INTERNATIONAL STANDARD

ISO/IEC/IEEE 8802-22

First edition
2015-05-01

AMENDMENT 1
2017-10

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements —

Part 22: Cognitive Wireless RAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: Policies and Procedures for Operation in the TV Bands

AMENDMENT 1: Management and control plane interfaces and procedures and enhancement to the management information base (MIB)

Technologies de l'information — Télécommunications et échange d'information entre systèmes — Réseaux locaux et métropolitains — Exigences spécifiques —

Partie 22: Spécifications du contrôle d'accès du milieu sans fil cognitif (MAC) et de la couche physique (PHY) : Politiques et procédures pour le fonctionnement dans les bandes TV

Reference number
ISO/IEC/IEEE 8802-22:2015/Amd.1:2017(E)

© IEEE 2014

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

COPYRIGHT PROTECTED DOCUMENT

© IEEE 2014

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO or IEEE at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Institute of Electrical and Electronics Engineers, Inc
3 Park Avenue, New York
NY 10016-5997, USA

stds.ipr@ieee.org
www.ieee.org

© IEEE 2014 – All rights reserved

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

IEEE Standards documents are developed within the IEEE Societies and the Standards Coordinating Committees of the IEEE Standards Association (IEEE-SA) Standards Board. The IEEE develops its standards through a consensus development process, approved by the American National Standards Institute, which brings together volunteers representing varied viewpoints and interests to achieve the final product. Volunteers are not necessarily members of the Institute and serve without compensation. While the IEEE administers the process and establishes rules to promote fairness in the consensus development process, the IEEE does not independently evaluate, test, or verify the accuracy of any of the information contained in its standards.

The main task of ISO/IEC JTC 1 is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is called to the possibility that implementation of this standard may require the use of subject matter covered by patent rights. By publication of this standard, no position is taken with respect to the existence or validity of any patent rights in connection therewith. ISO/IEEE is not responsible for identifying essential patents or patent claims for which a license may be required, for conducting inquiries into the legal validity or scope of patents or patent claims or determining whether any licensing terms or conditions provided in connection with submission of a Letter of Assurance or a Patent Statement and Licensing Declaration Form, if any, or in any licensing agreements are reasonable or non-discriminatory. Users of this standard are expressly advised that determination of the validity of any patent rights, and the risk of infringement of such rights, is entirely their own responsibility. Further information may be obtained from ISO or the IEEE Standards Association.

ISO/IEC/IEEE 8802-22:2015/Amd 1 was prepared by the LAN/MAN of the IEEE Computer Society (as IEEE 802.22a-2014). It was adopted by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems,* in parallel with its approval by the ISO/IEC national bodies, under the “fast-track procedure” defined in the Partner Standards Development Organization cooperation agreement between ISO and IEEE. IEEE is responsible for the maintenance of this document with participation and input from ISO/IEC national bodies.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/Amd 1:2017

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

IEEE Std 802.22a™-2014
(Amendment to
IEEE Std 802.22™-2011)

IEEE Standard for Information Technology—
Telecommunications and information exchange between systems
Wireless Regional Area Networks (WRAN)—
Specific requirements

Part 22: Cognitive Wireless RAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: Policies and Procedures for Operation in the TV Bands

Amendment 1: Management and Control Plane Interfaces and Procedures and Enhancement to the Management Information Base (MIB)

Sponsor

LAN/MAN Standards Committee
of the
IEEE Computer Society

Approved 27 March 2014

IEEE-SA Standards Board

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Abstract: This air interface, including the medium access control layer (MAC) and physical layer (PHY), of the fixed and portable point-to-multipoint wireless regional area networks (WRANs) operating in spectrum allocated to the Television Broadcasting Service in the frequency range of 54 MHz to 862 MHz is described in this amendment.

Keywords: broadband wireless access network, cognitive radio, fixed user terminals, IEEE 802.22a™, portable user terminals, radio spectrum sensing, regional area network, WRAN standards

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

The Institute of Electrical and Electronics Engineers, Inc.
3 Park Avenue, New York, NY 10016-5997, USA

Copyright © 2014 by The Institute of Electrical and Electronics Engineers, Inc.
All rights reserved. Published 30 May 2014. Printed in the United States of America.

IEEE is a registered trademark in the U.S. Patent & Trademark Office, owned by The Institute of Electrical and Electronics Engineers, Incorporated.

PDF: **ISBN 978-0-7381-9003-7** **STD98586**
Print: **ISBN 978-0-7381-9004-4** **STDPD98586**

IEEE prohibits discrimination, harassment, and bullying.
For more information, visit http://www.ieee.org/web/aboutus/whatis/policies/p9-26.html.
No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without the prior written permission of the publisher.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Important Notices and Disclaimers Concerning IEEE Standards Documents

IEEE documents are made available for use subject to important notices and legal disclaimers. These notices and disclaimers, or a reference to this page, appear in all standards and may be found under the heading "Important Notice" or "Important Notices and Disclaimers Concerning IEEE Standards Documents."

Notice and Disclaimer of Liability Concerning the Use of IEEE Standards documents

IEEE Standards documents (standards, recommended practices, and guides), both full-use and trial-use, are developed within IEEE Societies and the Standards Coordinating Committees of the IEEE Standards Association ("IEEE-SA") Standards Board. IEEE ("the Institute") develops its standards through a consensus development process, approved by the American National Standards Institute ("ANSI"), which brings together volunteers representing varied viewpoints and interests to achieve the final product. Volunteers are not necessarily members of the Institute and participate without compensation from IEEE. While IEEE administers the process and establishes rules to promote fairness in the consensus development process, IEEE does not independently evaluate, test, or verify the accuracy of any of the information or the soundness of any judgments contained in its standards.

IEEE does not warrant or represent the accuracy or content of the material contained in its standards, and expressly disclaims all warranties (express, implied and statutory) not included in this or any other document relating to the standard, including, but not limited to, the warranties of: merchantability; fitness for a particular purpose; non-infringement; and quality, accuracy, effectiveness, currency, or completeness of material. In addition, IEEE disclaims any and all conditions relating to: results; and workmanlike effort. IEEE standards documents are supplied "AS IS" and "WITH ALL FAULTS."

Use of an IEEE standard is wholly voluntary. The existence of an IEEE standard does not imply that there are no other ways to produce, test, measure, purchase, market, or provide other goods and services related to the scope of the IEEE standard. Furthermore, the viewpoint expressed at the time a standard is approved and issued is subject to change brought about through developments in the state of the art and comments received from users of the standard.

In publishing and making its standards available, IEEE is not suggesting or rendering professional or other services for, or on behalf of, any person or entity nor is IEEE undertaking to perform any duty owed by any other person or entity to another. Any person utilizing any IEEE Standards document, should rely upon his or her own independent judgment in the exercise of reasonable care in any given circumstances or, as appropriate, seek the advice of a competent professional in determining the appropriateness of a given IEEE standard.

IN NO EVENT SHALL IEEE BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO: PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE PUBLICATION, USE OF, OR RELIANCE UPON ANY STANDARD, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE AND REGARDLESS OF WHETHER SUCH DAMAGE WAS FORESEEABLE.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Translations

The IEEE consensus development process involves the review of documents in English only. In the event that an IEEE standard is translated, only the English version published by IEEE should be considered the approved IEEE standard.

Official statements

A statement, written or oral, that is not processed in accordance with the IEEE-SA Standards Board Operations Manual shall not be considered or inferred to be the official position of IEEE or any of its committees and shall not be considered to be, or be relied upon as, a formal position of IEEE. At lectures, symposia, seminars, or educational courses, an individual presenting information on IEEE standards shall make it clear that his or her views should be considered the personal views of that individual rather than the formal position of IEEE.

Comments on standards

Comments for revision of IEEE Standards documents are welcome from any interested party, regardless of membership affiliation with IEEE. However, IEEE does not provide consulting information or advice pertaining to IEEE Standards documents. Suggestions for changes in documents should be in the form of a proposed change of text, together with appropriate supporting comments. Since IEEE standards represent a consensus of concerned interests, it is important that any responses to comments and questions also receive the concurrence of a balance of interests. For this reason, IEEE and the members of its societies and Standards Coordinating Committees are not able to provide an instant response to comments or questions except in those cases where the matter has previously been addressed. For the same reason, IEEE does not respond to interpretation requests. Any person who would like to participate in revisions to an IEEE standard is welcome to join the relevant IEEE working group.

Comments on standards should be submitted to the following address:

Secretary, IEEE-SA Standards Board
445 Hoes Lane
Piscataway, NJ 08854 USA

Laws and regulations

Users of IEEE Standards documents should consult all applicable laws and regulations. Compliance with the provisions of any IEEE Standards document does not imply compliance to any applicable regulatory requirements. Implementers of the standard are responsible for observing or referring to the applicable regulatory requirements. IEEE does not, by the publication of its standards, intend to urge action that is not in compliance with applicable laws, and these documents may not be construed as doing so.

Copyrights

IEEE draft and approved standards are copyrighted by IEEE under U.S. and international copyright laws. They are made available by IEEE and are adopted for a wide variety of both public and private uses. These include both use, by reference, in laws and regulations, and use in private self-regulation, standardization, and the promotion of engineering practices and methods. By making these documents available for use and adoption by public authorities and private users, IEEE does not waive any rights in copyright to the documents.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Photocopies

Subject to payment of the appropriate fee, IEEE will grant users a limited, non-exclusive license to photocopy portions of any individual standard for company or organizational internal use or individual, non-commercial use only. To arrange for payment of licensing fees, please contact Copyright Clearance Center, Customer Service, 222 Rosewood Drive, Danvers, MA 01923 USA; +1 978 750 8400. Permission to photocopy portions of any individual standard for educational classroom use can also be obtained through the Copyright Clearance Center.

Updating of IEEE Standards documents

Users of IEEE Standards documents should be aware that these documents may be superseded at any time by the issuance of new editions or may be amended from time to time through the issuance of amendments, corrigenda, or errata. An official IEEE document at any point in time consists of the current edition of the document together with any amendments, corrigenda, or errata then in effect.

Every IEEE standard is subjected to review at least every ten years. When a document is more than ten years old and has not undergone a revision process, it is reasonable to conclude that its contents, although still of some value, do not wholly reflect the present state of the art. Users are cautioned to check to determine that they have the latest edition of any IEEE standard.

In order to determine whether a given document is the current edition and whether it has been amended through the issuance of amendments, corrigenda, or errata, visit the IEEE-SA Website at http://ieeexplore.ieee.org/xpl/standards.jsp or contact IEEE at the address listed previously. For more information about the IEEE–SA or IEEE's standards development process, visit the IEEE-SA Website at http://standards.ieee.org.

Errata

Errata, if any, for all IEEE standards can be accessed on the IEEE-SA Website at the following URL: http://standards.ieee.org/findstds/errata/index.html. Users are encouraged to check this URL for errata periodically.

Patents

Attention is called to the possibility that implementation of this standard may require use of subject matter covered by patent rights. By publication of this standard, no position is taken by the IEEE with respect to the existence or validity of any patent rights in connection therewith. If a patent holder or patent applicant has filed a statement of assurance via an Accepted Letter of Assurance, then the statement is listed on the IEEE-SA Website at http://standards.ieee.org/about/sasb/patcom/patents.html. Letters of Assurance may indicate whether the Submitter is willing or unwilling to grant licenses under patent rights without compensation or under reasonable rates, with reasonable terms and conditions that are demonstrably free of any unfair discrimination to applicants desiring to obtain such licenses.

Essential Patent Claims may exist for which a Letter of Assurance has not been received. The IEEE is not responsible for identifying Essential Patent Claims for which a license may be required, for conducting inquiries into the legal validity or scope of Patents Claims, or determining whether any licensing terms or conditions provided in connection with submission of a Letter of Assurance, if any, or in any licensing agreements are reasonable or non-discriminatory. Users of this standard are expressly advised that determination of the validity of any patent rights, and the risk of infringement of such rights, is entirely their own responsibility. Further information may be obtained from the IEEE Standards Association.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Participants

At the time this amendment went to sponsor ballot, the IEEE 802.22 Working Group had the following officer:

Apurva Mody, *Chair*
Chang-woo Pyo, *Vice Chair*

When this amendment was sent to sponsor ballot, the Task Group a had the following membership:

Ranga Reddy, *Chair and Editor*

Winston Caldwell
Charles Einolf
Peter Flynn
Tom Gurley
Hiroshi Harada
Bob Heile
Byng Jeong Jang
Jerry Kalke
Hynduk Kang
Gwangzeen Ko
Bruce Kraemer
Donghun Lee
Liru Lu
Michael Lynch
Paul Nikolich
Shigenobu Sasaki
Steven Shellhammer
Chunyi Song
Victor Tawil
Keat-Beng Toh
Junyi Wang
Bing Xuan Zhao
Xin (Amy) Zhang

Major contributions were received from the following individuals:

Gerald Chouinard
Charles Einolf
Sunghyun Hwang
Gwangzeen Ko
Chang-woo Pyo
Ranga Reddy
Ivan Reede

The following members of the balloting committee voted on this amendment. Balloters may have voted for approval, disapproval, or abstention.

Wole Akpose
Thomas Alexander
Nobumitsu Amachi
Butch Anton
Mathild Benveniste
Harry Bims
Nancy Bravin
William Byrd
Juan Carreon
Dave Cavalcanti
Keith Chow
Richard Edgar
Charles Einolf
Peter Flynn
Avraham Freedman
Devon Gayle
Randall Groves
Michael Gundlach
Marco Hernandez
Werner Hoelzl
Sunghyun Hwang
Noriyuki Ikeuchi
Akio Iso
Atsushi Ito
Bobby Jose
Shinkyo Kaku
Piotr Karocki
Stuart Kerry
Gwangzeen Ko
Bruce Kraemer
Yasushi Kudoh
Geoff Ladwig
Arthur H. Light
Liru Lu
William Lumpkins
Greg Luri
Elvis Maculuba
Jeffery Masters
Edward McCall
Michael McInnis
Apurva Mody
Jose Morales
Peter Murray
Nabil Nasser
Michael Newman
Nick S. A. Nikjoo
Venkatesha Prasad
Ivan Reede
Maximilian Riegel
Robert Robinson
William Rose
John Santhoff
Shigenobu Sasaki
Naotaka Sato
Kapil Sood
Thomas Starai
Rene Struik
Walter Struppler
Keat-Beng Toh
Ha-Nguyen Tran
Dmitri Varsanofiev
Prabodh Varshney
George Vlantis
Hung-Yu Wei
Oren Yuen
Daidi Zhong

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

When the IEEE-SA Standards Board approved this on 27 March 2014, it had the following membership:

John Kulick, *Chair*
Jon Walter Rosdahl, *Vice-chair*
Richard H. Hulett, *Past Chair*
Konstantinos Karachalios, *Secretary*

Peter Balma	Michael Janezic	Ron Peterson
Farooq Bari	Jeffrey Katz	Adrian Stephens
Ted Burse	Joseph L. Koepfinger*	Peter Sutherland
Clint Chaplain	David J. Law	Yatin Trivedi
Stephen Dukes	Hung Ling	Phil Winston
Jean-Phillippe Faure	Oleg Logvinov	Don Wright
Gary Hoffman	Ted Olsen	Yu Yuan
	Glenn Parsons	

*Member Emeritus

Also included are the following nonvoting IEEE-SA Standards Board liaisons:

Richard DeBlasio, *DOE Representative*
Michael Janezic, *NIST Representative*

Catherine Berger
IEEE Standards Senior Program Manager, Document Development

Lisa Perry
IEEE Standards Program Manager, Technical Program Development

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Introduction

This introduction is not part of IEEE Std 802.22a-2014, IEEE Standard for Information Technology—Telecommunications and information exchange between systems—Wireless Regional Area Networks(WRAN)—Specific requirements—Part 22: Cognitive Wireless RAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: Policies and Procedures for Operation in the TV Bands—Amendment 1: Management and Control Plane Interfaces and Procedures and Enhancement to the Management Information Base (MIB).

This amendment to IEEE Std 802.22-2011 defines a new clause for Management and Control Plane interfaces and procedures for operation in very high frequency and ultra-high frequency (VHF/UHF) television (TV) broadcast bands between 54 MHz and 862 MHz. The Management Information Base (MIB) structure enhancement includes changes to comply with the ASN.1 format and support for the new clause. Modifications to the existing clause on primitives for cognitive radio capabilities (Clause 10) to align it with the content in the MIB clause (Clause 13) and the new clause (Clause 14) are also defined.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Contents

5 System architecture 2
5.2 Management reference architecture 2
5.2.1 Service access primitives (SAPs)~~PHY/MAC to NCMS interface~~ 2
5.2.4 Managed objects 3

10 Cognitive radio capability 3
~~10.7 Primitives for cognitive radio capabilities~~ 3

12 Parameters and connection management 4
12.1 Parameters, timers, message IEs 4
12.1.1 MAC (dynamic service flow, multicast, ARQ, capability, and bandwidth management) 4
12.1.2 PHY (initialization, operation, and DS/US synchronization) 6
12.1.3 Coexistence 8
12.1.4 Security 9
12.1.5 Cognitive radio capabilities (SM, SSA, incumbent protection, QP management) 10

13 MIB structure 14
13.1 MIB description 14
13.1.1 wranDevMib 14
13.1.2 wranIfBsMib 20
13.1.3 wranIfBsSfMgmtMib~~wranIfBsSfMgmt~~ 72
13.1.4 wranIfCpeMib 85
13.1.5 wranIfSmMib 90
13.1.6 wranIfSsaMib 102
13.1.7 wranIfDatabaseServiceMib 116
13.2 MIB module definitions (ASN.1) 126
13.2.1 wranDevMib 126
13.2.2 wranIfBsMib 144
13.2.3 wranIfBsSfMgmtMib 291
13.2.4 wranIfCpeMib 323
13.2.5 wranIfSmMib 335
13.2.6 wranIfSsaMib 367
13.2.7 wranIfDatabaseServiceMib 407

14 Management plane interfaces and procedures 430
14.1 Primitive format 430
14.1.1 Purpose 430
14.1.2 SAP type 430
14.1.3 Operation type 430
14.1.4 Destination 430
14.1.5 Data 430
14.1.6 When generated 431
14.1.7 Effect of receipt 431
14.2 Primitive definitions 431
14.2.1 Management SAP (M-SAP) 431
14.2.2 Spectrum Manager-Spectrum Sensing Function SAP (SM-SSF-SAP) 463
14.2.3 Spectrum Manager-Geolocation SAP (SM-GL-SAP) 467
14.2.4 Control SAP (C-SAP) 470

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

IEEE Standard for Information Technology—
Telecommunications and information exchange between systems
Wireless Regional Area Networks (WRAN)—
Specific requirements

Part 22: Cognitive Wireless RAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: Policies and Procedures for Operation in the TV Bands

Amendment 1: Management and Control Plane Interfaces and Procedures and Enhancement to the Management Information Base (MIB)

IMPORTANT NOTICE: IEEE Standards documents are not intended to ensure safety, security, health, or environmental protection, or ensure against interference with or from other devices or networks. Implementers of IEEE Standards documents are responsible for determining and complying with all appropriate safety, security, environmental, health, and interference protection practices and all applicable laws and regulations.

This IEEE document is made available for use subject to important notices and legal disclaimers. These notices and disclaimers appear in all publications containing this document and may be found under the heading "Important Notice" or "Important Notices and Disclaimers Concerning IEEE Documents." They can also be obtained on request from IEEE or viewed at http://standards.ieee.org/IPR/disclaimers.html.

NOTE—The editing instructions contained in this amendment define how to merge the material contained therein into the existing base standard and its amendments to form the comprehensive standard. The editing instructions are shown in ***bold italic***. Four editing instructions are used: change, delete, insert, and replace. ***Change*** is used to make corrections in existing text or tables. The editing instruction specifies the location of the change and describes what is being changed by using ~~strikethrough~~ (to remove old material) and underscore (to add new material). ***Delete*** removes existing material. ***Insert*** adds new material without disturbing the existing material. Insertions may require renumbering. If so, renumbering instructions are given in the editing instruction. ***Replace*** is used to make changes in figures or equations by removing the existing figure or equation and replacing it with a new one. Editing instructions, change markings, and this NOTE will not be carried over into future editions because the changes will be incorporated into the base standard.[1]

[1] Notes in text, tables, and figures are given for information only and do not contain requirements needed to implement the standard.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

5 System architecture

5.2 Management reference architecture

Change the second paragraph of 5.2 as follows:

Figure 5 shows an example of a management reference model for WRANs. ~~It~~ This example consists of a Network Management System (NMS), a Network Control System (NCS), and managed nodes. The BS and CPEs shall collect and store the managed objects (see 5.2.4) in the format as defined in the WRAN Management Information Base (MIB). The MIB is defined and specified in Clause 13. The Network Control System contains the service flow and the associated QoS information that is pre-populated in service classes at the BS and instantiated when a CPE requests services.

Change the fourth paragraph of 5.2 as follows:

In the management reference architecture example in Figure 5, management information that is stored in the form of MIBs must be conveyed using SNMP messages. Use of MIBs to define the structure of management information and SNMP to convey this data is optional. If MIBs and the SNMP are not used to store and transport management information, the network operator and device manufacturers will have to specify another means to enable management functions. The management information between the CPE and the BS may be carried over a secondary management connection. ~~The management information can also be conveyed using the normal SNMP messages.~~

Change 5.2.1 as follows:

5.2.1 Service access primitives (SAPs)~~PHY/MAC to NCMS interface~~

In the Management/Control Plane, t~~T~~he NCMS is interfaced to the MAC and PHY layer entities of the CPE and BS through two Service Access Primitives ~~Points~~ (SAPs). The BS and CPE shall include a Control-SAP (C-SAP) and Management-SAP (M-SAP) that provide NCMS access to the control plane and management plane functions from upper layers. The M-SAP is used for less time-sensitive Management plane primitives, and the C-SAP is used for more time-sensitive Control plane primitives. The C-SAP and M-SAP interfaces are described in 5.2.1.1 and 5.2.1.2. The NCMS uses the C-SAP and M-SAP to interface with the IEEE 802.22 managed nodes.

In the Cognitive Plane, the SM is interfaced with the SSA through two SAPs. The SM uses the SM-SSF SAP to interface with the Spectrum Sensing Function on the SSA and the SM-GL SAP to interface with the Geolocation function on the SSA.

Insert the following new subclauses (5.2.1.3 and 5.2.1.4) after 5.2.1.2:

5.2.1.3 SM-SSF SAP (SM-SSF-SAP)

The SM-SSF SAP includes, but is not limited to, primitives related to the following:

— Channel Sensing configuration
— Channel Sensing reporting

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

5.2.1.4 SM-GL SAP (SM-GL-SAP)

The SM-GL SAP includes, but is not limited to, primitives related to the following:

— Geolocation fix calculation request
— Geolocation fix calculation results

5.2.4 Managed objects

Change 5.2.4 as follows:

Managed information items are also known as “managed objects.” If managed objects are defined as MIBs (see Clause 13), the definition of them shall follow conventions ~~The definition of managed objects in this standard is~~ expressed in IETF RFC 2578. It supports a management protocol agnostic approach, including SNMP. If managed objects are not defined as MIBs, use of conventions defined in IETF RFC 2578 to define them is optional, and use of SNMP to transport this information is optional as well.

10 Cognitive radio capability

Delete 10.7 to 10.7.6.4.2 (including Table 252 to Table 271) as follows:

~~**10.7 Primitives for cognitive radio capabilities**~~

~~**10.7.1 Database service primitives [and its subclauses]**~~

~~The following … **10.7.1.8** … (latitude, longitude).~~

NOTE—Information on database service primitives can now be found in 14.2.1.3.

~~**10.7.2 BS configuration and monitoring primitives [and its subclauses]**~~

~~The BS … **10.7.2.4.2** … another request.~~

NOTE—Information on BS configuration and monitoring primitives can now be found in 14.2.1.4.

~~**10.7.3 CPE reports the resulting available WRAN services list [and its subclauses]**~~

~~The selection … **10.7.3.3.2** … another query.~~

NOTE—Information on CPE reports the resulting available WRAN services list can now be found in 14.2.1.5.

~~**10.7.4 Spectrum Sensing Services [and its subclauses]**~~

~~The IEEE … **10.7.4.3.2** … PHY SSF.~~

NOTE—Information on spectrum sensing function primitives can now be found in 14.2.2.1.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

~~**10.7.5 Geolocation services [and its subclauses]**~~

~~The PHY … **10.7.5.3.2** … another request.~~

NOTE—Information on geolocation primitives can now be found in 14.2.3.1.

~~**10.7.6 Antenna primitives [and its subclauses]**~~

~~Essential antenna … **10.7.6.4.2** … to EIRP.~~

NOTE—Information on antenna primitives can now be found in 14.2.1.6.

12 Parameters and connection management

12.1 Parameters, timers, message IEs

12.1.1 MAC (dynamic service flow, multicast, ARQ, capability, and bandwidth management)

Change Table 272 as follows:

Table 272—MAC parameters, timers, message IEs

Entity/ Scope	Name	Reference	Min value	Default value	Max value
CPE, BS	DSx Request Retries	Number of Timeout Retries on DSA/DSC/DSD Requests.	—	3	—
CPE, BS	DSx Response Retries	Number of Timeout Retries on DSA/DSC/DSD Responses.	—	3	—
CPE	T6	Wait for registration response.	—	—	3 s
CPE, BS	T7	Wait for DSA/DSC/DSD Response timeout.	—	—	1 s
CPE, BS	T8	Wait for DSA/DSC Acknowledge timeout.	—	—	300 ms
BS	T9	Registration Timeout, the time allowed between the BS's sending a RNG-CMD (success) to a CPE and receiving a CBC-REQ from that same CPE.	300 ms	300 ms	—
CPE, BS	T10	Wait for Transaction End timeout.	—	—	3 s
BS	T13	The time allowed for an CPE, following receipt of a REG-RSP message to send a TFTP-CPLT message to the BS.	15 min	15 min	—
CPE	T14	Wait for DSx-RSP/DSX-RVD Timeout.	—	—	200 ms
BS	T15	Wait for MCA-RSP.	20 ms	20 ms	—
CPE	T16	Wait for bandwidth request grant.	10 ms	—	Service QoS dependent
CPE	T18	Wait for CBC-RSP timeout.	—	5 ms	<< T9
CPE, BS	T22	Wait for ARQ-Reset.	—	—	0.5 s
CPE	T26	Wait for TFTP-RSP.	10 ms	10 ms	200 ms

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Entity/ Scope	Name	Reference	Min value	Default value	Max value
BS	T27 as idle timer	Maximum time between unicast grants to CPE when BS believes CPE upstream transmission quality is *good enough.*	CPE Ranging Response Processing Time	—	—
BS	T27 as active timer	Maximum time between unicast grants to CPE when BS believes CPE upstream transmission quality is *not good enough.*	CPE Ranging Response Processing Time	—	—
BS	T28	Time allowed for the BS to complete the transmission of the backup/candidate channel list to its CPEs after initial registration by a new CPE, including the database service query.	—	60 s	<u><</u> T45
CPE	CBC Request Retries	Number of retries on CBC Request.	—	3	—
	DSx Flow Control	Maximum # of ongoing dynamic service flow (DSx) transactions that are ongoing.	1	4	Infinite
	MCA Flow Control	Maximum # of ongoing multicast group assignment (MCA-REQ/RSP) transactions.	1	—	Infinite
	Max # of multicast groups	Maximum # of multicast groups the BS supports in a cell.	—	—	<u>510</u>~~511~~
BS, CPE	T30	CPE registration Timer (see 7.7.7.3.4 and 7.14.2.11).	160 ms	40.8 s	10,485.6 s
BS, CPE	ARQ_BSN_ MODULUS	Number of unique BSN values.	—	2^10	—
BS, CPE	ARQ_ WINDOW_ SIZE	Max # of un-acknowledged ARQ blocks at a given time.	—	—	≤ (ARQ_ BSN_ MODULUS) /2
BS, CPE	ARQ_BLOCK _LIFETIME	Max time interval an ARQ block shall be managed by the Tx ARQ state machine.	10 µs	—	655.36 ms
BS, CPE	ARQ_RETRY _TIMEOUT (TRANSMITT ER_DELAY(RECEIVER_ DELAY)	Minimum time interval a transmitter shall wait before retransmission of a unacknowledged block.	10 µs	—	655.36 ms
BS, CPE	ARQ_SYNC_ LOSS_ TIMEOUT	Max amount of time ARQ_TX_WINDOW_START or ARQ_RX_WINDOW_START shall be allowed to remain at the same value before declaring a loss of synchronization of the sender and receiver state machines for an ongoing transfer.	10 µs	—	655.36 ms
BS, CPE	ARQ_RX_ PURGE_ TIMEOUT	Time interval the receiver shall wait after successful reception of a block that does not result in advancement of ARQ_RX_WINDOW_START, before advancing ARQ_RX_WINDOW_START.	10 µs	—	655.36 ms
BS, CPE	ARQ_BLOCK _SIZE	Size of ARQ block that SDU is fragmented into.	1 octet	—	2040 octet

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Entity/ Scope	Name	Reference	Min value	Default value	Max value
BS	Max CPE Transmit EIRP	Maximum CPE Transmit EIRP as negotiated during registration.	–64 dBm	—	+63.5 dBm
CPE	Registration Request Retries	Number of retries on registration requests.	3	—	—
CPE	Request Retries	Number of retries on bandwidth allocation requests.	16	—	—

12.1.2 PHY (initialization, operation, and DS/US synchronization)

Change Table 273 as follows:

Table 273—PHY parameters, timers, message IEs

Entity/ Scope	Name	Reference	Min value	Default value	Max value
BS	DCD Interval	Time between transmission of DCD messages.	—	—	10 s
BS	UCD Interval	Time between transmission of UCD messages.	—	—	10 s
BS	UCD Transition	The time the BS shall wait after repeating a UCD message with an incremented Configuration Change Count before issuing a US-MAP message referring to Upstream_Burst_Profiles defined in that UCD message.	2 MAC frames	—	—
BS	DCD Transition	The time the BS shall wait after repeating a DCD message with an incremented Configuration Change Count before issuing a DS-MAP message referring to Downstream_Burst_Profiles defined in that DCD message.	2 MAC frames	—	—
BS	Initial Ranging Interval	Time between Initial Ranging opportunities assigned by the BS.	—	—	2 s
BS	CLK-CMP Interval	Time between the clock compare measurements used for the generation of CLK-CMP messages.	50 ms	50 ms	50 ms
CPE	Lost DS-MAP Interval (T56)	Time since last received DS-MAP message before downstream synchronization is considered lost.	—	—	600 ms
CPE	Lost US-MAP Interval (T57)	Time since last received US-MAP message before upstream synchronization is considered lost.	—	—	600 ms
CPE	Lost SCH (T58)	Number of SCH that can be lost until synchronization is considered lost.	—	—	15
CPE	CDMA Ranging Retries	Number of retries on CDMA Ranging Requests.	1	—	4
CPE, BS	Invited Ranging Retries	Number of retries on inviting Ranging Requests.	16	—	—
BS	US-MAP Process Time	Time provided between arrival of the last bit of a US-MAP at a CPE and effectiveness of that map.	5 symbols	—	—

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Entity/ Scope	Name	Reference	Min value	Default value	Max value
BS	CPE Ranging Response Processing Time	Time allowed for a CPE following receipt of a ranging response before it is expected to reply to an invited ranging request.	10 ms	—	—
CPE	T1	Wait for DCD timeout.	—	—	5 × DCD interval maximum value
CPE	T2	Wait for broadcast ranging timeout.	—	—	5 × ranging interval
CPE	T3	Ranging Response reception timeout following the transmission of a Ranging Request.	—	200 ms	200 ms
CPE	T4	Wait for unicast ranging opportunity. If the pending-until-complete field was used earlier by this CPE, then the value of that field shall be added to this interval.	1 s	30 min (fixed) 10 min (portable	30 min
BS	T5	Wait for Upstream Channel Change response.	—	—	2 s
CPE	T12	Wait for UCD descriptor.	—	—	5 × UCD Interval maximum value
CPE	T20	Time the CPE searches for preambles on a given channel.	2 MAC frames	—	—
CPE	T21	Time the CPE searches for DS-MAP on a given channel.	—	—	10 s
BS	$EIRP_{BS}$	EIRP of BS (DS).	–64 dBm	—	63.5 dBm
BS	TTG	Transmit-receive Turnaround Gap. ~~Transmit/Receive Transition Gap~~	— ~~105 µs~~	210 µs	— ~~333 µs~~
CPE	RTG	Receive-transmit Turnaround Gap.	81.8 µs	—	303.5 µs
BS	DIUC Mandatory Exit Threshold	CINR at or below which this DIUC can no longer be used and where change to a more robust DIUC is required.	–64 dB	—	+63.5 dB
BS	DIUC Mandatory Entry Threshold	The minimum CINR required to start using this DIUC when changing from a more robust DIUC is required.	–64 dB	—	+63.5 dB
BS	Boosting	Boosting applied to a DS allocation.	–12 dB	0 dB	+9 dB
BS, CPE	BW Request Backoff Start	Initial size of BW Request opportunity used by CPEs to contend to send BW requests to BS.	0	—	15
BS, CPE	BW Request Backoff End	Final size of BW Request opportunity used by CPEs to contend to send BW requests to BS.	0~~1~~	—	15
BS, CPE	UCS Notification Backoff Start	Initial backoff window size in units of UCS Notification opportunity used by CPEs to contend to send UCS notifications to BS.	0	—	15
BS, CPE	UCS Notification Backoff End	Final size of UCS Notification opportunity used by CPEs to contend to send UCS Notification to BS.	0~~1~~	—	15

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Entity/ Scope	Name	Reference	Min value	Default value	Max value
BS, CPE	Contention-based reservation Timeout	Number of US-MAPs to receive before contention-based reservation is attempted again for the same connection.	~~0~~1	—	255
BS, CPE	BW Request opportunity size	Size (in OFDM slots) of PHY bursts, that a CPE may use to format and transmit a bandwidth request message in a contention request opportunity.	~~0~~1	—	255
BS, CPE	UCS Notification request opportunity size	Size (in OFDM slots) of PHY bursts that a CPE may use to transmit a UCS Notification.	~~0~~1	—	255
BS, CPE	# of initial ranging codes	Number of initial ranging CDMA codes (N).	~~0~~1	—	255
BS, CPE	# of periodic ranging codes	Number of periodic ranging CDMA codes (M).	~~0~~1	—	255
BS, CPE	# of bandwidth request codes	Number of bandwidth request CDMA codes (L).	~~0~~1	—	255
BS, CPE	# of UCS notification codes	Number of UCS notification CDMA codes (I).	~~0~~1	—	255
BS, CPE	Start of CDMA codes group	Indicates the starting number, S, of the group of codes used for the US.	0	~~See 6.10.3~~ —	255
BS, CPE	EIRP Density Level	EIRP Transmitted per subcarrier.	–104 dBm	—	+23.5 dBm
BS, CPE	EIRP Control	EIRP per subcarrier that the CPE should apply to correct its current transmission EIRP.	–104 dBm	—	+23.5 dBm
BS	EIRP Per subcarrier	EIRP transmitted per subcarrier.	–104 dBm	—	+23.5 dBm

12.1.3 Coexistence

Change Table 274 as follows:

Table 274—Coexistence parameters, timers, message IEs

Entity/ Scope	Name	Reference	Min value	Default value	Max value
~~BS~~	~~Tse (T33)~~	~~Time between transmission of the broadcast message of the operating backup and candidate channel sets for the purposes of spectrum etiquette.~~	—	—	~~60 s~~
BS	T32	Wait for the Frame Contention Response message.	1 superframe	—	32 superframes

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Entity/ Scope	Name	Reference	Min value	Default value	Max value
BS	FCW	Frame Contention Window: number of superframes during which a BS (FC_DST) accumulates the frame contention requests before reacting to it and responding to the FC_SRCs.	0 superframe	—	16 superframes
BS	SCWBackoff_ Max	Integer denoting the maximum superframes for the SCW backoff window.	0	—	15
BS	Frame_ Contention_ Min	Number of frames not available for contention at a BS in a coexistence situation.	0	2	8
BS	FCN_range	Exponent in base 2 defining the extent of the range of the random number FCN.	4	—	16
BS	SF_release	Number of superframes after which the BS releases the frames won by another BS through frame contention.	—	5	—
CPE	T_{CBP} (T34)	The minimum time between transmissions of a CBP packet carrying its MAC address for identification by nearby CPEs and BSs for coexistence purpose, as well as by spectrum monitoring systems to identify potential interference situations. Timing value may depend on the regulatory domain where the WRAN system operates (see Annex A).	8 s	—	15 min
BS	SCWBackoff_ Timer (T35)	Backoff timer that controls exiting or continuation of Frame contention procedure.	—	—	SCWBackoff _Max

12.1.4 Security

Change Table 275 as follows:

Table 275—Security parameters, timers, message IEs

Entity/ Scope	Name	Reference	Min value	Default value	Max value
CPE	EAP Authentication Timer (T36)	Timeout period between sending SCM EAP-Start or EAP-Transfer (8.2.2.5).	2 s	10 s	30 s
CPE	Authentication Grace Timer (T37)	Amount of time after authentication is complete that must pass before re-authentication is complete (8.2.2.5).	5 min (300 s)	10 min (600 s)	6 h (21,600) ~~35 days (3,024,000 s)~~
CPE	Max #of Authentication Attempts	Maximum # of Times a CPE is allowed to attempt EAP Authentication (8.2.2.5).	1 ~~s~~	5 ~~s~~	10 ~~s~~
CPE	Operational Wait Timeout (T38)	Timeout period between sending of Key Request messages from the Op Wait state (8.2.3.2.4).	1 s	1 s	10 s
CPE	Rekey Wait Timeout (T39)	Timeout period between sending of Key Request messages from the Rekey Wait state (8.2.3.2.4).	1 s	1 s	10 s
CPE	GTEK/TEK Grace Time (T40)	Time interval, in seconds before the estimated expiration of a GTEK/TEK (8.2.3.2.4).	5 min (300 s)	1 h (3600 s)	3.5 days (302,400 s)

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Entity/ Scope	Name	Reference	Min value	Default value	Max value
BS	AK Lifetime	Lifetime BS assigns to new AK.	1 day (86,400 s)	7 days (604,800 s)	70 days (6,048,000 s)
BS	TEK Lifetime	Lifetime BS assigns to new TEK.	30 min (1800 s)	12 h (43,200 s)	7 days (604,800 s)
BS, CPE	SCM Flow Control	The maximum number of concurrent SCM transactions.	0 (Default: unlimited # of transactions	—	255
BS, CPE	Number of Supported Security Associations	The maximum # of supported security associations.	2	—	2+*m* where *m* is the number of multicast groups
BS, CPE	PN_ WINDOW_ SIZE	Window that defines the acceptable PNs for received PDUs that are to be processed by encryption/decryption process.	16	—	512
BS	T17	Time allowed for CPE to complete CPE Authorization and Key Exchange.	5 min	5 min	—

12.1.5 Cognitive radio capabilities (SM, SSA, incumbent protection, QP management)

Change Table 276 as follows:

Table 276—Cognitive radio capability parameters, timers, message IEs

Entity/ Scope	Name	Reference	Min value	Default value	Max value
~~CPE~~	~~T19~~	~~Time DS channel remains unusable.~~	~~—~~	~~—~~	~~—~~
CPE	T29	Wait for BLM-ACK timeout.	10 ms	—	300 ms
BS	T31	Wait for BLM-REP timeout.	1 MAC Frame	—	—
CPE	BLM-REP Retries	Number of retries allowed for sending BLM-REP.	—	3	—
BS, CPE	Channel Availability Check Time	The time during which a channel SHALL be checked for the presence of licensed incumbent signals having a level above the Incumbent Detection Threshold prior to the commencement of WRAN operation in that channel and, in the case of TV, a related channel at an EIRP level that can affect the measured channel.	—	30 s	—
BS, CPE	Non-Occupancy Period	The required period during which WRAN device transmissions SHALL NOT occur in a given channel because of the detected presence of an incumbent signal in that channel above the Incumbent Detection Threshold, or in the case of TV, above a given EIRP level.	10 min	—	—

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Entity/ Scope	Name	Reference	Min value	Default value	Max value
BS, CPE	Channel Detection Time	The maximum time taken by a WRAN device to detect a licensed incumbent signal above the Incumbent Detection Threshold within a given channel during normal WRAN operation.	—	≤ 2 s to ≥ 90% Probability of Detection with a False Alarm rate of ≤ 10%	—
BS, CPE	Channel Setup Time	The window of time that may be taken by a WRAN CPE to transmit control information to a WRAN base station in order to establish operation with that base station at the prescribed power or, in the case of TV, at or below the allowable EIRP within a given channel.	—	2 s	—
BS, CPE	Channel Opening Transmission Time (Aggregate transmission time)	The aggregate duration of control transmissions by WRAN devices during the Channel Setup Time, which starts at the end of the Channel Availability Check Time.	—	100 ms	—
BS, CPE	Channel Move Time (In-service monitoring)	The time taken by a WRAN system to cease all interfering transmissions on the current channel upon detection of a licensed incumbent signal above the relevant Incumbent Detection Threshold, or in the case TV, to alternatively reduce its EIRP to that which is allowable within a given channel upon detection of a TV signal in the same or a related channel.	—	2 s	—
BS, CPE	Channel Closing Transmission Time (Aggregate transmission time)	The aggregate duration of control transmissions by the WRAN devices during the Channel Move/EIRP Reduction Time, which starts upon detection of a licensed incumbent signal above the relevant Incumbent Detection Threshold.	—	100 ms	—
BS, CPE	Channel Number	The channel number to be sensed by the SSF (10.4).	0	—	255
BS, CPE	Channel Bandwidth	The bandwidth of the channel to be sensed by the SSF (10.4).	—	6/7/8 MHz (depending on regulatory domain)	—
BS, CPE	Maximum Probability of false alarm	In sensing modes 0 and 1 this value specifies the maximum probability of false alarm for each sensing mode decision in the signal present array.	0.0	—	0.255
BS, CPE	NumSensingPeriods	Number of sensing periods field in a Sensing Window Specification Array entry.	0	1	127
BS, CPE	SensingPeriod Duration	Duration of sensing period field (in units of OFDM symbols) in a Sensing Window Specification Array entry.	0	16	1023
BS, CPE	SensingPeriod Interval	Periodicity of Sensing period field in a Sensing Window Specification Array entry.	0	200	2047

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Entity/ Scope	Name	Reference	Min value	Default value	Max value
BS, CPE	Sensing Window Specification Array	Array containing Sensing Window specification for each signal type enumerated in Signal Type Array.	1×sizeof (NumSensingPeriods+SensingPeriodDuration+SensingPeriodInterval)	—	32×sizeof (NumSensingPeriods+SensingPeriodDuration+SensingPeriodInterval)
BS, CPE	Signal Type Array	Bitmap that indicates which signal types are to be sensed for in a given regulatory domain.	—	Set on a regulatory domain-by-domain basis (see Table A.11)	—
BS, CPE	Sensing Mode	The sensing mode a CPE supports. Negotiated during CPE initialization. Various modes are described in Table 238.	—	No Sensing	—
BS, CPE	Signal Present Decision	Indication of whether a signal of a specific type has been detected. All unused values are reserved.	0x00 (Absent)	0x7F (No Decision could be made)	0xFF (Signal Present)
BS, CPE	Confidence Metric	Confidence with which sensing can determine the signal type.	0x00 (No Confidence)	—	0xFF (Full confidence)
BS, CPE	Mean RSSI	Mean of M RSSI measurements.	–104 dBm	—	+23.5 dBm
BS, CPE	Standard Deviation of RSSI	Standard deviation of the M RSSI measurements.	+0.0 dB	—	+25.5 dB
BS, CPE	RSSI_ detection_ threshold	Energy detection threshold indicating the presence of an incumbent, other WRAN system, or interference.	–120 dBm	—	–10 dBm
BS, CPE	Microphone Protection Radius	Radius of the contour within which the WRAN system cannot operate due to potential interference with the microphone.	0.1 km	—	100 km
BS, CPE	$T_{Candidate_Channel_Refresh}$ (T41)	Maximum time interval allowed before sensing is performed on the candidate channel to ensure that no incumbents are detected.	1 s	6 s	10 s
BS, CPE	$T_{Backup_Channel_Refresh}$ (T42)	Maximum time interval allowed before sensing is performed on the backup channel to ensure that no incumbents are detected.	1 s	6 s	10 s
BS, CPE	$T_{Candidate_to_Backup_Transition}$ (T43)	Minimum time duration without detection of any incumbent for a candidate channel to transition to the backup channel.	1 s	30 s	100 s
BS, CPE	T_{Ch_Move} (T44)	Maximum time to ensure that the channel move information is successfully conveyed to all the associated CPEs and BS (self-coexistence mode).	1 s	—	10 s
BS, CPE	T_{No_DB} (T45)	Maximum WRAN operation time without access to the incumbent database service.	0.1 h	—	72 h
BS	$T_{Wait_Before_Channel_Move}$ (T46)	Waiting time before which the BS moves to the first backup channel. This is used to make sure that all the CPEs are ready to move to the backup channel before BS switches operation to this backup channel.	1 frame	—	256×16 frames

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Entity/ Scope	Name	Reference	Min value	Default value	Max value
CPE	$T_{Wait_Before_Channel_Move}$ (T59)	Waiting time before which the CPE moves to its backup channels if it no longer hears from its BS. This is used to make sure that the CPE waits long enough after its UCS Notification so that the BS has had time to move to a backup channel, if it decided to do so.	1 frame	—	256×16 frames
BS, CPE	$T_{Refresh_Database_Info}$ (T47)	The prescribed time by the WRAN operator to refresh the incumbent database service.	0.1 h	—	72 h
BS, CPE	T_{Clear_N} (T48)	Lapser Timer keeps track of whether the Operating Channel N has been cleared using spectrum sensing.	0.1 s	—	60 s
BS, CPE	T_{Clear_N-1} (T49)	Lapser Timer keeps track of whether the Adjacent Channel N–1 has been cleared using spectrum sensing.	0.1 s	—	60 s
BS, CPE	T_{Clear_N+1} (T50)	Lapser Timer keeps track of whether the Adjacent Channel N+1 has been cleared using spectrum sensing.	0.1 s	—	60 s
BS, CPE	$T_{Loss_of_BS_Contact}$ (T51)	Initiated when the CPE loses contact with the BS.	1 s	—	600 s
BS, CPE	T_{Range1} (T52)	Used for terrestrial geolocation. Initiated when the downstream burst leaves the BS (i.e., at the start of the frame preamble).	1 TU	—	1000 TU
BS, CPE	T_{INsens} (T53)	The parameter T_{INsens} is used to verify that in-band sensing has been done within the required In-service monitoring period. The T_{INsens} parameter is driven by the regulatory domain requirements. See Annex A.	0.1 s	—	60 s
BS, CPE	$T_{OUTsens}$ (T54)	The parameter $T_{OUTsens}$ is used to verify that out-of-band sensing has been done within the required “Acquiring a channel monitoring period” specified in Annex A, Table A.13 (30 s in the US). This value would be used to either initialize a “lapse timer” for each channel in the backup/candidate list at each CPE so that it is compared to T_{sens}.	0.1 s	—	60 s
BS, CPE	T_{sensin} (T55)	T_{sensin} parameter corresponds to the maximum length of time required to carry out the sensing process on an in-band channel (N, N–1, or N+1). Manufacturers need to specify the sensing time required to detect the specified signals with required accuracy (see Figure 176).	1 ms	—	160 ms
CPE	$T_{sensout}$ (T60)	$T_{sensout}$ parameter corresponds to the maximum length of time required to carry out an out-of-band sensing process for a specified channel N (i.e., N, N–1, and N+1). Manufacturers need to specify the sensing time required to detect the specified signals out-of-band with required accuracy (see Figure 178).	20 ms	—	160 ms
BS, CPE	ISO 3166 IETF Country Code	3-character, ASCII string denoting the regulatory domain of operation (e.g., “USA” is for United States of America”).	—	3 characters	—

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Entity/ Scope	Name	Reference	Min value	Default value	Max value
BS, CPE	TA_{CBP}	Timing Advance of the CBP burst (see step 2 of 10.5.2.3). Note that the geolocation process will have to pre-adjust TA_{CBP} depending on the distance between the two CPE to be geolocated and the reference CPEs so that the delays measured by $Vernier_3$ fall within the symbol cyclic prefix (e.g., 74.68 µs corresponding to 22.4 km).	–1024 TU	—	+1024 TU

13 MIB structure

Change the third list item in the dashed list in the preliminary text of Clause 13 as follows:

— *wranIfBsSfMgmtMib:~~wranIfBsSfMgmt:~~* Basic MIB for managing items related to Service Flow configuration, instantiation, and management

13.1 MIB description

13.1.1 wranDevMib

Change the dashed list in 13.1.1 as follows:

— `wranDevBsObjects`: MIB objects to be implemented by the SNMP agent in BS
— `wranDevCpeObjects`: MIB objects to be implemented by the SNMP agent in CPE
— `wranDevCommonObjects`: MIB objects to be implemented by the SNMP agent in BS/CPE
— ~~`wranDevMibConformance`: MIB objects related to conformance~~

13.1.1.1 wranDevBsObjects

13.1.1.1.1 wranDevBsSoftwareUpgradeTable

13.1.1.1.1.1 wranDevBsSoftwareUpgradeEntry

Change 13.1.1.1.1.1.9 as follows:

13.1.1.1.1.1.9 wranDevBsSoftwareUpgradeTimeStamp

This value is a timestamp to indicate when the last SW download~~downloads~~ or activation took place.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Change 13.1.1.1.2 and its subclauses as follows:

13.1.1.1.2 wranDevBsNotification

This group of objects relates to SNMP traps on the BS. There is a control element that enables/disables the traps (`wranDevBsTrapControl`) and ~~whether or not~~ what event information is logged when a trap is sent (`wranDevBsTrapDefinition`) ~~when an event is logged~~.

13.1.1.1.2.1 wranDevBsTrapControl

Defines control elements for traps. This is a 2-bit field that enables setting a trap to indicate when a BS event is logged (`wranDevBsEvent`) or when a event log buffer size overruns the configured threshold (`wranDevBsLogBuffExceedThreshold`).

13.1.1.1.2.2~~13.1.1.1.2.1.1~~ wranDevBsTrapDefinition~~wranDevBsTrapPrefix~~

This object groups all of the notification objects for the BS. It is defined to be compatible with SNMPv1, following Sections 8.5 and 8.6 of IETF RFC 2758. It is a compound object made up of the contents of a logged BS event (`wranDevBsEventTrap`) and the indication of when the ratio of the portion used to total size of event log has been exceeded (`wranDevBsLogBuffExceedThresholdTrap`).

~~#### 13.1.1.1.2.1.2 wranDevBsTrapControlRegister~~

~~This is … `wranDevBsLogBuffExceedThresholdTrapControl`.~~

~~#### 13.1.1.1.2.2 wranDevBsEventTrapControl~~

~~This trap … `wranDevCmnEventTable`.~~

13.1.1.1.2.2.1 wranDevBsEventTrap

This object is a compound object that contains information that describes the event that is logged. This trap is caught when `wranDevBsEvent` in `wranDevBsTrapControl` is set.

13.1.1.1.2.2.2~~13.1.1.1.2.2.1~~ wranDevBsLogBuffExceedThresholdTrap

This ~~trap is sent when the size of the event log buffer is greater than the configured threshold~~ object is a compound object that indicates the index of an entry (defined by `wranDevCmnEventLogEntry`) in `wranDevCmnEventLogConfigTable` and the object in that entry that defines the ratio (defined by `wranDevCmnEventLogResidualBuffThreshold`) of used capacity in Event Log versus total capacity. This trap is caught when `wranDevBsLogBuffExceedThreshold` in `wranDevBsTrapControl` is set.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.1.2 wranDevCpeObjects

Change 13.1.1.2.2 and its subclauses as follows:

13.1.1.2.2 wranDevCpeNotification

This group of objects relates to SNMP traps on the ~~BS~~CPE. There is a control element that enables/disables the traps (`wranDevCpeTrapControl`) and ~~whether or not~~ what event information is logged when a trap is sent (`wranDevCpeTrapDefinition`)~~when an event is logged~~.

13.1.1.2.2.1 wranDevCpeTrapControl

Defines control elements for traps. This is a 2-bit field that enables setting a trap to indicate when a CPE event is logged (`wranDevCpeEvent`) or when a event log buffer size overruns the configured threshold (`wranDevCpeLogBuffExceedThreshold`).

13.1.1.2.2.1.1 wranDevCpeTrapDefinition~~wranDevCpeTrapPrefix~~

This object groups all of the notification objects for the ~~BS~~CPE. It is defined to be compatible with SNMPv1, following Sections 8.5 and 8.6 of IETF RFC 2758. It is a compound object made up of the contents of a logged BS event (`wranDevCpeEventTrap`) and the indication of when the ratio of the portion used to total size of event log has been exceeded (`wranDevCpeLogBuffExceedThresholdTrap`).

13.1.1.2.2.1.2 wranDevCpeEventTrap~~wranDevCpeTrapControlRegister~~

This object is a compound object that contains information that describes the event that is logged. This trap is caught when `wranDevCpeEvent` in `wranDevCpeTrapControl` is set. ~~This is a 2-bit, bitmap that enables the two BS traps that are available: `wranDevCpeEventTrapConrol`, `wranDevBsLogBuffExceedThresholdTrapControl`.~~

13.1.1.2.2.1.3 wranDevCpeLogBuffExceedThresholdTrap

This object is a compound object that indicates the index of an entry (defined by `wranDevCmnEventLogEntry`) in `wranDevCmnEventLogConfigTable` and the object in that entry that defines the ratio (defined by `wranDevCmnEventLogResidualBuffThreshold`) of used capacity in Event Log versus total capacity. This trap is caught when `wranDevCpeLogBuffExceedThreshold` in `wranDevCpeTrapControl` is set.

~~**13.1.1.2.2.2 wranDevCpeEventTrapControl**~~

~~This trap … `wranDevCmnEventTable`.~~

~~**13.1.1.2.2.2.1 wranDevBsLogBuffExceedThresholdTrap**~~

~~This trap … configured threshold.~~

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.1.3 wranDevCommonObjects

13.1.1.3.1 wranDevCmnEventLog

13.1.1.3.1.1 wranDevCmnEventLogConfigTable

Change the subclauses of 13.1.1.3.1.1 as follows:

13.1.1.3.1.1.1 wranDevCmnEventLogConfigEntry

This object … `wranDevCmnDeviceIndex`.

13.1.1.3.1.1.1.1~~13.1.1.3.1.1.2~~ wranDevCmnDeviceIndex

Index value … `wranDevCmnEventLogConfigTable`.

13.1.1.3.1.1.1.2~~13.1.1.3.1.1.3~~ wranDevCmnEventLogEntryLimit

Maximum number … is reached.

13.1.1.3.1.1.1.3~~13.1.1.3.1.1.4~~ wranDevCmnEventLogLifeTimeLimit

A value of 0 means that an entry is kept indefinitely. Any other value~~, it~~ is the maximum time an entry can exist in `wranDevCmnEventLogTable`. If this value is changed while entries exist in `wranDevCmnEventLogTable`, entries older than this limit will be discarded.

13.1.1.3.1.1.1.4~~13.1.1.3.1.1.5~~ wranDevCmnEventLogEntryLimitPerEventId

The number … per event.

13.1.1.3.1.1.1.5~~13.1.1.3.1.1.6~~ wranDevCmnEventLogSeverityThreshold

Minimum severity … Event Log.

13.1.1.3.1.1.1.6~~13.1.1.3.1.1.7~~ wranDevCmnEventLogWrapAroundBuffEnable

Indication of … when full.

13.1.1.3.1.1.1.7~~13.1.1.3.1.1.8~~ wranDevCmnEventLogLatestEvent

Index of … Event Log.

13.1.1.3.1.1.1.8~~13.1.1.3.1.1.9~~ wranDevCmnEventLogPersistenceSupported

Indication of … of device.

13.1.1.3.1.1.1.9~~13.1.1.3.1.1.10~~ wranDevCmnEventLogResidualBuffThreshold

Threshold ratio … is issued.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.1.3.1.2 wranDevCmnEventTable

Change 13.1.1.3.1.2.1 as follows:

13.1.1.3.1.2.1 wranDevCmnEventEntry

This object defines the parameters of an event entry in the `wranDevCmnEventTable`. Each entry is indexed by ~~`wranDevCmnDeviceIndex and`~~ `wranDevCmnEventIdentifier`.

13.1.1.3.1.3 wranDevCmnEventLogTable

Change 13.1.1.3.1.3.1 and 13.1.1.3.1.3.1.1 as follows:

13.1.1.3.1.3.1 wranDevCmnEventLogEntry~~wranDevCmnEventEntry~~

Each entry … several parameters.

13.1.1.3.1.3.1.1 wranDevCmnEventId

A counter used to index entries in the Event Log. When it reaches the maximum value, it will ~~wither~~ wrap-around if configured to wrap-around or the log will be flushed if it is not configured to wrap-around.

Change 13.1.1.3.2 as follows:

13.1.1.3.2 wranDevCmnSnmpAgent

This compound object deals with the common objects (`wranDevCmnSnmpAgent` and `wranDevCmnSnmpV1V2TrapDestTable`) related to SNMP agent configuration.

Change 13.1.1.3.3 and its subclauses as follows:

13.1.1.3.3 wranDevCmnDeviceConfig

This compound attribute contains the following:

— `wranDevCmnResetDevice`: Object that is used to reset the device
— `wranDevMibGroups`~~`wranDevMibConformance`~~: MIB objects that are required for conformance
— `wranDevMibCompliance`: MIB objects that are required for conformance

13.1.1.3.3.1 wranDevComnResetDevice

There are … reset itself.

13.1.1.3.3.2 wranDevMibGroups~~wranDevMibConformance~~

This object … each group.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.1.3.3.2.1 wranDevMibBsGroup

This MIB group is mandatory. It is made up of wranDevBsTrapControl. ~~wranDevBsTrapControlRegister.~~

13.1.1.3.3.2.2 wranDevMibBsSwUpgradeGroup

This MIB group is mandatory~~optional~~. It is a compound object made up of wranDevBsVendorId, wranDevBsHwId, wranDevBsCurrentSwVersion, wranDevBsDownloadSwVersion, wranDevBsUpgradeFileName, wranDevBsSoftwareUpgradeAdminState, wranDevBsDownloadSwProgress, wranDevBsSoftwareUpgradeTimeStamp. It contains the values of the most recent/current entry in wranDevBsSoftwareUpgradeTable.

13.1.1.3.3.2.3 wranDevMibCpeGroup

This MIB group is mandatory. It is a compound object made up of wranDevCpeMicConfigSetting, wranDevCpeVendorId~~wranDevBsVendorId~~, wranDevCpeHwId, wranDevCpeConfigFileVersion~~wranDevCpeSwVersion~~, wranDevCpeUpgradeFileName, wranDevCpeSwTftpServer, wranDevCpeTftpServerTimeStamp, wranDevCpeTrapControl~~wranDevCpeTrapControlRegister~~. It contains the values of the most recent/current entry in wranDevCpeConfigFileEncodingTable for a particular CPE.

13.1.1.3.3.2.4 wranDevMibCmnGroup

This MIB … wranDevCmnEventLogTable.

13.1.1.3.3.2.5 wranDevMibBsNotificationGroup

This MIB … wranDevBsLogBuffExceedThresholdTrap.

13.1.1.3.3.2.6 wranDevMibCpeNotificationGroup

This MIB … wranDevCpeLogBuffExceedThresholdTrap.

13.1.1.3.3.2.7 wranDevCpeTrapControlGroup

Contains objects related to enabling/disabling CPE device traps.

13.1.1.3.3.2.8 wranDevBsTrapControlGroup

Contains objects related to enabling/disabling BS device traps.

13.1.1.3.3.3 wranDevMibCompliance

This object indicates which MIB groups in wranDevMibGroups are optional and which ones are mandatory.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2 wranIfBsMib

Change 13.1.2.1 and 13.1.2.1.1 as follows:

13.1.2.1 wranIfBsFm

Exceptions and fault events can be reported by using the traps defined in this MIB. `wranIfBsFm` is made up of the following MIBs: `wranIfBsTrapControl`~~`wranIfBsTrapControlRegister`~~, `wranIfBsTrapDefinition`, `wranIfBsNotifactionObjectsTable`~~`wranIfBsCpeNotifactionObjectsTable`~~, `wranIfBsFmMibGroups`, and `wranIfBsFmMibCompliance`~~`wranIfBsThresholdConfigTable`~~.

13.1.2.1.1 wranIfBsTrapControl~~wranIfBsTrapControlRegister~~

This MIB is a bitmap that is used to disable/enable the following BS traps:
`wranIfBsCpeDynamicServiceNotification`
~~`wranIfBsCpeDynamicServiceFailNotification`~~,
~~`wranIfBsCpeRssiStatusChangeNotification`~~
`wranIfBsSignalPowerMetricsStatusNotification`,
~~`wranIfBsCpeEIRPStatusChangeNotification`~~,
`wranIfBsCpeRegisterNotification`,
`wranIfBsCpeScmNotification`~~`wranIfBsCpeScmFailNotification`~~,
`wranIfBsCpeStartupStatusChangeNotification`,
`wranIfBsThroughputMetricsNotification`,
`wranIfBsNetworkEntryMetricsNotification`,
`wranIfBsPacketErrorRateChangeNotification`,
`wranIfBsUserMetricsChangeNotification`,
`wranIfBsCoexistenceStatusNotification`,
~~`wranIfBsCpeCbpReceptionNotification`~~,
~~`wranIfBsCpeWiMicBeaconMSF1Notification`~~,
~~`wranIfBsCpeWiMicBeaconMSF12Notification`~~,
~~`wranIfBsCpeWiMicBeaconMSF123Notification`~~,
~~`wranIfBsInterFrameSensingStatusNotification`~~,
~~`wranIfBsMeasurementStatusNotification`~~
`wranIfBsBasicCapabilityNotification`, `wranIfBsRangingNotification`, and `wranIfBsAuthMetricsNotification`. Enable of a trap indicates that the trap will be recorded in `wranIfBsCpeNotificationObjectsTable`.

Insert the following new subclauses (13.1.2.1.2 to 13.1.2.1.2.14) after 13.1.2.1.1:

NOTE—For instructions for the former 13.1.2.1.2, see the new 13.1.2.1.3.

13.1.2.1.2 wranIfBsTrapDefinition

This object defines BS related traps for configuration, accounting, performance, and SCM management aspects in `wranIfBsMib`.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.1.2.1 wranIfBsDynamicServiceTrap

This trap contains information related to updating the configuration of either provisioned service flows (`wranIfBsProvSfTable`) or active service flows (`wranIfBsActiveSfTable`).

13.1.2.1.2.2 wranIfBsSignalPowerMetricsTrap

This trap contains information related to updating of signal power metrics (`wranIfBsSignalPowerMetricsTable`).

13.1.2.1.2.3 wranIfBsRegNotificationTrap

This trap contains the information related to indicating successful registration of a CPE (`wranIfBsCpeRegCapabilityRspTable`).

13.1.2.1.2.4 wranIfBsScmNotificationTrap

This trap contains the information related to updating the configuration of the SCM protocol capabilities on a CPE (`wranIfBsCpeScmCapabilityConfigTable`) or current authentication status (`wranIfBsCpeScmAuthConfigTable`).

13.1.2.1.2.5 wranIfBsStartupStatusTrap

This trap contains the information related to changes in a CPE's status with regard to network entry (`wranIfBsStartupMetricsTable`).

13.1.2.1.2.6 wranIfBsTxMetricsTrap

This trap contains the information related to changes in throughput metrics (`wranIfBsThroughputMetricsTable`) or ARQ metrics (`wranIfBsArqMetricsTable`).

13.1.2.1.2.7 wranIfBsNetEntryMetricsTrap

This trap contains the information related to updates in network entry and re-entry latency measurements (`wranIfBsNetworkEntryMetricsTable`).

13.1.2.1.2.8 wranIfBsPktErrorTrap

This trap contains the information related to updates in packet error rate measurements (`wranIfBsPacketErrorRateTable`).

13.1.2.1.2.9 wranIfBsUserMetricsTrap

This trap contains the information related to updates in tracking the number of active and non-active users (`wranIfBsUserMetricsTable`).

13.1.2.1.2.10 wranIfBsCoexistenceTrap

This trap contains the information related to updates in tracking ongoing coexistence transaction (e.g., On-Demand Frame Contention in `wranIfBsCoexistenceStatusTable`), discovery of new potential coexistence sources (`wranIfBsCoexistenceSourceTable`), discovery of resource usage in neighboring networks (`wranIfBsCoexistenceResourceListTable`), and updates to a BS's own coexistence configuration (`wranIfBsCoexistenceCurrentConfigTable`).

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.1.2.11 wranIfBsBasicCapabilityTrap

This trap contains the information related to updates in tracking updates to the basic capability configuration of CPEs (`wranIfBsCpeBasicCapabilityRspTable`).

13.1.2.1.2.12 wranIfBsRangingTrap

This trap contains the information related to updates in tracking status of ranging of (`wranIfBsCpeRngCapabilityCmdTable`).

13.1.2.1.2.13 wranIfBsAuthMetricsTrap

This trap contains the information related to updates in tracking updates to authentication metrics (`wranIfBsAuthenticationMetricsTable`).

13.1.2.1.2.14 wranIfBsDynamicServiceMetricsTrap

This trap contains the information related to updates in tracking metrics for current provisioned and active service flows (`wranIfBsAuthenticationMetricsTable`).

To create a new 13.1.2.1.3 with subclauses, change the former 13.1.2.1.2 and its subclauses as follows:

NOTE—For instructions for the former 13.1.2.1.3, see the deletions after the new 13.1.2.1.3.1.20.

13.1.2.1.3~~13.1.2.1.2~~ wranIfBsNotificationObjectsTable~~wranIfBsCpeNotificationObjectsTable~~

This table contains objects that represents notifications reported in BS fault traps. The table is made up of one or more entries.

13.1.2.1.3.1~~13.1.2.1.2.1~~ wranIfBsNotificationObjectsEntry ~~wranIfBsCpeNotificationObjectsEntry~~

This MIB is a compound object that represents an entry in the MIB object `wranIfBsNotificationsObjectsTable`~~`wranIfBsCpeNotificationsObjectsTable`~~.

13.1.2.1.3.1.1 wranIfBsNotificationObjectsIndex

Index of entry in the table.

13.1.2.1.3.1.2~~13.1.2.1.2.1.1~~ wranIfBsNotificationMacAddr~~wranIfBsCpeNotificationMacAddr~~

The MAC … the notification.

13.1.2.1.3.1.3 wranIfBsDynamicServiceType

Indication if the configuration for a provisioned or active service flow has been configured.

13.1.2.1.3.1.4 wranIfBsDynamicServiceNotificationIndex

Index into `wranIfBsProvSfTable` or `wranIfBsActiveSfTable` that indicates which service flow configuration was added/updated.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.1.3.1.5 wranIfBsSignaPowerNotificationIndex

Index into `wranIfBsSignalPowerMetricsTable` that indicates the entry that contains updated signal power metrics data.

13.1.2.1.3.1.6 wranIfBsBsRegCapabilityNotificationIndex

Index into `wranIfBsCpeRegCapabilityRspTable` that indicates the entry that contains updated registration for a CPE.

13.1.2.1.3.1.7 wranIfBsScmNotificationType

Indication if the configuration of the SCM protocol or the authentication status of a CPE has been updated.

13.1.2.1.3.1.8 wranIfBsScmNotificationIndex

Index into `wranIfBsCpeScmCapabilityConfigTable` that indicates which CPE has updated their SCM configuration, or `wranIfBsCpeScmAuthConfigTable` that indicates which CPE has had their authentication status updated.

13.1.2.1.3.1.9 wranIfBsStartupNotificationIndex

This contains the index of entry in `wranIfBsStartupMetricsTable` that contains data on any changes in a CPE's status with regard to network entry.

13.1.2.1.3.1.10 wranIfBsTxMetricsType

Indication if throughput metrics contained or ARQ Metrics in have been updated.

13.1.2.1.3.1.11 wranIfBsTxMetricsNotificationIndex

Index into `wranIfBsThroughputMetricsTable` that indicates changes in measure throughput metrics, or `wranIfBsArqMetricsTable` that indicates changes in ARQ performance.

13.1.2.1.3.1.12 wranIfBsNetEntryMetricsNotificationIndex

This contains the index of entry in `wranIfBsNetworkEntryMetricsTable` that contains data on any changes in network entry and re-entry latency measurements.

13.1.2.1.3.1.13 wranIfBsPktErrorMetricsNotificationIndex

This contains the index of entry in `wranIfBsPacketErrorRateTable` that contains data on any changes in packet error rate measurements.

13.1.2.1.3.1.14 wranIfBsUserMetricsNotificationIndex

This contains the index of entry in `wranIfBsUserMetricsTable` that contains data on any changes in the number of active and non-active users in the cell.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.1.3.1.15 wranIfBsCoexMetricsType

Indication if ongoing On-Demand Frame Coexistence Transactions, discovery of new potential coexistence resources, discovery of the resource usage in neighboring networks, and whether a BS's own coexistence configuration have been updated.

13.1.2.1.3.1.16 wranIfBsCoexNotificationIndex

Index into `wranIfBsCoexistenaceStatusTable` that indicates changes in ongoing On-Demand Frame Contention transactions, `wranIfBsCoexistenceSourceTable` that indicates changes in the discovery of new potential coexistence sources, `wranIfBsCoexistenceResourceListTable` that indicates discovery of resource usage in neighboring networks, or `wranIfBsCoexistenceCurrentConfigTable` that indicates whether a BS's own coexistence configuration have been updated.

13.1.2.1.3.1.17 wranIfBsBasicNotificationIndex

This contains the index of entry in `wranIfBsCpeBasicCapabilityRspTable` that contains data on any changes in tracking updates to the basic capability configuration of CPEs.

13.1.2.1.3.1.18 wranIfBsRngNotificationIndex

This contains the index of entry in `wranIfBsCpeRngCapabilityCmdTable` that contains data on any changes in tracking updates to the status of ranging of CPEs.

13.1.2.1.3.1.19 wranIfBsAuthNotificationIndex

This contains the index of entry in `wranIfBsAuthenticationMetricsTable` that contains data on any changes in tracking updates to authentication metrics.

13.1.2.1.3.1.20 wranIfBsDynSrvMetricsNotificationIndex

This contains the index of entry in `wranIfBsServiceFlowMetricsTable` that contains information related to tracking metrics of ongoing.

~~**13.1.2.1.2.1.2 wranIfBsCpeStartupStatusChange**~~

~~This object … initialization procedures.~~

~~...~~

~~**13.1.2.1.2.1.17 wranIfBsIntraFrameSensingStatus**~~

~~Indication when … been changed.~~

~~**13.1.2.1.3 wranIfBsThresholdConfigTable**~~

~~This MIB … **13.1.2.1.3.1.4** … EIRP alarm.~~

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Insert the following new subclauses (13.1.2.1.4 with its subclauses and 13.1.2.1.5) after 13.1.2.1.3.1.20:

13.1.2.1.4 wranIfBsFmMibGroups

This object helps define which MIB groups are available in this module (`wranIfBsFm`) and which MIB objects are part of each group.

13.1.2.1.4.1 wranIfBsFmTrapControlGroup

This group contains objects related to enabling/disabling traps use for management of the BS.

13.1.2.1.4.2 wranIfBsFmNotificationGroup

This group contains objects related to traps used for management of the BS.

13.1.2.1.5 wranIfBsFmMibCompliance

MIB objects that are optional or mandatory for `wranIfBsFm` compliance.

Change 13.1.2.2 as follows:

13.1.2.2 wranIfBsCm

This MIB contains various objects related to Configuration Management. Within this MIB, the following tables are handled: `wranIfBsCpeRngCapabilityReqTable`, `wranIfBsCpeRngCapabilityCmdTable`, `wranIfBsCpeBasicCapabilityReqTable`, `wranIfBsCpeBasicCapabilityRspTable`, `wranIfBsCpeRegCapabilityReqTable`, `wranIfBsCpeMeasSupportReqTable`, `wranIfBsCpeRegCapabilityRspTable`, `wranIfBsCpeMeasSupportRspTable`, `wranIfBsCpeAntennaGainTable`, `wranIfBsScmCapabilityConfiguration`, `wranIfBsCpeScmCapabilityConfigTable`, `wranIfBsScmAuthConfigTable`, `wranIfBsActionsTable`, `wranIfBsCpeMulticastConfigTable`, `wranIfBsCoexistenceConfigTable`, `wranIfBsCpeBasicCapabilityCmn`, `wranIfBsCpeRegCapabilityCmn`, `wranIfBsCpeMeasSupportCmn`, `wranIfBsCpeSystemParametersTable`, `wranIfBsCpeRegCapabilityCmn`, `wranIfBsCmMibGroups`, and `wranIfBsCmMibCompliance`. For CBC-REQ/RSP and REG-REQ/RSP there are two MIB object groups that represent entries that are common to Basic and Registered Capability negotiation.

13.1.2.2.1 wranIfBsCpeRngCapabilityReqTable

13.1.2.2.1.1 wranIfBsCpeRngCapabilityReqEntry

Change the subclauses of 13.1.2.2.1.1 as follows:

13.1.2.2.1.1.1 wranIfBsCpeRngCapabilityReqIndex

Index of entry in the table.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.2.1.1.2~~13.1.2.2.1.1.1~~ wranIfBsCpeMacAddress

The MAC … the BS.

13.1.2.2.1.1.3~~13.1.2.2.1.1.2~~ wranIfMmpPn

Current value … is used.

13.1.2.2.1.1.4~~13.1.2.2.1.1.3~~ wranIfCiphertextIcv

Calculated value … (see 8.2.4.6.1.2).

13.1.2.2.1.1.5~~13.1.2.2.1.1.4~~ wranIfRngAnomaly

Indication of … ranging process.

Change 13.1.2.2.2 and its subclauses as follows:

13.1.2.2.2 wranIfBsCpeRngCapabilityCmdTable

This object provides a table containing the ranging configuration the BS is specifying for CPE in the RNG-CMD during network entry. Each table is made up of multiple entries, one for each CPE that a RNG-CMD is sent to, that is defined by `wranIfBsCpeRngCapabilityCmdEntry` ~~`wranIfBsCpeRngCapabilityRspEntry`~~.

13.1.2.2.2.1 wranIfBsCpeRngCapabilityCmdEntry

This object … network entry.

13.1.2.2.2.1.1 wranIfBsCpeRngCapabilityCmdIndex

Index of entry in the table.

13.1.2.2.2.1.2~~13.1.2.2.2.1.1~~ wranIfBsCpeMacAddress

MAC Address … initial ranging.

13.1.2.2.2.1.3~~13.1.2.2.2.1.2~~ wranIfBSCpeStationId

Station ID … initial ranging.

13.1.2.2.2.1.4~~13.1.2.2.2.1.3~~ wranIfTimingAdvance

Timing advance … Table 44.

13.1.2.2.2.1.5~~13.1.2.2.2.1.4~~ wranIfEirpPerSubcarrier

EIRP per … Table 44.

13.1.2.2.2.1.6~~13.1.2.2.2.1.5~~ wranIfOffsetFreqAdjust

Offset frequency … Table 44.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.2.2.1.7~~13.1.2.2.2.1.6~~ wranIfRangingStatus

Ranging status … Table 44.

13.1.2.2.2.1.8~~13.1.2.2.2.1.7~~ wranIfActionSuperFrameNum

The Action … Table 44.

13.1.2.2.2.1.9~~13.1.2.2.2.1.8~~ wranIfCdmaCode

The CDMA … Table 44.

13.1.2.2.2.1.10~~13.1.2.2.2.1.9~~ wranIfTxOpportunityOffset

The Transmission … Table 44.

13.1.2.2.3 wranIfBsCpeBasicCapabilityReqTable

Change 13.1.2.2.3.1 and its subclauses as follows:

13.1.2.2.3.1 wranIfBsCpeBasicCapabilityReqEntry

This object is a compound object that contains ~~the requested configuration of basic~~ information on capabilities ~~by~~ that a CPE has declared to a BS during network entry. The list of objects used to make up `wranIfBsCpeBasicCapabilityReqEntry` can be found in `wranIfBsCpeBasicCapabilityCmn` (13.1.2.2.16).

~~**13.1.2.2.3.1.1 wranIfBsCpeBasicCapabilityReqEntryIndex**~~

~~A unique … this table.~~

~~…~~

~~**13.1.2.2.3.1.11 wranIfCpeScmFlowControl**~~

~~Maximum number … in 7.7.11.3.3.3.~~

13.1.2.2.4 wranIfBsCpeBasicCapabilityRspTable

Change 13.1.2.2.4.1 as follows:

13.1.2.2.4.1 wranIfBsCpeBasicCapabilityRspEntry

This object is a compound object that contains the configuration of basic capabilities BS has selected for a CPE during network entry. This table reflects the current configuration of a CPE's basic capabilities. The list of objects used to make up `wranIfBsCpeBasicCapabilityRspEntry` can be found in `wranIfBsCpeBasicCapabilityCmn` (13.1.2.2.16).

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

~~NOTE—The relevant objects that make up this entry are described in 13.1.2.2.3.1.1 to 13.1.2.2.3.1.11. All items defined for the entry will need to move to the beginning of the ASN.1 formatting of wranIfBsMib.~~

13.1.2.2.5 wranIfBsCpeRegCapabilityReqTable

Change 13.1.2.2.5.1 and its subclauses as follows:

13.1.2.2.5.1 wranIfBsCpeRegCapabilityReqEntry

This object is a compound object that contains the information on the capabilities ~~information for which~~ that a CPE ~~has requested confirmation from~~ declared to the BS, e.g., through sending a REG-REQ to the BS. The objects that make up the entry are defined in `wranIfBsCpeRegCapabilityCmn` (13.1.2.2.17). A REG-REQ message comprises objects within this compound object, `wranIfBsCpeAntennaGainTable` (13.1.2.2.9), and `wranIfBsCpeMeasSupportReqTable` (13.1.2.2.6).

~~**13.1.2.2.5.1.1 wranIfBsRegisteredCpeMacAddress**~~

~~MAC address … configured capabilities.~~

~~…~~

~~**13.1.2.2.5.1.24 wranIfCpeRegistrationTimer**~~

~~CPE Registration … in 7.7.7.3.5.~~

Change 13.1.2.2.6 and its subclauses as follows:

13.1.2.2.6 wranIfBsCpeMeasSupportReqTable~~wranIfBsCpeMeasurementSupportReqTable~~

A compound object representing the Measurement Support IE of REG-REQ/RSP in 7.7.7.3.4.7. It is made up of multiple entries, one for each signal type ~~for which sensing is~~ supported by sensing. Each entry is defined by `wranIfBsCpeMeasSupportReqEntry` ~~`wranIfBsCpeMeasurementSupportReqEntry`~~. Entries for a CPE are ~~only~~ present only if the value for `wranIfSensModeSupportArray` is anything other than “No Sensing.”

13.1.2.2.6.1 wranIfBsCpeMeasSupportReqEntry ~~wranIfBsCpeMeasurementSupportReqEntry~~

A compound object representing entries of Measurement Support IE of REG-REQ in 7.7.7.3.4.7. It is made up of multiple objects. A CPE will have one entry for each Signal Type in the Signal Type Array of the Measurement Support IE. The rest of the objects that represent each entry are defined in `wranIfBsCpeMeasSupportCmn` (13.1.2.2.18).

~~**13.1.2.2.6.1.1 wranIfMeasurementSupportEntryIndex**~~

~~A unique … `wranIfBsCpeMeasurementSupportReqTable`.~~

~~…~~

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

~~**13.1.2.2.6.1.9 wranIfMeasurementRecSensPeriodInterval**~~

~~Recommended length … of frames.~~

13.1.2.2.7 wranIfBsCpeRegCapabilityRspTable

Change 13.1.2.2.7.1 as follows:

13.1.2.2.7.1 wranIfBsCpeRegCapabilityRspEntry

This object is a compound object that contains the capabilities information that a BS has configured for ~~a~~ the CPE~~.~~, e.g., through sending a REG-RSP to the CPE. `wranIfRegCapabilityPermanentStationId` is unique to REG-RSP. The objects that make up the entry are defined in `wranIfBsCpeRegCapabilityCmn` (13.1.2.2.17). A REG-RSP message comprises objects within this compound object and `wranIfBsCpeMeasSupportRspTable` (13.1.2.2.8).

~~NOTE 1—As with CBC-RSP, the entries will contain the objects that have scope in both REG-REQ and REG-RSP object types as the REG-REQ objects, e.g., this entry will be made up of objects in 13.1.2.2.5.1.1-13.1.2.2.15.1.24.~~

~~NOTE 2—In addition to having the objects in 13.1.2.2.5.1.1 through 13.1.2.2.5.1.24, this compound object will have an object containing the permanent station Id when CPE privacy (see 8.7) is being used.~~

Change 13.1.2.2.8 and 13.1.2.2.8.1 as follows:

13.1.2.2.8 wranIfBsCpeMeasSupportRspTable~~wranIfBsCpeMeasurementSupportRspTable~~

A compound object representing the Measurement Support IE of REG-REQ/RSP in 7.7.7.3.4.7. It is made up of multiple entries, one for each signal type that sensing supports. Each entry is defined by `wranIfBsCpeMeasSupportRspEntry`~~`wranIfBsCpeMeasurementSupportRspEntry`~~.

13.1.2.2.8.1 wranIfBsCpeMeasSupportRspEntry wranIfBsCpeMeasurementSupportRspEntry

A compound object representing entries of Measurement Support IE of REG-RSP in 7.7.7.3.4.7. It is made up of multiple objects. A CPE will have one entry for each Signal Type in the Signal Type Array of the Measurement Support IE. Entries for a CPE are ~~only~~ present only if the value for `wranIfSensModeSupportArray` is anything other than "No Sensing." The rest of the objects that represent each entry are defined in `wranIfBsCpeMeasSupportCmn` (13.1.2.2.18).

~~NOTE—This will contain the same objects types, e.g., this entry will be made of the objects in 13.1.2.2.6.1.1 through 13.1.2.2.6.1.9.~~

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Change 13.1.2.2.10 and its subclauses as follows:

13.1.2.2.10 wranIfBsScmCapabilityConfiguration~~wranIfBsCapabilitiesConfigTable~~

This MIB provides a bitmap that describes the cryptographic suites that the BS supports. The list of suites is provided in Table 193. ~~This table is analogous to the `wranIfBsCpeBasicCapabilityRspTable` and `wranIfBsCpeRegCapabilityRspTable`, except there is … contains all the entries specified in `wranIfBsCpeBasicCapabilityRspEntry` and `wranIfBsCpeRegCapabilityRspEntry`.~~

~~**13.1.2.2.10.1 wranIfBsCapabilitiesConfigEntry**~~

~~This object … (`wranIfBsMaxNumRegReqAttempts`)].~~

~~**13.1.2.2.10.1.1 wranIfBsMaxNumRegReqAttempts**~~

~~This object … is 5.~~

~~…~~

~~**13.1.2.2.10.1.37 wranIfBsT17**~~

~~Time allowed … key exchange.~~

Change 13.1.2.2.11 and its subclauses as follows:

13.1.2.2.11 wranIfBsCpeScmCapabilityConfigTable~~wranIfBsMeasurementSupportTable~~

This MIB provides a table that provides contains a listing for the security capabilities for each CPE. Each CPE stores this table, with one entry for itself. On the BS, this table is made up of multiple entries, one for each CPE. Entries on the BS table do not contain the `wranIfBsCpeEapTlsTtlsCredential` object. Each entry is defined by `wranIfBsCpeScmCapabilityConfigEntry`. The list of capabilities is listed in Table 193. ~~A compound object representing default values that a BS uses …is defined by `wranIfMeasurementSupportEntry`.~~

13.1.2.2.11.1 wranIfBsCpeScmCapabilityConfigEntry~~wranIfBsMeasurementSupportEntry~~

This object is a compound object that provides the definition of the entries `wranIfBsCpeScmCapabilityConfigTable`. ~~A compound object representing entries of `wranIfBsMeasurementSupportTable` … Signal Type Array of the Measurement Support IE.~~

~~NOTE—This object is made up … recommendations in Annex A.~~

13.1.2.2.11.1.1 wranIfBsCpeScmCapabilityConfigIndex

Index of entry in the table.

13.1.2.2.11.1.2 wranIfBsCpeScmCapabilityConfigMacAddress

The MAC address of the CPE.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.2.11.1.3 wranIfBsCpeScmCapabilityConfiguration

This MIB provides a bitmap that describes the cryptographic suites that the CPE supports. The list of suites is provided in Table 193.

13.1.2.2.11.1.4 wranIfBsCpeEapTlsTtlsCredentialSize

Size, in number of octets, of X.509 certificate that defines the credential the CPE exchanges with the AAA server to perform authentication.

13.1.2.2.11.1.5 wranIfBsCpeEapTlsTtlsCredential

X.509 certificate that defines the credential the CPE exchanges with the AAA server to perform authentication.

Insert the following new subclauses (13.1.2.2.12 to 13.1.2.2.12.1.11) after 13.1.2.2.11.1.5:

NOTE—For instructions for the former 13.1.2.2.12, see the new 13.1.2.2.13.

13.1.2.2.12 wranIfBsCpeScmAuthConfigTable

This MIB provides a table that provides the configuration of the SCM attributes (e.g., timers and other items relating to the authorization process). This table is made up of one entry, defined by `wranIfBsScmAuthConfigEntry`.

13.1.2.2.12.1 wranIfBsCpeScmAuthConfigEntry

This object is a compound object that defines an entry in `wranIfBsScmAuthConfigTable`.

13.1.2.2.12.1.1 wranIfBsScmAuthConfigIndex

Index of entry in the table.

13.1.2.2.12.1.2 wranIfBsT36

EAP Authentication Timer, T36.

13.1.2.2.12.1.3 wranIfBsT37

Authentication Grace Timer, T37.

13.1.2.2.12.1.4 wranIfBsMaxNumAuthAttempts

Maximum number of Authentication Attempts.

13.1.2.2.12.1.5 wranIfBsT38

Operational Wait Timeout, T38.

13.1.2.2.12.1.6 wranIfBsT39

Rekey Wait Timeout, T39.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.2.12.1.7 wranIfBsT40

GTEK/TEK Grace time, T40.

13.1.2.2.12.1.8 wranIfBsAkLifetime

Lifetime BS assigns to new AK.

13.1.2.2.12.1.9 wranIfBsTekLifetime

Lifetime BS assigns to new TEK.

13.1.2.2.12.1.10 wranIfBsMaxNumSa

Maximum number of SAs for which a CPE can be authorized.

13.1.2.2.12.1.11 wranIfBsT17

Time for CPE to complete authentication and key exchange.

To create a new 13.1.2.2.13 with subclauses, change the former 13.1.2.2.12 and its subclauses as follows:

NOTE—For instructions for the former 13.1.2.2.13, see the new 13.1.2.2.14.

13.1.2.2.13~~13.1.2.2.12~~ wranIfBsActionsTable

This object … `wranIfBsActionsEntry`

13.1.2.2.13.1~~13.1.2.2.12.1~~ wranIfBsActionsEntry

This object … given time.

13.1.2.2.13.1.1 wranIfBsActionsIndex

Index of entry in this table.

13.1.2.2.13.1.2~~13.1.2.2.12.1.1~~ wranIfBsCpeActionsMacAddress

This uniquely … MAC address.

13.1.2.2.13.1.3~~13.1.2.2.12.1.2~~ wranIfBsCpeActionsRngCpe~~wranIfBsCpeActionsRangeCpe~~

When set, … is read.

13.1.2.2.13.1.4~~13.1.2.2.12.1.3~~ wranIfBsCpeActionsDeRegCpe

When set … is specified.

13.1.2.2.13.1.5~~13.1.2.2.12.1.4~~ wranIfBsCpeActionsSchedule~~wranIfBsCpeActionsStatus~~

This object … executed properly.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

To create a new 13.1.2.2.14 with subclauses, change the former 13.1.2.2.13 and its subclauses as follows:

NOTE—For instructions for the former 13.1.2.2.14, see the new 13.1.2.2.15.

13.1.2.2.14~~13.1.2.2.13~~ wranIfBsCpeMcastConfigTable~~wranIfBsCpeMulticastConfigTable~~

This table … multicast group.

13.1.2.2.14.1~~13.1.2.2.13.1~~ wranIfBsCpeMcastConfigEntry~~wranIfBsCpeMulticastEntry~~

This object … membership configuration.

13.1.2.2.14.1.1 wranIfBsCpeMcastConfigIndex

Index of entry in this table.

13.1.2.2.14.1.2~~13.1.2.2.13.1.1~~ wranIfBsCpeMcastMacAddress~~wranIfBsCpeMacAddress~~

This object … `wranIfBsCpeMulticastCid`.

13.1.2.2.14.1.3~~13.1.2.2.13.1.2~~ wranIfBsCpeMcastSid~~wranIfBsMulticastSid~~

This object … multicast group.

13.1.2.2.14.1.4~~13.1.2.2.13.1.3~~ wranIfBsCpeMcastPeriodicAllocParameterM
~~wranIfBsMulticastPeriodicAllocationParameterM~~

This object … multicast transmission.

13.1.2.2.14.1.5~~13.1.2.2.13.1.4~~ wranIfBsCpeMcastPeriodicAllocParameterK
~~wranIfBsMulticastPeriodicAllocationParameterK~~

This object … multicast transmission.

13.1.2.2.14.1.6~~13.1.2.2.13.1.5~~ wranIfBsCpeMcastPeriodicAllocParameterN
~~wranIfBsMulticastPeriodicAllocationParameterN~~

This object … multicast transmission.

To create a new 13.1.2.2.15 with subclauses, change the former 13.1.2.2.14 and its subclauses as follows:

NOTE—For instructions for the former 13.1.2.2.15, see the new 13.1.2.2.23.

13.1.2.2.15~~13.1.2.2.14~~ wranIfBsCoexistenceConfigTable

This table … CBP transmission.

13.1.2.2.15.1~~13.1.2.2.14.1~~ wranIfBsCoexistenceConfigEntry

This object … `wranIfBsCoexistenceConfigTable`.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.2.15.1.1 wranIfBsCoexistenceConfigIndex

Index of entry in this table.

13.1.2.2.15.1.2~~13.1.2.2.14.1.1~~ wranIfBsT34

This governs … is 300 s.

13.1.2.2.15.1.3~~13.1.2.2.14.1.2~~ wranIfBsT33

Time between … spectrum etiquette.

13.1.2.2.15.1.4~~13.1.2.2.14.1.3~~ wranIfBsT32

Wait for … (FC-RSP) message.

13.1.2.2.15.1.5~~13.1.2.2.14.1.4~~ wranIfBsFcw

Frame contention … to them.

13.1.2.2.15.1.6~~13.1.2.2.14.1.5~~ wranIfBsScwBackoffMax

Maximum number … backoff window.

13.1.2.2.15.1.7~~13.1.2.2.14.1.6~~ wranIfBsFcMin

Number of … the BS.

13.1.2.2.15.1.8~~13.1.2.2.14.1.7~~ wranIfBsFcnRange

Exponent, base 2, … the FCN.

13.1.2.2.15.1.9~~13.1.2.2.14.1.8~~ wranIfBsSfRel

Number of … frame contention.

13.1.2.2.15.1.10~~13.1.2.2.14.1.9~~ wranIfBsT35

SCW Backoff … Contention Procedure.

Insert the following new subclauses (13.1.2.2.16 to 13.1.2.2.22.1) after 13.1.2.2.15.1.10:

13.1.2.2.16 wranIfBsCpeBasicCapabilityCmn

This MIB object is a group containing objects that are common to `wranIfBsCpeBasicCapabilityReqEntry` and `wranIfBsCpeBasicCapabilityRspEntry`.

13.1.2.2.16.1 wranIfBasicCapabilityIndex

Index of entry in `wranIfBsCpeBasicCapabilityReqTable` or `wranIfBsCpeBasicCapabilityRspTable`.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.2.16.2 wranIfBasicCapabilityNumAttempts

The current number of attempts that a CPE has attempted basic capability configuration during network entry. This item is set to 0 upon successful completion of registration process and a CPE is admitted into the network. This item is incremented every time a CPE attempts basic capability configuration, but is unsuccessful. If this value reaches the limit set by `wranIfBsMaxNumCbcReqAttempts`, then the BS shall reject the network entry request from the CPE. This object is only pertinent for entries in `wranIfBsCpeBasicCapabilityRspTable` (as the decision to reject basic capability negotiation is made by BS).

13.1.2.2.16.3 wranIfBasicCapabilityMacAddress

The MAC address of the CPE attempting basic capability configuration.

13.1.2.2.16.4 wranIfBasicCapabilityStationId

The Station ID of the CPE attempting basic capability configuration.

13.1.2.2.16.5 wranIfBasicCapabilityMacPduTxandConstruction

An integer value that indicates the methods for transmission and construction of MAC PDUs that the CPE supports. This reflects the setting of the IE defined in 7.7.11.3.1.

13.1.2.2.16.6 wranIfBasicCapabilityMaxCpeTxEirp

An integer value, encoded in hexadecimal, that indicates the maximum EIRP for which the CPE is configured. This reflects the setting of the IE defined in 7.7.11.3.2.1.

13.1.2.2.16.7 wranIfBasicCapabilityCpeDemodulator

A bit map that encodes the DIUCs that the CPE supports. This reflects the setting of the IE defined in 7.7.11.3.2.2.1.

13.1.2.2.16.8 wranIfBasicCapabilityCpeModulator

A bit map that encodes the UIUCs that the CPE supports. This reflects the setting of the IE defined in 7.7.11.3.2.2.2.

13.1.2.2.16.9 wranIfBasicCapabilityCpeScmVersionSupport

Indicator of what version of the SCM protocol that the CPE supports. This reflects the setting of the IE defined in 6.9.11.3.3.1.

13.1.2.2.16.10 wranIfBasicCapabilityCpePnWindowSize

Size of PN_WINDOW (see 7.4) that is used to protect against replay attacks. This reflects the setting of the IE defined in 7.7.11.3.3.2.

13.1.2.2.16.11 wranIfBasicCapabilityCpeScmFlowControl

Maximum number of ongoing SCM transactions that the CPE can support. This reflects the setting of the IE defined in 7.7.11.3.3.3.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.2.17 wranIfBsCpeRegCapabilityCmn

This MIB object is a group containing objects that are common to `wranIfBsCpeRegCapabilityReqEntry` and `wranIfBsCpeRegCapabilityRspEntry`.

13.1.2.2.17.1 wranIfRegCapabilityIndex

Index for unique entry in tables relating to registered capabilities.

13.1.2.2.17.2 wranIfRegCapabilityMacAddress

MAC address of CPE that is currently registered with BS.

13.1.2.2.17.3 wranIfRegCapabilityReqNumAttempts

The current number of attempts that a CPE has attempted network entry. This item is set to 0 upon successful completion of registration process and a CPE is admitted into the network. This item is incremented every time a CPE attempts registration, but is unsuccessful. If this value reaches the limit set by `wranIfBsMaxNumRegReqAttempts`, then the CPE shall restart network entry process.

13.1.2.2.17.4 wranIfRegCapabilityNMEALocStringSize

Size of NMEA location string of the CPE in REG-REQ (see 7.7.7.3.1), in octets.

13.1.2.2.17.5 wranIfRegCapabilityNMEALocString

NMEA location string of the CPE in REG-REQ (see 7.7.7.3.1).

13.1.2.2.17.6 wranIfRegCapabilityCsConfig

Indication in REG-REQ/RSP of how the provider will operate the CPE on an ongoing basis; either with the Ethernet CS only or the IP CS (see 7.7.7.3.2).

13.1.2.2.17.7 wranIfRegCapabilityIpVersion

What version of the IP protocol (either v4 or v6) indicate in REG-REQ/RSP the CPE supports (see 7.7.7.3.3).

13.1.2.2.17.8 wranIfRegCapabilityIpRohcSupport

Indicator in REG-REQ/RSP of whether CPE supports IP Robust Header Compression (ROHC) (see 7.7.7.3.4.1).

13.1.2.2.17.9 wranIfRegCapabilityArqSupport

ARQ Support IE of REG-REQ/RSP in 7.7.7.3.4.2.

13.1.2.2.17.10 wranIfRegCapability2ndMgmtArqWindowSize

Secondary Management flow - ARQ Window Size IE of REG-REQ/RSP defined in 7.7.8.9.17.2.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.2.17.11 wranIfRegCapability2ndMgmtArqRetryTxDelay

Secondary Management flow - Transmitter Delay component of ARQ Retry Timeout IE of REG-REQ/RSP defined in 7.7.8.9.17.3.

13.1.2.2.17.12 wranIfRegCapability2ndMgmtArqRetryRxDelay

Secondary Management flow - Receiver Delay component of ARQ Retry Timeout IE of REG-REQ/RSP defined in 7.7.8.9.17.3.

13.1.2.2.17.13 wranIfRegCapability2ndMgmtArqBlockLifetime

Secondary Management flow - ARQ Block Lifetime IE of REG-REQ/RSP defined in 7.7.8.9.17.4.

13.1.2.2.17.14 wranIfRegCapability2ndMgmtArqSyncLossTimeout

Secondary Management flow - ARQ Sync Loss Timeout IE of REG-REQ/RSP defined in 7.7.8.9.17.5.

13.1.2.2.17.15 wranIfRegCapability2ndMgmtArqDeliverInOrder

Secondary Management flow - ARQ Deliver In Order IE of REG-REQ/RSP defined in 7.7.8.9.17.6.

13.1.2.2.17.16 wranIfRegCapability2ndMgmtArqRxPurgeTimeout

Secondary Management flow - ARQ Rx Purge Timeout IE of REG-REQ/RSP defined in 7.7.8.9.17.7.

13.1.2.2.17.17 wranIfRegCapability2ndMgmtArqBlockSize

Secondary Management flow - ARQ Block Size IE of REG-REQ/RSP defined in 7.7.8.9.17.8.

13.1.2.2.17.18 wranIfRegCapabilityDsxFlowControl

DSx Flow Control IE of REG-REQ/RSP in 7.7.7.3.4.4.

13.1.2.2.17.19 wranIfRegCapabilityMcaFlowControl

MCA Flow Control IE of REG-REQ/RSP in 7.7.7.3.4.5.

13.1.2.2.17.20 wranIfRegCapabilityMaxNumMcastGroups

Maximum Number of Multicast Groups IE of REG-REQ/RSP in 7.7.7.3.4.6.

13.1.2.2.17.21 wranIfRegCapabilitySensModeSupportArray

Value of the "Sensing Mode Support Array" of the Measurement Support IE in REG-REQ/RSP in 7.7.7.3.4.7. If the value of this is set to “No Sensing” then `wranIfBsCpeMeasSupportReqTable` and `wranIfBsCpeMeasSupportRspTable` will not be stored for the CPE.

13.1.2.2.17.22 wranIfRegCapabilityAntennaModelSize

Length of `wranIfRegCapabilityAntennaModel`, in octets (see Manufacturer Specific Antenna Model IE of REG-REQ in 7.7.7.3.4.8).

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.2.17.23 wranIfRegCapabilityAntennaModel

Manufacturer Specific Antenna Model IE of REG-REQ in 7.7.7.3.4.8.

13.1.2.2.17.24 wranIfRegCapabilityCpeResidualDelay

CPE Residual Delay IE of REG-REQ in 7.7.7.3.4.10.

13.1.2.2.17.25 wranIfRegCapability2ndMgmtIpAllocMethod

Method for allocating IP Addresses on Secondary Management Connection IE of REG-REQ/RSP in 7.7.7.3.4.11.

13.1.2.2.17.26 wranIfRegCapabilityCpeOperationalCapability

CPE Operation Capability IE of REG-REQ in 7.7.7.3.4.13.

13.1.2.2.17.27 wranIfRegCapabilityCpeRegistrationTimer

CPE Registration Timer IE of REG-REQ/RSP in 7.7.7.3.5. This value is used to set T30 for the CPE.

13.1.2.2.17.28 wranIfRegCapabilityPermanentSid

Permanent station ID assigned to CPE, when CPE is entering the network under the CPE Privacy method (see 8.7). The format of this IE is defined in 7.7.7.3.4.12.

13.1.2.2.18 wranIfBsCpeMeasSupportCmn

This MIB object is a group containing objects that are common to `wranIfBsCpeMeasSupportReqEntry` and `wranIfBsCpeMeasSupportRspEntry`.

13.1.2.2.18.1 wranIfMeasSupportIndex

Index into entry of tables storing Measurement Support IE that is part of REG-REQ/RSP.

13.1.2.2.18.2 wranIfMeasSupportMacAddress

MAC address of CPE. This corresponds to an entry in wranIfBsCpeRegCapabilityReqTable for a registered CPE.

13.1.2.2.18.3 wranIfMeasSupportSignalType

Signal type to which measurement configuration this entry pertains (see Table 237).

13.1.2.2.18.4 wranIfMeasSupportThreshold

Signed number that signifies the sensitivity threshold for the signal type.

13.1.2.2.18.5 wranIfMeasSupportPd

Probability of detection (PD) for the signal type.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.2.18.6 wranIfMeasSupportMpfa

Maximum Probability of False Alarm for the signal type.

13.1.2.2.18.7 wranIfMeasSupportRecNumSensPeriods

Recommended number of sensing periods required to sense the signal type.

13.1.2.2.18.8 wranIfMeasSupportRecSensPeriodDuration

Recommended duration of sensing periods, units of symbols.

13.1.2.2.18.9 wranIfMeasSupportRecSensPeriodInterval

Recommended length of sensing period interval, units of integer number of frames.

13.1.2.2.19 wranIfBsCpeSystemParametersTable

This table contains objects that define system constants for REG-REQ/RSP, DSx-REQ/RSP, and MCA-RSP transactions. It only has one entry, as defined by `wranIfBsCpeSystemParametersEntry`.

13.1.2.2.19.1 wranIfBsCpeSystemParametersEntry

This is a compound object that defines the entry in `wranIfBsCpeSystemParametersTable`.

13.1.2.2.19.1.1 wranIfBsCpeSystemParametersIndex

Index of entry in the table (defaults to 1).

13.1.2.2.19.1.2 wranIfBsDsxReqRetries

Maximum number of timeout retries for DSx-REQ messages.

13.1.2.2.19.1.3 wranIfBsDsxRspRetires

Maximum number of timeout retries for DSx-RSP messages.

13.1.2.2.19.1.4 wranIfBsT6

Timeout for receiving REG-RSP.

13.1.2.2.19.1.5 wranIfBsT7

Wait for DSx-RSP timeout.

13.1.2.2.19.1.6 wranIfBsT8

Wait for DSA/DSC-RSP timeout.

13.1.2.2.19.1.7 wranIfBsT9

Timeout between BS's transmitting RNG-CMD (success) to a CPE and receiving CBC-REQ from that same CPE.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.2.19.1.8 wranIfBsT10

Wait for Transaction End timeout.

13.1.2.2.19.1.9 wranIfBsT13

Time allowed for a CPE, following receipt of a REG-RSP, to send a TFTP-CPLT message to the BS.

13.1.2.2.19.1.10 wranIfBsT14

Wait for DSx-RSP timeout.

13.1.2.2.19.1.11 wranIfBsT15

Wait for MCA-RSP.

13.1.2.2.19.1.12 wranIfBsT16

Wait for bandwidth request grant.

13.1.2.2.19.1.13 wranIfBsT18

Wait for CBC-RSP timeout.

13.1.2.2.19.1.14 wranIfBsT22

Wait for ARQ-Reset.

13.1.2.2.19.1.15 wranIfBsT26

Wait for TFT-RSP.

13.1.2.2.19.1.16 wranIfBsT27Idle

Maximum time between unicast grants to CPE when BS believe CPE transmission quality is good enough.

13.1.2.2.19.1.17 wranIfBsT27Active

Maximum time between unicast grants to CPE when BS believes CPE transmission quality is not good enough.

13.1.2.2.19.1.18 wranIfBsT28

Time allowed for BS to complete the transmission of the backup/candidate channel list to its CPEs after initial registration by a new CPE, including the database service query.

13.1.2.2.20 wranIfBsCpeRegCapabilityDefTable

This object defines a table containing default values of REG-REQ/RSP IEs. This table can be used by the BS to judge/verify a CPE's REG-REQ and used to construct the REG-RSP message. There is one entry in this table defined by `wranIfBsCpeRegCapabilityDefEntry`.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.2.20.1 wranIfBsCpeRegCapabilityDefEntry

This object defines an entry in `wranIfBsCpeRegCapabilityDefTable`. The objects that make up this entry are defined in `wranIfBsCpeRegCapabilityCmn` (13.1.2.2.17).

13.1.2.2.21 wranIfBsCpeBasicCapabilityDefTable

This object defines a table containing default values of CBC-REQ/RSP IEs. This table can be used by the BS to judge/verify a CPE's CBC-REQ and used to construct the CBC-RSP message. There is one entry in this table defined by `wranIfBsCpeBasicCapabilityDefEntry`. The objects that make up this table are defined in `wranIfBsCpeBasicCapabilityCmn` (13.1.2.2.16).

13.1.2.2.21.1 wranIfBsCpeBasicCapabilityDefEntry

This object defines an entry in `wranIfBsCpeBasicCapabilityDefTable`. The objects that make up this table are defined in `wranIfBsCpeBasicCapabilityCmn` (13.1.2.2.16).

13.1.2.2.22 wranIfBsCpeMeasurementSupportDefault

This Table is a compound object containing default values of used to configure the Measurement Support IE REG-REQ/RSP. This table can be used by the BS to judge/verify the Measurement Support IE in CPE's REG-REQ and used to construct the Measurement Support IE sent by the BS in the REG-RSP message. There is one entry for each signal type, defined by `wranIfBsCpeMeasurementSupportDefaultEntry`.

13.1.2.2.22.1 wranIfBsCpeMeasurementSupportDefaultEntry

A compound object representing the default entries of Measurement Support IE of REG-REQ in 7.7.7.3.4.7. There is one entry for each Signal Type that exists in the Signal Type Array IE in the REG-REQ/RSP. Each entry are defined in `wranIfBsCpeMeasSupportCmn` (13.1.2.2.18).

To create a new 13.1.2.2.23 with subclauses, change the former 13.1.2.2.15 and its subclauses as follows:

13.1.2.2.23~~13.1.2.2.15~~ wranIfBsPhy

This MIB … is supported.

13.1.2.2.23.1~~13.1.2.2.15.1~~ wranIfBsOfdmaPhyUsChannelTable

This object provides a table to describe attributes of upstream channels. It is a compound object that is made up of multiple entries (one for each CPE), each described by `wranIfBsOfdmaPhyUsChannelTableEntry`.

13.1.2.2.23.1.1~~13.1.2.2.15.1.1~~ wranIfBsOfdmaPhyUsChannelEntry

This object is a compound object that represents an entry for the ~~BS~~ upstream channel.

13.1.2.2.23.1.1.1 wranIfBsOfdmaPhyUsChannelIndex

Index of entry in the table.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.2.23.1.1.2 wranIfBsOfdmaPhyUsSid

SID of CPE this entry represents.

13.1.2.2.23.1.1.3 wranIfBsOfdmaPhyUsMacAddress

MAC Address of CPE this entry represents.

13.1.2.2.23.1.1.4~~13.1.2.2.15.1.1.1~~ wranIfBsOfdmaCtBasedResvTimeout

The number … same connection.

13.1.2.2.23.1.1.5~~13.1.2.2.15.1.1.2~~ wranIfBsOfdmaUsCenterFrequency

Upstream center frequency in kHz.

13.1.2.2.23.1.1.6~~13.1.2.2.15.1.1.3~~ wranIfBsOfdmaUsRadioResource

Indicates the … radio resources.

13.1.2.2.23.1.1.7~~13.1.2.2.15.1.1.4~~ wranIfBsOfdmaUsConfigChangeCount

Current UCD change count.

13.1.2.2.23.1.1.8~~13.1.2.2.15.1.1.5~~ wranIfBsOfdmaUsUcsNotificationCodes

Number of … UCS Notification.

13.1.2.2.23.1.1.9~~13.1.2.2.15.1.1.6~~ wranIfBsOfdmaUsInitRngCodes

Number of … initial ranging.

13.1.2.2.23.1.1.10~~13.1.2.2.15.1.1.7~~ wranIfBsOfdmaUsPeriodicRngCodes

Number of … periodic ranging.

13.1.2.2.23.1.1.11~~13.1.2.2.15.1.1.8~~ wranIfBsOfdmaUsBWReqCodes

Number of … bandwidth requests.

13.1.2.2.23.1.1.12~~13.1.2.2.15.1.1.9~~ wranIfBsOfdmaUsPeriodicRngBackoffStart

Represented as … ranging contention.

13.1.2.2.23.1.1.13~~13.1.2.2.15.1.1.10~~ wranIfBsOfdmaUsPeriodicRngBackoffEnd

Represented as … ranging contention.

13.1.2.2.23.1.1.14~~13.1.2.2.15.1.1.11~~ wranIfBsOfdmaUsStartofCodes

Includes first … mod 256.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.2.23.1.1.15~~13.1.2.2.15.1.1.12~~ wranIfBsOfdmaUsNormalizedCnrOverride

This is a list of numbers~~,~~ and follows the specification of the Normalized CNR override as defined in Table 33 and in 8.10.3.2. ~~encoded by a nibble and interpreted by a signed integer. The nibbles are defined in 9.9.4.2.~~ The number encoded by each nibble represents the difference in normalized CNR relative to the previous one.

~~13.1.2.2.15.1.1.13 wranIfBsOfdmaUsNormalizedCnrValue~~

~~A signed … previous line.~~

~~13.1.2.2.15.1.1.14 wranIfBsOfdmaUsCpeUpPowerAdjStep~~

~~CPE-specific up-power offset adjustment step.~~

13.1.2.2.23.1.1.16~~13.1.2.2.15.1.1.15~~ wranIfBsOfdmaUsInitialRangingInterval

Number of … interval allocation.

~~13.1.2.2.15.1.1.16 wranIfBsOfdmaUsTxPowerReport~~

~~Tx Power report.~~

13.1.2.2.23.1.1.17~~13.1.2.2.15.1.1.17~~ wranIfBsOfdmaUsUcsNotificationBackoffStart

Expressed as … notification contention.

13.1.2.2.23.1.1.18~~13.1.2.2.15.1.1.18~~ wranIfBsOfdmaUsUcsNotificationBackoffEnd

Expressed as … notification contention.

13.1.2.2.23.1.1.19~~13.1.2.2.15.1.1.19~~ wranIfBsOfdmaUsInitialRngBackoffStart

Expressed as … ranging contention.

13.1.2.2.23.1.1.20~~13.1.2.2.15.1.1.20~~ wranIfBsOfdmaUsInitialRngBackoffEnd

Expressed as … ranging contention.

13.1.2.2.23.1.1.21~~13.1.2.2.15.1.1.21~~ wranIfBsOfdmaUsBwRequestBackoffStart

Expressed as … BW requests.

13.1.2.2.23.1.1.22~~13.1.2.2.15.1.1.22~~ wranIfBsOfdmaUsBwRequestBackoffEnd

Expressed as … BW requests.

~~13.1.2.2.15.1.1.23 wranIfBsOfdmaUsRelPwrOffsetMacMgmtBurst~~

~~Relative to … message transmission.~~

~~13.1.2.2.15.1.1.24 wranIfBsOfdmaUsInitialTxTiming~~

~~Initial timing reference for US transmissions.~~

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

~~**13.1.2.2.15.1.1.25 wranIfBsOfdmaUsRangingRegion**~~

~~US ranging region definition.~~

13.1.2.2.23.1.1.23~~13.1.2.2.15.1.1.26~~ wranIfBsOfdmaUsUcdInterval

Time between transmission of UCD messages.

13.1.2.2.23.1.1.24~~13.1.2.2.15.1.1.27~~ wranIfBsOfdmaUsUcdTransition

Time BS … UCD message.

13.1.2.2.23.1.1.25~~13.1.2.2.15.1.1.28~~ wranIfBsOfdmaUsClkCmpInterval

Time between … CLK-CMP messages.

13.1.2.2.23.1.1.26~~13.1.2.2.15.1.1.29~~ wranIfBsOfdmaUsT57

Lost US-MAP … the CPE).

13.1.2.2.23.1.1.27~~13.1.2.2.15.1.1.30~~ wranIfBsOfdmaT58

Number of … considered lost.

13.1.2.2.23.1.1.28~~13.1.2.2.15.1.1.31~~ wranIfBsOfdmaUsCdmaRngRetries

Number of … RNG-REQs.

13.1.2.2.23.1.1.29~~13.1.2.2.15.1.1.32~~ wranIfBsOfdmaUsInvRngReq

Number of … RNG-REQs.

13.1.2.2.23.1.1.30~~13.1.2.2.15.1.1.33~~ wranIfBsOfdmaUsMapProcTime

Time provided … that map.

13.1.2.2.23.1.1.31~~13.1.2.2.15.1.1.34~~ wranIfBsOfdmaUsT3

RNG-CMD … RNG-REQ.

13.1.2.2.23.1.1.32~~13.1.2.2.15.1.1.35~~ wranIfBsOfdmaUsT4

Time to … ranging opportunity.

13.1.2.2.23.1.1.33~~13.1.2.2.15.1.1.36~~ wranIfBsOfdmaUsT5

Time to … Change response.

13.1.2.2.23.1.1.34~~13.1.2.2.15.1.1.37~~ wranIfBsOfdmaUsT12

Wait for UCD descriptor.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.2.23.2~~13.1.2.2.15.2~~ wranIfBsOfdmaPhyDsChannelTable

This object provides a table to describe attributes of downstream channels. It is a compound object that is made up of multiple entries (one for each CPE), each described by `wranIfBsOfdmaPhyDsChannelTableEntry`.

13.1.2.2.23.2.1~~13.1.2.2.15.2.1~~ wranIfBsOfdmaPhyDsChannelTableEntry

This object is a compound object that represents an entry for each ~~the BS~~ downstream channel in each BS.

13.1.2.2.23.2.1.1 wranIfBsOfdmaPhyDsChannelIndex

Index of entry in the table.

13.1.2.2.23.2.1.2 wranIfBsOfdmaDsBsId

BS ID (MAC Address) of base station.

13.1.2.2.23.2.1.3~~13.1.2.2.15.2.1.1~~ wranIfBsOfdmaDsEirp

The equivalent … transmitter.

13.1.2.2.23.2.1.4~~13.1.2.2.15.2.1.2~~ wranIfBsOfdmaDsChannelNumber

Current operating channel.

13.1.2.2.23.2.1.5~~13.1.2.2.15.2.1.3~~ wranIfBsOfdmaDsPhyMaxEirp

Initial ranging … of 1 dBm.

13.1.2.2.23.2.1.6~~13.1.2.2.15.2.1.4~~ wranIfBsOfdmaDsCenterFreq

DS center frequency in kHz.

~~13.1.2.2.15.2.1.5 wranIfBsOfdmaDsBsId~~

~~Base Station Id.~~

13.1.2.2.23.2.1.7~~13.1.2.2.15.2.1.6~~ wranIfBsOfdmaDsMacVersion

The MAC … is conformant.

13.1.2.2.23.2.1.8~~13.1.2.2.15.2.1.7~~ wranIfBsOfdmaDsCyclicPrefix

Ratio of … 1/32.

13.1.2.2.23.2.1.9~~13.1.2.2.15.2.1.8~~ wranIfBsOfdmaDsRadioResource

Average ratio … radio resources.

~~13.1.2.2.15.2.1.9 wranIfBsOfdmaDsHysteresisMargin~~

~~When the … network entry.~~

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.2.23.2.1.10~~13.1.2.2.15.2.1.10~~ wranIfBsOfdmaDsCellType

This object … network entry.

13.1.2.2.23.2.1.11~~13.1.2.2.15.2.1.11~~ wranIfBsOfdmaDsConfigChangeCount

Current BS DCD configuration change count.

~~13.1.2.2.15.2.1.12 wranIfBsOfdmaDsPowerControlMode~~

~~Defines the … to CPE.~~

13.1.2.2.23.2.1.12~~13.1.2.2.15.2.1.13~~ wranIfBsOfdmaDsFrameDuration

Duration of the DS portion of a frame.

13.1.2.2.23.2.1.13~~13.1.2.2.15.2.1.14~~ wranIfBsOfdmaDsRssiCinrAvgParameter

Bits 0–3 … averaging parameter.

13.1.2.2.23.2.1.14~~13.1.2.2.15.2.1.15~~ wranIfBsOfdmaDsThresholdAddBsServiceSet

Threshold used … WRAN service.

13.1.2.2.23.2.1.15~~13.1.2.2.15.2.1.16~~ wranIfBsOfdmaDsThresholdDelBsServiceSet

Threshold used … diversity set.

13.1.2.2.23.2.1.16~~13.1.2.2.15.2.1.17~~ wranIfBsOfdmaDsDcdInterval

Time between … DCD messages.

13.1.2.2.23.2.1.17~~13.1.2.2.15.2.1.18~~ wranIfBsOfdmaDsDcdTransition

Time BS … DCD message.

13.1.2.2.23.2.1.18~~13.1.2.2.15.2.1.19~~ wranIfBsOfdmaDsT56

Time since … considered lost.

13.1.2.2.23.2.1.19~~13.1.2.2.15.2.1.20~~ wranIfBsOfdmaDsT1

Wait for DCD timeout.

13.1.2.2.23.2.1.20~~13.1.2.2.15.2.1.21~~ wranIfBsOfdmaDsT2

Wait for broadcast ranging timeout.

13.1.2.2.23.2.1.21~~13.1.2.2.15.2.1.22~~ wranIfBsOfdmaDsT20

Time CPE … given channel.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.2.23.2.1.22~~13.1.2.2.15.2.1.23~~ wranIfBsOfdmaDsT21

Time the … given channel.

13.1.2.2.23.2.1.23~~13.1.2.2.15.2.1.24~~ wranIfBsOfdmaDsTtg

Transmit/Receive Transition Gap.

13.1.2.2.23.3~~13.1.2.2.15.3~~ wranIfBsOfdmaUcdBurstProfileTable

This table … `wranIfBsOfdmaUcdBurstProfileEntry`.

13.1.2.2.23.3.1~~13.1.2.2.15.3.1~~ wranIfBsOfdmaUcdBurstProfileEntry

This is … `wranIfBsOfdmaUcdBurstProfileTable`.

13.1.2.2.23.3.1.1~~13.1.2.2.15.3.1.1~~ wranIfBsOfdmaUcdUiucIndex

The UIUC … UCD message.

~~13.1.2.2.15.3.1.2 wranIfBsOfdmaUcdFecCodeType~~

~~Modulation and FEC for upstream.~~

13.1.2.2.23.3.1.2~~13.1.2.2.15.3.1.3~~ wranIfBsOfdmaUcdUiucExitThreshold

CINR at … is required.

13.1.2.2.23.3.1.3~~13.1.2.2.15.3.1.4~~ wranIfBsOfdmaUcdUiucEntryThreshold

Minimum CINR … is required.

13.1.2.2.23.3.1.4~~13.1.2.2.15.3.1.5~~ wranIfBsOfdmaUcdRangingDataRatio

Difference in … of 1 dB.

13.1.2.2.23.4~~13.1.2.2.15.4~~ wranIfBsOfdmaDcdBurstProfileTable

This table … `wranIfBsOfdmaDcdBurstProfileEntry`.

13.1.2.2.23.4.1~~13.1.2.2.15.4.1~~ wranIfBsOfdmaDcdBurstProfileEntry

This is … `wranIfBsOfdmaDcdBurstProfileTable`.

13.1.2.2.23.4.1.1~~13.1.2.2.15.4.1.1~~ wranIfBsOfdmaDcdDiucIndex

The DIUC … DCD message.

~~13.1.2.2.15.4.1.2 wranIfBsOfdmaDcdFecCodeType~~

~~Modulation and FEC for downstream.~~

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.2.23.4.1.2~~13.1.2.2.15.4.1.3~~ wranIfBsOfdmaDcdDiucExitThreshold

CINR at … is required.

13.1.2.2.23.4.1.3~~13.1.2.2.15.4.1.4~~ wranIfBsOfdmaDcdDiucEntryThreshold

Minimum CINR … is required.

13.1.2.2.23.5~~13.1.2.2.15.5~~ wranIfBsOfdmaDsRegionTable

This table … `wranIfBsOfdmaDsRegionEntry`.

13.1.2.2.23.5.1~~13.1.2.2.15.5.1~~ wranIfBsOfdmaDsRegionEntry

This is … `wranIfBsOfdmaDsRegionTable`.

13.1.2.2.23.5.1.1~~13.1.2.2.15.5.1.1~~ wranIfBsOfdmaDsRegionIndex

Index DS region in table.

13.1.2.2.23.5.1.2~~13.1.2.2.15.5.1.2~~ wranIfBsOfdmaDsDuration

Number of … burst region.

13.1.2.2.23.6~~13.1.2.2.15.6~~ wranIfBsOfdmaUsRegionTable

This table … `wranIfBsOfdmaUsRegionEntry`.

13.1.2.2.23.6.1~~13.1.2.2.15.6.1~~ wranIfBsOfdmaUsRegionEntry

This is compound object that describes each entry in `wranIfBsOfdmaUsRegionTable` ~~`wranIfUsOfdmaDsRegionTable`~~.

13.1.2.2.23.6.1.1~~13.1.2.2.15.6.1.1~~ wranIfBsOfdmaUsRegionIndex

Index US region in table.

13.1.2.2.23.6.1.2~~13.1.2.2.15.6.1.2~~ wranIfBsOfdmaUsDuration

Number of … burst region.

Insert the following new subclauses (13.1.2.2.24 with its subclauses and 13.1.2.2.25) after 13.1.2.2.23.6.1.2:

13.1.2.2.24 wranIfBsCmMibGroups

This object helps define which MIB groups are available in this module (`wranIfBsCm`) and which MIB objects are part of each group.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.2.24.1 wranIfBsCmRangingGroup

This group contains objects related to management of the ranging process.

13.1.2.2.24.2 wranIfBsCmBasicCapabilityGroup

This group contains objects related to management of the CBC-REQ/RSP process.

13.1.2.2.24.3 wranIfBsCmRegCapabilityGroup

This group contains objects related to management of the REG-REQ/RSP process.

13.1.2.2.24.4 wranIfBsCmMeasSupportGroup

This group contains objects related to management of the measurement process.

13.1.2.2.24.5 wranIfBsCpeCmAntennaGroup

This group contains objects related to management of antenna configuration.

13.1.2.2.24.6 wranIfBsScmCmGroup

This group contains objects related to management of the SCM protocol and SCM status on a CPE/BS.

13.1.2.2.24.7 wranIfBsActionsCmGroup

This group contains objects related to management of actions the BS can take.

13.1.2.2.24.8 wranIfBsMulticastCmGroup

This group contains objects related to management of multicast configuration.

13.1.2.2.24.9 wranIfBsCoexistenceCmGroup

This group contains objects related to management of coexistence configuration.

13.1.2.2.24.10 wranIfBsSystemParametersCmGroup

This group contains objects related to management of system parameter configuration.

13.1.2.2.24.11 wranIfBsPhyCmGroup

This group contains objects related to management of PHY configuration.

13.1.2.2.25 wranIfBsCmMibCompliance

MIB objects that are optional or mandatory for `wranIfBsCm` compliance.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.3 wranIfBsAm

13.1.2.3.1 wranIfBsOtaUsageDataRecordTable

13.1.2.3.1.1 wranIfBsOtaUsageDataRecordEntry

Change the subclauses of 13.1.2.3.1.1 as follows:

13.1.2.3.1.1.1 wranIfBsOtaUsageDataRecordIndex

Index of entry in this table.

13.1.2.3.1.1.2~~13.1.2.3.1.1.1~~ wranIfBsOtaUsageSid~~wranIfBsSid~~

A 9-bit … carrying traffic.

13.1.2.3.1.1.3~~13.1.2.3.1.1.2~~ wranIfBsOtaUsageFid~~wranIfBsFid~~

A 3-bit … `wranIfBsServiceFlowId`).

13.1.2.3.1.1.4~~13.1.2.3.1.1.3~~ wranIfBsOtaUsageSessionId~~wranIfBsSessionId~~

An identifier … is changing.

~~13.1.2.3.1.1.4 wranIfBsServiceFlowId~~

~~31-bit identifier … of CPEs).~~

13.1.2.3.1.1.5 wranIfBsOtaUsageMacSduCount~~wranIfBsMacSduCount~~

Counter of … and US.

13.1.2.3.1.1.6 wranIfBsOtaUsageOctetCount~~wranIfBsOctetCount~~

Counter of … air interface.

13.1.2.3.1.1.7 wranIfBsOtaUsageSessionStartTime~~wranIfBsSessionStartTime~~

Date and … was established.

13.1.2.3.1.1.8 wranIfBsOtaUsageSessionEndTime~~wranIfBsSessionEndTime~~

Date and… was ended.

13.1.2.3.1.1.9 wranIfBsOtaUsageQoSServiceFlowListSize ~~wranIfBsOtaQoSProfileIndex~~

Number of items in `wranIfBsOtaUsageQoSServiceFlowList`.~~This index points to entry in QoS Profile table that defines the QoS parameter set used in the session.~~

13.1.2.3.1.1.10 wranIfBsOtaUsageQoSServiceFlowList

A list of SFIDs for each service flow active during this session (i.e., a list of SFIDs that pertain to service flows as defined in `wranIfBsActiveSfTable`).

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.3.1.1.11 wranIfBsOtaUsageQoSProfileListSize

Number of items in `wranIfBsOtaUsageQoSProfileList`.

13.1.2.3.1.1.12 wranIfBsOtaUsageQoSProfileList

A list of indexes into `wranIfBsScTable`, that point to the definition of the QoS parameter set of each service flow listed in `wranIfBsOtaUsageQoSServiceFlowList` (and hence were active during this session).

Insert the following new subclauses (13.1.2.3.2, 13.1.2.3.2.1, and 13.1.2.3.3) after 13.1.2.3.1.1.12:

13.1.2.3.2 wranIfBsAmMibGroups

This object helps define which MIB groups are available within this module and which MIB objects are part of each group.

13.1.2.3.2.1 wranIfBsOtaUsageDataGroup

This group contains objects related to tracking of OTA resources per CPE.

13.1.2.3.3 wranIfBsAmMibCompliance

MIB objects that are optional and mandatory for `wranIfBsAm` compliance.

13.1.2.4 wranIfBsPm

Change the second list item in the dashed list in 13.1.2.4 as follows:

— `wranIfBsSignalPowerMetricsTable`~~`wranIfBsRssiCinrMetricsTable`~~: Helps track metrics related to measurement of CPE upstream signal by BS and BS downstream signal by CPE.

Insert the following list items at the end of the dashed list in 13.1.2.4:

— `wranIfBsPmMibGroups`: Helps define which MIB groups are available within this module and which MIB objects are part of each group.
— `wranIfBsPmMibCompliance`: Defines which groups are optional and mandatory for wranIfBsPm compliance.

13.1.2.4.1 wranIfBsPmConfigurationTable

13.1.2.4.1.1 wranIfBsPmConfigurationEntry

Change the subclauses of 13.1.2.4.1.1 as follows:

13.1.2.4.1.1.1 wranIfBsPmConfigurationEntryIndex

Index of entry in the table (defaults to 1).

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.4.1.1.2~~13.1.2.4.1.1.1~~ wranIfBsGranularityInterval

Data rate statistics captured in ~~wranIfBsDataRateStatisticsTable,~~ wranIfBsSignalPowerMetricsTable, wranIfBsStartupMetricsTable, wranIfBsThroughputMetricsTable, wranIfBsNetworkEntryMetricsTable, wranIfBsPacketErrorRateTable, wranIfBsUserMetricsTable, wranIfBsServiceFlowMetricsTable, wranIfBsArqMetricsTable, and wranIfBsAuthenticationMetricsTable are measured over the time interval this object specifies.

13.1.2.4.1.1.3~~13.1.2.4.1.1.2~~ wranIfBsCountersReportInterval

This MIB … the NCMS.

13.1.2.4.1.1.4~~13.1.2.4.1.1.3~~ wranIfBsPmMeasurementBitmap

~~This MIB object is a~~ A 13-bit bitmap indicating which of the measurement tables are enabled or disabled. When a position in bitmap is set (=1), that measurement table is enabled; when it is unset (=0), the table is disabled.

Change 13.1.2.4.2 and its subclauses as follows:

13.1.2.4.2 wranIfBsSignalPowerMetricsTable~~wranIfBsRssiCinrMetricsTable~~

This MIB object contains a table that records BS upstream measurement of a CPE's transmissions as well as CPE measurement of BS downstream signal. The data is stored as a histogram. This table is made up of entries defined by wranIfBsSignalPowerMetricsEntry~~wranIfBsRssiCinrMetricsEntry~~. Each entry is uniquely identified by the CPE's MAC address and the index of the entry in the histogram.

13.1.2.4.2.1 wranIfBsSignalPowerMetricsEntry~~wranIfBsRssiCinrMetricsTable~~

This is a compound object made up objects that represent an entry in wranIfBsSignalPowerMetricsTable~~wranIfBsRssiCinrMetricsTable~~.

13.1.2.4.2.1.1 wranIfBsSignalPowerMetricsIndex

Index in histogram to which entry pertains.

13.1.2.4.2.1.2~~13.1.2.4.2.1.1~~ wranIfBsCpeMacAddress

MAC address of the CPE.

~~13.1.2.4.2.1.2 wranIfBsCpeHistogramIndex~~

~~Index in … entry pertains.~~

13.1.2.4.2.1.3 wranIfBsChannelDirection

Direction of … was done.

. . .

13.1.2.4.2.1.11 wranIfBsStdDevRssiReport

Standard Deviation RSSI report.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.4.2.1.12 wranIfBsMaxEIRPReport

Max EIRP Report.

13.1.2.4.2.1.13 wranIfBsPerScEIRPReport

Per Subchannel EIRP Report.

Change 13.1.2.4.3 and its subclauses as follows:

13.1.2.4.3 wranIfBsStartupMetricsTable

This MIB provides a table to track how CPEs perform during initial network entry and re-entry. This table is made of one entry~~entries~~, defined by `wranIfBsStartupMetricsEntry`. This ~~There is one~~ entry reflects startup metrics recorded during the current reporting session~~for each sector of the BS~~.

13.1.2.4.3.1 wranIfBsStartupMetricsEntry

This object … `wranIfBsStartupMetricsTable`.

13.1.2.4.3.1.1 wranIfBsStartupMetricsIndex

Index for entry in this table.

13.1.2.4.3.1.2~~13.1.2.4.3.1.1~~ wranIfBsNumAuthAttempt

A counter … authentication attempts.

13.1.2.4.3.1.3~~13.1.2.4.3.1.2~~ wranIfBsNumAuthSuccess

A counter … handshake completions.

13.1.2.4.3.1.4~~13.1.2.4.3.1.3~~ wranIfBsAuthSuccessRate

Success rate … (`wranIfBsNumAuthSuccess/wranIfBsNumAuthAttempt`).

13.1.2.4.3.1.5~~13.1.2.4.3.1.4~~ wranIfBsNumRangingAttempt

Number of … requests received.

13.1.2.4.3.1.6~~13.1.2.4.3.1.5~~ wranIfBsNumRangingSuccess

Number of … responses sent.

13.1.2.4.3.1.7~~13.1.2.4.3.1.6~~ wranIfBsRangingSuccessRate

Success rate … (`wranIfBsNumRangingSuccess/wranIfBsNumRangingAttempt`).

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.4.4 wranIfBsThroughputMetricsTable

13.1.2.4.4.1 wranIfBsThroughputMetricsEntry

Change the subclauses of 13.1.2.4.4.1 as follows:

13.1.2.4.4.1.1 wranIfBsThroughputMetricsIndex

Index of entry in the table.

13.1.2.4.4.1.2~~13.1.2.4.4.1.1~~ wranIfBsAvgDsUserThroughput

This records … over time.

13.1.2.4.4.1.3~~13.1.2.4.4.1.2~~ wranIfBsAvgUsUserThroughput

This records … over time.

13.1.2.4.4.1.4~~13.1.2.4.4.1.3~~ wranIfBsAvgDsMacThroughput

This records … over time.

13.1.2.4.4.1.5~~13.1.2.4.4.1.4~~ wranIfBsAvgUsMacThroughput

This records … over time.

13.1.2.4.4.1.6~~13.1.2.4.4.1.5~~ wranIfBsAvgDsPhyThroughput

This records … over time.

13.1.2.4.4.1.7~~13.1.2.4.4.1.6~~ wranIfBsAvgUsPhyThroughput

This records … over time.

13.1.2.4.4.1.8~~13.1.2.4.4.1.7~~ wranIfBsPeakDsUserThroughput

This records … over time.

13.1.2.4.4.1.9~~13.1.2.4.4.1.8~~ wranIfBsPeakUsUserThroughput

This records … over time.

13.1.2.4.4.1.10~~13.1.2.4.4.1.9~~ wranIfBsPeakDsMacThroughput

This records … over time.

13.1.2.4.4.1.11~~13.1.2.4.4.1.10~~ wranIfBsPeakUsMacThroughput

This records … over time.

13.1.2.4.4.1.12~~13.1.2.4.4.1.11~~ wranIfBsPeakDsPhyThroughput

This records … over time.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.4.4.1.13~~13.1.2.4.4.1.12~~ wranIfBsPeakUsPhyThroughput ~~wranIfBsAvgUsPhyThroughput~~

This records … over time.

13.1.2.4.4.1.14~~13.1.2.4.4.1.13~~ wranIfBsAvgDsCellEdgeThroughput

This records … using QPSK.

13.1.2.4.4.1.15~~13.1.2.4.4.1.14~~ wranIfBsAvgUsCellEdgeThroughput

This records … using QPSK.

~~**13.1.2.4.4.1.15 wranIfBsNumThroughputMeasurements**~~

~~This tracks … throughput measurements.~~

13.1.2.4.5 wranIfBsNetworkEntryMetricsTable

13.1.2.4.5.1 wranIfBsNetworkEntryMetricsEntry

Change the subclauses of 13.1.2.4.5.1 as follows:

13.1.2.4.5.1.1 wranIfBsNetworkEntryMetricsIndex

Index into entry in the table.

13.1.2.4.5.1.2~~13.1.2.4.5.1.1~~ wranIfBsAvgNetworkEntryLatency

Average network … in seconds.

13.1.2.4.5.1.3~~13.1.2.4.5.1.2~~ wranIfBsMaxNetworkEntryLatency

Maximum network … in seconds.

13.1.2.4.5.1.4~~13.1.2.4.5.1.3~~ wranIfBsAvgNetworkReEntryLatency

Average network … in seconds.

13.1.2.4.5.1.5~~13.1.2.4.5.1.4~~ wranIfBsMaxNetworkReEntryLatency

Maximum network … in seconds.

13.1.2.4.5.1.6~~13.1.2.4.5.1.5~~ wranIfBsNumNetworkEntryAttempts

Number of network entry attempts.

13.1.2.4.5.1.7~~13.1.2.4.5.1.6~~ wranIfBsNumNetworkReEntryAttempts

Number of network re-entry attempts.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.4.6 wranIfBsPacketErrorRateTable

13.1.2.4.6.1 wranIfBsPacketErrorRateEntry

Change the subclauses of 13.1.2.4.6.1 as follows:

13.1.2.4.6.1.1 wranIfBsPacketErrorRateIndex

Index of entry in the table.

13.1.2.4.6.1.2~~13.1.2.4.6.1.1~~ wranIfBsDsPacketsSent

Total number … has sent.

13.1.2.4.6.1.3~~13.1.2.4.6.1.2~~ wranIfBsDsPacketsErrored

Total number … been acknowledged.

13.1.2.4.6.1.4~~13.1.2.4.6.1.3~~ wranIfBsDsPacketErrorRate

`wranIfBsDsPacketErrorRate` … of 1e-7.

13.1.2.4.6.1.5~~13.1.2.4.6.1.4~~ wranIfBsUsPacketsReceived

Total number … has received.

13.1.2.4.6.1.6~~13.1.2.4.6.1.5~~ wranIfBsUsPacketsErrored

Total number … the BS.

13.1.2.4.6.1.7~~13.1.2.4.6.1.6~~ wranIfBsUsPacketErrorRate

`wranIfBsUsPacketErrorRate` … of 1e-7.

13.1.2.4.7 wranIfBsUserMetricsTable

13.1.2.4.7.1 wranIfBsUserMetricsEntry

Change the subclauses of 13.1.2.4.7.1 as follows:

13.1.2.4.7.1.1 wranIfBsUserMetricsIndex

Index of entry in the table.

13.1.2.4.7.1.2~~13.1.2.4.7.1.1~~ wranIfBsNumActiveUsers

Total number … on them.

13.1.2.4.7.1.3~~13.1.2.4.7.1.2~~ wranIfBsNumTotalUsers

Total number … (REG-REQ/RSP) process.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

~~**13.1.2.4.7.1.3 wranIfBsNumTimeoutUsers**~~

~~Total number of users that are in Timeout.~~

Change 13.1.2.4.8 and its subclauses as follows:

13.1.2.4.8 wranIfBsServiceFlowMetricsTable

This MIB object provides a table to track metrics related to service flows. This table is made up of one entry, ~~multiple entries, one for each BS sector.~~ Each entry is defined by `wranIfBsServiceFlowMetricsEntry`.

13.1.2.4.8.1 wranIfBsServiceFlowMetricsEntry

This object … `wranIfBsServiceFlowMetricsTable`.

13.1.2.4.8.1.1 wranIfBsServiceFlowMetricsIndex

Index of entry in the table.

13.1.2.4.8.1.2~~13.1.2.4.8.1.1~~ wranIfBsNumDsaReq

Number of … reporting period.

13.1.2.4.8.1.3~~13.1.2.4.8.1.2~~ wranIfBsNumDsaReqSuccess

Number of … particular DSA-REQ.

13.1.2.4.8.1.4~~13.1.2.4.8.1.3~~ wranIfBsDsaSuccessRate

`wranIfBsNumDsaSuccessRate` … × 100.

13.1.2.4.8.1.5~~13.1.2.4.8.1.4~~ wranIfBsNumDscReq

Number of … reporting period.

13.1.2.4.8.1.6~~13.1.2.4.8.1.5~~ wranIfBsNumDscReqSuccess

Number of … particular DSC-REQ.

13.1.2.4.8.1.7~~13.1.2.4.8.1.6~~ wranIfBsDscSuccessRate

`wranIfBsNumDscSuccessRate` … × 100.

13.1.2.4.8.1.8~~13.1.2.4.8.1.7~~ wranIfBsNumDsdReq

Number of … reporting period.

13.1.2.4.8.1.9~~13.1.2.4.8.1.8~~ wranIfBsNumDsdReqSuccess

Number of … particular DSD-REQ.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.4.8.1.10~~13.1.2.4.8.1.9~~ wranIfBsDsdSuccessRate

`wranIfBsNumDsdSuccessRate` … × 100.

13.1.2.4.8.1.11~~13.1.2.4.8.1.10~~ wranIfBsMaxActiveServiceFlow

Maximum number … reporting period.

13.1.2.4.8.1.12~~13.1.2.4.8.1.11~~ wranIfBsAvgActiveServiceFlow

Average number … reporting period.

13.1.2.4.8.1.13~~13.1.2.4.8.1.12~~ wranIfBsMaxProvisionedServiceFlow

Maximum number … reporting period.

13.1.2.4.8.1.14~~13.1.2.4.8.1.13~~ wranIfBsAvgProvisionedServiceFlow

Average number … reporting period.

13.1.2.4.8.1.15~~13.1.2.4.8.1.14~~ wranIfBsMaxDsServiceFlow

Maximum number … reporting period.

13.1.2.4.8.1.16~~13.1.2.4.8.1.15~~ wranIfBsMaxUsServiceFlow

Maximum number … reporting period.

13.1.2.4.8.1.17~~13.1.2.4.8.1.16~~ wranIfBsAvgDsServiceFlow

Average number … reporting period.

13.1.2.4.8.1.18~~13.1.2.4.8.1.17~~ wranIfBsAvgUsServiceFlow

Average number … reporting period.

13.1.2.4.8.1.19~~13.1.2.4.8.1.18~~ wranIfBsNumSfidAllocated

Number of … reporting period.

13.1.2.4.9 wranIfBsArqMetricsTable

13.1.2.4.9.1 wranIfBsArqMetricsEntry

Change the subclauses of 13.1.2.4.9.1 as follows:

13.1.2.4.9.1.1 wranIfBsArqMetricsIndex

Index of entry in the table.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.4.9.1.2~~13.1.2.4.9.1.1~~ wranIfBsDsNumArqBlocks

Total number … reporting period.

13.1.2.4.9.1.3~~13.1.2.4.9.1.2~~ wranIfBsDsNumArqBlocksDropped

Total number … at retransmission.

13.1.2.4.9.1.4~~13.1.2.4.9.1.3~~ wranIfBsDsArqBlockErrorRate

wranIfBsDsArqBlockErrorRate … of 1e-7.

13.1.2.4.9.1.5~~13.1.2.4.9.1.4~~ wranIfBsDsNumArqBlockReTx ~~wranIfBsDsNumArqBlockReTransmissions~~

Total number … were retransmitted.

13.1.2.4.9.1.6~~13.1.2.4.9.1.5~~ wranIfBsDsArqBlockEfficiency

wranIfBsDsArqBlockEfficiency = (wranIfBsDsNumArqBlockReTx ~~wranIfBsDsNumArqBlockReTransmissions~~ / wranIfBsDsNumArqBlocks) × 10000000, in units of 1e-7.

13.1.2.4.9.1.7~~13.1.2.4.9.1.6~~ wranIfBsUsNumArqBlocks

Total number … reporting period.

13.1.2.4.9.1.8 wranIfBsUsNumArqBlocksDropped

Total number of US ARQ blocks that were dropped, due to unsuccessful attempts at retransmission.

13.1.2.4.9.1.9 wranIfBsUsArqBlockErrorRate

wranIfBsUsArqBlockErrorRate = (wranIfBsUsNumArqBlocksDropped / wranIfBsUsNumArqBlocks) × 10000000, in units of 1e-7.

13.1.2.4.9.1.10~~13.1.2.4.9.1.7~~ wranIfBsUsNumArqBlockReTx ~~wranIfBsUsNumArqBlockReTransmissions~~

Total number … reporting period.

13.1.2.4.9.1.11~~13.1.2.4.9.1.8~~ wranIfBsDsArqBlockEfficiency

wranIfBsUsArqBlockEfficiency = (wranIfBsUsNumArqBlockReTx ~~wranIfBsUsNumArqBlockRetransmissions~~ / wranIfBsUsNumArqBlocks) × 10000000, in units of 1e-7.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.4.10 wranIfBsAuthenticationMetricsTable

13.1.2.4.10.1 wranIfBsAuthenticationMetricsEntry

Change the subclauses of 13.1.2.4.10.1 as follows:

13.1.2.4.10.1.1 wranIfBsAuthenticationMetricsIndex

Index of entry in the table.

13.1.2.4.10.1.2~~13.1.2.4.10.1.1~~ wranIfBsMgmtAuthErrors ~~wranIfBsMgmtAuthenticationErrors~~

A counter … properly authenticated.

13.1.2.4.10.1.3~~13.1.2.4.10.1.2~~ wranIfBsDataAuthErrors ~~wranIfBsDataAuthenticationErrors~~

A counter … properly authenticated.

13.1.2.4.10.1.4~~13.1.2.4.10.1.3~~ wranIfBsWiMicAuthErrors ~~wranIfBsWiMicAuthenticationErrors~~

A counter … properly authenticated.

13.1.2.4.10.1.5~~13.1.2.4.10.1.4~~ wranIfBsCbpAuthErrors ~~wranIfBsCbpAuthenticationErrors~~

A counter … properly authenticated.

13.1.2.4.11 wranIfBsCoexistenceStatusTable

13.1.2.4.11.1 wranIfBsCoexistenceStatusEntry

Change the subclauses of 13.1.2.4.11.1 as follows:

13.1.2.4.11.1.1 wranIfBsCoexistenceStatusIndex

Index of entry in the table.

13.1.2.4.11.1.2~~13.1.2.4.11.1.1~~ wranIfBsContentionChannel

Channel number … contented for).

13.1.2.4.11.1.3~~13.1.2.4.11.1.2~~ wranIfBsFCREQSourceID~~wranIfBsFrameContentionSourceID~~

BS ID … the FC-REQ.

13.1.2.4.11.1.4~~13.1.2.4.11.1.3~~ wranIfBsFrameContentionSeqNum

Sequence number … FC-REQ message.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.4.11.1.5~~13.1.2.4.11.1.4~~ wranIfBsFrameContentionNumber

Value of … the FC-REQ.

13.1.2.4.11.1.6~~13.1.2.4.11.1.5~~ wranIfBsContentionReqFrameIndexVector

Bitmap index … current one.

13.1.2.4.12 wranIfBsCoexistenceSourceTable

13.1.2.4.12.1 wranIfBsCoexistenceSourceEntry

Change the subclauses of 13.1.2.4.12.1 as follows:

13.1.2.4.12.1.1 wranIfBsCoexistenceSourceIndex

Index of entry in the table.

13.1.2.4.12.1.2~~13.1.2.4.12.1.1~~ wranIfBsCBPSourceID~~wranIfBsMacAddress~~

BS ID … Table 9).

13.1.2.4.12.1.3~~13.1.2.4.12.1.2~~ wranIfBsSchDataIndex

SCH Data … this table.

13.1.2.4.12.1.4~~13.1.2.4.12.1.3~~ wranIfBsSchData

SCH Data … `wranIfBsSchDataIndex`.

13.1.2.4.13 wranIfBsCoexistenceResourceListTable

13.1.2.4.13.1 wranIfBsCoexistenceResourceListEntry

Change the subclauses of 13.1.2.4.13.1 as follows:

13.1.2.4.13.1.1 wranIfBsCoexistenceResourceListIndex

Index of entry in the table. When set to 1, refers to a BS own Coexistence Resource.

13.1.2.4.13.1.2~~13.1.2.4.13.1.1~~ wranIfBsCoexistenceResourceID~~wranIfBsMacAddress~~

BS ID … Table 9).

13.1.2.4.13.1.3~~13.1.2.4.13.1.2~~ wranIfBsSelfCoexistenceCapabilityIndicator ~~wranIfBsSelfCoexistenceCapcityIndicator~~

Field within … are null.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

~~**13.1.2.4.13.1.3 wranIfBsNumBackupCandidateChannels**~~

~~Number of … wranIfBsBackupCandidateChannelList.~~

13.1.2.4.13.1.4 wranIfBsNumBackupChannels

Number of backup channels in wranIfBsBackupChannelList ~~wranIfBsBackupCandidateChannelList~~.

13.1.2.4.13.1.5 wranIfBsBackupChannelList~~wranIfBsBackupCandidateChannelList~~

This object is a vector, of the length = 8 bits × wranIfBsNumBackupChannels ~~wranIfBsNumBackupCandidateChannels~~, that contains the backup/candidate channel list received in a CBP burst from a neighbor WRAN.

13.1.2.4.13.1.6 wranIfBsCurrentDSUSSplit

Current US/DS … neighbor WRAN.

. . .

13.1.2.4.13.1.12 wranIfBsScwCycleFrameBitmap

DS/US Change … neighbor WRAN.

13.1.2.4.14 wranIfBsCoexistenceCurrentConfigTable

13.1.2.4.14.1 wranIfBsCoexistenceCurrentConfigEntry

Change the subclauses of 13.1.2.4.14.1 as follows:

13.1.2.4.14.1.1 wranIfBsCoexistenceCurrentConfigIndex

Index of entry in the table.

13.1.2.4.14.1.2~~13.1.2.4.14.1.1~~ wranIfBsContentionChannel

Channel number … was executed.

13.1.2.4.14.1.3~~13.1.2.4.14.1.2~~ wranIfBsFrameContentionSourceID

BS ID … won contention.

13.1.2.4.14.1.4~~13.1.2.4.14.1.3~~ wranIfBsAwardedSeqNum

Sequence number … FC-REQ message.

13.1.2.4.14.1.5~~13.1.2.4.14.1.4~~ wranIfBsContentionRspFrameIndexVector

Sequence number … FC-REQ message.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.4.14.1.6~~13.1.2.4.14.1.5~~ wranIfBsContentionRspFrameReleaseTime

Starting from … contention destination.

Insert the following new subclauses (13.1.2.4.15 with its subclauses and 13.1.2.4.16) after 13.1.2.4.14.1.6:

13.1.2.4.15 wranIfBsPmMibGroups

This object helps define which MIB groups are available within this module and which MIB objects are part of each group.

13.1.2.4.15.1 wranIfBsPmConfigGroup

This group contains objects relate to configuration of measurement records used in `wranIfBsPm`.

13.1.2.4.15.2 wranIfBsPmSignalPowerGroup

This group contains objects related to tracking CPE signal power measurements.

13.1.2.4.15.3 wranIfBsPmStartupGroup

This group contains objects related to tracking CPE performance during network entry and re-entry.

13.1.2.4.15.4 wranIfBsPmThroughputGroup

This group contains objects related to tracking CPE peak/average data rate.

13.1.2.4.15.5 wranIfBsPmNetEntryGroup

This group contains objects related to tracking latency of network entry and re-entry for CPEs.

13.1.2.4.15.6 wranIfBsPmPktErrorGroup

This group contains objects related to tracking packet error rate measurements.

13.1.2.4.15.7 wranIfBsPmUserGroup

This group contains objects related to tracking status of users in the cell.

13.1.2.4.15.8 wranIfBsPmServiceFlowGroup

This group contains objects related to tracking services flow metrics.

13.1.2.4.15.9 wranIfBsPmArqGroup

This group contains objects related to tracking ARQ performance.

13.1.2.4.15.10 wranIfBsPmAuthGroup

This group contains objects related to tracking the number of authentication/encryption errors that occur.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.4.15.11 wranIfBsPmCoexStatusGroup

This group contains objects related to tracking the status of on going coexistence (Frame Contention) transactions.

13.1.2.4.15.12 wranIfBsPmCoexSourceGroup

This group contains objects related to tracking which neighbor BSs are attempting a coexistence (Frame Contention) transaction.

13.1.2.4.15.13 wranIfBsPmCoexResourceGroup

This group contains objects related to tracking what resources are used by neighboring WRANs.

13.1.2.4.15.14 wranIfBsPmCoexConfigGroup

This group contains objects related to tracking what resources have been allocated to neighboring WRANs during coexistence (Frame Contention) transactions.

13.1.2.4.16 wranIfBsPmMibCompliance

MIB objects that are optional and mandatory for `wranIfBsPm` compliance.

Change 13.1.2.5 and its subclauses as follows:

13.1.2.5 wranIfBsScm

This MIB group has objects related to Security Management. The following tables are included in this MIB object:

- ~~`wranIfBsScmCapabilityConfiguration`: Contains information on what cryptographic suite capabilities are supported on the BS.~~
- ~~`wranIfBsCpeCapabilityConfigTable`: Contains information on what cryptographic suite capabilities are supported on the CPE.~~
- ~~`wranIfBsScmAuthConfigTable`: Contains information on configuration of SCM attributes, e.g., timers and constants as defined in Clause 8.~~
- `wranIfBsCpeScmAuthStatusTable`: Contains information related to the current status of CPE authentication.
- `wranIfBsCpeScmSaConfigTable`: Contains information related to attributes of SAs that are configured on CPEs.
- `wranIfBsCpeTekRefreshTable`: Contains information related to ongoing SCM Key-Request/Reply transactions.
- `wranIfBsCBPAuthCACertTable`: Contains CA root certificates used in CBP Authentication.
- `wranIfBsCBPAuthBsImplicitCertTable`: Contains BS implicit certificates used in CBP Authentication.
- `wranIfBsWiMicAuthCertTable`: Contains implicit certificates contained in MSF3 of captured wireless microphone beacons.
- `wranIfBsScmMibGroups`: Defines which MIB groups are available within this module and which MIB objects are part of each group.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

— wranIfBsScmMibCompliance: MIB objects that are optional and mandatory for wranIfBsPm compliance.

~~**13.1.2.5.1 wranIfBsScmCapabilityConfiguration**~~

~~This MIB … Table 193.~~

~~**13.1.2.5.2 wranIfBsCpeScmCapabilityConfigTable**~~

~~This MIB … **13.1.2.5.2.1.2** … Table 193.~~

~~**13.1.2.5.3 wranIfBsScmAuthConfigTable**~~

~~This MIB … **13.1.2.5.3.1.10** … key exchange.~~

13.1.2.5.1~~**13.1.2.5.4**~~ **wranIfBsCpeScmAuthStatusTable**

This object … wranIfBsCpeScmAuthStatusEntry.

13.1.2.5.1.1~~**13.1.2.5.4.1**~~ **wranIfBsCpeScmAuthStatusEntry**

This object … wranIfBsCpeScmAuthStatusTable.

13.1.2.5.1.1.1 wranIfBsCpeAuthStatusIndex

Index of entry in the table.

13.1.2.5.1.1.2~~**13.1.2.5.4.1.1**~~ **wranIfBsCpeScmAuthStatus**

Current s~~S~~tate of CPE's authentication state machine (see 8.2.2.1)~~ that CPE is in~~.

13.1.2.5.1.1.3~~**13.1.2.5.4.1.2**~~ **wranIfBsCpeScmAuthRecentEvent**

Indication of … the ASM.

13.1.2.5.1.1.4~~**13.1.2.5.4.1.3**~~ **wranIfBsCpeScmNumAuthAttempts**

Current number of EAP authentication attempts.

13.1.2.5.1.1.5 wranIfBsCpeScmAuthRecentMsgSize

Size of wranIfBsCpeScmAuthRecentMsg in octets.

13.1.2.5.1.1.6~~**13.1.2.5.4.1.4**~~ **wranIfBsCpeScmAuthRecentMsg**

Contents of … or EAP-Transfer.

13.1.2.5.1.1.7~~**13.1.2.5.4.1.5**~~ **wranIfBsCpeScmAuthEapAuthTimerExpiration**

Indication of … to expire.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.5.1.1.8~~13.1.2.5.4.1.6~~ wranIfBsCpeScmAuthGraceTimer1

Indication of … will expire.

13.1.2.5.1.1.9~~13.1.2.5.4.1.7~~ wranIfBsCpeScmAuthGraceTimer2

Indication of … will expire.

13.1.2.5.1.1.10~~13.1.2.5.4.1.8~~ wranIfBsCpeScmAk1Lifetime

Remaining lifetime for current (active) AK ~~will expire~~.

13.1.2.5.1.1.11~~13.1.2.5.4.1.9~~ wranIfBsCpeScmAk2Lifetime

Remaining lifetime for second generation (non-active) AK ~~will expire~~.

13.1.2.5.1.12 4.12 wranIfBsCpeScmConfigRequestSize

Size of `wranIfBsCpeScmConfigRequest` in octets.

13.1.2.5.1.1.13~~13.1.2.5.4.1.10~~ wranIfBsCpeScmConfigRequest

Contents of … AAA server.

13.1.2.5.1.1.14 wranIfBsCpeScmConfigReplySize

Size of `wranIfBsCpeScmConfigReply` in octets.

13.1.2.5.1.1.15~~13.1.2.5.4.1.11~~ wranIfBsCpeScmConfigReply

Contents of … to CPE.

13.1.2.5.2~~13.1.2.5.5~~ wranIfBsCpeScmSaConfigTable

This object provides a table that provides the configuration of the SA attributes that are related to SAs configured on each CPE. This table is maintained on each CPE as well as on the BS. On the BS, this table represents the configuration of SAs for all CPEs under its control. On the CPE, t~~T~~his table is made up of one entry for each SA that a CPE supports. Each entry is defined by `wranIfBsCpeScmSaConfigEntry`~~`wrnaIfBsCpeScmSaConfigEntry`~~.

13.1.2.5.2.1~~13.1.2.5.5.1~~ wranIfBsCpeScmSaConfigEntry~~wranIfBsCpeScmaConfigEntry~~

This object … `wranIfBsCpeScmSaConfigTable`.

13.1.2.5.2.1.1 wranIfBsCpeScmSaConfigIndex

Index of entry in the table.

13.1.2.5.2.1.2~~13.1.2.5.5.1.1~~ wranIfBsCpeMacAddress

MAC address of the CPE.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.5.2.1.3~~13.1.2.5.5.1.2~~ wranIfBsCpeSaid

SAID of … entry refers.

13.1.2.5.2.1.4~~13.1.2.5.5.1.3~~ wranIfBsCpeSaType

Type of … or Group.

13.1.2.5.2.1.5 wranIfBsCpeCryptoSuiteListSize

Number of items in `wranIfBsCpeCryptoSuiteList`.

13.1.2.5.2.1.6~~13.1.2.5.5.1.4~~ wranIfBsCpeCryptoSuiteList~~wranIfBsCpeCryptoSuiteCapability~~

This ~~MIB~~ object provides a ~~bitmap~~list that describes the cryptographic suites that the CPE supports for this particular SA. The complete list of suites is provided in Table 193.

13.1.2.5.2.1.7~~13.1.2.5.5.1.5~~ wranIfBsCpeActiveTekSequenceNumber ~~wranIfBsCpeTekN-1SequenceNumber~~

The EKS … this SA.

13.1.2.5.2.1.8~~13.1.2.5.5.1.6~~ wranIfBsCpeActiveTekLifetime~~wranIfBsCpeTekN-1Lifetime~~

The remaining lifetime, in units of time (e.g., seconds), for the current (active) generation of the two TEKs that are configured for this SA.

13.1.2.5.2.1.9~~13.1.2.5.5.1.7~~ wranIfBsCpeActiveTekPn~~wranIfBsCpeTekN-1Pn~~

Current value … this SA.

13.1.2.5.2.1.10~~13.1.2.5.5.1.8~~ wranIfBsCpeActiveTekExpireTime ~~wranIfBsCpeTekN-1ExpireTime~~

Time at which current (active) generation of the two TEKS configured for an SA will expire. This time is calculated as a function of the (Reception Time of Key Reply with ~~TEK N-1~~Active TEK) + (`wranIfBsCpeActiveTekLifetime`~~TEK N-1 Lifetime~~).

13.1.2.5.2.1.11~~13.1.2.5.5.1.9~~ wranIfBsCpeNonActiveTekSequenceNumber ~~wranIfBsCpeTekNSequenceNumber~~

The EKS … this SA.

13.1.2.5.2.1.12~~13.1.2.5.5.1.10~~ wranIfBsCpeNonActiveTekLifetime~~wranIfBsCpeTekNLifetime~~

The lifetime … this SA.

13.1.2.5.2.1.13~~13.1.2.5.5.1.11~~ wranIfBsCpeNonActiveTekPn~~wranIfBsCpeTekNPn~~

Current value … this SA.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.5.2.1.1~~13.1.2.5.5.1.12~~ wranIfBsCpeNonActiveTekExpireTime ~~wranIfBsCpeTekNExpireTime~~

Time at … TEK N Lifetime.

13.1.2.5.3~~13.1.2.5.6~~ wranIfBsCpeTekRefreshTable

This MIB … `wranIfBsCpeTekRefreshEntry`.

13.1.2.5.3.1~~13.1.2.5.6.1~~ wranIfBsCpeTekRefreshEntry

This object … `wranIfBsCpeTekRefreshTable`.

13.1.2.5.3.1.1 wranIfBsCpeTekRefreshIndex

Index of entry in the table.

13.1.2.5.3.1.2~~13.1.2.5.6.1.1~~ wranIfBsCpeScmReqTransactionId~~wranIfBsCpeScmReqId~~

Value of ~~SCM~~ Transaction ~~Identifier~~ID field of SCM REQ that carried the corresponding Key-Request message (see Table 160).

13.1.2.5.3.1.3~~13.1.2.5.6.1.2~~ wranIfBsCpeScmKeyReqKeySeqNum

Key Sequence Number of ~~Key Sequence~~ Key-Request message (see Table 165).

13.1.2.5.3.1.4~~13.1.2.5.6.1.3~~ wranIfBsCpeScmKeyReqSaid

SAID for … being requested.

13.1.2.5.3.1.5~~13.1.2.5.6.1.4~~ wranIfBsCpeScmKeyReqGroupKeyIndicator

Indicator of whether ~~or not~~ Key-Request was for a GSA~~ or not~~.

13.1.2.5.3.1.6~~13.1.2.5.6.1.5~~ wranIfBsCpeScmKeyReqCpeRandom

Random number … the Key-Request.

13.1.2.5.4~~13.1.2.5.7~~ wranIfBsCBPAuthCACertTable

This object … `wranIfBsCBPAuthCACertEntry`.

13.1.2.5.4.1~~13.1.2.5.7.1~~ wranIfBsCBPAuthCACertEntry

This object … `wranIfBsCBPAuthCACertTable`.

13.1.2.5.4.1.1 wranIfBsCBPAuthCACertIndex

Index of entry in the table.

13.1.2.5.4.1.2~~13.1.2.5.7.1.1~~ wranIfBsCBPAuthCACertCAID

CA ID, … root certificate.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.5.4.1.3~~13.1.2.5.7.1.2~~ wranIfBsCBPAuthCACertKeyID

Key ID, … root certificate.

13.1.2.5.4.1.4~~13.1.2.5.7.1.3~~ wranIfBsCBPAuthCACertKeyValidityDate

Key Validity … becomes valid.

13.1.2.5.4.1.5~~13.1.2.5.7.1.4~~ wranIfBsCBPAuthCACertKeyValidityTimePeriod

Key Validity Time Period, length of time from Key Validity Date (Not Before) in 6-month increments, during which CA root certificate is valid.

13.1.2.5.4.1.6~~13.1.2.5.7.1.5~~ wranIfBsCBPAuthCACertVersion

Version of … certificate supports.

13.1.2.5.4.1.7~~13.1.2.5.7.1.6~~ wranIfBsCBPAuthCACertECDomainParameters

Elliptic Curve … CA uses.

13.1.2.5.4.1.8 wranIfBsCBPAuthCACertCAPubKrdSize

Size of `wranIfBsCBPAuthCACertCAPubKrd` in octets.

13.1.2.5.4.1.9~~13.1.2.5.7.1.7~~ wranIfBsCBPAuthCACertCAPubKrd

Public Key … root certificate.

~~**13.1.2.5.7.1.8 wranIfBsCBPAuthCACertCAPubK**~~

~~Public Key … root certificate.~~

13.1.2.5.5~~13.1.2.5.8~~ wranIfBsCBPAuthBsImplicitCertTable

This object provides a table to store BS implicit certificates for neighbor WRANs that use CBP authentication. There will be one entry for each BS whose implicit certificate is installed (via this object) on the BS or received by CERT-REQ/RSP. A BS may keep an entry for its own implicit certificate in this object. Each entry is defined by `wranIfBsCBPAuthBsImplicitCertEntry`.

13.1.2.5.5.1~~13.1.2.5.8.1~~ wranIfBsCBPAuthBsImplicitCertEntry

This object … `wranIfBsCBPAuthBsImplicitCertTable`.

13.1.2.5.5.1.1 wranIfBsCBPAuthBsImplicitCertIndex

Index of entry in the table.

13.1.2.5.5.1.2~~13.1.2.5.8.1.1~~ wranIfBsCBPAuthBsImplicitCertBsID

BS ID … belongs to.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.2.5.5.1.3~~13.1.2.5.8.1.2~~ wranIfBsCBPAuthBsImplicitCertCAID

CA ID, … implicit certificate.

13.1.2.5.5.1.4~~13.1.2.5.8.1.3~~ wranIfBsCBPAuthBsImplicitCertKeyID

Key ID, … implicit certificate.

13.1.2.5.5.1.5~~13.1.2.5.8.1.4~~ wranIfBsCBPAuthBsImplicitCertKeyValidityDate

Key Validity … becomes valid.

13.1.2.5.5.1.6~~13.1.2.5.8.1.5~~ wranIfBsCBPAuthBsImplictCertKeyValidityTimePeriod

Key Validity … is valid.

13.1.2.5.5.1.7~~13.1.2.5.8.1.6~~ wranIfBsCBPAuthBsImplictCertVersion

Version of … certificate supports.

13.1.2.5.5.1.8 wranIfBsCBPAuthBsImplictCertPubKrdSize

Size of `wranIfBsCBPAuthBsImplicitCertPubKrd` in octets.

13.1.2.5.5.1.9~~13.1.2.5.8.1.7~~ wranIfBsCBPAuthBsImplictCertPubKrd

Public Key … implicit certificate.

~~**13.1.2.5.8.1.8 wranIfBsCBPAuthBsImplictCertPubK**~~

~~Public Key … implicit certificate.~~

~~**13.1.2.5.8.1.9 wranIfBsCBPAuthBsImplictCertPrKrd**~~

~~Private Key … certificate entries.~~

~~**13.1.2.5.8.1.10 wranIfBsCBPAuthBsImplictCertPrKrd**~~

~~Private Key … other BSs.~~

13.1.2.5.6~~13.1.2.5.9~~ wranIfBsWiMicAuthCertTable

This object provides a table to store wireless microphone implicit certificates contained in MSF3 of decoded wireless microphone beacons. This table is made up of multiple entries, one defined for each unique wireless microphone beacon implicit certificate. Each entry is defined by `wranIfBsWiMicAuthCertEntry`. Entries are added to this table when a wireless microphone beacon (MSF1+MSF2+MSF3) has been successfully received and decoded.

13.1.2.5.6.1~~13.1.2.5.9.1~~ wranIfBsWiMicAuthCertEntry

This object … `wranIfBsWiMicAuthCertTable`.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.2.5.6.1.1 wranIfBsWiMicAuthCertIndex

Index of entry in the table.

13.1.2.5.6.1.2~~13.1.2.5.9.1.1~~ wranIfBsWiMicAuthSrcAddress

Source Address … implicit certificate.

13.1.2.5.6.1.3 wranIfBsWiMicAuthImplicitCertSize

Size of `wranIfBsWiMicAuthImplictCert` in octets.

13.1.2.5.6.1.4~~13.1.2.5.9.1.2~~ wranIfBsWiMicAuthImplicitCert

Wireless microphone … IEEE Std 802.22.1-2010.

13.1.2.5.7 wranIfBsScmMibGroups

This object helps define which MIB groups are available within this module and which MIB objects are part of each group.

13.1.2.5.7.1 wranIfBsScmAuthStatusGroup

This group contains objects related to tracking the current state of a CPEs authentication state machine.

13.1.2.5.7.2 wranIfBsScmSaConfigGroup

This group contains objects related to tracking the configurations of SAs configured on CPEs.

13.1.2.5.7.3 wranIfBsScmTekGroup

This group contains objects related to tracking on going Key-Request transactions.

13.1.2.5.7.4 wranIfBsScmCBPAuthCACertGroup

This group contains objects related to storing CA Root certificates that used to validate BS Implicit Certificates used in CBP authentication.

13.1.2.5.7.5 wranIfBsScmCBPBsCertGroup

This group contains objects related to storing BS implicit certificates used in CBP authentication.

13.1.2.5.7.6 wranIfBsScmWiMicAuthGroup

This group contains objects related to storing wireless microphone beacon (IEEE Std 802.22.1-2010) certificates transmitted in MSF3 of wireless microphone beacons.

13.1.2.5.8 wranIfBsScmMibCompliance

MIB objects that are optional and mandatory for `wranIfBsScm`.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Change 13.1.3 as follows:

13.1.3 wranIfBsSfMgmtMib~~wranIfBsSfMgmt~~

This MIB group provides objects for managing service flows in the network.

Classification rules to be defined by the operator shall be downloadable to the BS and CPEs in a uniform and standardized format. The resulting behavior of a given classification rule shall be standardized and implementation independent. This shall be done by the MIB.

In this MIB group the following tables are defined:

— `wranIfBsProvSfTable`: Contains information about service flows provisioned by the NCMS.
— `wranIfBsScTable`: Contains the QoS parameter set for service flows defined for the supported service classes.
— `wranIfBsActiveSfTable`~~`wranIfBsSfTable`~~: Contains information about dynamic service flows that are created/torn-down on-the-fly.
— `wranIfBsProvClassifierRuleTable`: Contains information about classifier rules as applied to service flows provisioned by the NCMS.
— `wranIfBsClassifierRuleTable`: Contains information about classifier rules as applied to service flows applied to dynamic service flows.
— `wranIfBsSfTrapControl`: Defines trap control related to enabling/disabling service flow management event recording.
— `wranIfBsSfTrapDefinition`: Defines configuration of data recorded with traps.
— `wranIfBsSfNotificationObjectsTable`: Table that tracks information reported by traps.
— `wranIfBsSfMibGroups`: Definition of MIB groups available within `wranIfBsSfMgmtMib`.
— `wranIfBsSfMibCompliance`: Definition of compliance object for `wranIfBsSfMgmtMib`.

13.1.3.1 wranIfBsProvSfTable

13.1.3.1.1 wranIfBsProvSfEntry

Change the subclauses of 13.1.3.1.1 as follows:

13.1.3.1.1.1 wranIfBsProvEntryIndex

Index of entry in the table.

13.1.3.1.1.2~~13.1.3.1.1.1~~ wranIfBsCpeProvMacAddress

MAC address … is provisioned.

13.1.3.1.1.3~~13.1.3.1.1.2~~ wranIfBsProvSfId~~wranIfBsSfId~~

Unique identifier …particular CPE.

13.1.3.1.1.4~~13.1.3.1.1.3~~ wranIfBsProvSfDirection~~wranIfBsSfDirection~~

Indication of … DS SF.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.3.1.1.5~~13.1.3.1.1.4~~ wranIfBsProvScIndex~~wranIfBsScIndex~~

Index into … service flow.

13.1.3.1.1.6~~13.1.3.1.1.5~~ wranIfBsProvCsSpecification~~wranIfBsCsSpecification~~

Indication of which convergence sublayer has been used to encapsulate the higher-layer SDU (see 7.7.8.9.18.1).

13.1.3.1.1.7~~13.1.3.1.1.6~~ wranIfBsProvSfStatus

Indication of whether ~~or not~~ the provisioned service flow is currently provisioned, admitted, or active (see 7.7.8.9.4 and 7.18.2)~~or not~~.

13.1.3.1.1.8~~13.1.3.1.1.7~~ wranIfBsProvSfProvisioningTime

If currently active (see 13.1.3.1.1.7~~13.1.3.1.1.6~~), the time at which the service flow was provisioned.

13.1.3.1.1.9 wranIfBsProvTargetSaid

SAID of SA to which the service flow is being mapped. Provisioned service flows can be mapped to the Primary or Secondary SA of the CPE.

13.1.3.1.1.10 wranIfBsProvClsRuleListSize

Number of `wranIfBsProvClsfrRuleIndex` values in `wranIfBsProvClsRuleList`.

13.1.3.1.1.11 wranIfBsProvClsRuleList

List of `wranIfBsProvClsfrRuleIndex` values pointing to entries in the `wranIfBsProvClassifierRuleTable` that contain packet classification rules assigned to this service flow.

Change 13.1.3.2 and its subclauses as follows:

13.1.3.2 wranIfBsScTable

This MIB object provides a table that describes attributes of provisioned and dynamic service flows, such as the QoS parameter set. This table is made up of multiple entries, one for each service class. Each entry is defined by `wranIfBsScEntry`.

13.1.3.2.1 wranIfBsScEntry

This object … `wranIfBsScTable`.

13.1.3.2.1.1 wranIfBsScIndex

Index value … `wranIfBsScTable`.

13.1.3.2.1.2 wranIfBsQosSfSfid

SFID of service flow.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.3.2.1.3 wranIfBsQosSfFid

FID to which service flow is mapped.

13.1.3.2.1.4 wranIfBsQosServiceClassNameSize

Size, e.g., number of octets, of `wranIfBsQosServiceClassName`.

13.1.3.2.1.5~~13.1.3.2.1.2~~ wranIfBsQosServiceClassName

Defines the name of the service class associated with this entry. If a service class is not assigned, this will be blank.

~~13.1.3.2.1.3 wranIfBsQoSTrafficPriority~~

~~Priority of … bandwidth requests.~~

13.1.3.2.1.6 wranIfBsQosParameterSetType

Indication of whether the QoS Parameter set defined by this entry is applied to the Provisioned, Admitted, or Active parameter set of the service flow.

13.1.3.2.1.7~~13.1.3.2.1.4~~ wranIfBsQosMaxSustainedRate

Peak information/data … per second.

13.1.3.2.1.8~~13.1.3.2.1.5~~ wranIfBsQosTrafficSize

If fixed-length SDUs (see 13.1.3.2.1.12~~13.1.3.2.1.9~~) are enabled, this represents the size of SDU assigned to the service flow. If variable-length SDUs (see 13.1.3.2.1.12~~13.1.3.2.1.19~~) are enabled, this represents the average size of SDU assigned the service flow.

13.1.3.2.1.9~~13.1.3.2.1.6~~ wranIfBsQosMinReservedRate

Minimum required … per second.

13.1.3.2.1.10~~13.1.3.2.1.7~~ wranIfBsQosToleratedJitter

The maximum … service flow.

13.1.3.2.1.11~~13.1.3.2.1.8~~ wranIfBsQosMaxLatency

The maximum … service flow.

13.1.3.2.1.12~~13.1.3.2.1.9~~ wranIfBsQosEnableVariableLengthSdus

Setting this object allows the turning on/off ~~to enable/disable use~~ of variable-length SDU~~s~~ support. Default is to allow use of variable-length SDUs.

13.1.3.2.1.13~~13.1.3.2.1.10~~ wranIfBsQosSchedulingType

The scheduling … is BE.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.3.2.1.14~~13.1.3.2.1.11~~ wranIfBsQosArqEnable

Setting this … is enabled.

13.1.3.2.1.15~~13.1.3.2.1.12~~ wranIfBsQosArqWindowSize

Indication of … is set.

13.1.3.2.1.16~~13.1.3.2.1.13~~ wranIfBsQosArqTxRetryTimeout

Total time before timing out retransmissions of ARQ blocks (in 10-microsecond blocks). For BS, this should include time to compensate for scheduling and the propagation time for transmission.

13.1.3.2.1.17~~13.1.3.2.1.14~~ wranIfBsQosArqRxRetryTimeout

Total time before timing out reception of ARQ block retransmission (in 10-microsecond blocks). For BS, this should include time to compensate for scheduling and the propagation time for transmission.

13.1.3.2.1.18~~13.1.3.2.1.15~~ wranIfBsQosArqBlockLifetime

The maximum … is dropped.

13.1.3.2.1.19~~13.1.3.2.1.16~~ wranIfBsQosArqSyncLossTimeout

Timeout for … become unsynchronized.

13.1.3.2.1.20~~13.1.3.2.1.17~~ wranIfBsQosArqDeliverInOrderEnable

Disable/enables … the transmitter.

13.1.3.2.1.21~~13.1.3.2.1.18~~ wranIfBsQosArqRxPurgeTimeout

How much … is received.

13.1.3.2.1.22~~13.1.3.2.1.19~~ wranIfBsQosArqBlockSizeReq

This object … REG-REQ messages.

13.1.3.2.1.23~~13.1.3.2.1.20~~ wranIfBsQosArqBlockSizeRsp

This object … REG-RSP messages.

13.1.3.2.1.24~~13.1.3.2.1.21~~ wranIfBsQosReqTxPolicy

This value is a bitmap that enables/disables the following capabilities for a service flow: Use of broadcast BW request for US, use of multicast BW request for US only, piggyback BW requests on data for US transmissions, enable/disable fragmentation, enable/disable packing, and use of CRC for MAC PDU (see Table 83).

~~13.1.3.2.1.22 wranIfBsCsSpecification~~

~~The CS … service flow.~~

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

~~**13.1.3.2.1.23 wranIfBsTargetSaid**~~

~~SAID of … being mapped.~~

~~**13.1.3.2.1.24 wranIfBsFsnType**~~

~~Indication of … the connection.~~

Change 13.1.3.3 and its subclauses as follows:

13.1.3.3 wranIfBsActiveSfTable~~wranIfBsSfTable~~

This MIB object provides a table that is used to manage service flows that are currently active between the BS and CPEs. This table is made up of multiple entries, one for each service flow mapped to a particular CPE. Each entry is defined by `wranIfBsActiveSfEntry`~~`wranIfBsSfEntry`~~.

13.1.3.3.1 wranIfBsActiveSfEntry~~wranIfBsSfEntry~~

This object is a compound object that provides the definition of an entry in `wranIfBsActiveSfTable`~~`wranIfBsSfTable`~~.

13.1.3.3.1.1 wranIfBsActiveSfIndex

Index of entry in `wranIfBsActiveSfTable`.

13.1.3.3.1.2~~13.1.3.3.1.1~~ wranIfBsActiveSfSfid~~wranIfBsSfSfid~~

SFID of the active service flow that is assigned to a particular CPE.

~~**13.1.3.3.1.2 wranIfBsSfCid**~~

~~CID (SID … is mapped.~~

13.1.3.3.1.3 wranIfBsActiveSfMacAddress

The 48-bit MAC Address assigned to CPE to which this service flow is mapped.

13.1.3.3.1.4 wranIfBsActiveSfSid

SID of CPE assigned to service flow. If `wranIfBsActiveSfSid` is a multicast SID, there will be multiple entries in this table, one for each `wranIfBsActiveSfMacAddress` assigned to this service flow with the same `wranIfBsActiveSfSid`.

13.1.3.3.1.5~~13.1.3.3.1.3~~ wranIfBsActiveSfDirection~~wranIfBsSfDirection~~

Direction of … BS (US).

13.1.3.3.1.6~~13.1.3.3.1.4~~ wranIfBsActiveSfStatus~~wranIfBsSfState~~

Current state … service flow).

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

~~**13.1.3.3.1.5 wranIfBsSfPriority**~~

~~Priority of … be serviced.~~

~~…~~

~~**13.1.3.3.1.23 wranIfBsSfReqTxPolicy**~~

~~This value … MAC PDU.~~

13.1.3.3.1.7 wranIfBsActiveScIndex

Index into a `wranIfBsScTable` entry that indicates the QoS parameter set for this service flow.

13.1.3.3.1.8~~**13.1.3.3.1.24**~~ **wranIfBsActiveCsSpecification**~~**wranIfBsCsSpecification**~~

The CS … service flow.

13.1.3.3.1.9~~**13.1.3.3.1.25**~~ **wranIfBsActiveTargetSaid**~~**wranIfBsTargetSaid**~~

SAID of … being mapped.

~~**13.1.3.3.1.26 wranIfBsSfFsnType**~~

~~Indication of … the connection.~~

13.1.3.3.1.10 wranIfBsActiveSfClsRuleListSize

Number of items in `wranIfBsActiveClsRuleList`.

13.1.3.3.1.11 wranIfBsActiveSfClsRuleList

List of `wranIfBsClsfrRuleIndex` values pointing to entries in the `wranIfBsClassifierRuleTable` that contain packet classification rules assigned to this service flow.

13.1.3.4 wranIfBsProvClassifierRuleTable

13.1.3.4.1 wranIfBsProvClassifierRuleEntry

Change the subclauses of 13.1.3.4.1 as follows:

13.1.3.4.1.1 wranIfBsProvClsfrRuleIndex~~**wranIfBsProvClsfRuleIndex**~~

Index to … `wranIfBsProvClassiferRuleTable`.

13.1.3.4.1.2 wranIfBsProvClsfrRuleMap

A bitmap that indicates which classification parameters are included in the classification rule. A parameter exists in this rule if the corresponding bit is set to 1.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.3.4.1.3~~13.1.3.4.1.2~~ wranIfBsProvClsfrRulePriority~~wranIfBsProvClsfRulePriority~~

Priority of the classification rule. This determines the order in which classification rules are applied.

13.1.3.4.1.4~~13.1.3.4.1.3~~ wranIfBsProvClsfrRuleIpProtocol~~wranIfBsProvClsfRuleIpProtocol~~

Value of … by IANA.

13.1.3.4.1.5 wranIfBsProvClsfrRuleIpSrcAddrType

Type of IP address that Source IP address from IP header is.

13.1.3.4.1.6~~13.1.3.4.1.4~~ wranIfBsProvClsfrRuleIpSrcAddr~~wranIfBsProvClsfRuleIpSrcAddr~~

Source IP address from IP header.

13.1.3.4.1.7~~13.1.3.4.1.5~~ wranIfBsProvClsfrRuleIpSrcMask~~wranIfBsProvClsfRuleIpSrcMask~~

IP address mask. IP source address (`wranIfBsProvClsfrRuleIpSrcAddr` ~~`wranIfBsProvClsfRuleIpSrcAddr`~~) is matched when output of applying (bitwise AND) this value to IP source address from IP packet.

13.1.3.4.1.8 wranIfBsProvClsfrRuleIpDestAddrType

Type of IP address that Destination IP address from IP header is.

13.1.3.4.1.9~~13.1.3.4.1.6~~ wranIfBsProvClsfrRuleIpDestAddr~~wranIfBsProvClsfRuleIpDestAddr~~

Destination IP address from IP header.

13.1.3.4.1.10~~13.1.3.4.1.7~~ wranIfBsProvClsfrRuleIpDestMask ~~wranIfBsProvClsfRuleIpDestMask~~

IP address mask. IP destination address (`wranIfBsProvClsfrRuleIpDestAddr` ~~`wranIfBsProvClsfRuleIpDestAddr`~~) is matched when output of applying (bitwise AND) this value to IP destination address from IP packet.

13.1.3.4.1.11~~13.1.3.4.1.8~~ wranIfBsProvClsfrRuleSrcPortStart ~~wranIfBsProvClsfRuleSrcPortStart~~

Start (inclusive) of range of source ports against which that ~~that~~ packet will be compared ~~against~~.

13.1.3.4.1.12~~13.1.3.4.1.9~~ wranIfBsProvClsfrRuleSrcPortEnd ~~wranIfBsProvClsfRuleSrcPortEnd~~

End (inclusive) … be compared.

13.1.3.4.1.13~~13.1.3.4.1.10~~ wranIfBsProvClsfrRuleDestPortStart ~~wranIfBsProvClsfRuleDestPortStart~~

Start (inclusive) of range of destination ports against which that packet will be compared ~~against~~.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.3.4.1.14~~13.1.3.4.1.11~~ wranIfBsProvClsfrRuleDestPortEnd ~~wranIfBsProvClsfRuleDestPortEnd~~

End (inclusive) … be compared.

13.1.3.4.1.15~~13.1.3.4.1.12~~ wranIfBsProvClsfrRuleDestMacAddr ~~wranIfBsProvClsfRuleDestMacAddr~~

Destination MAC … Ethernet header.

13.1.3.4.1.16~~13.1.3.4.1.13~~ wranIfBsProvClsfrRuleDestMacAddrMask ~~wranIfBsProvClsfRuleDestMacMask~~

MAC address mask. A destination MAC address (`wranIfBsProvClsfrRuleDestMacAddr` ~~`wranIfBsProvClsfRuleDestMacAddr`~~) is matched when the destination MAC address from Ethernet header is applied (bitwise AND) with this mask.

13.1.3.4.1.17~~13.1.3.4.1.14~~ wranIfBsProvClsfrRuleSrcMacAddr ~~wranIfBsProvClsfRuleSrcMacAddr~~

Source MAC … Ethernet header.

13.1.3.4.1.18~~13.1.3.4.1.15~~ wranIfBsProvClsfrRuleSrcMacAddrMask ~~wranIfBsProvClsfRuleDestMacMask~~

MAC address mask. A source MAC address (`wranIfBsProvClsfrRuleSrcMacAddr` ~~`wranIfBsProvClsfRuleSrcMacAddr`~~) is matched when the source MAC address from Ethernet header is applied (bitwise AND) with this mask.

13.1.3.4.1.19~~13.1.3.4.1.16~~ wranIfBsProvClsfrRuleEnetProtType ~~wranIfBsProvClsfRuleEnetProtType~~

Identifier of layer 3 protocol type in an Ethernet frame. There are three types defined in Ethernet frame classification: ~~Enable/disable use~~ no layer 3 protocol type in Ethernet frame, EtherType in DIX/SNAP based frames, and DSAP in IEEE 802.3 frames~~, are used in Ethernet frame classification~~. If IEEE Std 802.1Q [B9] is supported, the EtherType value in the IEEE 802.1Q header is used.

13.1.3.4.1.20~~13.1.3.4.1.17~~ wranIfBsProvClsfrRuleEnetProtocol ~~wranIfBsProvClsfRuleEnetProtocol~~

Ethernet protocol type value that is used for classification. When `wranIfBsProvClsfrRuleEnetProtType` is set to EtherType, the value of this object is matched against the 16-bit EtherType value in an Ethernet header or IEEE 802.1Q header (if IEEE Std 802.1Q [B9] is supported). When `wranIfBsProvClsfrRuleEnetProtType` is set to DSAP, then the DSAP byte in IEEE 802.3 frames is matched against the 8 LSBs of this object's value. ~~This value will processed based on what is set in `wranIfBsProvClsfRuleEnetProtType`.~~

13.1.3.4.1.21~~13.1.3.4.1.18~~ wranIfBsProvClsfrRuleUserPriLow ~~wranIfBsProvClsfRuleUserPriLow~~

Low value … being used.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.3.4.1.22~~13.1.3.4.1.19~~ wranIfBsProvClsfrRuleUserPriHigh ~~wranIfBsProvClsfRuleUserPriHigh~~

High value … being used.

13.1.3.4.1.23~~13.1.3.4.1.20~~ wranIfBsProvClsfrRuleVlanIdwranIfBsProvClsfRuleVlanId

VLAN Id … being used.

13.1.3.4.1.24~~13.1.3.4.1.21~~ wranIfBsProvClsfrRuleIpv6FlowLabel ~~wranIfBsProvClsfRuleIpv6FlowLabel~~

Flow label field from IPv6 header. The IPv6 Flow Label field is mapped to the 20 LSBs of this object, and the first 4 MSBs are set to 0.

13.1.3.4.1.25~~13.1.3.4.1.22~~ wranIfBsProvClsfrRuleIpTypeOfService ~~wranIfBsProvClsfRuleIpTypeOfService~~

The value to match the IP TOS octet from IP header. The 6 MSBs of the value contained in this object are read in as the DSCP (IETF RFC 2474 [B24]), and the 2 LSBs are ignored.

~~**13.1.3.4.1.23 wranIfBsProvClsfRuleMap**~~

~~A bitmap … classification rule.~~

~~**13.1.3.4.1.24 wranIfBsProvClsfRulePktCount**~~

~~Counter to … this rule.~~

13.1.3.5 wranIfBsClassifierRuleTable

13.1.3.5.1 wranIfBsClassifierRuleEntry

Change the subclauses of 13.1.3.5.1 as follows:

13.1.3.5.1.1 wranIfBsClsfrRuleIndex~~wranIfBsClsfRuleIndex~~

Index to … `wranIfBsClassifierRuleTable`.

13.1.3.5.1.2 wranIfBsClsfrRuleMap

A bitmap that indicates which classification parameters are included in the classification rule. A parameter exists in this rule if the corresponding bit is set to 1.

13.1.3.5.1.3~~13.1.3.5.1.2~~ wranIfBsClsfrRulePrioritywranIfBsClsfRulePriority

Priority of … are applied.

13.1.3.5.1.4~~13.1.3.5.1.3~~ wranIfBsClsfrRuleIpProtocolwranIfBsClsfRuleIpProtocol

Value of … by IANA.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.3.5.1.5 wranIfBsClsfrRuleIpSrcAddrType

Type of IP address that Source IP address from IP header is.

13.1.3.5.1.6~~13.1.3.5.1.4~~ wranIfBsClsfrRuleIpSrcAddr~~wranIfBsClsfRuleIpSrcAddr~~

Source IP … IP header.

13.1.3.5.1.7~~13.1.3.5.1.5~~ wranIfBsClsfrRuleIpSrcMask~~wranIfBsClsfRuleIpSrcMask~~

IP address mask. IP source address (`wranIfBsClsfrRuleIpSrcAddr` ~~`wranIfBsClsfRuleIpSrcAddr`~~) is matched when output of applying (bitwise AND) this value to IP source address from IP packet.

13.1.3.5.1.8 wranIfBsClsfrRuleIpDestAddrType

Type of IP address that Destination IP address from IP header is.

13.1.3.5.1.9~~13.1.3.5.1.6~~ wranIfBsClsfrRuleIpDestAddr~~wranIfBsClsfRuleIpDestAddr~~

Destination IP address from IP header.

13.1.3.5.1.10~~13.1.3.5.1.7~~ wranIfBsClsfrRuleIpDestMask~~wranIfBsClsfRuleIpDestMask~~

IP address mask. IP destination address (`wranIfBsClsfrRuleIpDestAddr` ~~`wranIfBsClsfRuleIpDestAddr`~~) is matched when output of applying (bitwise AND) this value to IP destination address from IP packet.

13.1.3.5.1.11~~13.1.3.5.1.8~~ wranIfBsClsfrRuleSrcPortStart~~wranIfBsClsfRuleSrcPortStart~~

Start (inclusive) of range of source ports against which that ~~that~~ packet will be compared ~~against~~.

13.1.3.5.1.12~~13.1.3.5.1.9~~ wranIfBsClsfrRuleSrcPortEnd~~wranIfBsClsfRuleSrcPortEnd~~

End (inclusive) … be compared.

13.1.3.5.1.13~~13.1.3.5.1.10~~ wranIfBsClsfrRuleDestPortStart~~wranIfBsClsfRuleDestPortStart~~

Start (inclusive) of range of destination ports against which that ~~that~~ packet will be compared ~~against~~.

13.1.3.5.1.14~~13.1.3.5.1.11~~ wranIfBsClsfrRuleDestPortEnd~~wranIfBsClsfRuleDestPortEnd~~

End (inclusive) … be compared.

13.1.3.5.1.15~~13.1.3.5.1.12~~ wranIfBsClsfrRuleDestMacAddr~~wranIfBsClsfRuleDestMacAddr~~

Destination MAC … Ethernet header.

13.1.3.5.1.16~~13.1.3.5.1.13~~ wranIfBsClsfrRuleDestMacAddrMask ~~wranIfBsClsfRuleDestMacMask~~

MAC address mask. A destination MAC address (`wranIfBsProvClsfrRuleDestMacAddr` ~~`wranIfBsProvClsfRuleDestMacAddr`~~) is matched when the destination MAC address from Ethernet header is applied (bitwise AND) with this mask.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.3.5.1.17~~13.1.3.5.1.14~~ wranIfBsClsfrRuleSrcMacAddr~~wranIfBsClsfRuleSrcMacAddr~~

Source MAC … Ethernet header.

13.1.3.5.1.18~~13.1.3.5.1.15~~ wranIfBsClsfrRuleSrcMacAddrMask
~~wranIfBsClsfRuleDestMacMask~~

MAC address mask. A source MAC address (wranIfBsProvClsfrRuleSrcMacAddr ~~wranIfBsProvClsfRuleSrcMacAddr~~) is matched when the source MAC address from Ethernet header is applied (bitwise AND) with this mask.

13.1.3.5.1.19~~13.1.3.5.1.16~~ wranIfBsClsfrRuleEnetProtType~~wranIfBsClsfRuleEnetProtType~~

Identifier of layer 3 protocol type in an Ethernet frame. There are three types defined in Ethernet frame classification: ~~Enable/disable use~~ no layer 3 protocol type in Ethernet frame, EtherType in DIX/SNAP based frames, DSAP in IEEE 802.3 frames~~, are used in Ethernet frame classification~~. If IEEE Std 802.1Q [B9] is supported, the EtherType value in the IEEE 802.1Q header is used.

13.1.3.5.1.20~~13.1.3.5.1.17~~ wranIfBsClsfrRuleEnetProtocol~~wranIfBsClsfRuleEnetProtocol~~

Ethernet protocol type value that is used for classification. This value will be processed based on what is set in wranIfBsClsfrRuleEnetProtType~~wranIfBsClsfRuleEnetProtType~~.

13.1.3.5.1.21~~13.1.3.5.1.18~~ wranIfBsClsfrRuleUserPriLow~~wranIfBsClsfRuleUserPriLow~~

Low value … being used.

13.1.3.5.1.22~~13.1.3.5.1.19~~ wranIfBsClsfrRuleUserPriHigh~~wranIfBsClsfRuleUserPriHigh~~

High value … being used.

13.1.3.5.1.23~~13.1.3.5.1.20~~ wranIfBsClsfrRuleVlanId~~wranIfBsClsfRuleVlanId~~

VLAN Id … being used.

13.1.3.5.1.24~~13.1.3.5.1.21~~ wranIfBsClsfrRuleIpv6FlowLabel
~~wranIfBsClsfRuleIpv6FlowLabel~~

Flow label field from IPv6 header.

13.1.3.5.1.25~~13.1.3.5.1.22~~ wranIfBsClsfrRuleIpTypeOfService
~~wranIfBsClsfRuleIpTypeOfService~~

The value … (IETF RFC 2474 [B24]).

~~13.1.3.5.1.23 wranIfBsClsfRuleMap~~

~~A bitmap … classification rule.~~

~~13.1.3.5.1.24 wranIfBsClsfRulePktCount~~

~~Counter to … this rule.~~

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Insert the following new subclauses (13.1.3.6 to 13.1.3.10) after 13.1.3.5.1.25:

13.1.3.6 wranIfBsSfTrapControl

Defines control elements for traps related to management of service flows. This is a 5-bit field that enables setting a trap for particular Service Flow events: `wranIfBsProvSfChange`, `wranIfBsScChange`, `wranIfBsActiveSfChange`, `wranIfBsProvClassifierRuleChange`, and `wranIfBsClassifierRuleChange`.

13.1.3.7 wranIfBsSfTrapDefinition

This object defines service flow management traps that can be enabled/disabled in `wranIfBsSfTrapControl`.

13.1.3.7.1 wranIfBsProvSfChangeTrap

This trap contains the information related to the status of provisioned service flows.

13.1.3.7.2 wranIfBsScChangeTrap

This trap contains the information related to the status of the configuration of service flow parameters.

13.1.3.7.3 wranIfBsActiveSfChangeTrap

This trap contains the information related to the status of dynamic service flows.

13.1.3.7.4 wranIfBsProvClassifierRuleChangeTrap

This trap contains the information related to the status of classifier rules for provisioned service flows.

13.1.3.7.5 wranIfBsClassifierRuleChangeTrap

This trap contains the information related to the status of classifier rules for dynamic service flows.

13.1.3.8 wranIfBsSfNotificationObjectsTable

This MIB provides a table to track notification objects that have been reported by the traps related to the management of service flows. It is made up of one entry containing objects related to the most recent trap/even. The entry is defined by `wranIfBsNotificationObjectsEntry`.

13.1.3.8.1 wranIfBsSfNotificationObjectsEntry

This object defines an entry in `wranIfBsNotificationObjectsTable`.

13.1.3.8.1.1 wranIfBsSfNotificationIndex

Index of entry in the table (defaults to 1).

13.1.3.8.1.2 wranIfBsSfNotificationProvSfStatus

Status of provisioned service flow for which trap is enabled; see `wranIfBsProvSfStatus` (13.1.3.1.1.7).

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.3.8.1.3 wranIfBsSfNotificationProvEntryIndex

Index into `wranIfBsProvSfTable` that contains information on provisioned service that was recently modified.

13.1.3.8.1.4 wranIfBsSfNotificationScEntryIndex

Index into `wranIfBsScTable` that contains information on modified service flow parameters.

13.1.3.8.1.5 wranIfBsSfNotificationActiveSfIndex

Index into `wranIfBsActiveSfTable` that contains information on active service flows whose configuration has been updated.

13.1.3.8.1.6 wranIfBsSfNotificationActiveSfStatus

Current status of dynamic service flow; see `wranIfBsActiveSfStatus` (13.1.3.3.1.6).

13.1.3.8.1.7 wranIfBsSfNotificationProvClsfrRuleIndex

Index of entry in `wranIfBsProvClassifierRuleTable` that contains entry pertaining to a classifier rule for a provisioned service flow that was recently modified.

13.1.3.8.1.8 wranIfBsSfNotificationProvClsfrRuleMap

Value of `wranIfBsProvClsfrRuleMap` that contains the configuration of which classifier rules are part of the classifier rule set of a provisioned service flow that was recently modified.

13.1.3.8.1.9 wranIfBsSfNotificationClsfrRuleIndex

Index of entry in `wranIfBsClassifierRuleTable` that contains entry pertaining to a classifier rule for a dynamic service flow that was recently modified.

13.1.3.8.1.10 wranIfBsSfNotificationProvClsfrRuleMap

Value of `wranIfBsClsfrRuleMap` that contains the configuration of which classifier rules are part of the classifier rule set of a dynamic service flow that was recently modified.

13.1.3.9 wranIfBsSfMibGroups

This object helps define which MIB groups are available within this module and which MIB objects are part of each group.

13.1.3.9.1 wranIfBsProvSfMibGroup

This group contains objects related to the configuration of provisioned service flows.

13.1.3.9.2 wranIfBsScMibGroup

This group contains objects related to the configuration of QoS parameters for provisioned and dynamic service flows.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.3.9.3 wranIfBsActiveSfMibGroup

This group contains objects related to the configuration of dynamic service flows.

13.1.3.9.4 wranIfBsProvClassifierRuleMibGroup

This group contains objects related to the configuration of classifier rules for provisioned service flows.

13.1.3.9.5 wranIfBsClassifierRuleMibGroup

This group contains objects related to the configuration of classifier rules for dynamic service flows.

13.1.3.9.6 wranIfBsSfTrapControlGroup

This group contains objects related to enabling/disabling traps used for service flow management.

13.1.3.9.7 wranIfBsSfNotificationMibGroup

This group contains objects related to traps used for service flow management.

13.1.3.10 wranIfBsSfMibCompliance

MIB objects that are optional and mandatory for service flow management compliance.

Change 13.1.4 and its subclauses as follows:

13.1.4 wranIfCpeMib

This MIB defines objects used for managing CPEs. It is broken up into the following subclauses:

— `wranIfCpeConfigurationTable`: Definition of system parameters, timers, and constants related to CPE operation.
— `wranIfCpeTrapControl`: Enabling/disabling of traps ~~and setting thresholds for certain events~~ concerning events related to CPE operation.
— `wranIfCpeThresholdConfigTable`: Table containing configuration bounds for recording CPE events.
— `wranIfCpeTrapDefinitions`: Definition of traps and objects that can be reported by traps.
— `wranIfCpeNotificationObjectsTable`: Table containing information related to configured traps.

13.1.4.1 wranIfCpeConfigurationTable

This MIB … `wranIfCpeConfigurationEntry`.

13.1.4.1.1 wranIfCpeConfigurationEntry

This object … `wranIfCpeConfigurationTable`.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.4.1.1.1 wranIfCpeConfigurationIndex

Index of entry in this table (defaults to 1).

13.1.4.1.1.2~~13.1.4.1.1.1~~ wranIfCpeLostDsMapInterval

Amount of … considered lost.

13.1.4.1.1.3~~13.1.4.1.1.2~~ wranIfCpeLostUsMapInterval

Amount of … considered lost.

13.1.4.1.1.4~~13.1.4.1.1.3~~ wranIfCpeContentionRangingRetries

Maximum number … contention-based ranging.

13.1.4.1.1.5~~13.1.4.1.1.4~~ wranIfCpeContentionBwRetries

Maximum number … bandwidth requests.

13.1.4.1.1.6~~13.1.4.1.1.5~~ wranIfCpeRegReqRetries

Maximum number … registration requests.

13.1.4.1.1.7~~13.1.4.1.1.6~~ wranIfCpeTftpBackoffStart

Initial backoff ~~value~~ for TFTP Start~~backoff~~.

13.1.4.1.1.8~~13.1.4.1.1.7~~ wranIfCpeTftpBackoffEnd

Last value for TFTP backoff.

13.1.4.1.1.9~~13.1.4.1.1.8~~ wranIfCpeTftpReqRetries

Maximum number … CPE configuration.

13.1.4.1.1.10~~13.1.4.1.1.9~~ wranIfCpeTftpDownloadRetries

Maximum number … CPE configuration.

13.1.4.1.1.11~~13.1.4.1.1.10~~ wranIfCpeTftpWait

Time to … via TFTP.

13.1.4.1.1.12~~13.1.4.1.1.11~~ wranIfCpeToDRetries

Maximum number … of day.

13.1.4.1.1.13~~13.1.4.1.1.12~~ wranIfCpeToDRetryPeriod

Amount of … failed attempt.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.4.1.1.14~~13.1.4.1.1.13~~ wranIfCpeCBCReqRetries

Maximum number of retries allowed for sending ~~SBC~~CBC request.

13.1.4.1.1.15~~13.1.4.1.1.14~~ wranIfCpeTftpCpltRetries

Maximum number … to BS.

~~13.1.4.1.1.15 wranIfCpePowerCtrlProcTime~~

~~Maximum time … is executed.~~

~~13.1.4.1.1.16 wranIfCpeUsMapProcTime~~

~~Time provided … frame length.~~

~~13.1.4.1.1.17 wranIfCpeRangRspProcTime~~

~~Maximum time … in RNG-CMD.~~

13.1.4.1.1.16~~13.1.4.1.1.18~~ wranIfCpeInvitedRangRetries

Maximum number … ranging requests.

13.1.4.1.1.17~~13.1.4.1.1.19~~ wranIfCpeDSxReqRetries

Maximum number … on DSx-REQ.

13.1.4.1.1.18~~13.1.4.1.1.20~~ wranIfCpeDSxRspRetries

Maximum number … on DSx-RSP.

13.1.4.2 wranIfCpeTrapControl

~~`wranIfCpeTrapControl` is comprised of the following two MIBs that deal with SNMP traps: `wranIfCpeTrapControlRegister` and `wranIfCpeThresholdConfigTable`.~~

~~13.1.4.2.1 wranIfCpeTrapControlRegister~~

Defines a control element for traps related to CPE operation. This MIB object is a bitmap that allows the following SNMP traps to be set for CPEs: `wranIfCpeDhcpSuccess`, `wranIfCpeRssiStatusChange`, `wranIfCpeEirpPerScStatusChange` ~~`wranIfCpeEirpStatusChange`~~, `wranIfCpeMaxEirpStatusChange`, and `wranIfCpeScmStateChange`~~`wranIfCpeScmSilentState`~~.

13.1.4.3~~13.1.4.2.2~~ wranIfCpeThresholdConfigTable

This MIB provides a table that allows the setting of thresholds that can be used to detect the crossing of RSSI and EIRP thresholds. Each table is made up of one entry defined by `wranIfCpeThresholdConfigEntry`~~entries for low and high thresholds for RSSI and EIRP~~.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.4.3.1~~13.1.4.2.2.1~~ wranIfCpeThresholdConfigEntry

This object … `wranIfCpeThresholdConfigTable`.

13.1.4.3.1.1 wranIfCpeThresholdConfigIndex

Index of entry in this table (defaults to 1).

13.1.4.3.1.2~~13.1.4.2.2.1.1~~ wranIfCpeRssiLowThreshold

Low threshold … RSSI alarm.

13.1.4.3.1.3~~13.1.4.2.2.1.2~~ wranIfCpeRssiHighThreshold

High threshold … RSSI alarm.

13.1.4.3.1.4~~13.1.4.2.2.1.3~~ wranIfCpeEirpPerScLowThreshold~~wranIfCpeEirpLowThreshold~~

Low threshold for generating an EIRP per subcarrier alarm.

13.1.4.3.1.5~~13.1.4.2.2.1.4~~ wranIfCpeEirpPerScHighThreshold~~wranIfCpeEirpHighThreshold~~

High threshold for generating an EIRP per subcarrier alarm.

13.1.4.3.1.6 wranIfCpeMaxEirpLowThreshold

Low threshold for generating a maximum EIRP (over all 60 subchannels) alarm.

13.1.4.3.1.7 wranIfCpeMaxEirpHighThreshold

High threshold for generating a maximum EIRP (over all 60 subchannels) alarm.

NOTE—For information for the former 13.1.4.2.3, see the new 13.1.4.5.

13.1.4.4 wranIfCpeTrapDefinition

This MIB group specifies the definition of CPE traps that can be enabled/disabled in `wranIfCpeTrapControl`.

13.1.4.4.1 wranIfCpeRssiStatusChangeTrap

This trap indicates that the RSSI is outside the range defined by `wranIfCpeRssiLowThreshold` and `wranIfCpeRssiHighThreshold`.

13.1.4.4.2 wranIfCpeEirpPerScStatusChangeTrap

This trap indicates that the EIRP per subcarrier is outside the range defined by `wranIfCpeEirpPerScLowThreshold` and `wranIfCpeEirpPerScHighThreshold`.

13.1.4.4.3 wranIfCpeDhcpSuccessTrap

This trap indicates whether a specific CPE has been successful in acquiring an IP address via DHCP.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.4.4.4 wranIfCpeScmStateChangeTrap

This trap indicates that the CPE has entered the Idle state of the SCM Authentication state machine.

13.1.4.4.5 wranIfCpeMaxEirpStatusChangeTrap

This trap indicates that the maximum EIRP per subcarrier is outside the range defined by `wranIfCpeMaxEirpLowThreshold` and `wranIfCpeMaxEirpHighThreshold`.

13.1.4.5~~13.1.4.2.3~~ wranIfCpeNotificationObjectsTable

This MIB provides a table to track notification objects that have been reported by traps on a particular CPE. There is one entry ~~are multiple entries~~ in this table, ~~one for each CPE's trap~~defining the notification objects for that particular CPE. Each entry is defined by `wranIfCpeNotificationObjectsEntry`.

13.1.4.5.1~~13.1.4.2.3.1~~ wranIfCpeNotificationObjectsEntry

This object … `wranIfCpeNotificationObjectsTable`.

13.1.4.5.1.1 wranIfCpeNotificationObjectsEntryIndex

Index of entry in the table.

13.1.4.5.1.2~~13.1.4.2.3.1.1~~ wranIfCpeNotificationMacAddress~~wranIfCpeMacAddress~~

MAC address … the trap.

13.1.4.5.1.3~~13.1.4.2.3.1.2~~ wranIfCpeRssiStatus

An RSSI alarm is generated when RSSI is lower than `wranIfCpeRssiLowThreshold` or higher than `wranIfCpeRssiHighThreshold`. This alarm is generated when `wranIfCpeRssiStatusChange` in `wranIfCpeTrapControl` is set.

13.1.4.5.1.4~~13.1.4.2.3.1.3~~ wranIfCpeEirpPerScStatus~~wranIfCpeEirpStatus~~

An EIRP ~~RSSI~~ alarm is generated when EIRP is lower than `wranIfCpeEirpPerScLowThreshold` ~~`wranIfCpeEirpLowThreshold`~~ or higher than `wranIfCpeEirpPerScHighThreshold` ~~`wranIfCpeEirpHighThreshold`~~. This alarm is generated when `wranIfCpeEirpPerScStatusChange` in `wranIfCpeTrapControl` is set.

13.1.4.5.1.5 wranIfCpeMaxEirpStatus

An EIRP alarm is generated when EIRP is lower than `wranIfCpeMaxEirpLowThreshold` or higher than `wranIfCpeMaxEirpHighThreshold`. This alarm is generated when `wranIfCpeMaxEirpStatusChange` in `wranIfCpeTrapControl` is set.

13.1.4.5.1.6 wranIfCpeDhcpStatus

An DHCP alarm is generated when CPE is able to obtain an IP address via DHCP. This alarm is generated when `wranIfCpeDhcpSuccess` in `wranIfCpeTrapControl` is set.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.4.5.1.7 wranIfCpeScmStatus

An SCM state alarm is generated when the CPE's authentication state machine changes state. This alarm is generated when `wranIfCpeScmStateChange` in `wranIfCpeTrapControl` is set.

13.1.4.6 wranIfCpeMibGroups

This object helps define which MIB groups are available in this module and which MIB objects are part of each group. Two groups are defined: `wranIfCpeMibConfigGroup` and `wranIfCpeMibNotificationsGroup`.

13.1.4.6.1 wranIfCpeMibConfigGroup

This group contains configuration objects for the CPE.

13.1.4.6.2 wranIfCpeTrapControlGroup

This group contains configuration objects related to enabling/disabling traps for the CPE.

13.1.4.6.3 wranIfCpeMibNotificationsGroup

This group contains CPE event notifications.

13.1.4.7 wranIfCpeMibCompliance

MIB objects that are optional and mandatory for CPE conformance.

Change 13.1.5 as follows:

13.1.5 wranIfSmMib

This MIB group deals with objects related to the configuration, operation, and monitoring of the SM. This MIB group is made up of the following objects:

- `wranIfSmConfigTable`: Definition of system parameters, timers, and constants related to SM operation.
- `wranIfSmPendingBlmReqTable`: Tracks the status of the execution of ongoing sensing requests (BLM-REQ).
- `wranIfSmBlmRepTable`: Tracks the status of ongoing reporting (BLM-REP) in response to sensing requests.
- `wranIfSmChClassificationStatusTable`: Tracks classification status of channels the SM is managing.
- `wranIfSmChannelSetTable`: Stores information related to the Occupied, Backup, and Local Priority Channel sets used by the SM.
- `wranIfSmCurrentStatusTable`: Tracks current state of the SM state machine.
- `wranIfSmRegTrackingTable`: Tracks the location of CPEs currently associated with the BS.
- `wranIfSmTrapControl`: Control element related to enabling/disabling of traps for the SM.
- `wranIfSmTrapDefinition`: Definition of traps that can be enabled/disabled in `wranIfSnTrapControl`.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

— wranIfSmNotificationObjectsTable: Contains information related to most recent event raise by a trap.
— wranIfSmMibGroups: Definition of which MIB groups are available within this module and which MIB objects are a part of each group.
— wranIfSmMibCompliance: Defines MIB objects that are optional and mandatory for SM compliance.

13.1.5.1 wranIfSmConfigTable

13.1.5.1.1 wranIfSmConfigEntry

Change the subclauses of 13.1.5.1.1 as follows:

13.1.5.1.1.1 wranIfSmConfigIndex

Index of entry in the table (defaults to 1).

13.1.5.1.1.2~~13.1.5.1.1.1~~ wranIfSmT31

Wait for BLM-REP timeout.

13.1.5.1.1.3~~13.1.5.1.1.2~~ wranIfSmChAvailabilityCheckTime ~~wranIfSmSsaChAvailabilityCheckTime~~

Time during … TV channel.

13.1.5.1.1.4~~13.1.5.1.1.3~~ wranIfSmNonOccupancyPeriod~~wranIfSmSsaNonOccupancyPeriod~~

The required … EIRP level.

13.1.5.1.1.5~~13.1.5.1.1.4~~ wranIfSmChannelDetectionTime ~~wranIfSmSsaChannelDetectionTime~~

Maximum time … WRAN operation.

13.1.5.1.1.6~~13.1.5.1.1.5~~ wranIfSmChannelSetupTime~~wranIfSmSsaChannelSetupTime~~

The window … TV channel.

13.1.5.1.1.7~~13.1.5.1.1.6~~ wranIfSmChannelOpeningTxTime ~~wranIfSmSsaChannelOpeningTxTime~~

The aggregate … Check Time.

13.1.5.1.1.8~~13.1.5.1.1.7~~ wranIfSmChannelMoveTime~~wranIfSmSsaChannelMoveTime~~

The time … related channel.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.5.1.1.9~~13.1.5.1.1.8~~ wranIfSmChannelClosingTxTime ~~wranIfSmSsaChannelClosingTxTime~~

The aggregate … Detection Threshold.

13.1.5.1.1.10~~13.1.5.1.1.9~~ wranIfSmMicProtectionRadius~~wranIfSmSsaMicProtectionRadius~~

Radius of … the microphone.

13.1.5.1.1.11~~13.1.5.1.1.10~~ wranIfSmT41~~wranIfSmSsaT41~~

Maximum time … are detected.

13.1.5.1.1.12~~13.1.5.1.1.11~~ wranIfSmT42~~wranIfSmSsaT42~~

Maximum time … are detected.

13.1.5.1.1.13~~13.1.5.1.1.12~~ wranIfSmT43~~wranIfSmSsaT43~~

Minimum time … backup channel.

13.1.5.1.1.14~~13.1.5.1.1.13~~ wranIfSmT44~~wranIfSmSsaT44~~

Maximum time … (self-coexistence mode).

13.1.5.1.1.15~~13.1.5.1.1.14~~ wranIfSmT45~~wranIfSmSsaT45~~

Maximum WRAN … database service.

13.1.5.1.1.16~~13.1.5.1.1.15~~ wranIfSmT46

Waiting time … backup channel.

13.1.5.1.1.17~~13.1.5.1.1.16~~ wranIfSmT59~~wranIfSmSsaT59~~

Waiting time … do so.

13.1.5.1.1.18~~13.1.5.1.1.17~~ wranIfSmT47~~wranIfSmSsaT47~~

The prescribed … database service.

13.1.5.1.1.19~~13.1.5.1.1.18~~ wranIfSmT48~~wranIfSmSsaT48~~

Lapse timer … spectrum sensing.

13.1.5.1.1.20~~13.1.5.1.1.19~~ wranIfSmT49~~wranIfSmSsaT49~~

Lapse timer … spectrum sensing.

13.1.5.1.1.21~~13.1.5.1.1.20~~ wranIfSmT50~~wranIfSmSsaT50~~

Lapse timer … spectrum sensing.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.5.1.1.22~~13.1.5.1.1.21~~ wranIfSmT51~~wranIfSmSsaT51~~

Initiated when … the SM.

13.1.5.1.1.23~~13.1.5.1.1.22~~ wranIfSmT53~~wranIfSmSsaT53~~

The parameter … (Annex A).

13.1.5.1.1.24~~13.1.5.1.1.23~~ wranIfSmT54~~wranIfSmSsaT54~~

The parameter … to $T_{sensout}$.

13.1.5.1.1.25~~13.1.5.1.1.24~~ wranIfSmT55~~wranIfSmSsaT55~~

The T55 … required accuracy.

13.1.5.1.1.26~~13.1.5.1.1.25~~ wranIfSmT60~~wranIfSmSsaT60~~

The T60 or $T_{sensout}$ parameter corresponds to the maximum length of time required to carry out the out-of-band sensing process ~~to clear one channel~~ (see Figure 178). Manufacturers need to specify the sensing time required to detect the specified signals with required accuracy for out-of-band sensing.

13.1.5.2 wranIfSmPendingBlmReqTable

13.1.5.2.1 wranIfSmPendingBlmReqEntry

Change the subclauses of 13.1.5.2.1 as follows:

13.1.5.2.1.1 wranIfSmPendinBlmReqIndex

Index of entry in this table.

13.1.5.2.1.2~~13.1.5.2.1.1~~ wranIfSsaPendingBlmReqTransactionId

Transaction ID of BLM-REQ.

13.1.5.2.1.3 wranIfSmPendingBlmReqMsgSize

Size of BLM-REQ message pending a report.

13.1.5.2.1.4~~13.1.5.2.1.2~~ wranIfSmPendingBlmReqMsg

Contents of … a report.

13.1.5.2.1.5~~13.1.5.2.1.3~~ wranIfSmPendingBlmRspReceived

Indication of … from SSA.

13.1.5.2.1.6~~13.1.5.2.1.4~~ wranIfSmPendingBlmRspMulticastReceived

If BLM-REQ … multicast group.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.5.2.1.7~~13.1.5.2.1.5~~ wranIfSmPendingBlmRepTimeout

Indication of … this BLM-REP.

13.1.5.2.1.8~~13.1.5.2.1.6~~ wranIfSmPendingBlmRepReceived

Indication of … from SSA.

13.1.5.2.1.9~~13.1.5.2.1.7~~ wranIfSmPendingBlmRepMulticastReceived

If BLM-REQ … multicast group.

13.1.5.2.1.10~~13.1.5.2.1.8~~ wranIfSsaPendingBlmRepAck

Indication of … to SSA(s).

13.1.5.3 wranIfSmBlmRepTable

13.1.5.3.1 wranIfSmBlmRepEntry

Change the subclauses of 13.1.5.3.1 as follows:

13.1.5.3.1.1 wranIfSmBlmRepIndex

Index of entry in the table.

13.1.5.3.1.2~~13.1.5.3.1.1~~ wranIfSmBlmRepSid

SID of … the BLM-REP.

13.1.5.3.1.3~~13.1.5.3.1.2~~ wranIfSmBlmRepTransactionId

Transaction ID … `wranIfSmPendingBlmReqTable`.

13.1.5.3.1.4 wranIfSmBlmRepMsgSize

Size of BLM-REP msg.

13.1.5.3.1.5 ~~13.1.5.3.1.3~~ wranIfSmBlmRepMsg

Contents of BLM-REP msg.

13.1.5.4 wranIfSmChClassificationStatusTable

13.1.5.4.1 wranIfSmChClassificationStatusEntry

Change the subclauses of 13.1.5.4.1 as follows:

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.5.4.1.1 wranIfSmChClassificationIndex

Index of entry in this table.

13.1.5.4.1.2~~13.1.5.4.1.1~~ wranIfSmManagedChannel

Channel number of channel being managed.

13.1.5.4.1.3~~13.1.5.4.1.2~~ wranIfSmManagedChannelStatus

The state … in IPC-UPD).

13.1.5.4.1.4~~13.1.5.4.1.3~~ wranIfSmManagedChannelRecentEvent

Most recent … current state.

To create a new 13.1.5.5 with subclauses, change the former 13.1.5.5 through 13.1.5.14 as follows:

13.1.5.5 wranIfSmChannelSetTable

This MIB object represents a table that stores information related to the contents of the Occupied, Backup, and Local Priority Channel sets used by the SM (see 10.2.3.2). There is one entry in this table defined by `wranIfSmChannelSetEntry`.

13.1.5.5.1 wranIfSmChannelSetEntry

This object defines an entry in `wranIfSmChannelSetTable`. There is only one entry in this table.

13.1.5.5.1.1 wranIfSmChannelSetIndex

Index of entry in the table (defaults to 1).

13.1.5.5.1.2~~13.1.5.5~~ wranIfSmSizeWranOccupiedChannelSet

Number of … Channel Set.

13.1.5.5.1.3~~13.1.5.6~~ wranIfSmWranOccupiedChannelSet

Vector of … (see 10.2.3.2).

13.1.5.5.1.4~~13.1.5.7~~ wranIfSmSizeNghbrWranBackupChannelSet

Number of … Channel Set.

13.1.5.5.1.5~~13.1.5.8~~ wranIfSmNghbrWranBackupChannelSet
~~wranIfSmNghbrOccupiedChannSet~~

Vector of … (see 9.2.3.2).

13.1.5.5.1.6~~13.1.5.9~~ wranIfSmSizeLocalPrioritySet1

Number of … Set 1.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.5.5.1.7~~13.1.5.10~~ wranIfSmLocalPrioritySet1

Vector of … (see 10.2.3.2).

13.1.5.5.1.8~~13.1.5.11~~ wranIfSmSizeLocalPrioritySet2

Number of … Set 2.

13.1.5.5.1.9~~13.1.5.12~~ wranIfSmLocalPrioritySet2

Vector of … (see 10.2.3.2).

13.1.5.5.1.10~~13.1.5.13~~ wranIfSmSizeLocalPrioritySet3

Number of … `wranIfSmSizeWranOccupiedChannelSet`.

13.1.5.5.1.11~~13.1.5.14~~ wranIfSmLocalPrioritySet3

Vector of … `wranIfSmWranOccupiedChannelSet`.

To create a new 13.1.5.6 with subclauses, change the former 13.1.5.15 and its subclauses as follows:

13.1.5.6~~13.1.5.15~~ wranIfSmCurrentStatusTable

This MIB … `wranIfSmCurrentStatusEntry`.

13.1.5.6.1~~13.1.5.15.1~~ wranIfSmCurrentStatusEntry

This object … `wranIfSmCurrentStatusTable`.

13.1.5.6.1.1 wranIfSmCurrentStatusIndex

Index of entry in the table.

13.1.5.6.1.2~~13.1.5.15.1.1~~ wranIfSmCurrentState

The state (see Figure 164~~Figure 162~~) that the SM is in.

13.1.5.6.1.3~~13.1.5.15.1.2~~ wranIfSmRecentEvent

Recent event … in 10.2.6.1.

13.1.5.6.1.4~~13.1.5.15.1.3~~ wranIfSmRecentAction

Recent action … in 10.2.6.1.

13.1.5.6.1.5~~13.1.5.15.1.4~~ wranIfSmInitiateChannelMove

Current value … flag.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.5.6.1.6~~13.1.5.15.1.5~~ wranIfSmSelfCoexistenceMode

Current value … flag.

13.1.5.6.1.7~~13.1.5.15.1.6~~ wranIfSmCurrentOperatingChannel

Current operating channel.

13.1.5.6.1.8~~13.1.5.15.1.7~~ wranIfSmRecentSignalType

Type of signal recently detected (see Table 237).

13.1.5.6.1.9~~13.1.5.15.1.8~~ wranIfSmCurrentT47

Current value of T47.

13.1.5.6.1.10~~13.1.5.15.1.9~~ wranIfSmCurrentT46

Current value of T46.

To create a new 13.1.5.7 with subclauses, change the former 13.1.5.16 and its subclauses as follows:

13.1.5.7~~13.1.5.16~~ wranIfSmRegTrackingTable

This MIB … `wranIfSmRegTrackingEntry`.

13.1.5.7.1~~13.1.5.16.1~~ wranIfSmRegTrackingEntry

This object … `wranIfSmRegTrackingTable`.

13.1.5.7.1.1 wranIfSmRegTrackingIndex

Index of entry in the table.

13.1.5.7.1.2~~13.1.5.16.1.1~~ wranIfSmRegTrackingCpeSid

SID of … with BS.

13.1.5.7.1.3~~13.1.5.16.1.2~~ wranIfSmRegTrackingCurrentT30

Current value … by SM.

13.1.5.7.1.4~~13.1.5.16.1.3~~ wranIfSmRegTrackingLocStringSize

Size of … in octets.

13.1.5.7.1.5~~13.1.5.16.1.4~~ wranIfSmRegTrackingLocString

CPE's location string.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Insert the following new subclauses (13.1.5.8 to 13.1.5.12) after 13.1.5.7.1.5:

13.1.5.8 wranIfSmTrapControl

Defines control elements for traps related to the operation of the SM. This is a 9-bit field that enables setting a trap for particular SM events: `wranIfSmBlmReqChange`, `wranIfSmBlmRepChange`, `wranIfSmOccupiedChannelSetChange`, `wranIfSmNghbrBackupChannelSetChange`, `wranIfSmLocalPrioritySet1Change`, `wranIfSmLocalPriority2Change`, `wranIfSmLocalPriority3Change`, `wranIfSmCurrentStatusChange`, and `wranIfSmRegTrackingChange`.

13.1.5.9 wranIfSmTrapDefinition

This MIB group specifies the definition of traps that can be enabled/disabled in `wranIfSnTrapControl`.

13.1.5.9.1 wranIfSmBlmReqChangeTrap

This trap contains the information related to a BLM-REQ that is pending in the SM.

13.1.5.9.2 wranIfSmBlmRepChangeTrap

This trap contains the information related to a BLM-REP that is received by the SM.

13.1.5.9.3 wranIfSmOccupiedChannelSetChangeTrap

This trap contains the information related to the current state of the Occupied Channel Set in the SM.

13.1.5.9.4 wranIfSmNghbrBackupChannelSetChangeTrap

This trap contains the information related to the current state of the Neighbor WRAN Backup Channel Set in the SM.

13.1.5.9.5 wranIfSmLocalPrioritySet1ChangeTrap

This trap contains the information related to the current state of the Local Priority Set 1 in the SM.

13.1.5.9.6 wranIfSmLocalPrioritySet2ChangeTrap

This trap contains the information related to the current state of the Local Priority Set 2 in the SM.

13.1.5.9.7 wranIfSmLocalPrioritySet3ChangeTrap

This trap contains the information related to the current state of the Local Priority Set 3 in the SM.

13.1.5.9.8 wranIfSmCurrentStatusChangeTrap

This trap contains the information related to the current state the SM is in.

13.1.5.9.9 wranIfSmRegTrackingChangeTrap

This trap contains the information related to tracking the location of CPEs within the purview of the BS.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.5.10 wranIfSmNotificationObjectsTable

This MIB provides a table to track notification objects that have been reported by traps related to the operation of the SM. It is made up of one entry containing the objects related to the most recent trap/event. The entry is defined by `wranIfSmNotificationObjectsEntry`.

13.1.5.10.1 wranIfSmNotificationObjectsEntry

This object defines an entry in `wranIfSmNotificationObjectsTable`.

13.1.5.10.1.1 wranIfSmNotificationObjectsEntryIndex

Index of entry in the table.

13.1.5.10.1.2 wranIfSmNotificationSid

SID of station generating trap. `wranIfNotificationSid` set == 0 is reserved for traps dealing with channel set management (see `wranIfSmOccupiedChannelSetChangeTrap`, `wranIfSmNghbrBackupChannelSetChangeTrap`, `wranIfSmLocalPrioritySet1ChangeTrap`, `wranIfSmLocalPrioritySet2ChangeTrap`, `wranIfSmLocalPrioritySet3ChangeTrap`) and the current state of the SM (see `wranIfSmCurrentStatusChangeTrap`). `wranIfNotificationSid` set == 1..511 when dealing with traps for bulk measurement (see `wranIfSmBlmReqChangeTrap`, `wranIfSmBlmRepChangeTrap`) or CPE registration tracking (see `wranIfSmRegTackingChangeTrap`).

13.1.5.10.1.3 wranIfSmNotificationBlmTransactionId

The transaction ID of the bulk measurement transaction. Only pertinent when `wranIfSmBlmReqChangeTrap` or `wranIfSmBlmRepChangeTrap` is enabled.

13.1.5.10.1.4 wranIfSmNotificationSizeOccupiedChannelSet

Size of the current/new WRAN Occupied Channel Set. Only pertinent when `wranIfSmOccupiedChannelSetChangeTrap` is enabled.

13.1.5.10.1.5 wranIfSmNotificationOccupiedChannelSet

The current/new contents of the WRAN Occupied Channel Set. Only pertinent when `wranIfSmOccupiedChannelSetChangeTrap` is enabled.

13.1.5.10.1.6 wranIfSmNotificationSizeBackupChannelSet

Size of the current/new Neighbor WRAN Backup Channel Set. Only pertinent when `wranIfSmNghbrBackupChannelSetChangeTrap` is enabled.

13.1.5.10.1.7 wranIfSmNotificationBackupChannelSet

The current/new contents of the Neighbor WRAN Backup Channel Set. Only pertinent when `wranIfSmNghbrBackupChannelSetChangeTrap` is enabled.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.5.10.1.8 wranIfSmNotificationSizeLocalPrioritySet1

Size of the current/new Local Priority Set 1. Only pertinent when `wranIfSmLocalPrioritySet1ChangeTrap` is enabled.

13.1.5.10.1.9 wranIfSmNotificationLocalPrioritySet1

The current/new contents of the Local Priority Set 1. Only pertinent when `wranIfSmLocalPrioritySet1ChangeTrap` is enabled.

13.1.5.10.1.10 wranIfSmNotificationSizeLocalPrioritySet2

Size of the current/new Local Priority Set 2. Only pertinent when `wranIfSmLocalPrioritySet2ChangeTrap` is enabled.

13.1.5.10.1.11 wranIfSmNotificationLocalPrioritySet2

The current/new contents of the Local Priority Set 2. Only pertinent when `wranIfSmLocalPrioritySet2ChangeTrap` is enabled.

13.1.5.10.1.12 wranIfSmNotificationSizeLocalPrioritySet3

Size of the current/new Local Priority Set 3. Only pertinent when `wranIfSmLocalPrioritySet3ChangeTrap` is enabled.

13.1.5.10.1.13 wranIfSmNotificationLocalPrioritySet3

The current/new contents of the Local Priority Set 3. Only pertinent when `wranIfSmLocalPrioritySet3ChangeTrap` is enabled.

13.1.5.10.1.14 wranIfSmNotificationRecentAction

Value of `wranIfSmRecentAction` that triggered transition to current state of SM. Only pertinent when `wranIfSmCurrentStatusChangeTrap` is enabled.

13.1.5.10.1.15 wranIfSmPendingBlmReqStatus

Indicates BLM-RSP pertaining to bulk measurement transaction (defined by `wranIfSmNotificationBlmTransactionId`) was received from `wranIfSmNotificationSid`, if `wranIfSmNotificationSid` is a unicast SID, or if all BLM-RSP received from members of the multicast group identified by `wranIfSmNotificationSid`.

13.1.5.10.1.16 wranIfSmBlmRepStatus

Indicates whether BLM-ACK has been sent, pertaining to BLM-REP received in bulk measurement transaction defined by `wranIfSmNotificationBlmTransactionId`.

13.1.5.10.1.17 wranIfSmOccupiedChannelSetStatus

Indication of whether channels have been added or removed when the WRAN Occupied Channel Set is modified.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.5.10.1.18 wranIfSmNghbrBackupChannelSetStatus

Indication of whether channels have been added or removed when the Neighbor WRAN Backup Channel Set is modified.

13.1.5.10.1.19 wranIfSmLocalPrioritySet1Status

Indication of whether channels have been added or removed when the Local Priority Set 1 is modified.

13.1.5.10.1.20 wranIfSmLocalPrioritySet2Status

Indication of whether channels have been added or removed when the Local Priority Set 2 is modified.

13.1.5.10.1.21 wranIfSmLocalPrioritySet3Status

Indication of whether channels have been added or removed when the Local Priority Set 3 is modified.

13.1.5.10.1.22 wranIfSmCurrentStateStatus

Bitmap indicating current value of Initiate_Channel_Move flag, value of Self_Coexistence_Mode flag, whether operating channel assignment has been changed, whether recently detected signal was properly classified (i.e., not found to be == undetermined), whether T47 expired, and whether T46 has expired.

13.1.5.11 wranIfSmMibGroups

This object helps define which MIB groups are available within this module and which MIB objects are a part of each group.

13.1.5.11.1 wranIfSmConfigGroup

This group contains objects related to configuration of the SM.

13.1.5.11.2 wranIfSmPendingBlmReqGroup

This group contains objects related to tracking pending BLM-REQs.

13.1.5.11.3 wranIfSmBlmReqGroup

This group contains objects related to tracking received BLM-REPs.

13.1.5.11.4 wranIfSmChClassificationGroup

This group contains objects used to track how channels the SM is managing have been classified.

13.1.5.11.5 wranIfSmChannelSetGroup

This group contains objects used to track the various channel sets with which the SM operates.

13.1.5.11.6 wranIfSmCurrentStatusGroup

This group contains objects used to track the current state of the SM.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.5.11.7 wranIfSmRegTrackingGroup

This group contains objects the SM uses to keep track of the location of registered CPEs.

13.1.5.11.8 wranIfSmTrapControlGroup

This group contains objects related to enabling/disabling traps related to SM operation.

13.1.5.11.9 wranIfSmNotificationsGroup

This group contains notification objects related to traps configured for the SM.

13.1.5.12 wranIfSmMibCompliance

Defines MIB objects that are optional and mandatory for SM compliance.

Change 13.1.6 as follows:

13.1.6 wranIfSsaMib

This MIB group deals with objects related to the configuration, operation, and monitoring of the Spectrum Automaton.

The automaton needs to be told what needs to be sensed in the given regulatory domain. This can be done through the MIB referring to the regulatory domain information from Annex A. The CPE also need to be told which type of incumbent requires urgent, less urgent, and non-urgent reporting to the BS (see Table A.7). The background sensing done by the automaton shall be done under the MIB guidance.

This MIB group is made up of the following objects:

- `wranIfSsaSensingCapTable`: Definition of SSA sensing capabilities.
- `wranIfSsaStatusTable`: Tracks the status of the SSA state machine.
- `wranIfSsaConfigTable`: Defines the default configuration of SSA timers and constants.
- `wranIfSsaPendingBlmRepTable`: Tracks the status of ongoing sensing reporting (BLM-REP) the SSA has been assigned.
- `wranIfSsaSensingRecordTable`: Tracks status of sensing on each channel.
- `wranIfSsaSsfMode0OutputTable`: Tracks output of Mode 0 sensing by SSF.
- `wranIfSsaSsfMode1OutputTable`: Tracks output of Mode 1 sensing by SSF.
- `wranIfSsaSsfMode2OutputTable`: Tracks output of Mode 2 sensing by SSF.
- `wranIfSsaSsfWiMicMSFTable`: Tracks output of wireless microphone beacon sensing by SSF.
- `wranIfSsaGeolocationTable`: Tracks calculation of parameters used in geolocation functions.
- `wranIfSsaTrapControl`: Defines control element to enable/disable traps related to SSA.
- `wranIfSsaTrapDefinition`: Definition of traps that can be enabled for SSA monitoring.
- `wranIfSsaNotificationObjectsTable`: Tracks notification objects reported by SSA traps.
- `wranIfSsaMibGroups`: Defines MIB groups associated with this module.
- `wranIfSsaMibCompliance`: Defines MIB objects that are optional and mandatory for SSA compliance.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Change 13.1.6.1 and its subclauses as follows:

13.1.6.1 wranIfSsaSensingCapTable

This MIB object represents a table that stores the current sensing capabilities for an SSA under control of the SM. There is one entry in this table for an SSA, defined by `wranIfSsaSensingCapEntry`. This MIB is stored at the BS and CPE. These values are also stored in `wranIfBsCpeRegCapabilityRspTable`~~`wranIfBsRegisteredCpeTable`~~ (~~see~~ 13.1.2.2.7~~10.4.2~~) at the BS, in an entry specific to this CPE.

13.1.6.1.1 wranIfSsaSensingCapEntry

This object represents the entry that stores a CPE's sensing capabilities. The entry is identified by `wranIfSsaSensingCapIndex`.

13.1.6.1.1.1 wranIfSsaSensingCapIndex

Index of entry in this table (defaults to 1).

13.1.6.1.1.2~~13.1.6.1.1.1~~ wranIfSsaSensingThreshold

This object … –114 dBm).

13.1.6.1.1.3~~13.1.6.1.1.2~~ wranIfSsaSensRecContigPeriodDuration

This object … length value.

13.1.6.1.1.4~~13.1.6.1.1.3~~ wranIfSsaSensRecNumPeriods

This object … length value.

13.1.6.1.1.5~~13.1.6.1.1.4~~ wranIfSsaSensRecPeriodInterval

This object … length value.

13.1.6.2 wranIfSsaStatusTable

13.1.6.2.1 wranIfSsaStatusEntry

Change the subclauses of 13.1.6.2.1 as follows:

13.1.6.2.1.1 wranIfSsaStatusIndex

Index of entry in the table (defaults to 1).

13.1.6.2.1.2~~13.1.6.2.1.1~~ wranIfSsaCurrentState

The current … Out-of-band Sensing".

13.1.6.2.1.3~~13.1.6.2.1.2~~ wranIfSsaRecentEvent

The recent … Figure 173).

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.6.2.1.4~~13.1.6.2.1.3~~ wranIfSsaRecentAction

The recent … Figure 173).

13.1.6.2.1.5 wranIfSsaIpcUpdChannelsSize

Number of channels in `wranIfSsaIpcUpdChannels`.

13.1.6.2.1.6~~13.1.6.2.1.4~~ wranIfSsaIpcUpdChannels~~wranIfSsaIncProhibitedChannels~~

Contents of … from SM.

13.1.6.2.1.7~~13.1.6.2.1.5~~ wranIfSsaCurrentT48

Current value of T48 at the SSA in 0.1 s increments from 0 to 60 s.

13.1.6.2.1.8~~13.1.6.2.1.6~~ wranIfSsaCurrentT49

Current value of T49 at the SSA in 0.1 s increments from 0 to 60 s.

13.1.6.2.1.9~~13.1.6.2.1.7~~ wranIfSsaCurrentT50

Current value of T50 at the SSA in 0.1 s increments from 0 to 60 s.

13.1.6.2.1.10~~13.1.6.2.1.8~~ wranIfSsaIntraFrameQpCycleLength

Obtained from … is canceled.

13.1.6.2.1.11~~13.1.6.2.1.9~~ wranIfSsaIntraFrameQpCycleOffset

Obtained from … sensing cycle.

13.1.6.2.1.12~~13.1.6.2.1.10~~ wranIfSsaIntraFrameQpCycleFrameBitmap

Obtained from … period Duration.

13.1.6.2.1.13~~13.1.6.2.1.11~~ wranIfSsaIntraFrameQpDuration

Obtained from … take place.

13.1.6.2.1.14~~13.1.6.2.1.12~~ wranIfSsaInterFrameQpDuration

Obtained from … currently scheduled.

13.1.6.2.1.15~~13.1.6.2.1.13~~ wranIfSsaInterFrameQpOffset

Obtained from … will start.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.6.3 wranIfSsaConfigTable

13.1.6.3.1 wranIfSsaConfigEntry

Change the subclauses of 13.1.6.3.1 as follows:

13.1.6.3.1.1 wranIfSsaConfigIndex

Index of entry in this table.

13.1.6.3.1.2~~13.1.6.3.1.1~~ wranIfSsaT19

Time DS-channel remains unusable.

13.1.6.3.1.3~~13.1.6.3.1.2~~ wranIfSsaT29

Wait for BLM-ACK timeout.

13.1.6.3.1.4~~13.1.6.3.1.3~~ wranIfSsaMaxBlmRepRetries

Maximum number … sending BLM-REP.

13.1.6.3.1.5~~13.1.6.3.1.4~~ wranIfSsaChAvailabilityCheckTime ~~wranIfSmSsaChAvailabilityCheckTime~~

Time during … TV channel.

13.1.6.3.1.6~~13.1.6.3.1.5~~ wranIfSsaNonOccupancyPeriod~~wranIfSmSsaNonOccupancyPeriod~~

The required … EIRP level.

13.1.6.3.1.7~~13.1.6.3.1.6~~ wranIfSsaChannelDetectionTime ~~wranIfSmSsaChannelDetectionTime~~

Maximum time … WRAN operation.

13.1.6.3.1.8~~13.1.6.3.1.7~~wranIfSsaChannelSetupTime~~wranIfSmSsaChannelSetupTime~~

The window … TV channel.

13.1.6.3.1.9~~13.1.6.3.1.8~~ wranIfSsaChannelOpeningTxTime ~~wranIfSmSsaChannelOpeningTxTime~~

The aggregate … Check Time.

~~13.1.6.3.1.10~~~~13.1.6.3.1.9~~ wranIfSsaChannelMoveTime~~wranIfSmSsaChannelMoveTime~~

The time … related channel.

13.1.6.3.1.11~~13.1.6.3.1.10~~ wranIfSsaChannelClosingTxTime ~~wranIfSmSsaChannelClosingTxTime~~

The aggregate … Detection Threshold.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.6.3.1.12~~13.1.6.3.1.11~~ **wranIfSsaMicProtectionRadius**~~wranIfSmSsaMicProtectionRadius~~

Radius of … the microphone.

13.1.6.3.1.13~~13.1.6.3.1.12~~ **wranIfSsaT41**~~wranIfSmSsaT41~~

Maximum time … are detected.

13.1.6.3.1.14~~13.1.6.3.1.13~~ **wranIfSsaT42**~~wranIfSmSsaT42~~

Maximum time … are detected.

13.1.6.3.1.15~~13.1.6.3.1.14~~ **wranIfSsaT43**~~wranIfSmSsaT43~~

Minimum time … backup channel.

13.1.6.3.1.16~~13.1.6.3.1.15~~ **wranIfSsaT44**~~wranIfSmSsaT44~~

Maximum time … (self-coexistence mode).

13.1.6.3.1.17~~13.1.6.3.1.16~~ **wranIfSsaT45**~~wranIfSsaSmT45~~

Maximum WRAN … database service.

13.1.6.3.1.18~~13.1.6.3.1.17~~ **wranIfSsaT59**~~wranIfSmSsaT59~~

Waiting time … do so.

13.1.6.3.1.19~~13.1.6.3.1.18~~ **wranIfSsaT47**~~wranIfSmSsaT47~~

The prescribed … database service.

13.1.6.3.1.20~~13.1.6.3.1.19~~ **wranIfSsaT48**~~wranIfSmSsaT48~~

Lapse timer … spectrum sensing.

13.1.6.3.1.21~~13.1.6.3.1.20~~ **wranIfSsaT49**~~wranIfSmSsaT49~~

Lapse timer … spectrum sensing.

13.1.6.3.1.22~~13.1.6.3.1.21~~ **wranIfSsaT50**~~wranIfSmSsaT50~~

Lapse timer … spectrum sensing.

13.1.6.3.1.23~~13.1.6.3.1.22~~ **wranIfSsaT51**~~wranIfSmSsaT51~~

Initiated when … the SM.

13.1.6.3.1.24~~13.1.6.3.1.23~~ **wranIfSsaT53**~~wranIfSmSsaT53~~

The parameter … (Annex A).

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.6.3.1.25~~13.1.6.3.1.24~~ wranIfSsaT54~~wranIfSmSsaT54~~

The parameter … to $T_{sensout}$.

13.1.6.3.1.26~~13.1.6.3.1.25~~ wranIfSsaT55~~wranIfSmSsaT55~~

The T55 … in-band sensing.

13.1.6.3.1.27~~13.1.6.3.1.26~~ wranIfSsaT60~~wranIfSmSsaT60~~

The T60 … out-of-band sensing.

13.1.6.4 wranIfSsaPendingBlmRepTable

13.1.6.4.1 wranIfSsaPendingBlmRepEntry

Change the subclauses of 13.1.6.4.1 as follows:

13.1.6.4.1.1 wranIfSsaPendingBlmReqIndex

Index of entry in this table.

13.1.6.4.1.2~~13.1.6.4.1.1~~ wranIfSsaPendingBlmReqTransactionId

Transaction ID for pending BLM-REQ.

13.1.6.4.1.3 wranIfSsaPendingBlmReqMsgSize

Size of BLM-REQ message stored in `wranIfSsaPendingBlmReqMsg`.

13.1.6.4.1.4~~13.1.6.4.1.2~~ wranIfSsaPendingBlmReqMsg

Contents of pending BLM-REQ message.

13.1.6.4.1.5~~13.1.6.4.1.3~~ wranIfSsaPendingBlmRspSent

Indication of … been sent.

13.1.6.4.1.6~~13.1.6.4.1.4~~ wranIfSsaPendingBlmRepGenerated

Indication of … been executed.

13.1.6.4.1.7 wranIfSsaPendingBlmRepMsgSize

Size of BLM-REP message stored in `wranIfSsaPendingBlmRepMsg`.

13.1.6.4.1.8~~13.1.6.4.1.5~~ wranIfSsaPendingBlmRepMsg

Contents of … the BLM-REQ.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.6.4.1.9~~13.1.6.4.1.6~~ wranIfSsaPendingBlmRepSent

Indication of … been sent.

13.1.6.4.1.10~~13.1.6.4.1.7~~ wranIfSsaPendingBlmRepAck

Indication of whether BLM-ACK has been sent to acknowledge all transmitters of BLM-REP messages pertaining to BLM-REQ that was issued.~~or not BLM-REP pertaining to BLM-REQ has been acknowledged (via BLM-ACK).~~

13.1.6.4.1.11~~13.1.6.4.1.8~~ wranIfSsaPendingBlmRepNumTx

Current number … been resent.

13.1.6.5 wranIfSsaSensingRecordTable

13.1.6.5.1 wranIfSsaSensingRecordEntry

Change the subclauses of 13.1.6.5.1 as follows:

13.1.6.5.1.1 wranIfSsaSensingRecordIndex

Index of entry in the table.

13.1.6.5.1.2~~13.1.6.5.1.1~~ wranIfSsaSensingChannel

Channel that … in IPC-UPD.

13.1.6.5.1.3~~13.1.6.5.1.2~~ wranIfSsaTimeLastSensing

Last time … was sensed.

13.1.6.5.1.4~~13.1.6.5.1.3~~ wranIfSsaTimeLastPositive

Last time … this channel.

13.1.6.5.1.5~~13.1.6.5.1.4~~ wranIfSsaSensingPathRssi

RSSI on sensing path.

13.1.6.5.1.6~~13.1.6.5.1.5~~ wranIfSsaWranPathRssi

RSSI on WRAN sensing path.

13.1.6.5.1.7~~13.1.6.5.1.6~~ wranIfSsaSignalType

Type of … the channel.

13.1.6.5.1.8~~13.1.6.5.1.7~~ wranIfSsaWranServiceAdvertisement

If signal … neighbor WRAN.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.6.5.1.9~~13.1.6.5.1.8~~ wranIfSsaIdcUpdIndication

Indication if channel is on IPC-UPD.

13.1.6.6 wranIfSsaSsfMode0OutputTable

13.1.6.6.1 wranIfSsaSsfMode0OutputEntry

Change the subclauses of 13.1.6.6.1 as follows:

13.1.6.6.1.1 wranIfSsaSsfMode0OutputIndex

Index of entry in the table.

13.1.6.6.1.2~~13.1.6.6.1.1~~ wranIfSsaSsfMode0SignalType

Type of … be sensed.

13.1.6.6.1.3~~13.1.6.6.1.2~~ wranIfSsaSsfMode0SignalPresent

Indication of … was detected.

13.1.6.7 wranIfSsaSsfMode1OutputTable

13.1.6.7.1 wranIfSsaSsfMode1OutputEntry

Change the subclauses of 13.1.6.7.1 as follows:

13.1.6.7.1.1 wranIfSsaSsfMode1OutputIndex

Index of entry in table.

13.1.6.7.1.2~~13.1.6.7.1.1~~ wranIfSsaSsfMode1SignalType

Type of … be sensed.

13.1.6.7.1.3~~13.1.6.7.1.2~~ wranIfSsaSsfMode1SignalPresent

Indication of … was detected.

13.1.6.7.1.4~~13.1.6.7.1.3~~ wranIfSsaSsfMode1SignalConfidence

Confidence level in signal present decision, where 0x00 represents no confidence and 0xFF represents total confidence (see Table 241).

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.6.8 wranIfSsaSsfMode2OutputTable

13.1.6.8.1 wranIfSsaSsfMode2OutputEntry

Change the subclauses of 13.1.6.8.1 as follows:

13.1.6.8.1.1 wranIfSsaSsfMode2OutputIndex

Index of entry in the table.

13.1.6.8.1.2~~13.1.6.8.1.1~~ wranIfSsaSsfMode2SignalType

Type of … be sensed.

13.1.6.8.1.3~~13.1.6.8.1.2~~ wranIfSsaSsfMode2SignalRssiMean
~~wranIfSsaSsfMode0SignalRssiMean~~

Mean of RSSI signal measurements.

13.1.6.8.1.4~~13.1.6.8.1.3~~ wranIfSsaSsfMode2SignalStdDevRssi
~~wranIfSsaSsfMode0SignalStdDevRssi~~

Standard Deviation of RSSI signal measurements.

Change 13.1.6.9 and its subclauses as follows:

13.1.6.9 wranIfSsaSsfWiMicMSFTable~~wranIfSsaSsfWiMicMSF1Table~~

This object contains the current output ~~the~~ payload of MSF1, MSF1+MSF2, or MSF1+MSF2+MSF3 of an IEEE 802.22.1 beacon on recently sensed channels. It is made up of multiple entries for each channel on which one or more MSFs have been ~~a MSF1 was~~ sensed ~~on~~. Each entry is defined by `wranIfSsaSsfWiMicMSFEntry`~~`wranIfSsaSsfWiMicMSF1Entry`~~.

13.1.6.9.1 wranIfSsaSsfWiMicMSFEntry~~wranIfSsaSsfWiMicMSF1Entry~~

This object represents the entry in `wranIfSsaSsfWiMicMSFTable` ~~`wranIfSsaSsfWiMicMSF1Table`~~.

13.1.6.9.1.1 wranIfSsaSsfWiMicMSFIndex

An index to an entry in this table.

13.1.6.9.1.2~~13.1.6.9.1.1~~ wranIfSsaSsfWiMicMSFChannel~~wranIfSsaSsfWiMicMSF1Channel~~

Channel number … was captured.

13.1.6.9.1.3 wranIfSsaSsfWiMicMSFPayloadSize

Size of MSF payload stored in `wranIfSsaSsfWiMicMSFPayload`. Indicates whether MSF1 by itself (17 octets), MSF1+MSF2 (68 octets), or MSF1+MSF2+MSF3 (101 octets) have been captured (see Figure 16, 7.2.1, 7.2.2, and 7.2.3 of IEEE Std 802.22.1-2010). This size does not reflect CRC1/CRC2/CRC3 from the MSFs.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.6.9.1.4~~13.1.6.9.1.2~~ wranIfSsaSsfWiMicMSFPayload~~wranIfSsaSsfWiMicMSF1Payload~~

Payload of MSF1, MSF1+MSF2, or MSF1+MSF2+MSF3, not including the CRC1/CRC2/CRC3 field (see 7.2.1, 7.2.2, 7.2.3 of IEEE Std 802.22.1-2010).

13.1.6.9.1.5~~13.1.6.9.1.3~~ wranIfSsaSsfWiMicMSFCrc1Status
~~wranIfSsaSsfWiMicMSF1Crc1Status~~

Indication of … of CRC1.

13.1.6.9.1.6 wranIfSsaSsfWiMicMSFCrc2Status

Indication of whether MSF2 passed verification of CRC2.

13.1.6.9.1.7 wranIfSsaSsfWiMicMSFCrc3Status

Indication of whether MSF3 passed verification of CRC3.

Delete 13.1.6.10 to 13.1.6.11.1.3 as follows:

~~13.1.6.10 wranIfSsaSsfWiMicMSF2Table~~

~~This object … **13.1.6.10.1.3** … of CRC2.~~

~~13.1.6.11 wranIfSsaSsfWiMicMSF3Table~~

~~This object … **13.1.6.11.1.3** … of CRC3.~~

To create a new 13.1.6.10 with subclauses, change the former 13.1.6.12 and its subclauses as follows:

13.1.6.10~~13.1.6.12~~ wranIfSsaGeolocationTable

This object contains the current parameters and calculations being used by the Geolocation component of the SSA. It is made up of one entry to contain current values being used/calculated in the BS-to-CPE fine ranging, CPE-to-CPE fine ranging, and geolocation calculation functions~~outputs, and final geolocation string~~. It is made up of one entry, defined by `wranIfSsaGeolocationEntry`.

13.1.6.10.1~~13.1.6.12.1~~ wranIfSsaGeolocationEntry

This object … `wranIfSsaGeolocationTable`.

13.1.6.10.1.1 wranIfSsaGeolocationIndex

Index of entry in the table.

13.1.6.10.1.2 wranIfSsaGeolocationVernier1Size

Size of Vernier$_1$ data recorded only at the CPE.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.6.10.1.3~~13.1.6.12.1.1~~ wranIfSsaGeolocationVernier1

Vernier$_1$, recorded only at the CPE.

13.1.6.10.1.4 wranIfSsaGeolocationVernier2Size

Size of Vernier$_2$ data recorded only at the BS.

13.1.6.10.1.5~~13.1.6.12.1.2~~ wranIfSsaGeolocationVernier2

Vernier$_2$, recorded only at the BS.

13.1.6.10.1.6 wranIfSsaGeolocationVernier3Size

Size of Vernier$_3$ data recorded only at the CPE.

13.1.6.10.1.7~~13.1.6.12.1.3~~ wranIfSsaGeolocationVernier3

Vernier$_3$, recorded only at the CPE.

13.1.6.10.1.8~~13.1.6.12.1.4~~ wranIfSsaGeolocationTRange1

T_{Range1}, also … frame preamble.

13.1.6.10.1.9~~13.1.6.12.1.5~~ wranIfSsaGeolocationTACbp

TA_{CBP}, Timing … ranging calculations.

Insert the following new subclauses (13.1.6.11 to 13.1.6.15) after 13.1.6.10.1.9:

13.1.6.11 wranIfSsaTrapControl

Defines control elements for traps related to interaction with the SSA. This is 9-bit field that enables setting a trap for particular CPE events: `wranIfSsaSensingCpaChange`, `wranIfSsaStatusChange`, `wranIfSsaBlmRepChange`, `wranIfSsaSensingRecordChange`, `wranIfSsaSsfMode0Change`, `wranIfSsaSsfMode1Change`, `wranIfSsaSsfMode2Change`, `wranIfSsaSsfWiMicChange`, and `wranIfSsaGeolocationChange`.

13.1.6.12 wranIfSsaTrapDefinition

This MIB group specifies the definition of traps that can be enabled/disabled in `wranIfSsaTrapControl`.

13.1.6.12.1 wranIfSsaSensingCapChangeTrap

This trap contains information related to the configuration of SSA sensing capabilities.

13.1.6.12.2 wranIfSsaStatusChangeTrap

This traps contains information related to current state of the SSA.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.6.12.3 wranIfSsaBlmRepChangeTrap

This trap contains information related to pending BLM transactions at the SSA.

13.1.6.12.4 wranIfSsaSensingRecordChangeTrap

This trap contains information related to sensing records maintained by the SSA.

13.1.6.12.5 wranIfSsaSsfMode0ChangeTrap

This trap contains information related to sensing output using Mode 0.

13.1.6.12.6 wranIfSsaSsfMode1ChangeTrap

This trap contains information related to sensing output using Mode 1.

13.1.6.12.7 wranIfSsaSsfMode2ChangeTrap

This trap contains information related to sensing output using Mode 2.

13.1.6.12.8 wranIfSsaSsfWiMicMSFChangeTrap

This trap contains information related to sensing and capturing wireless microphone beacons (see IEEE Std 802.22.1-2010).

13.1.6.12.9 wranIfSsaGeolocationChangeTrap

This trap contains information related to terrestrial geolocation.

13.1.6.13 wranIfSsaNotificationObjectsTable

This MIB provides a table to track notification objects that have been reported by the traps related to operation of the SSA. It is made up of one entry, containing the objects related to the most recent trap/event. The entry is defined by `wranIfSsaNotificationObjectsEntry`.

13.1.6.13.1 wranIfSsaNotificationObjectsEntry

Definition of an entry in `wranIfSsaNotificationObjectsTable`. Each entry is defined by `wranIfSsaNotificationIndex`.

13.1.6.13.1.1 wranIfSsaNotificationIndex

Index of entry in the table.

13.1.6.13.1.2 wranIfSsaNotificationCurrentState

Current state that SSA is in as defined by current value of `wranIfSsaCurrentState`.

13.1.6.13.1.3 wranIfSsaNotificationRecentEvent

Recent event that occurred for SSA as defined by current value of `wranIfSsaRecentEvent`.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.6.13.1.4 wranIfSsaNotificationRecentAction

Recent action SSA has taken as defined by current value of `wranIfSsaRecentAction`.

13.1.6.13.1.5 wranIfSsaNotificationPendingBlmRepIndex

Index of entry in `wranIfSsaPendingBlmRepTable` that indicates the handling of which pending BLM-REP has triggered a trap.

13.1.6.13.1.6 wranIfSsaNotificationSensingRecordIndex

Index of entry in `wranIfSsaSensingRecordTable` that indicates the handling of which sensing record has triggered a trap.

13.1.6.13.1.7 wranIfSsaSsfNotificationMode0OutputIndex

Index of entry in `wranIfSsaSsfMode0OutputTable` that indicates the handling of which signal type detected by Mode 0 triggered a trap.

13.1.6.13.1.8 wranIfSsaSsfNotificationMode1OutputIndex

Index of entry in `wranIfSsaSsfMode1OutputTable` that indicates the handling of which signal type detected by Mode 1 triggered a trap.

13.1.6.13.1.9 wranIfSsaSsfNotificationMode1Confidence

Confidence value of entry indexed by `wranIfSsaSsfNotificationMode1OutputIndex` in `wranIfSsaSsafMode1OutputTable` that indicates handling of which signal type detected by Mode 1 triggered a trap.

13.1.6.13.1.10 wranIfSsaSsfNotificationMode2OutputIndex

Index of entry in `wranIfSsaSsfMode2OutputTable` that indicates the handling of which signal type detected by Mode 2 triggered a trap.

13.1.6.13.1.11 wranIfSsaSsfNotificationMode2SignalRssiMean

Current Mean of RSSI signal measurements, between –104 dBm to +23.5 dBm in 0.5 dB steps, for which a trap was caught.

13.1.6.13.1.12 wranIfSsaSsfNotificationMode2SignalStdDevRssi

Current Standard Deviation of RSSI signal measurements, between –104 dBm to +23.5 dBm in 0.5 dB steps, for which a trap was caught.

13.1.6.13.1.13 wranIfSsaNotificationWiMicMSFIndex

Index of entry in `wranIfSsaSsfWiMicMSFTable` that indicates the handling of which channel the capture of a wireless microphone beacon MSF has triggered a trap.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.1.6.13.1.14 wranIfSsaSensingCapabilityStatus

The 8-bit bitmap that indicates changes to the sensing capabilities defined in `wranIfSsaSensingCapTable`.

13.1.6.13.1.15 wranIfSsaStatus

Concerning the current state of the SSA, this 10-bit bitmap indicates whether what type of change to SSA state occurred to trigger the trap.

13.1.6.13.1.16 wranIfSsaBlmRepStatus

Concerning the current state of pending BLM-REQ messages, this object indicates how far along in the sensing and report generation process is the SSA.

13.1.6.13.1.17 wranIfSsaSensingRecordStatus

A 5-bit bitmap concerning the update of an entry in `wranIfSsaSensingRecordTable`.

13.1.6.13.1.18 wranIfSsaSsfMode0Status

Whether a specific signal type is present or not present using Mode 0 sensing.

13.1.6.13.1.19 wranIfSsaSsfMode1Status

Whether a specific signal type is present or not present using Mode 1 sensing.

13.1.6.13.1.20 wranIfSsaSsfMode2Status

Whether the mean or standard deviation RSSI for a detected signal has changed.

13.1.6.13.1.21 wranIfSsaSsfWiMicMSFStatus

Indication of how much wireless microphone beacon payload has been received and decoded on a given channel.

13.1.6.13.1.22 wranIfSsaGeolocationStatus

Indication of which geolocation parameters have been updated.

13.1.6.14 wranIfSsaMibGroups

This object helps define which MIB groups are available within this module and which MIB objects are part of each group.

13.1.6.14.1 wranIfSsaSensingCapGroup

This group represents objects related to the sensing capabilities supported by the SSA.

13.1.6.14.2 wranIfSsaStatusGroup

This group represents objects related to the current state of the SSA.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.6.14.3 wranIfSsaConfigGroup

This group represents objects related to the configuration of the SSA.

13.1.6.14.4 wranIfSsaPendingBlmRepGroup

This group represents objects related to the pending BLM transactions and sensing reports (BLM-REP) that are to be generated.

13.1.6.14.5 wranIfSsaSensingRecordGroup

This group represents objects related to the sensing status of each channel.

13.1.6.14.6 wranIfSsaSsfMode0OutputGroup

This group represents objects related to output of Mode 0 sensing.

13.1.6.14.7 wranIfSsaSsfMode1OutputGroup

This group represents objects related to output of Mode 1 sensing.

13.1.6.14.8 wranIfSsaSsfMode2OutputGroup

This group represents objects related to output of Mode 2 sensing.

13.1.6.14.9 wranIfSsaSsfWiMicMSFGroup

This group contains objects related to the detection of wireless microphone beacons as defined by IEEE Std 802.22.1-2010.

13.1.6.14.10 wranIfSsaGeolocationGroup

This group contains objects related to geolocation function of the SSA.

13.1.6.14.11 wranIfSsaTrapControlGroup

This group contains objects related to enabling/disabling traps on the SSA.

13.1.6.14.12 wranIfSsaNotificationsGroup

This group contains objects related to traps that are configured for the SSA.

13.1.6.15 wranIfSsaMibCompliance

MIB objects that are optional and mandatory for SSA compliance.

Change 13.1.7 as follows:

13.1.7 wranIfDatabaseServiceMib

This MIB group deals with objects related to the configuration of access to, as well as the interaction with, the database service. This group is made up of the following objects:

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

— `wranIfBsMgmtInfoTable`: Stores information on BS's management interface the database service can access.
— `wranIfBsDeviceEnlistmentTable`: Stores information regarding devices for which BS has attempted registration with database service.
— `wranIfDbsChannelIndicationTable`: Stores information on channels indicated as available by database service.
— `wranIfDbsAccessTable`: Stores access information for database service(s) that are available.
— `wranIfDbsTrapControl`: Enables/Disables recording of traps regarding database service access and interaction.
— `wranIfDbsTrapDefinition`: Defines traps related to database service access and interaction.
— `wranIfDbsNotificationObjectsTable`: Stores notification objects related to most recent trap.
— `wranIfDbsMibGroups`: Definition of MIB groups associated with this module.
— `wranIfDbsMibCompliance`: Definition of which MIB groups are mandatory or optional for compliance.

13.1.7.1 wranIfBsMgmtInfoTable

13.1.7.1.1 wranIfBsMgmtInfoEntry

Change the subclauses of 13.1.7.1.1 as follows:

13.1.7.1.1.1 wranIfBsMgmtInfoIndex

Index of entry in the table (defaults to 0).

13.1.7.1.1.2 wranIfBsSizeMgmtUrl

Size of Base Station Management URL (see 14.2.1.3).

13.1.7.1.1.3~~13.1.7.1.1.1~~ wranIfBsMgmtUrl

Base Station Management URL (see 14.2.1.3~~10.7.1.1~~).

13.1.7.1.1.4 wranIfBsSizeMgmtDeviceId

Size of BS FCC Device ID (see 14.2.1.3).

13.1.7.1.1.5~~13.1.7.1.1.2~~ wranIfBsMgmtDeviceId

BS FCC Device ID (see 14.2.1.3~~10.7.1.1~~).

13.1.7.1.1.6 wranIfBsSizeMgmtSn

Size of BS serial number (see 14.2.1.3).

13.1.7.1.1.7~~13.1.7.1.1.3~~ wranIfBsMgmtSn

BS serial number (see 14.2.1.3~~10.7.1.1~~).

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.7.1.1.8 wranIfBsSizeMgmtLocation

Size of Location data string of BS (see 14.2.1.3).

13.1.7.1.1.9~~13.1.7.1.1.4~~ wranIfBsMgmtLocation

Location data string of BS.

13.1.7.1.1.10~~13.1.7.1.1.5~~ wranIfBsMgmtAntennaHeight

Antenna height at the BS (see 14.2.1.3).

13.1.7.1.1.11 wranIfBsSizeMgmtContactName

Size of Contact Name for person(s) who has ownership of the BS (see 14.2.1.3).

13.1.7.1.1.12~~13.1.7.1.1.6~~ wranIfBsMgmtContactName

Contact Name for person(s) who has ownership of the BS (see 14.2.1.3).

13.1.7.1.1.13 wranIfBsSizeMgmtContactPhysAddress

Size of Physical address for the owner of the BS (see 14.2.1.3).

13.1.7.1.1.14~~13.1.7.1.1.7~~ wranIfBsMgmtContactPhysAddress

Physical address for contacting the owner of the BS (see 14.2.1.3).

13.1.7.1.1.15 wranIfBsSizeMgmtEmailAddress

Size of E-mail address for the owner of the BS (see 14.2.1.3).

13.1.7.1.1.16~~13.1.7.1.1.8~~ wranIfBsMgmtEmailAddress

E-mail address for contacting the owner of the BS (see 14.2.1.3).

13.1.7.1.1.17 wranIfBsSizeMgmtPhoneNumber

Size of Telephone number for the owner of the BS (see 14.2.1.3).

13.1.7.1.1.18~~13.1.7.1.1.9~~ wranIfBsMgmtPhoneNumber

Telephone number for contacting the owner of the BS (see 14.2.1.3).

13.1.7.1.1.19 wranIfBsSizeAccessUrl

Size of Base Station Access Service URL (see 14.2.1.3).

13.1.7.1.1.20 wranIfBsAccessUrl

Base Station Access Service URL (see 14.2.1.3).

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Change 13.1.7.2 and its subclauses as follows:

13.1.7.2 wranIfDbsDeviceEnlistmentTable~~wranIfBsDeviceEnlistmentTable~~

This object stores information regarding information on devices entering the network that the BS has attempted to enlist/register with the database service. It is made up of multiple entries~~values~~, each defined by `wranIfDbsDeviceEnlistmentEntry`~~`wranIfBsDeviceEnlistmentEntry`~~.

13.1.7.2.1 wranIfDbsDeviceEnlistmentEntry~~wranIfBsDeviceEnlistmentEntry~~

This object defines an entry in `wranIfDbsDeviceEnlistmentTable` ~~`wranIfBsDeviceEnlistmentTable`~~.

13.1.7.2.1.1 wranIfDbsDeviceEnlistmentIndex

Index of entry in the table.

13.1.7.2.1.2~~13.1.7.2.1.1~~ wranIfDbsDeviceEnlistmentConfirmed ~~wranIfBsDeviceEnlistmentConfirmed~~

Has this enlistment been confirmed via receipt of M-DB-ENLISTMENT-CONFIRMATION ~~M-DEVICE-ENLISTMENT-CONFIRM~~ (see 14.2.1.3.4~~10.7.1.4~~) from the database service?

13.1.7.2.1.3~~13.1.7.2.1.2~~ wranIfDbsConfirmedDeviceType~~wranIfBsDeviceType~~

Type of … personal/portable.

13.1.7.2.1.4 wranIfDbsSizeConfirmedDeviceId

Size of Device ID of device that is being enlisted/registered with the database service.

13.1.7.2.1.5~~13.1.7.2.1.3~~ wranIfDbsConfirmedDeviceId~~wranIfBsDeviceId~~

Device ID … database service.

13.1.7.2.1.6 wranIfDbsSizeConfirmedDeviceSn

Size of Serial number of device that is being enlisted/registered with the database service.

13.1.7.2.1.7~~13.1.7.2.1.4~~ wranIfDbsConfirmedDeviceSn~~wranIfBsDeviceSn~~

Serial number … database service.

13.1.7.2.1.8 wranIfDbsSizeConfirmedDeviceLocation

Size of location string of device requesting enlistment.

13.1.7.2.1.9~~13.1.7.2.1.5~~ wranIfDbsConfirmedDeviceLocation~~wranIfBsDeviceLocation~~

Location string … requesting enlistment.

13.1.7.2.1.10 wranIfDbsSizeProxyDeviceId

Device ID of proxy device BS may use to send queries to the database.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.7.2.1.11~~13.1.7.2.1.6~~ wranIfDbsProxyDeviceId~~wranIfBsProxyDeviceId~~

Device ID … the database.

13.1.7.2.1.12 wranIfDbsSizeProxySn

Size of Serial number of proxy device BS may use to send queries to the database.

13.1.7.2.1.13~~13.1.7.2.1.7~~ wranIfDbsProxySn~~wranIfBsProxySn~~

Serial number … the database.

13.1.7.2.1.14 wranIfDbsSizeRespPartyName

Name of party responsible for device enlistment/registration.

13.1.7.2.1.15~~13.1.7.2.1.8~~ wranIfDbsRespPartyName~~wranIfBsRespPartyName~~

Name of … enlistment/registration.

13.1.7.2.1.16~~13.1.7.2.1.9~~ wranIfDbsConfirmedDeviceAntennaHeight ~~wranIfBsDeviceAntennaHeight~~

Antenna height … being enlisted.

13.1.7.2.1.17 wranIfDbsSizeConfirmedDeviceContactName

Size of Contact Name for person(s) who has ownership of the device; only pertinent if device type is fixed BS or CPE.

13.1.7.2.1.18~~13.1.7.2.1.10~~ wranIfDbsConfirmedDeviceContactName ~~wranIfBsDeviceContactName~~

Contact Name for person(s) who has ownership of the device; only pertinent ~~o~~if device type is fixed BS or CPE.

13.1.7.2.1.19 wranIfDbsSizeConfirmedDeviceContactPhysAddress

Size of Physical address for the owner of the device; only pertinent if device type is fixed BS or CPE.

13.1.7.2.1.20~~13.1.7.2.1.11~~ wranIfDbsConfirmedDeviceContactPhysAddress ~~wranIfBsDeviceContactPhysAddress~~

Physical address … fixed CPE.

~~13.1.7.2.1.21~~ wranIfDbsSizeConfirmedDeviceEmailAddress

Size of E-mail address for the owner of the device; only pertinent if device type is fixed BS or CPE.

13.1.7.2.1.22~~13.1.7.2.1.12~~ wranIfDbsConfirmedDeviceEmailAddress ~~wranIfBsDeviceEmailAddress~~

E-mail address … fixed CPE.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.7.2.1.23 wranIfDbsSizeConfirmedDevicePhoneNumber

Size of Telephone number for the owner of the device; only pertinent if device type is fixed BS or CPE.

13.1.7.2.1.24~~13.1.7.2.1.13~~ wranIfDbsConfirmedDevicePhoneNumber ~~wranIfBsDevicePhoneNumber~~

Telephone number … fixed CPE.

13.1.7.2.1.25~~13.1.7.2.1.14~~ wranIfDbsConfirmedDeviceAntennaInformation ~~wranIfBsDeviceAntennaInformation~~

Antenna information … database service.

13.1.7.2.1.26~~13.1.7.2.1.15~~ wranIfDbsConfirmedDeviceAntennaAzimuth ~~wranIfBsDeviceAntennaAzimuth~~

Antenna azimuth … database service.

13.1.7.2.1.27~~13.1.7.2.1.16~~ wranIfDbsConfirmedDeviceConfirmationMsgTime ~~wranIfBsDeviceConfirmationMsgTime~~

Timestamp of transmission for M-DB-ENLISTMENT-REQUEST~~M-DEVICE-ENLISTMENT-REQUEST~~.

Change 13.1.7.3 and its subclauses as follows:

13.1.7.3 wranIfDbsChannelIndicationTable

This object stores information on what channels have been indicated (upon receipt of M-DB-AVAILABLE-CHANNEL-INDICATION) as available and their EIRP limit at a given location for a particular device. It is made up of multiple entries, one each for the tuple of location||channel||EIRP||DeviceID. Each entry is defined by `wranIfDbsChannelIndicationEntry`.

13.1.7.3.1 wranIfDbsChannelIndicationEntry

Compound object …`wranIfDbsChannelIndicationTable`.

13.1.7.3.1.1 wranIfDbsChannelIndicationIndex

Index of entry in this table.

13.1.7.3.1.2 wranIfDbsSizeDeviceId

Size of Device ID of device for which channel is indicated as available.

13.1.7.3.1.3~~13.1.7.3.1.1~~ wranIfDbsDeviceId~~wranIfBsDeviceId~~

Device ID … as available.

13.1.7.3.1.4 wranIfDbsSizeDeviceSn

Size of Serial number of device for which channel is indicated as available.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.7.3.1.5~~13.1.7.3.1.2~~ wranIfDbsDeviceSn~~wranIfBsDeviceSn~~

Serial number … as available.

13.1.7.3.1.6~~13.1.7.3.1.3~~ wranIfDbsDeviceChannelNumber~~wranIfBsDeviceChannelNumber~~

Channel number … is indicated.

13.1.7.3.1.7~~13.1.7.3.1.4~~ wranIfDbsDeviceMaxAllowedEirp~~wranIfBsDeviceMaxAllowedEirp~~

Maximum allowed EIRP on the channel.

13.1.7.3.1.8 wranIfDbsSizeDeviceLocation

Size of Location string of device requesting for which channel availability is indicated.

13.1.7.3.1.9~~13.1.7.3.1.5~~ wranIfDbsDeviceLocation~~wranIfBsDeviceLocation~~

Location string … is indicated.

13.1.7.3.1.10~~13.1.7.3.1.6~~ wranIfDbsDeviceDbsIndex~~wranIfBsDeviceDbsIndex~~

Index of … channel indication.

13.1.7.4 wranIfDbsAccessTable

13.1.7.4.1 wranIfDbsAccessEntry

Change the subclauses of 13.1.7.4.1 as follows:

13.1.7.4.1.1 wranIfDbsAccessEntryIndex

Index of entry in this table.

13.1.7.4.1.2 wranIfDbsSizeAccessUrl

Size of URL used to access database service.

13.1.7.4.1.3~~13.1.7.4.1.2~~ wranIfDbsAccessUrl

URL used to access database service.

13.1.7.4.1.4~~13.1.7.4.1.3~~ wranIfDbsAccessCredentialType

Indication of … database service.

13.1.7.4.1.5 wranIfDbsSizeAccessCertCredential

Size of Certificate Credential BS or proxy device uses to authenticate access to the database; only pertinent when `wranIfDbsAccessCredentialType` is set to certificate.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.7.4.1.6~~13.1.7.4.1.4~~ wranIfDbsAccessCertCredential~~wranIfDbsAccessCredential~~

Certificate Credential BS or proxy device used to authenticate access to the database; only pertinent when `wranIfDbsAccessCredentialType` is set to~~service, e.g., password,~~ certificate.

13.1.7.4.1.7 wranIfDbsSizeAccessUserID

Size of login User ID used for accessing the database service; only pertinent when `wranIfDbsAccessCredentialType` is set to userID and password.

13.1.7.4.1.8 wranIfDbsAccessUserID

Login User ID used for accessing the database service; only pertinent when `wranIfDbsAccessCredentialType` is set to userID and password.

13.1.7.4.1.9 wranIfDbsSizeAccessPassword

Size of login password (or hash of password) used for accessing the database service; only pertinent when `wranIfDbsAccessCredentialType` is set to userID and password.

13.1.7.4.1.10 wranIfDbsAccessPassword

Login password (or hash of password) used for accessing the database service; only pertinent when `wranIfDbsAccessCredentialType` is set to userID and password.

13.1.7.4.1.11~~13.1.7.4.1.5~~ wranIfDbsAccessLastTxTime

Time indication … database service.

13.1.7.4.1.12~~13.1.7.4.1.6~~ wranIfDbsAccessLastRxTime

Time indication … database service.

13.1.7.4.1.13~~13.1.7.4.1.7~~ wranIfDbsAccessAntennaInfoRequired

Indication of … database service.

13.1.7.4.1.14 wranIfDbsAccessPriority

Priority of database service. Higher priority means that a particular database service will be preferred when device enlistment and channel indication requests need to be made.

Insert the following new subclauses (13.1.7.5 to 13.1.7.9) after 13.1.7.4.1.14:

13.1.7.5 wranIfDbsTrapControl

Defines control elements for traps related to interaction with the database service. This is 3-bit field that enables setting a trap for particular CPE events: `wranIfDbsAvalailabilityChange`, `wranIfDbsEnlistmentChange`, and `wranIfDbsChannelIndicationChange`.

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

13.1.7.6 wranIfDbsTrapDefinition

This MIB group specifies the definition of traps that can be enabled/disable in `wranIfDbsTrapControl`.

13.1.7.6.1 wranIfDbsAvailabilityChangeTrap

This trap contains information related to the last time a particular database service was accessed.

13.1.7.6.2 wranIfDbsEnlistmentChangeTrap

This traps contains information regarding the status of enlistment confirmation for a particular device in the network.

13.1.7.6.3 wranIfDbsChannelIndicationChangeTrap

This trap contains information regarding the status of channel indication responses from the database service.

13.1.7.7 wranIfDbsNotificationObjectsTable

This MIB provides a table to track notification objects that have been reported by the traps related to access to the database. It is made up of one entry containing the objects related to the most recent trap/event. The entry is defined by `wranIfDbsNotificationObjectsEntry`.

13.1.7.7.1 wranIfDbsNotificationObjectsEntry

Definition of an entry in `wranIfDbsNotificationObjectsTable`. Each entry is identified by `wranIfNotificationDeviceId`.

13.1.7.7.1.1 wranIfDbsNotificationObjectsEntryIndex

Index of entry in the table.

13.1.7.7.1.2 wranIfDbsNotificationSizeDeviceId

Size of Device ID of the device for which trap status information is stored.

13.1.7.7.1.3 wranIfDbsNotificationDeviceId

Device ID of the device for which trap status information is stored.

13.1.7.7.1.4 wranIfDbsNotificationSizeDeviceSn

Size of Serial Number of the device for which trap status information is stored.

13.1.7.7.1.5 wranIfDbsNotificationDeviceSn

Serial Number of the device for which trap status information is stored.

13.1.7.7.1.6 wranIfDbsNotificationDbsSizeAccessUrl

Size of Access URL of database service with which device enlistment of channel indication query was exchanged.

Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

13.1.7.7.1.7 wranIfDbsNotificationDbsAccessUrl

Access URL of database service with which device enlistment of channel indication query was exchanged.

13.1.7.7.1.8 wranIfDbsAccessStatus

Indication of whether a message is transmitted or received from database service.

13.1.7.7.1.9 wranIfDbsConfirmedDeviceStatus

Indication of whether the enlistment of the device has been successfully completed.

13.1.7.7.1.10 wranIfDbsChannelIndicationStatus

Indication of whether channels have been indicated as available for the device in question.

13.1.7.8 wranIfDbsMibGroups

This object helps define which MIB groups are available within this module and which MIB objects are part of each group.

13.1.7.8.1 wranIfDbsMgmtGroup

This group contains configuration objects related to the management interface on the BS that the database service can access.

13.1.7.8.2 wranIfDbsEnlistmentGroup

This group contains configuration objects related to enlistment of devices.

13.1.7.8.3 wranIfDbsChannelIndicationGroup

This group contains configuration objects related to indication of available channels.

13.1.7.8.4 wranIfDbsAccessGroup

This group contains configuration objects related to current accessibility of the database service.

13.1.7.8.5 wranIfDbsTrapControlGroup

This group contains configuration objects related to enabling/disabling traps related to the accessibility of the database service.

13.1.7.8.6 wranIfDbsNotificationsGroup

This group contains notification objects related to traps configured for access to the database service.

13.1.7.9 wranIfDbsMibCompliance

Defines MIB objects that are optional and mandatory for database service.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

Insert the following new subclauses (13.2 to 13.2.7) after 13.1.7.9:

13.2 MIB module definitions (ASN.1)

13.2.1 wranDevMib

```
IEEE802dot22-WRAN-DEV-MIB     ::=   BEGIN

      IMPORTS
            MODULE-IDENTITY,
            OBJECT-TYPE,
            NOTIFICATION-TYPE,
            Unsigned32, Integer32
                  FROM SNMPv2-SMI
            SnmpAdminString
                  FROM SNMP-FRAMEWORK-MIB
            TEXTUAL-CONVENTION,
            RowStatus, TruthValue,
            TimeStamp, DateAndTime
                  FROM SNMPv2-TC
            InetAddressType, InetAddress
                  FROM INET-ADDRESS-MIB
            OBJECT-GROUP,
            MODULE-COMPLIANCE,
            NOTIFICATION-GROUP
                  FROM SNMPv2-CONF;

      wranDevMib  MODULE-IDENTITY
            LAST-UPDATED      "201405300000Z" – May 30, 2014
            ORGANIZATION      "IEEE 802.22"
            CONTACT-INFO
                  "WG E-mail:  STDS-802-22@LISTSERV.IEEE.ORG
                   WG Chair:   Apurva N. Mody
                   E-mail:     apurva.mody@ieee.org

                   TGa Chair/Editor:  Ranga Reddy
                   E-mail:            ranga.reddy@ieee.org"
            DESCRIPTION
                  "This material is from IEEE Std 802.22a-2014
                   Copyright (c) 2014. This MIB Module
                   Defines device related manage objects
                   for IEEE Std 802.22-2011 base Customer
                   Premise Equipment and Base Station and
                   is under
                   iso(1).std(0).iso8802(8802).wran(22).wranDevMib(1)"
            REVISION          "201405300000Z"
            DESCRIPTION
                  "The first version of IEEE802dot22-WRAN-DEV-MIB."
            ::= {iso std(0) iso8802(8802) wran(22) 1}

      wranDevBsObjects        OBJECT IDENTIFIER ::= { wranDevMib 1 }
      wranDevCpeObjects       OBJECT IDENTIFIER ::= { wranDevMib 2 }
      wranDevCommonObjects    OBJECT IDENTIFIER ::= { wranDevMib 3 }

      wranDevBsObjects              OBJECT IDENTIFIER
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                                        ::= { wranDevMib 1 }
wranDevBsSoftwareUpgradeTable OBJECT IDENTIFIER
                                        ::= { wranDevBsObjects 1 }
wranDevBsNotification         OBJECT IDENTIFIER
                                        ::= { wranDevBsObjects 2 }

wranDevBsSoftwareUpgradeTable OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranDevBsSoftwareUpgradeEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This table defines objects associated with BS
             software configuration"
      ::= { wranDevBsObjects 1 }

wranDevBsSoftwareUpgradeEntry OBJECT-TYPE
      SYNTAX      wranDevBsSoftwareUpgradeEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "Definition of an entry in
             wranDevBsSoftwareUpgradeTable. Each entry is
             identified by wranDevBsDeviceIndex."
      INDEX { wranDevBsDeviceIndex }
      ::= { wranDevBsSoftwareUpgradeTable 1 }

wranDevBsSoftwareUpgradeEntry ::= SEQUENCE {
      wranDevBsDeviceIndex                INTEGER,
      wranDevBsVendorId                   OCTET STRING,
      wranDevBsHwId                       OCTET STRING,
      wranDevBsCurrentSwVersion           OCTET STRING,
      wranDevBsDownloadSwVersion          OCTET STRING,
      wranDevBsUpgradeFileName            OCTET STRING,
      wranDevBsSoftwareUpdgradeAdminState INTEGER,
      wranDevBsDownloadSwProgress         INTEGER,
      wranDevBsSoftwareUpgradeTimeStamp   DateAndTime }

wranDevBsDeviceIndex    OBJECT-TYPE
      SYNTAX      INTEGER (1..10)
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "Index of entry in table."
      ::= { wranDevBsSoftwareUpgradeEntry 1 }

wranDevBsVendorId       OBJECT-TYPE
      SYNTAX            OCTET STRING (SIZE(2..256))
      MAX-ACCESS        read-only
      STATUS            current
      DESCRIPTION
            "This value identifies the managed BS vendor to
             which SW upgrade was applied."
      ::= { wranDevBsSoftwareUpgradeEntry 2 }

wranDevBsHwId           OBJECT-TYPE
      SYNTAX            OCTET STRING (SIZE(2..256))
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
              "Version of HW that SW upgrade is applied to."
        ::= { wranDevBsSoftwareUpgradeEntry 3 }

    wranDevBsCurrentSwVersion     OBJECT-TYPE
        SYNTAX            OCTET STRING (SIZE(2..256))
        MAX-ACCESS        read-only
        STATUS            current
        DESCRIPTION
              "Version of SW that is currently running on the BS.
               This value is set by the vendor specified by the
               Vendor ID. The  SW version and HW ID (wranDevBsHwId)
               should be a unique Tuple. After the downloaded
               software is activated, the  value in this object
               shall value of this object shall be replaced with
               the version in wranDevBsDownloadSwVersion."
        ::= { wranDevBsSoftwareUpgradeEntry 4 }

    wranDevBsDownloadSwVersion    OBJECT-TYPE
        SYNTAX            OCTET STRING (SIZE(2..256))
        MAX-ACCESS        read-write
        STATUS            current
        DESCRIPTION
              "Version of the SW to be downloaded. This value is
               set by the vendor specified by the Vendor ID. The SW
               version and  HW ID  (wranDevBsHwId) should be a
               unique type. This should be initialized before
               software is downloaded or activated."
        ::= { wranDevBsSoftwareUpgradeEntry 5 }

    wranDevBsUpgradeFileName      OBJECT-TYPE
        SYNTAX            OCTET STRING (SIZE(2..256))
        MAX-ACCESS        read-write
        STATUS            current
        DESCRIPTION
              "Fully qualified path name that points to the
               location of the SW version that is to be
               downloaded/activated."
        ::= { wranDevBsSoftwareUpgradeEntry 6 }

    wranDevBsSoftwareUpgradeAdminState  OBJECT-TYPE
        SYNTAX            INTEGER { null(0), download(1)
                    activate(2)}
        MAX-ACCESS        read-write
        STATUS            current
        DESCRIPTION
              "This value can take on two states. When set to
               Download, the software listed by
               wranDevBsDownloadSwVersion will be downloaded. When
               set to Activate, the software recently downloaded
               will be activated. The Download and Activate
               procedures are vendor specific operations that are
               not defined in this standard."
        DEFVAL      { null }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
            ::= { wranDevBsSoftwareUpgradeEntry 7 }

      wranDevBsDownloadSwProgress   OBJECT-TYPE
            SYNTAX            INTEGER (0..100)
            UNITS             "%"
            MAC-ACCESS        read-only
            STATUS            current
            DESCRIPTION
                  "This value shows the progress of the SW download
                   highlighted by wranDevBsDownloadSwVersion, encoded
                   as the percentage of the download successfully
                   completed."
            ::= { wranDevBsSoftwareUpgradeEntry 8 }

      wranDevBsSoftwareUpgradeTimeStamp   OBJECT-TYPE
            SYNTAX            DateAndTime
            MAX-ACCESS        read-only
            STATUS            current
            DESCRIPTION
                  "This value is a timestamp to indicate when the last
                   SW download or activation took place."
            ::= { wranDevBsSoftwareUpgradeEntry 9 }

-- wranDevBsNotification: Managed Objects related to SNMP traps on BS

      wranDevBsNotification   OBJECT IDENTIFIER
                                    ::= { wranDevBsObjects 2 }
      wranDevBsTrapControl    OBJECT IDENTIFIER
                                    ::= { wranDevBsNotification 1 }
      wranDevBsTrapDefinition OBJECT IDENTIFIER
                                    ::= { wranDevBsNotification 2 }

      wranDevBsTrapControl    OBJECT-TYPE
            SYNTAX      BITS  { wranDevBsEvent(0),
                                wranDevBsLogBuffExceedThreshold(1) }
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                  "Defines control elements for traps. This is a 2-bit
                   field that enables setting a trap to indicate when a
                   BS event is logged (wranDevBsEvent) or when a event
                   log buffer size overruns configured threshold
                   (wranDevBsLogBuffExceedThreshold)."
            ::= { wranDevBsNotification 1 }

-- wranDevBsTrapDefinition: This object groups all of the notification
-- objects for the BS. It is defined to be compatible with SNMPv1,
-- following Sections 8.5 and 8.6 of RFC 2758.

      wranDevBsTrapDefinition OBJECT IDENTIFIER
                                    ::= { wranDevBsNotification 2 }
      wranDevBsEventTrap      OBJECT IDENTIFIER
                                    ::= { wranDevBsTrapDefinition 1 }
      wranDevBsLogBuffExceedThresholdTrap OBJECT IDENTIFER
                                    ::= { wranDevBsTrapDefinition 2 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranDevBsEventTrap      NOTIFICATION-TYPE
      OBJECTS     { wranDevCmnEventId,
                    wranDevCmnEventLogIndex,
                    wranDevCmnEventLoggedTime,
                    wranDevCmnEventDescription,
                    wranDevCmnEventSeverity }
      STATUS      current
      DESCRIPTION
            "This object is a compound object that contains
             information the objects in wranDevCmnEventEntry in
             wranDevCmnEventLogTable that describes the event
             that is logged. This trap is caught when
             wranDevBsEvent in wranDevBsTrapControl is set."
      ::= { wranDevBsTrapDefinition 1 }

wranDevBsLogBuffExceedThresholdTrap NOTIFICATION-TYPE
      OBJECTS     { wranDevCmnEventId,
                    wranDevCmnEventLogResidualBuffThreshold }
      STATUS      current
      DESCRIPTION
            "This object is a compound object that indicates the
             index of an entry (defined by
             wranDevCmnEventLogEntry) in
             wranDevCmnEventLogConfigTable and the object in
             that entry that defines the ratio (defined by
             wranDevCmnEventLogResidualBuffThreshold) of used
             capacity in the Event Log vs. total capacity. This
             trap is caught when wranDevBsLogBuffExceedThreshold
             in wranDevBsTrapControl is set."
      ::= { wranDevBsTrapDefinition 2 }

wranDevCpeObjects                 OBJECT IDENTIFIER
                                        ::= { wranDevMib 2 }
wranDevCpeConfigFileEncodingTable   OBJECT IDENTIFIER
                                        ::= { wranDevCpeObjects 1 }
wranDevCpeNotification        OBJECT IDENTIFIER
                                        ::= { wranDevCpeObjects 2 }

wranDevCpeConfigFileEncodingTable   OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranDevCpeFileEncodingEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This table defines objects associated with CPE
             software configuration. This table may only have one
             entry, defined by a compound attribute,
             wranDevCpeConfigFileEncodingEntry."
      ::= { wranDevCpeObjects 1 }

wranDevCpeConfigFileEncodingEntry   OBJECT-TYPE
      SYNTAX      wranDevCpeConfigFileEncodingEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "Definition of an entry in
             wranDevBsSoftwareUpgradeTable. Each entry is
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                identified by wranDevBsDeviceIndex."
        INDEX { wranDevCpeDeviceIndex }
        ::= { wranDevCpeConfigFileEncodingTable 1 }

    wranDevCpeConfigFileEncodingEntry ::= SEQUENCE {
        wranDevCpeDeviceIndex               INTEGER,
        wranDevCpeMicConfigSetting          OCTET STRING,
        wranDevBsVendorId                   OCTET STRING,
        wranDevBsHwId                       OCTET STRING,
        wranDevCpeConfigFileVersion         OCTET STRING,
        wranDevCpeUpgradeFileName           OCTET STRING,
        wranDevCpeSwTftpServer              InetAddress,
        wranDevCpeTftpServerTimeStamp       DateAndTime }

    wranDevCpeDeviceIndex   OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "Index of entry in table, defaults to 1."
        ::= { wranDevCpeConfigFileEncodingEntry 1 }

    wranDevCpeMicConfigSetting    OBJECT-TYPE
        SYNTAX      OCTET STRING (SIZE(20))
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This value contains the MIC (Message Integrity Code)
               calculated for the CPE configuration file."
        ::= { wranDevCpeConfigFileEncodingEntry 2 }

    wranDevCpeVendorId          OBJECT-TYPE
        SYNTAX          OCTET STRING (SIZE(2..256))
        MAX-ACCESS      read-only
        STATUS          current
        DESCRIPTION
              "This value identifies the vendor of the managed CPE
               to which a configuration file upgrade is to be
               applied."
        ::= { wranDevCpeConfigFileEncodingEntry 3 }

    wranDevCpeHwId          OBJECT-TYPE
        SYNTAX          OCTET STRING (SIZE(2..256))
        MAX-ACCESS      read-only
        STATUS          current
        DESCRIPTION
              "This value identifies the hardware version of the
               CPE to which the configuration file upgrade is to be
               applied."
        ::= { wranDevCpeConfigFileEncodingEntry 4 }

    wranDevCpeConfigFileVersion   OBJECT-TYPE
        SYNTAX          OCTET STRING (SIZE(2..256))
        MAX-ACCESS      read-only
        STATUS          current
        DESCRIPTION
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                    "Version of the configuration file to be downloaded.
                     This value is set by the vendor specified by the
                     Vendor ID. The SW version and HW ID (wranDevCpeHwId)
                     should be a unique tuple. This should be initialized
                     before software is downloaded or activated."
              ::= { wranDevCpeConfigFileEncodingEntry 5 }

        wranDevCpeUpgradeFileName     OBJECT-TYPE
              SYNTAX            OCTET STRING (SIZE(2..256))
              MAX-ACCESS        read-only
              STATUS            current
              DESCRIPTION
                    "Fully qualified path name that points to the
                     location of the SW version that is to be
                     downloaded/activated."
              ::= { wranDevCpeConfigFileEncodingEntry 6 }

        wranDevCpeSwTftpServer  OBJECT-TYPE
              SYNTAX            InetAddress
              MAX-ACCESS        read-only
              STATUS            current
              DESCRIPTION
                    "IP address of the TFTP server on which the new
                     configuration file resides."
              ::= { wranDevCpeConfigFileEncodingEntry 7 }

        wranDevCpeTftpServerTimeStamp OBJECT-TYPE
              SYNTAX            DateAndTime
              MAX-ACCESS        read-only
              STATUS            current
              DESCRIPTION
                    "The time the configuration file was in seconds, as
                     defined by IETF RFC 868."
              ::= { wranDevCpeConfigFileEncodingEntry 8 }

-- wranDevCpeNotification: This group of objects relate to SNMP traps
-- on the CPE. There is a control element that enables/disables the
-- traps
-- (wranDevCpeTrapControl) and what event information is logged when a
-- trap is sent (wranDevCpeTrapDefinition).

        wranDevCpeNotification  OBJECT IDENTIFIER
                                      ::= { wranDevCpeObjects 2 }
        wranDevCpeTrapControl   OBJECT IDENTIFIER
                                      ::= { wranDevCpeNotification 1 }
        wranDecCpeTrapDefinition      OBJECT IDENTIFIER
                                      ::= { wranDevCpeNotification 2 }

        wranDevCpeTrapControl   OBJECT-TYPE
              SYNTAX      BITS  { wranDevCpeEvent(0),
                                  wranDevCpeLogBuffExceedThreshold(1) }
              MAX-ACCESS  read-write
              STATUS      current
              DESCRIPTION
                    "Defines control elements for traps. This is a 2-bit
                     field that enables setting a trap to indicate when a
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                    CPE event is logged (wranDevCpeEvent) or when a
                    event log buffer size overruns configured threshold
                   (wranDevCpeLogBuffExceedThreshold)."
              ::= { wranDevCpeNotification 1 }

-- wranDevCpeTrapDefinition: This object groups all of the notification
-- objects for the CPE. It is defined to be compatible with SNMPv1,
-- following Sections 8.5 and 8.6 of RFC 2758. It is a compound object
-- made of the elements of a logged BS event
-- (wranDevCpeEventTrap) and the indication of when the ratio used
-- portion to total size of event log has been exceeded
-- (wranDevCpeLogBuffExceedThresholdTrap).

      wranDevCpeTrapDefinition                    OBJECT IDENTIFIER
                                    ::= { wranDevCpeNotification 2 }
      wranDevCpeEventTrap                         OBJECT IDENTIFIER
                                    ::= { wranDevCpeTrapDefinition 1 }
      wranDevCpeLogBuffExceedThresholdTrap        OBJECT IDENTIFER
                                    ::= { wranDevCpeTrapDefinition 2 }

      wranDevCpeEventTrap     NOTIFICATION-TYPE
            OBJECTS     { wranDevCmnEventId,
                          wranDevCmnEventLogIndex,
                          wranDevCmnEventLoggedTime,
                          wranDevCmnEventDescription,
                          wranDevCmnEventSeverity }
            STATUS      current
            DESCRIPTION
                  "This object is a compound object that contains
                   information the objects in wranDevCmnEventEntry in
                   wranDevCmnEventLogTable that describes the event
                   that is logged. This trap is caught when
                   wranDevCpeEvent in wranDevCpeTrapControl is set."
            ::= { wranDevCpeTrapDefinition 1 }

      wranDevCpeLogBuffExceedThresholdTrap      NOTIFICATION-TYPE
            OBJECTS     { wranDevCmnEventId,
                          wranDevCmnEventLogResidualBuffThreshold }
            STATUS      current
            DESCRIPTION
                  "This object is a compound object that indicates the
                   index of an entry (defined by
                   wranDevCmnEventLogEntry) in
                   wranDevCmnEventLogConfigTable and the object in
                   that entry that  defines the ratio (defined by
                   wranDevCmnEventLogResidualBuffThreshold) of used
                   capacity in the Event Log vs. total capacity. This
                   trap is caught when wranDevCpeLogBuffExceedThreshold
                   in wranDevCpeTrapControl is set."
            ::= { wranDevCpeTrapDefinition 2 }

-- wranDevCommonObjects: This object contains managed elements that are
-- common to the CPE and BS.

      wranDevCommonObjects    OBJECT IDENTIFIER
                                    ::= { wranDevMib 3 }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
      wranDevCmnEventLog      OBJECT IDENTIFIER
                                    ::= { wranDevCommonObjects 1 }
      wranDevCmnSnmpAgent     OBJECT IDENTIFIER
                                    ::= { wranDevCommonObjects 2 }
      wranDevCmnDeviceConfig  OBJECT IDENTIFER
                                    ::= { wranDevCommonObjects 3 }

--wranDevCmnEventLog comprises three tables that control the
-- configuration of event recording and store recorded events.

      wranDevCmnEventLog            OBJECT IDENTIFIER
                                    ::= { wranDevCommonObjects 1 }
      wranDevCmnEventLogConfigTable OBJECT IDENTIFIER
                                          ::= { wranDevCmnEventLog 1 }
      wranDevCmnEventTable          OBJECT IDENTIFIER
                                          ::= { wranDevCmnEventLog 2 }
      wranDevCmnEventLogTable       OBJECT IDENTIFIER
                                          ::= { wranDevCmnEventLog 3 }

      wranDevCmnEventLogConfigTable OBJECT-TYPE
            SYNTAX      SEQUENCE OF wranDevCmnEventLogConfigEntry
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                  "Each entry stores the Event Log configuration for a
                   device."
            ::= { wranDevCmnEventLog 1 }

      wranDevCmnEventLogConfigEntry OBJECT-TYPE
            SYNTAX      wranDevCmnEventLogConfigEntry
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                  "Definition of an entry in
                   wranDevCmnEventLogConfigTable. Each  entry is
                   identified by wranDevCmnDeviceIndex."
            INDEX { wranDevCmnDeviceIndex }
            ::= { wranDevCmnEventLogConfigTable 1 }

      wranDevCmnEventLogConfigEntry::= SEQUENCE {
            wranDevCmnDeviceIndex                     INTEGER,
            wranDevCmnEventLogEntryLimit              INTEGER,
            wranDevCmnEventLogLifeTimeLimit           INTEGER,
            wranDevCmnEventLogEntryLimitPerEventId    INTEGER,
            wranDevCmnEventLogSeverityThreshold       INTEGER,
            wranDevCmnEVentLogWrapAroundBuffEnable    TruthEnable,
            wranDevCmnEventLogLatestEvent             Unsigned32,
            wranDevCmnEventLogPersistenceSupported    TruthEnable,
            wranDevCmnEventLogResidualBuffThreshold   INTEGER }

      wranDevCmnDeviceIndex   OBJECT-TYPE
            SYNTAX      INTEGER (1..255)
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                  "Index value that identifies a BS or CPE entry in the
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                wranDevCmnEventLogConfigTable."
        ::= { wranDevCmnEventLogConfigEntry 1 }

    wranDevCmnEventLogEntryLimit  OBJECT-TYPE
          SYNTAX      INTEGER (1..10000)
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "Maximum number of entries in
                 wranDevCmnEventLogConfigTable. If this value is
                 changed while entries exist in
                 wranDevCmnEventLogTable, old entries will be
                 discarded until limit is reached."
          DEFVAL      { 100 }
          ::= { wranDevCmnEventLogConfigEntry 2 }

    wranDevCmnEventLogLifeTimeLimit     OBJECT-TYPE
          SYNTAX      INTEGER (1..10000)
          UNITS       "minutes"
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "A value of 0 means that an entry is kept
                 indefinitely. Any other value is the maximum time
                 an entry can exist in wranDevCmnEventLogTable. If
                 this value is changed while entries exist in
                 wranDevCmnEventLogTable, entries older that this
                 limit will be discarded."
          DEFVAL      { 1440 }
          ::= { wranDevCmnEventLogConfigEntry 3 }

    wranDevCmnEventLogEntryLimitPerEventId    OBJECT-TYPE
          SYNTAX      INTEGER (1..100)
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "The number of log entries that can be logged per
                 event."
          DEFVAL      { 10 }
          ::= { wranDevCmnEventLogConfigEntry 4 }

    wranDevCmnEventLogSeverityThreshold OBJECT-TYPE
          SYNTAX            INTEGER (emergency(1),
                                     alert(2),
                                     critical(3),
                                     error(4),
                                     warning(5),
                                     notice(6),
                                     informational(7),
                                     debug(8)}
          MAX-ACCESS        read-write
          STATUS            current
          DESCRIPTION
                "Minimum severity level of an event that can be
                 logged into the Event Log."
          DEFVAL      { warning }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        ::= { wranDevCpeConfigFileEncodingEntry 5 }

    wranDevCmnEventLogWrapAroundBuffEnable    OBJECT-TYPE
        SYNTAX      TruthEnable
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "True (1), indicates that the log buffer will be
               wrapped around with the buffer is full."
        DEFVAL      { true }
        ::= { wranDevCpeConfigFileEncodingEntry 6 }

    wranDevCmnEventLogLatestEvent OBJECT-TYPE
        SYNTAX      Unsigned32 (1..4294967295)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of latest event in Event Log."
        DEFVAL      { 1 }
        ::= { wranDevCpeConfigFileEncodingEntry 7 }

    wranDevCmnEventLogPersistenceSupported    OBJECT-TYPE
        SYNTAX      TruthValue
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "True (1), indicates that the Event Log persisted
               through power cycle and reset."
        ::= { wranDevCpeConfigFileEncodingEntry 8 }

    wranDevCmnEventLogResidualBuffThreshold   OBJECT-TYPE
        SYNTAX      INTEGER (1..100)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Threshold ratio of used capacity for Event Log to
               total capacity of Event Log, that when reached a
               TRAP is issued."
        ::= { wranDevCpeConfigFileEncodingEntry 9 }

    wranDevCmnEventTable    OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranDevCmnEventEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This compound object defines the types of events
               that are supported by a BS or CPE. Each event is
               defined."
        ::= { wranDevCmnEventLog 2 }

    wranDevCmnEventEntry    OBJECT-TYPE
        SYNTAX      wranDevCmnEventEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object defines the parameters of an event entry
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                into the wranDevCmnEventTable. Each entry is indexed
                by wranDevCmnEventIdentifier."
        INDEX { wranDevCmnEventIdentifier }
        ::= { wranDevCmnEventTable 1 }

wranDevCmnEventEntry::= SEQUENCE {
        wranDevCmnEventIdentifier           INTEGER,
        wranDevCmnEventDescription          SnmpAdminString,
        wranDevCmnEventSeverity             INTEGER,
        wranDevCmnEventNotification         TruthValue,
        wranDevCmnEventNotificationOid      OBJECT IDENTIFIER }

wranDevCmnEventIdentifier     OBJECT-TYPE
        SYNTAX      INTEGER (0..100000)
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "Event Identifier encoded as a numeric value."
        ::= { wranDevCmnEventEntry 1 }

wranDevCmnEventDescription    OBJECT-TYPE
        SYNTAX      SnmpAdminString
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Description of the event in the form of an
                 SnmpAdminString"
        ::= { wranDevCmnEventEntry 2 }

wranDevCmnEventSeverity OBJECT-TYPE
        SYNTAX              INTEGER {emergency(1),
                                     alert(2),
                                     critical(3),
                                     error(4),
                                     warning(5),
                                     notice(6),
                                     informational(7),
                                     debug(8)}
        MAX-ACCESS          read-write
        STATUS              current
        DESCRIPTION
                "The severity of the event as assigned by the device.
                 The severity assigned to an event is configurable by
                 the system."
        DEFVAL      { warning }
        ::= { wranDevCmnEventEntry 3 }

wranDevCmnEventNotification   OBJECT-TYPE
        SYNTAX      TruthValue
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "When True (1), an event notification will be
                 reported."
        DEFVAL      { false }
        ::= { wranDevCmnEventEntry 4 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranDevCmnEventNotificationOid      OBJECT-TYPE
      SYNTAX      OBJECT IDENTIFIER
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "This is the object identifier of a notification
             object. If wranDevCmnEventNotification True (1), a
             trap identified by the OID
             will be reported."
      ::= { wranDevCmnEventEntry 5 }

wranDevCmnEventLogTable OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranDevCmnEventLogEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This is the log table that stores local events as
             they happen. This table shall reside in non-volatile
             memory that may persist after power cycle or resent
             of the device. The maximum number of entries in this
             table is determined by the
             wranDevCmnEventLogEntryLimit. If it is setup as a
             wrap-around log, then the oldest entry will be
             remove to make room for the newest entry. If it is
             not set up as a wrap-around log, then the log will
             be flushed. Multiple entries are stored in the
             table. Each entry is defined by
             wranDevCmnEventLogEntry."
      ::= { wranDevCmnEventLog 3 }

wranDevCmnEventLogEntry OBJECT-TYPE
      SYNTAX      wranDevCmnEventLogEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object represents an entry in
             wranDevCmnEventLogTable. It is indexed by
             wranDevCmnEventId."
      INDEX { wranDevCmnEventLogId }
      ::= { wranDevCmnEventLogTable 1 }

wranDevCmnEventLogEntry::= SEQUENCE {
      wranDevCmnEventLogId          Unsigned32,
      wranDevCmnEventLoggedTime     DateAndTime,
      wranDevCmnEventLogDescription SnmpAdminString,
      wranDevCmnEventLogSeverity    INTEGER }

wranDevCmnEventId OBJECT-TYPE
      SYNTAX      Unsigned32(1..4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "A counter used to index entries in the Event Log.
             When it reaches a maximum value, it will wrap-
             around if configured to wrap-around or the log will
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                be flushed if it is not configured to wrap-around."
          ::= { wranDevCmnEventLogEntry 1 }

      wranDevCmnEventLoggedTime     OBJECT-TYPE
            SYNTAX      TimeStamp
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                  "The time that the entry was placed into the Event
                   Log. If this event happened just before the last
                   initialization of the management system, then this
                   value is set to 0."
            ::= { wranDevCmnEventLogEntry 2 }

      wranDevCmnEventLogDescription OBJECT-TYPE
            SYNTAX      SnmpAdminString
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                  "Description of the event, in the form of an
                   SnmpAdminString"
            ::= { wranDevCmnEventLogEntry 3 }

      wranDevCmnEventLogSeverity    OBJECT-TYPE
            SYNTAX            INTEGER {emergency(1),
                                       alert(2),
                                       critical(3),
                                       error(4),
                                       warning(5),
                                       notice(6),
                                       informational(7),
                                       debug(8)}
            MAX-ACCESS        read-only
            STATUS            current
            DESCRIPTION
                  "Severity of the recorded event."
            DEFVAL            { warning }
            ::= { wranDevCmnEventLogEntry 4 }

-- wranDevCmnSnmpAgent: This object comprises one table that
-- deals with SNMP agent configuration.

      wranDevCmnSnmpAgent                 OBJECT IDENTIFIER
                                    ::= { wranDevCommonObjects 2 }
      wranDevCmnSnmpV1V2TrapDestTable     OBJECT IDENTIFIER
                                    ::= { wranDevCmnSnmpAgent 1 }

      wranDevCmnSnmpV1V2TrapDestTable OBJECT-TYPE
            SYNTAX      SEQUENCE OF wranDevCmnSnmpV1V2TrapDestEntry
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                  "This compound object deals with the configuration of
                   items of the SNMP agent. Each configuration item is
                   represented by wranDevCmnSnmpV1V2TrapDestEntry."
            ::= { wranDevCmnSnmpAgent 1 }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
wranDevCmnSnmpV1V2TrapDestEntry     OBJECT-TYPE
      SYNTAX      wranDevCmnSnmpV1V2TrapDestEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "The compound object contains the parameters that
             identify the destination of an SNMP trap."
      INDEX { wranDevCmnSnmpV1V1TrapDestIndex }
      ::= { wranDevCmnSnmpV1V2TrapDestTable 1 }

wranDevCmnSnmpV1V2TrapDestEntry::= SEQUENCE {
      wranDevCmnSnmpV1V1TrapDestIndex           Unsigned32,
      wranDevCmnSnmpV1V2TrapDestIpAddrType      InetAddressType,
      wranDevCmnSnmpV1V2TrapDestIpAddr          InetAddress,
      wranDevCmnSnmpV1V2TrapDestPort            Integer32,
      wranDevCmnSnmpV1V2TrapDestRowStatus       RowStatus }

wranDevCmnSnmpV1V1TrapDestIndex     OBJECT-TYPE
      SYNTAX      INTEGER (1..8)
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "Identifies the trap in the table. This parameter
             shall have a maximum value of 8."
      ::= { wranDevCmnSnmpV1V2TrapDestEntry 1 }

wranDevCmnSnmpV1V2TrapDestIpAddrType      OBJECT-TYPE
      SYNTAX      InetAddressType
      MAX-ACCESS  read-create
      STATUS      current
      DESCRIPTION
            "Type of IP address stored in
             wranDevCmnSnmpV1V2TrapDestIpAddr."
      ::= { wranDevCmnSnmpV1V2TrapDestEntry 2 }

wranDevCmnSnmpV1V2TrapDestIpAddr    OBJECT-TYPE
      SYNTAX            InetAddress
      MAX-ACCESS        read-create
      STATUS            current
      DESCRIPTION
            "SNMP manager's IP address that is configured as a
             destination for traps."
      ::= { wranDevCmnSnmpV1V2TrapDestEntry 3 }

wranDevCmnSnmpV1V2TrapDestPort      OBJECT-TYPE
      SYNTAX      Integer32 (0..65535)
      MAX-ACCESS  read-create
      STATUS      current
      DESCRIPTION
            "Port number of SNMP manager application configured
             as trap destination."
      ::= { wranDevCmnSnmpV1V2TrapDestEntry 4 }

wranDevCmnSnmpV1V2TrapDestRowStatus OBJECT-TYPE
      SYNTAX      RowStatus
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
            MAX-ACCESS  read-create
            STATUS      current
            DESCRIPTION
                  "This object is used to make sure that any write
                   operation to multiple columns is treated as an
                   atomic operation."
            ::= { wranDevCmnSnmpV1V2TrapDestEntry 5 }

      wranDevCmnDeviceConfig  OBJECT IDENTIFER
                                    ::= { wranDevCommonObjects 3 }
      wranDevCmnResetDevice   OBJECT IDENTIFIER
                                    ::= { wranDevCmnDeviceConfig 1 }
      wranDevMibGroups        OBJECT IDENTIFIER
                                    ::= { wranDevCmnDeviceConfig 2 }
      wranDevMibCompliance    OBJECT IDENTIFIER
                                    ::= { wranDevCmnDeviceConfig 3 }

      wranDevCmnResetDevice   OBJECT-TYPE
            SYNTAX      INTEGER { actionResetDeviceNoAction(0),
                                  actionResetDevice(1) }
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                  "There are two actions defined. When set to
                   actionResetDeviceNoAction, no action is taken. When
                   set to actionResetDevice, device will reset itself."
            ::= { wranDevCmnDeviceConfig 1 }

-- wranDevMibGroups: This object helps define which MIB groups are
-- necessary to meet conformance and what MIB objects are part of each
-- group.

      wranDevMibGroups            OBJECT IDENTIFIER
                                    ::= { wranDevCmnDeviceConfig 2 }
      wranDevMibBsGroup           OBJECT IDENTIFIER
                                    ::= { wranDevMibGroups 1 }
      wranDevMibBsSwUpgradeGroup    OBJECT IDENTIFIER
                                    ::= { wranDevMibGroups 2 }
      wranDevMibCpeGroup          OBJECT IDENTIFIER
                                    ::= { wranDevMibGroups 3 }
      wranDevMibCmnGroup          OBJECT IDENTIFIER
                                          ::= { wranDevMibGroups 4 }
      wranDevMibBsNotificationGroup OBJECT IDENTIFIER
                                          ::= { wranDevMibGroups 5 }
      wranDevMibCpeNotificationGroup OBJECT IDENTIFIER
                                          ::= { wranDevMibGroups 6 }
      wranDevCpeTrapControlGroup    OBJECT IDENTIFIER
                                          ::= { wranDevMibGroups 7 }
      wranDevBsTrapControlGroup     OBJECT IDENTIFIER
                                          ::= { wranDevMibGroups 8 }

      wranDevMibBsGroup OBJECT-GROUP
            OBJECTS     { wranDevBsTrapControl }
            STATUS      current
            DESCRIPTION
                  "Group of objects for the BS."
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        ::= { wranDevMibGroups 1 }

    wranDevMibBsSwUpgradeGroup    OBJECT-GROUP
          OBJECTS     { wranDevBsVendorId, wranDevBsHwId,
                        wranDevBsCurrentSwVersion,
                        wranDevBsUpgradeFileName,
                        wranDevBsSoftwareUpgradeAdminState,
                        wranDevBsDownloadSwProgress,
                        wranDevBsSoftwareUpgradeAdminState,
                        wranDevBsDownloadSwProgress,
                        wranDevBsSoftwareUpgradeTimeStamp }
          STATUS      current
          DESCRIPTION
                "This group contains the values of the most
                 recent/current entry in
                 wranDevBsSoftwareUpgradeTable."
          ::= { wranDevMibGroups 2 }

    wranDevMibCpeGroup      OBJECT-GROUP
          OBJECTS     { wranDevCpeMicConfigSetting,
                        wranDevCpeVendorId,  wranDevCpeHwId,
                        wranDevCpeConfigFileVersion,
                        wranDevCpeUpgradeFileName,
                        wranDevCpeSwTftpServer,
                        wranDevCpeTftpServerTimeStamp,
                        wranDevCpeTrapControl }
          STATUS      current
          DESCRIPTION
                "This group contains values of the most
                 recent/current entry in
                 wranDevCpeConfigFileEncodingTable for a particular
                 CPE."
          ::= { wranDevMibGroups 3 }

    wranDevMibCmnGroup      OBJECT-GROUP
          OBJECTS     { wranDevCmnSnmpV1V2TrapDestIpAddrType,
                        wranDevCmnSnmpV1V2TrapDestIpAddr,
                        wranDevCmnSnmpV1V2TrapDestPort,
                        wranDevCmnSnmpV1V2TrapDestRowStatus,
                        wranDevCmnResetDevice, wranDevCmnDeviceIndex,
                        wranDevCmnEventLogEntryLimit,
                        wranDevCmnEventLogLifeTimeLimit,
                        wranDevCmnEventLogEntryLimitPerEventId,
                        wranDevCmnEventLogSeverityThreshold,
                        wranDevCmnEventLogWrapAroundBuffEnable,
                        wranDevCmnEventLogLatestEvent,
                        wranDevCmnEventLogPersistenceSupported,
                        wranDevCmnEventLogResidualBuffThreshold,
                        wranDevCmnEventDescription,
                        wranDevCmnEventSeverity,
                        wranDevCmnEventNotification,
                        wranDevCmnEventNotificationOid,
                        wranDevCmnEventId, wranDevCmnEventLoggedTime,
                        wranDevCmnEventLogDescription,
                        wranDevCmnEventLogSeverity }
          STATUS      current
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
            DESCRIPTION
                  "It contains the values of most recent/current entry
                   in wranDevVMnSnmpV1V2TrapDestTable and
                   wranDevCmnEventLogTable."
            ::= { wranDevMibGroups 4 }

      wranDevMibBsNotificationGroup OBJECT-GROUP
            OBJECTS     { wranDevBsEventTrap,
                          wranDevBsLogBuffExceedThresholdTrap }
            STATUS      current
            DESCRIPTION
                  "Contains the contents of wranDevBsEventTrap and
                   wranDevBsLogBuffExceedThresholdTrap."
            ::= { wranDevMibGroups 5 }

      wranDevMibCpeNotificationGroup      OBJECT-GROUP
            OBJECTS     { wranDevCpeEventTrap,
                          wranDevCpeLogBuffExceedThresholdTrap }
            STATUS      current
            DESCRIPTION
                  "Contains the contents of wranDevCpeEventTrap and
                   wranDevCpeLogBuffExceedThresholdTrap."
            ::= { wranDevMibGroups 6 }

      wranDevCpeTrapControlGroup    OBJECT-GROUP
            OBJECTS     { wranDevCpeTrapControl }
            STATUS      current
            DESCRIPTION
                  "Contains objects related to enabling/disabling CPE
                   device traps."
            ::= { wranDevMibGroups 7 }

      wranDevBsTrapControlGroup     OBJECT-GROUP
            OBJECTS     { wranDevBsTrapControl }
            STATUS      current
            DESCRIPTION
                  "Contains objects related to enabling/disabling BS
                   device traps."
            ::= { wranDevMibGroups 8 }

      wranDevMibCompliance    MODULE-COMPLIANCE
            STATUS      current
            DESCRIPTION
                  "MIB object groups that are optional and mandatory
                   for conformance."
            MODULE      wranDevMib
            MANDATORY-GROUPS  { wranDevMibBsGroup,
                                wranDevMibBsSwUpgradeGroup,
                                wranDevMibCpeGroup, wranDevMibCmnGroup,
                                wranDevCpeTrapControlGroup,
                                wranDevBsTrapControlGroup }
            -- OPTIONAL-GROUPS      { wranDevMibBsNotificationGroup,
                                      wranDevMibCpeNotificationGroup }
            ::= { wranDevCmnDeviceConfig 3 }

END
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.2.2 wranIfBsMib

```
IEEE802dot22-WRAN-IF-BS-MIB   ::=   BEGIN

      IMPORTS
            MODULE-IDENTITY,
            OBJECT-TYPE,
            NOTIFICATION-TYPE,
            Unsinged32, Integer32, Counter32
            Counter64
                  From SNMPv2-SMI
            SnmpAdminString
                  FROM SNMP-FRAMEWORK-MIB
            TEXTUAL-CONVENTION,
            MacAddress, RowStatus, TruthValue,
            TimeStamp, DateAndTime
                  FROM SNMPv2-TC
            InetAddressType, InetAddress
                  FROM INET-ADDRESS-MIB
            OBJECT-GROUP,
            MODULE-COMPLIANCE,
            NOTIFICATION-GROUP
                  FROM SNMPv2-CONF

      wranIfBsMib       MODULE-IDENTITY
            LAST-UPDATED      "201405300000Z"   -- May 30, 2014
            ORGANIZATION      "IEEE 802.22"
            CONTACT-INFO
                  "WG E-mail: STDS-802-22@LISTSERV.IEEE.ORG
                   WG Chair:  Apurva N. Mody
                   E-mail:    apurva.mody@ieee.org

                   TGa Chair/Editor:  Ranga Reddy
                   E-mail:            ranga.reddy@ieee.org"
            DESCRIPTION
                  "This material is from IEEE Std 802.22a-2014
                   Copyright (c) 2014. This MIB Module Defines managed
                   objects for Base Station based on IEEE Std 802.22-
                   2011 and is under
                   iso(1).std(0).iso8802(8802).wran(22).wranIfBsMib(2)"
            REVISION          "201405300000Z"
            DESCRIPTION
                  "The first version of IEEE802dot22-WRAN-IF-BS-
                   MIB that provides for management of the base
                   station."
            ::= {iso std(0) iso8802(8802) wran(22) 2}

      wranIfBsFm              OBJECT IDENTIFIER ::= { wranIfBsMib 1 }
      wranIfBsCm              OBJECT IDENTIFIER ::= { wranIfBsMib 2 }
      wranIfBsAm              OBJECT IDENTIFIER ::= { wranIfBsMib 3 }
      wranIfBsPm              OBJECT IDENTIFIER ::= { wranIfBsMib 4 }
      wranIfBsScm             OBJECT IDENTIFIER ::= { wranIfBsMib 5 }
      wranIfBsMibGroups       OBJECT IDENTIFIER ::= { wranIfBsMib 6 }
      wranIfBsMibCompliance   OBJECT IDENTIFIER ::= { wranIfBsMib 7 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
-- wranIfBsFm: Exceptions and fault events can be reported using the
-- traps defined in this MIB.

      wranIfBsTrapControl                 OBJECT IDENTIFIER
                                                ::= { wranIfBsFm 1 }
      wranIfBsTrapDefinition              OBJECT IDENTIFIER
                                                ::= { wranIfBsFm 2 }
      wranIfBsNotificationObjectsTable    OBJECT IDENTIFIER
                                                ::= { wranIfBsFm 3 }


      wranIfBsTrapControl     OBJECT-TYPE
            SYNTAX      BITS { dynamicService(0),
                  signalPowerMetrics(1),
                  regNotification(2), scmNotification(3),
                  cpeStartupStatusChange(4),
                  txMetrics(5), netEntryMetrics(6),
                  pktErrRateNotification(7),
                  userMetricsNotification(8),
                  coexistenceNotification(9),
                  basicCapabilityNotification(10),
                  rangingNotification(11),
                  authMetricsNotification(12),
                  dynamicServeMetrics(13) }
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                  "This object is a bitmap that allows
                   enabling/disabling of traps related
                   setup/configuration of dynamic service flows (Bit0),
                   recording power measurements (Bit1), registration of
                   CPEs (Bit2), authentication+keying of CPEs (Bit3),
                   startup status of CPEs (Bit4), change in throughput
                   & retransmission metrics (Bit5), update of network
                   entry metrics (Bit6), update of packet error metrics
                   (Bit7), update of user metrics (Bit8), change in
                   coexistence status (Bit9), change in basic
                   capability configuration of CPEs (Bit10), change in
                   ranging status of CPEs (Bit11), update of
                   authentication metrics (Bit12), update of dynamic
                   service metrics (Bit13). A trap is enabled if the
                   bit is set to 1 and disable if set to 0."
            ::= { wranIfBsFm 1 }


      wranIfBsTrapDefinition         OBJECT IDENTIFIER
                                       ::= { wranIfBsFm 2 }
      wranIfBsDynamicServiceTrap     OBJECT IDENTIFIER
                                       ::= { wranIfBsTrapDefinition 1 }
      wranIfBsSignalPowerMetricsTrap OBJECT IDENTIFIER
                                       ::= { wranIfBsTrapDefinition 2 }
      wranIfBsRegNotificationTrap    OBJECT IDENTIFIER
                                       ::= { wranIfBsTrapDefinition 3 }
      wranIfBsScmNotificationTrap    OBJECT IDENTIFIER
                                       ::= { wranIfBsTrapDefinition 4 }
      wranIfBsStartupStatusTrap      OBJECT IDENTIFIER
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                                    ::= { wranIfBsTrapDefinition 5 }
wranIfBsTxMetricsTrap           OBJECT IDENTIFIER
                                    ::= { wranIfBsTrapDefinition 6 }
wranIfBsNetEntryMetricsTrap     OBJECT IDENTIFIER
                                    ::= { wranIfBsTrapDefinition 7 }
wranIfBsPktErrorTrap            OBJECT IDENTIFIER
                                    ::= { wranIfBsTrapDefinition 8 }
wranIfBsUserMetricsTrap         OBJECT IDENTIFIER
                                    ::= { wranIfBsTrapDefinition 9 }
wranIfBsCoexistenceTrap         OBJECT IDENTIFIER
                                    ::= { wranIfBsTrapDefinition 10 }
wranIfBsBasicCapabilityTrap     OBJECT IDENTIFIER
                                    ::= { wranIfBsTrapDefinition 11 }
wranIfBsRangingTrap             OBJECT IDENTIFIER
                                    ::= { wranIfBsTrapDefinition 12 }
wranIfBsAuthMetricsTrap         OBJECT IDENTIFIER
                                    ::= { wranIfBsTrapDefinition 13 }
wranIfBsDynamicServiceMetricsTrap          OBJECT IDENTIFIER
                                    ::= { wranIfBsTrapDefinition 14 }

wranIfBsDynamicServiceTrap    NOTIFICATION-TYPE
      OBJECTS     { wranIfBsDynamicServiceType,
                    wranIfBsDynamicServiceNotificationIndex }
      STATUS      current
      DESCRIPTION
            "This trap contains the information related to
             updating the configuration of either provisioned
             service flows (wranIfBsProvSfTable) or active
             service flows (wranIfBsActiveSfTable)."
      ::= { wranIfBsTrapDefinition 1 }

wranIfBsSignalPowerMetricsTrap      NOTIFICATION-TYPE
      OBJECTS     { wranIfBsSignalPowerNotificationIndex }
      STATUS      current
      DESCRIPTION
            "This trap contains the information related to
             updating of signal power metrics
             (wranIfBsSignalPowerMetricsTable)."
      ::= { wranIfBsTrapDefinition 2 }

wranIfBsRegNotificationTrap   NOTIFICATION-TYPE
      OBJECTS     { wranIfBsRegCapabilityNotificationIndex }
      STATUS      current
      DESCRIPTION
            "This trap contains the information related to
             indicating successful execution of the registration
             of a CPE (wranIfBsCpeRegCapabilityRspTable)."
      ::= { wranIfBsTrapDefinition 3 }

wranIfBsScmNotificationTrap   NOTIFICATION-TYPE
      OBJECTS     { wranIfBsScmNotificationType,
                    wranIfBsScmNotificationIndex }
      STATUS      current
      DESCRIPTION
            "This trap contains the information related to
             updating the configuration of either SCM protocol
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                capabilities on a CPE
                (wranIfBsCpeScmCapabilityConfigTable) or current
                authentication status
                (wranIfBsCpeScmAuthConfigTable)."
        ::= { wranIfBsTrapDefinition 4 }

wranIfBsStartupStatusTrap     NOTIFICATION-TYPE
        OBJECTS     { wranIfBsStartupNotificationIndex }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to
               changes in a CPE's status with regard to network
               entry (wranIfBsStartupMetricsTable)."
        ::= { wranIfBsTrapDefinition 5 }

wranIfBsTxMetricsTrap   NOTIFICATION-TYPE
        OBJECTS     { wranIfBsTxMetricsType,
               wranIfBsTxMetricsNotificationIndex }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to
               changes in throughput metrics
               (wranIfBsThroughputMetricsTable) or ARQ metrics
               (wranIfBsArqMetricsTable)."
        ::= { wranIfBsTrapDefinition 6 }

wranIfBsNetEntryMetricsTrap   NOTIFICATION-TYPE
        OBJECTS     { wranIfBsNetEntryMetricsNotificationIndex }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to
               updates in network entry and re-entry latency
               measurements (wranIfBsNetworkEntryMetricsTable)."
        ::= { wranIfBsTrapDefinition 7 }

wranIfBsPktErrorTrap    NOTIFICATION-TYPE
        OBJECTS     { wranIfBsPktErrorMetricsNotificationIndex }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to
               updates in packet error rate measurements
               (wranIfBsPacketErrorRateTable)."
        ::= { wranIfBsTrapDefinition 8 }

wranIfBsUserMetricsTrap NOTIFICATION-TYPE
        OBJECTS     { wranIfBsUserMetricsNotificationIndex }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to
               updates in tracking the number of active and non-
               active users in the cell
               (wranIfBsUserMetricsTable)."
        ::= { wranIfBsTrapDefinition 9 }

wranIfBsCoexistenceTrap NOTIFICATION-TYPE
        OBJECTS     { wranIfBsCoexMetricsType,
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                wranIfBsCoexNotificationIndex }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to
               updates in tracking ongoing coexistence (e.g., On-
               Demand Frame Contention transactions
               wranIfBsCoexistenceStatusTable), discovery of new
               potential coexistence sources
               (wranIfBsCoexistenceSourceTable), discovery the
               the resource usage in neighboring networks
               (wranIfBsCoexistenceResourceListTable), and updates
               to a BS's own coexistence configuration
               (wranIfBsCoexistenceCurrentConfigTable)."
        ::= { wranIfBsTrapDefinition 10 }

    wranIfBsBasicCapabilityTrap   NOTIFICATION-TYPE
        OBJECTS     { wranIfBsBasicNotificationIndex }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to
               updates in tracking updates to basic capability
               configuration of CPEs
               (wranIfBsCpeBasicCapabilityRspTable)."
        ::= { wranIfBsTrapDefinition 11 }

    wranIfBsRangingTrap     NOTIFICATION-TYPE
        OBJECTS     { wranIfBsRngNotificationIndex }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to
               updates in tracking updates to status of ranging of
               CPEs (wranIfBsCpeRngCapabilityCmdTable)."
        ::= { wranIfBsTrapDefinition 12 }

    wranIfBsAuthMetricsTrap NOTIFICATION-TYPE
        OBJECTS     { wranIfBsAuthNotificationIndex }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to
               updates in tracking updates to authentication
               metrics (wranIfBsAuthenticationMetricsTable)."
        ::= { wranIfBsTrapDefinition 13 }

    wranIfBsDynamicServiceMetricsTrap   NOTIFICATION-TYPE
        OBJECTS     { wranIfBsDynSrvMetricsNotificationIndex }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to
               updates in tracking metrics current provisioned and
               active service flows
               (wranIfBsServiceFlowMetricsTable)."
        ::= { wranIfBsTrapDefinition 14 }

    wranIfBsNotificationObjectsTable    OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsNotificationObjectsEntry
        MAX-ACCESS  not-accessible
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        STATUS      current
        DESCRIPTION
              "This table contains objects that represents
               notifications reported in BS fault traps. The table
               is made up of one or more entries."
        ::= { wranIfBsFm 3 }

    wranIfBsNotificationObjectsEntry    OBJECT-TYPE
        SYNTAX      wranIfBsNotificationObjectsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              " This MIB is a compound object that represents an
               entry in the MIB object
               wranIfBsNotificationsObjectsTable."
        INDEX { wranIfBsNotificationObjectsIndex }
        ::= { wranIfBsNotificationObjectsTable 1 }

    wranIfBsNotificationObjectsEntry    ::= SEQUENCE {
        wranIfBsNotificationObjectsIndex          INTEGER,
        wranIfBsNotificationMacAddr               MacAddress,
        wranIfBsDynamicServiceType                INTEGER,
        wranIfBsDynamicServiceNotificationIndex   Integer32,
        wranIfBsSignalPowerNotificationIndex      Integer32,
        wranIfBsRegCapabilityNotificationIndex    Integer32,
        wranIfBsScmNotificationType               INTEGER,
        wranIfBsScmNotificationIndex              Integer32,
        wranIfBsStartupNotificationIndex          INTEGER,
        wranIfBsTxMetricsType                     INTEGER,
        wranIfBsTxMetricsNotificationIndex        INTEGER,
        wranIfBsNetEntryMetricsNotificationIndex  INTEGER,
        wranIfBsPktErrorMetricsNotificationIndex  INTEGER,
        wranIfBsUserErrorMetricsNotificationIndex INTEGER,
        wranIfBsCoexMetricsType                   INTEGER,
        wranIfBsCoexNotificationIndex             Integer32,
        wranIfBsBasicNotificationIndex            Integer32,
        wranIfBsRngNotificationIndex              Integer32,
        wranIfBsAuthNotificationIndex             INTEGER,
        wranIfBsDynSrvMetricsNotificationIndex    INTEGER }

    wranIfBsNotificationObjectsIndex    OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in table."
        ::= { wranIfBsNotificationObjectsEntry 1 }

    wranIfBsNotificationMacAddr   OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "MAC Address reporting the notification."
        ::= { wranIfBsNotificationObjectsEntry 2 }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
wranIfBsDynamicServiceType    OBJECT-TYPE
      SYNTAX      INTEGER { provisioned(0), active(1) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Indication if the configuration for a provisioned
             or active service flow has been configured."
      ::= { wranIfBsNotificationObjectsEntry 3 }

wranIfBsDynamicServiceNotificationIndex   OBJECT-TYPE
      SYNTAX      Integer32 (1..2048)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index into wranIfBsProvSfTable or
             wranIfBsActiveSfTable that indicates which service
             flow configuration was added/updated."
      ::= { wranIfBsNotificationObjectsEntry 4 }

wranIfBsSignalPowerNotificationIndex      OBJECT-TYPE
      SYNTAX      Integer32 (1..261120)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index into wranIfBsSignalPowerMetricsTable that
             indicates the entry that contains updated signal
             power metrics data."
      ::= { wranIfBsNotificationObjectsEntry 5 }

wranIfBsRegCapabilityNotificationIndex    OBJECT-TYPE
      SYNTAX      wranIfRegCapabilityIndex
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index into wranIfBsCpeRegCapabilityRspTable that
             indicates the entry that contains updated
             registration for a CPE."
      ::= { wranIfBsNotificationObjectsEntry 6 }

wranIfBsScmNotificationType   OBJECT-TYPE
      SYNTAX      INTEGER { scmCapability(0), scmAuthConfig(1) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Indication if the configuration of the SCM protocol
             or the authentication status of a CPE has been
             updated."
      ::= { wranIfBsNotificationObjectsEntry 7 }

wranIfBsScmNotificationIndex  OBJECT-TYPE
      SYNTAX      Integer32 (1..512)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index into wranIfBsCpeScmCapabilityConfigTable that
             indicates which CPE has updated their SCM
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                configuration or wranIfBsCpeScmAuthConfigTable that
                indicates which CPE has had their authentication
                status updated."
        ::= { wranIfBsNotificationObjectsEntry 8 }

    wranIfBsStartupNotificationIndex    OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "This contains the index of entry in
                wranIfBsStartupMetricsTable that contains data on
                any changes in a CPE's status with regard to network
                entry."
        ::= { wranIfBsNotificationObjectsEntry 9 }

    wranIfBsTxMetricsType   OBJECT-TYPE
        SYNTAX      INTEGER { throughput(0), arq(1) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Indication if throughput metrics or ARQ metrics have
                been updated."
        ::= { wranIfBsNotificationObjectsEntry 10 }

    wranIfBsTxMetricsIndex  OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Index into wranIfBsThroughputMetricsTable that
                indicates changes in measure throughput metrics, or
                wranIfBsArqMetricsTable that indicates changes in
                ARQ performance."
        ::= { wranIfBsNotificationObjectsEntry 11 }

    wranIfBsNetEntryMetricsNotificationIndex  OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "This contains the index of entry in
                wranIfBsNetworkEntryMetricsTable that contains data
                on any changes in network entry and re-entry latency
                measurements."
        ::= { wranIfBsNotificationObjectsEntry 12 }

    wranIfBsPktErrorMetricsNotificationIndex  OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "This contains the index of entry in
                wranIfBsPacketErrorRateTable that contains data on
                any changes in packet error rate measurements."
        ::= { wranIfBsNotificationObjectsEntry 13 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranIfBsUserMetricsNotificationIndex      OBJECT-TYPE
      SYNTAX      INTEGER (1..1)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "This contains the index of entry in
             wranIfBsUserMetricsTable that contains data on any
             changes in the number of active and non-active users
             in the cell."
      ::= { wranIfBsNotificationObjectsEntry 14 }

wranIfBsCoexMetricsType OBJECT-TYPE
      SYNTAX      INTEGER { odfcTransaction(0),
                  potentialCoexSource(1),
                  resourceUsage(2),
                  coexistenceConfig(3) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Indication if ongoing On-Demand Frame Coexistence
             Transactions, discovery of new potential coexistence
             resources, discovery of the resource usage in
             neighboring networks, and whether a BS's own
             coexistence configuration have been updated."
      ::= { wranIfBsNotificationObjectsEntry 15 }

wranIfBsCoexNotificationIndex OBJECT-TYPE
      SYNTAX      Integer32 (1..4096)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index into wranIfBsCoexistenaceStatusTable that
             indicates changes in ongoing On-Demand Frame
             Contention transactions,
             wranIfBsCoexistenceSourceTable that indicates
             changes in the discovery of new potential
             coexistence sources,
             wranIfBsCoexistenceResourceListTable that indicates
             discovery of resource usage in neighboring networks,
             or wranIfBsCoexistenceCurrentConfigTable that
             indicates whether a BS's own coexistence
             configuration have been updated."
      ::= { wranIfBsNotificationObjectsEntry 16 }

wranIfBsBasicNotificationIndex      OBJECT-TYPE
      SYNTAX      wranIfBasicCapabilityIndex
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "This contains the index of entry in
             wranIfBsCpeBasicCapabilityRspTable that contains
             data on any changes in tracking updates to the basic
             capability configuration of CPEs."
      ::= { wranIfBsNotificationObjectsEntry 17 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
      wranIfBsRngNotificationIndex  OBJECT-TYPE
            SYNTAX      Integer32 (1..512)
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                  "This contains the index of entry in
                   wranIfBsCpeRngCapabilityCmdTable that contains data
                   on any changes in tracking updates to the status of
                   ranging of CPEs."
            ::= { wranIfBsNotificationObjectsEntry 18 }

      wranIfBsAuthNotificationIndex OBJECT-TYPE
            SYNTAX      INTEGER (1..1)
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                  "This contains the index of entry in
                   wranIfBsAuthenticationMetricsTable that contains
                   data on any changes in tracking updates to
                   authentication metrics."
            ::= { wranIfBsNotificationObjectsEntry 19 }

      wranIfBsDynSrvMetricsNotificationIndex    OBJECT-TYPE
            SYNTAX      INTEGER (1..1)
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                  "This contains the index of entry in
                   wranIfBsServiceFlowMetricsTable that contains
                   information related to tracking metrics of ongoing."
            ::= { wranIfBsNotificationObjectsEntry 20 }

-- wranIfBsFmMibGroups: This object helps define which MIB groups are
-- available in this module (wranIfBsFm) and which MIB objects are
-- part of each group.

      wranIfBsFmMibGroups           OBJECT IDENTIFIER
                                          ::= { wranIfBsFm 4 }
      wranIfBsFmTrapControlGroup    OBJECT IDENTIFIER
                                          ::= { wranIfBsFmMibGroups 1 }
      wranIfBsFmNotificationGroup   OBJECT IDENTIFIER
                                          ::= { wranIfBsFmMibGroups 2 }

      wranIfBsFmTrapControlGroup          OBJECT-GROUP
            OBJECTS     { wranIfBsTrapControl }
            STATUS      current
            DESCRIPTION
                  "This group contains objects related to
                   enabling/disabling traps used for  service
                   flow management."
            ::= { wranIfBsFmMibGroups 1 }

      wranIfBsFmNotificationGroup         OBJECT-GROUP
            OBJECTS     { wranIfBsDynamicServiceTrap,
                   wranIfBsSignalPowerMetricsTrap,
                   wranIfBsRegNotificationTrap,
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                wranIfBsScmNotificationTrap,
                wranIfBsStartupStatusTrap,
                wranIfBsTxMetricsTrap,
                wranIfBsNetEntryMetricsTrap,
                wranIfBsPktErrorTrap, wranIfBsUserMetricsTrap,
                wranIfBsCoexistenceTrap,
                wranIfBsBasicCapabilityTrap,
                wranIfBsRangingTrap, wranIfBsAuthMetricsTrap,
                wranIfBsDynamicServiceMetricsTrap,
                wranIfBsNotificationObjectsIndex,
                wranIfBsNotificationMacAddr,
                wranIfBsDynamicServiceType,
                wranIfBsDynamicServiceNotificationIndex,
                wranIfBsSignalPowerNotificationIndex,
                wranIfBsRegCapabilityNotificationIndex,
                wranIfBsScmNotificationType,
                wranIfBsScmNotificationIndex,
                wranIfBsStartupNotificationIndex,
                wranIfBsTxMetricsType,
                wranIfBsTxMetricsNotificationIndex,
                wranIfBsNetEntryMetricsNotificationIndex,
                wranIfBsPktErrorMetricsNotificationIndex,
                wranIfBsUserErrorMetricsNotificationIndex,
                wranIfBsCoexMetricsType,
                wranIfBsCoexNotificationIndex,
                wranIfBsBasicNotificationIndex,
                wranIfBsRngNotificationIndex,
                wranIfBsAuthNotificationIndex,
                wranIfBsDynSrvMetricsNotificationIndex }
        STATUS      current
        DESCRIPTION
              "This group contains objects related to
               traps used for management of the BS."
        ::= { wranIfBsFmMibGroups 2 }


    wranIfBsFmMibCompliance MODULE-COMPLIANCE
          STATUS      current
          DESCRIPTION
                "MIB objects that are optional and mandatory for
                 wranIfBsFm compliance."
          MODULE      wranIfBsFm
          MANDATORY-GROUPS  { wranIfBsFmTrapControlGroup }
          -- OPTIONAL-GROUPS      { wranIfBsFmNotificationGroup }
          ::= { wranIfBsFm 5 }

    -- wranIfBsCm: This MIB group contains various objects related to
    -- Configuration Management.

          wranIfBsCpeRngCapabilityReqTable          OBJECT IDENTIFIER
                                                       ::= { wranIfBsCm 1 }
          wranIfBsCpeRngCapabilityCmdTable          OBJECT IDENTIFIER
                                                       ::= { wranIfBsCm 2 }
          wranIfBsCpeBasicCapabilityReqTable        OBJECT IDENTIFIER
                                                       ::= { wranIfBsCm 3 }
          wranIfBsCpeBasicCapabilityRspTable        OBJECT IDENTIFIER
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                                                    ::= { wranIfBsCm 4 }
wranIfBsCpeRegCapabilityReqTable          OBJECT IDENTIFIER
                                                    ::= { wranIfBsCm 5 }
wranIfBsCpeMeasSupportReqTable            OBJECT IDENTIFIER
                                                    ::= { wranIfBsCm 6 }
wranIfBsCpeRegCapabilityRspTable          OBJECT IDENTIFIER
                                                    ::= { wranIfBsCm 7 }
wranIfBsCpeMeasSupportRspTable            OBJECT IDENTIFIER
                                                    ::= { wranIfBsCm 8 }
wranIfBsCpeAntennaGainTable               OBJECT IDENTIFIER
                                                    ::= { wranIfBsCm 9 }
wranIfBsScmCapabilityConfiguration        OBJECT IDENTIFIER
                                                    ::= { wranIfBsCm 10 }
wranIfBsCpeScmCapabilityConfigTable       OBJECT IDENTIFIER
                                                    ::= { wranIfBsCm 11 }
wranIfBsScmAuthConfigTable                OBJECT IDENTIFIER
                                                    ::= { wranIfBsCm 12 }
wranIfBsActionsTable                      OBJECT IDENTIFIER
                                                    ::= { wranIfBsCm 13 }
wranIfBsCpeMulticastConfigTable           OBJECT IDENTIFIER
                                                    ::= { wranIfBsCm 14 }
wranIfBsCoexistenceConfigTable            OBJECT IDENTIFIER
                                                    ::= { wranIfBsCm 15 }
wranIfBsCpeBasicCapabilityCmn             OBJECT IDENTIFIER
                                                    ::= { wranIfBsCm 16 }
wranIfBsCpeRegCapabilityCmn               OBJECT IDENTIFIER
                                                    ::= { wranIfBsCm 17 }
wranIfBsCpeMeasSupportCmn                 OBJECT IDENTIFIER
                                                    ::= { wranIfBsCm 18 }
wranIfBsCpeSystemParametersTable          OBJECT IDENTIFIER
                                                    ::= { wranIfBsCm 19 }
wranIfBsPhy                               OBJECT IDENTIFIER
                                                    ::= { wranIfBsCm 20 }

wranIfBsCpeRngCapabilityReqTable    OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfBsCpeRngCapabilityReqEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object provides a table containing the ranging
             configuration requested by the CPE in RNG-REQ during
             network entry. The table is made up of multiple
             entries, one for each CPE that has sent a RNG-REQ,
             that is defined by
             wranIfBsCpeRngCapabilityReqEntry."
      ::= { wranIfBsCm 1 }

wranIfBsCpeRngCapabilityReqEntry    OBJECT-TYPE
      SYNTAX      wranIfBsCpeRngCapabilityReqEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object is a compound object that defines an
             entry in wranIfBsCpeRngCapabilityReqTable."
      INDEX { wranIfBsCpeRngCapabilityReqIndex }
      ::= { wranIfBsCpeRngCapabilityReqTable 1 }
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
wranIfBsCpeRngCapabilityReqEntry    ::= SEQUENCE {
      wranIfBsCpeRngCapabilityReqIndex    Integer32,
      wranIfBsCpeMacAddress               MacAddress,
      wranIfMmpPn                         Integer32,
      wranIfCiphertextIcv                 Counter64,
      wranIfRngAnomaly                    BITS }

wranIfBsCpeRngCapabilityReqIndex    OBJECT-TYPE
      SYNTAX      Integer32 (1.. 512)
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "Index of entry in this table."
      ::= { wranIfBsCpeRngCapabilityReqEntry 1 }

wranIfBsCpeMacAddress   OBJECT-TYPE
      SYNTAX      MacAddress
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index of entry in this table."
      ::= { wranIfBsCpeRngCapabilityReqEntry 2 }

wranIfMmpPn OBJECT-TYPE
      SYNTAX      Integer32 (0..16777215)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Current value of MMP_PN that CPE is using if
             authenticated ranging (see 8.2.4.6.1.2) is used."
      ::= { wranIfBsCpeRngCapabilityReqEntry 3 }

wranIfCiphertextIcv   OBJECT-TYPE
      SYNTAX      Counter64
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Calculated value of Ciphertext ICV, calculated over
             RNG-REQ is authenticated ranging (see 8.2.4.6.1.2)."
      ::= { wranIfBsCpeRngCapabilityReqEntry 4 }

wranIfRngAnomaly  OBJECT-TYPE
      SYNTAX      BITS { atMaxEIRP(0), atMinEIRP(1),
                         timingAdvTooLarge(2) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "3-bit bitmap that gives indication of any error
             condition detected by CPE during ranging process."
      ::= { wranIfBsCpeRngCapabilityReqEntry 5 }

wranIfBsCpeRngCapabilityCmdTable    OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfBsCpeRngCapabilityCmdEntry
      MAX-ACCESS  not-accessible
      STATUS      current
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        DESCRIPTION
              "This object provides a table containing the ranging
               configuration the BS is specifying for CPE in the
               RNG-CMD during network entry. Each table is made up
               of multiple entries, one for each CPE that a RNG-CMD
               is sent, that is defined by
               wranIfBsCpeRngCapabilityCmdEntry."
        ::= { wranIfBsCm 2 }

    wranIfBsCpeRngCapabilityCmdEntry    OBJECT-TYPE
        SYNTAX      wranIfBsCpeRngCapabilityReqEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object is a compound object that defines an
               entry in wranIfBsCpeRngCapabilityCmdTable."
        INDEX { wranIfBsCpeRngCapabilityCmdIndex }
        ::= { wranIfBsCpeRngCapabilityCmdTable 1 }

    wranIfBsCpeRngCapabilityCmdEntry    ::= SEQUENCE {
        wranIfBsCpeRngCapabilityCmdIndex    Integer32,
        wranIfBsCpeMacAddress               MacAddress,
        wranIfBsCpeStationId                Integer32,
        wranIfTimingAdvance                 Integer32,
        wranIfEirpPerSubcarrier             INTEGER,
        wranIfOffsetFreqAdjust              Integer32,
        wranIfRangingStatus                 INTEGER,
        wranIfActionSuperFrameNum           INTEGER,
        wranIfCdmaCode                      INTEGER,
        wranIfTxOpportunityOffset           INTEGER }

    wranIfBsCpeRngCapabilityCmdIndex    OBJECT-TYPE
        SYNTAX      Integer32 (1.. 512)
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "Index of entry in this table."
        ::= { wranIfBsCpeRngCapabilityCmdEntry 1 }

    wranIfBsCpeMacAddress   OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "MAC Address of CPE that RNG-CMD is sent to. This is
               used to fill in the MAC Address field of RNG-CMD,
               when RNG-CMD is sent in response to initial
               ranging."
        ::= { wranIfBsCpeRngCapabilityCmdEntry 2 }

    wranIfBsCpeStationId    OBJECT-TYPE
        SYNTAX      Integer32 (1..512)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Station ID of CPE that RNG-CMD is sent to. This is
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                used to fill in the Station ID field of RNG-CMD,
                when RNG-CMD is sent in response to initial
                ranging."
        ::= { wranIfBsCpeRngCapabilityCmdEntry 3 }

    wranIfTimingAdvance     OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        UNITS “TU”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Unsigned timing advance to be applied to compensate
               for signal propagation delay on both the US and DS,
               in number of TU."
        ::= { wranIfBsCpeRngCapabilityCmdEntry 4 }

    wranIfEirpPerSubcarrier OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "EIRP to be applied to subcarrier, from -104 dBm to
               +23.5 dBm in 0.5 dB steps."
        ::= { wranIfBsCpeRngCapabilityCmdEntry 5 }

    wranIfOffsetFreqAdjust  OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Offset frequency adjustment parameter of RNG-CMD."
        ::= { wranIfBsCpeRngCapabilityCmdEntry 6 }

    wranIfRangingStatus     OBJECT-TYPE
        SYNTAX      INTEGER { continue(0), abort(1),
                              success(2), reRange(3),
                              reAuth(4), reRngAndreReg(5) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Ranging status sent to CPE in RNG-CMD to indicate
               what step the CPE should take next."
        ::= { wranIfBsCpeRngCapabilityCmdEntry 7 }

    wranIfActionSuperFrameNum     OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "The superframe number (modulo 256) at which Channel
               Action shall be performed."
        ::= { wranIfBsCpeRngCapabilityCmdEntry 8 }

    wranIfCdmaCode    OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        STATUS      current
        DESCRIPTION
              "CDMA code value to be sent in RNG-CMD to enable
               dedicated ranging (selected from initial ranging
               codeset)."
        ::= { wranIfBsCpeRngCapabilityCmdEntry 9 }

  wranIfTxOpportunityOffset     OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        UNITS       “symbols”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Transmission opportunity offset sent to CPE in RNG-
               CMD, to used for dedicated ranging."
        ::= { wranIfBsCpeRngCapabilityCmdEntry 10 }


  wranIfBsCpeBasicCapabilityReqTable  OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsCpeBasicCapabilityReqEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object provides a table containing the basic
               capability information CPEs that have declared to
               the BS in the CBC-REQ. Each table is made up of
               multiple entries, one for each CPE that has
               transmitted the CBC-REQ, that is defined by
               wranIfBsCpeBasicCapabilityReqEntry."
        ::= { wranIfBsCm 3 }

  wranIfBsCpeBasicCapabilityReqEntry  OBJECT-TYPE
        SYNTAX      wranIfBsCpeBasicCapabilityReqEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object is a compound object that contains
               information on capabilities that a CPE has declared
               to a BS during network entry. The list of objects
               used to make wranIfBsCpeBasicCapabilityReqEntry can
               be found in 13.1.2.2.16
               (wranIfBsCpeBasicCapabilityCmn)."
        INDEX { wranIfBsCpeBasicCapabilityReqIndex }
        ::= { wranIfBsCpeBasicCapabilityReqTable 1 }

  wranIfBsCpeBasicCapabilityReqEntry  ::= SEQUENCE {
        wranIfBsCpeBasicCapabilityReqIndex
              wranIfBasicCapbilityIndex,
        wranIfBsCpeBasicCapabilityReqMacAddress
              wranIfBasicCapabilityMacAdddress,
        wranIfBsCpeBasicCapabilityReqStationId
              wranIfBasicCapbilityStationId,
        wranIfBsCpeBasicCapabilityReqMacPduTxAndConstruction
              wranIfBasicCapabilityMacPduTxAndConstruction,
        wranIfBsCpeBasicCapabilityReqMaxCpeTxEirp
              wranIfBasicCapabilityMaxCpeTxEirp,
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        wranIfBsCpeBasicCapabilityReqCpeDemodulator
              wranIfBasicCapabilityCpeDemodulator,
        wranIfBsCpeBasicCapabilityReqCpeModulator
              wranIfBasicCapabilityCpeModulator,
        wranIfBsCpeBasicCapabilityReqScmVersionSupport
              wranIfBasicCapabilityCpeScmVersionSupport,
        wranIfBsCpeBasicCapabilityReqPnWindowSize
              wranIfBasicCapabilityCpePnWindowSize,
        wranIfBsCpeBasicCapabilityReqScmFlowControl
              wranIfBasicCapabilityScmFlowControl }

  wranIfBsCpeBasicCapabilityReqIndex  OBJECT-TYPE
        SYNTAX      wranIfBasicCapbilityIndex
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "Defined by wranIfBasicCapabilityIndex."
        ::= { wranIfBsCpeBasicCapabilityReqEntry 1 }

  wranIfBsCpeBasicCapabilityReqMacAddress   OBJECT-TYPE
        SYNTAX      wranIfBasicCapabilityMacAdddress
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfBasicCapabilityMacAdddress."
        ::= { wranIfBsCpeBasicCapabilityReqEntry 2 }

  wranIfBsCpeBasicCapabilityReqStationId    OBJECT-TYPE
        SYNTAX      wranIfBasicCapbilityStationId
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfBasicCapbilityStationId."
        ::= { wranIfBsCpeBasicCapabilityReqEntry 3 }

  wranIfBsCpeBasicCapabilityReqMacPduTxAndConstruction  OBJECT-TYPE
        SYNTAX      wranIfBasicCapabilityMacPduTxAndConstruction
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfBasicCapabilityMacPduTxAndConstruction."
        ::= { wranIfBsCpeBasicCapabilityReqEntry 4 }

  wranIfBsCpeBasicCapabilityReqMaxCpeTxEirp OBJECT-TYPE
        SYNTAX      wranIfBasicCapabilityMaxCpeTxEirp
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfBasicCapabilityMaxCpeTxEirp."
        ::= { wranIfBsCpeBasicCapabilityReqEntry 5 }

  wranIfBsCpeBasicCapabilityReqCpeDemodulator     OBJECT-TYPE
        SYNTAX      wranIfBasicCapabilityCpeDemodulator
        MAX-ACCESS  read-only
        STATUS      current
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        DESCRIPTION
              "Defined by wranIfBasicCapabilityCpeDemodulator."
        ::= { wranIfBsCpeBasicCapabilityReqEntry 6 }

    wranIfBsCpeBasicCapabilityReqCpeModulator OBJECT-TYPE
        SYNTAX      wranIfBasicCapabilityCpeModulator
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfBasicCapabilityCpeModulator."
        ::= { wranIfBsCpeBasicCapabilityReqEntry 7 }

    wranIfBsCpeBasicCapabilityReqScmVersionSupport  OBJECT-TYPE
        SYNTAX      wranIfBasicCapabilityCpeScmVersionSupport
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfBasicCapabilityCpeScmVersionSupport."
        ::= { wranIfBsCpeBasicCapabilityReqEntry 8 }

    wranIfBsCpeBasicCapabilityReqPnWindowSize OBJECT-TYPE
        SYNTAX      wranIfBasicCapabilityCpePnWindowSize
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfBasicCapabilityCpePnWindowSize."
        ::= { wranIfBsCpeBasicCapabilityReqEntry 9 }

    wranIfBsCpeBasicCapabilityReqScmFlowControl     OBJECT-TYPE
        SYNTAX      wranIfBasicCapabilityScmFlowControl
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfBasicCapabilityScmFlowControl."
        ::= { wranIfBsCpeBasicCapabilityReqEntry 10 }

    wranIfBsCpeBasicCapabilityRspTable  OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsCpeBasicCapabilityRspEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object provides a table containing the basic
               capability information BS has configured for CPEs in
               the CBC-RSP. Each table is made up of multiple
               entries, one for each CPE that has transmitted the
               CBC-RSP, that is defined by
               wranIfBsCpeBasicCapabilityRspEntry."
        ::= { wranIfBsCm 4 }

    wranIfBsCpeBasicCapabilityRspEntry  OBJECT-TYPE
        SYNTAX      wranIfBsCpeBasicCapabilityRspEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object is a compound object that contains
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                information on capabilities that a BS has selected
                for a CPE during network entry. This table reflects
                the current configuration of a CPE's basic
                capabilities. The list of objects used to make up
                wranIfBsCpeBasicCapabilityRspEntry can be found in
                13.1.2.2.16 (wranIfBsCpeBasicCapabilityCmn)."
        INDEX { wranIfBsCpeBasicCapabilityRspIndex }
        ::= { wranIfBsCpeBasicCapabilityRspTable 1 }

wranIfBsCpeBasicCapabilityRspEntry  ::= SEQUENCE {
        wranIfBsCpeBasicCapabilityRspIndex
                wranIfBasicCapbilityIndex,
        wranIfBsCpeBasicCapabilityRspNumAttempts
                wranIfBasicCapabilityNumAttempts,
        wranIfBsCpeBasicCapabilityRspMacAddress
                wranIfBasicCapabilityMacAdddress,
        wranIfBsCpeBasicCapabilityRspStationId
                wranIfBasicCapbilityStationId,
        wranIfBsCpeBasicCapabilityRspMacPduTxAndConstruction
                wranIfBasicCapabilityMacPduTxAndConstruction,
        wranIfBsCpeBasicCapabilityRspCpeDemodulator
                wranIfBasicCapabilityCpeDemodulator,
        wranIfBsCpeBasicCapabilityRspCpeModulator
                wranIfBasicCapabilityCpeModulator,
        wranIfBsCpeBasicCapabilityRspScmVersionSupport
                wranIfBasicCapabilityCpeScmVersionSupport,
        wranIfBsCpeBasicCapabilityRspPnWindowSize
                wranIfBasicCapabilityCpePnWindowSize,
        wranIfBsCpeBasicCapabilityRspScmFlowControl
                wranIfBasicCapabilityScmFlowControl }

wranIfBsCpeBasicCapabilityRspIndex  OBJECT-TYPE
        SYNTAX      wranIfBasicCapbilityIndex
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "Defined by wranIfBasicCapabilityIndex."
        ::= { wranIfBsCpeBasicCapabilityRspEntry 1 }

wranIfBsCpeBasicCapabilityRspNumAttempts  OBJECT-TYPE
        SYNTAX      wranIfBasicCapabilityNumAttempts
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Defined by wranIfBasicCapabilityNumAttempts."
        ::= { wranIfBsCpeBasicCapabilityRspEntry 2 }

wranIfBsCpeBasicCapabilityRspMacAddress   OBJECT-TYPE
        SYNTAX      wranIfBasicCapabilityMacAdddress
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Defined by wranIfBasicCapabilityMacAdddress."
        ::= { wranIfBsCpeBasicCapabilityRspEntry 3 }

wranIfBsCpeBasicCapabilityRspStationId    OBJECT-TYPE
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        SYNTAX      wranIfBasicCapbilityStationId
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfBasicCapbilityStationId."
        ::= { wranIfBsCpeBasicCapabilityRspEntry 4 }

wranIfBsCpeBasicCapabilityRspMacPduTxAndConstruction  OBJECT-TYPE
        SYNTAX      wranIfBasicCapabilityMacPduTxAndConstruction
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfBasicCapabilityMacPduTxAndConstruction."
        ::= { wranIfBsCpeBasicCapabilityRspEntry 5 }

wranIfBsCpeBasicCapabilityRspCpeDemodulator     OBJECT-TYPE
        SYNTAX      wranIfBasicCapabilityCpeDemodulator
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfBasicCapabilityCpeDemodulator."
        ::= { wranIfBsCpeBasicCapabilityRspEntry 6 }

wranIfBsCpeBasicCapabilityRspCpeModulator OBJECT-TYPE
        SYNTAX      wranIfBasicCapabilityCpeModulator
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfBasicCapabilityCpeModulator."
        ::= { wranIfBsCpeBasicCapabilityRspEntry 7 }

wranIfBsCpeBasicCapabilityRspScmVersionSupport  OBJECT-TYPE
        SYNTAX      wranIfBasicCapabilityCpeScmVersionSupport
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfBasicCapabilityCpeScmVersionSupport."
        ::= { wranIfBsCpeBasicCapabilityRspEntry 8 }

wranIfBsCpeBasicCapabilityRspPnWindowSize OBJECT-TYPE
        SYNTAX      wranIfBasicCapabilityCpePnWindowSize
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfBasicCapabilityCpePnWindowSize."
        ::= { wranIfBsCpeBasicCapabilityRspEntry 9 }

wranIfBsCpeBasicCapabilityRspScmFlowControl     OBJECT-TYPE
        SYNTAX      wranIfBasicCapabilityScmFlowControl
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfBasicCapabilityScmFlowControl."
        ::= { wranIfBsCpeBasicCapabilityRspEntry 10 }
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
wranIfBsCpeRegCapabilityReqTable    OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfBsCpeRegCapabilityReqEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object provides a table containing the
             capability information that a CPE has declared to
             the BS in the REG-REQ. Each table is made up of
             multiple entries, one for each CPE, that is defined
             by wranIfBsCpeRegCapabilityReqEntry."
      ::= { wranIfBsCm 5 }

wranIfBsCpeRegCapabilityReqEntry    OBJECT-TYPE
      SYNTAX      wranIfBsCpeRegCapabilityReqEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object is a compound object that contains
             information on capabilities that a CPE has declared
             to a BS, e.g., through sending a REG-REQ to the BS.
             The objects that make up the entry are defined in
             wranIfBsCpeRegCapabilityCmn (13.1.2.2.17). A REG-REQ
             message comprises objects within this compound
             object, wranIfBsCpeAntennaGainTable(13.1.2.2.9), and
             wranIfBsCpeMeasSupportReqTable
             (13.1.2.2.6)."
      INDEX { wranIfBsCpeRegCapabilityReqIndex }
      ::= { wranIfBsCpeRegCapabilityReqTable 1 }

wranIfBsCpeRegCapabilityReqEntry    ::= SEQUENCE {
      wranIfBsCpeRegCapabilityReqIndex
            wranIfRegCapabilityIndex,
      wranIfBsCpeRegCapabilityReqMacAddress
            wranIfRegCapabilityMacAdddress,
      wranIfBsCpeRegCapabilityReqNMEALocStringSize
            wranIfRegCapabilityNMEALocStringSize,
      wranIfBsCpeRegCapabilityReqNMEALocString
            wranIfRegCapabilityNMEALocString,
      wranIfBsCpeRegCapabilityReqCsConfig
            wranIfRegCapabilityCsConfig,
      wranIfBsCpeRegCapabilityReqIpVersion
            wranIfRegCapabilityIpVersion,
      wranIfBsCpeRegCapabilityReqIpRochSupport
            wranIfRegCapabilityIpRochSupport,
      wranIfBsCpeRegCapabilityReqArqSupport
            wranIfRegCapabilityArqSupport,
      wranIfBsCpeRegCapabilityReq2ndMgmtArqWindowSize
            wranIfRegCapability2ndMgmtArqWindowSize,
      wranIfBsCpeRegCapabilityReq2ndMgmtArqRetryTxDelay
            wranIfRegCapability2ndMgmtArqRetryTxDelay,
      wranIfBsCpeRegCapabilityReq2ndMgmtArqRetryRxDelay
            wranIfRegCapability2ndMgmtArqRetryRxDelay,
      wranIfBsCpeRegCapabilityReq2ndMgmtArqBlockLifetime
            wranIfRegCapability2ndMgmtArqBlockLifetime,
      wranIfBsCpeRegCapabilityReq2ndMgmtArqSyncLossTimeout
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
            wranIfRegCapability2ndMgmtArqSyncLossTimeout,
      wranIfBsCpeRegCapabilityReq2ndMgmtArqDeliverInOrder
            wranIfRegCapability2ndMgmtArqDeliverInOrder,
      wranIfBsCpeRegCapabilityReq2ndMgmtArqRxPurgeTimeout
            wranIfRegCapability2ndMgmtArqRxPurgeTimeout,
      wranIfBsCpeRegCapabilityReq2ndMgmtArqBlockSize
            wranIfRegCapability2ndMgmtArqBlockSize,
      wranIfBsCpeRegCapabilityReqDsxFlowControl
            wranIfRegCapabilityDsxFlowControl,
      wranIfBsCpeRegCapabilityReqMcaFlowControl
            wranIfRegCapabilityMcaFlowControl,
      wranIfBsCpeRegCapabilityReqMaxNumMcastGroups
            wranIfRegCapabilityMaxNumMcastGroups,
      wranIfBsCpeRegCapabilityReqSensModeSupportArray
            wranIfRegCapabilitySensModeSupportArray,
      wranIfBsCpeRegCapabilityReqAntennaModelSize
            wranIfRegCapabilityAntennaModelSize,
      wranIfBsCpeRegCapabilityReqAntennaModel
            wranIfRegCapabilityAntennaModel,
      wranIfBsCpeRegCapabilityReqCpeResidualDelay
            wranIfRegCapabilityCpeResidualDelay,
      wranIfBsCpeRegCapabilityReq2ndMgmtIpAllocMethod
            wranIfRegCapability2ndMgmtIpAllocMethod,
      wranIfBsCpeRegCapabilityReqCpeOperationalCapability
            wranIfRegCapabilityCpeOperationalCapability,
      wranIfBsCpeRegCapabilityReqCpeRegistrationTimer
            wranIfRegCapabilityCpeRegistrationTimer }

wranIfBsCpeRegCapabilityReqIndex    OBJECT-TYPE
      SYNTAX      wranIfRegCapabilityIndex
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "Defined by wranIfRegCapabilityIndex."
      ::= { wranIfBsCpeRegCapabilityReqEntry 1 }

wranIfBsCpeRegCapabilityReqMacAddress     OBJECT-TYPE
      SYNTAX      wranIfRegCapabilityMacAdddress
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by wranIfRegCapabilityMacAdddress."
      ::= { wranIfBsCpeRegCapabilityReqEntry 2 }

wranIfBsCpeRegCapabilityReqNMEALocStringSize    OBJECT-TYPE
      SYNTAX      wranIfRegCapabilityNMEALocStringSize
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by wranIfRegCapabilityNMEALocStringSize."
      ::= { wranIfBsCpeRegCapabilityReqEntry 3 }

wranIfBsCpeRegCapabilityReqNMEALocString  OBJECT-TYPE
      SYNTAX      wranIfRegCapabilityNMEALocString
      MAX-ACCESS  read-only
      STATUS      current
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        DESCRIPTION
              "Defined by wranIfRegCapabilityNMEALocString."
        ::= { wranIfBsCpeRegCapabilityReqEntry 4 }

    wranIfBsCpeRegCapabilityReqCsConfig OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityCsConfig
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityCsConfig."
        ::= { wranIfBsCpeRegCapabilityReqEntry 5 }

    wranIfBsCpeRegCapabilityReqIpVersion      OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityIpVersion
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityIpVersion."
        ::= { wranIfBsCpeRegCapabilityReqEntry 6 }

    wranIfBsCpeRegCapabilityReqIpRochSupport  OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityIpRochSupport
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityIpRochSupport."
        ::= { wranIfBsCpeRegCapabilityReqEntry 7 }

    wranIfBsCpeRegCapabilityReqArqSupport     OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityArqSupport
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityArqSupport."
        ::= { wranIfBsCpeRegCapabilityReqEntry 8 }

    wranIfBsCpeRegCapabilityReq2ndMgmtArqWindowSize OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqWindowSize
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapability2ndMgmtArqWindowSize."
        ::= { wranIfBsCpeRegCapabilityReqEntry 9 }

    wranIfBsCpeRegCapabilityReq2ndMgmtArqRetryTxDelay     OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqRetryTxDelay
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqRetryTxDelay."
        ::= { wranIfBsCpeRegCapabilityReqEntry 10 }

    wranIfBsCpeRegCapabilityReq2ndMgmtArqRetryRxDelay     OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqRetryRxDelay
        MAX-ACCESS  read-only
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqRetryRxDelay."
        ::= { wranIfBsCpeRegCapabilityReqEntry 11 }

    wranIfBsCpeRegCapabilityReq2ndMgmtArqBlockLifetime    OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqBlockLifetime
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqBlockLifetime."
        ::= { wranIfBsCpeRegCapabilityReqEntry 12 }

    wranIfBsCpeRegCapabilityReq2ndMgmtArqSyncLossTimeout  OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqSyncLossTimeout
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqSyncLossTimeout."
        ::= { wranIfBsCpeRegCapabilityReqEntry 13 }

    wranIfBsCpeRegCapabilityReq2ndMgmtArqDeliverInOrder   OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqDeliverInOrder
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqDeliverInOrder."
        ::= { wranIfBsCpeRegCapabilityReqEntry 14 }

    wranIfBsCpeRegCapabilityReq2ndMgmtArqRxPurgeTimeout   OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqRxPurgeTimeout
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqRxPurgeTimeout."
        ::= { wranIfBsCpeRegCapabilityReqEntry 15 }

    wranIfBsCpeRegCapabilityReq2ndMgmtArqBlockSize  OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqBlockSize
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapability2ndMgmtArqBlockSize."
        ::= { wranIfBsCpeRegCapabilityReqEntry 16 }

    wranIfBsCpeRegCapabilityReqDsxFlowControl OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityDsxFlowControl
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityDsxFlowControl."
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        ::= { wranIfBsCpeRegCapabilityReqEntry 17 }

    wranIfBsCpeRegCapabilityReqMcaFlowControl OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityMcaFlowControl
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityMcaFlowControl."
        ::= { wranIfBsCpeRegCapabilityReqEntry 18 }

    wranIfBsCpeRegCapabilityReqMaxNumMcastGroups    OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityMaxNumMcastGroups
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityMaxNumMcastGroups."
        ::= { wranIfBsCpeRegCapabilityReqEntry 19 }

    wranIfBsCpeRegCapabilityReqSensModeSupportArray OBJECT-TYPE
        SYNTAX      wranIfRegCapabilitySensModeSupportArray
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilitySensModeSupportArray."
        ::= { wranIfBsCpeRegCapabilityReqEntry 20 }

    wranIfBsCpeRegCapabilityReqAntennaModelSize     OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityAntennaModelSize
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityAntennaModelSize."
        ::= { wranIfBsCpeRegCapabilityReqEntry 21 }

    wranIfBsCpeRegCapabilityReqAntennaModel   OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityAntennaModel
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityAntennaModel."
        ::= { wranIfBsCpeRegCapabilityReqEntry 22 }

    wranIfBsCpeRegCapabilityReqCpeResidualDelay     OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityCpeResidualDelay
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityCpeResidualDelay."
        ::= { wranIfBsCpeRegCapabilityReqEntry 23 }

    wranIfBsCpeRegCapabilityReq2ndMgmtIpAllocMethod OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtIpAllocMethod
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapability2ndMgmtIpAllocMethod."
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
      ::= { wranIfBsCpeRegCapabilityReqEntry 24 }

wranIfBsCpeRegCapabilityReqCpeOperationalCapability   OBJECT-TYPE
      SYNTAX      wranIfRegCapabilityCpeOperationalCapability
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by
             wranIfRegCapabilityCpeOperationalCapability."
      ::= { wranIfBsCpeRegCapabilityReqEntry 25 }

wranIfBsCpeRegCapabilityReqCpeRegistrationTimer OBJECT-TYPE
      SYNTAX      wranIfRegCapabilityCpeRegistrationTimer
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by
             wranIfRegCapabilityCpeRegistrationTimer."
      ::= { wranIfBsCpeRegCapabilityReqEntry 26 }

wranIfBsCpeMeasSupportReqTable      OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfBsCpeMeasSupportReqEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "A compound object representing the Measurement
             Support IE of REG-REQ in 7.7.7.3.4.7. It is made
             up of multiple entries, one for each signal type
             supported by sensing. Each entry is defined by
             wranIfBsCpeMeasSupportReqEntry. Entries for a CPE
             are only present if the value for
             wranIfSensModeSupportArray is anything other than
             'No Sensing'."
      ::= { wranIfBsCm 6 }

wranIfBsCpeMeasSupportReqEntry      OBJECT-TYPE
      SYNTAX      wranIfBsCpeMeasSupportReqEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "A compound object representing the entries of
             Measurement Support IE of REG-REQ in 7.7.7.3.4.7. It
             is made up of multiple objects. A CPE will have one
             entry for each Signal Type in the Signal Type Array
             of the Measurement Support IE. The rest of the
             objects that represent each entry are defined in
             wranIfBsCpeMeasSupportCmn (13.1.2.2.18)."
      INDEX { wranIfBsCpeMeasSupportReqIndex }
      ::= { wranIfBsCpeMeasSupportReqTable 1 }

wranIfBsCpeMeasSupportReqEntry      ::= SEQUENCE {
      wranIfBsCpeMeasSupportReqIndex
            wranIfMeasSupportIndex,
      wranIfBsCpeMeasSupportReqMacAddress
            wranIfMeasSupportMacAdddress,
      wranIfBsCpeMeasSupportReqSignalType
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
            wranIfMeasSupportSignalType,
      wranIfBsCpeMeasSupportReqThreshold
            wranIfMeasSupportThreshold,
      wranIfBsCpeMeasSupportReqPd
            wranIfMeasSupportPd,
      wranIfBsCpeMeasSupportReqMpfa
            wranIfMeasSupportMpfa,
      wranIfBsCpeMeasSupportReqRecNumSensPeriods
            wranIfMeasSupportRecNumSensPeriods,
      wranIfBsCpeMeasSupportReqRecSensPeriodDuration
            wranIfMeasSupportRecSensPeriodDuration,
      wranIfBsCpeMeasSupportReqRecSensPeriodInterval
            wranIfMeasSupportRecSensPeriodInterval }

wranIfBsCpeMeasSupportReqIndex      OBJECT-TYPE
      SYNTAX      wranIfMeasSupportIndex
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "Defined by wranIfMeasSupportIndex."
      ::= { wranIfBsCpeMeasSupportReqEntry 1 }

wranIfBsCpeMeasSupportReqMacAddress OBJECT-TYPE
      SYNTAX      wranIfMeasSupportMacAdddress
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by wranIfMeasSupportMacAdddress."
      ::= { wranIfBsCpeMeasSupportReqEntry 2 }

wranIfBsCpeMeasSupportReqSignalType OBJECT-TYPE
      SYNTAX      wranIfMeasSupportSignalType
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by wranIfMeasSupportSignalType."
      ::= { wranIfBsCpeMeasSupportReqEntry 3 }

wranIfBsCpeMeasSupportReqThreshold  OBJECT-TYPE
      SYNTAX      wranIfMeasSupportThreshold
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by wranIfMeasSupportThreshold."
      ::= { wranIfBsCpeMeasSupportReqEntry 4 }

wranIfBsCpeMeasSupportReqPd   OBJECT-TYPE
      SYNTAX      wranIfMeasSupportPd
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by wranIfMeasSupportPd."
      ::= { wranIfBsCpeMeasSupportReqEntry 5 }

wranIfBsCpeMeasSupportReqMpfa OBJECT-TYPE
      SYNTAX      wranIfMeasSupportMpfa
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportMpfa."
        ::= { wranIfBsCpeMeasSupportReqEntry 6 }

    wranIfBsCpeMeasSupportReqRecNumSensPeriods      OBJECT-TYPE
        SYNTAX      wranIfMeasSupportRecNumSensPeriods
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportRecNumSensPeriods."
        ::= { wranIfBsCpeMeasSupportReqEntry 7 }

    wranIfBsCpeMeasSupportReqRecSensPeriodDuration  OBJECT-TYPE
        SYNTAX      wranIfMeasSupportRecSensPeriodDuration
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportRecSensPeriodDuration."
        ::= { wranIfBsCpeMeasSupportReqEntry 8 }

    wranIfBsCpeMeasSupportReqRecSensPeriodInterval  OBJECT-TYPE
        SYNTAX      wranIfMeasSupportRecSensPeriodInterval
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportRecSensPeriodInterval."
        ::= { wranIfBsCpeMeasSupportReqEntry 9 }

    wranIfBsCpeRegCapabilityRspTable    OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsCpeRegCapabilityRspEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object provides a table containing the
               capability information that a BS has configured for
               a CPE in REG-RSP. Each table is made up of multiple
               entries, one for each CPE, that is defined by
               wranIfBsCpeRegCapabilityRspEntry."
        ::= { wranIfBsCm 7 }

    wranIfBsCpeRegCapabilityRspEntry    OBJECT-TYPE
        SYNTAX      wranIfBsCpeRegCapabilityRspEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object is a compound object that contains the
               capabilities information that a BS has configured
               for the CPE, e.g., through sending a REG-RSP to the
               CPE. wranIfRegCapabilityPermanentStationId is unique
               to REG-RSP. The objects that make up the entry are
               defined in wranIfBsCpeRegCapabilityCmn
               (13.1.2.2.18). A REG-RSP message comprises
               objects within this compound and
               wranIfBsCpeMeasSupportRspTable (13.1.2.2.8)."
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        INDEX { wranIfBsCpeRegCapabilityRspIndex }
        ::= { wranIfBsCpeRegCapabilityRspTable 1 }

    wranIfBsCpeRegCapabilityRspEntry    ::= SEQUENCE {
        wranIfBsCpeRegCapabilityRspIndex
            wranIfRegCapabilityIndex,
        wranIfBsCpeRegCapabilityRspMacAddress
            wranIfRegCapabilityMacAdddress,
        wranIfBsCpeRegCapabilityRspNumAttempts
            wranIfRegCapabilityNumAttempts,
        wranIfBsCpeRegCapabilityRspCsConfig
            wranIfRegCapabilityCsConfig,
        wranIfBsCpeRegCapabilityRspIpVersion
            wranIfRegCapabilityIpVersion,
        wranIfBsCpeRegCapabilityRspIpRochSupport
            wranIfRegCapabilityIpRochSupport,
        wranIfBsCpeRegCapabilityRspArqSupport
            wranIfRegCapabilityIpArqSupport,
        wranIfBsCpeRegCapabilityRsp2ndMgmtArqWindowSize
            wranIfRegCapability2ndMgmtArqWindowSize,
        wranIfBsCpeRegCapabilityRsp2ndMgmtArqRetryTxDelay
            wranIfRegCapability2ndMgmtArqRetryTxDelay,
        wranIfBsCpeRegCapabilityRsp2ndMgmtArqRetryRxDelay
            wranIfRegCapability2ndMgmtArqRetryRxDelay,
        wranIfBsCpeRegCapabilityRsp2ndMgmtArqBlockLifetime
            wranIfRegCapability2ndMgmtArqBlockLifetime,
        wranIfBsCpeRegCapabilityRsp2ndMgmtArqSyncLossTimeout
            wranIfRegCapability2ndMgmtArqSyncLossTimeout,
        wranIfBsCpeRegCapabilityRsp2ndMgmtArqDeliverInOrder
            wranIfRegCapability2ndMgmtArqDeliverInOrder,
        wranIfBsCpeRegCapabilityRsp2ndMgmtArqRxPurgeTimeout
            wranIfRegCapability2ndMgmtArqRxPurgeTimeout,
        wranIfBsCpeRegCapabilityRsp2ndMgmtArqBlockSize
            wranIfRegCapability2ndMgmtArqBlockSize,
        wranIfBsCpeRegCapabilityRspDsxFlowControl
            wranIfRegCapabilityDsxFlowControl,
        wranIfBsCpeRegCapabilityRspMcaFlowControl
            wranIfRegCapabilityMcaFlowControl,
        wranIfBsCpeRegCapabilityRspMaxNumMcastGroups
            wranIfRegCapabilityMaxNumMcastGroups,
        wranIfBsCpeRegCapabilityRspSensModeSupportArray
            wranIfRegCapabilitySensModeSupportArray,
        wranIfBsCpeRegCapabilityRspAntennaModelSize
            wranIfRegCapabilityAntennaModelSize,
        wranIfBsCpeRegCapabilityRspAntennaModel
            wranIfRegCapabilityAntennaModel,
        wranIfBsCpeRegCapabilityRsp2ndMgmtIpAllocMethod
            wranIfRegCapability2ndMgmtIpAllocMethod,
        wranIfBsCpeRegCapabilityRspCpeOperationalCapability
            wranIfRegCapabilityCpeOperationalCapability,
        wranIfBsCpeRegCapabilityRspCpeRegistrationTimer
            wranIfRegCapabilityCpeRegistrationTimer,
        wranIfBsCpeRegCapabilityRspPermanentSid
            wranIfRegCapabilityPermanentSid }

    wranIfBsCpeRegCapabilityRspIndex    OBJECT-TYPE
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        SYNTAX      wranIfRegCapabilityIndex
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityIndex."
        ::= { wranIfBsCpeRegCapabilityRspEntry 1 }

    wranIfBsCpeRegCapabilityRspMacAddress     OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityMacAdddress
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityMacAdddress."
        ::= { wranIfBsCpeRegCapabilityRspEntry 2 }

    wranIfBsCpeRegCapabilityRspNumAttempts    OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityNumAttempts
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityNumAttempts."
        ::= { wranIfBsCpeRegCapabilityRspEntry 3 }

    wranIfBsCpeRegCapabilityRspCsConfig OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityCsConfig
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityCsConfig."
        ::= { wranIfBsCpeRegCapabilityRspEntry 4 }

    wranIfBsCpeRegCapabilityRspIpVersion      OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityIpVersion
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityIpVersion."
        ::= { wranIfBsCpeRegCapabilityRspEntry 5 }

    wranIfBsCpeRegCapabilityRspIpRochSupport  OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityIpRochSupport
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityIpRochSupport."
        ::= { wranIfBsCpeRegCapabilityRspEntry 6 }

    wranIfBsCpeRegCapabilityRspArqSupport     OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityArqSupport
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityArqSupport."
        ::= { wranIfBsCpeRegCapabilityRspEntry 7 }

    wranIfBsCpeRegCapabilityRsp2ndMgmtArqWindowSize OBJECT-TYPE
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        SYNTAX      wranIfRegCapability2ndMgmtArqWindowSize
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapability2ndMgmtArqWindowSize."
        ::= { wranIfBsCpeRegCapabilityRspEntry 8 }

    wranIfBsCpeRegCapabilityRsp2ndMgmtArqRetryTxDelay     OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqRetryTxDelay
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqRetryTxDelay."
        ::= { wranIfBsCpeRegCapabilityRspEntry 9 }

    wranIfBsCpeRegCapabilityRsp2ndMgmtArqRetryRxDelay  OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqRetryRxDelay
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqRetryRxDelay."
        ::= { wranIfBsCpeRegCapabilityRspEntry 10 }

    wranIfBsCpeRegCapabilityRsp2ndMgmtArqBlockLifetime    OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqBlockLifetime
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqBlockLifetime."
        ::= { wranIfBsCpeRegCapabilityRspEntry 11 }

    wranIfBsCpeRegCapabilityRsp2ndMgmtArqSyncLossTimeout  OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqSyncLossTimeout
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqSyncLossTimeout."
        ::= { wranIfBsCpeRegCapabilityRspEntry 12 }

    wranIfBsCpeRegCapabilityRsp2ndMgmtArqDeliverInOrder   OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqDeliverInOrder
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqDeliverInOrder."
        ::= { wranIfBsCpeRegCapabilityRspEntry 13 }

    wranIfBsCpeRegCapabilityRsp2ndMgmtArqRxPurgeTimeout   OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqRxPurgeTimeout
        MAX-ACCESS  read-only
        STATUS      current
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqRxPurgeTimeout."
        ::= { wranIfBsCpeRegCapabilityRspEntry 14 }

    wranIfBsCpeRegCapabilityRsp2ndMgmtArqBlockSize  OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqBlockSize
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapability2ndMgmtArqBlockSize."
        ::= { wranIfBsCpeRegCapabilityRspEntry 15 }

    wranIfBsCpeRegCapabilityRspDsxFlowControl OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityDsxFlowControl
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityDsxFlowControl."
        ::= { wranIfBsCpeRegCapabilityRspEntry 16 }

    wranIfBsCpeRegCapabilityRspMcaFlowControl OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityMcaFlowControl
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityMcaFlowControl."
        ::= { wranIfBsCpeRegCapabilityRspEntry 17 }

    wranIfBsCpeRegCapabilityRspMaxNumMcastGroups    OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityMaxNumMcastGroups
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityMaxNumMcastGroups."
        ::= { wranIfBsCpeRegCapabilityRspEntry 18 }

    wranIfBsCpeRegCapabilityRspSensModeSupportArray OBJECT-TYPE
        SYNTAX      wranIfRegCapabilitySensModeSupportArray
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilitySensModeSupportArray."
        ::= { wranIfBsCpeRegCapabilityRspEntry 19 }

    wranIfBsCpeRegCapabilityRspAntennaModelSize     OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityAntennaModelSize
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityAntennaModelSize."
        ::= { wranIfBsCpeRegCapabilityRspEntry 20 }

    wranIfBsCpeRegCapabilityRspAntennaModel   OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityAntennaModel
        MAX-ACCESS  read-only
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityAntennaModel."
        ::= { wranIfBsCpeRegCapabilityRspEntry 21 }

    wranIfBsCpeRegCapabilityRsp2ndMgmtIpAllocMethod OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtIpAllocMethod
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapability2ndMgmtIpAllocMethod."
        ::= { wranIfBsCpeRegCapabilityRspEntry 22 }

    wranIfBsCpeRegCapabilityRspCpeOperationalCapability   OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityCpeOperationalCapability
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapabilityCpeOperationalCapability."
        ::= { wranIfBsCpeRegCapabilityRspEntry 23 }

    wranIfBsCpeRegCapabilityRspCpeRegistrationTimer OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityCpeRegistrationTimer
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapabilityCpeRegistrationTimer."
        ::= { wranIfBsCpeRegCapabilityRspEntry 24 }

    wranIfBsCpeRegCapabilityRspPermanentSid   OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityPermanentSid
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapabilityPermanentSid."
        ::= { wranIfBsCpeRegCapabilityRspEntry 25 }

    wranIfBsCpeMeasSupportRspTable      OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsCpeMeasSupportRspEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "A compound object representing the Measurement
               Support IE of REG-RSP in 7.7.7.3.4.7. It is made
               up of multiple entries, one for each signal type
               supported by sensing. Each entry is defined by
               wranIfBsCpeMeasSupportRspEntry. Entries for a CPE
               are only present if the value for
               wranIfSensModeSupportArray is anything other than
               'No Sensing'."
        ::= { wranIfBsCm 8 }

    wranIfBsCpeMeasSupportRspEntry      OBJECT-TYPE
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        SYNTAX      wranIfBsCpeMeasSupportRspEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "A compound object representing the entries of
               Measurement Support IE of REG-RSP in 7.7.7.3.4.7. It
               is made up of multiple objects. A CPE will have one
               entry for each Signal Type in the Signal Type Array
               of the Measurement Support IE. The rest of the
               objects that represent each entry are defined in
               wranIfBsCpeMeasSupportCmn (13.1.2.2.18)."
        INDEX { wranIfBsCpeMeasSupportRspIndex }
        ::= { wranIfBsCpeMeasSupportRspTable 1 }

  wranIfBsCpeMeasSupportRspEntry      ::= SEQUENCE {
        wranIfBsCpeMeasSupportRspIndex
              wranIfMeasSupportIndex,
        wranIfBsCpeMeasSupportRspMacAddress
              wranIfMeasSupportMacAdddress,
        wranIfBsCpeMeasSupportRspSignalType
              wranIfMeasSupportSignalType,
        wranIfBsCpeMeasSupportRspThreshold
              wranIfMeasSupportThreshold,
        wranIfBsCpeMeasSupportRspPd
              wranIfMeasSupportPd,
        wranIfBsCpeMeasSupportRspMpfa
              wranIfMeasSupportMpfa,
        wranIfBsCpeMeasSupportRspRecNumSensPeriods
              wranIfMeasSupportRecNumSensPeriods,
        wranIfBsCpeMeasSupportRspRecSensPeriodDuration
              wranIfMeasSupportRecSensPeriodDuration,
        wranIfBsCpeMeasSupportRspRecSensPeriodInterval
              wranIfMeasSupportRecSensPeriodInterval }

  wranIfBsCpeMeasSupportRspIndex      OBJECT-TYPE
        SYNTAX      wranIfMeasSupportIndex
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportIndex."
        ::= { wranIfBsCpeMeasSupportRspEntry 1 }

  wranIfBsCpeMeasSupportRspMacAddress OBJECT-TYPE
        SYNTAX      wranIfMeasSupportMacAdddress
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportMacAdddress."
        ::= { wranIfBsCpeMeasSupportRspEntry 2 }

  wranIfBsCpeMeasSupportRspSignalType OBJECT-TYPE
        SYNTAX      wranIfMeasSupportSignalType
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportSignalType."
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        ::= { wranIfBsCpeMeasSupportRspEntry 3 }

    wranIfBsCpeMeasSupportRspThreshold  OBJECT-TYPE
        SYNTAX      wranIfMeasSupportThreshold
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportThreshold."
        ::= { wranIfBsCpeMeasSupportRspEntry 4 }

    wranIfBsCpeMeasSupportRspPd   OBJECT-TYPE
        SYNTAX      wranIfMeasSupportPd
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportPd."
        ::= { wranIfBsCpeMeasSupportRspEntry 5 }

    wranIfBsCpeMeasSupportRspMpfa OBJECT-TYPE
        SYNTAX      wranIfMeasSupportMpfa
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportMpfa."
        ::= { wranIfBsCpeMeasSupportRspEntry 6 }

    wranIfBsCpeMeasSupportRspRecNumSensPeriods      OBJECT-TYPE
        SYNTAX      wranIfMeasSupportRecNumSensPeriods
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportRecNumSensPeriods."
        ::= { wranIfBsCpeMeasSupportRspEntry 7 }

    wranIfBsCpeMeasSupportRspRecSensPeriodDuration  OBJECT-TYPE
        SYNTAX      wranIfMeasSupportRecSensPeriodDuration
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportRecSensPeriodDuration."
        ::= { wranIfBsCpeMeasSupportRspEntry 8 }

    wranIfBsCpeMeasSupportRspRecSensPeriodInterval  OBJECT-TYPE
        SYNTAX      wranIfMeasSupportRecSensPeriodInterval
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportRecSensPeriodInterval."
        ::= { wranIfBsCpeMeasSupportRspEntry 9 }

    wranIfBsCpeAntennaGainTable   OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsCpeAntennaGainEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "At the CPE this object represents a compound object
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                representing the entries of the CPE Antenna Gain IE
                (7.7.7.3.4.9), that carries a CPE's receive antenna
                gain when a CPE transmits a REG-REQ to the BS. At
                the BS, this object is a compound object that
                represents the entries for its own transmit antenna
                gain as well as the receive antenna gain information
                for each CPE that sent a CPE Antenna Gain IE in a
                REG-REQ (and successfully completed registration).
                This object is a table that is made up of multiple
                entries, each defined by
                wranIfBsCpeAntennaGainEntry."
        ::= { wranIfBsCm 9 }

wranIfBsCpeAntennaGainEntry   OBJECT-TYPE
        SYNTAX      wranIfBsCpeAntennaGainEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "A compound object representing the on-axis gain (in
               dB) for each channel the CPE's of BS's antenna is
               capable of operating on."
        INDEX { wranIfBsCpeAntennaGainIndex }
        ::= { wranIfBsCpeAntennaGainTable 1 }

wranIfBsCpeAntennaGainEntry   ::= SEQUENCE {
        wranIfBsCpeAntennaGainIndex         Integer32,
        wranIfBsCpeAntennaGainMacAddress    MacAddress,
        wranIfBsCpeTvChannel                INTEGER,
        wranIfBsCpeOnAxisGain               INTEGER }

wranIfBsCpeAntennaGainIndex   OBJECT-TYPE
        SYNTAX      Integer32 (1.. 131072)
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "Index of entry in this table."
        ::= { wranIfBsCpeAntennaGainEntry 1 }

wranIfBsCpeAntennaGainMacAddress    OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "MAC Address of the device."
        ::= { wranIfBsCpeAntennaGainEntry 2 }

wranIfBsCpeTvChannel    OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "TV Channel number."
        ::= { wranIfBsCpeAntennaGainEntry 3 }

wranIfBsCpeOnAxisGain   OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        UNITS       “dB”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Maximum gain in the specified TV channel, from -91.5
               dB."
        ::= { wranIfBsCpeAntennaGainEntry 4 }

  wranIfBsScmCapabilityConfiguration  OBJECT-TYPE
        SYNTAX      BITS  { suite0(0), suite1(1), suite1(2),
                            suite3(3), suite4(4), suite5(5),
                            suite6(6), suite7(7), suite8(8),
                            suite9(9), suiteA(10), suiteB(11),
                            suiteC(12), suiteD(13), suiteE(14),
                            suiteF(15) }
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB object provides a bitmap that describes the
               cryptographic suites that the BS supports. The list
               of suites is provided in Table 193 in 8.4.1.
               The bit for suite0 corresponds to ‘No Protection’,
               and so on. A cryptographic suite is supported when
               the corresponding bit is set to 1 and disabled/not
               supported when the suite is not supported. Currently
               Bit8-Bit15 will all be set to 0."
        ::= { wranIfBsCm 10 }

  wranIfBsCpeScmCapabilityConfigTable       OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsCpeScmCapabilityConfigEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB provides a table that contains a listing
               for the security capabilities of each CPE. CPE
               stores this table. On the BS, this table is made
               up of multiple entries, one for each CPE. Each entry
               is defined by wranIfBsCpeScmCapabilityConfigEntry.
               Entries on the BS table do not contain the
               wranIfBsCpeEapTlsTtlsCredential object. The list of
               capabilities is listed in Table 193."
        ::= { wranIfBsCm 11 }

  wranIfBsCpeScmCapabilityConfigEntry OBJECT-TYPE
        SYNTAX      wranIfBsCpeScmCapabilityConfigEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object is a compound object that provides the
               definition of entries in
               wranIfBsCpeScmCapabilityConfigTable."
        INDEX { wranIfBsCpeScmCapabilityConfigIndex }
        ::= { wranIfBsCpeScmCapabilityConfigTable 1 }

  wranIfBsCpeScmCapabilityConfigEntry ::= SEQUENCE {
        wranIfBsCpeScmCapabilityConfigIndex       Integer32,
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
      wranIfBsCpeScmCapabilityConfigMacAddress  MacAddress,
      wranIfBsCpeScmCapabilityConfiguration     BITS,
      wranIfBsCpeEapTlsTtlsCredentialSize       Integer32,
      wranIfBsCpeEapTlsTtlsCredential           OCTET STRING }

wranIfBsCpeScmCapabilityConfigIndex OBJECT-TYPE
      SYNTAX      Integer32 (1.. 512)
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "Index of entry in this table."
      ::= { wranIfBsCpeScmCapabilityConfigEntry 1 }

wranIfBsCpeScmCapabilityConfigMacAddress  OBJECT-TYPE
      SYNTAX      MacAddress
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "MAC Address of the CPE."
      ::= { wranIfBsCpeScmCapabilityConfigEntry 2 }

wranIfBsCpeScmCapabilityConfiguration    OBJECT-TYPE
      SYNTAX      BITS  { suite0(0), suite1(1), suite1(2),
                          suite3(3), suite4(4), suite5(5),
                          suite6(6), suite7(7), suite8(8),
                          suite9(9), suiteA(10), suiteB(11),
                          suiteC(12), suiteD(13), suiteE(14),
                          suiteF(15) }
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This MIB object provides a bitmap that describes the
             cryptographic suites that the CPE supports. The list
             of suites is provided in Table 193 in 8.4.1.
             The bit for suite0 corresponds to 'No Protection',
             and so on. A cryptographic suite is supported when
             the corresponding bit is set to 1 and disabled/not
             supported when the suite is not supported. Currently
             Bit8-Bit15 will all be set to 0."
      ::= { wranIfBsCpeScmCapabilityConfigEntry 3 }

wranIfBsCpeEapTlsTtlsCredentialSize OBJECT-TYPE
      SYNTAX      Integer32 (1..10000)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Size, in # of octets, of X.509 certificate that
             defines the credential the CPE exchanges with the
             AAA server to perform authentication."
      ::= { wranIfBsCpeScmCapabilityConfigEntry 4 }

wranIfBsCpeEapTlsTtlsCredential     OBJECT-TYPE
      SYNTAX      OCTET STRING
                   (SIZEOF(wranIfBsCpeEapTlsTtlsCredentialSize))
      MAX-ACCESS  read-only
      STATUS      current
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        DESCRIPTION
              "X.509 certificate that defines the credential the
               CPE exchanges with the AAA server to perform
               authentication."
        ::= { wranIfBsCpeScmCapabilityConfigEntry 5 }


wranIfBsCpeScmAuthConfigTable       OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfBsCpeScmAuthConfigEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This MIB provides a table that provides the
             configuration of the SCM attributes (e.g., timers
             and other items related to the authentication
             process). This table is made up of one entry,
             defined by wranIfBsCpeScmAuthConfigEntry."
      ::= { wranIfBsCm 12 }

wranIfBsCpeScmAuthConfigEntry OBJECT-TYPE
      SYNTAX      wranIfBsCpeScmAuthConfigEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object is a compound object that provides the
             definition of entries in
             wranIfBsCpeScmCapabilityConfigTable."
      INDEX { wranIfBsCpeScmAuthConfigIndex }
      ::= { wranIfBsCpeScmAuthConfigTable 1 }

wranIfBsCpeScmAuthConfigEntry ::= SEQUENCE {
      wranIfBsScmAuthConfigIndex    Integer32,
      wranIfBsT36                   INTEGER,
      wranIfBsT37                   Integer32,
      wranIfBsMaxNumAuthAttempts    INTEGER,
      wranIfBsT38                   INTEGER,
      wranIfBsT39                   INTEGER,
      wranIfBsT40                   Integer32,
      wranIfBsAkLifetime            Integer32,
      wranIfBsTekLifetime           Integer32,
      wranIfBsMaxNumSa              Integer32,
      wranIfBsT17                   INTEGER }

wranIfBsCpeScmAuthConfigIndex OBJECT-TYPE
      SYNTAX      Integer32 (1.. 512)
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "Index of entry in this table."
      ::= { wranIfBsCpeScmAuthConfigEntry 1 }

wranIfBsT36 OBJECT-TYPE
      SYNTAX      INTEGER (2..30)
      UNITS       “seconds”
      MAX-ACCESS  read-only
      STATUS      current
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        DESCRIPTION
              "EAP Authentication Timer, T36."
        ::= { wranIfBsCpeScmAuthConfigEntry 2 }

    wranIfBsT37 OBJECT-TYPE
        SYNTAX      Integer32 (300..3024000)
        UNITS       “seconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Authentication Grace Timer, T37."
        ::= { wranIfBsCpeScmAuthConfigEntry 3 }

    wranIfBsMaxNumAuthAttempts    OBJECT-TYPE
        SYNTAX      INTEGER (1..10)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Maximum # of Authentication Attempts."
        ::= { wranIfBsCpeScmAuthConfigEntry 4 }

    wranIfBsT38 OBJECT-TYPE
        SYNTAX      INTEGER (1..10)
        UNITS       “seconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Operational Wait Timeout, T38."
        ::= { wranIfBsCpeScmAuthConfigEntry 5 }

    wranIfBsT39 OBJECT-TYPE
        SYNTAX      INTEGER (1..10)
        UNITS       “seconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Rekey Wait Timeout, T39."
        ::= { wranIfBsCpeScmAuthConfigEntry 6 }

    wranIfBsT40 OBJECT-TYPE
        SYNTAX      Integer32 (300..302400)
        UNITS       “seconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "GTEK/TEK Grace Time, T40."
        ::= { wranIfBsCpeScmAuthConfigEntry 7 }

    wranIfBsAkLifetime      OBJECT-TYPE
        SYNTAX      Integer32 (86400..6048000)
        UNITS       “seconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Lifetime BS assigns to new AK."
        ::= { wranIfBsCpeScmAuthConfigEntry 8 }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
wranIfBsTekLifetime     OBJECT-TYPE
      SYNTAX      Integer32 (1800..604800)
      UNITS       “seconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Lifetime BS assigns to new TEK."
      ::= { wranIfBsCpeScmAuthConfigEntry 9 }

wranIfBsMaxNumSa  OBJECT-TYPE
      SYNTAX      Integer32 (1..510)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Maximum # of multicast groups."
      ::= { wranIfBsCpeScmAuthConfigEntry 10 }

wranIfBsT17 OBJECT-TYPE
      SYNTAX      Integer32 (5..5)
      UNITS       “minutes”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Time for CPE to complete authentication and key
             exchange."
      ::= { wranIfBsCpeScmAuthConfigEntry 11 }

wranIfBsActionsTable    OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfBsActionsEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object provides a table that stores actions
             that can be configured to have BS direct a CPE how
             to act up receiving unsolicited MAC management
             messages such as RNG-CMD and DREG-CMD. This table is
             made up of multiple entries, one for each CPE for
             which an  action is set up. Each entry is defined by
             wranIfBsActionsEntry."
      ::= { wranIfBsCm 13 }

wranIfBsActionsEntry    OBJECT-TYPE
      SYNTAX      wranIfBsActionsEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object defines an entry in
             wranIfBsActionsTable."
      INDEX { wranIfBsCpeActionsIndex }
      ::= { wranIfBsActionsTable 1 }

wranIfBsActionsEntry    ::= SEQUENCE {
      wranIfBsCpeActionsIndex       Integer32,
      wranIfBsCpeActionsMacAddress  MacAddress,
      wranIfBsCpeActionsRngCpe      INTEGER,
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
      wranIfBsCpeActionsDeRegCpe    INTEGER,
      wranIfBsCpeActionsSchedule    DateAndTime }

wranIfBsCpeActionsIndex OBJECT-TYPE
      SYNTAX      Integer32 (1.. 512)
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "Index of entry in this table."
      ::= { wranIfBsActionsEntry 1 }

wranIfBsCpeActionsMacAddress  OBJECT-TYPE
      SYNTAX      MacAddress
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "MAC Address of CPE that action is directed towards."
      ::= { wranIfBsActionsEntry 2 }

wranIfBsCpeActionsRngCpe      OBJECT-TYPE
      SYNTAX      INTEGER { continue(0), abort(1), success(2),
                            reRange(3), reAuth(4),
                            reRangeAndreRegister(5),
                            doNothing(15) }
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "When set, the BS will send an unsolicited RNG-CMD to
             a CPE with the Ranging Status field set to the value
             written to this object. No action is to be taken if
             this object is read or if set to an invalid Ranging
             Status value. Valid values for the Ranging Status
             field of RNG-CMD are listed in Table 44."
      ::= { wranIfBsActionsEntry 3 }

wranIfBsCpeActionsDeRegCpe    OBJECT-TYPE
      SYNTAX      INTEGER { ac0(0), ac1(1), ac2(2),
                            ac3(3), ac4(4), ac5(5),
                            doNothing(15) }
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "When set to an Action code value as defined in Table
             115, the BS will send a DREG-CMD to the CPE with
             that Action Code. No action is to be taken if this
             object is read or an invalid Action Code is
             specified."
      ::= { wranIfBsActionsEntry 4 }

wranIfBsCpeActionsSchedule    OBJECT-TYPE
      SYNTAX      DateAndTime
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "This object contains the date and time, whereby
             scheduled action, either DREG-CMD or RNG-CMD, is
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                sent to the CPE."
        ::= { wranIfBsActionsEntry 5 }

    wranIfBsCpeMcastConfigTable   OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsCpeMcastConfigEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "This table contains the configuration of multicast
                 groups and what CPEs are assigned to them. Each
                 table is made up of multiple entries, defined by
                 wranIfBsCpeMcastConfigEntry. A CPE may have multiple
                 entries in this table, one for each multicast group
                 that it belongs to. Entries will be deleted whenever
                 a CPE is asked to leave a multicast group."
        ::= { wranIfBsCm 14 }

    wranIfBsCpeMcastConfigEntry   OBJECT-TYPE
        SYNTAX      wranIfBsCpeMcastConfigEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "This object defines an entry in
                 wranIfBsCpeMcastConfigTable."
        INDEX { wranIfBsCpeMcastConfigIndex }
        ::= { wranIfBsCpeMcastConfigTable 1 }

    wranIfBsCpeMcastConfigEntry  ::= SEQUENCE {
        wranIfBsCpeMcastConfigIndex               Integer32,
        wranIfBsCpeMcastMacAddress                MacAddress,
        wranIfBsCpeMcastSid                       Integer32,
        wranIfBsCpeMcastPeriodicAllocParameterM   INTEGER,
        wranIfBsCpeMcastPeriodicAllocParameterK   INTEGER,
        wranIfBsCpeMcastPeriodicAllocParameterN   INTEGER }

    wranIfBsCpeMcastIndex   OBJECT-TYPE
        SYNTAX      Integer32 (1..262144)
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "Index of entry in this table."
        ::= { wranIfBsCpeMcastConfigEntry 1 }

    wranIfBsCpeMcastMacAddress    OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "This object refers to a CPE's MAC address. It is
                 used to uniquely identify the multicast group
                 configuration for a particular CPE in
                 wranIfBsCpeMcastConfigTable, along with
                 wranIfBsCpeMcastSid."
        ::= { wranIfBsCpeMcastConfigEntry 2 }

    wranIfBsCpeMcastSid     OBJECT-TYPE
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        SYNTAX      Integer32 (1..512)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This object refers to the multicast SID that is
               assigned to a multicast SID that is assigned to a
               multicast group."
        ::= { wranIfBsCpeMcastConfigEntry 3 }

    wranIfBsCpeMcastPeriodicAllocParameterM   OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This object defines the 'M' value (see Table 103)
               that is used to calculate the periodic allocation
               for multicast transmission."
        ::= { wranIfBsCpeMcastConfigEntry 4 }

    wranIfBsCpeMcastPeriodicAllocParameterK   OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This object defines the 'K' value (see Table 103)
               that is used to calculate the periodic allocation
               for multicast transmission."
        ::= { wranIfBsCpeMcastConfigEntry 5 }

    wranIfBsCpeMcastPeriodicAllocParameterN   OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This object defines the 'N' value (see Table 103)
               that is used to calculate the periodic allocation
               for multicast transmission."
        ::= { wranIfBsCpeMcastConfigEntry 6 }

    wranIfBsCoexistenceConfigTable      OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsCoexistenceConfigEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This table contains configuration items related to
               Coexistence operation and CBP transmission. It is
               made up of one entry that represents the default
               values for Coexistence operation and CBP
               transmission."
        ::= { wranIfBsCm 15 }

    wranIfBsCoexistenceConfigEntry      OBJECT-TYPE
        SYNTAX      wranIfBsCoexistenceConfigEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
            "This object defines an entry in
             wranIfBsCoexistenceConfigTable."
      INDEX { wranIfBsCoexistenceConfigIndex }
      ::= { wranIfBsCoexistenceConfigTable 1 }

wranIfBsCoexistenceConfigEntry      ::= SEQUENCE {
      wranIfBsCoexistenceConfigIndex      INTEGER,
      wranIfBsT34                         Integer32,
      wranIfBsT33                         INTEGER,
      wranIfBsT32                         INTEGER,
      wranIfBsFcw                         INTEGER,
      wranIfBsScwBackoffMax               INTEGER,
      wranIfBsFcMin                       INTEGER,
      wranIfBsFcnRange                    INTEGER,
      wranIfBsSfRel                       INTEGER,
      wranIfBsT35                         INTEGER }

wranIfBsCoexistenceConfigIndex      OBJECT-TYPE
      SYNTAX      INTEGER (1..1)
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "Index of entry in this table."
      ::= { wranIfBsCoexistenceConfigEntry 1 }

wranIfBsT34 OBJECT-TYPE
      SYNTAX      Integer32 (8..900)
      UNITS       “seconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "This governs how often in (seconds) the Device
             Identification IE is transmitted in a CBP burst.
             Recommended value is 300s."
      ::= { wranIfBsCoexistenceConfigEntry 2 }

wranIfBsT33 OBJECT-TYPE
      SYNTAX      INTEGER (1..60)
      UNITS       “seconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Time between transmission of CBP bursts with
             backup/candidate channel list information (see
             7.6.1.3.1.1) to facilitate spectrum etiquette."
      ::= { wranIfBsCoexistenceConfigEntry 3 }

wranIfBsT32 OBJECT-TYPE
      SYNTAX      INTEGER (1..32)
      UNITS       “superframes”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Time between transmission of CBP bursts with
             backup/candidate channel list information (see
             7.6.1.3.1.1) to facilitate spectrum etiquette."
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        ::= { wranIfBsCoexistenceConfigEntry 4 }

    wranIfBsFcw OBJECT-TYPE
          SYNTAX      INTEGER (1..16)
          UNITS       “superframes”
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Frame contention window, the number of superframes
                 that a contention destination accumulates frame
                 contention requests before responding to them."
          ::= { wranIfBsCoexistenceConfigEntry 5 }

    wranIfBsScwBackoffMax   OBJECT-TYPE
          SYNTAX      INTEGER (1..16)
          UNITS       “superframes”
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Maximum number of superframes for the SCW backoff
                 window."
          ::= { wranIfBsCoexistenceConfigEntry 6 }

    wranIfBsFcMin     OBJECT-TYPE
          SYNTAX      INTEGER (0..8)
          UNITS       “superframes”
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Maximum number of superframes for the SCW backoff
                 window."
          ::= { wranIfBsCoexistenceConfigEntry 7 }

    wranIfBsFcnRange  OBJECT-TYPE
          SYNTAX      INTEGER (4..16)
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Exponent, base 2, defining range of random numbers
                 for the FCN."
          ::= { wranIfBsCoexistenceConfigEntry 8 }

    wranIfBsSfRel     OBJECT-TYPE
          SYNTAX      INTEGER (5..16)
          UNITS       “superframes”
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Number of superframes, after which a BS releases the
                 frames won by another BS through frame contention."
          ::= { wranIfBsCoexistenceConfigEntry 9 }

    wranIfBsT35 OBJECT-TYPE
          SYNTAX      INTEGER (1..255)
          UNTIS       “self-coexistence windows”
          MAX-ACCESS  read-only
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
            STATUS      current
            DESCRIPTION
                  "SCW backoff timer, timer controlling continuation or
                   exiting of Frame Contention procedure."
            ::= { wranIfBsCoexistenceConfigEntry 10 }

-- wranIfBsCpeBasicCapabilityCmn: This MIB object is defines group
-- containing objects that are common to
-- wranIfBsCpeBasicCapabilityReqEntry,
-- wranIfBsCpeBasicCapabilityRspEntry, and
-- wranIfBsCpeBasicCapabilityDefEntry.

      wranIfBsCpeBasicCapabilityCmn OBJECT IDENTIFIER
                                ::= { wranIfBsCm 16 }
      wranIfBasicCapabilityIndex  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeBasicCapabilityCmn 1 }
      wranIfBasicCapabilityNumAttempts  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeBasicCapabilityCmn 2 }
      wranIfBasicCapabilityMacAddress  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeBasicCapabilityCmn 3 }
      wranIfBasicCapabilityStationId  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeBasicCapabilityCmn 4 }
      wranIfBasicCapabilityMacPduTxandConstruction  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeBasicCapabilityCmn 5 }
      wranIfBasicCapabilityMaxCpeTxEirp  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeBasicCapabilityCmn 6 }
      wranIfBasicCapabilityCpeDemodulator  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeBasicCapabilityCmn 7 }
      wranIfBasicCapabilityCpeModulator OBJECT IDENTIFIER
                                ::= { wranIfBsCpeBasicCapabilityCmn 8 }
      wranIfBasicCapabilityCpeScmVersionSupport  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeBasicCapabilityCmn 9 }
      wranIfBasicCapabilityCpePnWindowSize  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeBasicCapabilityCmn 10 }
      wranIfBasicCapabilityCpeScmFlowControl  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeBasicCapabilityCmn 11 }

      wranIfBasicCapabilityIndex    ::= TEXTUAL-CONVENTION
            STATUS      current
            DESCRIPTION
                  "Index of entry in this table."
            SYNTAX      Integer32 (1..511)

      wranIfBasicCapabilityNumAttempts    ::= TEXTUAL-CONVENTION
            STATUS      current
            DESCRIPTION
                  "The current number of attempts that a CPE has
                   attempted basic capability configuration during
                   network entry. This item is set to 0 upon
                   successful completion of registration process and a
                   CPE is admitted into the network. This item is
                   incremented every time a CPE attempts basic
                   capability configuration, but is unsuccessful. If
                   this value reaches the limit set by
                   wranIfBsMaxNumCbcReqAttempts, then the BS shall
                   reject network entry."
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        SYNTAX      INTEGER (5..10)

    wranIfBasicCapabilityMacAddress     ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "The MAC address of the CPE attempting basic
               capability configuration."
        SYNTAX      MacAddress

    wranIfBasicCapabilityStationId      ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "The Station ID of the CPE attempting basic
               capability configuration."
        SYNTAX      Integer32 (1..512)

    wranIfBasicCapabilityMacPduTxandConstruction
                                        ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "An integer value that indicates the methods for
               transmission and construction of MAC PDUs that the
               CPE supports. This reflects the setting of the IE
               defined in 7.7.11.3.1."
        SYNTAX      INTEGER { reqPiggybackedWithData(0) }

    wranIfBasicCapabilityMaxCpeTxEirp   ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "An integer value, encoded in hexadecimal, that
               indicates the maximum EIRP for which the CPE is
               configured. This reflects the setting of the IE
               defined in 7.7.11.3.2.1. On the range from -64 dBm
               (0x00) to +63.5 dBm (0xFF) in 0.5 dB steps."
        SYNTAX      INTEGER (0..255)

    wranIfBasicCapabilityCpeDemodulator ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "A bit map that encodes the DIUCs that the CPE
               supports. This reflects the setting of the IE
               defined in 7.7.11.3.2.2.1. DIUCs are listed in Table
               27."
        BITS  { diuc0(0), diuc1(1), diuc2(2), diuc3(3), diuc4(4),
                diuc5(5), diuc6(6), diuc7(7), diuc8(8), diuc9(9),
                diuc10(10), diuc11(11), diuc12(12), diuc13(13),
                diuc14(14), diuc15(15), diuc16(16), diuc17(17),
                diuc18(18), diuc19(19), diuc20(20), diuc21(21),
                diuc22(22), diuc23(23), diuc24(24), diuc25(25),
                diuc26(26), diuc27(27), diuc28(28), diuc29(29),
                diuc30(30), diuc31(31), diuc32(32), diuc33(33),
                diuc34(34), diuc35(35), diuc36(36), diuc37(37),
                diuc38(38), diuc39(39), diuc40(40), diuc41(41),
                diuc42(42), diuc43(43), diuc44(44), diuc45(45),
                diuc46(46), diuc47(47), diuc48(48), diuc49(49),
                diuc50(50), diuc51(51), diuc52(52), diuc53(53),
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                diuc54(54), diuc55(55), diuc56(56), diuc57(57),
                diuc58(58), diuc59(59), diuc60(60), diuc61(61),
                diuc62(62), diuc63(63) }

    wranIfBasicCapabilityCpeModulator   ::= TEXTUAL-CONVENTION
          STATUS      current
          DESCRIPTION
                "A bit map that encodes the UIUCs that the CPE
                 supports. This reflects the setting of the IE
                 defined in 7.7.11.3.2.2.2. UIUCs are listed in Table
                 36."
          BITS  { uiuc0(0), uiuc1(1), uiuc2(2), uiuc3(3), uiuc4(4),
                  uiuc5(5), uiuc6(6), uiuc7(7), uiuc8(8), uiuc9(9),
                  uiuc10(10), uiuc11(11), uiuc12(12), uiuc13(13),
                  uiuc14(14), uiuc15(15), uiuc16(16), uiuc17(17),
                  uiuc18(18), uiuc19(19), uiuc20(20), uiuc21(21),
                  uiuc22(22), uiuc23(23), uiuc24(24), uiuc25(25),
                  uiuc26(26), uiuc27(27), uiuc28(28), uiuc29(29),
                  uiuc30(30), uiuc31(31), uiuc32(32), uiuc33(33),
                  uiuc34(34), uiuc35(35), uiuc36(36), uiuc37(37),
                  uiuc38(38), uiuc39(39), uiuc40(40), uiuc41(41),
                  uiuc42(42), uiuc43(43), uiuc44(44), uiuc45(45),
                  uiuc46(46), uiuc47(47), uiuc48(48), uiuc49(49),
                  uiuc50(50), uiuc51(51), uiuc52(52), uiuc53(53),
                  uiuc54(54), uiuc55(55), uiuc56(56), uiuc57(57),
                  uiuc58(58), uiuc59(59), uiuc60(60), uiuc61(61),
                  uiuc62(62), uiuc63(63) }

    wranIfBasicCapabilityCpeScmVersionSupport ::= TEXTUAL-CONVENTION
          STATUS      current
          DESCRIPTION
                "Indicator of what version of SCM protocol the CPE
                 supports."
          SYNTAX      INTEGER { v1(0) }

    wranIfBasicCapabilityCpePnWindowSize      ::= TEXTUAL-CONVENTION
          STATUS      current
          DESCRIPTION
                "Size of PN_WINDOW (see 7.4) that is used to protect
                against replay attacks. This reflects the setting of
                the IE defined in 7.7.11.3.3.2."
          SYNTAX      Integer32 (1..65535)

    wranIfBasicCapabilityCpeScmFlowControl    ::= TEXTUAL-CONVENTION
          STATUS      current
          DESCRIPTION
                "Maximum # of ongoing SCM transactions the CPE can
                 support. This reflects the setting of the IE defined
                 in 7.7.11.3.3.3. Here a value of (0x00) indicates no
                 limit, while 0x01-0xFF indicates 1..255
                 transactions."
          SYNTAX      INTEGER (0..255)

-- wranIfBsCpeRegCapabilityCmn: This MIB object is defines group
-- containing objects that are common to
-- wranIfBsCpeRegCapabilityReqEntry,
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
-- wranIfBsCpeRegCapabilityRspEntry, and
-- wranIfBsCpeRegCapabilityDefEntry.

    wranIfBsCpeRegCapabilityCmn   OBJECT IDENTIFIER
                                ::= { wranIfBsCm 17 }
    wranIfRegCapabilityIndex  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 1 }
    wranIfRegCapabilityMacAddress  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 2 }
    wranIfRegCapabilityReqNumAttempts  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 3 }
    wranIfRegCapabilityNMEALocStringSize  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 4 }
    wranIfRegCapabilityNMEALocString  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 5 }
    wranIfRegCapabilityCsConfig  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 6 }
    wranIfRegCapabilityIpVersion  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 7 }
    wranIfRegCapabilityIpRohcSupport  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 8 }
    wranIfRegCapabilityArqSupport  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 9 }
    wranIfRegCapability2ndMgmtArqWindowSize  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 10 }
    wranIfRegCapability2ndMgmtArqRetryTxDelay  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 11 }
    wranIfRegCapability2ndMgmtArqRetryRxDelay  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 12 }
    wranIfRegCapability2ndMgmtArqBlockLifetime  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 13 }
    wranIfRegCapability2ndMgmtArqSyncLossTimeout  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 14 }
    wranIfRegCapability2ndMgmtArqDeliverInOrder  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 15 }
    wranIfRegCapability2ndMgmtArqRxPurgeTimeout  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 16 }
    wranIfRegCapability2ndMgmtArqBlockSize  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 17 }
    wranIfRegCapabilityDsxFlowControl  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 18 }
    wranIfRegCapabilityMcaFlowControl  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 19 }
    wranIfRegCapabilityMaxNumMcastGroups  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 20 }
    wranIfRegCapabilitySensModeSupportArray  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 21 }
    wranIfRegCapabilityAntennaModelSize  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 22 }
    wranIfRegCapabilityAntennaModel  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 23 }
    wranIfRegCapabilityCpeResidualDelay  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 24 }
    wranIfRegCapability2ndMgmtIpAllocMethod  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeRegCapabilityCmn 25 }
    wranIfRegCapabilityCpeOperationalCapability  OBJECT IDENTIFIER
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                              ::= { wranIfBsCpeRegCapabilityCmn 26 }
    wranIfRegCapabilityCpeRegistrationTimer  OBJECT IDENTIFIER
                              ::= { wranIfBsCpeRegCapabilityCmn 27 }
    wranIfRegCapabilityPermanentStationId OBJECT IDENTIFIER
                              ::= { wranIfBsCpeRegCapabilityCmn 28 }

    wranIfRegCapabilityIndex      ::= TEXTUAL-CONVENTION
          STATUS      current
          DESCRIPTION
                "Index of entry in this table."
          SYNTAX      Integer32 (1..511)

    wranIfRegCapabilityMacAddress ::= TEXTUAL-CONVENTION
          STATUS      current
          DESCRIPTION
                "The MAC address of the CPE that is currently
                 registered with BS."
          SYNTAX      MacAddress

    wranIfRegCapabilityReqNumAttempts   ::= TEXTUAL-CONVENTION
          STATUS      current
          DESCRIPTION
                "The current number of attempts that a CPE has
                 attempted network entry. This item is set to 0
                 upon successful completion of registration process
                 and a CPE is admitted into the network. This item
                 is incremented every time a CPE attempts
                 registration, but is unsuccessful. If this value
                 reaches the limit set by
                 wranIfBsmaxNumRegReqAttempts, then the CPE shall
                 restart the network entry process."
          SYNTAX      INTEGER (5..10)

    wranIfRegCapabilityNMEALocStringSize      ::= TEXTUAL-CONVENTION
          STATUS      current
          DESCRIPTION
                "Size of NMEA Location String of the CPE (see
                 7.7.7.3.1), in octets."
          SYNTAX      Integer32 (1..10000)

    wranIfRegCapabilityNMEALocString    ::= TEXTUAL-CONVENTION
          STATUS      current
          DESCRIPTION
                "NMEA Location String of the CPE (see
                 7.7.7.3.1), in octets."
          SYNTAX
            OCTET STRING (SIZE(wranIfRegCapabilityNMEALocStringSize))

    wranIfRegCapabilityCsConfig   ::= TEXTUAL-CONVENTION
          STATUS      current
          DESCRIPTION
                "Indication in REG-REQ/RSP of how the provider will
                 operate the CPE on an ongoing basis; either with
                 Ethernet CS only or the IP CS (see 7.7.7.3.2)."
          SYNTAX      INTEGER { ethCS(0), ipCS(1) }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranIfRegCapabilityIpVersion  ::= TEXTUAL-CONVENTION
      STATUS      current
      DESCRIPTION
            "What version of the IP protocol (either v4 or v6)
             indicate in REG-REQ/RSP the CPE supports (see
             7.7.7.3.3)."
      SYNTAX      INTEGER { ipv4(0), ipv6(1) }

wranIfRegCapabilityIpRohcSupport    ::= TEXTUAL-CONVENTION
      STATUS      current
      DESCRIPTION
            "Indicator in REG-RES/RSP of whether CPE
             supports IP Robust Header Compression (ROHC), see
             7.7.7.3.4.1."
      SYNTAX     INTEGER { ipROHCdisabled(0), ipROHCenabled (1) }

wranIfRegCapabilityArqSupport ::= TEXTUAL-CONVENTION
      STATUS      current
      DESCRIPTION
            "ARQ Support IE of REG-REQ/RSP in 7.7.7.3.4.2."
      SYNTAX      INTEGER { noARQ(0), arqOn2ndMgmtOnly(1),
                            arqOnTransportOnly(2), arqOnall(3) }

wranIfRegCapability2ndMgmtArqWindowSize   ::= TEXTUAL-CONVENTION
      STATUS      current
      DESCRIPTION
            "Secondary Management flow - ARQ Window Size IE of
             REG-REQ/RSP defined in 7.7.8.9.17.2. Where
             ARQ_BSN_MODULUS is the # of unique BSN values =
             2^10."
      SYNTAX      Integer32 (1..ARQ_BSN_MODULUS/2)

wranIfRegCapability2ndMgmtArqRetryTxDelay ::= TEXTUAL-CONVENTION
      STATUS      current
      DESCRIPTION
            "Secondary Management flow – Transmitter delay
             component of ARQ Retry Timeout IE of REG-REQ/RSP
             defined in 7.7.8.9.17.3. Encoded from 0 to 655350
             microseconds in 10-microsecond blocks."
      SYNTAX      Integer32 (0..65535)

wranIfRegCapability2ndMgmtArqRetryRxDelay ::= TEXTUAL-CONVENTION
      STATUS      current
      DESCRIPTION
            "Secondary Management flow – Receiver delay
             component of ARQ Retry Timeout IE of REG-REQ/RSP
             defined in 7.7.8.9.17.3. Encoded from 0 to 655350
             microseconds in 10-microsecond blocks."
      SYNTAX      Integer32 (0..65535)

wranIfRegCapability2ndMgmtArqBlockLifetime
                                          ::= TEXTUAL-CONVENTION
      STATUS      current
      DESCRIPTION
            "Secondary Management flow – ARQ Block Lifetime IE of
             REG-REQ/RSP defined in 7.7.8.9.17.4. =0 indicates
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                Infinite lifetime. =1..65535 # of 10-microsecond
                blocks."
        SYNTAX      Integer32 (0..65535)

    wranIfRegCapability2ndMgmtArqSyncLossTimeout
                                                ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "Secondary Management flow – ARQ Sync Loss Timeout IE
               of REG-REQ/RSP defined in 7.7.8.9.17.5. =0 indicates
               Infinite timeout. =1..65535 # of 10-microsecond
               blocks."
        SYNTAX      Integer32 (0..65535)

    wranIfRegCapability2ndMgmtArqDeliverInOrder
                                                ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "Secondary Management flow – ARQ Deliver in Order IE
               of REG-REQ/RSP defined in 7.7.8.9.17.6."
        SYNTAX      INTEGER { notInOrder(0), orderPreserved(1) }

    wranIfRegCapability2ndMgmtArqRxPurgeTimeout
                                                ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "Secondary Management flow – ARQ Rx Purge Timeout IE
               of REG-REQ/RSP defined in 7.7.8.9.17.7. =0 indicates
               Infinite timeout. =1..65535 # of 10-microsecond
               blocks."
        SYNTAX      Integer32 (0..65535)

    wranIfRegCapability2ndMgmtArqBlockSize ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "Secondary Management flow – ARQ Block Size IE
               of REG-REQ/RSP defined in 7.7.8.9.17.8"
        SYNTAX      Integer32 (1..2040)

    wranIfRegCapabilityDsxFlowControl ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "DSx Flow Control IE of REG-REQ/RSP defined in
               7.7.7.3.4.4. =0, no limit. 1..255 indicates #
               maximum concurrent transactions."
        SYNTAX      INTEGER (0..255)

    wranIfRegCapabilityMcaFlowControl ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "MCA Flow Control IE of REG-REQ/RSP defined in
               7.7.7.3.4.5. =0, no limit. 1..255 indicates #
               maximum concurrent transactions."
        SYNTAX      INTEGER (0..255)

    wranIfRegCapabilityMaxNumMcastGroups ::= TEXTUAL-CONVENTION
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        STATUS      current
        DESCRIPTION
              "Maximum # of Multicast Groups IE of REG-REQ/RSP
               defined in 7.7.7.3.4.5. =0, no limit. 1..255
               indicates # maximum concurrent transactions."
        SYNTAX      INTEGER (0..255)

  wranIfRegCapabilitySensModeSupportArray ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "Value of the 'Sensing Mode Support Array' of the
               Measurement Support IE in REG-REQ/RSP in
               7.7.7.3.4.7. If the value of this is set to 'No
               Sensing', then wranIfBsCpeMeasSupportReqTable and
               wranIfBsCpeMeasSupportRspTable will not be stored
               for the CPE. Bit4 through Bit7 are reserved and set
               to 0. A mode is supported when the corresponding bit
               is set to 1 and disabled when set to 0."
        SYNTAX      BITS { noSensing(0), mode0(1), mode1(2),
                           mode2(3), res1(4), res2(5), res3(6),
                           res4(7) }

  wranIfRegCapabilityAntennaModelSize ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "Length of wranIfRegCapabilityAntennaModel, in octets
               (see Manufacturer Specific Antenna Model IE of REG-
               REQ in 7.7.7.3.4.8)."
        SYNTAX      Integer32 (1..65535)

  wranIfRegCapabilityAntennaModel     ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "Manufacturer Specific Antenna Model IE of REG-
               REQ in 7.7.7.3.4.8."
        SYNTAX
           OCTET STRING (SIZE(wranIfRegCapabilityAntennaModelSize))

  wranIfRegCapabilityCpeResidualDelay ::= TEXTUAL-CONVENTION
        STATUS      current
        UNITS       "nanoseconds"
        DESCRIPTION
              "CPE Residual Delay IE of REG-REQ in 7.7.7.3.4.10."
        SYNTAX      Integer32 (-16777215..16777216)

  wranIfRegCapability2ndMgmtIpAllocMethod   ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "Method for allocating IP Address on Secondary
               Management Connection IE of REG-REQ in
               7.7.7.3.4.11. A method is selected when the bit in
               corresponding position is set to 1 and is disabled
               when the bit is set to 0. Bit4-Bit7 Reserved and set
               to 0."
        SYNTAX      BITS { DHCPv4(0), MIPv4(1), DHCPv6(2),
                           v6Stateless(3), res1(4), res2(5),
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                                res3(6), res4(7) }

      wranIfRegCapabilityCpeOperationalCapability
                                                ::= TEXTUAL-CONVENTION
            STATUS      current
            DESCRIPTION
                  "CPE Operation Capability IE of REG-REQ in
                   7.7.7.3.4.13."
            SYNTAX      INTEGER { fixed(0), portable(1) }

      wranIfRegCapabilityCpeRegistrationTimer   ::= TEXTUAL-CONVENTION
            STATUS      current
            DESCRIPTION
                  "CPE Registration Timer IE of REG-REQ/RSP in
                   7.7.7.3.5. This value is used to set T30 for the
                   CPE. =0x0000 is reserved. =0x0001..0xFFFF represents
                   time in units of 160 ms blocks. "
            SYNTAX      Integer32 (1..65535)

      wranIfRegCapabilityPermanentStationId     ::= TEXTUAL-CONVENTION
            STATUS      current
            DESCRIPTION
                  "Permanent station ID assigned to CPE, when CPE is
                   entering the network under the CPE Privacy method
                   (see 8.7). The format of this IE is defined in
                   7.7.7.3.4.12."
            SYNTAX      Integer32 (1..512)

-- wranIfBsCpeMeasSupportCmn: This MIB object is a group containing
-- objects that textual conventions used in to
-- wranIfBsCpeMeasSupportReqEntry, wranIfBsCpeMeasSupportRspEntry, and
-- wranIfBsCpeMeasSupportDefEntry.

      wranIfBsCpeMeasSupportCmn     OBJECT IDENTIFIER
                                ::= { wranIfBsCm 18 }
      wranIfMeasSupportIndex        OBJECT IDENTIFIER
                                ::= { wranIfBsCpeMeasSupportCmn 1 }
      wranIfMeasSupportMacAddress   OBJECT IDENTIFIER
                                ::= { wranIfBsCpeMeasSupportCmn 2 }
      wranIfMeasSupportSignalType   OBJECT IDENTIFIER
                                ::= { wranIfBsCpeMeasSupportCmn 3 }
      wranIfMeasSupportThreshold  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeMeasSupportCmn 4 }
      wranIfMeasSupportPd         OBJECT IDENTIFIER
                                ::= { wranIfBsCpeMeasSupportCmn 5 }
      wranIfMeasSupportMpfa       OBJECT IDENTIFIER
                                ::= { wranIfBsCpeMeasSupportCmn 6 }
      wranIfMeasSupportRecNumSensPeriods  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeMeasSupportCmn 7 }
      wranIfMeasSupportRecSensPeriodDuration  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeMeasSupportCmn 8 }
      wranIfMeasSupportRecSensPeriodInterval  OBJECT IDENTIFIER
                                ::= { wranIfBsCpeMeasSupportCmn 9 }

      wranIfMeasSupportIndex  ::= TEXTUAL-CONVENTION
            STATUS      current
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        DESCRIPTION
              "Index of entry defined by
               wranIfBsCpeMeasSupportReqEntry or
               wranifBsCpeMeasSupportRspEntry."
        SYNTAX      Integer32 (1.. 16384)

  wranIfMeasSupportMacAddress   ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "MAC address of CPE. This corresponds to an entry in
               wranIfBsCpeRegCapabilityReqTable for a registered
               CPE."
        SYNTAX      MacAddress

  wranIfMeasSupportSignalType   ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "Signal type to which measurement configuration this
               entry pertains (see Table 237)."
        SYNTAX      INTEGER { undetermined(0), dot22Wran(1),
                              atsc(2), dvbt(3), isdbt(4), ntsc(5),
                              pal(6), secam(7), wimic(8),
                              dot22dot1SyncBurst(9),
                              dot22dot1Msf1(10), dot22dot1Msf2(11),
                              dot22dot1Msf3(12) }

  wranIfMeasSupportThreshold    ::= TEXTUAL-CONVENTION
        STATUS      current
        UNITS       “dBm”
        DESCRIPTION
              "Signed # that signifies the sensitivity threshold
               for the signal type. Values indicates a sensitivity
               threshold in dBm on the range from -127.5 to +128
               dBm in 0.5 dB steps."
        SYNTAX      Integer32 (0..511)

  wranIfMeasSupportPd     ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "Probability of detection (PD) for the signal type.
               Ranges from 0 (0x00) to 1 (0xFA) in increments of
               0.004."
        SYNTAX      INTEGER (0..250)

  wranIfMeasSupportMpfa   ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "Maximum Probability of False Alarm for the signal
               type. Probability is specified from 0 (0x00) to
               0.255 (0xFF) in 0.001 increments."
        SYNTAX      INTEGER (0..255)

  wranIfMeasSupportRecNumSensPeriods  ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
              "Recommended # of sensing periods required to sense
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                signal type (see Table 238)."
        SYNTAX      INTEGER (0..127)

wranIfMeasSupportRecSensPeriodDuration    ::= TEXTUAL-CONVENTION
        STATUS      current
        UNITS       “symbols”
        DESCRIPTION
              "Recommended duration of sensing periods in units of
               symbols (see Table 238)."
        SYNTAX      Integer32 (0..1023)

wranIfMeasSupportRecSensPeriodInterval    ::= TEXTUAL-CONVENTION
        STATUS      current
        UNITS       “frames”
        DESCRIPTION
              "Recommended length of sensing period interval, units
               of integer number of frames (see Table 238)."
        SYNTAX      Integer32 (0..2047)

wranIfBsCpeSystemParametersTable    OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsCpeSystemParametersEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This table contains objects that define system
               constants for REG-REQ/RSP, DSx-REQ/RSP, and MCA-RSP
               transactions. It only has one entry, as defined by
               wranIfBsCpeSystemParametersEntry."
        ::= { wranIfBsCm 19 }

wranIfBsCpeSystemParametersEntry    OBJECT-TYPE
        SYNTAX      wranIfBsCpeSystemParametersEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object defines an entry in
               wranIfBsCpeSystemParametersTable."
        INDEX { wranIfBsCpeSystemParametersIndex }
        ::= { wranIfBsCpeSystemParametersTable 1 }

wranIfBsCpeSystemParametersEntry    ::= SEQUENCE {
        wranIfBsCpeSystemParametersIndex    INTEGER,
        wranIfBsDsxReqRetries               INTEGER,
        wranIfBsDsxRspRetries               INTEGER,
        wranIfBsT6                          INTEGER,
        wranIfBsT7                          INTEGER,
        wranIfBsT8                          Integer32,
        wranIfBsT9                          Integer32,
        wranIfBsT10                         INTEGER,
        wranIfBsT13                         INTEGER,
        wranIfBsT14                         INTEGER,
        wranIfBsT15                         INTEGER,
        wranIfBsT16                         Integer32,
        wranIfBsT18                         Integer32,
        wranIfBsT22                         INTEGER,
        wranIfBsT26                         INTEGER,
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
      wranIfBsT27Idle                    Integer32,
      wranIfBsT27Active                  Integer32,
      wranIfBsT28                        Integer32 }

wranIfBsCpeSystemParametersIndex    OBJECT-TYPE
      SYNTAX      INTEGER (1..1)
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "Index of entry in this table."
      ::= { wranIfBsCpeSystemParametersEntry 1 }

wranIfBsDsxReqRetries   OBJECT-TYPE
      SYNTAX      INTEGER (3..5)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Maximum number of timeout retries for DSx-REQ
             messages."
      ::= { wranIfBsCpeSystemParametersEntry 2 }

wranIfBsDsxRspRetries   OBJECT-TYPE
      SYNTAX      INTEGER (3..5)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Maximum number of timeout retries for DSx-RSP
             messages."
      ::= { wranIfBsCpeSystemParametersEntry 3 }

wranIfBsT6  OBJECT-TYPE
      SYNTAX      INTEGER (1..3)
      UNITS       “seconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Timeout for receiving REG-RSP."
      ::= { wranIfBsCpeSystemParametersEntry 4 }

wranIfBsT7  OBJECT-TYPE
      SYNTAX      INTEGER (1..250)
      UNITS       “seconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Timeout for receiving DSx-RSP, representing a range
             from 4 ms to 1 s in 4 ms increments."
      ::= { wranIfBsCpeSystemParametersEntry 5 }

wranIfBsT8  OBJECT-TYPE
      SYNTAX      Integer32 (1..300)
      UNITS       “milliseconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Timeout for receiving DSA-ACK/DSC-ACK, representing
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                a range from 1 ms to 300 ms in 1 ms increments."
        ::= { wranIfBsCpeSystemParametersEntry 6 }

    wranIfBsT9  OBJECT-TYPE
          SYNTAX      Integer32 (300..1000)
          UNITS       “milliseconds”
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Timeout between BS’s transmitting RNG-CMD (success)
                 to a CPE and receiving CBC-REQ from that same CPE.”
          ::= { wranIfBsCpeSystemParametersEntry 7 }

    wranIfBsT10 OBJECT-TYPE
          SYNTAX      INTEGER (1..3)
          UNITS       “seconds”
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Wait for Transaction End timeout.”
          ::= { wranIfBsCpeSystemParametersEntry 8 }

    wranIfBsT13 OBJECT-TYPE
          SYNTAX      INTEGER (1..3)
          UNITS       “seconds”
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Time allowed for CPE, following receipt of a REG-RSP
                 to send a TFTP-CPLT message to the BS."
          ::= { wranIfBsCpeSystemParametersEntry 9 }

    wranIfBsT14 OBJECT-TYPE
          SYNTAX      INTEGER (10..200)
          UNITS       “milliseconds”
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Wait for DSx-RSP timeout."
          ::= { wranIfBsCpeSystemParametersEntry 10 }

    wranIfBsT15 OBJECT-TYPE
          SYNTAX      INTEGER (20..200)
          UNITS       “milliseconds”
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Wait for MCA-RSP."
          ::= { wranIfBsCpeSystemParametersEntry 11 }

    wranIfBsT16 OBJECT-TYPE
          SYNTAX      Integer32 (10..2000)
          UNITS       “milliseconds”
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
            "Wait for bandwidth request grant."
      ::= { wranIfBsCpeSystemParametersEntry 12 }

wranIfBsT18 OBJECT-TYPE
      SYNTAX      Integer32 (10..2000)
      UNITS       “milliseconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Wait for CBC-REQ timeout."
      ::= { wranIfBsCpeSystemParametersEntry 13 }

wranIfBsT22 OBJECT-TYPE
      SYNTAX      INTEGER (1..250)
      UNITS       “milliseconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Wait for ARQ-Reset."
      ::= { wranIfBsCpeSystemParametersEntry 14 }

wranIfBsT26 OBJECT-TYPE
      SYNTAX      INTEGER (1..250)
      UNITS       “milliseconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Wait for TFT-RSP."
      ::= { wranIfBsCpeSystemParametersEntry 15 }

wranIfBsT27Idle   OBJECT-TYPE
      SYNTAX      Integer32 (200..500)
      UNITS       “milliseconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Maximum time between unicast grants to CPE when BS
             believe CPE transmission quality is good enough."
      ::= { wranIfBsCpeSystemParametersEntry 16 }

wranIfBsT27Active OBJECT-TYPE
      SYNTAX      Integer32 (200..500)
      UNITS       “milliseconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Maximum time between unicast grants to CPE when BS
             believe CPE transmission quality is not good
             enough."
      ::= { wranIfBsCpeSystemParametersEntry 17 }

wranIfBsT28 OBJECT-TYPE
      SYNTAX      Integer32 (60..300)
      UNITS       “seconds”
      MAX-ACCESS  read-only
      STATUS      current
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        DESCRIPTION
              "Time allowed for BS to complete the transmission of
               the backup/candidate channel list to its CPEs after
               initial registration by a new CPE, including the
               database service query."
        ::= { wranIfBsCpeSystemParametersEntry 18 }

  wranIfBsCpeRegCapabilityDefTable    OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsCpeRegCapabilityDefEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object defines a table containing default
               values of REG-REQ/RSP IEs. This table can be used by
               the BS to judge/verify a CPE's REG-REQ and used to
               construct the REG-RSP message. There is one entry in
               this table, defined by
               wranIfBsCpeRegCapabilityDefEntry."
        ::= { wranIfBsCm 20 }

  wranIfBsCpeRegCapabilityDefEntry    OBJECT-TYPE
        SYNTAX      wranIfBsCpeRegCapabilityDefEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object defines an entry in
               wranIfBsCpeRegCapabilityDefTable. The objects that
               make up this entry are defined in
               wranIfBsCpeRegCapabilityCmn (13.1.2.2.17)."
        INDEX { wranIfBsCpeRegCapabilityDefIndex }
        ::= { wranIfBsCpeRegCapabilityDefTable 1 }

  wranIfBsCpeRegCapabilityDefEntry    ::= SEQUENCE {
        wranIfBsCpeRegCapabilityDefIndex
              wranIfRegCapbilityIndex,
        wranIfBsCpeRegCapabilityDefCsConfig
              wranIfRegCapabilityCsConfig,
        wranIfBsCpeRegCapabilityDefIpVersion
              wranIfRegCapabilityIpVersion,
        wranIfBsCpeRegCapabilityDefIpRochSupport
              wranIfRegCapabilityIpRochSupport,
        wranIfBsCpeRegCapabilityDefArqSupport
              wranIfRegCapabilityArqSupport,
        wranIfBsCpeRegCapabilityDef2ndMgmtArqWindowSize
              wranIfRegCapability2ndMgmtArqWindowSize,
        wranIfBsCpeRegCapabilityDef2ndMgmtArqRetryTxDelay
              wranIfRegCapability2ndMgmtArqRetryTxDelay,
        wranIfBsCpeRegCapabilityDef2ndMgmtArqRetryRxDelay
              wranIfRegCapability2ndMgmtArqRetryRxDelay,
        wranIfBsCpeRegCapabilityDef2ndMgmtArqBlockLifetime
              wranIfRegCapability2ndMgmtArqBlockLifetime,
        wranIfBsCpeRegCapabilityDef2ndMgmtArqSyncLossTimeout
              wranIfRegCapability2ndMgmtArqSyncLossTimeout,
        wranIfBsCpeRegCapabilityDef2ndMgmtArqDeliverInOrder
              wranIfRegCapability2ndMgmtArqDeliverInOrder,
        wranIfBsCpeRegCapabilityDef2ndMgmtArqRxPurgeTimeout
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
            wranIfRegCapability2ndMgmtArqRxPurgeTimeout,
      wranIfBsCpeRegCapabilityDef2ndMgmtArqBlockSize
            wranIfRegCapability2ndMgmtArqBlockSize,
      wranIfBsCpeRegCapabilityDefDsxFlowControl
            wranIfRegCapabilityDsxFlowControl,
      wranIfBsCpeRegCapabilityDefMcaFlowControl
            wranIfRegCapabilityMcaFlowControl,
      wranIfBsCpeRegCapabilityDefMaxNumMcastGroups
            wranIfRegCapabilityMaxNumMcastGroups,
      wranIfBsCpeRegCapabilityDefSensModeSupportArray
            wranIfRegCapabilitySensModeSupportArray,
      wranIfBsCpeRegCapabilityDef2ndMgmtIpAllocMethod
            wranIfRegCapability2ndMgmtIpAllocMethod,
      wranIfBsCpeRegCapabilityDefCpeOperationalCapability
            wranIfRegCapabilityCpeOperationalCapability,
      wranIfBsCpeRegCapabilityDefCpeRegistrationTimer
            wranIfRegCapabilityCpeRegistrationTimer }

wranIfBsCpeRegCapabilityDefIndex    OBJECT-TYPE
      SYNTAX      wranIfRegCapbilityIndex
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "Defined by wranIfRegCapbilityIndex."
      ::= { wranIfBsCpeRegCapabilityDefEntry 1 }

wranIfBsCpeRegCapabilityDefCsConfig OBJECT-TYPE
      SYNTAX      wranIfRegCapabilityCsConfig
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by wranIfRegCapabilityCsConfig."
      ::= { wranIfBsCpeRegCapabilityDefEntry 2 }

wranIfBsCpeRegCapabilityDefIpVersion      OBJECT-TYPE
      SYNTAX      wranIfRegCapabilityIpVersion
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by wranIfRegCapabilityIpVersion."
      ::= { wranIfBsCpeRegCapabilityDefEntry 3 }

wranIfBsCpeRegCapabilityDefIpRochSupport  OBJECT-TYPE
      SYNTAX      wranIfRegCapabilityIpRochSupport
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by wranIfRegCapabilityIpRochSupport."
      ::= { wranIfBsCpeRegCapabilityDefEntry 4 }

wranIfBsCpeRegCapabilityDefArqSupport     OBJECT-TYPE
      SYNTAX      wranIfRegCapabilityArqSupport
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by wranIfRegCapabilityArqSupport."
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        ::= { wranIfBsCpeRegCapabilityDefEntry 5 }

    wranIfBsCpeRegCapabilityDef2ndMgmtArqWindowSize OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqWindowSize
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapability2ndMgmtArqWindowSize."
        ::= { wranIfBsCpeRegCapabilityDefEntry 6 }

    wranIfBsCpeRegCapabilityDef2ndMgmtArqRetryTxDelay     OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqRetryTxDelay
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqRetryTxDelay."
        ::= { wranIfBsCpeRegCapabilityDefEntry 7 }

    wranIfBsCpeRegCapabilityDef2ndMgmtArqRetryRxDelay     OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqRetryRxDelay
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqRetryRxDelay."
        ::= { wranIfBsCpeRegCapabilityDefEntry 8 }

    wranIfBsCpeRegCapabilityDef2ndMgmtArqBlockLifetime    OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqBlockLifetime
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqBlockLifetime."
        ::= { wranIfBsCpeRegCapabilityDefEntry 9 }

    wranIfBsCpeRegCapabilityDef2ndMgmtArqSyncLossTimeout  OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqSyncLossTimeout
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqSyncLossTimeout."
        ::= { wranIfBsCpeRegCapabilityDefEntry 10 }

    wranIfBsCpeRegCapabilityDef2ndMgmtArqDeliverInOrder   OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqDeliverInOrder
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqDeliverInOrder."
        ::= { wranIfBsCpeRegCapabilityDefEntry 11 }

    wranIfBsCpeRegCapabilityDef2ndMgmtArqRxPurgeTimeout   OBJECT-TYPE
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        SYNTAX      wranIfRegCapability2ndMgmtArqRxPurgeTimeout
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by
               wranIfRegCapability2ndMgmtArqRxPurgeTimeout."
        ::= { wranIfBsCpeRegCapabilityDefEntry 12 }

    wranIfBsCpeRegCapabilityDef2ndMgmtArqBlockSize  OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtArqBlockSize
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapability2ndMgmtArqBlockSize."
        ::= { wranIfBsCpeRegCapabilityDefEntry 13 }

    wranIfBsCpeRegCapabilityDefDsxFlowControl OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityDsxFlowControl
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityDsxFlowControl."
        ::= { wranIfBsCpeRegCapabilityDefEntry 14 }

    wranIfBsCpeRegCapabilityDefMcaFlowControl OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityMcaFlowControl
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityMcaFlowControl."
        ::= { wranIfBsCpeRegCapabilityDefEntry 15 }

    wranIfBsCpeRegCapabilityDefMaxNumMcastGroups    OBJECT-TYPE
        SYNTAX      wranIfRegCapabilityMaxNumMcastGroups
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilityMaxNumMcastGroups."
        ::= { wranIfBsCpeRegCapabilityDefEntry 16 }

    wranIfBsCpeRegCapabilityDefSensModeSupportArray OBJECT-TYPE
        SYNTAX      wranIfRegCapabilitySensModeSupportArray
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapabilitySensModeSupportArray."
        ::= { wranIfBsCpeRegCapabilityDefEntry 17 }

    wranIfBsCpeRegCapabilityDef2ndMgmtIpAllocMethod OBJECT-TYPE
        SYNTAX      wranIfRegCapability2ndMgmtIpAllocMethod
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfRegCapability2ndMgmtIpAllocMethod."
        ::= { wranIfBsCpeRegCapabilityDefEntry 18 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranIfBsCpeRegCapabilityDefCpeOperationalCapability   OBJECT-TYPE
      SYNTAX      wranIfRegCapabilityCpeOperationalCapability
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by
             wranIfRegCapabilityCpeOperationalCapability."
      ::= { wranIfBsCpeRegCapabilityDefEntry 19 }

wranIfBsCpeRegCapabilityDefCpeRegistrationTimer OBJECT-TYPE
      SYNTAX      wranIfRegCapabilityCpeRegistrationTimer
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by
             wranIfRegCapabilityCpeRegistrationTimer."
      ::= { wranIfBsCpeRegCapabilityDefEntry 20 }

wranIfBsCpeBasicCapabilityDefTable  OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfBsCpeBasicCapabilityDefEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object defines a table containing default
             values of CBC-REQ/RSP IEs. This table can be used by
             the BS to judge/verify a CPE's CBC-REQ and used to
             construct the CBC-RSP message. There is one entry in
             this table defined by
             wranIfBSCpeBasicCapabilityDefEntry."
      ::= { wranIfBsCm 21 }

wranIfBsCpeBasicCapabilityDefEntry  OBJECT-TYPE
      SYNTAX      wranIfBsCpeBasicCapabilityDefEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object defines an entry in
             wranIfBsCpeBasicCapabilityDefTable The objects that
             make up this table are defined in
             wranIfBsCpeBasicCapabilityCmn (13.1.2.2.16)."
      INDEX { wranIfBsCpeBasicCapabilityDefIndex }
      ::= { wranIfBsCpeBasicCapabilityDefTable 1 }

wranIfBsCpeBasicCapabilityDefEntry  ::= SEQUENCE {
      wranIfBsCpeBasicCapabilityDefIndex
            wranIfBasicCapbilityIndex,
      wranIfBsCpeBasicCapabilityDefMacPduTxAndConstruction
            wranIfBasicCapbilityMacPduTxAndConstruction,
      wranIfBsCpeBasicCapabilityDefCpeDemodulator
            wranIfBasicCapabilityCpeDemodulator,
      wranIfBsCpeBasicCapabilityDefCpeModulator
            wranIfBasicCapabilityCpeModulator,
      wranIfBsCpeBasicCapabilityDefScmVersionSupport
            wranIfBasicCapabilityCpeScmVersionSupport,
      wranIfBsCpeBasicCapabilityDefPnWindowSize
            wranIfBasicCapabilityCpePnWindowSize,
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
      wranIfBsCpeBasicCapabilityDefScmFlowControl
            wranIfBasicCapabilityScmFlowControl }

wranIfBsCpeBasicCapabilityDefIndex  OBJECT-TYPE
      SYNTAX      wranIfBasicCapbilityIndex
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "Defined by wranIfBasicCapabilityIndex."
      ::= { wranIfBsCpeBasicCapabilityDefEntry 1 }

wranIfBsCpeBasicCapabilityDefMacPduTxAndConstruction  OBJECT-TYPE
      SYNTAX      wranIfBasicCapbilityMacPduTxAndConstruction
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by
             wranIfBasicCapbilityMacPduTxAndConstruction."
      ::= { wranIfBsCpeBasicCapabilityDefEntry 2 }

wranIfBsCpeBasicCapabilityDefCpeDemodulator     OBJECT-TYPE
      SYNTAX      wranIfBasicCapabilityCpeDemodulator
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by wranIfBasicCapabilityCpeDemodulator."
      ::= { wranIfBsCpeBasicCapabilityDefEntry 3 }

wranIfBsCpeBasicCapabilityDefCpeModulator OBJECT-TYPE
      SYNTAX      wranIfBasicCapabilityCpeModulator
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by wranIfBasicCapabilityCpeModulator."
      ::= { wranIfBsCpeBasicCapabilityDefEntry 4 }

wranIfBsCpeBasicCapabilityDefScmVersionSupport  OBJECT-TYPE
      SYNTAX      wranIfBasicCapabilityCpeScmVersionSupport
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by
             wranIfBasicCapabilityCpeScmVersionSupport."
      ::= { wranIfBsCpeBasicCapabilityDefEntry 5 }

wranIfBsCpeBasicCapabilityDefPnWindowSize OBJECT-TYPE
      SYNTAX      wranIfBasicCapabilityCpePnWindowSize
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Defined by wranIfBasicCapabilityCpePnWindowSize."
      ::= { wranIfBsCpeBasicCapabilityDefEntry 6 }

wranIfBsCpeBasicCapabilityDefScmFlowControl     OBJECT-TYPE
      SYNTAX      wranIfBasicCapabilityScmFlowControl
      MAX-ACCESS  read-only
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        STATUS      current
        DESCRIPTION
              "Defined by wranIfBasicCapabilityScmFlowControl."
        ::= { wranIfBsCpeBasicCapabilityDefEntry 7 }

  wranIfBsCpeMeasSupportDefTable      OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsCpeMeasSupportDefEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "A compound object representing the default
               configuration of the Measurement Support IE of REG-
               REQ/RSP. This table can be used by the BS to
               judge/verify the Measurement Support IE in CPE's
               REG-REQ and used to construct the Measurement
               Support IE sent by the BS in the REG-RSP message.
               There is one entry for each signal type defined by
               wranIfBsCpeMeasSupportDefEntry. This table is only
               valid if the value for wranIfSensModeSupportArray is
               anything other than 'No Sensing'."
        ::= { wranIfBsCm 22 }

  wranIfBsCpeMeasSupportDefEntry      OBJECT-TYPE
        SYNTAX      wranIfBsCpeMeasSupportDefEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "A compound object representing the entries
               of wranIfBsCpeMeasSupportDefTable. Each part
               entry is defined in wranIfBsCpeMeasSupportCmn
               (13.1.2.2.18)."
        INDEX { wranIfBsCpeMeasSupportDefIndex }
        ::= { wranIfBsCpeMeasSupportDefTable 1 }

  wranIfBsCpeMeasSupportReqEntry      ::= SEQUENCE {
        wranIfBsCpeMeasSupportDefIndex
              wranIfMeasSupportIndex,
        wranIfBsCpeMeasSupportDefSignalType
              wranIfMeasSupportSignalType,
        wranIfBsCpeMeasSupportDefThreshold
              wranIfMeasSupportThreshold,
        wranIfBsCpeMeasSupportDefPd
              wranIfMeasSupportPd,
        wranIfBsCpeMeasSupportDefMpfa
              wranIfMeasSupportMpfa,
        wranIfBsCpeMeasSupportDefRecNumSensPeriods
              wranIfMeasSupportRecNumSensPeriods,
        wranIfBsCpeMeasSupportDefRecSensPeriodDuration
              wranIfMeasSupportRecSensPeriodDuration,
        wranIfBsCpeMeasSupportDefRecSensPeriodInterval
              wranIfMeasSupportRecSensPeriodInterval }

  wranIfBsCpeMeasSupportDefIndex      OBJECT-TYPE
        SYNTAX      wranIfMeasSupportIndex
        MAX-ACCESS  not-accessible
        STATUS      current
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        DESCRIPTION
              "Defined by wranIfMeasSupportIndex."
        ::= { wranIfBsCpeMeasSupportDefEntry 1 }

    wranIfBsCpeMeasSupportDefSignalType OBJECT-TYPE
        SYNTAX      wranIfMeasSupportSignalType
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportSignalType."
        ::= { wranIfBsCpeMeasSupportDefEntry 2 }

    wranIfBsCpeMeasSupportDefThreshold  OBJECT-TYPE
        SYNTAX      wranIfMeasSupportThreshold
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportThreshold."
        ::= { wranIfBsCpeMeasSupportDefEntry 3 }

    wranIfBsCpeMeasSupportDefPd   OBJECT-TYPE
        SYNTAX      wranIfMeasSupportPd
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportPd."
        ::= { wranIfBsCpeMeasSupportDefEntry 4 }

    wranIfBsCpeMeasSupportDefMpfa OBJECT-TYPE
        SYNTAX      wranIfMeasSupportMpfa
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportMpfa."
        ::= { wranIfBsCpeMeasSupportDefEntry 5 }

    wranIfBsCpeMeasSupportDefRecNumSensPeriods      OBJECT-TYPE
        SYNTAX      wranIfMeasSupportRecNumSensPeriods
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportRecNumSensPeriods."
        ::= { wranIfBsCpeMeasSupportDefEntry 6 }

    wranIfBsCpeMeasSupportDefRecSensPeriodDuration  OBJECT-TYPE
        SYNTAX      wranIfMeasSupportRecSensPeriodDuration
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Defined by wranIfMeasSupportRecSensPeriodDuration."
        ::= { wranIfBsCpeMeasSupportDefEntry 7 }

    wranIfBsCpeMeasSupportDefRecSensPeriodInterval  OBJECT-TYPE
        SYNTAX      wranIfMeasSupportRecSensPeriodInterval
        MAX-ACCESS  read-only
        STATUS      current
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
            DESCRIPTION
                  "Defined by wranIfMeasSupportRecSensPeriodInterval."
            ::= { wranIfBsCpeMeasSupportDefEntry 8 }

-- wranIfBsPhy: This MIB object contains managed objects related to PHY
-- configuration. All object described are related to the OFDMA PHY
-- that is supported.

      wranIfBsPhy                          OBJECT IDENTIFIER
                                                ::= { wranIfBsCm 23 }
      wranIfBsOfdmaPhyUsChannelTable       OBJECT IDENTIFIER
                                                ::= { wranIfBsPhy 1 }
      wranIfBsOfdmaPhyDsChannelTable       OBJECT IDENTIFIER
                                                ::= { wranIfBsPhy 2 }
      wranIfBsOfdmaUcdBurstProfileTable    OBJECT IDENTIFIER
                                                ::= { wranIfBsPhy 3 }
      wranIfBsOfdmaDcdBurstProfileTable    OBJECT IDENTIFIER
                                                ::= { wranIfBsPhy 4 }
      wranIfBsOfdmaDsRegionTable           OBJECT IDENTIFIER
                                                ::= { wranIfBsPhy 5 }
      wranIfBsOfdamUsRegionTable           OBJECT IDENTIFER
                                                ::= { wranIfBsPhy 6 }

      wranIfBsOfdmaPhyUsChannelTable       OBJECT-TYPE
            SYNTAX      SEQUENCE OF wranIfBsOfdmaPhyUsChannelEntry
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                  "This object provides a table to describe attributes
                   of upstream channels. It is a compound object that
                   is made up of multiple entries (one for each CPE),
                   described by wranIfBsOfdmaPhyUsChannelTableEntry."
            ::= { wranIfBsPhy 1 }

      wranIfBsOfdmaPhyUsChannelEntry       OBJECT-TYPE
            SYNTAX      wranIfBsOfdmaPhyUsChannelEntry
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                  "This object is a compound object that represents an
                   entry a CPE's upstream channel configuration."
            INDEX { wranIfBsOfdmaPhyUsChannelIndex }
            ::= { wranIfBsOfdmaPhyUsChannelTable 1 }

      wranIfBsOfdmaPhyUsChannelEntry       ::= SEQUENCE {
            wranIfBsOfdmaPhyUsChannelIndex                  Integer32,
            wranIfBsOfdmaPhyUsSid                           Integer32,
            wranIfBsOfdmaPhyUsMacAddress                    MacAddress,
            wranIfBsOfdmaCtBasedResvTimeout                 INTEGER,
            wranIfBsOfdmaUsCenterFrequency                  Integer32,
            wranIfBsOfdmasUsRadioResource                   INTEGER,
            wranIfBsOfdmaUsUcsConfigChangeCount             INTEGER,
            wranIfBsOfdmaUsUcsNotificationCodes             INTEGER,
            wranIfBsOfdmaUsInitRngCodes                     INTEGER,
            wranIfBsOfdmaUsPeriodicRngCodes                 INTEGER,
            wranIfBsOfdmaUsBWReqCodes                       INTEGER,
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        wranIfBsOfdmaUsPeriodicRngBackoffStart          INTEGER,
        wranIfBsOfdmaUsPeriodicRngBackoffEnd            INTEGER,
        wranIfBsOfdmaUsStartofCodes                     INTEGER,
        wranIfBsOfdmaUsNormalizedCnrOverride      OCTET STRING,
        wranIfBsOfdamUsInitialRangingInterval           INTEGER,
        wranIfBsOfdmaUsUcsNotificationBackoffStart      INTEGER,
        wranIfBsOfdmaUsUcsNotificationBackoffEnd        INTEGER,
        wranIfBsOfdmaUsInitialRngBackoffStart           INTEGER,
        wranIfBsOfdmaUsInitialRngBackoffEnd             INTEGER,
        wranIfBsOfdmaUsBwRequestBackoffStart            INTEGER,
        wranIfBsOfdmaUsBwRequestBackoffEnd              INTEGER,
        wranIfBsOfdmaUsUcdInterval                      INTEGER,
        wranIfBsOfdmaUsUcdTransition                    INTEGER,
        wranIfBsOfdmaUsClkCmpInterval                   INTEGER,
        wranIfBsOfdmaUsT57                              INTEGER,
        wranIfBsOfdmaUsT58                              INTEGER,
        wranIfBsOfdmaUsCdmaRngRetries                   INTEGER,
        wranIfBsOfdmaUsInvRngReq                        INTEGER,
        wranIfBsOfdmaUsMapProcTime                      INTEGER,
        wranIfBsOfdmaUsT3                               INTEGER,
        wranIfBsOfdmaUsT4                               Integer32,
        wranIfBsOfdmaUsT5                               INTEGER,
        wranIfBsOfdmaUsT12                              INTEGER }

wranIfBsOfdmaPhyUsChannelIndex     OBJECT-TYPE
      SYNTAX      Integer32 (1.. 131071)
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "Index of entry in this table, defaults to 1."
      ::= { wranIfBsOfdmaPhyUsChannelEntry 1 }

wranIfBsOfdmaPhyUsSid  OBJECT-TYPE
      SYNTAX      Integer32 (0.. 512)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "A 9-bit Station ID that identifies the station whose
             US is defined in this entry."
      ::= { wranIfBsOfdmaPhyUsChannelEntry 2 }

wranIfBsOfdmaPhyUsMacAddress  OBJECT-TYPE
      SYNTAX      MacAddress
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "MAC Address of CPE whose upstream is defined in this
             table."
      ::= { wranIfBsOfdmaPhyUsChannelEntry 3 }

wranIfBsOfdmaCtBasedResvTimeout     OBJECT-TYPE
      SYNTAX      INTEGER (1..255)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "The number of US-MAPs to receive before contention-
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                based reservation is attempted again for the same
                connection."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 4 }

    wranIfBsOfdmaUsCenterFrequency      OBJECT-TYPE
        SYNTAX      Integer32 (0..6000000)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Upstream center frequency in kHz."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 5 }

    wranIfBsOfdmaUsRadioResource  OBJECT-TYPE
        SYNTAX      INTEGER (0..100)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Indicates the average percentage (ratio) of non-
                 assigned US radio resources to total usable US radio
                 resources (should be the same across all CPEs on the
                 same channel."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 6 }

    wranIfBsOfdmaUsConfigChangeCount    OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Current UCD change count."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 7 }

    wranIfBsOfdmaUsUcsNotificationCodes OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Number of CDMA codes for UCS Notification."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 8 }

    wranIfBsOfdmaUsInitRngCodes   OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Number of CDMA codes for Initial Ranging."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 9 }

    wranIfBsOfdmaUsPeriodicRngCodes     OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Number of CDMA codes for periodic ranging."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 10 }

    wranIfBsOfdmaUsBWReqCodes     OBJECT-TYPE
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Number of CDMA codes for bandwidth requests."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 11 }

wranIfBsOfdmaUsPeriodicRngBackoffStart    OBJECT-TYPE
        SYNTAX      INTEGER (0..15)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Expressed as a power of 2, initial backoff window
               size for Periodic ranging."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 12 }

wranIfBsOfdmaUsPeriodicRngBackoffEnd      OBJECT-TYPE
        SYNTAX      INTEGER (1..15)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Represented in powers of 2, initial size of backoff
               window used for periodic ranging contention."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 13 }

wranIfBsOfdmaUsStartofCodes   OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Includes first code in block of codes to be used in
               a particular BS, known as S. The total set of codes
               ranges from S to
              (wranIfBsOfdmaUsInitRngCodes+wranIfBsOfdmaUsPeriodicR
              ngCodes+wranIfBsOfdmaUsBWReqCodes+wranIfBsOfdmaUsUcsN
              otificationCodes) mod 256."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 14 }

wranIfBsOfdmaUsNormalizedCnrOverride      OBJECT-TYPE
        SYNTAX      OCTET STRING (SIZE(7))
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This is a list of numbers and follows the
               specification of the Normalized CNR override as
               defined in Table 33 and in 8.10.3.2. The
               number encoded by each nibble represents the
               difference in normalized CNR relative to the
               previous one."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 15 }

wranIfBsOfdamUsInitialRangingInterval     OBJECT-TYPE
        SYNTAX      INTEGER (2..15)
        UNITS       “seconds”
        MAX-ACCESS  read-only
        STATUS      current
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        DESCRIPTION
              "Number of frames between initial ranging interval
               allocation."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 16 }

    wranIfBsOfdmaUsUcsNotificationBackoffStart      OBJECT-TYPE
        SYNTAX      INTEGER (0..15)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Represented in powers of 2, initial backoff
               window size used for UCS notification contention."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 17 }

    wranIfBsOfdmaUsUcsNotificationBackoffEnd  OBJECT-TYPE
        SYNTAX      INTEGER (1..15)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Represented in powers of 2, final backoff
               window size used for UCS notification contention."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 18 }

    wranIfBsOfdmaUsInitialRngBackoffStart      OBJECT-TYPE
        SYNTAX      INTEGER (0..15)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Represented in powers of 2, initial backoff
               window size used for initial ranging contention."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 19 }

    wranIfBsOfdmaUsInitialRngBackoffEnd OBJECT-TYPE
        SYNTAX      INTEGER (1..15)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Represented in powers of 2, final backoff
               window size used for initial ranging contention."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 20 }

    wranIfBsOfdmaUsBwRequestBackoffStart      OBJECT-TYPE
        SYNTAX      INTEGER (0..15)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Represented in powers of 2, initial backoff
               window size used for contention-based BW requests
               contention."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 21 }

    wranIfBsOfdmaUsBwRequestBackoffEnd  OBJECT-TYPE
        SYNTAX      INTEGER (1..15)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
            "Represented in powers of 2, final backoff
             window size used for contention-based BW requests
             contention."
      ::= { wranIfBsOfdmaPhyUsChannelEntry 22 }

wranIfBsOfdmaUsUcdInterval    OBJECT-TYPE
      SYNTAX      INTEGER (1..10)
      UNITS       “seconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Time between transmission of UCD messages."
      ::= { wranIfBsOfdmaPhyUsChannelEntry 23 }

wranIfBsOfdmaUsUcdTransition  OBJECT-TYPE
      SYNTAX      INTEGER (2..5)
      UNITS       “frames”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Time BS shall wait after repeating a UCD message
             with an incremented Configuration Change Count
             before issuing a US-MAP message referring to
             Upstream_Burst_Profiles defined in that UCD
             message."
      ::= { wranIfBsOfdmaPhyUsChannelEntry 24 }

wranIfBsOfdmaUsClkCmpInterval OBJECT-TYPE
      SYNTAX      INTEGER (50)
      UNITS       “milliseconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Time between the clock compare measurements used for
             the generation of CLK-CMP messages."
      ::= { wranIfBsOfdmaPhyUsChannelEntry 25 }

wranIfBsOfdmaUsT57      OBJECT-TYPE
      SYNTAX      Integer32 (10..600)
      UNITS       “milliseconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Lost US-MAP interval, time since last received US-
             MAP message before upstream synchronization is
             considered lost (used on the CPE)."
      ::= { wranIfBsOfdmaPhyUsChannelEntry 26 }

wranIfBsOfdmaUsT58      OBJECT-TYPE
      SYNTAX      Integer32 (10..600)
      UNITS       “milliseconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Number of SCH that can be lost until synchronization
             is considered lost."
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        ::= { wranIfBsOfdmaPhyUsChannelEntry 27 }

    wranOfBsOfdmaUsCdmaRngRetries OBJECT-TYPE
        SYNTAX      INTEGER (1..4)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "# of retries on CDMA RNG-REQs."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 28 }

    wranIfBsOfdmaUsInvRngReq      OBJECT-TYPE
        SYNTAX      INTEGER (16..32)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "# of retries on inviting RNG-REQs."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 29 }

    wranIfBsOfdmaUsMapProcTime    OBJECT-TYPE
        SYNTAX      INTEGER (5)
        UNITS       “symbols”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Time provided between arrival of the last bit of a
               US-MAP at a CPE and the effectiveness of that map."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 30 }

    wranIfBsOfdmaUsT3 OBJECT-TYPE
        SYNTAX      INTEGER (200)
        UNITS       “milliseconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "RNG-CMD reception timeout following the transmission
               of RNG-REQ."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 31 }

    wranIfBsOfdmaUsT4 OBJECT-TYPE
        SYNTAX      Integer32 (1..1800)
        UNITS       “seconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Time to wait for unicast ranging opportunity."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 32 }

    wranIfBsOfdmaUsT5 OBJECT-TYPE
        SYNTAX      INTEGER (2)
        UNITS       “seconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Time to wait for Upstream Channel Change response."
        ::= { wranIfBsOfdmaPhyUsChannelEntry 33 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranIfBsOfdmaUsT12      OBJECT-TYPE
      SYNTAX      INTEGER (1..50)
      UNITS       “seconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Wait for UCD descriptor."
      ::= { wranIfBsOfdmaPhyUsChannelEntry 34 }

wranIfBsOfdmaPhyDsChannelTable      OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfBsOfdmaPhyDsChannelEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object provides a table to describe attributes
             of downstream channels. It is a compound object that
             is made up of multiple entries (one for each CPE),
             described by wranIfBsOfdmaPhyDsChannelTableEntry."
      ::= { wranIfBsPhy 2 }

wranIfBsOfdmaPhyDsChannelEntry      OBJECT-TYPE
      SYNTAX      wranIfBsOfdmaPhyDsChannelEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object is a compound object that represents an
             entry a each downstream channel in each BS."
      INDEX { wranIfBsOfdmaPhyDsChannelIndex }
      ::= { wranIfBsOfdmaPhyDsChannelTable 1 }

wranIfBsOfdmaPhyDsChannelEntry      ::= SEQUENCE {
      wranIfBsOfdmaPhyDsChannelIndex            INTEGER,
      wranIfBsOfdmaDsBsId                       MacAddress,
      wranIfBsOfdmaDsEirp                       INTEGER,
      wranIfBsOfdmaDsChannelNumber              INTEGER,
      wranIfBsOfdmaDsPhyMaxEirp                 INTEGER,
      wranIfBsOfdmaDsCenterFreq                 Integer32,
      wranIfBsOfdmaDsMacVersion                 INTEGER,
      wranIfBsOfdmaDsCyclicPrefix               INTEGER,
      wranIfBsOfdmaDsRadioResource              INTEGER,
      wranIfBsOfdmaDsCellType                   INTEGER,
      wranIfBsOfdmaDsConfigChangeCount          INTEGER,
      wranIfBsOfdmaDsFrameDuration              OCTET STRING,
      wranIfBsOfdmaDsRssiCinrAvgParameter       BITS,
      wranIfBsOfdmaDsThresholdAddBsServiceSet   INTEGER,
      wranIfBsOfdmaDsThresholdDelBsServiceSet   INTEGER,
      wranIfBsOfdmaDsDcdInterval                INTEGER,
      wranIfBsOfdmaDsDcdTransition              INTEGER,
      wranIfBsOfdmaDsT56                        Integer32,
      wranIfBsOfdmaDsT1                         INTEGER,
      wranIfBsOfdmaDsT2                         INTEGER,
      wranIfBsOfdmaDsT20                        INTEGER,
      wranIfBsOfdmaDsT21                        INTEGER,
      wranIfBsOfdmaDsTtg                        INTEGER }

wranIfBsOfdmaPhyDsChannelIndex      OBJECT-TYPE
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        SYNTAX      INTEGER (1.. 255)
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "Index of entry in this table, defaults to 1."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 1 }

  wranIfBsOfdmaDsBsId     OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "BS ID (MAC Address) of the base station."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 2 }

  wranIfBsOfdmaDsEirp     OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        UNITS       "dBm"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "The equivalent isotropic radiated power of the base
               station, which is computed for a simple single-
               antenna transmitter (ranging from -64 dBm to +63.5
               dBm in 0.5 dB steps)."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 3 }

  wranIfBsOfdmaDsChannelNumber  OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Current operating channel."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 4 }

  wranIfBsOfdmaDsPhyMaxEirp     OBJECT-TYPE
        SYNTAX      INTEGER (0..127)
        UNITS       "dBm"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Initial ranging maximum EIRP, at BS in units of 1
               dBm (ranging from -104 dBm to +23 dBm)."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 5 }

  wranIfBsOfdmaDsCenterFreq     OBJECT-TYPE
        SYNTAX      Integer32 (0..10000000)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "DS center frequency in kHz."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 6 }

  wranIfBsOfdmaDsMacVersion     OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        STATUS      current
        DESCRIPTION
              "The MAC version to which the BS is conformant."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 7 }

    wranIfBsOfdmaDsCyclicPrefix   OBJECT-TYPE
        SYNTAX      INTEGER { oneQuarter(0), oneEighth(1),
                    oneSixteenth(2),
                    oneThirtySecond(3) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Ratio of CP time to useful symbol time; possible
               values are 1/4, 1/8, 1/16, and 1/32."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 8 }

    wranIfBsOfdmaDsRadioResource  OBJECT-TYPE
        SYNTAX      INTEGER (0..100)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Average ratio of non-assigned DS radio resources to
               total usable DS radio resources."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 9 }

    wranIfBsOfdmaDsCellType OBJECT-TYPE
        SYNTAX      INTEGER { fixed(0), personalPortable(1) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This object identifies classes of BSs that can be
               used by CPE when selecting the cell with which to
               attempt network entry."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 10 }

    wranIfBsOfdmaDsConfigChangeCount    OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Current BS DCD configuration change count."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 11 }

    wranIfBsOfdmaDsFrameDuration  OBJECT-TYPE
        SYNTAX      INTEGER (0..63)
        UNITS       “symbols”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Duration of DS portion of a frame (from the start of
               frame including preambles)."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 12 }

    wranIfBsOfdmaDsRssiCinrAvgParameter OBJECT-TYPE
        SYNTAX      BITS { avg0(0), avg1(1), avg2(2), avg3(3) }
        UNITS       “seconds”
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Bits 0-3 of default RSSI and CINR averaging
               parameter."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 13 }

    wranIfBsOfdmaDsThresholdAddBsServiceSet   OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        UNITS       “dBm”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Threshold used by CPE to add a neighbor BS to the
               list of available WRAN services (ranging from -104
               dBm to +23.5 dBm in 0.5 dB steps)."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 14 }

    wranIfBsOfdmaDsThresholdDelBsServiceSet   OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Threshold used by CPE to delete a neighbor BS from
               the list of available WRAN services (ranging from
               -104 dBm to +23.5 dBm in 0.5 dB steps)."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 15 }

    wranIfBsOfdmaDsDcdInterval   OBJECT-TYPE
        SYNTAX      INTEGER (1..10)
        UNITS       “seconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Time between transmission of DCD messages."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 16 }

    wranIfBsOfdmaDsDcdTransition  OBJECT-TYPE
        SYNTAX      INTEGER (2..5)
        UNITS       “frames”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Time BS shall wait after repeating a DCD message
               with an incremented Configuration Change Count
               before issuing a DS-MAP message referring to
               Downstream_Burst_Profiles defined in that DCD
               message."
        ::= { wranIfBsOfdmaPhyDsChannelEntry 17 }

    wranIfBsOfdmaDsT56      OBJECT-TYPE
        SYNTAX      Integer32 (10..600)
        UNITS       “milliseconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
            "Time since last received DS-MAP message before
             downstream synchronization is considered lost."
      ::= { wranIfBsOfdmaPhyDsChannelEntry 18 }

wranIfBsOfdmaDsT1 OBJECT-TYPE
      SYNTAX      INTEGER (1..50)
      UNITS       “seconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Wait for DCD timeout."
      ::= { wranIfBsOfdmaPhyDsChannelEntry 19 }

wranIfBsOfdmaDsT2 OBJECT-TYPE
      SYNTAX      INTEGER (1..10)
      UNITS       “seconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Wait for broadcast ranging timeout."
      ::= { wranIfBsOfdmaPhyDsChannelEntry 20 }

wranIfBsOfdmaDsT20      OBJECT-TYPE
      SYNTAX      INTEGER (1..5)
      UNTIS       “frames”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Time CPE searches for preambles on a given channel."
      ::= { wranIfBsOfdmaPhyDsChannelEntry 21 }

wranIfBsOfdmaDsT21      OBJECT-TYPE
      SYNTAX      INTEGER (1..10)
      UNITS       “seconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Time the CPE searches for a DS-MAP on a given
             channel."
      ::= { wranIfBsOfdmaPhyDsChannelEntry 22 }

wranIfBsOfdmaDsTtg      OBJECT-TYPE
      SYNTAX      INTEGER { 105us(0), 210us(1), 333us(3) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Transmit/Receive Transition Gap."
      ::= { wranIfBsOfdmaPhyDsChannelEntry 23 }

wranIfBsOfdmaUcdBurstProfileTable   OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfBsOfdmaUcdBurstProfileEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This table contains the UCD burst profile
             configurations for each upstream channel. Each entry
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                in the table is represented by
                wranIfBsOfdmaUcdBurstProfileEntry."
        ::= { wranIfBsPhy 3 }

    wranIfBsOfdmaUcdBurstProfileEntry   OBJECT-TYPE
        SYNTAX      wranIfBsOfdmaUcdBurstProfileEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "This is a compound object that defines an entry in
                 wranIfBsOfdmaUcdBurstProfileTable."
        INDEX { wranIfBsOfdmaUcdUiucIndex }
        ::= { wranIfBsOfdmaUcdBurstProfileTable 1 }

    wranIfBsOfdmaUcdBurstProfileEntry   ::= SEQUENCE {
        wranIfBsOfdmaUcdUiucIndex                   INTEGER,
        wranIfBsOfdmaUcdUicuExitThreshold           INTEGER,
        wranIfBsOfdmaUcdUicuEntryThreshold          INTEGER,
        wranIfBsOfdmaUcdRangingDataRatio            INTEGER }

    wranIfBsOfdmaUcdUiucIndex     OBJECT-TYPE
        SYNTAX      INTEGER (0.. 63)
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "Index of entry in this table, this index value
                 maps to the UIUCs listed in Table 36."
        ::= { wranIfBsOfdmaUcdBurstProfileEntry 1 }

    wranIfBsOfdmaUcdUicuExitThreshold   OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        UNITS       “dBm”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "CINR at or below which this UIUC can no longer be
                 used where change to a more robust UIUC is required
                 (ranging from -104 dBm to +23.5 dBm in 0.5 dB
                 steps)."
        ::= { wranIfBsOfdmaUcdBurstProfileEntry 2 }

    wranIfBsOfdmaUcdUicuEntryThreshold  OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        UNITS       “dBm”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Minimum CINR required to start using this UIUC when
                 changing from a more robust UIUC is required
                 (ranging from -104 dBm to +23.5 dBm in 0.5 dB
                 steps)."
        ::= { wranIfBsOfdmaUcdBurstProfileEntry 3 }

    wranIfBsOfdmaUcdRangingDataRatio    OBJECT-TYPE
        SYNTAX      INTEGER (0..127)
        UNITS       “dB”
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Difference in power from burst UCD and power to be
               used for CDMA ranging in units of 1 dB (ranging from
               -104 dBm to +23 dBm)."
        ::= { wranIfBsOfdmaUcdBurstProfileEntry 4 }

  wranIfBsOfdmaDcdBurstProfileTable   OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsOfdmaDcdBurstProfileEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This table provides configuration for each DCD burst
               profile. It is made up of multiple entries defined
               by wranIfBsOfdmaDcdBurstProfileEntry."
        ::= { wranIfBsPhy 4 }

  wranIfBsOfdmaDcdBurstProfileEntry   OBJECT-TYPE
        SYNTAX      wranIfBsOfdmaDcdBurstProfileEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This is a compound object that defines an entry in
               wranIfBsOfdmaDcdBurstProfileTable."
        INDEX { wranIfBsOfdmaDcdDiucIndex }
        ::= { wranIfBsOfdmaDcdBurstProfileTable 1 }

  wranIfBsOfdmaDcdBurstProfileEntry   ::= SEQUENCE {
        wranIfBsOfdmaDcdDiucIndex                 INTEGER,
        wranIfBsOfdmaDcdDicuExitThreshold         INTEGER,
        wranIfBsOfdmaDcdDicuEntryThreshold        INTEGER }

  wranIfBsOfdmaDcdDiucIndex     OBJECT-TYPE
        SYNTAX      INTEGER (0.. 63)
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "Index of entry in this table, this index value
               maps to the DIUCs listed in Table 27."
        ::= { wranIfBsOfdmaDcdBurstProfileEntry 1 }

  wranIfBsOfdmaDcdDicuExitThreshold   OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        UNITS       “dBm”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "CINR at or below which this DIUC can no longer be
               used where change to a more robust DIUC is required
               (ranging from -104 dBm to +23.5 dBm in 0.5 dB
               steps)."
        ::= { wranIfBsOfdmaDcdBurstProfileEntry 2 }

  wranIfBsOfdmaDcdDicuEntryThreshold  OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        UNITS       “dBm”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Minimum CINR required to start using this DIUC when
               changing from a more robust DIUC is required
               (ranging from -104 dBm to +23.5 dBm in 0.5 dB
               steps)."
        ::= { wranIfBsOfdmaDcdBurstProfileEntry 3 }

    wranIfBsOfdmaDsRegionTable    OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsOfdmaDsRegionEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This table provides the configuration of the DS
               subframe. It is made up of entries defined by
               wranIfBsOfdmaDsRegionEntry."
        ::= { wranIfBsPhy 5 }

    wranIfBsOfdmaDsRegionEntry    OBJECT-TYPE
        SYNTAX      wranIfBsOfdmaDsRegionEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This is a compound object that describes each entry
               in wranIfBsOfdmaDsRegionTable."
        INDEX { wranIfBsOfdmaDsRegionIndex }
        ::= { wranIfBsOfdmaDsRegionTable 1 }

    wranIfBsOfdmaDsRegionEntry     ::= SEQUENCE {
        wranIfBsOfdmaDsRegionIndex                INTEGER,
        wranIfBsOfdmaDsDuration                   INTEGER }

    wranIfBsOfdmaDsRegionIndex    OBJECT-TYPE
        SYNTAX      Integer32 (1.. 512)
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "Index DS region in table."
        ::= { wranIfBsOfdmaDsRegionEntry 1 }

    wranIfBsOfdmaDsDuration OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Number of OFDMA slots allocated to a DS burst
               region."
        ::= { wranIfBsOfdmaDsRegionEntry 2 }

    wranIfBsOfdmaUsRegionTable    OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsOfdmaUsRegionEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                    "This table provides the configuration of the DS
                     subframe. It is made up of entries defined by
                     wranIfBsOfdmaUsRegionEntry."
              ::= { wranIfBsPhy 6 }

        wranIfBsOfdmaUsRegionEntry    OBJECT-TYPE
              SYNTAX      wranIfBsOfdmaUsRegionEntry
              MAX-ACCESS  not-accessible
              STATUS      current
              DESCRIPTION
                    "This is a compound object that describes each entry
                     in wranIfBsOfdmaUsRegionTable."
              INDEX { wranIfBsOfdmaUsRegionIndex }
              ::= { wranIfBsOfdmaUsRegionTable 1 }

        wranIfBsOfdmaUsRegionEntry    ::= SEQUENCE {
              wranIfBsOfdmaUsRegionIndex    INTEGER,
              wranIfBsOfdmaUsDuration       INTEGER }

        wranIfBsOfdmaUsRegionIndex    OBJECT-TYPE
              SYNTAX      Integer32 (1.. 512)
              MAX-ACCESS  not-accessible
              STATUS      current
              DESCRIPTION
                    "Index US region in table."
              ::= { wranIfBsOfdmaUsRegionEntry 1 }

        wranIfBsOfdmaUsDuration OBJECT-TYPE
              SYNTAX      Integer32 (0..65535)
              MAX-ACCESS  read-only
              STATUS      current
              DESCRIPTION
                    "Number of OFDMA slots allocated to a US burst
                     region."
              ::= { wranIfBsOfdmaUsRegionEntry 2 }

-- wranIfBsCmMibGroups: This object helps define which MIB groups are
-- available within this module and which MIB objects are part of each
-- group.

        wranIfBsCmMibGroups           OBJECT IDENTIFIER
                                            ::= { wranIfBsCm 24 }
        wranIfBsCmRangingGroup        OBJECT IDENTIFIER
                                            ::= { wranIfBsCmMibGroups 1 }
        wranIfBsCmBasicCapabilityGroup OBJECT IDENTIFIER
                                            ::= { wranIfBsCmMibGroups 2 }
        wranIfBsCmRegCapabilityGroup  OBJECT IDENTIFIER
                                            ::= { wranIfBsCmMibGroups 3 }
        wranIfBsCmMeasSupportGroup    OBJECT IDENTIFIER
                                            ::= { wranIfBsCmMibGroups 4 }
        wranIfBsCpeCmAntennaGroup     OBJECT IDENTIFIER
                                            ::= { wranIfBsCmMibGroups 5 }
        wranIfBsScmCmGroup            OBJECT IDENTIFIER
                                            ::= { wranIfBsCmMibGroups 6 }
        wranIfBsActionsCmGroup        OBJECT IDENTIFIER
                                            ::= { wranIfBsCmMibGroups 7 }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
wranIfBsMulticastCmGroup      OBJECT IDENTIFIER
                                    ::= { wranIfBsCmMibGroups 8 }
wranIfBsCoexistenceCmGroup    OBJECT IDENTIFIER
                                    ::= { wranIfBsCmMibGroups 9 }
wranIfBsSystemParametersCmGroup OBJECT IDENTIFIER
                                   ::= { wranIfBsCmMibGroups 10 }
wranIfBsPhyCmGroup            OBJECT IDENTIFIER
                                    := { wranIfBsCmMibGroups 11 }

wranIfBsCmRangingGroup        OBJECT-GROUP
      OBJECTS     { wranIfBsCpeRngCapabilityReqIndex,
                    wranIfBsCpeMacAddress, wranIfMmpPn,
                    wranIfCiphertextIcv,
                    wranIfRngAnomaly,
                    wranIfBsCpeRngCapabilityCmdIndex,
                    wranIfBsCpeMacAddress,
                    wranIfBsCpeStationId,
                    wranIfTimingAdvance,
                    wranIfEirpPerSubcarrier,
                    wranIfOffsetFreqAdjust,
                    wranIfRangingStatus,
                    wranIfActionSuperFrameNum,
                    wranIfCdmaCode,
                    wranIfTxOpportunityOffset }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
             management of the ranging process."
      ::= { wranIfBsCmMibGroups 1 }

wranIfBsCmBasicCapabilityGroup            OBJECT-GROUP
      OBJECTS     { wranIfBsCpeBasicCapabilityReqIndex,
        wranIfBsCpeBasicCapabilityReqMacAddress,
        wranIfBsCpeBasicCapabilityReqStationId,
        wranIfBsCpeBasicCapabilityReqMacPduTxAndConstruction,
        wranIfBsCpeBasicCapabilityReqMaxCpeTxEirp,
        wranIfBsCpeBasicCapabilityReqCpeDemodulator,
        wranIfBsCpeBasicCapabilityReqCpeModulator,
        wranIfBsCpeBasicCapabilityReqScmVersionSupport,
        wranIfBsCpeBasicCapabilityReqPnWindowSize,
        wranIfBsCpeBasicCapabilityReqScmFlowControl,
        wranIfBsCpeBasicCapabilityRspIndex,
        wranIfBsCpeBasicCapabilityRspNumAttempts,
        wranIfBsCpeBasicCapabilityRspMacAddress,
        wranIfBsCpeBasicCapabilityRspStationId,
        wranIfBsCpeBasicCapabilityRspMacPduTxAndConstruction,
        wranIfBsCpeBasicCapabilityRspCpeDemodulator,
        wranIfBsCpeBasicCapabilityRspCpeModulator,
        wranIfBsCpeBasicCapabilityRspScmVersionSupport,
        wranIfBsCpeBasicCapabilityRspPnWindowSize,
        wranIfBsCpeBasicCapabilityRspScmFlowControl,
        wranIfBsCpeBasicCapabilityDefIndex,
        wranIfBsCpeBasicCapabilityDefMacPduTxAndConstruction,
        wranIfBsCpeBasicCapabilityDefCpeDemodulator,
        wranIfBsCpeBasicCapabilityDefCpeModulator,
        wranIfBsCpeBasicCapabilityDefScmVersionSupport,
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
          wranIfBsCpeBasicCapabilityDefPnWindowSize,
          wranIfBsCpeBasicCapabilityDefScmFlowControl }
        STATUS      current
        DESCRIPTION
             "This group contains objects related to
              management of the CBC-REQ/RSP process."
        ::= { wranIfBsCmMibGroups 2 }

  wranIfBsCmRegCapabilityGroup        OBJECT-GROUP
        OBJECTS     { wranIfBsCpeRegCapabilityReqIndex,
          wranIfBsCpeRegCapabilityReqMacAddress,
          wranIfBsCpeRegCapabilityReqNMEALocStringSize,
          wranIfBsCpeRegCapabilityReqNMEALocString,
          wranIfBsCpeRegCapabilityReqCsConfig,
          wranIfBsCpeRegCapabilityReqIpVersion,
          wranIfBsCpeRegCapabilityReqIpRochSupport,
          wranIfBsCpeRegCapabilityReqArqSupport,
          wranIfBsCpeRegCapabilityReq2ndMgmtArqWindowSize,
          wranIfBsCpeRegCapabilityReq2ndMgmtArqRetryTxDelay,
          wranIfBsCpeRegCapabilityReq2ndMgmtArqRetryRxDelay,
          wranIfBsCpeRegCapabilityReq2ndMgmtArqBlockLifetime,
          wranIfBsCpeRegCapabilityReq2ndMgmtArqSyncLossTimeout,
          wranIfBsCpeRegCapabilityReq2ndMgmtArqDeliverInOrder,
          wranIfBsCpeRegCapabilityReq2ndMgmtArqRxPurgeTimeout,
          wranIfBsCpeRegCapabilityReq2ndMgmtArqBlockSize,
          wranIfBsCpeRegCapabilityReqDsxFlowControl,
          wranIfBsCpeRegCapabilityReqMcaFlowControl,
          wranIfBsCpeRegCapabilityReqMaxNumMcastGroups,
          wranIfBsCpeRegCapabilityReqSensModeSupportArray,
          wranIfBsCpeRegCapabilityReqAntennaModelSize,
          wranIfBsCpeRegCapabilityReqAntennaModel,
          wranIfBsCpeRegCapabilityReqCpeResidualDelay,
          wranIfBsCpeRegCapabilityReq2ndMgmtIpAllocMethod,
          wranIfBsCpeRegCapabilityReqCpeOperationalCapability,
          wranIfBsCpeRegCapabilityReqCpeRegistrationTimer,
          wranIfBsCpeRegCapabilityRspIndex,
          wranIfBsCpeRegCapabilityRspMacAddress,
          wranIfBsCpeRegCapabilityRspNumAttempts,
          wranIfBsCpeRegCapabilityRspCsConfig,
          wranIfBsCpeRegCapabilityRspIpVersion,
          wranIfBsCpeRegCapabilityRspIpRochSupport,
          wranIfBsCpeRegCapabilityRspArqSupport,
          wranIfBsCpeRegCapabilityRsp2ndMgmtArqWindowSize,
          wranIfBsCpeRegCapabilityRsp2ndMgmtArqRetryTxDelay,
          wranIfBsCpeRegCapabilityRsp2ndMgmtArqRetryRxDelay,
          wranIfBsCpeRegCapabilityRsp2ndMgmtArqBlockLifetime,
          wranIfBsCpeRegCapabilityRsp2ndMgmtArqSyncLossTimeout,
          wranIfBsCpeRegCapabilityRsp2ndMgmtArqDeliverInOrder,
          wranIfBsCpeRegCapabilityRsp2ndMgmtArqRxPurgeTimeout,
          wranIfBsCpeRegCapabilityRsp2ndMgmtArqBlockSize,
          wranIfBsCpeRegCapabilityRspDsxFlowControl,
          wranIfBsCpeRegCapabilityRspMcaFlowControl,
          wranIfBsCpeRegCapabilityRspMaxNumMcastGroups,
          wranIfBsCpeRegCapabilityRspSensModeSupportArray,
          wranIfBsCpeRegCapabilityRspAntennaModelSize,
          wranIfBsCpeRegCapabilityRspAntennaModel,
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        wranIfBsCpeRegCapabilityRsp2ndMgmtIpAllocMethod,
        wranIfBsCpeRegCapabilityRspCpeOperationalCapability,
        wranIfBsCpeRegCapabilityRspCpeRegistrationTimer,
        wranIfBsCpeRegCapabilityRspPermanentSid,
        wranIfBsCpeRegCapabilityDefIndex,
        wranIfBsCpeRegCapabilityDefCsConfig,
        wranIfBsCpeRegCapabilityDefIpVersion,
        wranIfBsCpeRegCapabilityDefIpRochSupport,
        wranIfBsCpeRegCapabilityDefArqSupport,
        wranIfBsCpeRegCapabilityDef2ndMgmtArqWindowSize,
        wranIfBsCpeRegCapabilityDef2ndMgmtArqRetryTxDelay,
        wranIfBsCpeRegCapabilityDef2ndMgmtArqRetryRxDelay,
        wranIfBsCpeRegCapabilityDef2ndMgmtArqBlockLifetime,
        wranIfBsCpeRegCapabilityDef2ndMgmtArqSyncLossTimeout,
        wranIfBsCpeRegCapabilityDef2ndMgmtArqDeliverInOrder,
        wranIfBsCpeRegCapabilityDef2ndMgmtArqRxPurgeTimeout,
        wranIfBsCpeRegCapabilityDef2ndMgmtArqBlockSize,
        wranIfBsCpeRegCapabilityDefDsxFlowControl,
        wranIfBsCpeRegCapabilityDefMcaFlowControl,
        wranIfBsCpeRegCapabilityDefMaxNumMcastGroups,
        wranIfBsCpeRegCapabilityDefSensModeSupportArray,
        wranIfBsCpeRegCapabilityDef2ndMgmtIpAllocMethod,
        wranIfBsCpeRegCapabilityDefCpeOperationalCapability,
        wranIfBsCpeRegCapabilityDefCpeRegistrationTimer }
    STATUS      current
    DESCRIPTION
          "This group contains objects related to
           management of the REG-REQ/RSP process."
    ::= { wranIfBsCmMibGroups 3 }

wranIfBsCmMeasSupportGroup          OBJECT-GROUP
    OBJECTS     { wranIfBsCpeMeasSupportReqIndex,
        wranIfBsCpeMeasSupportReqMacAddress,
        wranIfBsCpeMeasSupportReqSignalType,
        wranIfBsCpeMeasSupportReqThreshold,
        wranIfBsCpeMeasSupportReqPd,
        wranIfBsCpeMeasSupportReqMpfa,
        wranIfBsCpeMeasSupportReqRecNumSensPeriods,
        wranIfBsCpeMeasSupportReqRecSensPeriodDuration,
        wranIfBsCpeMeasSupportReqRecSensPeriodInterval,
        wranIfBsCpeMeasSupportRspIndex,
        wranIfBsCpeMeasSupportRspMacAddress,
        wranIfBsCpeMeasSupportRspSignalType,
        wranIfBsCpeMeasSupportRspThreshold,
        wranIfBsCpeMeasSupportRspPd,
        wranIfBsCpeMeasSupportRspMpfa,
        wranIfBsCpeMeasSupportRspRecNumSensPeriods,
        wranIfBsCpeMeasSupportRspRecSensPeriodDuration,
        wranIfBsCpeMeasSupportRspRecSensPeriodInterval,
        wranIfBsCpeMeasSupportDefIndex,
        wranIfBsCpeMeasSupportDefSignalType,
        wranIfBsCpeMeasSupportDefThreshold,
        wranIfBsCpeMeasSupportDefPd,
        wranIfBsCpeMeasSupportDefMpfa,
        wranIfBsCpeMeasSupportDefRecNumSensPeriods,
        wranIfBsCpeMeasSupportDefRecSensPeriodDuration,
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        wranIfBsCpeMeasSupportDefRecSensPeriodInterval }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
             management of the measurement process."
      ::= { wranIfBsCmMibGroups 4 }

wranIfBsCpeCmAntennaGroup           OBJECT-GROUP
      OBJECTS     { wranIfBsCpeAntennaGainIndex,
                    wranIfBsCpeAntennaGainMacAddress,
                    wranIfBsCpeTvChannel,
                    wranIfBsCpeOnAxisGain }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
             management of the antenna configuration."
      ::= { wranIfBsCmMibGroups 5 }

wranIfBsScmCmGroup            OBJECT-GROUP
      OBJECTS     { wranIfBsScmCapabilityConfiguration,
                    wranIfBsCpeScmCapabilityConfigIndex,
                    wranIfBsCpeScmCapabilityConfigMacAddress,
                    wranIfBsCpeScmCapabilityConfiguration,
                    wranIfBsCpeEapTlsTlsCredentialSize,
                    wranIfBsCpeEapTlsTlsCredential,
                    wranIfBsScmAuthConfigIndex,
                    wranIfBsT36, wranIfBsT37,
                    wranIfBsMaxNumAuthAttempts,
                    wranIfBsT38, wranIfBsT39,
                    wranIfBsT40, wranIfBsAkLifetime,
                    wranIfBsTekLifetime, wranIfBsMaxNumSa,
                    wranIfBsT17 }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
             management of the SCM protocol and SCM status
             on a CPE/BS."
      ::= { wranIfBsCmMibGroups 6 }

wranIfBsActionsCmGroup        OBJECT-GROUP
      OBJECTS     { wranIfBsCpeActionsIndex,
                    wranIfBsCpeActionsMacAddress,
                    wranIfBsCpeActionsRngCpe,
                    wranIfBsCpeActionsDeRegCpe,
                    wranIfBsCpeActionsSchedule }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
             management of actions the BS can take."
      ::= { wranIfBsCmMibGroups 7 }

wranIfBsMulticastCmGroup            OBJECT-GROUP
      OBJECTS     { wranIfBsCpeMcastConfigIndex,
                    wranIfBsCpeMcastMacAddress,
                    wranIfBsCpeMcastSid,
                    wranIfBsCpeMcastPeriodicAllocParameterM,
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                    wranIfBsCpeMcastPeriodicAllocParameterK,
                    wranIfBsCpeMcastPeriodicAllocParameterN }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
             management of multicast configuration."
      ::= { wranIfBsCmMibGroups 8 }

wranIfBsCoexistenceCmGroup          OBJECT-GROUP
      OBJECTS     { wranIfBsCoexistenceConfigIndex,
                    wranIfBsT34, wranIfBsT33,
                    wranIfBsT32, wranIfBsFcw,
                    wranIfBsScwBackoffMax,
                    wranIfBsFcMin, wranIfBsFcnRange,
                    wranIfBsSfRel, wranIfBsT35 }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
             management of coexistence configuration."
      ::= { wranIfBsCmMibGroups 9 }

wranIfBsSystemParametersCmGroup          OBJECT-GROUP
      OBJECTS     { wranIfBsCpeSystemParametersIndex,
                    wranIfBsDsxReqRetries,
                    wranIfBsDsxRspRetries,
                    wranIfBsT6, wranIfBsT7, wranIfBsT8,
                    wranIfBsT9, wranIfBsT10, wranIfBsT13,
                    wranIfBsT14, wranIfBsT15, wranIfBsT16,
                    wranIfBsT18, wranIfBsT22, wranIfBsT26,
                    wranIfBsT27Idle, wranIfBsT27Active,
                    wranIfBsT28 }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
             management of system parameter configuration."
      ::= { wranIfBsCmMibGroups 10 }

wranIfBsPhyCmGroup            OBJECT-GROUP
      OBJECTS     { wranIfBsOfdmaPhyUsChannelIndex,
                    wranIfBsOfdmaPhyUsSid,
                    wranIfBsOfdmaPhyUsMacAddress,
                    wranIfBsOfdmaCtBasedResvTimeout,
                    wranIfBsOfdmaUsCenterFrequency, ,
                    wranIfBsOfdmasUsRadioResource,
                    wranIfBsOfdmaUsUcsConfigChangeCount,
                    wranIfBsOfdmaUsUcsNotificationCodes,
                    wranIfBsOfdmaUsInitRngCodes,
                    wranIfBsOfdmaUsPeriodicRngCodes,
                    wranIfBsOfdmaUsBWReqCodes,
                    wranIfBsOfdmaUsPeriodicRngBackoffStart,
                    wranIfBsOfdmaUsPeriodicRngBackoffEnd,
                    wranIfBsOfdmaUsStartofCodes,
                    wranIfBsOfdmaUsNormalizedCnrOverride,
                    wranIfBsOfdamUsInitialRangingInterval,
                    wranIfBsOfdmaUsUcsNotificationBackoffStart,
                    wranIfBsOfdmaUsUcsNotificationBackoffEnd,
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                wranIfBsOfdmaUsInitialRngBackoffStart,
                wranIfBsOfdmaUsInitialRngBackoffEnd,
                wranIfBsOfdmaUsBwRequestBackoffStart,
                wranIfBsOfdmaUsBwRequestBackoffEnd,
                wranIfBsOfdmaUsUcdInterval,
                wranIfBsOfdmaUsUcdTransition,
                wranIfBsOfdmaUsClkCmpInterval,
                wranIfBsOfdmaUsT57,
                wranIfBsOfdmaUsT58,
                wranIfBsOfdmaUsCdmaRngRetries,
                wranIfBsOfdmaUsInvRngReq,
                wranIfBsOfdmaUsMapProcTime,
                wranIfBsOfdmaUsT3,
                wranIfBsOfdmaUsT4,
                wranIfBsOfdmaUsT5,
                wranIfBsOfdmaUsT12,
                wranIfBsOfdmaPhyDsChannelIndex,
                wranIfBsOfdmaDsBsId,
                wranIfBsOfdmaDsEirp,
                wranIfBsOfdmaDsChannelNumber,
                wranIfBsOfdmaDsPhyMaxEirp,
                wranIfBsOfdmaDsCenterFreq,
                wranIfBsOfdmaDsMacVersion,
                wranIfBsOfdmaDsCyclicPrefix,
                wranIfBsOfdmaDsRadioResource,
                wranIfBsOfdmaDsCellType,
                wranIfBsOfdmaDsConfigChangeCount,
                wranIfBsOfdmaDsFrameDuration,
                wranIfBsOfdmaDsRssiCinrAvgParameter,
                wranIfBsOfdmaDsThresholdAddBsServiceSet,
                wranIfBsOfdmaDsThresholdDelBsServiceSet,
                wranIfBsOfdmaDsDcdInterval,
                wranIfBsOfdmaDsDcdTransition,
                wranIfBsOfdmaDsT56,
                wranIfBsOfdmaDsT1,
                wranIfBsOfdmaDsT2,
                wranIfBsOfdmaDsT20,
                wranIfBsOfdmaDsT21,
                wranIfBsOfdmaDsTtg,
                wranIfBsOfdmaUcdUiucIndex,
                wranIfBsOfdmaUcdUicuExitThreshold,
                wranIfBsOfdmaUcdUicuEntryThreshold,
                wranIfBsOfdmaUcdRangingDataRatio,
                wranIfBsOfdmaDcdDiucIndex,
                wranIfBsOfdmaDcdDicuExitThreshold,
                wranIfBsOfdmaDcdDicuEntryThreshold,
                wranIfBsOfdmaDsRegionIndex,
                wranIfBsOfdmaDsDuration,
                wranIfBsOfdmaUsRegionIndex,
                wranIfBsOfdmaUsDuration }
        STATUS      current
        DESCRIPTION
              "This group contains objects related to
               management of PHY configuration."
        ::= { wranIfBsCmMibGroups 11 }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        wranIfBsCmMibCompliance MODULE-COMPLIANCE
              STATUS      current
              DESCRIPTION
                    "MIB objects that are optional and mandatory for
                     wranIfBsCm compliance."
              MODULE      wranIfBsCm
              MANDATORY-GROUPS  { wranIfBsCmRangingGroup,
                                  wranIfBsCmBasicCapabilityGroup,
                                  wranIfBsCmRegCapabilityGroup,
                                  wranIfBsCmMeasSupportGroup,
                                  wranIfBsCpeAntennaGroup,
                                  wranIfBsActionsGroup,
                                  wranIfBsScmGroup,
                                  wranIfBsActionsGroup,
                                  wranIfBsCoexistenceGroup,
                                  wranIfBsSystemParametersGroup,
                                  wranIfBsPhyGroup }
              -- OPTIONAL-GROUPS      { wranIfBsMulticastGroup }
              ::= { wranIfBsCm 25 }

    -- wranIfBsAm: This MIB group contains various objects related to
    -- Accounting Management.

        wranIfBsOtaUsageDataRecordTable     OBJECT-TYPE
              SYNTAX      SEQUENCE OF wranIfBsOtaUsageDataRecordEntry
              MAX-ACCESS  not-accessible
              STATUS      current
              DESCRIPTION
                    "This object contains usage entries that track the
                     number of octets/packets transmitted or received
                     over the air interface. Records may be transferred
                     to an external database, such as an AAA server,
                     after which they can be deleted from this table.
                     Each entry is defined by
                     wranIfBsOtaUsageDataRecordEntry."
              ::= { wranIfBsAm 1 }

        wranIfBsOtaUsageDataRecordEntry     OBJECT-TYPE
              SYNTAX      wranIfBsOtaUsageDataRecordEntry
              MAX-ACCESS  not-accessible
              STATUS      current
              DESCRIPTION
                    "This object is a compound object that defines an
                     entry in wranIfBsOtaUsageDataRecordTable."
              INDEX { wranIfBsOtaUsageDataRecordIndex }
              ::= { wranIfBsOtaUsageDataRecordTable 1 }

        wranIfBsOtaUsageDataRecordEntry     ::= SEQUENCE {
              wranIfBsOtaUsageDataRecordIndex           Integer32,
              wranIfBsOtaUsageSid                       Integer32,
              wranIfBsOtaUsageFid                       INTEGER,
              wranIfBsOtaUsageSessionId                 Integer32,
              wranIfBsOtaUsageMacSduCount               Integer32,
              wranIfBsOtaUsageOctetCount                INTEGER,
              wranIfBsOtaUsageSessionStartTime          DateAndTime,
              wranIfBsOtaUsageSessionEndTime            DateAndTime,
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        wranIfBsOtaUsageQoSServiceFlowListSize    INTEGER,
        wranIfBsOtaUsageQoSServiceFlowList        OCTET STRING,
        wranIfBsOtaUsageQoSProfileListSize        INTEGER,
        wranIfBsOtaUsageQoSProfileList            OCTET STRING }

wranIfBsOtaUsageDataRecordIndex     OBJECT-TYPE
        SYNTAX      Integer32 (1.. 2048)
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "Index of entry in this table, defaults to 1."
        ::= { wranIfBsOtaUsageDataRecordEntry 1 }

wranIfBsOtaUsageSid     OBJECT-TYPE
        SYNTAX      Integer32 (0.. 512)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "A 9-bit Station ID that identifies the station that
               is carrying traffic."
        ::= { wranIfBsOtaUsageDataRecordEntry 2 }

wranIfBsOtaUsageFid     OBJECT-TYPE
        SYNTAX      INTEGER (0..7)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "A 3-bit Flow Id that identifies the specific flow
               assigned to a station that is carrying traffic. For
               data traffic this identifies the FID that is mapped
               to a service flow id (i.e., wranIfBsServiceFlowId)."
        ::= { wranIfBsOtaUsageDataRecordEntry 3 }

wranIfBsOtaUsageSessionId     OBJECT-TYPE
        SYNTAX      Integer32 (0..4294967295)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "An identifier for a session. A session is a segment
               in time when a service flow is active. Multiple
               sessions can be created during service flow
               activation time to the allow the BS to track usage
               during period when service flow configuration is
               changing."
        ::= { wranIfBsOtaUsageDataRecordEntry 4 }

wranIfBsOtaUsageMacSduCount   OBJECT-TYPE
        SYNTAX      Integer32 (0.. 4294967295)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Counter of the number of MAC SDUs transmitted on a
               FID. If the FID represents a basic,
               primary/secondary management, or multicast
               management FID, then this deals with traffic
               transmitted on both the DS and US."
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        ::= { wranIfBsOtaUsageDataRecordEntry 5 }

    wranIfBsOtaUsageOctetCount    OBJECT-TYPE
        SYNTAX      Integer32 (0.. 4294967295)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Counter of the number of MAC PDUs that have been
               transmitted and received over the air interface."
        ::= { wranIfBsOtaUsageDataRecordEntry 6 }

    wranIfBsOtaUsageSessionStartTime    OBJECT-TYPE
        SYNTAX      DateAndTime
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Date and time session was established."
        ::= { wranIfBsOtaUsageDataRecordEntry 7 }

    wranIfBsOtaUsageSessionEndTime      OBJECT-TYPE
        SYNTAX      DateAndTime
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Date and time session was ended."
        ::= { wranIfBsOtaUsageDataRecordEntry 8 }

    wranIfBsOtaUsageServiceFlowListSize OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Number of items in
               wranIfBsOtaUsageQoSServiceFlowList."
        ::= { wranIfBsOtaUsageDataRecordEntry 9 }

    wranIfBsOtaUsageServiceFlowList     OBJECT-TYPE
        SYNTAX      OCTET STRING
                    (SIZE(wranIfBsOtaUsageServiceFlowListSize*4))
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "A list of service flow Ids (SFIDs), identifying
               each service flow active during this session (i.e.,
               a list of SFIDs that pertain to service flows as
               defined in wranIfBsActiveSfTable)."
        ::= { wranIfBsOtaUsageDataRecordEntry 10 }

    wranIfBsOtaUsageQoSProfileListSize  OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Number of items in
               wranIfBsOtaUsageQoSProfileList."
        ::= { wranIfBsOtaUsageDataRecordEntry 11 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
      wranIfBsOtaUsageQoSProfileList      OBJECT-TYPE
            SYNTAX      OCTET STRING
        (SIZE(wranIfBsOtaUsageQoSProfileListSize*2))
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                  "A list of indexes into wranIfBsScTable, that point
                   to the definition of the QoS parameter set of each
                   service flow listed in
                   wranIfBsOtaUsageQoSServiceFlowList (and hence were
                   active during this session)."
            ::= { wranIfBsOtaUsageDataRecordEntry 12 }

-- wranIfBsAmMibGroups: This object helps define which MIB groups are
-- available within this module and which MIB objects are part of each
-- group.

      wranIfBsAmMibGroups           OBJECT IDENTIFIER
                                          ::= { wranIfBsAm 2 }
      wranIfBsAmOtaUsageDataGroup   OBJECT IDENTIFIER
                                          ::= { wranIfBsAmMibGroups 1 }

      wranIfBsAmOtaUsageDataGroup         OBJECT-GROUP
            OBJECTS     { wranIfBsOtaUsageDataRecordIndex,
                          wranIfBsOtaUsageSid,
                          wranIfBsOtaUsageFid,
                          wranIfBsOtaUsageSessionId,
                          wranIfBsOtaUsageMacSduCount,
                          wranIfBsOtaUsageOctetCount,
                          wranIfBsOtaUsageSessionStartTime,
                          wranIfBsOtaUsageSessionEndTime,
                          wranIfBsOtaUsageQoSServiceFlowListSize,
                          wranIfBsOtaUsageQoSServiceFlowList,
                          wranIfBsOtaUsageQoSProfileListSize,
                          wranIfBsOtaUsageQoSProfileList }
            STATUS      current
            DESCRIPTION
                  "This group contains objects related to
                   tracking usage of OTA resources per CPE."
            ::= { wranIfBsAmMibGroups 1 }

      wranIfBsAmMibCompliance MODULE-COMPLIANCE
            STATUS      current
            DESCRIPTION
                  "MIB objects that are optional and mandatory for
                   wranIfBsAm compliance."
            MODULE      wranIfBsCm
            MANDATORY-GROUPS  { wranIfBsAmOtaUsageDataGroup }
            ::= { wranIfBsAm 3 }

-- wranIfBsPm: This MIB group contains various objects related to
-- Performance Management.

      wranIfBsPmConfigurationTable
                              OBJECT IDENTIFIER ::= { wranIfBsPm 1 }
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
wranIfBsSignalPowerMetricsTable
                        OBJECT IDENTIFIER ::= { wranIfBsPm 2 }
wranIfBsStartupMetricsTable
                        OBJECT IDENTIFIER ::= { wranIfBsPm 3 }
wranIfBsThroughputMetricsTable
                        OBJECT IDENTIFIER ::= { wranIfBsPm 4 }
wranIfBsNetworkEntryMetricsTable
                        OBJECT IDENTIFIER ::= { wranIfBsPm 5 }
wranIfBsPacketErrorRateTable
                        OBJECT IDENTIFIER ::= { wranIfBsPm 6 }
wranIfBsUserMetricsTable
                        OBJECT IDENTIFIER ::= { wranIfBsPm 7 }
wranIfBsServiceFlowMetricsTable
                        OBJECT IDENTIFIER ::= { wranIfBsPm 8 }
wranIfBsArqMetricsTable
                        OBJECT IDENTIFIER ::= { wranIfBsPm 9 }
wranIfBsAuthenticationMetricsTable
                        OBJECT IDENTIFIER ::= { wranIfBsPm 10 }
wranIfBsCoexistenceStatusTable
                        OBJECT IDENTIFIER ::= { wranIfBsPm 11 }
wranIfBsCoexistenceSourceTable
                        OBJECT IDENTIFIER ::= { wranIfBsPm 12 }
wranIfBsCoexistenceResourceListTable
                        OBJECT IDENTIFIER ::= { wranIfBsPm 13 }
wranIfBsCoexistenceCurrentConfigTable
                        OBJECT IDENTIFIER ::= { wranIfBsPm 14 }
wranIfBsPmMibGroups
                        OBJECT IDENTIFIER ::= { wranIfBsPm 15 }
wranIfBsPmMibCompliance
                        OBJECT IDENTIFIER ::= { wranIfBsPm 16 }

wranIfBsPmConfigurationTable  OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfBsPmConfigurationEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "The configuration of statistics recording and
             measurement is captured in this table. There is one
             entry in this table, defined by
             wranIfBsPmConfigurationEntry."
      ::= { wranIfBsPm 1 }

wranIfBsPmConfigurationEntry  OBJECT-TYPE
      SYNTAX      wranIfBsPmConfigurationEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object is a compound object that defines an
             entry in wranIfBsPmConfigurationTable."
      INDEX { wranIfBsPmConfigurationEntryIndex }
      ::= { wranIfBsPmConfigurationTable 1 }

wranIfBsPmConfigurationEntry  ::= SEQUENCE {
      wranIfBsPmConfigurationEntryIndex         INTEGER,
      wranIfBsGranularityInterval               Integer32,
      wranIfBsCountersReportInterval            Integer32,
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
      wranIfBsPmMeasurementBitmap              BITS }

wranIfBsOtaUsageDataRecordIndex     OBJECT-TYPE
      SYNTAX      INTEGER (1.. 1)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index of entry in this table, defaults to 1."
      ::= { wranIfBsPmConfigurationEntry 1 }

wranIfBsGranularityInterval   OBJECT-TYPE
      SYNTAX      INTEGER (1.. 255)
      UNITS       "seconds"
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Data rate statistics captured in
             wranIfBsRssiCinrMetricsTable,
             wranIfBsStartupMetricsTable,
             wranIfBsThroughputMetricsTable,
             wranIfBsPacketErrorRateTable,
             wranIfBsUserMetricsTable,
             wranIfBsServiceFlowMetricsTable,
             wranIfBsArqMetricsTable, and
             wranIfBsAuthenticationMetricsTable are measured over
             the time interval this object specifics."
      ::= { wranIfBsPmConfigurationEntry 2 }

wranIfBsCountersReportInterval      OBJECT-TYPE
      SYNTAX      INTEGER (1.. 255)
      UNITS       "minutes"
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Determines the interval in which traps in enabled in
             wranIfBsTrapControl, related to performance
             measurement, are sent to the NCMS."
      ::= { wranIfBsPmConfigurationEntry 2 }

wranIfBsPmMeasurementBitmap   OBJECT-TYPE
      SYNTAX      BITS { RssiCinr(0),
                         Startup(1),
                         Throughput(2),
                         NetworkEntry(3),
                         PacketError(4),
                         User(5),
                         ServiceFlow(6),
                         Arq(7),
                         Authentication(8),
                         CoexistenceStatus(9),
                         CoexistenceSource(10),
                         CoexistenceResourceList(11),
                         CoexistenceCurrentConfig(12) }
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                "A 13-bit bitmap indicating which of the measurement
                 tables are enabled or disabled. When a position in
                 the bitmap is set(=1) that measurement table is
                 enabled, when it is unset (=0) the table is
                 disabled. The bitmap position to table assignment is
                 as follows:
                      Bit0->wranIfBsSignalPowerMetricsTable
                      Bit1->wranIfBsStartupMetricsTable
                      Bit2->wranIfBsThroughputMetricsTable
                      Bit3->wranIfBsNetworkEntryMetricsTable
                      Bit4->wranIfBsPacketErrorRateTable
                      Bit5->wranIfBsUserMetricsTable
                      Bit6->wranIfBsServiceFlowMetricsTable
                      Bit7->wranIfBsArqMetricsTable
                      Bit8->wranIfBsAuthenticationMetricsTable
                      Bit9->wranIfBsCoexistenceStatusTable
                      Bit10->wranIfBsCoexistenceSourceTable
                      Bit11->wranIfBsCoexistenceResourceListTable
                      Bit12->wranIfBsCoexistenceCurrentConfigTable."
          ::= { wranIfBsPmConfigurationEntry 3 }

    wranIfBsSignalPowerMetricsTable     OBJECT-TYPE
          SYNTAX      SEQUENCE OF wranIfBsSignalPowerMetricsEntry
          MAX-ACCESS  not-accessible
          STATUS      current
          DESCRIPTION
                "This MIB object contains a table that records BS US
                 measurement of a CPE's transmissions, as well as CPE
                 measurement of BS DS signal. The data in each entry
                 is stored as a histogram. This table is made up of
                 entries defined by wranIfBsRssiCinrMetricsEntry.
                 Each entry is uniquely identified by the CPE's MAC
                 Address and the index of the entry in the table."
          ::= { wranIfBsPm 2 }

    wranIfBsSignalPowerMetricsEntry     OBJECT-TYPE
          SYNTAX      wranIfBsSignalPowerMetricsEntry
          MAX-ACCESS  not-accessible
          STATUS      current
          DESCRIPTION
                "This object is a compound object that defines an
                 entry in wranIfBsRssiCinrMetricsTable."
          INDEX { wranIfBsSignalPowerMetricsIndex }
          ::= { wranIfBsSignalPowerMetricsTable 1 }

    wranIfBsSignalPowerMetricsEntry     ::= SEQUENCE {
          wranIfBsRssiCinrMetricsIndex        Integer32,
          wranIfBsCpeMacAddress               MacAddress,
          wranIfBsChannelDirection            INTEGER,
          wranIfBsChannelNumber               INTEGER,
          wranIfBsStartFrame                  INTEGER
          wranIfBsMeasurementDuration         Integer32,
          wranIfBsSignalReportType            INTEGER,
          wranIfBsMeanCinrReport              INTEGER,
          wranIfBsMeanRssiReport              INTEGER,
          wranIfBsStdDevCinrReport            INTEGER,
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
      wranIfBsStdDevRssiReport            INTEGER,
      wranIfBsMaxEIRPReport               INTEGER,
      wranIfBsPerScEIRPReport             INTEGER }

wranIfBsSignalPowerMetricsIndex     OBJECT-TYPE
      SYNTAX      Integer32 (1.. 261120)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index of entry in this table, defaults to 1."
      ::= { wranIfBsSignalPowerMetricsEntry 1 }

wranIfBsCpeMacAddress   OBJECT-TYPE
      SYNTAX      MacAddress
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "MAC Address of the CPE."
      ::= { wranIfBsSignalPowerMetricsEntry 2 }

wranIfBsChannelDirection      OBJECT-TYPE
      SYNTAX      INTEGER { ds(0), us(1) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Direction of channel, whether DS or US, that
             measurement was done on."
      ::= { wranIfBsSignalPowerMetricsEntry 3 }

wranIfBsChannelNumber   OBJECT-TYPE
      SYNTAX      INTEGER
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Channel number that measurement was done on."
      ::= { wranIfBsSignalPowerMetricsEntry 4 }

wranIfBsStartFrame      OBJECT-TYPE
      SYNTAX      INTEGER (0..255)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Frame number in which measurement was conducted in."
      ::= { wranIfBsSignalPowerMetricsEntry 5 }

wranIfBsMeasurementDuration   OBJECT-TYPE
      SYNTAX      Integer32 (1.. 16777215)
      UNITS       "symbols"
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Duration of measurement period in units of symbol
             period."
      ::= { wranIfBsRssiCinrMetricsEntry 6 }

wranIfBsSignalReportType      OBJECT-TYPE
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        SYNTAX      INTEGER { undetermined(0),
                              ieee802dot22wran(1),
                              atsc(2),
                              dvbt(3),
                              isdbt(4),
                              ntsc(5),
                              pal(6),
                              secam(7),
                              wirelessMicrophone(8),
                              ieee802dot22dot1Sync(9),
                              ieee802dot22dot1Msf1(10),
                              ieee802dot22dot1Msf2(11),
                              ieee802dot22dot1Msf3(12) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Type of signal detected during the measurement
               recorded in this entry."
        ::= { wranIfBsSignalPowerMetricsEntry 7 }

    wranIfBsMeanCinrReport  OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        UNITS       "dBm"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Mean CINR report, on an interval -64 to +63.5 dBm in
               0.5 dB steps."
        ::= { wranIfBsSignalPowerMetricsEntry 8 }

    wranIfBsMeanRssiReport  OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        UNITS       "dBm"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Mean RSSI report, on an interval -104 to +23.5 dBm
               in 0.5 dB steps."
        ::= { wranIfBsSignalPowerMetricsEntry 9 }

    wranIfBsStdDevCinrReport      OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        UNITS       "dBm"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Standard Deviation CINR report, on an interval -64
               to +63.5 dBm in 0.5 dB steps."
        ::= { wranIfBsSignalPowerMetricsEntry 10 }

    wranIfBsStdDevRssiReport      OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        UNITS       "dBm"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
            "Standard Deviation RSSI report, on an interval -104
             to +23.5 dBm in 0.5 dB steps."
      ::= { wranIfBsSignalPowerMetricsEntry 11 }

wranIfBsMaxEIRPReport   OBJECT-TYPE
      SYNTAX      INTEGER (0..255)
      UNITS       "dBm"
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Max EIRP report, on an interval -104 to +23.5 dBm in
             0.5 dB steps."
      ::= { wranIfBsSignalPowerMetricsEntry 12 }

wranIfBsPerScEIRPReport OBJECT-TYPE
      SYNTAX      INTEGER (0..255)
      UNITS       "dBm"
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Per subchannel EIRP report, on an interval -104 to
             +23.5 dBm in 0.5 dB steps."
      ::= { wranIfBsSignalPowerMetricsEntry 13 }

wranIfBsStartupMetricsTable   OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfBsStartupMetricsEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This MIB provides a table to track how CPEs perform
            during initial network entry and re-entry. This
            table is made of one entry, defined by
            wranIfBsStartupMetricsEntry. This entry reflects the
            startup metrics recorded ruing the current reporting
            session."
      ::= { wranIfBsPm 3 }

wranIfBsStartupMetricsEntry   OBJECT-TYPE
      SYNTAX      wranIfBsStartupMetricsEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object is a compound object that defines an
             entry in wranIfBsStartupMetricsTable."
      INDEX { wranIfBsStartupMetricsIndex }
      ::= { wranIfBsStartupMetricsTable 1 }

wranIfBsStartupMetricsEntry   ::= SEQUENCE {
      wranIfBsStartupMetricsIndex         INTEGER,
      wranIfBsNumAuthAttempt              Integer32,
      wranIfBsNumAuthSuccess              Integer32,
      wranIfBsAuthSuccessRate             INTEGER,
      wranIfBsNumRangingAttempt           Integer32
      wranIfBsNumRangingSuccess           Integer32,
      wranIfBsRangingSuccessRate          INTEGER,
      wranIfBsMeanCinrReport              INTEGER }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
wranIfBsStartupMetricsIndex   OBJECT-TYPE
      SYNTAX      INTEGER (1.. 1)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index of entry in this table, defaults to 1."
      ::= { wranIfBsStartupMetricsEntry 1 }

wranIfBsNumAuthAttempt  OBJECT-TYPE
      SYNTAX      Integer32 (1.. 16777216)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "A counter for the number of CPE authentication
             attempts."
      ::= { wranIfBsStartupMetricsEntry 2 }

wranIfBsNumAuthSuccess  OBJECT-TYPE
      SYNTAX      Integer32 (1.. 16777216)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "A counter for the number of successful
             authentication handshake completions. "
      ::= { wranIfBsStartupMetricsEntry 3 }

wranIfBsAuthSuccessRate OBJECT-TYPE
      SYNTAX      INTEGER (0..100)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Success rate of authentication attempts:
             wranIfBsAuthSuccessRate = floor( 100 *
             wranIfBsNumAuthSuccess / wranIfBsNumAuthAttempts )."
      ::= { wranIfBsStartupMetricsEntry 4 }

wranIfBsNumRangingAttempt     OBJECT-TYPE
      SYNTAX      Integer32 (1.. 16777216)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Number of CPE ranging requests received."
      ::= { wranIfBsStartupMetricsEntry 5 }

wranIfBsNumRangingSuccess     OBJECT-TYPE
      SYNTAX      Integer32 (1.. 16777216)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Number of CPE ranging responses sent."
      ::= { wranIfBsStartupMetricsEntry 6 }

wranIfBsRangingSuccessRate    OBJECT-TYPE
      SYNTAX      INTEGER (0..100)
      MAX-ACCESS  read-only
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        STATUS      current
        DESCRIPTION
              "Success rate of ranging attempts:
               wranIfBsRangingSuccessRate = floor( 100 *
               wranIfBsNumRangingSuccess /
               wranIfBsNumRangingAttempts )."
        ::= { wranIfBsStartupMetricsEntry 7 }

wranIfBsThroughputMetricsTable      OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsThroughputMetricsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB object provides a table to record
               peak/average data rate. This table is made of one
               entry, defined by wranIfBsThroughputMetricsEntry."
        ::= { wranIfBsPm 4 }

wranIfBsThroughputMetricsEntry      OBJECT-TYPE
        SYNTAX      wranIfBsThroughputMetricsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object is a compound object that defines an
               entry in wranIfBsThroughputMetricsTable."
        INDEX { wranIfBsThroughputMetricsIndex }
        ::= { wranIfBsThroughputMetricsTable 1 }

wranIfBsThroughputMetricsEntry      ::= SEQUENCE {
        wranIfBsThroughputMetricsIndex      INTEGER,
        wranIfBsAvgDsUserThroughput         Integer32,
        wranIfBsAvgUsUserThroughput         Integer32,
        wranIfBsAvgDsMacThroughput          Integer32,
        wranIfBsAvgUsMacThroughput          Integer32
        wranIfBsAvgDsPhyThroughput          Integer32,
        wranIfBsAvgUsPhyThroughput          Integer32,
        wranIfBsPeakDsUserThroughput        Integer32,
        wranIfBsPeakUsUserThroughput        Integer32,
        wranIfBsPeakDsMacThroughput         Integer32,
        wranIfBsPeakUsMacThroughput         Integer32,
        wranIfBsPeakDsPhyThroughput         Integer32,
        wranIfBsPeakUsPhyThroughput         Integer32,
        wranIfBsAvgDsCellEdgeThroughput     Integer32,
        wranIfBsAvgUsCellEdgeThroughput     Integer32 }

wranIfBsThroughputMetricsIndex      OBJECT-TYPE
        SYNTAX      INTEGER (1.. 1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in this table, defaults to 1."
        ::= { wranIfBsThroughputMetricsEntry 1 }

wranIfBsAvgDsUserThroughput   OBJECT-TYPE
        SYNTAX      Integer32 (0..4294967295)
        UNITS       “bps”
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This records the average user throughput in the DS.
               This is a function of the number of octets of MAC
               SDUs transmitted by the BS to CPEs over time."
        ::= { wranIfBsThroughputMetricsEntry 2 }

    wranIfBsAvgUsUserThroughput   OBJECT-TYPE
        SYNTAX      Integer32 (0..4294967295)
        UNITS       “bps”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This records the average user throughput in the US.
               This is a function of the number of octets of MAC
               SDUs transmitted by the CPEs to BS over time."
        ::= { wranIfBsThroughputMetricsEntry 3 }

    wranIfBsAvgDsMacThroughput    OBJECT-TYPE
        SYNTAX      Integer32 (0..4294967295)
        UNITS       “bps”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This records the average MAC throughput in the DS.
               This is a function of the number of octets of MAC
               PDUs transmitted by the BS to CPEs over time."
        ::= { wranIfBsThroughputMetricsEntry 4 }

    wranIfBsAvgUsMacThroughput    OBJECT-TYPE
        SYNTAX      Integer32 (0..4294967295)
        UNITS       “bps”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This records the average MAC throughput in the US.
               This is a function of the number of octets of MAC
               PDUs transmitted by the CPEs to BS over time."
        ::= { wranIfBsThroughputMetricsEntry 5 }

    wranIfBsAvgDsPhyThroughput    OBJECT-TYPE
        SYNTAX      Integer32 (0..4294967295)
        UNITS       “bps”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This records the average PHY throughput in the DS.
               This is a function of the number of burst octets
               (e.g., MAC PDU + PHY overhead) transmitted by the BS
               to CPEs over time."
        ::= { wranIfBsThroughputMetricsEntry 6 }

    wranIfBsAvgUsPhyThroughput    OBJECT-TYPE
        SYNTAX      Integer32 (0..4294967295)
        UNITS       “bps”
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This records the average PHY throughput in the US.
               This is a function of the number of burst octets
               (e.g., MAC PDU + PHY overhead) transmitted by the
               CPEs to BS over time."
        ::= { wranIfBsThroughputMetricsEntry 7 }

    wranIfBsPeakDsUserThroughput  OBJECT-TYPE
        SYNTAX      Integer32 (0..4294967295)
        UNITS       “bps”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This records the peak user throughput in the DS.
               This is a function of the number of octets of MAC
               SDUs transmitted by the BS to CPEs over time."
        ::= { wranIfBsThroughputMetricsEntry 8 }

    wranIfBsPeakUsUserThroughput  OBJECT-TYPE
        SYNTAX      Integer32 (0..4294967295)
        UNITS       “bps”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This records the peak user throughput in the US.
               This is a function of the number of octets of MAC
               SDUs transmitted by the CPEs to BS over time."
        ::= { wranIfBsThroughputMetricsEntry 9 }

    wranIfBsPeakDsMacThroughput   OBJECT-TYPE
        SYNTAX      Integer32 (0..4294967295)
        UNITS       “bps”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This records the peak MAC throughput in the DS.
               This is a function of the number of octets of MAC
               PDUs transmitted by the BS to CPEs over time."
        ::= { wranIfBsThroughputMetricsEntry 10 }

    wranIfBsPeakUsMacThroughput   OBJECT-TYPE
        SYNTAX      Integer32 (0..4294967295)
        UNITS       “bps”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This records the peak MAC throughput in the US.
               This is a function of the number of octets of MAC
               PDUs transmitted by the CPEs to BS over time."
        ::= { wranIfBsThroughputMetricsEntry 11 }

    wranIfBsPeakDsPhyThroughput   OBJECT-TYPE
        SYNTAX      Integer32 (0..4294967295)
        UNITS       “bps”
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This records the peak PHY throughput in the DS.
               This is a function of the number of burst octets
               (e.g., MAC PDU + PHY overhead) transmitted by the BS
               to CPEs over time."
        ::= { wranIfBsThroughputMetricsEntry 12 }

    wranIfBsPeakUsPhyThroughput   OBJECT-TYPE
        SYNTAX      Integer32 (0..4294967295)
        UNITS       “bps”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This records the peak PHY throughput in the US.
               This is a function of the number of burst octets
               (e.g., MAC PDU + PHY overhead) transmitted by the
               CPEs to BS over time."
        ::= { wranIfBsThroughputMetricsEntry 13 }

    wranIfBsAvgDsCellEdgeThroughput     OBJECT-TYPE
        SYNTAX      Integer32 (0..4294967295)
        UNITS       “bps”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This records the average MAC throughput in the DS
               transmitted with the most robust MCS. This is a
               function of the number of octets of MAC PDUs
               transmitted by the BS to the CPEs over time using
               QPSK."
        ::= { wranIfBsThroughputMetricsEntry 14 }

    wranIfBsAvgUsCellEdgeThroughput     OBJECT-TYPE
        SYNTAX      Integer32 (0..4294967295)
        UNITS       “bps”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This records the average MAC throughput in the US
               transmitted with the most robust MCS. This is a
               function of the number of octets of MAC PDUs
               transmitted by the CPEs to the BS over time using
               QPSK."
        ::= { wranIfBsThroughputMetricsEntry 15 }

    wranIfBsNetworkEntryMetricsTable    OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsNetworkEntryMetricsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB provides a table that contains latency
               (time) for network entry and re-entry. Network entry
               time is measured as the time in between receiving
               the first RNG-REQ from a CPE until the CPE has
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                received the REG-RSP. Network re-entry process is
                governed by the policies in (Policy) Table 234.
                This could required execution of the entire network
                entry process if the CPE is forced to re-initialize
                itself or it could only required execution of the
                CPE initialization procedure through the ranging
                process (see 7.14.2). There is one entry in the
                table, defined by wranIfBsNetworkEntryMetricsEntry."
        ::= { wranIfBsPm 5 }

wranIfBsNetworkEntryMetricsEntry    OBJECT-TYPE
        SYNTAX      wranIfBsNetworkEntryMetricsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "This object is a compound object that defines an
                 entry in wranIfBsNetworkEntryMetricsTable."
        INDEX { wranIfBsNetworkEntryMetricsIndex }
        ::= { wranIfBsNetworkEntryMetricsTable 1 }

wranIfBsNetworkEntryMetricsEntry    ::= SEQUENCE {
        wranIfBsNetworkEntryMetricsIndex    INTEGER,
        wranIfBsAvgNetworkEntryLatency      Integer32,
        wranIfBsMaxNetworkEntryLatency      Integer32,
        wranIfBsAvgNetworkReEntryLatency    Integer32,
        wranIfBsMaxNetworkReEntryLatency    Integer32,
        wranIfBsNumNetworkEntryAttempts     Integer32,
        wranIfBsNumNetworkReEntryAttempts   Integer32 }

wranIfBsNetworkEntryMetricsIndex    OBJECT-TYPE
        SYNTAX      INTEGER (1.. 1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Index of entry in this table, defaults to 1."
        ::= { wranIfBsNetworkEntryMetricsEntry 1 }

wranIfBsAvgNetworkEntryLatency      OBJECT-TYPE
        SYNTAX      Integer32 (1.. 3600000)
        UNITS       “milliseconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Average network entry latency, measured in milli-
                 seconds."
        ::= { wranIfBsNetworkEntryMetricsEntry 2 }

wranIfBsMaxNetworkEntryLatency      OBJECT-TYPE
        SYNTAX      Integer32 (1.. 3600000)
        UNITS       “milliseconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Maximum network entry latency, measured in milli-
                 seconds."
        ::= { wranIfBsNetworkEntryMetricsEntry 3 }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
wranIfBsAvgNetworkReEntryLatency    OBJECT-TYPE
      SYNTAX      Integer32 (1.. 3600000)
      UNITS       “milliseconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Average network re-entry latency, measure in milli-
             seconds."
      ::= { wranIfBsNetworkEntryMetricsEntry 4 }

wranIfBsMaxNetworkReEntryLatency    OBJECT-TYPE
      SYNTAX      Integer32 (1.. 3600000)
      UNITS       “milliseconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Average network re-entry latency, measure in milli-
             seconds."
      ::= { wranIfBsNetworkEntryMetricsEntry 5 }

wranIfBsNumNetworkEntryAttempts     OBJECT-TYPE
      SYNTAX      Integer32 (1.. 3600000)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Number of network entry attempts."
      ::= { wranIfBsNetworkEntryMetricsEntry 6 }

wranIfBsNumNetworkReEntryAttempts   OBJECT-TYPE
      SYNTAX      Integer32 (1.. 3600000)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Number of network re-entry attempts."
      ::= { wranIfBsNetworkEntryMetricsEntry 7 }

wranIfBsPacketErrorRateTable  OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfBsPacketErrorRateEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This MIB object contains information about packet
             error rate measurements. There is one entry in the
             table, defined by wranIfBsPacketErrorRateEntry."
      ::= { wranIfBsPm 6 }

wranIfBsPacketErrorRateEntry  OBJECT-TYPE
      SYNTAX      wranIfBsPacketErrorRateEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object is a compound object that defines an
             entry in wranIfBsPacketErrorRateTable."
      INDEX { wranIfBsPacketErrorRateIndex }
      ::= { wranIfBsPacketErrorRateTable 1 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranIfBsNetworkEntryMetricsEntry    ::= SEQUENCE {
      wranIfBsPacketErrorRateIndex        INTEGER,
      wranIfBsDsPacketsSent               Integer32,
      wranIfBsDsPacketsErrored            Integer32,
      wranIfBsDsPacketsErrorRate          INTEGER,
      wranIfBsUsPacketsSent               Integer32,
      wranIfBsUsPacketsErrored            Integer32,
      wranIfBsUsPacketsErrorRate          INTEGER }

wranIfBsPacketErrorRateIndex  OBJECT-TYPE
      SYNTAX      INTEGER (1.. 1)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index of entry in this table, defaults to 1."
      ::= { wranIfBsPacketErrorRateEntry 1 }

wranIfBsDsPacketsSent   OBJECT-TYPE
      SYNTAX      Integer32 (1.. 4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Total number of MAC SDUs that the BS has sent."
      ::= { wranIfBsPacketErrorRateEntry 2 }

wranIfBsDsPacketsErrored      OBJECT-TYPE
      SYNTAX      Integer32 (1.. 4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Total number of MAC SDUs, including ARQ blocks that
             have not been acknowledged."
      ::= { wranIfBsPacketErrorRateEntry 3 }

wranIfBsDsPacketsErrorRate    OBJECT-TYPE
      SYNTAX      Integer32 (1..4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "DS Packet error rate, as measured:
             wranIfBsPacketErrorRate = (wranIfBsDsPacketsErrored
             / wranIfBsDsPacketsSent) * 10000000, in units of
             1e-7."
      ::= { wranIfBsPacketErrorRateEntry 4 }

wranIfBsUsPacketsReceived     OBJECT-TYPE
      SYNTAX      Integer32 (1..4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Total number of MAC SDUs that the BS has received."
      ::= { wranIfBsPacketErrorRateEntry 5 }

wranIfBsUsPacketsErrored      OBJECT-TYPE
      SYNTAX      Integer32 (1.. 4294967295)
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Total number of MAC SDUs with CRC errors and/or ARQ
               blocks that required retransmission that have been
               received by BS."
        ::= { wranIfBsPacketErrorRateEntry 6 }

    wranIfBsUsPacketsErrorRate    OBJECT-TYPE
        SYNTAX      Integer32 (1.. 4294967295)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "US Packet error rate, as measured:
               wranIfBsUsPacketsErrorRate =
               (wranIfBsUsPacketsErrored /
               wranIfBsUsPacketsReceived) * 10000000, in unites of
               1e-7."
        ::= { wranIfBsPacketErrorRateEntry 7 }

    wranIfBsUserMetricsTable      OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfUserMetricsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB object provides a table to track the
               current status of users in the cell. There is one
               entry in the table, defined by
               wranIfUserMetricsEntry."
        ::= { wranIfBsPm 7 }

    wranIfUserMetricsEntry   OBJECT-TYPE
        SYNTAX      wranIfUserMetricsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object is a compound object that defines an
               entry in wranIfBsUserMetricsTable."
        INDEX { wranIfBsUserMetricsIndex }
        ::= { wranIfBsUserMetricsTable 1 }

    wranIfUserMetricsEntry  ::= SEQUENCE {
        wranIfBsUserMetricsIndex            INTEGER,
        wranIfBsNumActiveUsers              Integer32,
        wranIfBsNumTotalUsers               Integer32 }

    wranIfBsUserMetricsIndex      OBJECT-TYPE
        SYNTAX      INTEGER (1.. 1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in this table, defaults to 1."
        ::= { wranIfUserMetricsEntry 1 }

    wranIfBsNumActiveUsers        OBJECT-TYPE
        SYNTAX      INTEGER (0..512)
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Total number of users that have FIDs with active SFs
               on them."
        ::= { wranIfUserMetricsEntry 2 }

    wranIfBsNumTotalUsers         OBJECT-TYPE
        SYNTAX      INTEGER (0..512)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Total number of users that have completed
               registration (REG-REQ/RSP) process."
        ::= { wranIfUserMetricsEntry 3 }

    wranIfBsServiceFlowMetricsTable     OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsServiceFlowMetricsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB object provides a table to track metrics
               related to service flows. There is one entry in the
               table, defined by wranIfBsServiceFlowMetricsEntry."
        ::= { wranIfBsPm 8 }

    wranIfBsServiceFlowMetricsEntry     OBJECT-TYPE
        SYNTAX      wranIfBsServiceFlowMetricsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object is a compound object that defines an
               entry in wranIfBsServiceFlowMetricsTable."
        INDEX { wranIfBsServiceFlowMetricsIndex }
        ::= { wranIfBsServiceFlowMetricsTable 1 }

    wranIfBsServiceFlowMetricsEntry     ::= SEQUENCE {
        wranIfBsServiceFlowMetricsIndex     INTEGER,
        wranIfBsNumDsaReq                   Integer32,
        wranIfBsNumDsaReqSuccess            Integer32,
        wranIfBsDsaSuccessRate              INTEGER,
        wranIfBsNumDscReq                   Integer32,
        wranIfBsNumDscReqSuccess            Integer32,
        wranIfBsDscSuccessRate              INTEGER,
        wranIfBsNumDsdReq                   Integer32,
        wranIfBsNumDsdReqSuccess            Integer32,
        wranIfDsdSuccessRate                INTEGER,
        wranIfBsMaxActiveServiceFlow        Integer32,
        wranIfBsAvgActiveServiceFlow        Integer32,
        wranIfBsMaxProvisionedServiceFlow   Integer32,
        wranIfBsAvgProvisionedServiceFlow   Integer32,
        wranIfBsMaxDsServiceFlow            Integer32,
        wranIfBsMaxUsServiceFlow            Integer32,
        wranIfBsAvgDsServiceFlow            Integer32,
        wranIfBsAvgUsServiceFlow            Integer32,
        wranIfBsNumSfidAllocated            Integer32 }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
wranIfBsServiceFlowMetricsIndex     OBJECT-TYPE
      SYNTAX      INTEGER (1.. 1)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index of entry in this table, defaults to 1."
      ::= { wranIfBsServiceFlowMetricsEntry 1 }

wranIfBsNumDsaReq OBJECT-TYPE
      SYNTAX      Integer32 (1..4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Number of DSA-REQ counted during reporting period."
      ::= { wranIfBsServiceFlowMetricsEntry 2 }

wranIfBsNumDsaReqSuccess      OBJECT-TYPE
      SYNTAX      Integer32 (1..4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Number of successful SF activations counted during
             reporting period. A successful activation of SF is
             noted when a BS receives a DSA-RSP with a successful
             confirmation in response to a particular DSA-REQ."
      ::= { wranIfBsServiceFlowMetricsEntry 3 }

wranIfBsDsaSuccessRate  OBJECT-TYPE
      SYNTAX      INTEGER (0..100)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "wranIfBsDsaSuccessRate = ( wranIfBsNumDsaReqSuccess
             / wranIfBsNumDsaReq ) * 100."
      ::= { wranIfBsServiceFlowMetricsEntry 4 }

wranIfBsNumDscReq OBJECT-TYPE
      SYNTAX      Integer32 (1..4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Number of DSC-REQ counted during reporting period."
      ::= { wranIfBsServiceFlowMetricsEntry 5 }

wranIfBsNumDscReqSuccess      OBJECT-TYPE
      SYNTAX      Integer32 (1..4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Number of successful SF modifications counted during
             reporting period. A successful modification of SF is
             noted when a BS receives a DSC-RSP with a successful
             confirmation in response to a particular DSC-REQ."
      ::= { wranIfBsServiceFlowMetricsEntry 6 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranIfBsDscSuccessRate  OBJECT-TYPE
      SYNTAX      INTEGER (0..100)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "wranIfBsDscSuccessRate = ( wranIfBsNumDscReqSuccess
             / wranIfBsNumDscReq ) * 100."
      ::= { wranIfBsServiceFlowMetricsEntry 7 }

wranIfBsNumDsdReq OBJECT-TYPE
      SYNTAX      Integer32 (1..4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Number of DSD-REQ counted during reporting period."
      ::= { wranIfBsServiceFlowMetricsEntry 8 }

wranIfBsNumDsdReqSuccess      OBJECT-TYPE
      SYNTAX      Integer32 (1..4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Number of successful SF deletions counted during
             reporting period. A successful deletion of SF is
             noted when a BS receives a DSD-RSP with a successful
             confirmation in response to a particular DSD-REQ."
      ::= { wranIfBsServiceFlowMetricsEntry 9 }

wranIfBsDsdSuccessRate  OBJECT-TYPE
      SYNTAX      INTEGER (0..100)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "wranIfBsDsdSuccessRate = ( wranIfBsNumDsdReqSuccess
             / wranIfBsNumDsdReq ) * 100."
      ::= { wranIfBsServiceFlowMetricsEntry 10 }

wranIfBsMaxActiveServiceFlow  OBJECT-TYPE
      SYNTAX      Integer32 (1..4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Maximum number of service flows active during
             reporting period."
      ::= { wranIfBsServiceFlowMetricsEntry 11 }

wranIfBsAvgActiveServiceFlow  OBJECT-TYPE
      SYNTAX      Integer32 (1..4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Average number of service flows active during
             reporting period."
      ::= { wranIfBsServiceFlowMetricsEntry 12 }

wranIfBsMaxProvisionedServiceFlow   OBJECT-TYPE
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        SYNTAX      Integer32 (1.. 4294967295)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Maximum number of pre-provisioned service flows
               active during reporting period."
        ::= { wranIfBsServiceFlowMetricsEntry 13 }

    wranIfBsAvgProvisionedServiceFlow   OBJECT-TYPE
        SYNTAX      Integer32 (1.. 4294967295)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Average number of pre-provisioned service flows
               active during reporting period."
        ::= { wranIfBsServiceFlowMetricsEntry 14 }

    wranIfBsMaxDsServiceFlow      OBJECT-TYPE
        SYNTAX      Integer32 (1.. 4294967295)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Maximum number of DS service flows active during
               reporting period."
        ::= { wranIfBsServiceFlowMetricsEntry 15 }

    wranIfBsMaxUsServiceFlow      OBJECT-TYPE
        SYNTAX      Integer32 (1.. 4294967295)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Maximum number of US service flows active during
               reporting period."
        ::= { wranIfBsServiceFlowMetricsEntry 16 }

    wranIfBsAvgDsServiceFlow      OBJECT-TYPE
        SYNTAX      Integer32 (1.. 4294967295)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Average number of DS service flows active during
               reporting period."
        ::= { wranIfBsServiceFlowMetricsEntry 17 }

    wranIfBsAvgUsServiceFlow      OBJECT-TYPE
        SYNTAX      Integer32 (1.. 4294967295)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Average number of US service flows active during
               reporting period."
        ::= { wranIfBsServiceFlowMetricsEntry 18 }

    wranIfBsNumSfidAllocated      OBJECT-TYPE
        SYNTAX      Integer32 (1.. 4294967295)
        MAX-ACCESS  read-only
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        STATUS      current
        DESCRIPTION
              "Number of SFIDs allocated during reporting period."
        ::= { wranIfBsServiceFlowMetricsEntry 19 }

    wranIfBsArqMetricsTable OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfArqMetricsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB object provides a table to track metrics
               related to service flows. There is one entry in the
               table, defined by wranIfArqMetricsEntry."
        ::= { wranIfBsPm 9 }

    wranIfBsArqMetricsEntry OBJECT-TYPE
        SYNTAX      wranIfArqMetricsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object is a compound object that defines an
               entry in wranIfBsArqMetricsTable."
        INDEX { wranIfBsArqMetricsIndex }
        ::= { wranIfBsArqMetricsTable 1 }

    wranIfBsArqMetricsEntry ::= SEQUENCE {
        wranIfBsArqMetricsIndex             INTEGER,
        wranIfBsDsNumArqBlocks              Integer32,
        wranIfBsDsNumArqBlocksDropped       Integer32,
        wranIfBsDsNumArqBlockErrorRate      INTEGER,
        wranIfBsDsNumArqBlockReTx           Integer32,
        wranIfBsDsNumArqBlockEfficiency     INTEGER,
        wranIfBsUsNumArqBlocks              Integer32,
        wranIfBsUsNumArqBlocksDropped       Integer32,
        wranIfBsUsNumArqBlockErrorRate      INTEGER,
        wranIfBsUsNumArqBlockReTx           Integer32,
        wranIfBsUsNumArqBlockEfficiency     INTEGER }

    wranIfBsArqMetricsIndex OBJECT-TYPE
        SYNTAX      INTEGER (1.. 1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in this table, defaults to 1."
        ::= { wranIfBsArqMetricsEntry 1 }

    wranIfBsDsNumArqBlocks  OBJECT-TYPE
        SYNTAX      Integer32 (1.. 4294967295)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Total number of ARQ blocks, including
               retransmissions, that BS has sent during reporting
               period."
        ::= { wranIfBsArqMetricsEntry 2 }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
wranIfBsDsNumArqBlocksDropped OBJECT-TYPE
      SYNTAX      Integer32 (1.. 4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Total number of ARQ blocks that were dropped, due
             to unsuccessful attempts at retransmission."
      ::= { wranIfBsArqMetricsEntry 3 }

wranIfBsDsArqBlockErrorRate   OBJECT-TYPE
      SYNTAX      INTEGER (0..100)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "wranIfBsDsArqBlockErrorRate = (
             wranIfBsDsNumArqBlocksDropped / wranIfBsNumArqBlocks
             ) * 10000000, in units of 1e-7."
      ::= { wranIfBsArqMetricsEntry 4 }

wranIfBsDsNumArqBlockReTx     OBJECT-TYPE
      SYNTAX      Integer32 (1.. 4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Total number of ARQ blocks that were retransmitted."
      ::= { wranIfBsArqMetricsEntry 5 }

wranIfBsDsArqBlockEfficiency  OBJECT-TYPE
      SYNTAX      INTEGER (0..100)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "wranIfBsDsArqBlockEfficiency = (
             wranIfBsDsNumArqBlockReTx / wranIfBsDsNumArqBlocks )
             * 10000000, in units of 1e-7."
      ::= { wranIfBsArqMetricsEntry 6 }

wranIfBsUsNumArqBlocks  OBJECT-TYPE
      SYNTAX      Integer32 (1.. 4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Total number of ARQ blocks, including
             retransmissions, that BS has received during
             reporting period."
      ::= { wranIfBsArqMetricsEntry 7 }

wranIfBsUsNumArqBlocksDropped OBJECT-TYPE
      SYNTAX      Integer32 (1..4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Total number of US ARQ blocks that were dropped, due
             to unsuccessful attempts at retransmission."
      ::= { wranIfBsArqMetricsEntry 8 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranIfBsUsArqBlockErrorRate   OBJECT-TYPE
      SYNTAX      INTEGER (0..100)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "wranIfBsUsArqBlockErrorRate = (
             wranIfBsUsNumArqBlocksDropped /
             wranIfBsUsNumArqBlocks ) * 10000000, in units of 1e-
            7."
      ::= { wranIfBsArqMetricsEntry 9 }

wranIfBsUsNumArqBlockReTx     OBJECT-TYPE
      SYNTAX      Integer32 (1.. 4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Total number of US ARQ blocks that were
             retransmitted."
      ::= { wranIfBsArqMetricsEntry 10 }

wranIfBsUsArqBlockEfficiency  OBJECT-TYPE
      SYNTAX      INTEGER (0..100)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "wranIfBsUsArqBlockEfficiency = (
             wranIfBsUsNumArqBlockReTx / wranIfBsUsNumArqBlocks )
             * 10000000, in units of 1e-7."
      ::= { wranIfBsArqMetricsEntry 11 }

wranIfBsAuthenticationMetricsTable  OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfBsAuthenticationMetricsEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This MIB provides a table to track the number of
             authentication/encryption errors that occur. This
             table is made up of one entry, defined by
             wranIfBsAuthenticationMetricsEntry."
      ::= { wranIfBsPm 10 }

wranIfBsAuthenticationMetricsEntry  OBJECT-TYPE
      SYNTAX      wranIfBsAuthenticationMetricsEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object is a compound object that defines an
             entry in wranIfBsAuthenticationMetricsTable."
      INDEX { wranIfBsAuthenticationMetricsIndex }
      ::= { wranIfBsAuthenticationMetricsTable 1 }

wranIfBsAuthenticationMetricsEntry  ::= SEQUENCE {
      wranIfBsAuthenticationMetricsIndex  INTEGER,
      wranIfBsMgmtAuthErrors              Integer32,
      wranIfBsDataAuthErrors              Integer32,
      wranIfBsWiMicAuthErrors             Integer32,
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        wranIfBsDsNumArqBlockReTx           Integer32,
        wranIfBsDsNumArqBlockEfficiency     INTEGER,
        wranIfBsUsNumArqBlocks              Integer32,
        wranIfBsUsNumArqBlocksDropped       Integer32,
        wranIfBsUsNumArqBlockErrorRate      INTEGER,
        wranIfBsUsNumArqBlockReTx           Integer32,
        wranIfBsUsNumArqBlockEfficiency     INTEGER }

    wranIfBsAuthenticationMetricsIndex  OBJECT-TYPE
        SYNTAX      INTEGER (1.. 1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in this table, defaults to 1."
        ::= { wranIfBsAuthenticationMetricsEntry 1 }

    wranIfBsMgmtAuthErrors  OBJECT-TYPE
        SYNTAX      INTEGER (1..4294967295)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Current count of the number of management messages
               from CPEs that cannot be properly authenticated."
        ::= { wranIfBsAuthenticationMetricsEntry 2 }

    wranIfBsDataAuthErrors  OBJECT-TYPE
        SYNTAX      INTEGER (1..4294967295)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Current count of the number of data messages
               from CPEs that cannot be properly authenticated."
        ::= { wranIfBsAuthenticationMetricsEntry 3 }

    wranIfBsWiMicAuthErrors OBJECT-TYPE
        SYNTAX      INTEGER (1..4294967295)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Current count of the number of wireless microphones
               beacons (MSF1+MSF2+MSF3) that were not properly
               authenticated."
        ::= { wranIfBsAuthenticationMetricsEntry 4 }

    wranIfBsCbpAuthErrors   OBJECT-TYPE
        SYNTAX      INTEGER (1..4294967295)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Current count of the number of CBP bursts from
               neighboring WRANs that were not properly
               authenticated."
        ::= { wranIfBsAuthenticationMetricsEntry 5 }

    wranIfBsCoexistenceStatusTable      OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsCoexistenceStatusEntry
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB provides a table to track the on going
               coexistence (Frame Contention) transactions. This
               table is made up of multiple entries, one for each
               ongoing transaction. Each entry is defined by
               wranIfBsCoexistenceStatusEntry. If a Frame
               Contention Destination receives a FC-REQ from a
               source on a channel from which it already has a
               message, then the existing entry is updated."
        ::= { wranIfBsPm 11 }

  wranIfBsCoexistenceStatusEntry      OBJECT-TYPE
        SYNTAX      wranIfBsCoexistenceStatusEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object is a compound object that defines an
               entry in wranIfBsCoexistenceStatusTable."
        INDEX { wranIfBsCoexistenceStatusIndex }
        ::= { wranIfBsCoexistenceStatusTable 1 }

  wranIfBsCoexistenceStatusEntry      ::= SEQUENCE {
        wranIfBsCoexistenceStatusIndex          Intege32,
        wranIfBsContentionChannel               INTEGER,
        wranIfBsFCREQSourceID                   MacAddress,
        wranIfBsFrameContentionSeqNum           INTEGER,
        wranIfBsFrameContentionNumber           Integer32,
        wranIfBsContentionReqFrameIndexVector   BITS }

  wranIfBsCoexistenceStatusIndex      OBJECT-TYPE
        SYNTAX      Integer32 (1..4096)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in this table. At BS can conduct
               Frame Contention with at most 16 other BSs
               simultaneously on a given channel."
        ::= { wranIfBsCoexistenceStatusEntry 1 }

  wranIfBsContentionChannel     OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Channel # of channel that FC-REQ was received on
               (i.e., channel that is being contended for)."
        ::= { wranIfBsCoexistenceStatusEntry 2 }

  wranIfBsFCREQSourceID         OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "BS ID (MAC Address) of the transmitter of a FC-REQ
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                message in a CBP burst. This is pulled from the SCH
                data in the CBP MAC PDU header pulled from the CBP
                burst containing the FC-REQ."
        ::= { wranIfBsCoexistenceStatusEntry 3 }

    wranIfBsFrameContentionSeqNum OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Sequence # field of received FC-REQ message."
        ::= { wranIfBsCoexistenceStatusEntry 4 }

    wranIfBsFrameContentionNumber OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Value of the frame contention number (FCN) in FC-
               REQ."
        ::= { wranIfBsCoexistenceStatusEntry 5 }

    wranIfBsFrameContentionReqFrameIndexVector      OBJECT-TYPE
        SYNTAX      BITS { frame1(0), frame2(1),
                           frame3(2), frame4(3),
                           frame5(4), frame6(5),
                           frame7(6), frame8(7),
                           frame9(8), frame10(9),
                           frame11(10), frame12(11),
                           frame13(12), frame14(13),
                           frame15(14), frame16(15) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Bitmap index of data frames w/in a superframe that a
               Frame Contention Source is requesting, to be
               scheduled in the next superframe after the current
               one. A frame is selected if the Bit is set to 1 and
               is not selected when set to 0."
        ::= { wranIfBsCoexistenceStatusEntry 6 }

    wranIfBsCoexistenceSourceTable      OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsCoexistenceSourceEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB provides a table to track what neighbor BSs
               are attempting a coexistence (Frame Contention)
               transaction with a particular BS or have
               communicated other information (e.g.,
               Backup/Candidate channel list) via CBP. Each entry
               is defined by wranIfBsCoexistenceSourceEntry."
        ::= { wranIfBsPm 12 }

    wranIfBsCoexistenceSourceEntry      OBJECT-TYPE
        SYNTAX      wranIfBsCoexistenceSourceEntry
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object is a compound object that defines an
             entry in wranIfBsCoexistenceSourceTable."
      INDEX { wranIfBsCoexistenceSourceIndex }
      ::= { wranIfBsCoexistenceSourceTable 1 }

wranIfBsCoexistenceSourceEntry      ::= SEQUENCE {
      wranIfBsCoexistenceSourceIndex      Integer32,
      wranIfBsCBPSourceID                 MacAddress,
      wranIfBsSchDataIndex                INTEGER,
      wranIfBsSchData                     OCTET STRING }

wranIfBsCoexistenceSourceIndex      OBJECT-TYPE
      SYNTAX      Integer32 (1..4096)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index of entry in this table. At BS can conduct
             Frame Contention with at most 16 other BSs
             simultaneously on a given channel."
      ::= { wranIfBsCoexistenceSourceEntry 1 }

wranIfBsCBPSourceID     OBJECT-TYPE
      SYNTAX      MacAddress
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "BS ID of BS that sent CBP burst, obtained from SCH
             data in CBP MAC PDU header (see Table 1 and Table
             9)."
      ::= { wranIfBsCoexistenceSourceEntry 2 }

wranIfBsSchDataIndex    OBJECT-TYPE
      SYNTAX      INTEGER { FirstSeven(0),
                            DsUsSplit(1),
                            ScwScheduling(2),
                            InterFrameQP(4),
                            IntraFrameQP(8) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "SCH Data Index field of CBP MAC PDU header. It
             indicates the length of and indication of what SCH
             fields comprise the wranIfBsSchData contents. For
             example (see Table 8), when set to 0 wranIfBsSchData
             contains 11 octets and comprises the first
             seven parameters of the SCH."
      ::= { wranIfBsCoexistenceSourceEntry 3 }

wranIfBsSchData         OBJECT-TYPE
      SYNTAX      OCTET STRING (SIZE(wranIfBsSchDataIndex))
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                "SCH Data from CBP MAC PDU header. The length of this
                 field is governed by wranIfBsSchDataIndex."
          ::= { wranIfBsCoexistenceSourceEntry 4 }

    wranIfBsCoexistenceResourceListTable      OBJECT-TYPE
          SYNTAX
                SEQUENCE OF wranIfBsCoexistenceResourceListEntry
          MAX-ACCESS  not-accessible
          STATUS      current
          DESCRIPTION
                "This MIB provides a table to track the resources
                 being used by neighboring WRANs. This includes the
                 Backup/Candidate Lists being transmitted by
                 neighboring WRANs, as well as the DS/US split. This
                 table is made up of multiple entries defined by
                 wranIfBsCoexistenceResourceListEntry."
          ::= { wranIfBsPm 13 }

    wranIfBsCoexistenceResourceListEntry      OBJECT-TYPE
          SYNTAX      wranIfBsCoexistenceResourceListEntry
          MAX-ACCESS  not-accessible
          STATUS      current
          DESCRIPTION
                "This object is a compound object that defines an
                 entry in wranIfBsCoexistenceResourceListTable."
          INDEX { wranIfBsCoexistenceResourceListIndex }
          ::= { wranIfBsCoexistenceResourceListTable 1 }

    wranIfBsCoexistenceResourceListEntry      ::= SEQUENCE {
          wranIfBsCoexistenceResourceListIndex      Integer32,
          wranIfBsCoexistenceResourceID             MacAddress,
          wranIfBsSelfCoexistenceCapabilityIndicator
                                                    INTEGER,
          wranIfBsNumBackupChannels                 INTEGER,
          wranIfBsBackupChannelList                 OCTET STRING,
          wranIfBsCurrentDSUSSplit                  INTEGER,
          wranIfBsClaimedDSUSSplit                  INTEGER,
          wranIfBsDSUSChangeOffset                  INTEGER,
          wranIfBsFrameAllocationMap                BITS,
          wranIfBsScwCycleLength                    INTEGER,
          wranIfBsScwCycleOffset                    INTEGER,
          wranIfBsScwCycleFrameBitmap               BITS }

    wranIfBsCoexistenceResourceListIndex      OBJECT-TYPE
          SYNTAX      Integer32 (1..4096)
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Index of entry in this table. When set to 1,
                 refers to a BS's own coexistence resource
                 configuration."
          ::= { wranIfBsCoexistenceResourceListEntry 1 }

    wranIfBsCoexistenceResourceID OBJECT-TYPE
          SYNTAX      MacAddress
          MAX-ACCESS  read-only
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        STATUS      current
        DESCRIPTION
              "BS ID of BS that sent CBP burst, obtained from SCH
               data in CBP MAC PDU header (see Table 1 and Table
               9)."
        ::= { wranIfBsCoexistenceResourceListEntry 2 }

    wranIfBsSelfCoexistenceCapabilityIndicator      OBJECT-TYPE
        SYNTAX      INTEGER { noCapability(0),
                              onlySE(1),
                              SEAndFC(2) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Field within SCH Data field of CBP MAC PDU header
               that indicates what coexistence capabilities a BS
               supports. If this field is 0000, the remaining
               fields of this entry are null."
        ::= { wranIfBsCoexistenceResourceListEntry 3 }

    wranIfBsNumBackupChannels     OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Number of backup and candidate channels in the
               wranIfBsBackupChannelList."
        ::= { wranIfBsCoexistenceResourceListEntry 4 }

    wranIfBsBackupChannelList     OBJECT-TYPE
        SYNTAX      OCTET STRING (SIZE(wranIfBsNumBackupChannels))
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "This object is a vector, of length = 8 bits *
               wranIfBsBackupChannelList, that contains
               backup/candidate channel list received in a CBP
               burst from a neighbor WRAN."
        ::= { wranIfBsCoexistenceResourceListEntry 5 }

    wranIfBsCurrentDSUSSplit      OBJECT-TYPE
        SYNTAX      INTEGER (0..63)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Current US/DS split indicated in SCH data of CBP MAC
               PDU header received from neighbor WRAN."
        ::= { wranIfBsCoexistenceResourceListEntry 6 }

    wranIfBsClaimedDSUSSplit      OBJECT-TYPE
        SYNTAX      INTEGER (0..63)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Claimed US/DS split indicated in SCH data of CBP MAC
               PDU header received from neighbor WRAN."
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        ::= { wranIfBsCoexistenceResourceListEntry 7 }

    wranIfBsDSUSChangeOffset      OBJECT-TYPE
        SYNTAX      Integer32 (0..4095)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "DS/US Change Offset indicated in SCH data of CBP MAC
               PDU header received from neighbor WRAN."
        ::= { wranIfBsCoexistenceResourceListEntry 8 }

    wranIfBsFrameAllocationMap    OBJECT-TYPE
        SYNTAX      BITS { frame1(0), frame2(1),
                           frame3(2), frame4(3),
                           frame5(4), frame5(5),
                           frame7(6), frame8(7),
                           frame9(8), frame10(9),
                           frame11(10), frame12(11),
                           frame13(12), frame14(13),
                           frame15(14), frame16(15) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Indicates which frames in a superframe are allocated
               to the neighbor WRAN BS. A frame is allocated if the
               bit is set to 1 and unallocated if the bit is set to
               0."
        ::= { wranIfBsCoexistenceResourceListEntry 9 }

    wranIfBsScwCycleLength  OBJECT-TYPE
        SYNTAX      INTEGER { never(0), every1SF(1),
                              every2SF(2), every4SF(4),
                              every8SF(8), every16SF(16) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "SCW Cycle Length being applied by neighbor WRAN."
        ::= { wranIfBsCoexistenceResourceListEntry 10 }

    wranIfBsScwCycleOffset  OBJECT-TYPE
        SYNTAX      INTEGER { never(0), every1SF(1),
                              every2SF(2), every4SF(4),
                              every8SF(8), every16SF(16) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "SCW Cycle Offset being applied by neighbor WRAN."
        ::= { wranIfBsCoexistenceResourceListEntry 11 }

    wranIfBsScwCycleFrameBitmap   OBJECT-TYPE
        SYNTAX      BITS { frame1bit1(0), frame1bit2(1),
                           frame2bit1(2), frame2bit2(3),
                           frame3bit1(4), frame3bit2(5),
                           frame4bit1(6), frame4bit2(7),
                           frame5bit1(8), frame5bit2(9),
                           frame6bit1(10), frame6bit2(11),
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                        frame7bit1(12), frame7bit2(13),
                        frame8bit1(14), frame8bit2(15),
                        frame9bit1(16), frame9bit2(17),
                        frame10bit1(18), frame10bit2(19),
                        frame11bit1(20), frame11bit2(21),
                        frame12bit1(22), frame12bit2(23),
                        frame13bit1(24), frame13bit2(25),
                        frame14bit1(26), frame14bit2(27),
                        frame15bit1(28), frame15bit2(29),
                        frame16bit1(30), frame16bit2(31) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Valid within the context of a superframe, indicates
             for each frame if no SCW is setup (00), the BS has
             setup a reservation-based SCW for itself (11), a
             reservation-based SCW for a neighboring WRAN (10),
             or a contention-based SCW to be shared by
             neighboring WRANs (01). This is set in groups of two
             bits, e.g., BIT#0 & BIT#1 correspond to frame 1
             within the superframe."
      ::= { wranIfBsCoexistenceResourceListEntry 12 }

wranIfBsCoexistenceCurrentConfigTable     OBJECT-TYPE
      SYNTAX
            SEQUENCE OF wranIfBsCoexistenceCurrentConfigEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This MIB provides a table to track what frame
             allocation has been awarded to a frame contention
             winner and when the awarded resource will be
             released. It is made up of multiple entries, one for
             each channel that frame contention procedure was
             executed on, as defined in
             wranIfBsCoexistenceCurrentConfigEntry. When a frame
             contention winner is selected, the corresponding
             entries in wranIfBsCoexistenceCurrentConfigTable are
             removed."
      ::= { wranIfBsPm 14 }

wranIfBsCoexistenceCurrentConfigEntry     OBJECT-TYPE
      SYNTAX      wranIfBsCoexistenceCurrentConfigEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object is a compound object that defines an
             entry in wranIfBsCoexistenceCurrentConfigTable."
      INDEX { wranIfBsCoexistenceCurrentConfigIndex }
      ::= { wranIfBsCoexistenceCurrentConfigTable 1 }

wranIfBsCoexistenceCurrentConfigEntry     ::= SEQUENCE {
      wranIfBsCoexistenceCurrentConfigIndex     INTEGER,
      wranIfBsContentionChannel                 INTEGER,
      wranIfBsFrameContentionSourceID           MacAddress,
      wranIfBsAwardedSeqNum                     INTEGER,
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
      wranIfBsContentionRspFrameIndexVector     BITS,
      wranIfBsContentionRspFrameReleaseTime     INTEGER }

wranIfBsCoexistenceCurrentConfigIndex     OBJECT-TYPE
      SYNTAX      INTEGER (1..255)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index of entry in the table."
      ::= { wranIfBsCoexistenceCurrentConfigEntry 1 }

wranIfBsContentionChannel     OBJECT-TYPE
      SYNTAX      INTEGER (1..255)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Channel # of channel that frame contention was
             executed on."
      ::= { wranIfBsCoexistenceCurrentConfigEntry 2 }

wranIfBsFrameContentionSourceID     OBJECT-TYPE
      SYNTAX      MacAddress
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "BS ID of frame contention source that has won
             contention."
      ::= { wranIfBsCoexistenceCurrentConfigEntry 3 }

wranIfBsAwardedSeqNum   OBJECT-TYPE
      SYNTAX      INTEGER (1..255)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Sequence number from FC-REQ message of frame
             contention winner."
      ::= { wranIfBsCoexistenceCurrentConfigEntry 4 }

wranIfBsContentionRspFrameIndexVector     OBJECT-TYPE
      SYNTAX      BITS { frame1(0), frame2(1),
                         frame3(2), frame4(3),
                         frame5(4), frame5(5),
                         frame7(6), frame8(7),
                         frame9(8), frame10(9),
                         frame11(10), frame12(11),
                         frame13(12), frame14(13),
                         frame15(14), frame16(15) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "A bitmap containing the indexes of frames within the
             superframe that the Contention Source has won. When
             a frame is allocated to the contention source, it is
             set to 1. When a frame is not allocated, the
             corresponding bit is set to 0."
      ::= { wranIfBsCoexistenceCurrentConfigEntry 5 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
      wranIfBsContentionRspFrameReleaseTime     OBJECT-TYPE
            SYNTAX      INTEGER (1..255)
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                  "Starting from the next superframe, the number of
                   superframes after which the channel shall be
                   released by the frame contention destination BS."
            ::= { wranIfBsCoexistenceCurrentConfigEntry 6 }

-- wranIfBsPmMibGroups: This object helps define which MIB groups are
-- available within this module and which MIB objects are part of each
-- group.

      wranIfBsPmMibGroups           OBJECT IDENTIFIER
                                          ::= { wranIfBsPm 15 }
      wranIfBsPmConfigGroup         OBJECT IDENTIFIER
                                          ::= { wranIfBsPmMibGroups 1 }
      wranIfBsPmSignalPowerGroup    OBJECT IDENTIFIER
                                          ::= { wranIfBsPmMibGroups 2 }
      wranIfBsPmStartupGroup        OBJECT IDENTIFIER
                                          ::= { wranIfBsPmMibGroups 3 }
      wranIfBsPmThroughputGroup     OBJECT IDENTIFIER
                                          ::= { wranIfBsPmMibGroups 4 }
      wranIfBsPmNetEntryGroup       OBJECT IDENTIFIER
                                          ::= { wranIfBsPmMibGroups 5 }
      wranIfBsPmPktErrorGroup       OBJECT IDENTIFIER
                                          ::= { wranIfBsPmMibGroups 6 }
      wranIfBsPmUserGroup           OBJECT IDENTIFIER
                                          ::= { wranIfBsPmMibGroups 7 }
      wranIfBsPmServiceFlowGroup    OBJECT IDENTIFIER
                                          ::= { wranIfBsPmMibGroups 8 }
      wranIfBsPmArqGroup            OBJECT IDENTIFIER
                                          ::= { wranIfBsPmMibGroups 9 }
      wranIfBsPmAuthGroup           OBJECT IDENTIFIER
                                         ::= { wranIfBsPmMibGroups 10 }
      wranIfBsPmCoexStatusGroup     OBJECT IDENTIFIER
                                         ::= { wranIfBsPmMibGroups 11 }
      wranIfBsPmCoexSourceGroup     OBJECT IDENTIFIER
                                         ::= { wranIfBsPmMibGroups 12 }
      wranIfBsPmCoexResourceGroup   OBJECT IDENTIFIER
                                         ::= { wranIfBsPmMibGroups 13 }
      wranIfBsPmCoexConfigGroup     OBJECT IDENTIFIER
                                         ::= { wranIfBsPmMibGroups 14 }

      wranIfBsPmConfigGroup         OBJECT-GROUP
            OBJECTS     { wranIfBsPmConfigurationEntryIndex,
                          wranIfBsGranularityInterval,
                          wranIfBsCountersReportInterval,
                          wranIfBsPmMeasurementBitmap }
            STATUS      current
            DESCRIPTION
                  "This group contains objects configuration of
                   measurement records used in wranIfBsPm."
            ::= { wranIfBsPmMibGroups 1 }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
wranIfBsPmSignalPowerGroup          OBJECT-GROUP
      OBJECTS     { wranIfBsRssiCinrMetricsIndex,
                    wranIfBsCpeMacAddress,
                    wranIfBsChannelDirection,
                    wranIfBsChannelNumber,
                    wranIfBsStartFrame,
                    wranIfBsMeasurementDuration,
                    wranIfBsSignalReportType,
                    wranIfBsMeanCinrReport,
                    wranIfBsMeanRssiReport,
                    wranIfBsStdDevCinrReport,
                    wranIfBsStdDevRssiReport,
                    wranIfBsMaxEIRPReport,
                    wranIfBsPerScEIRPReport }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
             tracking CPE signal power measurements."
      ::= { wranIfBsPmMibGroups 2 }

wranIfBsPmStartupGroup        OBJECT-GROUP
      OBJECTS     { wranIfBsStartupMetricsIndex,
                    wranIfBsNumAuthAttempt,
                    wranIfBsNumAuthSuccess,
                    wranIfBsAuthSuccessRate,
                    wranIfBsNumRangingAttempt,
                    wranIfBsNumRangingSuccess,
                    wranIfBsRangingSuccessRate,
                    wranIfBsMeanCinrReport }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
             tracking CPE performance during network entry
             and re-entry."
      ::= { wranIfBsPmMibGroups 3 }

wranIfBsPmThroughputGroup           OBJECT-GROUP
      OBJECTS     { wranIfBsThroughputMetricsIndex,
                    wranIfBsAvgDsUserThroughput,
                    wranIfBsAvgUsUserThroughput,
                    wranIfBsAvgDsMacThroughput,
                    wranIfBsAvgUsMacThroughput,
                    wranIfBsAvgDsPhyThroughput,
                    wranIfBsAvgUsPhyThroughput,
                    wranIfBsPeakDsUserThroughput,
                    wranIfBsPeakUsUserThroughput,
                    wranIfBsPeakDsMacThroughput,
                    wranIfBsPeakUsMacThroughput,
                    wranIfBsPeakDsPhyThroughput,
                    wranIfBsPeakUsPhyThroughput,
                    wranIfBsAvgDsCellEdgeThroughput,
                    wranIfBsAvgUsCellEdgeThroughput }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                tracking CPE peak/average data rate."
        ::= { wranIfBsPmMibGroups 4 }

    wranIfBsPmNetEntryGroup       OBJECT-GROUP
        OBJECTS     { wranIfBsNetworkEntryMetricsIndex,
                      wranIfBsAvgNetworkEntryLatency,
                      wranIfBsMaxNetworkEntryLatency,
                      wranIfBsAvgNetworkReEntryLatency,
                      wranIfBsMaxNetworkReEntryLatency,
                      wranIfBsNumNetworkEntryAttempts,
                      wranIfBsNumNetworkReEntryAttempts }
        STATUS      current
        DESCRIPTION
              "This group contains objects related to
               tracking latency of network entry and re-entry
               for CPEs."
        ::= { wranIfBsPmMibGroups 5 }

    wranIfBsPmPktErrorGroup       OBJECT-GROUP
        OBJECTS     { wranIfBsPacketErrorRateIndex,
                      wranIfBsDsPacketsSent,
                      wranIfBsDsPacketsErrored,
                      wranIfBsDsPacketsErrorRate,
                      wranIfBsUsPacketsSent,
                      wranIfBsUsPacketsErrored,
                      wranIfBsUsPacketsErrorRate }
        STATUS      current
        DESCRIPTION
              "This group contains objects related to
               tracking packet error rate measurements."
        ::= { wranIfBsPmMibGroups 6 }

    wranIfBsPmUserGroup           OBJECT-GROUP
        OBJECTS     { wranIfBsUserMetricsIndex,
                      wranIfBsNumActiveUsers,
                      wranIfBsNumTotalUsers }
        STATUS      current
        DESCRIPTION
              "This group contains objects related to
               tracking status of users in the cell."
        ::= { wranIfBsPmMibGroups 7 }

    wranIfBsPmServiceFlowGroup          OBJECT-GROUP
        OBJECTS     { wranIfBsServiceFlowMetricsIndex,
                      wranIfBsNumDsaReq,
                      wranIfBsNumDsaReqSuccess,
                      wranIfBsDsaSuccessRate,
                      wranIfBsNumDscReq,
                      wranIfBsNumDscReqSuccess,
                      wranIfBsDscSucessRate,
                      wranIfBsNumDsdReq,
                      wranIfBsNumDsdReqSuccess,
                      wranIfDsdSuccessRate,
                      wranIfBsMaxActiveServiceFlow,
                      wranIfBsAvgActiveServiceFlow,
                      wranIfBsMaxProvisionedServiceFlow,
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                    wranIfBsAvgProvisionedServiceFlow,
                    wranIfBsMaxDsServiceFlow,
                    wranIfBsMaxUsServiceFlow,
                    wranIfBsAvgDsServiceFlow,
                    wranIfBsAvgUsServiceFlow,
                    wranIfBsNumSfidAllocated }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
             tracking service flow metrics."
      ::= { wranIfBsPmMibGroups 8 }

wranIfBsPmArqGroup            OBJECT-GROUP
      OBJECTS     { wranIfBsArqMetricsIndex,
                    wranIfBsDsNumArqBlocks,
                    wranIfBsDsNumArqBlocksDropped,
                    wranIfBsDsNumArqBlockErrorRate,
                    wranIfBsDsNumArqBlockReTx,
                    wranIfBsDsNumArqBlockEfficiency,
                    wranIfBsUsNumArqBlocks,
                    wranIfBsUsNumArqBlocksDropped,
                    wranIfBsUsNumArqBlockErrorRate,
                    wranIfBsUsNumArqBlockReTx,
                    wranIfBsUsNumArqBlockEfficiency }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
             tracking ARQ performance."
      ::= { wranIfBsPmMibGroups 9 }

wranIfBsPmAuthGroup           OBJECT-GROUP
      OBJECTS     { wranIfBsAuthenticationMetricsIndex,
                    wranIfBsMgmtAuthErrors,
                    wranIfBsDataAuthErrors,
                    wranIfBsWiMicAuthErrors,
                    wranIfBsDsNumArqBlockReTx,
                    wranIfBsDsNumArqBlockEfficiency,
                    wranIfBsUsNumArqBlocks,
                    wranIfBsUsNumArqBlocksDropped,
                    wranIfBsUsNumArqBlockErrorRate,
                    wranIfBsUsNumArqBlockReTx,
                    wranIfBsUsNumArqBlockEfficiency }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
            tracking the number of
            authentication/encryption errors that occur."
      ::= { wranIfBsPmMibGroups 10 }

wranIfBsPmCoexStatusGroup          OBJECT-GROUP
      OBJECTS     { wranIfBsCoexistenceStatusIndex,
                    wranIfBsContentionChannel,
                    wranIfBsFCREQSourceID,
                    wranIfBsFrameContentionSeqNum,
                    wranIfBsFrameContentionNumber,
                    wranIfBsContentionReqFrameIndexVector }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
            tracking the status of on going coexistence (Frame
            Contention) transactions."
      ::= { wranIfBsPmMibGroups 11 }

wranIfBsPmCoexSourceGroup           OBJECT-GROUP
      OBJECTS     { wranIfBsCoexistenceSourceIndex,
                    wranIfBsCBPSourceID,
                    wranIfBsSchDataIndex,
                    wranIfBsSchData }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
            tracking which neighbor BSs are attempting
            a coexistence (Frame Contention) transaction."
      ::= { wranIfBsPmMibGroups 12 }

wranIfBsPmCoexResourceGroup         OBJECT-GROUP
      OBJECTS     { wranIfBsCoexistenceResourceListIndex,
                    wranIfBsCoexistenceResourceID,
                    wranIfBsSelfCoexistenceCapabilityIndicator,
                    wranIfBsNumBackupChannels,
                    wranIfBsBackupChannelList,
                    wranIfBsCurrentDSUSSplit,
                    wranIfBsClaimedDSUSSplit,
                    wranIfBsDSUSChangeOffset,
                    wranfBsFrameAllocationMap,
                    wranIfBsScwCycleLength,
                    wranIfBsScwCycleOffset,
                    wranIfBsScwCycleFrameBitmap }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
            tracking what resources are used by
            neighboring WRANs."
      ::= { wranIfBsPmMibGroups 13 }

wranIfBsPmCoexConfigGroup           OBJECT-GROUP
      OBJECTS     { wranIfBsCoexistenceCurrentConfigIndex,
                    wranIfBsContentionChannel,
                    wranIfBsFrameContentionSourceID,
                    wranIfBsAwardedSeqNum,
                    wranIfBsContentionRspFrameIndexVector,
                    wranIfBsContentionRspFrameReleaseTime }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
            tracking what resources have been
            allocated to neighboring WRANs during
            coexistence (Frame Contention) transactions."
      ::= { wranIfBsPmMibGroups 14 }


wranIfBsPmMibCompliance MODULE-COMPLIANCE
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
            STATUS      current
            DESCRIPTION
                  "MIB objects that are optional and mandatory for
                   wranIfBsPm compliance."
            MODULE      wranIfBsCm
            MANDATORY-GROUPS  { wranIfBsPmConfigGroup }
            -- OPTIONAL-GROUPS      { wranIfBsPmSignalPowerGroup,
                                      wranIfBsPmStartupGroup,
                                      wranIfBsPmThroughputGroup,
                                      wranIfBsPmNetEntryGroup,
                                      wranIfBsPmPktErrorGroup,
                                      wranIfBsPmUserGroup,
                                      wranIfBsPmServiceFlowGroup,
                                      wranIfBsPmArqGroup,
                                      wranIfBsPmAuthGroup,
                                      wranIfBsPmCoexStatusGroup,
                                      wranIfBsPmCoexSourceGroup,
                                      wranIfBsPmCoexResourceGroup,
                                      wranIfBsPmCoexConfigGroup }
            ::= { wranIfBsPm 16 }

-- wranIfBsScm: This MIB group has objects related to security
-- management.

      wranIfBsCpeScmAuthStatusTable
                              OBJECT IDENTIFIER ::= { wranIfBsScm 1 }
      wranIfBsCpeScmSaConfigTable
                              OBJECT IDENTIFIER ::= { wranIfBsScm 2 }
      wranIfBsCpeTekRefreshTable
                              OBJECT IDENTIFIER ::= { wranIfBsScm 3 }
      wranIfBsCBPAuthCACertTable
                              OBJECT IDENTIFIER ::= { wranIfBsScm 4 }
      wranIfBsCBPAuthBsImplicitCertTable
                              OBJECT IDENTIFIER ::= { wranIfBsScm 5 }
      wranIfBsWiMicAuthCertTable
                              OBJECT IDENTIFIER ::= { wranIfBsScm 6 }
      wranIfBsPmMibGroups
                              OBJECT IDENTIFIER ::= { wranIfBsScm 7 }
      wranIfBsScmMibCompliance
                              OBJECT IDENTIFIER ::= { wranIfBsScm 8 }

      wranIfBsCpeScmAuthStatusTable OBJECT-TYPE
            SYNTAX
                  SEQUENCE OF wranIfBsCpeScmAuthStatusEntry
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                  "This object provides a table that stores information
                   regarding the current state of the CPE's
                   authentication state machine. This table is stored
                   on each CPE and made of one entry, defined by
                   wranIfBsCpeScmAuthStatusEntry."
            ::= { wranIfBsScm 1 }

      wranIfBsCpeScmAuthStatusEntry OBJECT-TYPE
            SYNTAX      wranIfBsCpeScmAuthStatusEntry
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object is a compound object that defines an
               entry in wranIfBsCpeScmAuthStatusTable."
        INDEX { wranIfBsCpeAuthStatusIndex }
        ::= { wranIfBsCpeScmAuthStatusTable 1 }

  wranIfBsCpeScmAuthStatusEntry ::= SEQUENCE {
        wranIfBsCpeAuthStatusIndex                INTEGER,
        wranIfBsCpeScmAuthStatus                  INTEGER,
        wranIfBsCpeScmAuthRecentEvent             MacAddress,
        wranIfBsCpeScmNumAuthAttempts             INTEGER,
        wranIfBsCpeAuthRecentMsgSize              Integer32,
        wranIfBsCpeScmAuthRecentMsg               OCTET STRING,
        wranIfBsCpeScmAuthEapAuthTimerExpiration  Integer32,
        wranIfBsCpeAuthGraceTimer1                Integer32,
        wranIfBsCepAuthGraceTimer2                Integer32,
        wranIfBsCpeScmAk1Lifetime                 Integer32,
        wranIfBsCpeScmAk2Lifetime                 Integer32,
        wranIfBsCpeScmConfigRequestSize           Integer32,
        wranIfBsCpeScmConfigRequest               OCTET STRING,
        wranIfBsCpeScmConfigReplySize             Integer32,
        wranIfBsCpeScmConfigReply                 OCTET STRING }

  wranIfBsCpeAuthStatusIndex    OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in the table."
        ::= { wranIfBsCpeScmAuthStatusEntry 1 }

  wranIfBsCpeScmAuthStatus      OBJECT-TYPE
        SYNTAX      INTEGER { idle(0), notAuthenticated(1),
                              reAuthWait(2), authenticated(3) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Current state of CPE's authentication state machine
               (see 8.2.2.1)."
        ::= { wranIfBsCpeScmAuthStatusEntry 2 }

  wranIfBsCpeScmAuthRecentEvent OBJECT-TYPE
        SYNTAX      INTEGER { startAuth(0), eapTimeout(1),
                              eapFailure(2), eapRetryExhaustion(3),
                              eapSuccess(4), reAuthNeeded(5),
                              authGraceTimeout(6) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Indication of most recent event (see 8.2.2.4) that
               has occurred in the ASM."
        ::= { wranIfBsCpeScmAuthStatusEntry 3 }

  wranIfBsCpeScmNumAuthAttempts OBJECT-TYPE
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        SYNTAX      INTEGER (1..11)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Current # of EAP authentication attempts."
        ::= { wranIfBsCpeScmAuthStatusEntry 4 }

    wranIfBsCpeAuthRecentMsgSize  OBJECT-TYPE
        SYNTAX      Integer32 (1..65535)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Size of wranIfBsCpeScmAuthRecentMsg in octets."
        ::= { wranIfBsCpeScmAuthStatusEntry 5 }

    wranIfBsCpeAuthRecentMsg      OBJECT-TYPE
        SYNTAX
              OCTETS STRING (SIZE(wranIfCpeAuthRecentMsgSize))
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Contents of most recent authentication message,
               either EAP-Start or EAP-Transfer."
        ::= { wranIfBsCpeScmAuthStatusEntry 6 }

    wranIfBsCpeScmAuthEapAuthTimerExpiration  OBJECT-TYPE
        SYNTAX      Integer32 (300..3024000)
        UNITS       “seconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Contents of most recent authentication message,
               either EAP-Start or EAP-Transfer."
        ::= { wranIfBsCpeScmAuthStatusEntry 7 }

    wranIfBsCpeScmAuthGraceTimer1 OBJECT-TYPE
        SYNTAX      Integer32 (1..3024000)
        UNITS       “seconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Indication of when Authentication Grace timer for
               current (active) AK will expire."
        ::= { wranIfBsCpeScmAuthStatusEntry 8 }

    wranIfBsCpeScmAuthGraceTimer2 OBJECT-TYPE
        SYNTAX      Integer32 (1..3024000)
        UNITS       “seconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Indication of when Authentication Grace timer for
               second generation (non-active) AK will expire."
        ::= { wranIfBsCpeScmAuthStatusEntry 9 }

    wranIfBsCpeScmAk1Lifetime     OBJECT-TYPE
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        SYNTAX      Integer32 (1..6048000)
        UNITS       “seconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Remaining lifetime for current (active) AK."
        ::= { wranIfBsCpeScmAuthStatusEntry 10 }

wranIfBsCpeScmAk2Lifetime     OBJECT-TYPE
        SYNTAX      Integer32 (1..6048000)
        UNITS       “seconds”
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Remaining lifetime for second generation (non-
               active) AK."
        ::= { wranIfBsCpeScmAuthStatusEntry 11 }

wranIfBsCpeScmConfigRequestSize     OBJECT-TYPE
        SYNTAX      Integer32 (1..65535)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Size of wranIfBsCpeScmConfigRequest in octets."
        ::= { wranIfBsCpeScmAuthStatusEntry 12 }

wranIfBsCpeScmConfigRequest   OBJECT-TYPE
        SYNTAX
              OCTETS STRING (SIZE(wranIfBsCpeScmConfigRequestSize))
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Contents of SCM configuration request (see Table
               187) sent by CPE, upon initial authentication or re-
               authentication, to AAA server."
        ::= { wranIfBsCpeScmAuthStatusEntry 13 }

wranIfBsCpeScmConfigReplySize OBJECT-TYPE
        SYNTAX      Integer32 (1..65535)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Size of wranIfBsCpeScmConfigReply in octets."
        ::= { wranIfBsCpeScmAuthStatusEntry 14 }

wranIfBsCpeScmConfigReply     OBJECT-TYPE
        SYNTAX
              OCTETS STRING (SIZE(wranIfBsCpeScmConfigReplySize))
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Contents of SCM configuration reply (see Table
               188) sent by AAA server, upon confirmation of
               initial authentication or re-authentication, to
               CPE."
        ::= { wranIfBsCpeScmAuthStatusEntry 15 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranIfBsCpeScmSaConfigTable   OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfBsCpeScmConfigEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object provides a table that provides the
             configuration of the SA attributes that are related
             to SAs configured on each CPE. This table is
             maintained on each CPE as well as on the BS. On the
             BS, this table represents the configuration of SAs
             for all CPEs under its control. On the CPE, this
             table is made up of entry for each SA that a CPE
             supports. Each entry is defined by
             wranIfBsCpeScmSaConfigEntry."
      ::= { wranIfBsScm 2 }

wranIfBsCpeScmSaConfigEntry   OBJECT-TYPE
      SYNTAX      wranIfBsCpeScmSaConfigEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object is a compound object that defines an
             entry in wranIfBsCpeScmSaConfigTable."
      INDEX { wranIfBsCpeScmSaConfigIndex }
      ::= { wranIfBsCpeScmSaConfigTable 1 }

wranIfBsCpeScmSaConfigEntry  ::= SEQUENCE {
      wranIfBsCpeScmSaConfigIndex               Integer32,
      wranIfBsCpeMacAddress                     MacAddress,
      wranIfBsCpeSaid                           Integer32,
      wranIfBsCpeSaType                         INTEGER,
      wranIfBsCpeCryptoSuiteListSize            INTEGER,
      wranIfBsCpeCryptoSuiteList                OCTET STRING,
      wranIfBsCpeActiveTekSequenceNumber        INTEGER,
      wranIfBsCpeActiveTekLifetime              Integer32,
      wranIfBsCpeActiveTekPn                    Integer32,
      wranIfBsCpeActiveTekExpireTime            DateAndTime,
      wranIfBsCpeNonActiveTekSequenceNumber     INTEGER,
      wranIfBsCpeNonActiveTekLifetime           Integer32,
      wranIfBsCpeNonActiveTekPn                 Integer32,
      wranIfBsCpeNonActiveTekExpireTime         DateAndTime }

wranIfBsCpeScmSaConfigIndex   OBJECT-TYPE
      SYNTAX      Integer32 (1..65535)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index of entry in the table."
      ::= { wranIfBsCpeScmSaConfigEntry 1 }

wranIfBsCpeMacAddress   OBJECT-TYPE
      SYNTAX      MacAddress
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
            "MAC address of CPE."
      ::= { wranIfBsCpeScmSaConfigEntry 2 }

wranIfBsCpeSaid   OBJECT-TYPE
      SYNTAX      Integer32 (1..65535)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "SAID of SA that this entry refers to."
      ::= { wranIfBsCpeScmSaConfigEntry 3 }

wranIfBsCpeSaType OBJECT-TYPE
      SYNTAX      INTEGER { null(0), primary(1),
                            secondary(2), group(3) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Type of SA, either Null, Primary, Secondary, or
             Group."
      ::= { wranIfBsCpeScmSaConfigEntry 4 }

wranIfBsCpeCryptoSuiteListSize      OBJECT-TYPE
      SYNTAX      INTEGER (1..255)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Number of items in wranIfBsCpeCryptoSuiteList."
      ::= { wranIfBsCpeScmSaConfigEntry 5 }

wranIfBsCpeCryptoSuiteList  OBJECT-TYPE
      SYNTAX
            OCTET STRING (SIZE(wranIfBsCpeCryptoSuiteListSize))
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "This object provides a list that describes the
             cryptographic suites that the CPE supports for this
             particular SA. The complete list of suites is
             provided in Table 193."
      ::= { wranIfBsCpeScmSaConfigEntry 6 }

wranIfBsCpeActiveTekSequenceNumber  OBJECT-TYPE
      SYNTAX      INTEGER (0..3)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "The EKS value for the current (active) generation of
             the two TEKs that are configured for this SA."
      ::= { wranIfBsCpeScmSaConfigEntry 7 }

wranIfBsCpeActiveTekLifetime  OBJECT-TYPE
      SYNTAX      Integer32 (0..604800)
      UNITS       “seconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
            "The remaining lifetime, in units of time (e.g.,
             seconds), for the current (active) generation of the
             two TEKs that are configured for this SA."
      ::= { wranIfBsCpeScmSaConfigEntry 8 }

wranIfBsCpeActiveTekPn  OBJECT-TYPE
      SYNTAX      Integer32 (0..16777216)
      UNITS       “seconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Current value of the PN counter for the current
             (active) generation of the two TEKs that are
             configured for this SA."
      ::= { wranIfBsCpeScmSaConfigEntry 9 }

wranIfBsCpeActiveTekExpireTime      OBJECT-TYPE
      SYNTAX      DateAndTime
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Time at which current (active) generation of the two
             TEKs configured for an SA will expire. This time is
             calculated as a function of the (Reception Time of
             Key Reply with Active Tek) +
             (wranIfBsCpeActiveTekLifetime)."
      ::= { wranIfBsCpeScmSaConfigEntry 10 }

wranIfBsCpeNonActiveTekSequenceNumber     OBJECT-TYPE
      SYNTAX      INTEGER (0..3)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "The EKS value for the second (non-active) generation
             of the two TEKs that are configured for this SA."
      ::= { wranIfBsCpeScmSaConfigEntry 11 }

wranIfBsCpeNonActiveTekLifetime     OBJECT-TYPE
      SYNTAX      Integer32 (0..604800)
      UNITS       “seconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "The remaining lifetime, in units of time (e.g.,
             seconds), for the second (non-active) generation of
             the two TEKs that are configured for this SA."
      ::= { wranIfBsCpeScmSaConfigEntry 12 }

wranIfBsCpeNonActiveTekPn     OBJECT-TYPE
      SYNTAX      Integer32 (0..16777216)
      UNITS       “seconds”
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Current value of the PN counter for the second
             (non-active) generation of the two TEKs that are
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                configured for this SA."
        ::= { wranIfBsCpeScmSaConfigEntry 13 }

    wranIfBsCpeNonActiveTekExpireTime   OBJECT-TYPE
          SYNTAX      DateAndTime
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Time at which current (active) generation of the two
                 TEKs configured for an SA will expire. This time is
                 calculated as a function of the (Reception Time of
                 Key Reply with Non-Active Tek) +
                 (wranIfBsCpeNonActiveTekLifetime)."
          ::= { wranIfBsCpeScmSaConfigEntry 14 }

    wranIfBsCpeTekRefreshTable    OBJECT-TYPE
          SYNTAX      SEQUENCE OF wranIfBsCpeTekRefreshEntry
          MAX-ACCESS  not-accessible
          STATUS      current
          DESCRIPTION
                "This MIB object provides a table to track
                 information related to ongoing Key-Request
                 transactions. This table has one entry for each
                 current SCM Key-Request transaction. Each entry is
                 defined by wranIfBsCpeTekRefreshEntry."
          ::= { wranIfBsScm 3 }

    wranIfBsCpeTekRefreshEntry    OBJECT-TYPE
          SYNTAX      wranIfBsCpeTekRefreshEntry
          MAX-ACCESS  not-accessible
          STATUS      current
          DESCRIPTION
                "This object is a compound object that defines an
                 entry in wranIfBsCpeTekRefreshTable."
          INDEX { wranIfBsCpeTekRefreshIndex }
          ::= { wranIfBsCpeTekRefreshTable 1 }

    wranIfBsCpeTekRefreshEntry    ::= SEQUENCE {
          wranIfBsCpeTekRefreshIndex                Integer32,
          wranIfBsCpeScmReqId                       Integer32,
          wranIfBsCpeScmKeyReqKeySeqNum             INTEGER,
          wranIfBsCpeScmKeyReqSaid                  Integer32,
          wranIfBsCpeScmKeyReqGroupKeyIndicator     INTEGER,
          wranIfBsCpeScmKeyReqCpeRandom             Counter64 }

    wranIfBsCpeTekRefreshIndex    OBJECT-TYPE
          SYNTAX      Integer32 (1..131070)
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Index of entry in the table."
          ::= { wranIfBsCpeTekRefreshEntry 1 }

    wranIfBsCpeScmReqId     OBJECT-TYPE
          SYNTAX      INTEGER (0..65535)
          MAX-ACCESS  read-only
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        STATUS      current
        DESCRIPTION
              "Value of Transaction ID field of SCM REQ that
               carried the corresponding Key-Request message (see
               Table 160)."
        ::= { wranIfBsCpeTekRefreshEntry 2 }

    wranIfBsCpeScmKeyReqKeySeqNum OBJECT-TYPE
        SYNTAX      INTEGER (0..15)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Key Sequence Number of Key-Request message (see
               Table 165)."
        ::= { wranIfBsCpeTekRefreshEntry 3 }

    wranIfBsCpeScmKeyReqSaid      OBJECT-TYPE
        SYNTAX      Integer32 (1..65535)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Key Sequence Number of Key-Request message (see
               Table 165)."
        ::= { wranIfBsCpeTekRefreshEntry 4 }

    wranIfBsCpeScmKeyReqGroupKeyIndicator     OBJECT-TYPE
        SYNTAX      INTEGER { unicastSA(0), groupSA(1) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Indication of whether Key-Request was for a
               GSA."
        ::= { wranIfBsCpeTekRefreshEntry 5 }

    wranIfBsCpeScmKeyReqCpeRandom OBJECT-TYPE
        SYNTAX      Counter64 (0..18446744073709551615)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Random number generated by CPE and sent in the Key-
               Request."
        ::= { wranIfBsCpeTekRefreshEntry 6 }


    wranIfBsCBPAuthCACertTable    OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsCBPAuthCACertEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object provides a table to CA root certificates
               (see 8.6.2.3) used to validate CBP BS implicit
               certificates. There will be one entry for each CA
               for which a root certificate is installed. Each
               entry is defined by wranIfBsCBPAuthCACertEntry."
        ::= { wranIfBsScm 4 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranIfBsCBPAuthCACertEntry    OBJECT-TYPE
      SYNTAX      wranIfBsCBPAuthCACertEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object is a compound object that defines an
             entry in wranIfBsCBPAuthCACertTable."
      INDEX { wranIfBsCBPAuthCACertIndex }
      ::= { wranIfBsCBPAuthCACertTable 1 }

wranIfBsCBPAuthCACertEntry    ::= SEQUENCE {
      wranIfBsCBPAuthCACertIndex                  INTEGER,
      wranIfBsCBPAuthCACertCAID                   INTEGER,
      wranIfBsCBPAuthCACertKeyID                  Integer32,
      wranIfBsCBPAuthCACertKeyValidityDate        DateAndTime,
      wranIfBsCBPAuthCACertKeyValidityTimePeriod  INTEGER,
      wranIfBsCBPAuthCACertVersion                INTEGER,
      wranIfBsCBPAuthCACertECDomainParameters     INTEGER,
      wranIfBsCBPAuthCACertCAPubKrdSize           Integer32,
      wranIfBsCBPAuthCACertCAPubKrd               OCTET STRING }

wranIfBsCBPAuthCACertIndex    OBJECT-TYPE
      SYNTAX      INTEGER (1..255)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index of entry in the table."
      ::= { wranIfBsCBPAuthCACertEntry 1 }

wranIfBsCBPAuthCACertCAID    OBJECT-TYPE
      SYNTAX      INTEGER (1..255)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "CA ID, identifier of CA in CA root certificate."
      ::= { wranIfBsCBPAuthCACertEntry 2 }

wranIfBsCBPAuthCACertKeyID    OBJECT-TYPE
      SYNTAX      Integer32 (1..512)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Key ID, identifier of assigned of public key
             reconstruction data in CA root certificate."
      ::= { wranIfBsCBPAuthCACertEntry 3 }

wranIfBsCBPAuthCACertKeyValidityDate      OBJECT-TYPE
      SYNTAX      DateAndTime
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Key Validity Date (Not Before), date/time at which
             CA root certificate becomes valid."
      ::= { wranIfBsCBPAuthCACertEntry 4 }

wranIfBsCBPAuthCACertKeyValidityTimePeriod      OBJECT-TYPE
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        SYNTAX      INTEGER (1..128)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Key Validity Time Period, length of time from Key
               Validity Date (Not Before) in 6-month increments,
               during which CA root certificate is valid."
        ::= { wranIfBsCBPAuthCACertEntry 5 }

  wranIfBsCBPAuthCACertVersion  OBJECT-TYPE
        SYNTAX      INTEGER (1..64)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Version of CBP Authentication being applied that CA
               root certificate supports."
        ::= { wranIfBsCBPAuthCACertEntry 6 }

  wranIfBsCBPAuthCACertECDomainParameters   OBJECT-TYPE
        SYNTAX      INTEGER (0..15)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Indication of which EC Domain parameters are
               associated with this CA root certificate (see Table
               197)."
        ::= { wranIfBsCBPAuthCACertEntry 7 }

  wranIfBsCBPAuthCACertCAPubKrdSize   OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Size of wranIfBsCBPAuthCACertCAPubKrd in octets."
        DEFVAL { 31 }
        ::= { wranIfBsCBPAuthCACertEntry 8 }

  wranIfBsCBPAuthCACertCAPubKrd OBJECT-TYPE
        SYNTAX
              OCTET STRING (SIZE(wranIfBsCBPAuthCACertCAPubKrdSize))
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Public Key Reconstruction Data that can be used to
               generate the public key associated with CA Root
               certificate."
        ::= { wranIfBsCBPAuthCACertEntry 9 }

  wranIfBsCBPAuthBsImplicitCertTable  OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsCBPAuthBsImplicitCertEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object provides a table to store BS implicit
               certificates for neighbor WRANs that use CBP
               authentication. There will be one entry for each BS
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                whose implicit certificate is installed (via this
                object) on the BS or received by CERT-REQ/RSP. A BS
                make keep an entry for its own implicit certificate
                in this object. Each is defined
                wranIfBsCBPAuthBsImplicitCertEntry."
        ::= { wranIfBsScm 5 }

    wranIfBsCBPAuthBsImplicitCertEntry  OBJECT-TYPE
          SYNTAX      wranIfBsCBPAuthBsImplicitCertEntry
          MAX-ACCESS  not-accessible
          STATUS      current
          DESCRIPTION
                "This object is a compound object that defines an
                 entry in wranIfBsCBPAuthBsImplicitCertTable."
          INDEX { wranIfBsCBPAuthBsImplicitCertIndex }
          ::= { wranIfBsCBPAuthBsImplicitCertTable 1 }

    wranIfBsCBPAuthBsImplicitCertEntry  ::= SEQUENCE {
          wranIfBsCBPAuthBsImplicitCertIndex          Integer32,
          wranBsCBPAuthBsImplicitCertBsID             MacAddress,
          wranIfBsCBPAuthBsImplicitCertCAID           INTEGER,
          wranIfBsCBPAuthBsImplicitKeyID              Integer32,
          wranIfBsCBPAuthBsImplicitKeyValidityDate    DateAndTime,
          wranIfBsCBPAuthBsImplicitKeyValidityTimePeriod  INTEGER,
          wranIfBsCBPAuthBsImplicitCertVersion        INTEGER,
          wranIfBsCBPAuthBsImplicitPubKrdSize         Integer32,
          wranIfBsCBPAuthBsImplicitPubKrd             OCTET STRING }

    wranIfBsCBPAuthBsImplicitCertIndex  OBJECT-TYPE
          SYNTAX      Integer32 (1..4080)
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Index of entry in the table."
          ::= { wranIfBsCBPAuthBsImplicitCertEntry 1 }

    wranBsCBPAuthBsImplicitCertBsID     OBJECT-TYPE
          SYNTAX      MacAddress
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "BS ID (MAC Address) of BS that implicit certificates
                 belongs to."
          ::= { wranIfBsCBPAuthBsImplicitCertEntry 2 }

    wranIfBsCBPAuthBsImplicitCertCAID   OBJECT-TYPE
          SYNTAX      INTEGER (1..255)
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "CA ID, identifier of CA in BS implicit certificate."
          ::= { wranIfBsCBPAuthBsImplicitCertEntry 3 }

    wranIfBsCBPAuthBsImplicitKeyID      OBJECT-TYPE
          SYNTAX      Integer32 (1..512)
          MAX-ACCESS  read-only
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        STATUS      current
        DESCRIPTION
              "Key ID, identifier of assigned of public key
               reconstruction data in BS implicit certificate."
        ::= { wranIfBsCBPAuthBsImplicitCertEntry 4 }

    wranIfBsCBPAuthBsImplicitKeyValidityDate  OBJECT-TYPE
        SYNTAX      DateAndTime
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Key Validity Date (Not Before), date/time at which
               BS implicit certificate becomes valid."
        ::= { wranIfBsCBPAuthBsImplicitCertEntry 5 }

    wranIfBsCBPAuthBsImplicitKeyValidityTimePeriod  OBJECT-TYPE
        SYNTAX      INTEGER (1..128)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Key Validity Time Period, length of time from Key
               Validity Date (Not Before) in 6-month increments,
               during which BS implicit certificate is valid."
        ::= { wranIfBsCBPAuthBsImplicitCertEntry 6 }

    wranIfBsCBPAuthBsImplicitCertVersion      OBJECT-TYPE
        SYNTAX      INTEGER (1..64)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Version of CBP Authentication being applied that BS
               implicit certificate supports."
        ::= { wranIfBsCBPAuthBsImplicitCertEntry 7 }

    wranIfBsCBPAuthBsImplicitPubKrdSize OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Size of wranIfBsCBPAuthCACertCAPubKrd in octets."
        DEFVAL { 31 }
        ::= { wranIfBsCBPAuthBsImplicitCertEntry 8 }

    wranIfBsCBPAuthBsImplicitPubKrd     OBJECT-TYPE
        SYNTAX
          OCTET STRING (SIZE(wranIfBsCBPAuthBsImplicitPubKrdSize))
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Public Key Reconstruction Data that can be used to
               generate the public key associated with BS implicit
               certificate."
        ::= { wranIfBsCBPAuthBsImplicitCertEntry 9 }

    wranIfBsWiMicAuthCertTable    OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsWiMicAuthCertEntry
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object provides a table to store wireless
               microphone implicit certificates contained in MSF3
               of decoded wireless microphone beacons. This table
               is made up of multiple entries, one defined for each
               unique wireless microphone beacon implicit
               certificate. Each entry is defined by
               wranIfBsWiMicAuthCertEntry. Entries are added to
               this table when a wireless microphone beacon
               (MSF1+MSF2+MSF3) has been successfully received and
               decoded."
        ::= { wranIfBsScm 6 }

    wranIfBsWiMicAuthCertEntry    OBJECT-TYPE
        SYNTAX      wranIfBsWiMicAuthCertEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object is a compound object that defines an
               entry in wranIfBsWiMicAuthCertTable."
        INDEX { wranIfBsWiMicAuthCertIndex }
        ::= { wranIfBsWiMicAuthCertTable 1 }

    wranIfBsWiMicAuthCertEntry    ::= SEQUENCE {
        wranIfBsWiMicAuthCertIndex          Integer32,
        wranIfBsWiMicAuthSrcAddress         MacAddress,
        wranIfBsWiMicAuthImplicitCertSize   Integer32,
        wranIfBsWiMicAuthImplicitCert       OCTET STRING }

    wranIfBsWiMicAuthCertIndex    OBJECT-TYPE
        SYNTAX      Integer32 (1..4080)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in the table."
        ::= { wranIfBsWiMicAuthCertEntry 1 }

    wranIfBsWiMicAuthSrcAddress   OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Source Address from MSF1 of received wireless
               microphone beacon. It is stored as a 48-bit IEEE
               conformant MAC address that identifies the beaconing
               device associated with the implicit certificate."
        ::= { wranIfBsWiMicAuthCertEntry 2 }

    wranIfBsWiMicAuthImplicitCertSize   OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Size of wranIfBsWiMicAuthImplicitCert in octets."
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
            DEFVAL { 31 }
            ::= { wranIfBsWiMicAuthCertEntry 3 }

      wranIfBsWiMicAuthImplicitCert OBJECT-TYPE
            SYNTAX
                 OCTET STRING (SIZE(wranIfBsWiMicAuthImplicitCertSize))
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                  "Wireless microphone beacon implicit certificate
                   obtained form MSF3 of received wireless microphone
                   beacon. Format of implicit certificate is defined in
                   7.5.5 of IEEE Std 802.22.1-2010."
            ::= { wranIfBsWiMicAuthCertEntry 4 }

-- wranIfBsScmMibGroups: This object helps define which MIB groups are
-- available within this module and which MIB objects are part of each
-- group.

      wranIfBsScmMibGroups          OBJECT IDENTIFIER
                                         ::= { wranIfBsPm 7 }
      wranIfBsScmAuthStatusGroup    OBJECT IDENTIFIER
                                         ::= { wranIfBsScmMibGroups 1 }
      wranIfBsScmSaConfigGroup      OBJECT IDENTIFIER
                                         ::= { wranIfBsScmMibGroups 2 }
      wranIfBsScmTekGroup           OBJECT IDENTIFIER
                                         ::= { wranIfBsScmMibGroups 3 }
      wranIfBsScmCBPAuthCACertGroup OBJECT IDENTIFIER
                                         ::= { wranIfBsScmMibGroups 4 }
      wranIfBsScmCBPBsCertGroup     OBJECT IDENTIFIER
                                         ::= { wranIfBsScmMibGroups 5 }
      wranIfBsScmWiMicAuthGroup     OBJECT IDENTIFIER
                                         ::= { wranIfBsScmMibGroups 6 }

      wranIfBsScmAuthStatusGroup          OBJECT-GROUP
            OBJECTS   { wranIfBsCpeAuthStatusIndex,
                        wranIfBsCpeScmAuthStatus,
                        wranIfBsCpeScmAuthRecentEvent,
                        wranIfBsCpeScmNumAuthAttempts,
                        wranIfBsCpeAuthRecentMsgSize,
                        wranIfBsCpeScmAuthRecentMsg,
                        wranIfBsCpeScmAuthEapAuthTimerExpiration,
                        wranIfBsCpeAuthGraceTimer1,
                        wranIfBsCepAuthGraceTimer2,
                        wranIfBsCpeScmAk1Lifetime,
                        wranIfBsCpeScmAk2Lifetime,
                        wranIfBsCpeScmConfigRequestSize,
                        wranIfBsCpeScmConfigRequest,
                        wranIfBsCpeScmConfigReplySize,
                        wranIfBsCpeScmConfigReply }
            STATUS      current
            DESCRIPTION
                  "This group contains objects related to
                  tracking the current state of a CPEs
                  authentication state machine."
            ::= { wranIfBsScmMibGroups 1 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranIfBsScmSaConfigGroup            OBJECT-GROUP
      OBJECTS     { wranIfBsCpeScmSaConfigIndex,
                    wranIfBsCpeMacAddress,
                    wranIfBsCpeSaid,
                    wranIfBsCpeSaType,
                    wranIfBsCpeCryptoSuiteListSize,
                    wranIfBsCpeCryptoSuiteList,
                    wranIfBsCpeActiveTekSequenceNumber,
                    wranIfBsCpeActiveTekLifetime,
                    wranIfBsCpeActiveTekPn,
                    wranIfBsCpeActiveTekExpireTime,
                    wranIfBsCpeNonActiveTekSequenceNumber,
                    wranIfBsCpeNonActiveTekLifetime,
                    wranIfBsCpeNonActiveTekPn,
                    wranIfBsCpeNonActiveTekExpireTime }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
            tracking the configuration of SAs configured
            on CPEs."
      ::= { wranIfBsScmMibGroups 2 }

wranIfBsScmTekGroup           OBJECT-GROUP
      OBJECTS     { wranIfBsCpeTekRefreshIndex,
                    wranIfBsCpeScmReqId,
                    wranIfBsCpeScmKeyReqKeySeqNum,
                    wranIfBsCpeScmKeyReqSaid,
                    wranIfBsCpeScmKeyReqGroupKeyIndicator,
                    wranIfBsCpeScmKeyReqCpeRandom }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
            tracking on going Key-Request transactions."
      ::= { wranIfBsScmMibGroups 3 }

wranIfBsScmCBPAuthCACertGroup       OBJECT-GROUP
      OBJECTS     { wranIfBsCBPAuthCACertIndex,
                    wranIfBsCBPAuthCACertCAID,
                    wranIfBsCBPAuthCACertKeyID,
                    wranIfBsCBPAuthCACertKeyValidityDate,
                    wranIfBsCBPAuthCACertKeyValidityTimePeriod,
                    wranIfBsCBPAuthCACertVersion,
                    wranIfBsCBPAuthCACertECDomainParameters,
                    wranIfBsCBPAuthCACertCAPubKrdSize,
                    wranIfBsCBPAuthCACertCAPubKrd }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
            storing CA Root certificates that used to
            validate BS Implicit Certificates."
      ::= { wranIfBsScmMibGroups 4 }

wranIfBsScmCBPBsCertGroup           OBJECT-GROUP
      OBJECTS     { wranIfBsCBPAuthCACertIndex,
                    wranIfBsCBPAuthCACertCAID,
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                        wranIfBsCBPAuthCACertKeyID,
                        wranIfBsCBPAuthCACertKeyValidityDate,
                        wranIfBsCBPAuthCACertKeyValidityTimePeriod,
                        wranIfBsCBPAuthCACertVersion,
                        wranIfBsCBPAuthCACertECDomainParameters,
                        wranIfBsCBPAuthCACertCAPubKrdSize,
                        wranIfBsCBPAuthCACertCAPubKrd }
        STATUS      current
        DESCRIPTION
              "This group contains objects related to
              storing BS implicit certificates used in CBP
              authentication."
        ::= { wranIfBsScmMibGroups 5 }

    wranIfBsScmWiMicAuthGroup           OBJECT-GROUP
        OBJECTS     { wranIfBsWiMicAuthCertIndex,
                      wranIfBsWiMicAuthSrcAddress,
                      wranIfBsWiMicAuthImplicitCertSize,
                      wranIfBsWiMicAuthImplicitCert }
        STATUS      current
        DESCRIPTION
              "This group contains objects related to
              storing wireless microphone beacon (IEEE Std
              802.22.1-2010) certificates transmitted in
              MSF3 of wireless microphone beacons."
        ::= { wranIfBsScmMibGroups 6 }

    wranIfBsScmMibCompliance      MODULE-COMPLIANCE
        STATUS      current
        DESCRIPTION
              "MIB objects that are optional and mandatory for
               wranIfBsScm compliance."
        MODULE      wranIfBsCm
        MANDATORY-GROUPS  { wranIfBsScmAuthStatusGroup,
                            wranIfBsScmSaConfigGroup,
                            wranIfBsScmTekGroup }
        -- OPTIONAL-GROUPS      { wranIfBsScmCBPAuthCACertGroup,
                                  wranIfBsScmCBPBsCertGroup,
                                  wranIfBsScmWiMicAuthGroup }
        ::= { wranIfBsScm 8 }


END
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.2.3 wranIfBsSfMgmtMib

```
IEEE802dot22-WRAN-IF-BS-SF-MGMT-MIB ::=   BEGIN

      IMPORTS
            MODULE-IDENTITY,
            OBJECT-TYPE,
            NOTIFICATION-TYPE,
            Unsigned32, Integer32, Counter32,
            Counter64
                  FROM SNMPv2-SMI
            SnmpAdminString
                  FROM SNMP-FRAMEWORK-MIB
            TEXTUAL-CONVENTION,
            MacAddress, RowStatus, TruthValue,
            TimeStamp, DateAndTime
                  FROM SNMPv2-TC
            InetAddressType, InetAddress
                  FROM INET-ADDRESS-MIB
            OBJECT-GROUP,
            MODULE-COMPLIANCE,
            NOTIFICATION-GROUP
                  FROM SNMPV2-CONF

      wranIfBsSfMgmtMib       MODULE-IDENTITY
            LAST-UPDATED      "201405300000Z"   -- May 30, 2014
            ORGANIZATION      "IEEE 802.22"
            CONTACT-INFO
                  "WG E-mail: STDS-802-22@LISTSERV.IEEE.ORG
                   WG Chair:  Apurva N. Mody
                   E-mail:    apurva.mody@ieee.org

                   TGa Chair/Editor:  Ranga Reddy
                   E-mail:            ranga.reddy@ieee.org"
            DESCRIPTION
                  "This material is from IEEE Std 802.22a-2014
                   Copyright (c) 2014. This MIB Module Defines managed
                   objects for Service Flow management based on
                   IEEE Std 802.22-2011 and is under iso(1).std(0)
                   .iso8802(8802).wran(22).wranIfBsSfMgmtMib(3)"
                  REVISION          "201405300000Z"
                  DESCRIPTION
                        "The first version of IEEE802dot22-WRAN-IF-BS-SF-
                         MGMT-MIB that provides for management of service
                         flows."
            ::= {iso std(0) iso8802(8802) wran(22) 3}

      wranIfBsProvSfTable                 OBJECT IDENTIFIER
                                           ::= { wranIfBsSfMgmtMib 1 }
      wranIfBsScTable                     OBJECT IDENTIFIER
                                           ::= { wranIfBsSfMgmtMib 2 }
      wranIfBsSfActiveTable               OBJECT IDENTIFIER
                                           ::= { wranIfBsSfMgmtMib 3 }
      wranIfBsProvClassifierRuleTable     OBJECT IDENTIFIER
                                           ::= { wranIfBsSfMgmtMib 4 }
      wranIfBsClassifierRuleTable         OBJECT IDENTIFIER
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                                        ::= { wranIfBsSfMgmtMib 5 }
wranIfBsSfTrapControl                 OBJECT IDENTIFIER
                                        ::= { wranIfBsSfMgmtMib 6 }
wranIfBsSfTrapDefinition              OBJECT IDENTIFIER
                                        ::= { wranIfBsSfMgmtMib 7 }
wranIfBsSfNotificationObjectsTable    OBJECT IDENTIFIER
                                        ::= { wranIfBsSfMgmtMib 8 }
wranIfBsSfMibGroups                   OBJECT IDENTIFIER
                                        ::= { wranIfBsSfMgmtMib 9 }
wranIfBsSfMibCompliance               OBJECT IDENTIFIER
                                        ::= { wranIfSfMgmtMib 10 }

wranIfBsProvSfTable     OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfBsProvSfEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This MIB object defines the profiles for services
             that are provisioned by the NCMS. Service flow that
             are provisioned for a particular CPE are tied to
             that CPE via that CPE's MAC Address. This table is
             made up of multiple entries, each specific to a
             particular provisioned service flow. Each entry is
             defined by wranfBsProvSfEntry. The QoS parameters
             for provisioned service flows are mapped to
             information in wranIfBsScTable. Classification rules
             for provisioned service flows are defined in
             wranIfBsProvClassifierRuleTable."
      ::= { wranIfBsSfMgmtMib 1 }

wranIfBsProvSfEntry     OBJECT-TYPE
      SYNTAX      wranIfBsProvSfEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object is a compound object that defines an
             entry in wranIfBsProvSfTable."
      INDEX { wranIfBsProvEntryIndex }
      ::= { wranIfBsProvSfTable 1 }

wranIfBsProvSfEntry     ::= SEQUENCE {
      wranIfBsProvEntryIndex              Integer32,
      wranIfBsCpeProvMacAddress           MacAddress,
      wranIfBsProvSfId                    Integer32,
      wranIfBsProvSfDirection             INTEGER,
      wranIfBsProvScIndex                 Integer32,
      wranIfBsProvCsSpecification         INTEGER,
      wranIfBsProvSfStatus                INTEGER,
      wranIfBsProvSfProvisioningTime      DateAndTime,
      wranIfBsProvTargetSaid              INTEGER,
      wranIfBsProvClsRuleListSize         INTEGER
      wranIfBsProvClsRuleList             OCTET STRING }

wranIfBsProvEntryIndex  OBJECT-TYPE
      SYNTAX      Integer32 (1.. 2048)
      MAX-ACCESS  read-only
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        STATUS      current
        DESCRIPTION
              "Index of entry in this table, defaults to 1."
        ::= { wranIfBsProvSfEntry 1 }

    wranIfBsCpeProvMacAddress     OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "MAC Address of CPE with which the service flow is
               created."
        ::= { wranIfBsProvSfEntry 2 }

    wranIfBsProvSfId        OBJECT-TYPE
        SYNTAX      Integer32 (1.. 4294967295)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Unique identifier for the SF that is provisioned
               between a BS and a particular CPE."
        ::= { wranIfBsProvSfEntry 3 }

    wranIfBsProvSfDirection OBJECT-TYPE
        SYNTAX      INTEGER { ds(0),
                              us(1) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Indication of whether the SF is an US SF or a
               DS SF."
        ::= { wranIfBsProvSfEntry 4 }

    wranIfBsProvScIndex           OBJECT-TYPE
        SYNTAX      Integer32 (1.. 4294967295)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Index into a wranIfBsScTable entry that indicates
               the QoS parameter set for this service flow."
        ::= { wranIfBsProvSfEntry 5 }

    wranIfBsProvCsSpecification         OBJECT-TYPE
        SYNTAX      INTEGER { noCS(0),
                              ethCS(1),
                              ipCS(2) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Indication of which convergence sublayer has been
               used to encapsulate the higher-layer SDU (see
               7.7.8.9.18.1)."
        ::= { wranIfBsProvSfEntry 6 }

    wranIfBsProvSfStatus          OBJECT-TYPE
        SYNTAX      INTEGER { provisioned(0),
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                              admitted(1),
                              active(2) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Indication of whether the provisioned service
               flow is currently provisioned, admitted, or active
               (see 7.7.8.9.4 and 7.18.2)."
        ::= { wranIfBsProvSfEntry 7 }

wranIfBsProvSfProvisioningTime            OBJECT-TYPE
        SYNTAX      DateAndTime
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "If currently active (see 13.1.3.1.1.7), the time at
               which the service flow was provisioned."
        ::= { wranIfBsProvSfEntry 8 }

wranIfBsProvTargetSaid        OBJECT-TYPE
        SYNTAX      INTEGER { primarySA(0),
                              secondarySA(1) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "SAID of SA to which service flow is being mapped.
               Provisioned services flows can be mapped to the
               Primary or Secondary SA."
        ::= { wranIfBsProvSfEntry 9 }

wranIfBsProvClsRuleListSize         OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Number of wranIfBsProvClsfrRuleIndex values in
               wranIfBsProvClsRuleList."
        ::= { wranIfBsProvSfEntry 10 }

wranIfBsProvClsRuleList       OBJECT-TYPE
        SYNTAX
              OCTET STRING (SIZE(wranIfBsProvClsRuleListSize))
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "List of wranIfBsProvClsfrRuleIndexValues pointing to
               entries in the wranIfBsProvClassifierRuleTable that
               contain packet classification rules assigned to this
               service flow."
        ::= { wranIfBsProvSfEntry 11 }

wranIfBsScTable   OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsScEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                "This MIB object provides a table that describes
                 attributes of provisioned and dynamic service flows,
                 such as QoS Parameter Set. This table is made up of
                 multiple entries, one for each service class. Each
                 entry is defined by wranIfBsScEntry."
          ::= { wranIfBsSfMgmtMib 2 }

    wranIfBsScEntry   OBJECT-TYPE
          SYNTAX      wranIfBsScEntry
          MAX-ACCESS  not-accessible
          STATUS      current
          DESCRIPTION
                "This object is a compound object that defines an
                 entry in wranIfBsScTable."
          INDEX { wranIfBsScIndex }
          ::= { wranIfBsScTable 1 }

    wranIfBsScEntry   ::= SEQUENCE {
          wranIfBsScIndex                          Integer32,
          wranIfBsQosSfSfid                        Integer32,
          wranIfBsQosSfFid                         INTEGER,
          wranIfBsQosServiceClassNameSize          INTEGER,
          wranIfBsQosServiceClassName              OCTET STRING,
          wranIfBsQosParameterSetType              INTEGER,
          wranIfBsQosMaxSustainedRate              Integer32,
          wranIfBsQoSTrafficSize                   Integer32,
          wranIfBsQosMinReservedRate               Integer32,
          wranIfBsQosToleratedJitter               Integer32,
          wranIfBsQosMaxLatency                    INTEGER,
          wranIfBsQosEnableVariableLengthSdus      TruthValue,
          wranIfBsQosSchedulingType                INTEGER,
          wranIfBsQosArqEnable                     TruthValue,
          wranIfBsQosArqWindowSize                 Integer32,
          wranIfBsQosArqTxRetryTimeout             Integer32,
          wranIfBsQosArqRxRetryTimeout             Integer32,
          wranIfBsQosArqBlockLifetime              Integer32,
          wranIfBsQosArqSyncLossTimeout            Integer32,
          wranIfBsQosArqDeliverInOrderEnable       TruthValue,
          wranIfBsQosArqRxPurgeTimeout             Integer32,
          wranIfBsQosArqBlockSizeReq               Integer32,
          wranIfBsQosArqBlockSizeRsp               Integer32,
          wranIfBsQosReqTxPolicy                   BITS }

    wranIfBsScIndex   OBJECT-TYPE
          SYNTAX      Integer32 (1..4096)
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Index value to uniquely identify an entry in
                 wranIfBsScTable."
          ::= { wranIfBsScEntry 1 }

    wranIfBsQosSfSfid OBJECT-TYPE
          SYNTAX      Integer32 (1..4294967295)
          MAX-ACCESS  read-write
          STATUS      current
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        DESCRIPTION
              "SFID of service flow."
        ::= { wranIfBsScEntry 2 }

    wranIfBsQosSfFid  OBJECT-TYPE
        SYNTAX      INTEGER { be(2), nrtPS(3), rtPS(4),
                              ugs(5), reserved(6) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "FID to which service flow is mapped."
        ::= { wranIfBsScEntry 3 }

    wranIfBsQosServiceClassNameSize     OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Size, e.g., number of octets, of
               wranIfBsQosServiceClassName."
        ::= { wranIfBsScEntry 4 }

    wranIfBsQosServiceClassName   OBJECT-TYPE
        SYNTAX
              OCTET STRING (SIZE(wranIfBsQosServiceClassNameSize))
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Defines the name of the service class associated
               with this entry. If service class is not assigned,
               this will be blank."
        ::= { wranIfBsScEntry 5 }

    wranIfBsQosParameterSetType   OBJECT-TYPE
        SYNTAX      INTEGER (0..7)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Indication of whether the QoS parameter set
               defined by this entry is applied to the Provisioned,
               Admitted, or Active Parameter Set of the service
               flow (see Table 77)."
        ::= { wranIfBsScEntry 6 }

    wranIfBsQosMaxSustainedRate   OBJECT-TYPE
        SYNTAX      Integer32 (1.. 16777216)
        UNITS       "bps"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Peak information/data rate of SDUs carried by the
               service flow, defined in units of bits per second."
        ::= { wranIfBsScEntry 7 }

    wranIfBsQosTrafficSize  OBJECT-TYPE
        SYNTAX      Integer32 (1.. 16777216)
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        UNITS       "bytes"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "If fixed-length SDUs (see 13.1.3.2.1.10) are
               enabled, this represents the size of the SDU
               assigned to the service flow. If variable-length
               SDUs (see 13.1.3.2.1.10) are enabled, this
               represents the average size of SDU assigned the
               service flow."
        ::= { wranIfBsScEntry 8 }

    wranIfBsQosMinReservedRate    OBJECT-TYPE
        SYNTAX      Integer32 (1.. 16777216)
        UNITS       "bps"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Minimum required information/data rate of SDUs
               carried by the service flow, defined in units of
               bits per second."
        ::= { wranIfBsScEntry 9 }

    wranIfBsQosToleratedJitter    OBJECT-TYPE
        SYNTAX      Integer32 (1.. 16777216)
        UNITS       "milliseconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The maximum jitter (variation in delay) that can be
               suffered by the traffic assigned to the service
               flow."
        ::= { wranIfBsScEntry 10 }

    wranIfBsQosMaxLatency   OBJECT-TYPE
        SYNTAX      Integer32 (1.. 16777216)
        UNITS       "milliseconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The maximum delay that can be suffered by traffic
               assigned to the service flow."
        ::= { wranIfBsScEntry 11 }

    wranIfBsQosEnableVariableLengthSdus OBJECT-TYPE
        SYNTAX      TruthValue
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Setting this object allows the turning on/off of
               variable-length SDU support. Default is to allow use
               of variable-length SDUs, Truth(1)."
        ::= { wranIfBsScEntry 12 }

    wranIfBsQosSchedulingType     OBJECT-TYPE
        SYNTAX      INTEGER { be(0), nrtPS(1), rtPS(2), ugs(3) }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Setting this object allows the turning on/off of
               variable-length SDU support. Default is to allow use
               of variable-length SDUs."
        ::= { wranIfBsScEntry 13 }

    wranIfBsQosArqEnable    OBJECT-TYPE
        SYNTAX      TruthValue
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Setting this object enables/disables ARQ for a
               service flow. Default is that ARQ is enabled,
               Truth(1)."
        ::= { wranIfBsScTable 14 }

    wranIfBsQosArqWindowSize      OBJECT-TYPE
        SYNTAX      Integer32 (1..65535)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Indication of the maximum number of unacknowledged
               fragments at any given time. Only valid if
               wranIfBsQosArqEnable is set."
        ::= { wranIfBsScEntry 15 }

    wranIfBsQosArqTxRetryTimeout OBJECT-TYPE
        SYNTAX      Integer32 (0..655350)
        UNITS       "microseconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Total time before timing out retransmissions of ARQ
               blocks (in 10-microsecond blocks). For BS, this
               should include time to compensate for scheduling and
               the propagation time for transmission."
        ::= { wranIfBsScEntry 16 }

    wranIfBsQosArqRxRetryTimeout  OBJECT-TYPE
        SYNTAX      Integer32 (0..655350)
        UNITS       "microseconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Total time before timing out receptions of ARQ block
               retransmission (in 10-microsecond blocks). For BS,
               this should include time to compensate for
               scheduling and the propagation
               time for transmission."
        ::= { wranIfBsScEntry 17 }

    wranIfBsQosArqBlockLifetime   OBJECT-TYPE
        SYNTAX      Integer32 (0..655350)
        UNITS       "microseconds"
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The maximum amount of time that an ARQ block can be
               held in the ARQ state machine before it is dropped
               (in 10-microsecond blocks). Setting this to 0,
               indicates an indefinite lifetime."
        ::= { wranIfBsScEntry 18 }

    wranIfBsQosArqSyncLossTimeout OBJECT-TYPE
        SYNTAX      Integer32 (0..655350)
        UNITS       "microseconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Timeout for determining the that transmitter and
               receiver state machines have become unsynchronized
               (in 10-microsecond blocks). Setting this to 0,
               indicates an indefinite lifetime."
        ::= { wranIfBsScEntry 19 }

    wranIfBsQosArqDeliverInOrderEnable  OBJECT-TYPE
        SYNTAX      TruthValue
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Disable/enable ability to deliver ARQ blocks to
               higher layer at receiver in the same order they were
               transmitted by the transmitter."
        ::= { wranIfBsScEntry 20 }

    wranIfBsQosArqRxPurgeTimeout  OBJECT-TYPE
        SYNTAX      Integer32 (0..655350)
        UNITS       "microseconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "How much the ARQ window is advanced after an ARQ
               fragment is received (in 10-microsecond blocks)."
        ::= { wranIfBsScEntry 21 }

    wranIfBsQosArqBlockSizeReq    OBJECT-TYPE
        SYNTAX      Integer32 (1..2048)
        UNITS       "bytes"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "This object defines the value of the ARQ block size
               included in DSA-REQ and REG-REQ messages."
        ::= { wranIfBsScEntry 22 }

    wranIfBsQosArqBlockSizeRsp    OBJECT-TYPE
        SYNTAX      Integer32 (1..2048)
        UNITS       "bytes"
        MAX-ACCESS  read-write
        STATUS      current
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        DESCRIPTION
              "This object defines the value of the ARQ block size
               included in DSA-RSP and REG-RSP messages."
        ::= { wranIfBsScEntry 23 }

    wranIfBsQosReqTxPolicy  OBJECT-TYPE
        SYNTAX      BITS { noUseOfBroadcastBwReqOpportunities(0),
                           reserved(1),
                           noPiggyReqWithData(2),
                           noFragmentationOfData(3),
                           noSuppressionOfPayloadHeaders(4),
                           noPacking(5),
                           reserved(6),
                           reserved(7) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "This value is a bitmap that enables/disables the
               following capabilities for a service flow: Use of
               broadcast BW request for US, use of multicast BW
               request for US only, piggyback BW requests on data
               for US transmissions, enable/disable fragmentation,
               enable/disable packing, and use of CRC for MAC PDU
               (See Table 83). Bits #1, #6, and #7, are reserved
               and should default to 0."
        ::= { wranIfBsScEntry 24 }

    wranIfBsActiveSfTable   OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsActiveSfEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB object provides a table that is used to
               manage service flows that are currently active
               between the BS and CPEs. This table is made up of
               multiple entries, one for each service flow mapped
               to a particular CPE. Each entry is defined by
               wranIfBsActiveSfEntry."
        ::= { wranIfBsSfMgmtMib 3 }

    wranIfBsActiveSfEntry   OBJECT-TYPE
        SYNTAX      wranIfBsActiveSfEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object is a compound object that defines an
               entry in wranIfBsActiveSfTable."
        INDEX { wranIfBsActiveSfIndex }
        ::= { wranIfBsActiveSfTable 1 }

    wranIfBsActiveSfEntry   ::= SEQUENCE {
        wranIfBsActiveSfIndex                   Integer32,
        wranIfBsActiveSfSfid                    Integer32,
        wranIfBsActiveSfMacAddress              MacAddress,
        wranIfBsActiveSfSid                     Integer32,
        wranIfBsActiveSfDirection               INTEGER,
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        wranIfBsActiveSfStatus                      INTEGER,
        wranIfBsActiveScIndex                       Integer32,
        wranIfBsActiveCsSpecification               INTEGER,
        wranIfBsActiveTargetSaid                    Integer32,
        wranIfBsActiveSfClsRuleListSize             INTEGER,
        wranIfBsActiveSfClsRuleList                 OCTET STRING }

    wranIfBsActiveSfIndex   OBJECT-TYPE
        SYNTAX      Integer32 (1..4096)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index value to uniquely identify an entry in
               wranIfBsActiveSfTable."
        ::= { wranIfBsActiveSfEntry 1 }

    wranIfBsActiveSfSfid    OBJECT-TYPE
        SYNTAX      Integer32 (1.. 4294967296)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "SFID of active service flow that is assigned to a
               particular CPE."
        ::= { wranIfBsActiveSfEntry 2 }

    wranIfBsActiveSfMacAddress    OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "48-bit IEEE MAC Address assigned to CPE to which
               this service flow is mapped."
        ::= { wranIfBsActiveSfEntry 3 }

    wranIfBsActiveSfSid     OBJECT-TYPE
        SYNTAX      Integer32 (0..511)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "SID of CPE assigned to service flow. If
              wranIfBsActiveSfSid is a multicast SID, there will be
              multiple entries in this table, one for each
              wranIfBsActiveSfMacAddress assigned to this service
              flow with the same wranIfBsActiveSfSid."
        ::= { wranIfBsActiveSfEntry 4 }

    wranIfBsActiveSfDirection     OBJECT-TYPE
        SYNTAX      INTEGER { ds(0), us(1) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Direction of service flow: BS to CPE (DS), CPE to BS
               (US)."
        ::= { wranIfBsActiveSfEntry 5 }

    wranIfBsActiveSfStatus  OBJECT-TYPE
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        SYNTAX      INTEGER { inactive(0), provisioned(1),
                              admitted(2), active(3) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Current sate of service flow. Service flow can be in
               one of four states: inactive, provisioned, admitted
               (service flow initiated but not received BW yet), or
               active (service flow initiated and there has been BW
               assigned to use on service flow)."
        ::= { wranIfBsActiveSfEntry 6 }

wranIfBsActiveScIndex   OBJECT-TYPE
        SYNTAX      Integer32 (1..4096)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Index into wranIfBsScTable entry that indicates the
               QoS parameter set for this service flow."
        ::= { wranIfBsActiveSfEntry 7 }

wranIfBsActiveCsSpecification OBJECT-TYPE
        SYNTAX      INTEGER { noCS(0), ethCS(1), ipCS(2) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The CS used for encapsulating SDUs for this service
               flow (see 7.7.8.9.18.1)."
        ::= { wranIfBsActiveSfEntry 8 }

wranIfBsActiveTargetSaid      OBJECT-TYPE
        SYNTAX      Integer32 (1..4096)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The CS used for encapsulating SDUs for this service
               flow (see 7.7.8.9.18.1)."
        ::= { wranIfBsActiveSfEntry 9 }

wranIfBsActiveSfClsRuleListSize     OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Number of items in wranIfBsActiveSfClsRuleList."
        ::= { wranIfBsActiveSfEntry 10 }

wranIfBsActiveSfClsRuleList         OBJECT-TYPE
        SYNTAX
              OCTET STRING (SIZE(wranIfBsActiveSfClsRuleListSize))
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "List of wranIfBsClsfrRuleIndex values pointing to
               entries in the wranIfBsClassifierRuleTable that
               contain packet classification rules assigned to this
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                service flow."
        ::= { wranIfBsActiveSfEntry 11 }

    wranIfBsProvClassifierRuleTable     OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsProvClassifierRuleEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This table contains classifier rules that are to be
               applied to service flows for CPEs that are
               provisioned by the NCMS. There are multiple entries
               in this table, one for each classifier rule. Each
               entry is defined by
               wranIfBsProvClassifierRuleEntry."
        ::= { wranIfBsSfMgmtMib 4 }

    wranIfBsProvClassifierRuleEntry     OBJECT-TYPE
        SYNTAX      wranIfBsProvClassifierRuleEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object is a compound object that provides the
               definition of entries in
               wranIfBsProvClassifierRuleTable."
        INDEX { wranIfBsProvClsfrRuleIndex }
        ::= { wranIfBsProvClassifierRuleTable 1 }

    wranIfBsProvClassifierRuleEntry      ::= SEQUENCE {
        wranIfBsProvClsfrRuleIndex                Integer32,
        wranIfBsProvClsfrRuleMap                  BITS,
        wranIfBsProvClsfrRulePriority             INTEGER,
        wranIfBsProvClsfrRuleProtocol             INTEGER,
        wranIfBsProvClsfrRuleIpSrcAddrType        InetAddressType,
        wranIfBsProvClsfrRuleIpSrcAddr            InetAddress,
        wranIfBsProvClsfrRuleIpSrcMask            InetAddress,
        wranIfBsProvClsfrRuleIpDestAddrType       InetAddressType,
        wranIfBsProvClsfrRuleIpDestAddr           InetAddress,
        wranIfBsProvClsfrRuleIpDestMask           InetAddress,
        wranIfBsProvClsfrRuleSrcPortStart         Integer32,
        wranIfBsProvClsfrRuleSrcPortEnd           Integer32,
        wranIfBsProvClsfrRuleDestPortStart        Integer32,
        wranIfBsProvClsfrRuleDestPortEnd          Integer32,
        wranIfBsProvClsfrRuleDestMacAddr          MacAddress,
        wranIfBsProvClsfrRuleDestMacAddrMask      MacAddress,
        wranIfBsProvClsfrRuleSrcMacAddr           MacAddress,
        wranIfBsProvClsfrRuleSrcMacAddrMask       MacAddress,
        wranIfBsProvClsfrRuleEnetProtType         INTEGER,
        wranIfBsProvClsfrRuleEnetProtocol         Integer32,
        wranIfBsProvClsfrRuleUserPriLow           INTEGER,
        wranIfBsProvClsfrRuleUserPriHigh          INTEGER,
        wranIfBsProvClsfrRuleVlanId               Integer32,
        wranIfBsProvClsfrRuleIpv6FlowLabel        OCTET STRING,
        wranIfBsProvClsfrRuleIpTypeOfService      OCTET STRING }

    wranIfBsProvClsfrRuleIndex    OBJECT-TYPE
        SYNTAX      Integer32 (1..65535)
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index value to uniquely identify an entry in
               wranIfBsProvClassifierRuleTable."
        ::= { wranIfBsProvClassifierRuleEntry 1 }

    wranIfBsProvClsfrRuleMap      OBJECT-TYPE
        SYNTAX      BITS { priority(0),
                           protocol(1),
                           ipSrcAddrType(2),
                           ipSrcAddr(3),
                           ipSrcMask(4),
                           ipDestAddrType(5),
                           ipDestAddr(6),
                           ipDestMask(7),
                           srcPortStart(8),
                           srcPortEnd(9),
                           destPortStart(10),
                           destPortEnd(11),
                           destMacAddr(12),
                           destMacAddrMask(13),
                           srcMacAddr(14),
                           srcMacAddrMask(15),
                           enetProtType(16),
                           enetProtocol(17),
                           userPriLow(18),
                           userPriHigh(19),
                           vlanId(20),
                           ipv6FlowLabel(21),
                           ipTypeOfService(22) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "A bitmap that indicates which classification
               parameters are included in the classification rule.
               A parameter exists in this rule if the corresponding
               bit is set to 1."
        ::= { wranIfBsProvClassifierRuleEntry 2 }

    wranIfBsProvClsfrRulePriority OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Priority of the classification rule. This determines
               the order in which classification rules are
               applied."
        ::= { wranIfBsProvClassifierRuleEntry 3 }

    wranIfBsProvClsfrRuleIpProtocol     OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Value of IP Protocol field. For IPv6 headers, this
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                refers to the next header entry in the last header
                of the IP header list. The value of this field
                follows the "Protocol Numbers" specification
                defined by IANA."
        ::= { wranIfBsProvClassifierRuleEntry 4 }

    wranIfBsProvClsfrRuleIpSrcAddrType  OBJECT-TYPE
        SYNTAX      InetAddressType
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Type of IP address that Source IP address
                 from IP header is."
        ::= { wranIfBsProvClassifierRuleEntry 5 }

    wranIfBsProvClsfrRuleIpSrcAddr      OBJECT-TYPE
        SYNTAX      InetAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Source IP address from IP header."
        ::= { wranIfBsProvClassifierRuleEntry 6 }

    wranIfBsProvClsfrRuleIpSrcMask      OBJECT-TYPE
        SYNTAX      InetAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "IP address mask. IP source address
                 (wranIfBsProvClsfrRuleIpSrcAddr) is matched when
                 output of applying (bitwise AND) this value to IP
                 source address from IP packet."
        ::= { wranIfBsProvClassifierRuleEntry 7 }

    wranIfBsProvClsfrRuleIpDestAddrType OBJECT-TYPE
        SYNTAX      InetAddressType
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Type of IP address that Destination IP
                 address from IP header is."
        ::= { wranIfBsProvClassifierRuleEntry 8 }

    wranIfBsProvClsfrRuleIpDestAddr     OBJECT-TYPE
        SYNTAX      InetAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Destination IP address from IP header."
        ::= { wranIfBsProvClassifierRuleEntry 9 }

    wranIfBsProvClsfrRuleIpDestMask     OBJECT-TYPE
        SYNTAX      InetAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                "IP address mask. IP destination address
                 (wranIfBsProvClsfrRuleIpDestAddr) is matched when
                 output of applying (bitwise AND) this value to IP
                 destination address from IP packet."
        ::= { wranIfBsProvClassifierRuleEntry 10 }

    wranIfBsProvClsfrRuleSrcPortStart   OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Start (inclusive) of range of source ports against
                 which that packet will be compared."
        ::= { wranIfBsProvClassifierRuleEntry 11 }

    wranIfBsProvClsfrRuleSrcPortEnd     OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "End (inclusive) of range of source ports against
                 which that packet will be compared."
        ::= { wranIfBsProvClassifierRuleEntry 12 }

    wranIfBsProvClsfrRuleDestPortStart  OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Start (inclusive) of range of destination ports
                 against which that packet will be compared."
        ::= { wranIfBsProvClassifierRuleEntry 13 }

    wranIfBsProvClsfrRuleDestPortEnd    OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "End (inclusive) of range of destination ports
                 against which that packet will be compared."
        ::= { wranIfBsProvClassifierRuleEntry 14 }

    wranIfBsProvClsfrRuleDestMacAddr    OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Destination MAC address to be matched against
                 destination MAC address in Ethernet header."
        ::= { wranIfBsProvClassifierRuleEntry 15 }

    wranIfBsProvClsfrRuleDestMacAddrMask      OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                "MAC address mask. A destination MAC address
                 (wranIfBsProvClsfrRuleDestMacAddr) is matched when
                 the destination MAC address from Ethernet header is
                 applied (bitwise AND) with this mask."
        ::= { wranIfBsProvClassifierRuleEntry 16 }

    wranIfBsProvClsfrRuleSrcMacAddr     OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Source MAC address to be matched against source MAC
                 address in Ethernet header."
        ::= { wranIfBsProvClassifierRuleEntry 17 }

    wranIfBsProvClsfrRuleSrcMacAddrMask OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "MAC address mask. A source MAC address
                 (wranIfBsProvClsfrRuleDestMacAddr) is matched when
                 the source MAC address from Ethernet header is
                 applied (bitwise AND) with this mask."
        ::= { wranIfBsProvClassifierRuleEntry 18 }

    wranIfBsProvClsfrRuleEnetProtType   OBJECT-TYPE
        SYNTAX      INTEGER { noProtocol(0),
                              ethertype(1),
                              dsap(2) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Identifier of layer 3 protocol type in an Ethernet
                 frame. There are three types defined in Ethernet
                 frame classification: no layer 3 protocol type in
                 Ethernet frame, EtherType in DIX/SNAP based frames,
                 and DSAP in IEEE 802.3 frames. If 802.1Q is
                 supported, the EtherType value in the 802.1Q header
                 is used."
        ::= { wranIfBsProvClassifierRuleEntry 19 }

    wranIfBsProvClsfrRuleEnetProtocol   OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Ethernet protocol type value that is used for
                 classification. When
                 wranIfBsProvClsfrRuleEnetProtType is set to
                 EtherType, the value of this object is matched
                 against the 16-bit EtherType value in an Ethernet
                 header or 802.1Q header (if 802.1Q is supported).
                 When wranIfBsProvClsfrRuleEnetProtType is set to
                 DSAP, the DSAP byte in IEEE 802.3 frames is
                 matched against the 8 LSB of this object's value."
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        ::= { wranIfBsProvClassifierRuleEntry 20 }

    wranIfBsProvClsfrRuleUserPriLow     OBJECT-TYPE
        SYNTAX      INTEGER (0..7)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Low value (inclusive) in range of 3-bit user
               priority value. This field is part of 16 bit tag of
               a 802.1Q header. Only valid if 802.1Q is being
               used."
        ::= { wranIfBsProvClassifierRuleEntry 21 }

    wranIfBsProvClsfrRuleUserPriHigh    OBJECT-TYPE
        SYNTAX      INTEGER (0..7)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "High value (inclusive) in range of 3-bit user
               priority value. This field is part of 16 bit tag of
               a 802.1Q header. Only valid if 802.1Q is being
               used."
        ::= { wranIfBsProvClassifierRuleEntry 22 }

    wranIfBsProvClsfrRuleVlanId   OBJECT-TYPE
        SYNTAX      Integer32 (0..4095)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "VLAN Id from Ethernet frame. Only valid if 802.1Q is
               being used."
        ::= { wranIfBsProvClassifierRuleEntry 23 }

    wranIfBsProvClsfrRuleIpv6FlowLabel  OBJECT-TYPE
        SYNTAX      OCTET STRING (SIZE(3))
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Flow label field from IPv6 header. The IPv6 Flow
               Label field is mapped to the 20 LSB of this object;
               the first 4 MSB are set to 0."
        ::= { wranIfBsProvClassifierRuleEntry 24 }

    wranIfBsProvClsfrRuleIpTypeOfService      OBJECT-TYPE
        SYNTAX      OCTET STRING (SIZE(1))
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The value to match the IP TOS octet from IP header.
               The 6 MSBs of the value contained in this object are
               read in as the DSCP (RFC 2474), the 2 LSB are
               ignored."
        ::= { wranIfBsProvClassifierRuleEntry 25 }


    wranIfBsClassifierRuleTable   OBJECT-TYPE
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        SYNTAX      SEQUENCE OF wranIfBsClassifierRuleEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB object provides a table to contain
               classification rules for service flows that are
               dynamically created/destroyed. There are multiple
               entries in this table, one for each classifier rule.
               Each entry is defined by
               wranIfBsClassifierRuleEntry."
        ::= { wranIfBsSfMgmtMib 5 }

  wranIfBsClassifierRuleEntry   OBJECT-TYPE
        SYNTAX      wranIfBsClassifierRuleEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object is a compound object that provides the
               definition of entries in
               wranIfBsClassifierRuleTable."
        INDEX { wranIfBsClsfrRuleIndex }
        ::= { wranIfBsClassifierRuleTable 1 }

  wranIfBsClassifierRuleEntry   ::= SEQUENCE {
        wranIfBsClsfrRuleIndex                  Integer32,
        wranIfBsClsfrRuleMap                    BITS,
        wranIfBsClsfrRulePriority               INTEGER,
        wranIfBsClsfrRuleProtocol               INTEGER,
        wranIfBsClsfrRuleIpSrcAddrType          InetAddressType,
        wranIfBsClsfrRuleIpSrcAddr              InetAddress,
        wranIfBsClsfrRuleIpSrcMask              InetAddress,
        wranIfBsClsfrRuleIpDestAddrType         InetAddressType,
        wranIfBsClsfrRuleIpDestAddr             InetAddress,
        wranIfBsClsfrRuleIpDestMask             InetAddress,
        wranIfBsClsfrRuleSrcPortStart           Integer32,
        wranIfBsClsfrRuleSrcPortEnd             Integer32,
        wranIfBsClsfrRuleDestPortStart          Integer32,
        wranIfBsClsfrRuleDestPortEnd            Integer32,
        wranIfBsClsfrRuleDestMacAddr            MacAddress,
        wranIfBsClsfrRuleDestMacAddrMask        MacAddress,
        wranIfBsClsfrRuleSrcMacAddr             MacAddress,
        wranIfBsClsfrRuleSrcMacAddrMask         MacAddress,
        wranIfBsClsfrRuleEnetProtType           INTEGER,
        wranIfBsClsfrRuleEnetProtocol           Integer32,
        wranIfBsClsfrRuleUserPriLow             INTEGER,
        wranIfBsClsfrRuleUserPriHigh            INTEGER,
        wranIfBsClsfrRuleVlanId                 Integer32,
        wranIfBsClsfRuleIpv6FlowLabel           OCTET STRING,
        wranIfBsClsfrRuleIpTypeOfService        OCTET STRING }

  wranIfBsClsfrRuleIndex  OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index value to uniquely identify an entry in
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                wranIfBsClassifierRuleTable."
        ::= { wranIfBsClassifierRuleEntry 1 }

    wranIfBsClsfrRuleMap    OBJECT-TYPE
        SYNTAX      BITS { priority(0),
                           protocol(1),
                           ipSrcAddrType(2),
                           ipSrcAddr(3),
                           ipSrcMask(4),
                           ipDestAddrType(5),
                           ipDestAddr(6),
                           ipDestMask(7),
                           srcPortStart(8),
                           srcPortEnd(9),
                           destPortStart(10),
                           destPortEnd(11),
                           destMacAddr(12),
                           destMacAddrMask(13),
                           srcMacAddr(14),
                           srcMacAddrMask(15),
                           enetProtType(16),
                           enetProtocol(17),
                           userPriLow(18),
                           userPriHigh(19),
                           vlanId(20),
                           ipv6FlowLabel(21),
                           ipTypeOfService(22) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "A bitmap that indicates which classification
               parameters are included in the classification rule.
               A parameter exists in this rule if the corresponding
               bit is set to 1."
        ::= { wranIfBsClassifierRuleEntry 2 }

    wranIfBsClsfrRulePriority     OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Priority of the classification rule. This determines
               the order in which classification rules are
               applied."
        ::= { wranIfBsClassifierRuleEntry 3 }

    wranIfBsClsfrRuleIpProtocol   OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Value of IP Protocol field. For IPv6 headers, this
               refers to the next header entry in the last header
               of the IP header list. The value of this field
               follows the "Protocol Numbers" specification defined
               by IANA."
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        ::= { wranIfBsClassifierRuleEntry 4 }

    wranIfBsClsfrRuleIpSrcAddrType      OBJECT-TYPE
        SYNTAX      InetAddressType
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Type of IP address that Source IP address
               from IP header is."
        ::= { wranIfBsClassifierRuleEntry 5 }

    wranIfBsClsfrRuleIpSrcAddr    OBJECT-TYPE
        SYNTAX      InetAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Source IP address from IP header."
        ::= { wranIfBsClassifierRuleEntry 6 }

    wranIfBsClsfrRuleIpSrcMask    OBJECT-TYPE
        SYNTAX      InetAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "IP address mask. IP source address
               (wranIfBsClsfrRuleIpSrcAddr) is matched when output
               of applying (bitwise AND) this value to IP source
               address from IP packet."
        ::= { wranIfBsClassifierRuleEntry 7 }

    wranIfBsClsfrRuleIpDestAddrType     OBJECT-TYPE
        SYNTAX      InetAddressType
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Type of IP address that Destination IP
               address from IP header is."
        ::= { wranIfBsClassifierRuleEntry 8 }

    wranIfBsClsfrRuleIpDestAddr   OBJECT-TYPE
        SYNTAX      InetAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Destination IP address from IP header."
        ::= { wranIfBsClassifierRuleEntry 9 }

    wranIfBsClsfrRuleIpDestMask   OBJECT-TYPE
        SYNTAX      InetAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "IP address mask. IP destination address
               (wranIfBsClsfrRuleIpDestAddr) is matched when output
               of applying (bitwise AND) this value to IP
               destination address from IP packet."
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        ::= { wranIfBsClassifierRuleEntry 10 }

    wranIfBsClsfrRuleSrcPortStart OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Start (inclusive) of range of source ports against
               which that packet will be compared."
        ::= { wranIfBsClassifierRuleEntry 11 }

    wranIfBsClsfrRuleSrcPortEnd   OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "End (inclusive) of range of source ports against
               which that packet will be compared."
        ::= { wranIfBsClassifierRuleEntry 12 }

    wranIfBsClsfrRuleDestPortStart      OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Start (inclusive) of range of destination ports
               against which that packet will be compared."
        ::= { wranIfBsClassifierRuleEntry 13 }

    wranIfBsClsfrRuleDestPortEnd  OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "End (inclusive) of range of destination ports
               against which that packet will be compared."
        ::= { wranIfBsClassifierRuleEntry 14 }

    wranIfBsClsfrRuleDestMacAddr  OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Destination MAC address to be matched against
               destination MAC address in Ethernet header."
        ::= { wranIfBsClassifierRuleEntry 15 }

    wranIfBsClsfrRuleDestMacAddrMask    OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "MAC address mask. A destination MAC address
               (wranIfBsClsfrRuleDestMacAddr) is matched when the
               destination MAC address from Ethernet header is
               applied (bitwise AND) with this mask."
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        ::= { wranIfBsClassifierRuleEntry 16 }

    wranIfBsClsfrRuleSrcMacAddr   OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Source MAC address to be matched against source MAC
               address in Ethernet header."
        ::= { wranIfBsClassifierRuleEntry 17 }

    wranIfBsClsfrRuleSrcMacAddrMask     OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "MAC address mask. A source MAC address
               (wranIfBsClsfrRuleDestMacAddr) is matched when the
               source MAC address from Ethernet header is applied
               (bitwise AND) with this mask."
        ::= { wranIfBsClassifierRuleEntry 18 }

    wranIfBsClsfrRuleEnetProtType OBJECT-TYPE
        SYNTAX      INTEGER { noProtocol(0),
                              ethertype(1),
                              dsap(2) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Identifier of layer 3 protocol type in an Ethernet
               frame. There are three types defined in Ethernet
               frame classification: no layer 3 protocol type in
               Ethernet frame, EtherType in DIX/SNAP based frames,
               and DSAP in IEEE 802.3 frames. If 802.1Q is
               supported, the EtherType value in the 802.1Q header
               is used."
        ::= { wranIfBsClassifierRuleEntry 19 }

    wranIfBsClsfrRuleEnetProtocol OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Ethernet protocol type value that is used for
               classification. When wranIfBsClsfrRuleEnetProtType
               is set to EtherType, the value of this object is
               matched against the 16-bit EtherType value in an
               Ethernet header or 802.1Q header (if 802.1Q is
               supported). When wranIfBsClsfrRuleEnetProtType is
               set to DSAP, the DSAP byte in IEEE 802.3 frames
               is matched against the 8 LSB of this object's
               value."
        ::= { wranIfBsClassifierRuleEntry 20 }

    wranIfBsClsfrRuleUserPriLow   OBJECT-TYPE
        SYNTAX      INTEGER (0..7)
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Low value (inclusive) in range of 3-bit user
               priority value. This field is part of 16 bit tag of
               a 802.1Q header. Only valid if 802.1Q is being
               used."
        ::= { wranIfBsClassifierRuleEntry 21 }

    wranIfBsClsfrRuleUserPriHigh  OBJECT-TYPE
        SYNTAX      INTEGER (0..7)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "High value (inclusive) in range of 3-bit user
               priority value. This field is part of 16 bit tag of
               a 802.1Q header. Only valid if 802.1Q is being
               used."
        ::= { wranIfBsClassifierRuleEntry 22 }

    wranIfBsClsfrRuleVlanId OBJECT-TYPE
        SYNTAX      Integer32 (0..4095)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "VLAN Id from Ethernet frame. Only valid if 802.1Q is
               being used."
        ::= { wranIfBsClassifierRuleEntry 23 }

    wranIfBsClsfrRuleIpv6FlowLabel      OBJECT-TYPE
        SYNTAX      OCTET STRING (SIZE(3))
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Flow label field from IPv6 header. The IPv6 Flow
               Label field is mapped to the 20 LSB of this object;
               the first 4 MSB are set to 0."
        ::= { wranIfBsClassifierRuleEntry 24 }

    wranIfBsClsfrRuleIpTypeOfService    OBJECT-TYPE
        SYNTAX      OCTET STRING (SIZE(1))
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The value to match the IP TOS octet from IP header.
               The 6 MSBs of the value contained in this object are
               read in as the DSCP (RFC 2474), the 2 LSB are
               ignored."
        ::= { wranIfBsClassifierRuleEntry 25 }

    wranIfBsSfTrapControl   OBJECT-TYPE
        SYNTAX      BITS  { wranIfBsProvSfChange(0),
                            wranIfBsScChange(1),
                            wranIfBsActiveSfChange(2),
                            wranIfBsProvClassifierRuleChange(3),
                            wranIfBsClassifierRuleChange (4) }
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Defines control elements for traps related to
               management of service flows. This is a 5-bit field
               that enables setting a trap for particular Service
               Flow events: wranIfBsProvSfChange, wranIfBsScChange,
               wranIfBsActiveSfChange,
               wranIfBsProvClassifierRuleChange,
               wranIfBsClassifierRuleChange."
        ::= { wranIfBsSfMgmtMib 6 }

wranIfBsSfTrapDefinition                    OBJECT IDENTIFIER
                                  ::= { wranIfBsSfMgmtMib 7 }
wranIfBsProvSfChangeTrap                    OBJECT IDENTIFIER
                                  ::= { wranIfBsSfTrapDefinition 1 }
wranIfBsScChangeTrap                        OBJECT IDENTIFIER
                                  ::= { wranIfBsSfTrapDefinition 2 }
wranIfBsActiveSfChangeTrap                  OBJECT IDENTIFIER
                                  ::= { wranIfBsSfTrapDefinition 3 }
wranIfBsProvClassifierRuleChangeTrap        OBJECT IDENTIFIER
                                  ::= { wranIfBsSfTrapDefinition 4 }
wranIfBsClassifierRuleChangeTrap            OBJECT IDENTIFIER
                                  ::= { wranIfBsSfTrapDefinition 5 }

wranIfBsProvSfChangeTrap      NOTIFICATION-TYPE
        OBJECTS     { wranIfBsProvSfStatus,
                      wranIfBsProvEntryIndex }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to the
               status of provisioned service flows."
        ::= { wranIfBsSfTrapDefinition 1 }

wranIfBsScChangeTrap    NOTIFICATION-TYPE
        OBJECTS     { wranIfBsScIndex }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to the
               status of the configuration of service flow
               parameters."
        ::= { wranIfBsSfTrapDefinition 2 }

wranIfBsActiveSfChangeTrap    NOTIFICATION-TYPE
        OBJECTS     { wranIfBsActiveSfIndex,
                      wranIfBsActiveSfStatus }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to the
               status of dynamic service flows."
        ::= { wranIfBsSfTrapDefinition 3 }

wranIfBsProvClassifierRuleChangeTrap      NOTIFICATION-TYPE
        OBJECTS     { wranIfBsProvClsfrRuleIndex,
                      wranIfBsProvClsfrRuleMap }
        STATUS      current
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        DESCRIPTION
              "This trap contains information related to the status
               of classifier rules for provisioned service flows."
        ::= { wranIfBsSfTrapDefinition 4 }

    wranIfBsClassifierRuleChangeTrap    NOTIFICATION-TYPE
        OBJECTS     { wranIfBsClsfrRuleIndex,
                      wranIfBsClsfrRuleMap }
        STATUS      current
        DESCRIPTION
              "This trap contains information relate to the status
               of classifier rules for dynamic service flows."
        ::= { wranIfBsSfTrapDefinition 5 }

    wranIfBsSfNotificationObjectsTable  OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfBsSfNotificationObjectsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB provides a table to track notification
               objects that have been reported by the traps related
               to the management of service flows. It is made up of
               one entry containing objects related to the most
               recent trap/event. The entry is defined by
               wranIfBsSfNotificationObjectsEntry."
        ::= { wranIfBsSfMgmtMib 8 }

    wranIfBsSfNotificationObjectsEntry  OBJECT-TYPE
        SYNTAX      wranIfBsSfNotificationObjectsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object defines an entry in
               wranIfBsSfNotificationObjectsTable."
        INDEX { wranIfBsNotificationIndex }
        ::= { wranIfBsSfNotificationObjectsTable 1 }

    wranIfBsSfNotificationObjectsEntry  ::= SEQUENCE {
        wranIfBsSfNotificationIndex               INTEGER,
        wranIfBsSfNotificationProvSfStatus        INTEGER,
        wranIfBsSfNotificationProvEntryIndex      Integer32,
        wranIfBsSfNotificationScEntryIndex        Integer32,
        wranIfBsSfNotificationActiveSfIndex       Integer32,
        wranIfBsSfNotificationActiveSfStatus      INTEGER,
        wranIfBsSfNotificationProvClsfrRuleIndex  Integer32,
        wranIfBsSfNotificationProvClsfrRuleMap
                                          wranIfBsProvClsfrRuleMap,
        wranIfBsSfNotificationClsfrRuleIndex      Integer32,
        wranIfBsSfNotificationClsfrRuleMap
                                          wranIfBsClsfrRuleMap }

    wranIfBsSfNotificationIndex   OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
            "Index of entry in table."
      ::= { wranIfBsSfNotificationObjectsEntry 1 }

wranIfBsSfNotificationProvSfStatus  OBJECT-TYPE
      SYNTAX      INTEGER (0..2)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Status of provisioned service flow trap is enabled
             for, see wranIfBsProvSfStatus."
      ::= { wranIfBsSfNotificationObjectsEntry 2 }

wranIfBsSfNotificationProvEntryIndex      OBJECT-TYPE
      SYNTAX      Integer32 (1..2048)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index into wranIfBsProvSfTable that contains
             information on provisioned service flow that was
             recently modified."
      ::= { wranIfBsSfNotificationObjectsEntry 3 }

wranIfBsSfNotificationScEntryIndex  OBJECT-TYPE
      SYNTAX      Integer32 (1.. 4294967295)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index into wranIfBsScTable entry that contains
             information on modified service flow parameters."
      ::= { wranIfBsSfNotificationObjectsEntry 4 }

wranIfBsSfNotificationActiveSfIndex OBJECT-TYPE
      SYNTAX      Integer32 (1.. 4096)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index into wranIfBsActiveSfTable entry that contains
             information on an active service flow whose
             configuration has been updated."
      ::= { wranIfBsSfNotificationObjectsEntry 5 }

wranIfBsSfNotificationActiveSfStatus      OBJECT-TYPE
      SYNTAX      INTEGER (0..3)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Current status of dynamic service flow, see
             wranIfBsActiveSfStatus "
      ::= { wranIfBsSfNotificationObjectsEntry 6 }

wranIfBsSfNotificationProvClsfrRuleIndex  OBJECT-TYPE
      SYNTAX      Integer32 (0..65535)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index of entry in wranIfBsProvClassifierRuleTable
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                    that contains entry pertaining to a classifier rule
                    for a provisioned service flow that was recently
                    modified."
              ::= { wranIfBsSfNotificationObjectsEntry 7 }

        wranIfBsSfNotificationProvClsfrRuleMap    OBJECT-TYPE
              SYNTAX      wranIfBsProvClsfrRuleMap
              MAX-ACCESS  read-only
              STATUS      current
              DESCRIPTION
                    "Value of wranIfBsProvClsfrRuleMap that contains the
                    configuration of which classifier rules are part of
                    the classifier rule set of a provisioned service
                    flow that was recently modified."
              ::= { wranIfBsSfNotificationObjectsEntry 8 }

        wranIfBsSfNotificationClsfrRuleIndex      OBJECT-TYPE
              SYNTAX      Integer32 (0..65535)
              MAX-ACCESS  read-only
              STATUS      current
              DESCRIPTION
                    "Index of entry in wranIfBsClassifierRuleTable that
                    contains entry pertaining to a classifier rule for a
                    dynamic service flow that was recently modified."
              ::= { wranIfBsSfNotificationObjectsEntry 9 }

        wranIfBsSfNotificationClsfrRuleMap  OBJECT-TYPE
              SYNTAX      wranIfBsClsfrRuleMap
              MAX-ACCESS  read-only
              STATUS      current
              DESCRIPTION
                    "Value of wranIfBsClsfrRuleMap that contains the
                    configuration of which classifier rules are part of
                    the classifier rule set of a dynamic service flow
                    that was recently modified."
              ::= { wranIfBsSfNotificationObjectsEntry 10 }

  -- wranIfBsSfMibGroups: This object helps define which MIB groups are
  -- available within this module and which MIB objects are part of each
  -- group.

        wranIfBsSfMibGroups                         OBJECT IDENTIFIER
                                          ::= { wranIfBsSfMgmtMib 9 }
        wranIfBsProvSfMibGroup                      OBJECT IDENTIFIER
                                          ::= { wranIfBsSfMibGroups 1 }
        wranIfBsScMibGroup                          OBJECT IDENTIFIER
                                          ::= { wranIfBsSfMibGroups 2 }
        wranIfBsActiveSfMibGroup                    OBJECT IDENTIFIER
                                          ::= { wranIfBsSfMibGroups 3 }
        wranIfBsProvClassifierRuleMibGroup          OBJECT IDENTIFIER
                                          ::= { wranIfBsSfMibGroups 4 }
        wranIfBsClassifierRuleMibGroup              OBJECT IDENTIFIER
                                          ::= { wranIfBsSfMibGroups 5 }
        wranIfBsSfTrapControlGroup                  OBJECT IDENTIFIER
                                          ::= { wranIfBsSfMibGroups 6 }
        wranIfBsSfNotificationMibGroup              OBJECT IDENTIFIER
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                                ::= { wranIfBsSfMibGroups 7 }

wranIfBsProvSfMibGroup          OBJECT-GROUP
      OBJECTS     { wranIfBsProvEntryIndex,
                    wranIfBsCpeProvMacAddress,
                    wranIfBsProvSfId, wranIfBsProvSfDirection,
                    wranIfBsProvScIndex,
                    wranIfBsProvCsSpecification,
                    wranIfBsProvSfStatus,
                    wranIfBsProvSfProvisioningTime,
                    wranIfBsProvTargetSaid,
                    wranIfBsProvClsRuleListSize,
                    wranIfBsProvClsRuleList }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to the
             configuration of provisioned service flows."
      ::= { wranIfBsSfMibGroups 1 }

wranIfBsScMibGroup              OBJECT-GROUP
      OBJECTS     { wranIfBsScIndex,
                    wranIfBsQosSfSfid, wranIfBsQosSfFid,
                    wranIfBsQosServiceClassNameSize,
                    wranIfBsQosServiceClassName,
                    wranIfBsQosParameterSetType,
                    wranIfBsQosMaxSustainedRate,
                    wranIfBsQoSTrafficSize,
                    wranIfBsQosMinReservedRate,
                    wranIfBsQosToleratedJitter,
                    wranIfBsQosMaxLatency,
                    wranIfBsQosEnableVariableLengthSdus,
                    wranIfBsQosSchedulingType,
                    wranIfBsQosArqEnable,
                    wranIfBsQosArqWindowSize,
                    wranIfBsQosArqTxRetryTimeout,
                    wranIfBsQosArqRxRetryTimeout,
                    wranIfBsQosArqBlockLifetime,
                    wranIfBsQosArqSyncLossTimeout,
                    wranIfBsQosArqDeliverInOrderEnable,
                    wranIfBsQosArqRxPurgeTimeout,
                    wranIfBsQosArqBlockSizeReq,
                    wranIfBsQosArqBlockSizeRsp,
                    wranIfBsQosReqTxPolicy }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to the
             configuration of QoS Parameters for
             provisioned and dynamic service flows."
      ::= { wranIfBsSfMibGroups 2 }

wranIfBsActiveSfMibGroup        OBJECT-GROUP
      OBJECTS     { wranIfBsActiveSfIndex, wranIfBsActiveSfSfid,
                    wranIfBsActiveSfMacAddress,
                    wranIfBsActiveSfSid,
                    wranIfBsActiveSfDirection,
                    wranIfBsActiveSfStatus,
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                    wranIfBsActiveScIndex,
                    wranIfBsActiveCsSpecification,
                    wranIfBsActiveTargetSaid,
                    wranIfBsActiveSfClsRuleListSize,
                    wranIfBsActiveSfClsRuleList }
        STATUS      current
        DESCRIPTION
              "This group contains objects related to the
               configuration of dynamic service flows."
        ::= { wranIfBsSfMibGroups 3 }

wranIfBsProvClassifierRuleMibGroup        OBJECT-GROUP
        OBJECTS     { wranIfBsProvClsfrRuleIndex,
                      wranIfBsProvClsfrRuleMap,
                      wranIfBsProvClsfrRulePriority,
                      wranIfBsProvClsfrRuleProtocol,
                      wranIfBsProvClsfrRuleIpSrcAddrType,
                      wranIfBsProvClsfrRuleIpSrcAddr,
                      wranIfBsProvClsfrRuleIpSrcMask,
                      wranIfBsProvClsfrRuleIpDestAddrType,
                      wranIfBsProvClsfrRuleIpDestAddr,
                      wranIfBsProvClsfrRuleIpDestMask,
                      wranIfBsProvClsfrRuleSrcPortStart,
                      wranIfBsProvClsfrRuleSrcPortEnd,
                      wranIfBsProvClsfrRuleDestPortStart,
                      wranIfBsProvClsfrRuleDestPortEnd,
                      wranIfBsProvClsfrRuleDestMacAddr,
                      wranIfBsProvClsfrRuleDestMacAddrMask,
                      wranIfBsProvClsfrRuleSrcMacAddr,
                      wranIfBsProvClsfrRuleSrcMacAddrMask,
                      wranIfBsProvClsfrRuleEnetProtType,
                      wranIfBsProvClsfrRuleEnetProtocol,
                      wranIfBsProvClsfrRuleUserPriLow,
                      wranIfBsProvClsfrRuleUserPriHigh,
                      wranIfBsProvClsfrRuleVlanId,
                      wranIfBsProvClsfRuleIpv6FlowLabel,
                      wranIfBsProvClsfrRuleIpTypeOfService }
        STATUS      current
        DESCRIPTION
              "This group contains objects related to the
               configuration of classifier rules for
               provisioned service flows."
        ::= { wranIfBsSfMibGroups 4 }

wranIfBsClassifierRuleMibGroup            OBJECT-GROUP
        OBJECTS     { wranIfBsClsfrRuleIndex, wranIfBsClsfrRuleMap,
                      wranIfBsClsfrRulePriority,
                      wranIfBsClsfrRuleProtocol,
                      wranIfBsClsfrRuleIpSrcAddrType,
                      wranIfBsClsfrRuleIpSrcAddr,
                      wranIfBsClsfrRuleIpSrcMask,
                      wranIfBsClsfrRuleIpDestAddrType,
                      wranIfBsClsfrRuleIpDestAddr,
                      wranIfBsClsfrRuleIpDestMask,
                      wranIfBsClsfrRuleSrcPortStart,
                      wranIfBsClsfrRuleSrcPortEnd,
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                    wranIfBsClsfrRuleDestPortStart,
                    wranIfBsClsfrRuleDestPortEnd,
                    wranIfBsClsfrRuleDestMacAddr,
                    wranIfBsClsfrRuleDestMacAddrMask,
                    wranIfBsClsfrRuleSrcMacAddr,
                    wranIfBsClsfrRuleSrcMacAddrMask,
                    wranIfBsClsfrRuleEnetProtType,
                    wranIfBsClsfrRuleEnetProtocol,
                    wranIfBsClsfrRuleUserPriLow,
                    wranIfBsClsfrRuleUserPriHigh,
                    wranIfBsClsfrRuleVlanId,
                    wranIfBsClsfRuleIpv6FlowLabel,
                    wranIfBsClsfrRuleIpTypeOfService }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to the
             configuration of classifier rules for dynamic
             service flows."
      ::= { wranIfBsSfMibGroups 5 }

wranIfBsSfTrapControlGroup          OBJECT-GROUP
      OBJECTS     { wranIfBsSfTrapControl }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
             enabling/disabling traps used for  service
             flow management."
      ::= { wranIfBsSfMibGroups 6 }

wranIfBsSfNotificationMibGroup            OBJECT-GROUP
      OBJECTS     { wranIfBsProvSfChangeTrap,
                    wranIfBsScChangeTrap,
                    wranIfBsActiveSfChangeTrap,
                    wranIfBsProvClassifierRuleChangeTrap,
                    wranIfBsClassifierRuleChangeTrap,
                    wranIfBsSfNotificationIndex,
                    wranIfBsSfNotificationProvSfStatus,
                    wranIfBsSfNotificationProvEntryIndex,
                    wranIfBsSfNotificationScIndex,
                    wranIfBsSfNotificationActiveSfIndex,
                    wranIfBsSfNotificationActiveSfStatus,
                    wranIfBsSfNotificationProvClsfrRuleIndex,
                    wranIfBsSfNotificationProvClsfrRuleMap,
                    wranIfBsSfProvClsfrRuleMap,
                    wranIfBsSfNotificationClsfrRuleIndex,
                    wranIfBsSfNotificationClsfrRuleMap }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to traps
             used for service flow management."
      ::= { wranIfBsSfMibGroups 7 }

wranIfBsSfMibCompliance MODULE-COMPLIANCE
      STATUS      current
      DESCRIPTION
            "MIB objects that are optional and mandatory for
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                service flow management compliance."
        MODULE      wranIfBsSfMgmtMib
        MANDATORY-GROUPS  { wranIfBsProvSfMibGroup,
                            wranIfBsScMibGroup,
                            wranIfBsSfMibGroup,
                            wranIfBsProvClassifierRuleMibGroup,
                            wranIfBsClassifierRuleMibGroup,
                            wranIfBsSfTrapControlGroup }
        -- OPTIONAL-GROUPS      { wranIfBsSfNotificationMibGroup }
        ::= { wranIfBsSfMgmtMib 10 }

END
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.2.4 wranIfCpeMib

```
IEEE802dot22-WRAN-IF-CPE-MIB  ::=   BEGIN

      IMPORTS
            MODULE-IDENTITY,
            OBJECT-TYPE,
            NOTIFICATION-TYPE,
            Unsigned32, Integer32, Counter32,
            Counter64
                  FROM SNMPv2-SMI
            SnmpAdminString
                  FROM SNMP-FRAMEWORK-MIB
            TEXTUAL-CONVENTION,
            MacAddress, RowStatus, TruthValue,
            TimeStamp, DateAndTime
                  FROM SNMPv2-TC
            InetAddressType, InetAddress
                  FROM INET-ADDRESS-MIB
            OBJECT-GROUP,
            MODULE-COMPLIANCE,
            NOTIFICATION-GROUP
                  FROM SNMPV2-CONF

      wranIfCpeMib      MODULE-IDENTITY
            LAST-UPDATED      "201405300000Z"   -- May 30, 2014
            ORGANIZATION      "IEEE 802.22"
            CONTACT-INFO
                  "WG E-mail: STDS-802-22@LISTSERV.IEEE.ORG
                   WG Chair:  Apurva N. Mody
                   E-mail:    apurva.mody@ieee.org

                   TGa Chair/Editor:  Ranga Reddy
                   E-mail:            ranga.reddy@ieee.org"
            DESCRIPTION
                  "This material is from IEEE Std 802.22a-2014
                   Copyright (c) 2014. This MIB Module Defines managed
                   objects for Customer Premise Equipment based on
                   IEEE Std 802.22-2011 and is under iso(1).std(0)
                   .iso8802(8802).wran(22).wranIfCpeMib(4)"
            REVISION          "201405300000Z"
            DESCRIPTION
                  "The first version of IEEE802dot22-WRAN-IF-CPE-MIB."
            ::= {iso std(0) iso8802(8802) wran(22) 4}

      wranIfCpeConfigurationTable         OBJECT IDENTIFIER
                                                ::= { wranIfCpeMib 1 }
      wranIfCpeTrapControl                OBJECT IDENTIFIER
                                                ::= { wranIfCpeMib 2 }
      wranIfCpeThresholdConfigTable       OBJECT IDENTIFIER
                                                ::= { wranIfCpeMib 3 }
      wranIfCpeTrapDefinition             OBJECT IDENTIFIER
                                                ::= { wranIfCpeMib 4 }
      wranIfCpeNotificationObjectsTable   OBJECT IDENTIFIER
                                                ::= { wranIfCpeMib 5 }
      wranIfCpeMibGroups                  OBJECT IDENTIFIER
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                                                ::= { wranIfCpeMib 6 }
wranIfCpeMibCompliance                  OBJECT IDENTIFIER
                                                ::= { wranIfCpeMib 7 }

wranIfCpeConfigurationTable   OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfCpeConfigurationEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This MIB provides a table that provides the values
             for system parameters. The parameters in this table
             are applied to all CPEs in the network, hence there
             is on entry in the table, defined by
             wranIfCpeConfigurationEntry."
      ::= { wranIfCpeMib 1 }

wranIfCpeConfigurationEntry   OBJECT-TYPE
      SYNTAX      wranIfCpeConfigurationEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "Definition of an entry in
             wranIfCpeConfigurationTable. There is only one entry
             in each CPE."
      ::= { wranIfCpeConfigurationTable 1 }

wranIfCpeConfigurationEntry   ::= SEQUENCE {
      wranIfCpeConfigurationIndex         INTEGER,
      wranIfCpeLostDsMapInterval          Integer32,
      wranIfCpeLostUsMapInterval          Integer32,
      wranIfCpeContentionRangingRetries   Integer32,
      wranIfCpeContentionBwRetries        Integer32,
      wranIfCpeRegReqRetries              INTEGER,
      wranIfCpeTftpBackoffStart           Integer32,
      wranIfCpeTftpBackoffEnd             Integer32,
      wranIfCpeTftpReqRetries             Integer32,
      wranIfCpeTftpDownloadRetries        Integer32,
      wranIfCpeTftpWait                   Integer32,
      wranIfCpeToDRetries                 Integer32,
      wranIfCpeToDRetryPeriod             Integer32
      wranIfCpeCBCReqRetries              INTEGER,
      wranIfCpeTftpCpltRetries            INTEGER,
      wranIfCpeInvitedRangRetries         Integer32,
      wranIfCpeDSxReqRetries              INTEGER,
      wranIfCpeDSxRspRetries              INTEGER }

wranIfCpeConfigurationIndex   OBJECT-TYPE
      SYNTAX      INTEGER (1..1)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index of entry in this table, defaults to 1."
      ::= { wranIfCpeConfigurationEntry 1 }

wranIfCpeLostDsMapInterval    OBJECT-TYPE
      SYNTAX      Integer32 (0..600)
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        UNITS       "milliseconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Amount of time (in milliseconds) since reception of
               last DS-MAP before DS synchronization was lost."
        ::= { wranIfCpeConfigurationEntry 2 }

    wranIfCpeLostUsMapInterval    OBJECT-TYPE
        SYNTAX      Integer32 (0..600)
        UNITS       "milliseconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Amount of time (in milliseconds) since reception of
               last US-MAP before US synchronization is considered
               lost."
        ::= { wranIfCpeConfigurationEntry 3 }

    wranIfCpeContentionRangingRetries   OBJECT-TYPE
        SYNTAX            Integer32 (16..65535)
        MAX-ACCESS        read-write
        STATUS            current
        DESCRIPTION
              "Number of retries on contention ranging requests."
        ::= { wranIfCpeConfigurationEntry 4 }

    wranIfCpeContentionBwRetries  OBJECT-TYPE
        SYNTAX            Integer32 (16..65535)
        MAX-ACCESS        read-write
        STATUS            current
        DESCRIPTION
              "Number of retries on contention bandwidth requests."
        ::= { wranIfCpeConfigurationEntry 5 }

    wranIfCpeRegReqRetries  OBJECT-TYPE
        SYNTAX            INTEGER (1..255)
        MAX-ACCESS        read-write
        STATUS            current
        DESCRIPTION
              "Maximum number of retries allowed for registration
               requests."
        ::= { wranIfCpeConfigurationEntry 6 }

    wranIfCpeTftpBackoffStart     OBJECT-TYPE
        SYNTAX            Integer32 (1..65535)
        UNITS             "seconds"
        MAX-ACCESS        read-write
        STATUS            current
        DESCRIPTION
              "Initial backoff for TFTP Start."
        ::= { wranIfCpeConfigurationEntry 7 }

    wranIfCpeTftpBackoffEnd OBJECT-TYPE
        SYNTAX      Integer32 (1..65535)
        UNITS       "seconds"
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                  "Last value for TFTP backoff."
            ::= { wranIfCpeConfigurationEntry 8 }

      wranIfCpeTftpReqRetries OBJECT-TYPE
            SYNTAX            Integer32 (16..65535)
            MAC-ACCESS        read-write
            STATUS            current
            DESCRIPTION
                  "Maximum number of retires allowed for attempting
                   TFTP to get CPE configuration."
            ::= { wranIfCpeConfigurationEntry 9 }

      wranIfCpeTftpDownloadRetries  OBJECT-TYPE
            SYNTAX            Integer32 (3..65535)
            MAX-ACCESS        read-write
            STATUS            current
            DESCRIPTION
                  "Maximum number of retries allowed for re-attempting
                   TFTP (after failed/corrupted download) to get CPE
                   configuration."
            ::= { wranIfCpeConfigurationEntry 10 }

wranIfCpeTftpWait OBJECT-TYPE
            SYNTAX            Integer32 (2..65535)
            UNITS             "minutes"
            MAX-ACCESS        read-write
            STATUS            current
            DESCRIPTION
                  "Time to wait before consecutive attempts to obtain
                   configuration via TFTP."
            ::= { wranIfCpeConfigurationEntry 11 }

      wranIfCpeToDRetries     OBJECT-TYPE
            SYNTAX            Integer32 (3..65535)
            MAX-ACCESS        read-write
            STATUS            current
            DESCRIPTION
                  "Number of retries allowed for establishing Time of
                   Day, per network entry procedures."
            ::= { wranIfCpeConfigurationEntry 12 }

      wranIfCpeToDRetryPeriod OBJECT-TYPE
            SYNTAX      Integer32 (5..65535)
            UNITS       "minutes"
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                  "Amount of time to wait before retrying establishment
                   of time of day after failed attempt."
            ::= { wranIfCpeConfigurationEntry 13 }

      wranIfCpeCBCReqRetries  OBJECT-TYPE
            SYNTAX      INTEGER (3..16)
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Maximum number of retries for sending CBC request."
        DEFVAL { 3 }
        ::= { wranIfCpeConfigurationEntry 14 }

    wranIfCpeTftpCpltRetries      OBJECT-TYPE
        SYNTAX      INTEGER (3..16)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Maximum number of retries allowed for sending TFTP-
               CPLT messages to BS."
        ::= { wranIfCpeConfigurationEntry 15 }

    wranIfCpeInvitedRangRetries   OBJECT-TYPE
        SYNTAX      Integer32 (16..65535)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Maximum time number of retries on invited ranging
               requests."
        ::= { wranIfCpeConfigurationEntry 16 }

    wranIfCpeDSxReqRetries  OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Number of timeout retries on DSx-REQ."
        DEFVAL { 3 }
        ::= { wranIfCpeConfigurationEntry 17 }

    wranIfCpeDSxRspRetries  OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Number of timeout retries on DSx-RSP."
        DEFVAL { 3 }
        ::= { wranIfCpeConfigurationEntry 17 }

    wranIfCpeTrapControl    OBJECT-TYPE
        SYNTAX      BITS  { wranIfCpeDhcpSuccess(0),
                            wranIfCpeRssiStatusChange(1),
                            wranIfCpeEirpPerScStatusChange(2),
                            wranIfCpeMaxEirpStatusChange(3),
                            wranIfCpeScmStateChange(4) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Defines control elements for traps related to CPE
               operation. This is a 5-bit field that enables
               setting a trap for particular CPE events:
               wranIfCpeDhcpSuccess, wranIfCpeRssiStatusChange,
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                wranIfCpeEirpPerScStatusChange,
                wranIfCpeMaxEirpStatusChange and
                wranIfCpeScmStateChange."
        ::= { wranIfCpeMib 2 }

    wranIfCpeThresholdConfigTable OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfCpeThresholdConfigEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB provides a table that allows the setting of
               thresholds that can be used to detect the crossing
               of RSSI and EIRP thresholds. Each table is made of
               one entry defined by wranIfCpeThresholdConfigEntry."
        ::= { wranIfCpeMib 3 }

    wranIfCpeThresholdConfigEntry OBJECT-TYPE
        SYNTAX      wranIfCpeThresholdConfigEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "Definition of an entry in
               wranIfCpeConfigurationTable. There is only one entry
               in each CPE."
        ::= { wranIfCpeThresholdConfigTable 1 }

    wranIfCpeThresholdConfigEntry ::= SEQUENCE {
        wranIfCpeThresholdConfigIndex       INTEGER,
        wranIfCpeRssiLowThreshold           INTEGER,
        wranIfCpeRssiHighThreshold          INTEGER,
        wranIfCpeEirpPerScLowThreshold      INTEGER,
        wranIfCpeEirpPerScHighThreshold     INTEGER,
        wranIfCpeMaxEirpLowThreshold        INTEGER,
        wranIfCpeMaxEirpHighThreshold       INTEGER }

    wranIfCpeThresholdConfigIndex OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in this table, defaults to 1."
        ::= { wranIfCpeThresholdConfigEntry 1 }

    wranIfCpeRssiLowThreshold     OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        UNITS       "dBm"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Low threshold for RSSI alarm trap (between -104 dBm
               to +23.5 dBm in 0.5 dB steps)."
        ::= { wranIfCpeThresholdConfigEntry 2 }

    wranIfCpeRssiHighThreshold    OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        UNITS       "dBm"
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                  "High threshold for RSSI alarm trap (between -104 dBm
                   to +23.5 dBm in 0.5 dB steps)."
            ::= { wranIfCpeThresholdConfigEntry 3 }

      wranIfCpeEirpPerScLowThreshold      OBJECT-TYPE
            SYNTAX      INTEGER (0..255)
            UNITS       "dBm"
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                  "Low threshold for EIRP per subcarrier alarm trap
                   (between -104 dBm to +23.5 dBm in 0.5 dB steps)."
            ::= { wranIfCpeThresholdConfigEntry 4 }

      wranIfCpeEirpPerScHighThreshold     OBJECT-TYPE
            SYNTAX      INTEGER (0..255)
            UNITS       "dBm"
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                  "High threshold for EIRP per subcarrier alarm trap
                   (between -104 dBm to +23.5 dBm in 0.5 dB steps)."
            ::= { wranIfCpeThresholdConfigEntry 5 }

      wranIfCpeMaxEirpLowThreshold  OBJECT-TYPE
            SYNTAX      INTEGER (0..255)
            UNITS       "dBm"
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                  "Low threshold for maximum EIRP (over all 60
                   subchannels) alarm trap (between -64 dBm to +63.5
                   dBm in 0.5 dB steps)."
            ::= { wranIfCpeThresholdConfigEntry 6 }

      wranIfCpeMaxEirpHighThreshold OBJECT-TYPE
            SYNTAX      INTEGER (0..255)
            UNITS       "dBm"
            MAX-ACCESS  read-write
            STATUS      current
            DESCRIPTION
                  "High threshold for maximum EIRP (over all 60
                   subchannels) alarm trap (between -64 dBm to +63.5
                   dBm in 0.5 dB steps).
            ::= { wranIfCpeThresholdConfigEntry 7 }

   -- wranIfCpeTrapDefinition: This MIB group specifies the definition of
   -- CPE traps that can be enabled/disable in wranIfCpeTrapControl.

      wranIfCpeTrapDefinition                    OBJECT IDENTIFIER
                                    ::= { wranIfCpeMib 4 }
      wranIfCpeRssiStatusChangeTrap              OBJECT IDENTIFIER
                                    ::= { wranIfCpeTrapDefinition 1 }
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
wranIfCpeEirpPerScStatusChangeTrap        OBJECT IDENTIFIER
                                ::= { wranIfCpeTrapDefinition 2 }
wranIfCpeDhcpSuccessTrap                  OBJECT IDENTIFIER
                                ::= { wranIfCpeTrapDefinition 3 }
wranIfCpeScmStateChangeTrap               OBJECT IDENTIFIER
                                ::= { wranIfCpeTrapDefinition 4 }
wranIfCpeMaxEirpStatusChangeTrap          OBJECT IDENTIFIER
                                ::= { wranIfCpeTrapDefinition 5 }

wranIfCpeRssiStatusChangeTrap NOTIFICATION-TYPE
      OBJECTS     { wranIfCpeMacAddress,
                    wranIfCpeRssiStatus }
      STATUS      current
      DESCRIPTION
            "This trap contains the information related to the
             RSSI alarm that is contained in
             wranIfCpeNotificationObjectsTable."
      ::= { wranIfCpeTrapDefinition 1 }

wranIfCpeEirpPerScStatusChangeTrap  NOTIFICATION-TYPE
      OBJECTS     { wranIfCpeMacAddress,
                    wranIfCpeEirpPerScStatus }
      STATUS      current
      DESCRIPTION
            "This trap contains the information related to the
             EIRP per subcarrier alarm that is contained in
             wranIfCpeNotificationObjectsTable."
      ::= { wranIfCpeTrapDefinition 2 }

wranIfCpeDhcpSuccessTrap    NOTIFICATION-TYPE
      OBJECTS     { wranIfCpeMacAddress,
                    wranIfCpeDhcpStatus }
      STATUS      current
      DESCRIPTION
            "This trap contains the information related to the
             DHCP alarm that is contained in
             wranIfCpeNotificationObjectsTable."
      ::= { wranIfCpeTrapDefinition 3 }

wranIfCpeScmStateChangeTrap   NOTIFICATION-TYPE
      OBJECTS     { wranIfCpeMacAddress,
                    wranIfCpeScmStatus }
      STATUS      current
      DESCRIPTION
            "This trap contains the information related to the
             SCM state change alarm that is contained in
             wranIfCpeNotificationObjectsTable."
      ::= { wranIfCpeTrapDefinition 4 }

wranIfCpeMaxEirpStatusChangeTrap    NOTIFICATION-TYPE
      OBJECTS     { wranIfCpeMacAddress,
                    wranIfCpeMaxEirpStatus }
      STATUS      current
      DESCRIPTION
            "This trap contains the information related to the
             maximum EIRP (over all 60 subchannels) subcarrier
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                alarm that is contained in
                wranIfCpeNotificationObjectsTable."
        ::= { wranIfCpeTrapDefinition 5 }

    wranIfCpeNotificationObjectsTable   OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfCpeNotificationObjectsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB provides a table to track notification
               objects that have been reported by the traps on a
               particular CPE. There is one entry in this table,
               defining the notification objects for that
               particular CPE. Each entry is defined by
               wranIfCpeNotificationObjectsEntry."
        ::= { wranIfCpeMib 5 }

    wranIfCpeNotificationObjectsEntry   OBJECT-TYPE
        SYNTAX      wranIfCpeNotificationObjectsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "Definition of an entry in
               wranIfCpeNotificationObjectsTable. There is only one
               entry in each CPE."
        INDEX { wranIfCpeNotificationMacAddress }
        ::= { wranIfCpeNotificationObjectsTable 1 }

    wranIfCpeNotificationObjectsEntry   ::= SEQUENCE {
        wranIfCpeNotificationObjectsEntyIndex     INTEGER,
        wranIfCpeNotificationMacAddress           MacAddress,
        wranIfCpeRssiStatus                       INTEGER,
        wranIfCpeEirpPerScStatus                  INTEGER,
        wranIfCpeDhcpStatus                       INTEGER,
        wranIfCpeScmIdleStatus                    INTEGER,
        wranIfCpeMaxEirpStatus                    INTEGER }

    wranIfCpeNotificationObjectsEntyIndex     OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in this table, defaults to 1."
        ::= { wranIfCpeNotificationObjectsEntry 1 }

    wranIfCpeNotificationMacAddress     OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "MAC Address of the CPE generating the trap."
        ::= { wranIfCpeNotificationObjectsEntry 2 }

    wranIfCpeRssiStatus     OBJECT-TYPE
        SYNTAX      INTEGER { lowThresholdAlarm(0),
                              highThresholdAlarm(1),
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                              noAlarm(2) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Indication if RSSI alarm was for an RSSI value below
             wranIfCpeRssiLowThreshold, for an RSSI value above
             wranIfCpeRssiHighThreshold, or the RSSI as returned
             to within the bounds set by
             wranIfCpeRssiLowThreshold and
             wranIfCpeRssiHighThreshold."
      ::= { wranIfCpeNotificationObjectsEntry 3 }

wranIfCpeEirpPerScStatus      OBJECT-TYPE
      SYNTAX      INTEGER { lowThresholdAlarm(0),
                            highThresholdAlarm(1),
                            noAlarm(2) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Indication if EIRP per subcarrier alarm was for an
             EIRP value below wranIfCpeEirpPerScLowThreshold, for
             an EIRP value above wranIfCpeEirpPerScHighThreshold,
             or the EIRP as returned to within the bounds set by
             wranIfCpeEirpPerScLowThreshold and
             wranIfCpeEirpPerScHighThreshold."
      ::= { wranIfCpeNotificationObjectsEntry 4 }

wranIfCpeDhcpStatus     OBJECT-TYPE
      SYNTAX      INTEGER { failure(0),
                            successful(1) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "An DHCP alarm is generated when a CPE is
             successfully able to obtain an IP address or fails
             to obtain an IP address."
      ::= { wranIfCpeNotificationObjectsEntry 5 }

wranIfCpeScmStatus      OBJECT-TYPE
      SYNTAX      INTEGER { idle(0),
                            notAuthenticated(1),
                            authenticated(2),
                            reAuthWait(3) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "An SCM alarm is generated when a CPE changes to a
             different state in the SCM Authentication state
             machine."
      ::= { wranIfCpeNotificationObjectsEntry 6 }

wranIfCpeMaxEirpStatus  OBJECT-TYPE
      SYNTAX      INTEGER { lowThresholdAlarm(0),
                            highThresholdAlarm(1),
                            noAlarm(2) }
      MAX-ACCESS  read-only
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
            STATUS      current
            DESCRIPTION
                  "Indication if maximum EIRP (over all 60 subchannels)
                   was for an EIRP value below
                   wranIfCpeMaxEirpLowThreshold, for an EIRP value
                   above wranIfCpeMaxEirpHighThreshold, or the EIRP as
                   returned to within the bounds set by
                   wranIfCpeMaxEirpLowThreshold and
                   wranIfCpeMaxEirpHighThreshold."
            ::= { wranIfCpeNotificationObjectsEntry 7 }

-- wranIfCpeMibGroups: This object helps define which MIB groups are
-- available within this module and which MIB objects are part of each
-- group.

      wranIfCpeMibGroups                              OBJECT IDENTIFIER
                                            ::= { wranIfCpeMib 6 }
      wranIfCpeMibConfigGroup                         OBJECT IDENTIFIER
                                            ::= { wranIfCpeMibGroups 1 }
      wranIfCpeTrapControlGroup                       OBJECT IDENTIFIER
                                            ::= { wranIfCpeMibGroups 2 }
      wranIfCpeMibNotificationGroup                   OBJECT IDENTIFIER
                                            ::= { wranIfCpeMibGroups 3 }

      wranIfCpeMibConfigGroup       OBJECT-GROUP
            OBJECTS     { wranIfCpeConfigurationIndex,
                          wranIfCpeLostDsMapInterval,
                          wranIfCpeLostUsMapInterval,
                          wranIfCpeContentionRangingRetries,
                          wranIfCpeContentionBwRetries,
                          wranIfCpeRegReqRetries,
                          wranIfCpeTftpBackoffStart,
                          wranIfCpeTftpBackoffEnd,
                          wranIfCpeTftpReqRetries,
                          wranIfCpeTftpDownloadRetries,
                          wranIfCpeTftpWait, wranIfCpeToDRetries,
                          wranIfCpeToDRetryPeriod,
                          wranIfCpeCBCReqRetries,
                          wranIfCpeTftpCpltRetries,
                          wranIfCpeInvitedRangRetries,
                          wranIfCpeInvitedRangRetries,
                          wranIfCpeDSxReqRetries,
                          wranIfCpeDSxRspRetries }
            STATUS      current
            DESCRIPTION
                  "This group contains configuration objects for
                   the CPE."
            ::= { wranIfCpeMibGroups 1 }

      wranIfCpeTrapControlGroup           OBJECT-GROUP
            OBJECTS     { wranIfCpeTrapControl }
            STATUS      current
            DESCRIPTION
                  "This group contains configuration objects
                   related to enabling/disabling traps for the
                   CPE."
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
            ::= { wranIfCpeMibGroups 2 }

      wranIfCpeMibNotificationsGroup      OBJECT-TYPE
            OBJECTS     { wranIfCpeThresholdConfigIndex,
                          wranIfCpeRssiLowThreshold,
                          wranIfCpeRssiHighThreshold,
                          wranIfCpeEirpPerScLowThreshold,
                          wranIfCpeEiprPerScHighThreshold,
                          wranIfCpeMaxEirpLowThreshold,
                          wranIfCpeMaxEirpHighThreshold,
                          wranIfCpeNotificationMacAddress,
                          wranIfCpeRssiStatus,
                          wranIfCpeEirpPerScStatus,
                          wranIfCpeMaxEirpStatus,
                          wranIfCpeDhcpStatus,
                          wranIfCpeScmIdleStatus,
                          wranIfCpeRssiStatusChangeTrap,
                          wranIfCpeEirpPerScStatusChangeTrap,
                          wranIfCpeDhcpSuccessTrap,
                          wranIfCpeScmStateChangeTrap,
                          wranIfCpeMaxEirpStatusChangeTrap }
            STATUS      current
            DESCRIPTION
                  "This group contains CPE event notifications."
            ::= {wranIfCpeMibGroups 3 }

      wranIfCpeMibCompliance  MODULE-COMPLIANCE
            STATUS      current
            DESCRIPTION
                  "MIB objects that are optional and mandatory for CPE
                   conformance."
            MODULE      wranIfCpeMib
            MANDATORY-GROUPS  { wranIfCpeMibConfigGroup,
                                wranIfCpeTrapControlGroup }
            -- OPTIONAL-GROUPS      { wranIfCpeMibNotificationsGroup }
            ::= { wranIfCpeMib 7 }

END
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.2.5 wranIfSmMib

```
IEEE802dot22-WRAN-IF-SM-MIB   ::=   BEGIN

      IMPORTS
            MODULE-IDENTITY,
            OBJECT-TYPE,
            NOTIFICATION-TYPE,
            Unsigned32, Integer32, Counter32,
            Counter64
                  FROM SNMPv2-SMI
            SnmpAdminString
                  FROM SNMP-FRAMEWORK-MIB
            TEXTUAL-CONVETION,
            MacAddress, RowStatus, TruthValue,
            TimeStamp, DateAndTime
                  FROM SNMPv2-TC
            InetAddressType, InetAddress
                  FROM INET-ADDRESS-MIB
            OBJECT-GROUP,
            MODULE-COMPLIANCE,
            NOTIFICATION-GROUP
                  FROM SNMPV2-CONF

      wranIfSmMib MODULE-IDENTITY
            LAST-UPDATED      "201405300000Z"   -- May 30, 2014
            ORGANIZATION      "IEEE 802.22"
            CONTACT-INFO
                  "WG E-mail: STDS-802-22@LISTSERV.IEEE.ORG
                   WG Chair:  Apurva N. Mody
                   E-mail:    apurva.mody@ieee.org

                   TGa Chair/Editor:  Ranga Reddy
                   E-mail:            ranga.reddy@ieee.org"
            DESCRIPTION
                  "This material is from IEEE Std 802.22a-2014
                   Copyright (c) 2014. This MIB Module object is
                   related to configuration, operation and monitoring
                   of the Spectrum Manager (SM). Objects in this module
                   are based on IEEE Std 802.22-2011 and is under
                   iso(1).std(0).iso8802(8802).wran(22).wranIfSmMib(5)"
            REVISION          "201405300000Z"
            DESCRIPTION
                  "The first version of IEEE802dot22-WRAN-IF-SM-MIB."
            ::= {iso std(0) iso8802(8802) wran(22) 5}

      wranIfSmConfigTable                        OBJECT IDENTIFIER
                                       ::= { wranIfSmMib 1 }
      wranIfSmPendingBlmReqTable                 OBJECT IDENTIFIER
                                       ::= { wranIfSmMib 2 }
      wranIfSmBlmRepTable                        OBJECT IDENTIFIER
                                       ::= { wranIfSmMib 3 }
      wranIfSmChClassificationStatusTable        OBJECT IDENTIFIER
                                       ::= { wranIfSmMib 4 }
      wranIfSmChannelSetTable                    OBJECT IDENTIFIER
                                       ::= { wranIfSmMib 5 }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
      wranIfSmCurrentStatusTable                OBJECT IDENTIFIER
                                    ::= { wranIfSmMib 6 }
      wranIfSmRegTrackingTable                  OBJECT IDENTIFIER
                                    ::= { wranIfSmMib 7 }
      wranIfSmTrapControl                       OBJECT IDENTIFIER
                                    ::= { wranIfSmMib 8 }
      wranIfSmTrapDefinition                    OBJECT IDENTIFIER
                                    ::= { wranIfSmMib 9 }
      wranIfSmNotificationObjectsTable          OBJECT IDENTIFIER
                                    ::= { wranIfSmMib 10 }
      wranIfSmMibGroups                         OBJECT IDENTIFIER
                                    ::= { wranIfSmMib 11 }
      wranIfSmMibCompliance                     OBJECT IDENTIFIER
                                    ::= { wranIfSmMib 12 }

-- NOTE: In this module "Sm" or "SM" refers to Spectrum Manager, while
-- "Ssa" or "SSA" refers to Spectrum Sensing Automaton.

      wranIfSmConfigTable     OBJECT-TYPE
            SYNTAX      SEQUENCE OF wranIfSmConfigEntry
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                  "This MIB object represents a table that tracks the
                   default configuration of SM timers and constants. It
                   is made up of one entry, defined by
                   wranIfSmConfigEntry."
            ::= { wranIfSmMib 1 }

      wranIfSmConfigEntry     OBJECT-TYPE
            SYNTAX      wranIfSmConfigEntry
            MAX-ACCESS  not-accessible
            STATUS      current
            DESCRIPTION
                  "This object defines an entry in wranIfSmConfigTable.
                   Each entry is identified by wranIfSmConfigIndex."
            INDEX { wranIfSmConfigIndex }
            ::= { wranIfSmConfigTable 1 }

      wranIfSmConfigEntry     ::= SEQUENCE {
            wranIfSmConfigIndex                 INTEGER,
            wranIfSmT31                         INTEGER,
            wranIfSmChAvailabilityCheckTime     Integer32,
            wranIfSmNonOccupancyPeriod          Integer32,
            wranIfSmChannelDetectionTime        INTEGER,
            wranIfSmChannelSetupTime            INTEGER,
            wranIfSmChannelOpeningTxTime        Integer32,
            wranIfSmChannelMoveTime             INTEGER,
            wranIfSmChannelClosingTxTime        Integer32,
            wranIfSmMicProtectionRadius         Integer32,
            wranIfSmT41                         INTEGER,
            wranIfSmT42                         INTEGER,
            wranIfSmT43                         INTEGER,
            wranIfSmT44                         INTEGER,
            wranIfSmT45                         Integer32,
            wranIfSmT46                         Integer32,
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        wranIfSmT59                             Integer32,
        wranIfSmT47                             Integer32,
        wranIfSmT48                             Integer32,
        wranIfSmT49                             Integer32,
        wranIfSmT50                             Integer32,
        wranIfSmT51                             Integer32,
        wranIfSmT53                             Integer32,
        wranIfSmT54                             Integer32,
        wranIfSmT55                             INTEGER,
        wranIfSmT60                             INTEGER }

wranIfSmConfigIndex     OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in the table, defaults to 1."
        ::= { wranIfSmConfigEntry 1 }

wranIfSmT31             OBJECT-TYPE
        SYNTAX      INTEGER (1..64)
        UNITS       "frames"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Wait for BLM-REP timeout."
        ::= { wranIfSmConfigEntry 2 }

wranIfSmChAvailabilityCheckTime     OBJECT-TYPE
        SYNTAX      Integer32 (30..3600)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Time during which a TV channel shall be checked for
               the presence of licensed incumbent signals having a
               level above the incumbent detection threshold prior
               to commencement of WRAN operation in the channel,
               and in the case of TV, a related channel at an EIRP
               level that can affect the measured TV channel."
        ::= { wranIfSmConfigEntry 3 }

wranIfSmNonOccupancyPeriod    OBJECT-TYPE
        SYNTAX      Integer32 (10..60)
        UNITS       "minutes"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The required period during which WRAN device
               transmissions SHALL NOT occur in a given TV channel
               because of the detected presence of an incumbent
               signal in that channel above the Incumbent detection
               threshold, or in the case of TV, above a given EIRP
               level."
        ::= { wranIfSmConfigEntry 4 }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
wranIfSmChannelDetectionTime  OBJECT-TYPE
      SYNTAX      INTEGER (2..128)
      UNITS       "seconds"
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Maximum time taken by a WRAN device to detect a
             licensed incumbent signal above the Incumbent
             Detection Threshold within a given TV channel during
             normal WRAN operation."
      ::= { wranIfSmConfigEntry 5 }

wranIfSmChannelSetupTime      OBJECT-TYPE
      SYNTAX      INTEGER (2..128)
      UNITS       "seconds"
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "The window of time that may be taken by a WRAN CPE
             to transmit control information to a WRAN base
             station in order to establish operation with that
             base station at the prescribed power or, in the case
             of TV, at or below the allowable EIRP within a given
             TV channel."
      ::= { wranIfSmConfigEntry 6 }

wranIfSmChannelOpeningTxTime  OBJECT-TYPE
      SYNTAX      Integer32 (100..480)
      UNITS       "milliseconds"
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "The aggregate duration of control transmissions by
             WRAN devices during the Channel Setup Time that
             starts at the end of the Channel Availability Check
             Time."
      ::= { wranIfSmConfigEntry 7 }

wranIfSmChannelMoveTime OBJECT-TYPE
      SYNTAX      INTEGER (2..60)
      UNITS       "seconds"
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "The time taken by WRAN system to cease all
             interfering transmissions on the current TV channel
             upon detection of a license incumbent signal above
             the relevant Incumbent Detection Threshold, or in
             the case of TV, to alternatively reduces its EIRP to
             which is allowable within a given TV channel upon
             detection of a TV signal in the same or a related
             channel."
      ::= { wranIfSmConfigEntry 8 }

wranIfSmChannelClosingTxTime  OBJECT-TYPE
      SYNTAX      Integer32 (100..480)
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        UNITS       "milliseconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The aggregate duration of control transmissions by
               the WRAN devices during the Channel Move/EIRP
               Reduction Time that starts upon detection of a
               licensed incumbent signal above the relevant
               Incumbent Detection Threshold."
        ::= { wranIfSmConfigEntry 9 }

    wranIfSmMicProtectionRadius   OBJECT-TYPE
        SYNTAX      Integer32 (100..100000)
        UNITS       "meters"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Radius of contour within which the WRAN system
               cannot operate due to potential interference with
               the microphone."
        ::= { wranIfSmConfigEntry 10 }

    wranIfSmT41             OBJECT-TYPE
        SYNTAX      INTEGER (1..10)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Maximum time interval allowed before sensing is
               performed on the candidate channel to ensure that no
               incumbents are detected."
        ::= { wranIfSmConfigEntry 11 }

    wranIfSmT42             OBJECT-TYPE
        SYNTAX      INTEGER (1..10)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Maximum time interval allowed before sensing is
               performed on the backup channel to ensure that no
               incumbents are detected."
        ::= { wranIfSmConfigEntry 12 }

    wranIfSmT43             OBJECT-TYPE
        SYNTAX      INTEGER (1..100)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Minimum time duration without detection of any
               incumbent for a candidate channel to transition to
               the backup channel."
        ::= { wranIfSmConfigEntry 13 }

    wranIfSmT44             OBJECT-TYPE
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        SYNTAX      INTEGER (1..100)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Maximum time to ensure that the channel move
               information is successfully conveyed to all the
               associated CPEs and BS (self-coexistence mode)."
        ::= { wranIfSmConfigEntry 14 }

    wranIfSmT45             OBJECT-TYPE
        SYNTAX      Integer32 (0..720)
        UNITS       "hours"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Maximum WRAN operation time without access to the
               incumbent database service, from 0 to 72 h in
               0.1-h steps."
        ::= { wranIfSmConfigEntry 15 }

    wranIfSmT46             OBJECT-TYPE
        SYNTAX      Integer32 (1..4096)
        UNITS       "frames"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Waiting time before which the BS moves to the first
               backup channel. This is used to make sure that all
               the CPEs are ready to move to the backup channel
               before BS switches operation to this backup
               channel."
        ::= { wranIfSmConfigEntry 16 }

    wranIfSmT59             OBJECT-TYPE
        SYNTAX      Integer32 (1..4096)
        UNITS       "frames"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Waiting time before which the CPE moves to its
               backup channels if it no longer hears from its BS.
               This is used to make sure that the CPE waits long
               enough after UCS Notification so that BS has had
               time to move to the backup channel, it decided to do
               so."
        ::= { wranIfSmConfigEntry 17 }

    wranIfSmT47             OBJECT-TYPE
        SYNTAX      Integer32 (0..720)
        UNITS       "hours"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The prescribed time by the WRAN operator to refresh
               the incumbent database service."
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        ::= { wranIfSmConfigEntry 18 }

    wranIfSmT48             OBJECT-TYPE
          SYNTAX      Integer32 (0..600)
          UNITS       "seconds"
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "Lapse timer keeps track of whether the Operating
                 Channel N has been cleared using spectrum sensing,
                 from 0 to 60 s in 0.1 s steps."
          ::= { wranIfSmConfigEntry 19 }

    wranIfSmT49             OBJECT-TYPE
          SYNTAX      Integer32 (0..600)
          UNITS       "seconds"
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "Lapse timer keeps track of whether the Adjacent
                 Channel N–1 has been cleared using spectrum sensing,
                 from 0 to 60 s in 0.1 s steps."
          ::= { wranIfSmConfigEntry 20 }

    wranIfSmT50             OBJECT-TYPE
          SYNTAX      Integer32 (0..600)
          UNITS       "seconds"
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "Lapse timer keeps track of whether the Adjacent
                 Channel N+1 has been cleared using spectrum
                 sensing, from 0 to 60 s in 0.1 s steps."
          ::= { wranIfSmConfigEntry 21 }

    wranIfSmT51             OBJECT-TYPE
          SYNTAX      Integer32 (1..600)
          UNITS       "seconds"
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "Initiated when SSA loses contact with the SM."
          ::= { wranIfSmConfigEntry 22 }

    wranIfSmT53             OBJECT-TYPE
          SYNTAX      Integer32 (1..600)
          UNITS       "seconds"
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "The parameter TINsens is used to verify that in-band
                 sensing has been done within the required In-service
                 monitoring period. The TINsens parameter is driven
                 by regulatory domain requirements (Annex A), from 0
                 to 60 s in 0.1 s steps."
          ::= { wranIfSmConfigEntry 23 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranIfSmT54             OBJECT-TYPE
      SYNTAX      Integer32 (1..600)
      UNITS       "seconds"
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "The parameter TOUTsens is used to verify that out-
             of-band sensing has been done within the required
             "Acquiring a channel monitoring period" specified in
             Annex A. This value would be used to initialize a
             lapse timer for each channel in the backup candidate
             channel list at each CPE so that it is compared to
             Tsensout, from 0 to 60 s in 0.1 s steps."
      ::= { wranIfSmConfigEntry 24 }

wranIfSmT55             OBJECT-TYPE
      SYNTAX      INTEGER (1..160)
      UNITS       "milliseconds"
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "The T55 or Tsensin parameter corresponds to the
             maximum length of time required to carry out the
             sensing process on an in-band channel (see Figure
             176). Manufacturers need to specify the sensing time
             required to detect the specified signals with
             required accuracy, from 0 to 60 s in 0.1 s
             steps."
      ::= { wranIfSmConfigEntry 25 }

wranIfSmT60             OBJECT-TYPE
      SYNTAX      INTEGER (20..160)
      UNITS       "milliseconds"
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "The T60 or Tsensout parameter corresponds to the
             maximum length of time required to carry out the
             out-of-band sensing process to clear one channel
             (see Figure 178). Manufacturers need to specify the
             sensing time required to detect the specified
             signals with required accuracy for out-of-band
             sensing."
      ::= { wranIfSmConfigEntry 26 }

wranIfSmPendingBlmReqTable    OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfSmPendingBlmReqEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This MIB object represents a table that tracks the
             status of the execution of ongoing sensing requests
             (BLM-REQ). For each BLM-REQ there is a corresponding
             BLM-RSP to indicate that REQ message was received by
             the SSA. When an SSA is done with the sensing it
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                will send a BLM-REP to the SM. This table keeps
                track of any BLM-REP messages that are pending
                transmission from the SSA. When a report is received
                a response is acknowledgement is sent to the SSA,
                and then the entry corresponding to the report and
                request will be cleared. Each entry is defined by
                wranIfSmPendingBlmReqEntry."
        ::= { wranIfSmMib 2 }

    wranIfSmPendingBlmReqEntry    OBJECT-TYPE
          SYNTAX      wranIfSmPendingBlmReqEntry
          MAX-ACCESS  not-accessible
          STATUS      current
          DESCRIPTION
                "This object defines an entry in
                 wranIfSmPendingBlmReqTable. Each entry is identified
                 by wranIfSmPendingBlmReqIndex."
          INDEX { wranIfSmPendingBlmReqIndex }
          ::= { wranIfSmPendingBlmReqTable 1 }

    wranIfSmPendingBlmReqEntry    ::= SEQUENCE {
          wranIfSmPendingBlmReqIndex                INTEGER,
          wranIfSmPendingBlmReqTransactionId        Integer32,
          wranIfSmPendingBlmReqMsgSize              Integer32,
          wranIfSmPendingBlmReqMsg                  OCTET STRING,
          wranIfSmPendingBlmRspReceived             TruthValue,
          wranIfSmPendingBlmRspMulticastReceived    TruthValue,
          wranIfSmPendingBlmRepTimeout              Integer32,
          wranIfSmPendingBlmRepReceived             TruthValue,
          wranIfSmPendingBlmRepMulticastReceived    TruthValue,
          wranIfSmPendingBlmRepAck                  TruthValue }

    wranIfSmPendingBlmReqIndex    OBJECT-TYPE
          SYNTAX      INTEGER (1..100)
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Index of entry in the table."
          ::= { wranIfSmPendingBlmReqEntry 1 }

    wranIfSmPendingBlmReqTransactionId  OBJECT-TYPE
          SYNTAX      Integer32 (0..65535)
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "Transaction ID of BLM-REQ."
          ::= { wranIfSmPendingBlmReqEntry 2 }

    wranIfSmPendingBlmReqMsgSize  OBJECT-TYPE
          SYNTAX      Integer32 (SIZE(1..65535))
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "Size of BLM-REQ pending a report."
          ::= { wranIfSmPendingBlmReqEntry 3 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranIfSmPendingBlmReqMsg      OBJECT-TYPE
      SYNTAX
            OCTET STRING (SIZE(wranIfSmPendingBlmReqMsgSize))
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Contents of BLM-REQ pending a report."
      ::= { wranIfSmPendingBlmReqEntry 4 }

wranIfSmPendingBlmRspReceived OBJECT-TYPE
      SYNTAX      TruthValue
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Indication of whether (Truth(1)) or not (Truth(0))
             BLM-RSP pertaining to BLM-REQ has been received from
             SSA."
      ::= { wranIfSmPendingBlmReqEntry 5 }

wranIfSmPendingBlmRspMulticastReceived    OBJECT-TYPE
      SYNTAX      TruthValue
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "If BLM-REQ was multicast, indication of whether
             (Truth(1)) or not (Truth(0)) BLM-RSP pertaining to
             BLM-REQ has been received from each SSA (CPE) in the
             multicast group."
      ::= { wranIfSmPendingBlmReqEntry 6 }

wranIfSmPendingBlmRepTimeout        OBJECT-TYPE
      SYNTAX      Integer32 (1..640)
      UNITS       "milliseconds"
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Indication of current value of T31 set for this BLM-
             REP."
      ::= { wranIfSmPendingBlmReqEntry 7 }

wranIfSmPendingBlmRepReceived OBJECT-TYPE
      SYNTAX      TruthValue
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Indication of whether (Truth(1)) or not (Truth(0))
             BLM-REP pertaining to BLM-REQ has been received from
             SSA."
      ::= { wranIfSmPendingBlmReqEntry 8 }

wranIfSmPendingBlmRepMulticastReceived    OBJECT-TYPE
      SYNTAX      TruthValue
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "If BLM-REQ was multicast, indication of whether
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                (Truth(1)) or not (Truth(0)) BLM-REP pertaining to
                BLM-REQ has been received from each SSA (CPE) in the
                multicast group."
        ::= { wranIfSmPendingBlmReqEntry 9 }

    wranIfSsaPendingBlmRepAck     OBJECT-TYPE
        SYNTAX      TruthValue
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Indication of whether (Truth(1)) or not (Truth(0))
               BLM-ACK, has been sent to acknowledge all
               transmitters of BLM-REP messages pertaining to BLM-
               REQ that was issued."
        ::= { wranIfSmPendingBlmReqEntry 10 }

    wranIfSmBlmRepTable     OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfSmBlmRepEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object contains BLM-REP messages received in
               response to BLM-REQ; it is made up of multiple
               entries, one for each BLM-REP that pertains to a
               BLM-REQ. Once a BLM-REP has been processed the entry
               will be removed. Each entry is defined by
               wranIfSmBlmRepEntry."
        ::= { wranIfSmMib 3 }

    wranIfSmBlmRepEntry     OBJECT-TYPE
        SYNTAX      wranIfSmBlmRepEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object defines an entry in wranIfSmBlmRepTable.
               Each entry is identified by wranIfSmBlmReqIndex."
        INDEX { wranIfSmBlmReqIndex }
        ::= { wranIfSmBlmRepTable 1 }

    wranIfSmBlmRepEntry     ::= SEQUENCE {
        wranIfSmBlmRepIndex                 INTEGER,
        wranIfSmBlmRepSid                   INTEGER,
        wranIfSmBlmRepTransactionId         Integer32,
        wranIfSmBlmRepMsgSize               Integer32,
        wranIfSmBlmRepMsg                   OCTET STRING }

    wranIfSmBlmRepIndex     OBJECT-TYPE
        SYNTAX      INTEGER (1..100)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in the table."
        ::= { wranIfSmBlmRepEntry 1 }

    wranIfSmBlmRepSid OBJECT-TYPE
        SYNTAX      INTEGER (1..512)
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "SID of CPE that sent the BLM-REP."
        ::= { wranIfSmBlmRepEntry 2 }

    wranIfSmBlmRepTransactionId   OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Transaction ID of BLM-REP, it should match a
               transaction ID of an entry in
               wranIfSmPendingBlmReqTable."
        ::= { wranIfSmBlmRepEntry 3 }

    wranIfSmBlmRepMsgSize   OBJECT-TYPE
        SYNTAX      Integer32 (SIZE(1..65535))
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Size of BLM-REP msg."
        ::= { wranIfSmBlmRepEntry 4 }

    wranIfSmBlmRepMsg OBJECT-TYPE
        SYNTAX      OCTET STRING (SIZE(wranIfSmBlmRepMsgSize))
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Contents of BLM-REP msg."
        ::= { wranIfSmBlmRepEntry 5 }

    wranIfSmChClassificationStatusTable OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfSmChClassificationStatusEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB object represents a table that the status
               for channels that the SM is managing. It is made up
               of multiple entries, one for each channel, as
               defined in wranIfSmChClassificationStatusEntry."
        ::= { wranIfSmMib 4 }

    wranIfSmChClassificationStatusEntry OBJECT-TYPE
        SYNTAX      wranIfSmChClassificationStatusEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object defines an entry in
               wranIfSmChClassificationStatusTable. Each entry is
               identified by wranIfSmChClassificationStatusIndex."
        INDEX { wranIfSmChClassificationStatusIndex }
        ::= { wranIfSmChClassificationStatusTable 1 }

    wranIfSmChClassificationStatusEntry ::= SEQUENCE {
        wranIfSmChClassificationStatusIndex INTEGER,
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
      wranIfSmManagedChannel              INTEGER,
      wranIfSmManagedChannelStatus        INTEGER,
      wranIfSmManagedChannelRecentEvent   INTEGER }

wranIfSmChClassificationStatusIndex OBJECT-TYPE
      SYNTAX      INTEGER (1..255)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index of entry in the table."
      ::= { wranIfSmChClassificationStatusEntry 1 }

wranIfSmManagedChannel  OBJECT-TYPE
      SYNTAX      INTEGER (0..255)
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            " Channel number of channel being managed."
      ::= { wranIfSmChClassificationStatusEntry 2 }

wranIfSmManagedChannelStatus  OBJECT-TYPE
      SYNTAX      INTEGER { unclassified(0),
                            candidate(1),
                            protected(2),
                            operating(3),
                            backup(4),
                            disallowed(5) }
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "The state of the channel as set by the states in the
             SM Channel Set Transition Diagram (Figure 162) or
             disallowed state (if channel is in IPC-UPD)."
      ::= { wranIfSmChClassificationStatusEntry 3 }

wranIfSmManagedChannelRecentEvent   OBJECT-TYPE
      SYNTAX      INTEGER { disallowed(0),
                            event1(1),
                            event2(2),
                            event3(3),
                            event4(4),
                            event5(5),
                            event6(6),
                            event7(7),
                            event8(8) }
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Most recent event (see 10.2.3.1) that dictated a
             transition to the current state. disallowed(0)
             pertains to reception of IPC-UPD."
      ::= { wranIfSmChClassificationStatusEntry 4 }

wranIfSmChannelSetTable OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfSmChannelSetEntry
      MAX-ACCESS  not-accessible
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        STATUS      current
        DESCRIPTION
              "This MIB object represents a table that stores
               information related to the contents of the Occupied,
               Backup Channel, and Local Priority channel sets used
               by the Spectrum Manager (see 10.2.3.2)."
        ::= { wranIfSmMib 5 }

  wranIfSmChannelSetEntry OBJECT-TYPE
        SYNTAX      wranIfSmChannelSetEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object defines an entry in
               wranIfSmChannelSetTable. There is only one entry in
               this table."
        INDEX { wranIfSmChannelSetIndex }
        ::= { wranIfSmChannelSetTable 1 }

  wranIfSmChannelSetEntry ::= SEQUENCE {
        wranIfSmChannelSetIndex                  INTEGER,
        wranIfSmSizeWranOccupiedChannelSet       INTEGER,
        wranIfSmWranOccupiedChannelSet           OCTET STRING,
        wranIfSmSizeNghbrWranBackupChannelSet    INTEGER,
        wranIfSmNghbrWranBackupChannelSet        OCTET STRING,
        wranIfSmSizeLocalPrioritySet1            INTEGER,
        wranIfSmLocalPrioritySet1                OCTET STRING,
        wranIfSmSizeLocalPrioritySet2            INTEGER,
        wranIfSmLocalPrioritySet2                OCTET STRING,
        wranIfSmSizeLocalPrioritySet3            INTEGER,
        wranIfSmLocalPrioritySet3                OCTET STRING }

  wranIfSmChannelSetIndex OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in the table."
        ::= { wranIfSmChannelSetEntry 1 }

  wranIfSmSizeWranOccupiedChannelSet  OBJECT-TYPE
        SYNTAX      INTEGER (1..256)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Number of channels in WRAN Occupied Channel Set."
        ::= { wranIfSmChannelSetEntry 2 }

  wranIfSmWranOccupiedChannelSet      OBJECT-TYPE
        SYNTAX
              OCTET STRING
                    (SIZE(wranIfSmSizeWranOccupiedChannelSet))
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Vector of channels of length 8 bits ×
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                wranIfSmSizeWranOccupiedChannelSet that indicate the
                channels that occupy the WRAN Occupied Channel Set
                used by the Spectrum Etiquette procedure (see
                10.2.3.2)."
        ::= { wranIfSmChannelSetEntry 3 }

    wranIfSmSizeNghbrWranBackupChannelSet     OBJECT-TYPE
        SYNTAX      INTEGER (1..256)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Number of channels in Neighbor WRAN Backup Channel
                 Set."
        ::= { wranIfSmChannelSetEntry 4 }

    wranIfSmNghbrWranBackupChannelSet   OBJECT-TYPE
        SYNTAX
              OCTET STRING
                    (SIZE(wranIfSmSizeNghbrWranBackupChannelSet))
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Vector of channels of length 8 bits ×
               wranIfSmSizeNghbrWranBackupChannelSet that indicate
               the channels that occupy the Neighbor WRAN Backup
               Channel Set used by the Spectrum Etiquette procedure
               (see 10.2.3.2)."
        ::= { wranIfSmChannelSetEntry 5 }

    wranIfSmSizeLocalPrioritySet1 OBJECT-TYPE
        SYNTAX      INTEGER (1..256)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Number of channels in Local Priority Set 1."
        ::= { wranIfSmChannelSetEntry 6 }

    wranIfSmLocalPrioritySet1     OBJECT-TYPE
        SYNTAX
              OCTET STRING (SIZE(wranIfSmSizeLocalPrioritySet1))
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Vector of channels of length 8 bits ×
               wranIfSmSizeLocalPrioritySet1 that indicate the
               channels that occupy the Local Priority Set 1 used
               by the Spectrum Etiquette procedure (see 10.2.3.2)."
        ::= { wranIfSmChannelSetEntry 7 }

    wranIfSmSizeLocalPrioritySet2 OBJECT-TYPE
        SYNTAX      INTEGER (1..256)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Number of channels in Local Priority Set 2."
        ::= { wranIfSmChannelSetEntry 8 }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
wranIfSmLocalPrioritySet2     OBJECT-TYPE
      SYNTAX
            OCTET STRING (SIZE(wranIfSmSizeLocalPrioritySet2))
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Vector of channels of length 8 bits ×
             wranIfSmSizeLocalPrioritySet2 that indicate the
             channels that occupy the Local Priority Set 2 used
             by the Spectrum Etiquette procedure (see 10.2.3.2)."
      ::= { wranIfSmChannelSetEntry 9 }

wranIfSmSizeLocalPrioritySet3 OBJECT-TYPE
      SYNTAX      INTEGER (1..256)
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Number of channels in Local Priority Set 3, should
             be the same size as
             wranIfSmSizeWranOccupiedChannelSet."
      ::= { wranIfSmChannelSetEntry 10 }

wranIfSmLocalPrioritySet3     OBJECT-TYPE
      SYNTAX
            OCTET STRING (SIZE(wranIfSmSizeLocalPrioritySet3))
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Vector of channels of length 8 bits ×
             wranIfSmSizeLocalPrioritySet3 that indicate the
             channels that occupy the Local Priority Set 3 used
             by the Spectrum Etiquette procedure (see 10.2.3.2).
             Should contain the same channel set as
             wranIfSmWranOccupiedChannelSet."
      ::= { wranIfSmChannelSetEntry 11 }

wranIfSmCurrentStatusTable    OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfSmCurrentStatusEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This MIB object represents a table that the records
             the current status of the SM. This includes the
             state the SM is in, the event that triggered a move
             into that state, as well as the current state of any
             relevant timers. There is one entry in this table
             defined in wranIfSmCurrentStatusEntry."
      ::= { wranIfSmMib 6 }

wranIfSmCurrentStatusEntry    OBJECT-TYPE
      SYNTAX      wranIfSmCurrentStatusEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object defines an entry in
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                wranIfSmCurrentStatusTable. There is only one entry
                in this table."
        INDEX { wranIfSmCurrentStatusIndex }
        ::= { wranIfSmCurrentStatusTable 1 }

wranIfSmCurrentStatusEntry    ::= SEQUENCE {
        wranIfSmCurrentStatusIndex          INTEGER,
        wranIfSmCurrentState                INTEGER,
        wranIfSmRecentEvent                 INTEGER,
        wranIfSmRecentAction                INTEGER,
        wranIfSmInitiateChannelMove         TruthValue,
        wranIfSmSelfCoexistenceMode         TruthValue,
        wranIfSmCurrentOperatingChannel     INTEGER,
        wranIfSmRecentSignalType            INTEGER,
        wranIfSmCurrentT47                  Integer32,
        wranIfSmCurrentT46                  Integer32 }

wranIfSmCurrentStatusIndex    OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in the table."
        ::= { wranIfSmCurrentStatusEntry 1 }

wranIfSmCurrentState    OBJECT-TYPE
        SYNTAX      INTEGER { init(0),
                              operation(1) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "The state (see Figure 164) that the SM is in. A
               value of 0 indicates that the SM is in the 'Spectrum
               Manager at Network Initialization State', a value of
               1 indicates that the SM is in the 'Spectrum Manager
               at Network Operation' state."
        ::= { wranIfSmCurrentStatusEntry 2 }

wranIfSmRecentEvent     OBJECT-TYPE
        SYNTAX      INTEGER { timeT46expires(0),
                              operatingChannelIdentified(1),
                              initiateChannelMoveSet(2),
                              newCpeRegRequest(3),
                              timerT47expires(4),
                              signalDetected(5),
                              selfCoexistenceModeSet(6) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Recent event that triggered a transition into the
               current state as given in 10.2.6.1 "
        ::= { wranIfSmCurrentStatusEntry 3 }

wranIfSmRecentAction    OBJECT-TYPE
        SYNTAX
              INTEGER {   smFindOperatingChannel(0),
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                        smEstablishNetwork(1),
                        smInitiateChannelMove(2),
                        smNewCpeVerification(3),
                        smDatabaseUpdate(4),
                        smDetermineSignalTypeExecutePolicies(5),
                        smSelfCoexistenceMode(6) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Recent action that was taken when transitioning into
             the current state as given in 10.2.6.1."
      ::= { wranIfSmCurrentStatusEntry 4 }

wranIfSmInitiateChannelMove   OBJECT-TYPE
      SYNTAX      TruthValue
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Current value of Initiate_Channel_Move flag.
             Truth(1) if the flag is set to 1, Truth(0) if
             the flag is set to 0."
      ::= { wranIfSmCurrentStatusEntry 5 }

wranIfSmSelfCoexistenceMode   OBJECT-TYPE
      SYNTAX      TruthValue
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Current value of Self_Coexistence_Mode flag.
             Truth(1) if the flag is set to 1, Truth(0) if
             the flag is set to 0."
      ::= { wranIfSmCurrentStatusEntry 6 }

wranIfSmCurrentOperatingChannel     OBJECT-TYPE
      SYNTAX      INTEGER (0..255)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Current operating channel."
      ::= { wranIfSmCurrentStatusEntry 7 }

wranIfSmRecentSignalType      OBJECT-TYPE
      SYNTAX      INTEGER { undetermined(0),
                            ieee802dot22wran(1),
                            atsc(2),
                            dvbt(3),
                            isdbt(4),
                            ntsc(5),
                            pal(6),
                            secam(7),
                            wirelessMicrophone(8),
                            ieee802dot22dot1Sync(9),
                            ieee802dot22dot1Msf1(10),
                            ieee802dot22dot1Msf2(11),
                            ieee802dot22dot1Msf3(12) }
      MAX-ACCESS  read-only
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        STATUS      current
        DESCRIPTION
              "Type of signal recently detected (see Table 237)."
        ::= { wranIfSmCurrentStatusEntry 8 }

    wranIfSmCurrentT47      OBJECT-TYPE
        SYNTAX      Integer32 (1..720)
        UNITS       "hours"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Current value of T47, in 0.1 h increments from 0 to
               72 h."
        ::= { wranIfSmCurrentStatusEntry 9 }

    wranIfSmCurrentT46      OBJECT-TYPE
        SYNTAX      Integer32 (1..4096)
        UNITS       "frames"
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Current value of T46."
        ::= { wranIfSmCurrentStatusEntry 10 }

    wranIfSmRegTrackingTable      OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfSmRegTrackingEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB object represents a table that records the
               SM's monitoring of CPEs associated with the BS. It
               contains the location data string and current value
               of T30 for each CPE. There are multiple entries in
               this table (one for each CPE) defined in
               wranIfSmRegTrackingEntry."
        ::= { wranIfSmMib 7 }

    wranIfSmRegTrackingEntry      OBJECT-TYPE
        SYNTAX      wranIfSmRegTrackingEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object defines an entry in
               wranIfSmRegTrackingTable."
        INDEX { wranIfSmRegTrackingIndex }
        ::= { wranIfSmRegTrackingTable 1 }

    wranIfSmRegTrackingEntry      ::= SEQUENCE {
        wranIfSmRegTrackingIndex            INTEGER,
        wranIfSmRegTrackingCpeSid           INTEGER,
        wranIfSmRegTrackingCurrentT30       Integer32,
        wranIfSmRegTrackingLocStringSize    INTEGER,
        wranIfSmRegTrackingLocString        OCTET STRING }

    wranIfSmRegTrackingIndex      OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in the table."
        ::= { wranIfSmRegTrackingEntry 1 }

    wranIfSmRegTrackingCpeSid     OBJECT-TYPE
        SYNTAX      INTEGER (1..511)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "SID of CPE whose location is being tracked."
        ::= { wranIfSmRegTrackingEntry 2 }

    wranIfSmRegTrackingCurrentT30 OBJECT-TYPE
        SYNTAX      Integer32 (1..65535)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Current value of CPE's T30, as known by SM. From
               0.16 s to 10 485.6 s in 0.16 s increments."
        ::= { wranIfSmRegTrackingEntry 3 }

    wranIfSmRegTrackingLocStringSize    OBJECT-TYPE
        SYNTAX      INTEGER (1..512)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Size of the location string
               (wranIfSmRegTrackingLocString) in octets."
        ::= { wranIfSmRegTrackingEntry 4 }

    wranIfSmRegTrackingLocString  OBJECT-TYPE
        SYNTAX
              OCTET STRING(SIZE(wranIfSmRegTrackingLocStringSize))
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Size of the location string
               (wranIfSmRegTrackingLocString) in octets."
        ::= { wranIfSmRegTrackingEntry 5 }

    wranIfSmTrapControl     OBJECT-TYPE
        SYNTAX      BITS  { wranIfSmBlmReqChange(0),
                            wranIfSmBlmRepChange(1),
                            wranIfSmOccupiedChannelSetChange(2),
                            wranIfSmNghbrBackupChannelSetChange(3),
                            wranIfSmLocalPrioritySet1Change(4),
                            wranIfSmLocalPrioritySet2Change(5),
                            wranIfSmLocalPrioritySet3Change(6),
                            wranIfSmCurrentStatusChange(7),
                            wranIfSmRegTrackingChange(8) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Defines control elements for traps related to
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                operation of the spectrum manager. This is a 9-bit
                field that enables setting a trap for particular SM
                events: wranIfSmBlmReqChange,
                wranIfSmBlmRepChange,
                wranIfSmOccupiedChannelSetChange,
                wranIfSmNghbrBackupChannelSetChange,
                wranIfSmLocalPrioritySet1Change,
                wranIfSmLocalPrioritySet2Change,
                wranIfSmLocalPrioritySet3Change,
                wranIfSmCurrentStatusChange,
                and wranIfSmRegTrackingChange."
        ::= { wranIfSmMib 8 }

wranIfSmTrapDefinition                      OBJECT IDENTIFIER
                                ::= { wranIfSmMib 9 }
wranIfSmBlmReqChangeTrap                    OBJECT IDENTIFIER
                                ::= { wranIfSmTrapDefinition 1 }
wranIfSmBlmRepChangeTrap                    OBJECT IDENTIFIER
                                ::= { wranIfSmTrapDefinition 2 }
wranIfSmOccupiedChannelSetChangeTrap        OBJECT IDENTIFIER
                                ::= { wranIfSmTrapDefinition 3 }
wranIfSmNghbrBackupChannelSetChangeTrap     OBJECT IDENTIFIER
                                ::= { wranIfSmTrapDefinition 4 }
wranIfSmLocalPrioritySet1ChangeTrap         OBJECT IDENTIFIER
                                ::= { wranIfSmTrapDefinition 5 }
wranIfSmLocalPrioritySet2ChangeTrap         OBJECT IDENTIFIER
                                ::= { wranIfSmTrapDefinition 6 }
wranIfSmLocalPrioritySet3ChangeTrap         OBJECT IDENTIFIER
                                ::= { wranIfSmTrapDefinition 7 }
wranIfSmCurrentStatusChangeTrap             OBJECT IDENTIFIER
                                ::= { wranIfSmTrapDefinition 8 }
wranIfSmRegTrackingChangeTrap               OBJECT IDENTIFIER
                                ::= { wranIfSmTrapDefinition 9 }

wranIfSmBlmReqChangeTrap      NOTIFICATION-TYPE
        OBJECTS     { wranIfSmPendingBlmReqTransactionId,
                      wranIfSmPendingBlmReqStatus }
        STATUS      current
        DESCRIPTION
                "This trap contains the information related to a BLM-
                 REQ that is pending in the SM."
        ::= { wranIfSmTrapDefinition 1 }

wranIfSmBlmRepChangeTrap      NOTIFICATION-TYPE
        OBJECTS     { wranIfSmBlmRepTransactionId,
                      wranIfSmBlmRepStatus }
        STATUS      current
        DESCRIPTION
                "This trap contains the information related to a BLM-
                 REP that is received by the SM."
        ::= { wranIfSmTrapDefinition 2 }

wranIfSmOccupiedChannelSetChangeTrap      NOTIFICATION-TYPE
        OBJECTS     { wranIfSmSizeWranOccupiedChannelSet,
                      wranIfSmWranOccupiedChannelSet,
                      wranIfSmOccupiedChannelSetStatus }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to the
               current state of the Occupied Channel Set in the
               SM."
        ::= { wranIfSmTrapDefinition 3 }

    wranIfSmNghbrBackupChannelSetChangeTrap   NOTIFICATION-TYPE
        OBJECTS     { wranIfSmSizeNghbrWranBackupChannelSet,
                      wranIfSmNghbrWranBackupChannelSet,
                      wranIfSmNghbrBackupChannelSetStatus }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to the
               current state of the Neighbor WRAN Backup Channel
               Set in the SM."
        ::= { wranIfSmTrapDefinition 4 }

    wranIfSmLocalPrioritySet1ChangeTrap NOTIFICATION-TYPE
        OBJECTS     { wranIfSmSizeLocalPrioritySet1,
                      wranIfSmLocalPrioritySet1,
                      wranIfSmLocalPrioritySet1Status }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to the
               current state of the Local Priority Set 1 in the
               SM."
        ::= { wranIfSmTrapDefinition 5 }

    wranIfSmLocalPrioritySet2ChangeTrap NOTIFICATION-TYPE
        OBJECTS     { wranIfSmSizeLocalPrioritySet2,
                      wranIfSmLocalPrioritySet2,
                      wranIfSmLocalPrioritySet2Status }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to the
               current state of the Local Priority Set 2 in the
               SM."
        ::= { wranIfSmTrapDefinition 6 }

    wranIfSmLocalPrioritySet3ChangeTrap NOTIFICATION-TYPE
        OBJECTS     { wranIfSmSizeLocalPrioritySet3,
                      wranIfSmLocalPrioritySet3,
                      wranIfSmLocalPrioritySet3Status }
        STATUS      current
        DESCRIPTION
              "This trap contains the information related to the
               current state of the Local Priority Set 3 in the
               SM."
        ::= { wranIfSmTrapDefinition 7 }

    wranIfSmCurrentStatusChangeTrap     NOTIFICATION-TYPE
        OBJECTS     { wranIfSmRecentAction,
                      wranIfSmCurrentStateStatus }
        STATUS      current
        DESCRIPTION
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
            "This trap contains the information related to the
             current state the SM is in."
      ::= { wranIfSmTrapDefinition 8 }

wranIfSmRegTrackingChangeTrap NOTIFICATION-TYPE
      OBJECTS     { wranIfSmRegTrackingCpeSid,
                    wranIfSmRegTrackingStatus }
      STATUS      current
      DESCRIPTION
            "This trap contains the information related to the
             tracking of the location of CPEs within the purview
             of the BS."
      ::= { wranIfSmTrapDefinition 9 }

wranIfSmNotificationObjectsTable    OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfSmNotificationObjectsEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This MIB provides a table to track notification
             objects that have been reported by the traps related
             to the operation of the SM. It is made up of one
             entry containing objects related to the most recent
             trap/event. The entry is defined by
             wranIfSmNotificationObjectsEntry."
      ::= { wranIfSmMib 10 }

wranIfSmNotificationObjectsEntry    OBJECT-TYPE
      SYNTAX      wranIfSmNotificationObjectsEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object defines an entry in
             wranIfSmNotificationObjectsTable."
      INDEX { wranIfSmNotificationSid }
      ::= { wranIfSmNotificationObjectsTable 1 }

wranIfSmNotificationObjectsEntry    ::= SEQUENCE {
      wranIfSmNotificationObjectsEntryIndex          INTEGER,
      wranIfSmNotificationSid                        INTEGER,
      wranIfSmNotificationBlmTransactionId           Integer32,
      wranIfSmNotificationSizeOccupiedChannelSet     INTEGER,
      wranIfSmNotificationOccupiedChannelSet    OCTET STRING,
      wranIfSmNotificationSizeBackupChannelSet       INTEGER,
      wranIfSmNotificationBackupChannelSet      OCTET STRING,
      wranIfSmNotificationSizeLocalPrioritySet1      INTEGER,
      wranIfSmNotificationLocalPrioritySet1     OCTET STRING,
      wranIfSmNotificationSizeLocalPrioritySet2      INTEGER,
      wranIfSmNotificationLocalPrioritySet2     OCTET STRING,
      wranIfSmNotificationSizeLocalPrioritySet3      INTEGER,
      wranIfSmNotificationLocalPrioritySet3     OCTET STRING,
      wranIfSmNotificationRecentAction               INTEGER,
      wranIfSmPendingBlmReqStatus                    INTEGER,
      wranIfSmBlmRepStatus                           INTEGER,
      wranIfSmOccupiedChannelSetStatus               INTEGER,
      wranIfSmNghbrBackupChannelSetStatus            INTEGER,
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        wranIfSmLocalPrioritySet1Status                 INTEGER,
        wranIfSmLocalPrioritySet2Status                 Integer32,
        wranIfSmLocalPrioritySet3Status                 Integer32,
        wranIfSmCurrentStateStatus                      Integer32,
        wranIfSmRegTrackingStatus                       Integer32 }

    wranIfSmNotificationObjectsEntryIndex     OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "The transaction ID of the bulk measurement
               transaction. Only pertinent when
               wranIfSmBlmReqChangeTrap or wranIfSmBlmRepChangeTrap
               is enabled."
        ::= { wranIfSmNotificationObjectsEntry 1 }

    wranIfSmNotificationSid OBJECT-TYPE
        SYNTAX      INTEGER (0..511)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "SID of station generating trap.
               wranIfSmNotificationSid set == 0 is reserved for
               traps dealing with channel set management (see
               wranIfSmOccupiedChannelSetChangeTrap,
               wranIfSmNghbrBackupChannelSetChangeTrap,
               wranIfSmLocalPrioritySet1ChangeTrap,
               wranIfSmLocalPrioritySet2ChangeTrap,
               wranIfSmLocalPrioritySet3ChangeTrap) and the current
               state of the SM (see
               wranIfSmCurrentStatusChangeTrap).
               wranIfSmNotificationSid set == 1..511 when dealing
               with traps for bulk measurement (see
               wranIfSmBlmReqChangeTrap, wranIfSmBlmRepChangeTrap)
               or CPE registration tracking (see
               wranIfSmRegTrackingChangeTrap)."
        ::= { wranIfSmNotificationObjectsEntry 2 }

    wranIfSmNotificationBlmTransactionId      OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "The transaction ID of the bulk measurement
               transaction. Only pertinent when
               wranIfSmBlmReqChangeTrap or wranIfSmBlmRepChangeTrap
               is enabled."
        ::= { wranIfSmNotificationObjectsEntry 3 }

    wranIfSmNotificationSizeOccupiedChannelSet      OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Size of the current/new WRAN Occupied Channel Set
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                (only pertinent when
                wranIfSmOccupiedChannelSetChangeTrap is enabled)."
        ::= { wranIfSmNotificationObjectsEntry 4 }

    wranIfSmNotificationOccupiedChannelSet    OBJECT-TYPE
        SYNTAX
              STRING
                 (SIZE(wranIfSmNotificationSizeOccupiedChannelSet))
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "The current/new contents of the WRAN Occupied
               Channel Set (only pertinent when
               wranIfSmOccupiedChannelSetChangeTrap is enabled)."
        ::= { wranIfSmNotificationObjectsEntry 5 }

    wranIfSmNotificationSizeBackupChannelSet  OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Size of the current/new Neighbor WRAN Backup Channel
               Set (only pertinent when
               wranIfSmNghbrBackupChannelSetChangeTrap is
               enabled)."
        ::= { wranIfSmNotificationObjectsEntry 6 }

    wranIfSmNotificationBackupChannelSet      OBJECT-TYPE
        SYNTAX
              OCTET STRING
                   (SIZE(wranIfSmNotificationSizeBackupChannelSet))
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "The current/new contents of the Neighbor WRAN Backup
               Channel Set (only pertinent when
               wranIfSmNghbrBackupChannelSetChangeTrap is
               enabled)."
        ::= { wranIfSmNotificationObjectsEntry 7 }

    wranIfSmNotificationSizeLocalPrioritySet1 OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Size of the current/new Local Priority Set 1 (only
               pertinent when wranIfSmLocalPrioritySet1ChangeTrap
               is enabled)."
        ::= { wranIfSmNotificationObjectsEntry 8 }

    wranIfSmNotificationLocalPrioritySet1     OBJECT-TYPE
        SYNTAX
              OCTET STRING
                  (SIZE(wranIfSmNotificationSizeLocalPrioritySet1))
        MAX-ACCESS  read-only
        STATUS      current
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        DESCRIPTION
              "The current/new contents of the Local Priority Set 1
               (only pertinent when
               wranIfSmLocalPrioritySet1ChangeTrap is enabled)."
        ::= { wranIfSmNotificationObjectsEntry 9 }

    wranIfSmNotificationSizeLocalPrioritySet2 OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Size of the current/new Local Priority Set 2 (only
               pertinent when wranIfSmLocalPrioritySet2ChangeTrap
               is enabled)."
        ::= { wranIfSmNotificationObjectsEntry 10 }

    wranIfSmNotificationLocalPrioritySet2     OBJECT-TYPE
        SYNTAX
              OCTET STRING
                  (SIZE(wranIfSmNotificationSizeLocalPrioritySet2))
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "The current/new contents of the Local Priority Set 2
               (only pertinent when
               wranIfSmLocalPrioritySet2ChangeTrap is enabled)."
        ::= { wranIfSmNotificationObjectsEntry 11 }

    wranIfSmNotificationSizeLocalPrioritySet3 OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Size of the current/new Local Priority Set 3 (only
               pertinent when wranIfSmLocalPrioritySet3ChangeTrap
               is enabled)."
        ::= { wranIfSmNotificationObjectsEntry 12 }

    wranIfSmNotificationLocalPrioritySet3     OBJECT-TYPE
        SYNTAX
              OCTET STRING
                  (SIZE(wranIfSmNotificationSizeLocalPrioritySet3))
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "The current/new contents of the Local Priority Set 3
               (only pertinent when
               wranIfSmLocalPrioritySet3ChangeTrap is enabled)."
        ::= { wranIfSmNotificationObjectsEntry 13 }

    wranIfSmNotificationRecentAction    OBJECT-TYPE
        SYNTAX      INTEGER (0..6)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Value of wranIfSmRecentAction that triggered
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                transition to current state of SM (only pertinent
                when wranIfSmCurrentStatusChangeTrap is enabled)."
        ::= { wranIfSmNotificationObjectsEntry 14 }

    wranIfSmPendingBlmReqStatus   OBJECT-TYPE
        SYNTAX      INTEGER { blmRspUnicastReceived(0),
                              blmRspMulticastReceived(1) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Indicates BLM-RSP pertaining to bulk measurement
               transaction (defined by
               wranIfSmNotificationBlmTransactionId) was received
               from wranIfSmNotificationSid, if
               wranIfSmNotificationSid is a unicast SID, or if all
               BLM-RSP received from members of multicast group
               identified by wranIfSmNotificationSid."
        ::= { wranIfSmNotificationObjectsEntry 15 }

    wranIfSmBlmRepStatus    OBJECT-TYPE
        SYNTAX      INTEGER { blmRepAcknowledged(0),
                              blmRepUnAcknowledged(1) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Indicates whether BLM-ACK has been sent,
               pertaining to BLM-REP received in bulk measurement
               transaction defined by
               wranIfSmNotificationBlmTransactionId."
        ::= { wranIfSmNotificationObjectsEntry 16 }

    wranIfSmOccupiedChannelSetStatus    OBJECT-TYPE
        SYNTAX      INTEGER { channelsAdded(0),
                              channelsRemoved(1) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Indication of whether channels have been
               added or removed when the WRAN Occupied Channel Set
               is modified."
        ::= { wranIfSmNotificationObjectsEntry 17 }

    wranIfSmNghbrBackupChannelSetStatus OBJECT-TYPE
        SYNTAX      INTEGER { channelsAdded(0),
                              channelsRemoved(1) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Indication of whether channels have been
               added or removed when the Neighbor WRAN Backup
               Channel Set is modified."
        ::= { wranIfSmNotificationObjectsEntry 18 }

    wranIfSmLocalPrioritySet1Status     OBJECT-TYPE
        SYNTAX      INTEGER { channelsAdded(0),
                              channelsRemoved(1) }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Indication of whether channels have been
               added or removed when the Local Priority Set 1 is
               modified."
        ::= { wranIfSmNotificationObjectsEntry 19 }

    wranIfSmLocalPrioritySet2Status     OBJECT-TYPE
        SYNTAX      INTEGER { channelsAdded(0),
                              channelsRemoved(1) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Indication of whether channels have been
               added or removed when the Local Priority Set 2 is
               modified."
        ::= { wranIfSmNotificationObjectsEntry 20 }

    wranIfSmLocalPrioritySet3Status     OBJECT-TYPE
        SYNTAX      INTEGER { channelsAdded(0),
                              channelsRemoved(1) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Indication of whether channels have been
               added or removed when the Local Priority Set 3 is
               modified."
        ::= { wranIfSmNotificationObjectsEntry 21 }

    wranIfSmCurrentStateStatus     OBJECT-TYPE
        SYNTAX      BITS { initiateChannelMoveSet(0),
                           coexistenceModeSet(1),
                           currentOperatingChannelChange(2),
                           signalDetectionClassificationSuccess(3),
                           expirationT47(4),
                           expirationT46(5) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Bitmap indicating current value of
               Initiate_Channel_Move has bit set (bit 0); whether
               Self_Coexistence_Mode flag is set (bit 1);
               whether the operating channel assignment has
               changed (bit 2); whether recently detected signal
               was properly classified, e.g., signal type ==
               undetermined (bit 3); whether T47
               has expired (bit 4); whether T46 has expired
               (bit 5). Setting the bit to 0 makes the condition
               false, setting the bit to 1 makes the condition
               true."
        ::= { wranIfSmNotificationObjectsEntry 22 }

    wranIfSmRegTrackingStatus     OBJECT-TYPE
        SYNTAX      INTEGER { locationChanged(0),
                              locationNotChanged(1) }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                  "Indication of whether CPE location,
                   pertaining to CPE SID identified by
                   wranIfSmNotificationSid, has changed."
            ::= { wranIfSmNotificationObjectsEntry 23 }

-- wranIfSmMibGroups: this object helps define which MIB groups are
-- available within this module and which MIB objects are a part of
-- each group

      wranIfSmMibGroups             OBJECT IDENTIFER
                                          ::= { wranIfSmMib 11 }
      wranIfSmConfigGroup           OBJECT IDENTIFIER
                                          ::= { wranIfSmMibGroups 1 }
      wranIfSmPendingBlmReqGroup    OBJECT IDENTIFIER
                                          ::= { wranIfSmMibGroups 2 }
      wranIfSmBlmRepGroup           OBJECT IDENTIFIER
                                          ::= { wranIfSmMibGroups 3 }
      wranIfSmChClassificationGroup OBJECT IDENTIFIER
                                          ::= { wranIfSmMibGroups 4 }
      wranIfSmChannelSetGroup       OBJECT IDENTIFIER
                                          ::= { wranIfSmMibGroups 5 }
      wranIfSmCurrentStatusGroup    OBJECT IDENTIFIER
                                          ::= { wranIfSmMibGroups 6 }
      wranIfSmRegTrackingGroup      OBJECT IDENTIFIER
                                          ::= { wranIfSmMibGroups 7 }
      wranIfSmTrapControlGroup      OBJECT IDENTIFIER
                                          ::= { wranIfSmMibGroups 8 }
      wranIfSmNotificationsGroup    OBJECT IDENTIFIER
                                          ::= { wranIfSmMibGroups 9 }

      wranIfSmConfigGroup           OBJECT-GROUP
            OBJECTS     { wranIfSmConfigIndex, wranIfSmT31,
                          wranIfSmChAvailabilityCheckTime,
                          wranIfSmNonOccupancyPeriod,
                          wranIfSmChannelDetectionTime,
                          wranIfSmChannelSetupTime,
                          wranIfSmChannelOpeningTxTime,
                          wranIfSmChannelMoveTime,
                          wranIfSmChannelClosingTxTime,
                          wranIfSmMicProtectionRadius,
                          wranIfSmT41, wranIfSmT42,
                          wranIfSmT43, wranIfSmT44,
                          wranIfSmT45, wranIfSmT46, wranIfSmT59,
                          wranIfSmT47, wranIfSmT48,
                          wranIfSmT49, wranIfSmT50,
                          wranIfSmT51, wranIfSmT53,
                          wranIfSmT54, wranIfSmT55,
                          wranIfSmT60 }
            STATUS      current
            DESCRIPTION
                  "This group contains objects related to
                   configuration of the Spectrum Manager."
            ::= { wranIfSmMibGroups 1 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranIfSmPendingBlmReqGroup          OBJECT-GROUP
      OBJECTS     { wranIfSmPendingBlmReqIndex,
                    wranIfSmPendingBlmReqTransactionId,
                    wranIfSmPendingBlmReqMsgSize,
                    wranIfSmPendingBlmReqMsg,
                    wranIfSmPendingBlmRspReceived,
                    wranIfSmPendingBlmRspMulticastReceived,
                    wranIfSmPendingBlmRepTimeout,
                    wranIfSmPendingBlmRepReceived,
                    wranIfSmPendingBlmRepMulticastReceived,
                    wranIfSmPendingBlmRepAck }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
             tracking pending BLM-REQs."
      ::= { wranIfSmMibGroups 2 }

wranIfSmBlmRepGroup           OBJECT-GROUP
      OBJECTS     { wranIfSmBlmRepIndex, wranIfSmBlmRepSid,
                    wranIfSmBlmRepTransactionId,
                    wranIfSmBlmRepMsgSize,
                    wranIfSmPendingBlmRspReceived,
                    wranIfSmBlmRepMsg }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
             tracking received BLM-REPs."
      ::= { wranIfSmMibGroups 3 }

wranIfSmChClassificationGroup       OBJECT-GROUP
      OBJECTS     { wranIfSmChClassificationStatusIndex,
                    wranIfSmManagedChannel,
                    wranIfSmManagedChannelStatus,
                    wranIfSmManagedChannelRecentEvent }
      STATUS      current
      DESCRIPTION
            "This group contains objects used to track how
            channels the SM is managing have been
            classified."
      ::= { wranIfSmMibGroups 4 }

wranIfSmChannelSetGroup       OBJECT-GROUP
      OBJECTS     { wranIfSmChannelSetIndex,
                    wranIfSmSizeWranOccupiedChannelSet,
                    wranIfSmWranOccupiedChannelSet,
                    wranIfSmSizeNghbrWranBackupChannelSet,
                    wranIfSmNghbrWranBackupChannelSet,
                    wranIfSmSizeLocalPrioritySet1,
                    wranIfSmLocalPrioritySet1,
                    wranIfSmSizeLocalPrioritySet2,
                    wranIfSmLocalPrioritySet2,
                    wranIfSmSizeLocalPrioritySet3,
                    wranIfSmLocalPrioritySet3 }
      STATUS      current
      DESCRIPTION
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
            "This group contains objects used to track the
             various channel sets with which the SM operates."
      ::= { wranIfSmMibGroups 5 }

wranIfSmCurrentStatusGroup          OBJECT-GROUP
      OBJECTS     { wranIfSmCurrentStatusIndex,
                    wranIfSmCurrentState, wranIfSmRecentEvent,
                    wranIfSmRecentAction,
                    wranIfSmInitiateChannelMove,
                    wranIfSmSelfCoexistenceMode,
                    wranIfSmCurrentOperatingChannel,
                    wranIfSmRecentSignalType, wranIfSmCurrentT47,
                    wranIfSmCurrentT46 }
      STATUS      current
      DESCRIPTION
            "This group contains objects used to track the
             current state of the SM."
      ::= { wranIfSmMibGroups 6 }

wranIfSmRegTrackingGroup            OBJECT-GROUP
      OBJECTS     { wranIfSmRegTrackingIndex,
                    wranIfSmRegTrackingCpeSid,
                    wranIfSmRegTrackingCurrentT30,
                    wranIfSmRegTrackingLocStringSize,
                    wranIfSmRegTrackingLocString }
      STATUS      current
      DESCRIPTION
            "This group contains objects the SM uses to
             keep track of the location of registered
             CPEs."
      ::= { wranIfSmMibGroups 7 }

wranIfSmTrapControlGroup            OBJECT-GROUP
      OBJECTS     { wranIfSmTrapControl }
      STATUS      current
      DESCRIPTION
            "This group contains objects related to
             enabling/disabling traps related to SM
             operation."
      ::= { wranIfSmMibGroups 8 }

wranIfSmNotificationsGroup          OBJECT-GROUP
      OBJECTS     { wranIfSmBlmReqChangeTrap,
                    wranIfSmBlmRepChangeTrap,
                    wranIfSmOccupiedChannelSetChangeTrap,
                    wranIfSmNghbrBackupChannelSetChangeTrap,
                    wranIfSmLocalPrioritySet1ChangeTrap,
                    wranIfSmLocalPrioritySet2ChangeTrap,
                    wranIfSmLocalPrioritySet3ChangeTrap,
                    wranIfSmCurrentStatusChangeTrap,
                    wranIfSmRegTrackingChangeTrap,
                    wranIfSmNotificationSid,
                    wranIfSmNotificationBlmTransactionId,
                    wranIfSmNotificationSizeOccupiedChannelSet,
                    wranIfSmNotificationOccupiedChannelSet,
                    wranIfSmNotificationSizeBackupChannelSet,
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                        wranIfSmNotificationBackupChannelSet,
                        wranIfSmNotificationSizeLocalPrioritySet1,
                        wranIfSmNotificationLocalPrioritySet1,
                        wranIfSmNotificationSizeLocalPrioritySet2,
                        wranIfSmNotificationLocalPrioritySet2,
                        wranIfSmNotificationSizeLocalPrioritySet3,
                        wranIfSmNotificationLocalPrioritySet3,
                        wranIfSmNotificationRecentAction,
                        wranIfSmPendingBlmReqStatus,
                        wranIfSmBlmRepStatus,
                        wranIfSmOccupiedChannelSetStatus,
                        wranIfSmNghbrBackupChannelSetStatus,
                        wranIfSmLocalPrioritySet1Status,
                        wranIfSmLocalPrioritySet2Status,
                        wranIfSmLocalPrioritySet3Status,
                        wranIfSmCurentStateStatus }
            STATUS      current
            DESCRIPTION
                  "This group contains notification objects
                   related to traps configured for the SM."
            ::= { wranIfSmMibGroups 9 }

      wranIfSmMibCompliance   MODULE-COMPLIANCE
            STATUS      current
            DESCRIPTION
                  "MIB objects that are optional and mandatory for SM
                   compliance."
            MODULE      wranIfSmMib
            MANDATORY-GROUPS  { wranIfSmConfigGroup, ,
                                wranIfSmChClassificationGroup,
                                wranIfSmChannelSetGroup,
                                wranIfSmCurrentStatusGroup,
                                wranIfSmRegTrackingGroup,
                                wranIfSmTrapControlGroup }
            -- OPTIONAL-GROUPS      { wranIfSmPendingBlmReqGroup,
                                      wranIfSmBlmRepGroup,
                                      wranIfSmNotificationsGroup }
            ::= { wranIfSmMib 12 }

END
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

13.2.6 wranIfSsaMib

```
IEEE802dot22-WRAN-IF-SSA-MIB  ::=   BEGIN

      IMPORTS
            MODULE-IDENTITY,
            OBJECT-TYPE,
            NOTIFICATION-TYPE,
            Unsigned32, Integer32, Counter32,
            Counter64
                  FROM SNMPv2-SMI
            SnmpAdminString
                  FROM SNMP-FRAMEWORK-MIB
            TEXTUAL-CONVETION,
            MacAddress, RowStatus, TruthValue,
            TimeStamp, DateAndTime
                  FROM SNMPv2-TC
            InetAddressType, InetAddress
                  FROM INET-ADDRESS-MIB
            OBJECT-GROUP,
            MODULE-COMPLIANCE,
            NOTIFICATION-GROUP
                  FROM SNMPV2-CONF

      wranIfSsaMib      MODULE-IDENTITY
            LAST-UPDATED      "201405300000Z"   -- May 30, 2014
            ORGANIZATION      "IEEE 802.22"
            CONTACT-INFO
                  "WG E-mail: STDS-802-22@LISTSERV.IEEE.ORG
                   WG Chair:  Apurva N. Mody
                   E-mail:    apurva.mody@ieee.org

                   TGa Chair/Editor:  Ranga Reddy
                   E-mail:            ranga.reddy@ieee.org"
            DESCRIPTION
                  "This material is from IEEE Std 802.22a-2014
                   Copyright (c) 2014. This MIB Module object is
                   related to configuration, operation and monitoring
                   of the Spectrum Sensing Automaton (SSA). Objects in
                   this module are based on IEEE Std 802.22-2011 and is
                   under iso(1).std(0).iso8802(8802).wran(22)
                   .wranIfSsaMib(6)"
            REVISION          "201405300000Z"
            DESCRIPTION
                  "The first version of IEEE802dot22-WRAN-IF-SSA-MIB."
            ::= {iso std(0) iso8802(8802) wran(22) 6}

      wranIfSsaSensingCapTable            OBJECT IDENTIFIER
                                                ::= { wranIfSsaMib 1 }
      wranIfSsaStatusTable                OBJECT IDENTIFIER
                                                ::= { wranIfSsaMib 2 }
      wranIfSsaConfigTable                OBJECT IDENTIFIER
                                                ::= { wranIfSsaMib 3 }
      wranIfSsaPendingBlmRepTable         OBJECT IDENTIFIER
                                                ::= { wranIfSsaMib 4 }
      wranIfSsaSensingRecordTable         OBJECT IDENTIFIER
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                                                ::= { wranIfSsaMib 5 }
wranIfSsaSsfMode0OutputTable        OBJECT IDENTIFIER
                                                ::= { wranIfSsaMib 6 }
wranIfSsaSsfMode1OutputTable        OBJECT IDENTIFIER
                                                ::= { wranIfSsaMib 7 }
wranIfSsaSsfMode2OutputTable        OBJECT IDENTIFIER
                                                ::= { wranIfSsaMib 8 }
wranIfSsaSsfWiMicMSFTable           OBJECT IDENTIFIER
                                                ::= { wranIfSsaMib 9 }
wranIfSsaGeolocationTable           OBJECT IDENTIFIER
                                                ::= { wranIfSsaMib 10 }
wranIfSsaTrapControl                OBJECT IDENTIFIER
                                                ::= { wranIfSsaMib 11 }
wranIfSsaTrapDefinition             OBJECT IDENTIFIER
                                                ::= { wranIfSsaMib 12 }
wranIfSsaNotificationObjectsTable   OBJECT IDENTIFIER
                                                ::= { wranIfSsaMib 13 }
wranIfSsaMibGroups                  OBJECT IDENTIFIER
                                                ::= { wranIfSsaMib 14 }
wranIfSsaMibCompliance              OBJECT IDENTIFIER
                                                ::= { wranIfSsaMib 15 }

wranIfSsaSensingCapTable      OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfSsaSensingCapEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This MIB object represents a table that stores the
             current sensing capabilities for a SSA under control
             of the SM. There is one entry in this table for a
             SSA, defined by wranIfSsaSensingCapEntry. This MIB
             is stored at the BS and CPE. These values are also
             stored in wranIfBsCpeRegCapabilityRspTable (see
             13.1.2.2.7) at the BS, in an entry specific to a
             particular CPE."
      ::= { wranIfSsaMib 1 }

wranIfSsaSensingCapEntry      OBJECT-TYPE
      SYNTAX      wranIfSsaSensingCapEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object defines an entry in
             wranIfSsaSensingCapTable. The entry is identified by
             wranIfSsaSensingCapIndex."
      INDEX { wranIfSsaSensingCapIndex }
      ::= { wranIfSsaSensingCapTable 1 }

wranIfSsaSensingCapEntry      ::= SEQUENCE {
      wranIfSsaSensingCapIndex                  INTEGER,
      wranIfSsaSensingThreshold                 INTEGER,
      wranIfSsaSensRecContigPeriodDuration      Integer32,
      wranIfSsaSensRecNumPeriods                INTEGER,
      wranIfSsaSensRecPeriodInterval            Integer32 }

wranIfSsaSensingCapIndex      OBJECT-TYPE
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in the table, defaults to 1."
        ::= { wranIfSsaSensingCapEntry 1 }

  wranIfSsaSensingThreshold     OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        UNITS       "dBm"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "This object is the recommended sensing threshold
               that the CPE is capable of supporting. It is in
               units of dBm, encoded in a single, integer byte
               value that is assumed to be negative (e.g., 0x01 =
               -1 dBm, 0x72 = –114 dBm)."
        ::= { wranIfSsaSensingCapEntry 2 }

  wranIfSsaSensRecContigPeriodDuration      OBJECT-TYPE
        SYNTAX      Integer32 (0..1023)
        UNITS       "symbols"
        MAX-ACCESS  read- write
        STATUS      current
        DESCRIPTION
              "This object is the recommended contiguous sensing
               period duration that the CPE is capable of
               supporting. It is in integer, in units of symbols.
               This value ranges from 0 to 1023 and is encoded in
               a 2-octet length value."
        ::= { wranIfSsaSensingCapEntry 3 }

  wranIfSsaSensRecNumPeriods    OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        MAX-ACCESS  read- write
        STATUS      current
        DESCRIPTION
              "This object is the recommended number of sensing
               periods that a CPE can support. It is an integer
               value, encoded in 1-octet length value."
        ::= { wranIfSsaSensingCapEntry 4 }

  wranIfSsaSensRecPeriodInterval      OBJECT-TYPE
        SYNTAX      Integer32 (0..2047)
        UNITS       "frames"
        MAX-ACCESS  read- write
        STATUS      current
        DESCRIPTION
              "This object is the recommended interval between
               sensing periods that a CPE can support. It is an
               integer value, in units of frames. It is encoded in
               a 2-octet length value."
        ::= { wranIfSsaSensingCapEntry 5 }

  wranIfSsaStatusTable    OBJECT-TYPE
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        SYNTAX      SEQUENCE OF wranIfSsaStatusEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB object represents a table that tracks what
               the current state the SSA is in. There is only one
               entry in this table, to define the current state of
               the SSA, as well as any parameters of interest for
               current SSA procedures. This entry is defined by
               wranIfSsaStatusEntry."
        ::= { wranIfSsaMib 2 }

wranIfSsaStatusEntry    OBJECT-TYPE
        SYNTAX      wranIfSsaStatusEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object defines an entry in
               wranIfSsaStatusTable. The entry is identified by
               wranIfSsaStatusIndex."
        INDEX { wranIfSsaStatusIndex }
        ::= { wranIfSsaStatusTable 1 }

wranIfSsaStatusEntry    ::= SEQUENCE {
        wranIfSsaStatusIndex                        INTEGER,
        wranIfSsaCurrentState                       INTEGER,
        wranIfSsaRecentEvent                        INTEGER,
        wranIfSsaRecentAction                       INTEGER,
        wranIfSsaIpcUpdChannelsSize                 INTEGER,
        wranIfSsaIpcUpdChannels                     OCTET STRING,
        wranIfSsaCurrentT48                         Integer32,
        wranIfSsaCurrentT49                         Integer32,
        wranIfSsaCurrentT50                         Integer32,
        wranIfSsaIntraFrameQpCycleLength            INTEGER,
        wranIfSsaIntraFrameQpCycleOffset            INTEGER,
        wranIfSsaIntraFrameQpCycleFrameBitmap       BITS,
        wranIfSsaIntraFrameQpDuration               INTEGER,
        wranIfSsaInterFrameQpDuration               INTEGER,
        wranIfSsaInterFrameQpOffset                 Integer32 }

wranIfSsaStatusIndex    OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in the table, defaults to 1."
        ::= { wranIfSsaStatusEntry 1 }

wranIfSsaCurrentState   OBJECT-TYPE
        SYNTAX      INTEGER { inBandSensing(0),
                              outOfBandSensing(1) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The current state of the SSA is in (see 10.3.1,
               Figure 173), either “SSA In-band Sensing” or “SSA
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                Out-of-band Sensing."
        ::= { wranIfSsaStatusEntry 2 }

    wranIfSsaRecentEvent    OBJECT-TYPE
        SYNTAX
              INTEGER { blmReqInBandChannelMeasurements(0),
                        quietPeriodEnds(1),
                        quietPeriodCommences(2),
                        ssaIdleTime(3),
                        ssaInitialization(4),
                        blmReqOutOfBandChannelMeasurements(5),
                        lossOfContactWithSm(6) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The recent event that caused entry in the current
               state (see 10.3.1, Figure 173). "
        ::= { wranIfSsaStatusEntry 3 }

    wranIfSsaRecentAction   OBJECT-TYPE
        SYNTAX      INTEGER { ssaBlmRepGeneration(0),
                              ssaReportSensingResults(1),
                              ssaInBandSensing(2),
                              ssaIdleTime(3),
                              ssaInitialization(4),
                              lossOfContactWithSm(5) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The recent action, triggered by recent event, that
               was undertaken while entering into the current state
               (see 10.3.1, Figure 173)."
        ::= { wranIfSsaStatusEntry 4 }

    wranIfSsaIpcUpdChannelsSize   OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Number of channels in
               wranIfSsaIpcUpdChannels."
        ::= { wranIfSsaStatusEntry 5 }

    wranIfSsaIpcUpdChannels OBJECT-TYPE
        SYNTAX
              OCTET STRING
                    (SIZE(wranIfSsaIpcUpdChannelsSize))
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Contents of most recent IPC-UPD message received
               from SM."
        ::= { wranIfSsaStatusEntry 6 }

    wranIfSsaCurrentT48     OBJECT-TYPE
        SYNTAX      Integer32 (1..600)
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Current value of T48 in in 0.1 s increments from 0
               to 60 s."
        ::= { wranIfSsaStatusEntry 7 }

    wranIfSsaCurrentT49     OBJECT-TYPE
        SYNTAX      Integer32 (1..600)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Current value of T49 in in 0.1 s increments from 0
               to 60 s."
        ::= { wranIfSsaStatusEntry 8 }

    wranIfSsaCurrentT50     OBJECT-TYPE
        SYNTAX      Integer32 (1..600)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Current value of T50 in in 0.1 s increments from 0
               to 60 s."
        ::= { wranIfSsaStatusEntry 9 }

    wranIfSsaIntraFrameQpCycleLength    OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        UNITS       "superframes"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Obtained from CHQ-REQ or SCH. Specified in number of
               superframes, it indicates the spacing between the
               superframes for which the intra-frame quiet period
               specification is valid. For example, if this field
               is set 1, the Quiet Period Cycle repeats every
               superframe; if it is set to 2, the Quiet Period
               Cycle repeats every 2 superframes, etc. When = 0, no
               intra-frame quiet period is scheduled or the current
               intra-frame quiet period is canceled."
        ::= { wranIfSsaStatusEntry 10 }

    wranIfSsaIntraFrameQpCycleOffset    OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        UNITS       "superframes"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Obtained from CHQ-REQ or SCH. Valid only if intra-
               frame Sensing Cycle Length > 0. Used for in-band
               intra-frame sensing. Specified in number of
               superframes, it indicates the offset from this SCH
               transmission to the beginning of the first
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                superframe in the current intra-frame sensing
                cycle."
        ::= { wranIfSsaStatusEntry 11 }

    wranIfSsaIntraFrameQpCycleFrameBitmap     OBJECT-TYPE
        SYNTAX      BITS { frame1(1), frame2(2), frame3(3),
                    frame4(4), frame5(5), frame6(6),
                    frame7(7), frame8(8), frame9(9),
                    frame10(10), frame11(11), frame12(12),
                    frame13(13), frame14(14), frame15(15),
                    frame16(16) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Obtained from CHQ-REQ or SCH. Valid only if intra-
               frame Quiet Period Cycle Length > 0. Valid for each
               superframe identified by the Intra-frame Quiet
               Period Cycle Length, each bit in the bitmap
               corresponds to one frame within the superframe. If
               the bit is set to 0, no intra-frame quiet period
               shall be scheduled in the corresponding frame. If
               the bit is set to 1, an intra-frame quiet period
               shall be scheduled within the corresponding frame
               for the duration specified by Intra-frame Quiet
               period Duration."
        ::= { wranIfSsaStatusEntry 12 }

    wranIfSsaIntraFrameQpDuration OBJECT-TYPE
        SYNTAX      INTEGER (1..16)
        UNITS       "symbols"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Obtained from CHQ-REQ or SCH. Valid only if Intra-
               frame Quiet Period Cycle Length > 0. If this field
               is set to a value different from 0 (zero): it
               indicates the number of symbols starting from the
               end of the frame during which no transmission shall
               take place."
        ::= { wranIfSsaStatusEntry 13 }

    wranIfSsaInterFrameQpDuration OBJECT-TYPE
        SYNTAX      INTEGER (1..16)
        UNITS       "frames"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Obtained from CHQ-REQ or SCH. Used for in-band
               inter-frame sensing, it indicates the duration of
               the next scheduled quiet period. When > 0, it
               indicates the number of frames starting from Inter-
               frame Quiet Period Offset that shall be used to
               perform inter-frame sensing. When == 0, it cancels
               the next scheduled quiet period for inter-frame
               sensing or indicates that no inter-frame sensing are
               currently scheduled."
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        ::= { wranIfSsaStatusEntry 14 }

    wranIfSsaInterFrameQpOffset   OBJECT-TYPE
        SYNTAX      Integer32 (0..4096)
        UNITS       "frames"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Obtained from CHQ-REQ or SCH. Used for in-band
               inter-frame sensing, it indicates the time span
               between the transmission of this information and the
               next scheduled quiet period for inter-frame sensing.
               Bit 31-12: set to 0. Bit 11–4: index the superframe
               number, Bit 3–0: index the frame number when the
               next scheduled quiet period for inter-frame sensing
               will start."
        ::= { wranIfSsaStatusEntry 15 }

    wranIfSsaConfigTable    OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfSsaConfigEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB object represents a table that tracks what
               the default configuration of SSA timers and
               constants. There is only one entry in this table, to
               define the default configuration of the SSA. This
               entry is defined by wranIfSsaConfigEntry."
        ::= { wranIfSsaMib 3 }

    wranIfSsaConfigEntry    OBJECT-TYPE
        SYNTAX      wranIfSsaConfigEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object defines an entry in
               wranIfSsaConfigTable. The entry is identified by
               wranIfSsaConfigIndex."
        INDEX { wranIfSsaConfigIndex }
        ::= { wranIfSsaConfigTable 1 }

    wranIfSsaConfigEntry    ::= SEQUENCE {
        wranIfSsaConfigIndex                INTEGER,
        wranIfSsaT19                        Integer32,
        wranIfSsaT29                        Integer32,
        wranIfSsaMaxBlmRepRetries           INTEGER,
        wranIfSsaChAvailabilityCheckTime    INTEGER,
        wranIfSsaNonOccupancyPeriod         Integer32,
        wranIfSsaChannelDetectionTime       INTEGER,
        wranIfSsaChannelSetupTime           INTEGER,
        wranIfSsaChannelOpeningTxTime       Integer32,
        wranIfSsaChannelMoveTime            INTEGER,
        wranIfSsaChannelClosingTxTime       INTEGER,
        wranIfSsaMicProtectionRadius        Integer32,
        wranIfSsaT41                        INTEGER,
        wranIfSsaT42                        INTEGER,
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        wranIfSsaT43                            INTEGER,
        wranIfSsaT44                            INTEGER,
        wranIfSsaT45                            Integer32,
        wranIfSsaT59                            Integer32,
        wranIfSsaT47                            Integer32,
        wranIfSsaT48                            Integer32,
        wranIfSsaT49                            Integer32,
        wranIfSsaT50                            Integer32,
        wranIfSsaT51                            Integer32,
        wranIfSsaT53                            Integer32,
        wranIfSsaT54                            Integer32,
        wranIfSsaT55                            INTEGER,
        wranIfSsaT60                            INTEGER }

    wranIfSsaConfigIndex    OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in the table, defaults to 1."
        ::= { wranIfSsaConfigEntry 1 }

    wranIfSsaT19      OBJECT-TYPE
        SYNTAX      Integer32 (30..86400)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Time DS-channel remains unusable."
        ::= { wranIfSsaConfigEntry 2 }

    wranIfSsaT29      OBJECT-TYPE
        SYNTAX      Integer32 (10..300)
        UNITS       "milliseconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Wait for BLM-ACK timeout."
        ::= { wranIfSsaConfigEntry 3 }

    wranIfSsaMaxBlmRepRetries     OBJECT-TYPE
        SYNTAX      INTEGER (3..16)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Maximum number of retry attempts allowed for sending
               BLM-REP."
        ::= { wranIfSsaConfigEntry 4 }

    wranIfSsaChAvailabilityCheckTime    OBJECT-TYPE
        SYNTAX      INTEGER (30..255)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Time during which a TV channel shall be checked for
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                the presence of licensed incumbent signals having a
                level above the incumbent detection threshold prior
                to commencement of WRAN operation in the channel
                and, in the case of TV, a related channel at an EIRP
                level that can affect the measured TV channel."
        ::= { wranIfSsaConfigEntry 5 }

    wranIfSsaNonOccupancyPeriod   OBJECT-TYPE
        SYNTAX      INTEGER (10..1440)
        UNITS       "minutes"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The required period during which WRAN device
               transmissions SHALL NOT occur in a given TV channel
               because of the detected presence of an incumbent
               signal in that channel above the Incumbent detection
               threshold or, in the case of TV, above a given EIRP
               level."
        ::= { wranIfSsaConfigEntry 6 }

    wranIfSsaChannelDetectionTime OBJECT-TYPE
        SYNTAX      INTEGER (2..255)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Maximum time taken by a WRAN device to detect a
               licensed incumbent signal above the Incumbent
               Detection Threshold within a given TV channel during
               normal WRAN operation."
        ::= { wranIfSsaConfigEntry 7 }

    wranIfSsaChannelSetupTime     OBJECT-TYPE
        SYNTAX      INTEGER (2..255)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The window of time that may be taken by a WRAN CPE
               to transmit control information to a WRAN base
               station in order to establish operation with that
               base station at the prescribed power or, in the case
               of TV, at or below the allowable EIRP within a given
               TV channel."
        ::= { wranIfSsaConfigEntry 8 }

    wranIfSsaChannelOpeningTxTime OBJECT-TYPE
        SYNTAX      Integer32 (100..1000)
        UNITS       "milliseconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The aggregate duration of control transmissions by
               WRAN devices during the Channel Setup Time, which
               starts at the end of the Channel Availability Check
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                Time."
        ::= { wranIfSsaConfigEntry 9 }

    wranIfSsaChannelMoveTime      OBJECT-TYPE
        SYNTAX      INTEGER (2..255)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The time taken by WRAN system to cease all
               interfering transmissions on the current TV channel
               upon detection of a license incumbent signal above
               the relevant Incumbent Detection Threshold or, in
               the case of TV, to alternatively reduces its EIRP to
               which is allowable within a given TV channel upon
               detection of a TV signal in the same or a related
               channel."
        ::= { wranIfSsaConfigEntry 10 }

    wranIfSsaChannelClosingTxTime OBJECT-TYPE
        SYNTAX      Integer32 (100..1000)
        UNITS       "milliseconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The aggregate duration of control transmissions by
               the WRAN devices during the Channel Move/EIRP
               Reduction Time, which starts upon detection of a
               licensed incumbent signal above the relevant
               Incumbent Detection Threshold."
        ::= { wranIfSsaConfigEntry 11 }

    wranIfSsaMicProtectionRadius  OBJECT-TYPE
        SYNTAX      Integer32 (100..100000)
        UNITS       "meters"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Radius of contour within which the WRAN system
               cannot operate due to potential interference with
               the microphone."
        ::= { wranIfSsaConfigEntry 12 }

    wranIfSsaT41      OBJECT-TYPE
        SYNTAX      INTEGER (1..10)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Maximum time interval allowed before sensing is
               performed on the candidate channel to ensure that no
               incumbents are detected."
        ::= { wranIfSsaConfigEntry 13 }

    wranIfSsaT42      OBJECT-TYPE
        SYNTAX      INTEGER (1..10)
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Maximum time interval allowed before sensing is
               performed on the backup channel to ensure that no
               incumbents are detected."
        ::= { wranIfSsaConfigEntry 14 }

    wranIfSsaT43      OBJECT-TYPE
        SYNTAX      INTEGER (1..100)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Minimum time duration without detection of any
               incumbent for a candidate channel to transition to
               the backup channel."
        ::= { wranIfSsaConfigEntry 15 }

    wranIfSsaT44      OBJECT-TYPE
        SYNTAX      INTEGER (1..10)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Maximum time to ensure that the channel move
               information is successfully conveyed to all the
               associated CPEs and BS (self-coexistence mode)."
        ::= { wranIfSsaConfigEntry 16 }

    wranIfSsaT45      OBJECT-TYPE
        SYNTAX      Integer32 (1..720)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Maximum WRAN operation time without access to the
               incumbent database service from 0.1 h to 72 h in
               0.1 h increments."
        ::= { wranIfSsaConfigEntry 17 }

    wranIfSsaT59      OBJECT-TYPE
        SYNTAX      Integer32 (1..4096)
        UNITS       "frames"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Waiting time before which the CPE moves to its
               backup channels if it no longer hears from its BS.
               This is used to make sure that the CPE waits long
               enough after UCS notification so that BS has had
               time to move to the backup channel, it decided to do
               so."
        ::= { wranIfSsaConfigEntry 18 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranIfSsaT47      OBJECT-TYPE
      SYNTAX      Integer32 (1..4096)
      UNITS       "hours"
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "The prescribed time by the WRAN operator to refresh
             the incumbent database service, from 0.1 h to 72
             h in 0.1 h increments."
      ::= { wranIfSsaConfigEntry 19 }

wranIfSsaT48      OBJECT-TYPE
      SYNTAX      Integer32 (1..600)
      UNITS       "seconds"
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Lapse timer keeps track of whether the Operating
             Channel N has been cleared using spectrum sensing,
             from 0.1 s to 60 s in 0.1 s increments."
      ::= { wranIfSsaConfigEntry 20 }

wranIfSsaT49      OBJECT-TYPE
      SYNTAX      Integer32 (1..600)
      UNITS       "seconds"
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Lapse timer keeps track of whether the Operating
             Channel N-1 has been cleared using spectrum sensing,
             from 0.1 s to 60 s in 0.1 s increments."
      ::= { wranIfSsaConfigEntry 21 }

wranIfSsaT50      OBJECT-TYPE
      SYNTAX      Integer32 (1..600)
      UNITS       "seconds"
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Lapse timer keeps track of whether the Operating
             Channel N+1 has been cleared using spectrum sensing,
             from 0.1 s to 60 s in 0.1 s increments."
      ::= { wranIfSsaConfigEntry 22 }

wranIfSsaT51      OBJECT-TYPE
      SYNTAX      Integer32 (1..600)
      UNITS       "seconds"
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Initiated when SSA loses contact with the SM, from
             0.1 s to 60 s in 0.1 s increments."
      ::= { wranIfSsaConfigEntry 23 }

wranIfSsaT53      OBJECT-TYPE
      SYNTAX      Integer32 (1..600)
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The parameter TINsens is used to verify that in-band
               sensing has been done within the required In-service
               monitoring period. The TINsens parameter is driven
               by regulatory domain requirements (Annex A), from
               0.1 s to 60 s in 0.1 s increments."
        ::= { wranIfSsaConfigEntry 24 }

    wranIfSsaT54      OBJECT-TYPE
        SYNTAX      Integer32 (1..600)
        UNITS       "seconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The parameter TOUTsens is used to verify that out-
               of-band sensing has been done within the required
               “Acquiring a channel monitoring period” specified in
               Annex A. This value would be used to initialize
               a lapse timer for each channel in the backup
               candidate channel list at each CPE so that it
               compared to Tsens, from 0.1 s to 60 s in 0.1 s
               increments."
        ::= { wranIfSsaConfigEntry 25 }

    wranIfSsaT55      OBJECT-TYPE
        SYNTAX      INTEGER (1..160)
        UNITS       "milliseconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The T55 or Tsensin parameter corresponds to the
               maximum length of time required to carry out the in-
               band sensing process (see Figure 176). Manufacturers
               need to specify the sensing time required to detect
               the specified signals with required accuracy for in-
               band sensing."
        ::= { wranIfSsaConfigEntry 26 }

    wranIfSsaT60      OBJECT-TYPE
        SYNTAX      INTEGER (20..160)
        UNITS       "milliseconds"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "The T60 or Tsensout parameter corresponds to the
               maximum length of time required to carry out the
               out-of-band sensing process (see  Figure 178).
               Manufacturers need to specify the sensing time
               required to detect the specified signals with
               required accuracy for out-of-band sensing."
        ::= { wranIfSsaConfigEntry 27 }

    wranIfSsaPendingBlmRepTable   OBJECT-TYPE
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        SYNTAX      SEQUENCE OF wranIfSsaPendingBlmRepEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This MIB object represents a table that tracks the
               status of the execution of ongoing reporting (BLM-
               REP) in response to BLM-REQs. For each BLM-REQ there
               is a corresponding BLM-RSP to indicate that REQ
               message was received by the SSA. When an SSA is done
               with the sensing, it will send a BLM-REP to the SM.
               This table keeps track of any BLM-REP messages that
               are pending acknowledgement from the SM. When a
               report sent in a response is acknowledged, then the
               entry corresponding to the report and request will
               be cleared. This entry is defined by
               wranIfSsaPendingBlmRepEntry."
        ::= { wranIfSsaMib 4 }

wranIfSsaPendingBlmRepEntry   OBJECT-TYPE
        SYNTAX      wranIfSsaPendingBlmRepEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object defines an entry in
               wranIfSsaPendingBlmRepTable. The entry is identified
               by wranIfSsaPendingBlmRepIndex."
        INDEX { wranIfSsaPendingBlmRepIndex }
        ::= { wranIfSsaPendingBlmRepTable 1 }

wranIfSsaPendingBlmRepEntry  ::= SEQUENCE {
        wranIfSsaPendingBlmRepIndex                INTEGER,
        wranIfSsaPendingBlmReqTransactionId        Integer32,
        wranIfSsaPendingBlmReqMsgSize              Integer32,
        wranIfSsaPendingBlmReqMsg                  OCTET STRING,
        wranIfSsaPendingBlmRspSent                 TruthValue,
        wranIfSsaPendingBlmRepGenerated            TruthValue,
        wranIfSsaPendingBlmRepMsgSize              Integer32,
        wranIfSsaPendingBlmRepMsg                  OCTET STRING,
        wranIfSsaPendingBlmRepSent                 TruthValue,
        wranIfSsaPendingBlmRepAck                  TruthValue,
        wranIfSsaPendingBlmRepNumTx                INTEGER }

wranIfSsaPendingBlmRepIndex   OBJECT-TYPE
        SYNTAX      INTEGER (1..10)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in the table."
        ::= { wranIfSsaPendingBlmRepEntry 1 }

wranIfSsaPendingBlmReqTransactionId OBJECT-TYPE
        SYNTAX      Integer32 (0..65535)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Transaction ID for pending BLM-REQ."
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        ::= { wranIfSsaPendingBlmRepEntry 2 }

    wranIfSsaPendingBlmReqMsgSize OBJECT-TYPE
          SYNTAX      Integer32 (1..65535)
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "Size of BLM-REQ message stored in
                 wranIfSsaPendingBlmReqMsg."
          ::= { wranIfSsaPendingBlmRepEntry 3 }

    wranIfSsaPendingBlmReqMsg     OBJECT-TYPE
          SYNTAX
                OCTET STRING (SIZE(wranIfSsaPendingBlmReqMsgSize))
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "Contents of pending BLM-REQ message stored in
                 wranIfSsaPendingBlmReqMsg."
          ::= { wranIfSsaPendingBlmRepEntry 4 }

    wranIfSsaPendingBlmRspSent    OBJECT-TYPE
          SYNTAX      TruthValue
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "Indication of whether (Truth(1)) or not (Truth(0))
                 BLM-RSP pertaining to BLM-REQ has been sent."
          ::= { wranIfSsaPendingBlmRepEntry 5 }

    wranIfSsaPendingBlmRepGenerated     OBJECT-TYPE
          SYNTAX      TruthValue
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "Indication of whether (Truth(1)) or not (Truth(0))
                 BLM-REP corresponding to BLM-REQ has been generated,
                 i.e., sensing has been executed."
          ::= { wranIfSsaPendingBlmRepEntry 6 }

    wranIfSsaPendingBlmRepMsgSize OBJECT-TYPE
          SYNTAX      Integer32 (1..65535)
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "Size of BLM-REP message stored in
                 wranIfSsaPendingBlmRepMsg."
          ::= { wranIfSsaPendingBlmRepEntry 7 }

    wranIfSsaPendingBlmRepMsg     OBJECT-TYPE
          SYNTAX
                OCTET STRING (SIZE(wranIfSsaPendingBlmRepMsgSize))
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "Contents of BLM-REP message that corresponds to the
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                BLM-REQ."
        ::= { wranIfSsaPendingBlmRepEntry 8 }

    wranIfSsaPendingBlmRepSent    OBJECT-TYPE
        SYNTAX      TruthValue
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Indication of whether (Truth(1)) or not (Truth(0))
                 BLM-REP pertaining to BLM-REQ has been sent. "
        ::= { wranIfSsaPendingBlmRepEntry 9 }

    wranIfSsaPendingBlmRepAck     OBJECT-TYPE
        SYNTAX      TruthValue
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Indication of whether (Truth(1)) or not (Truth(0))
                 BLM-REP pertaining to BLM-REQ has been acknowledged
                 (via BLM-ACK)."
        ::= { wranIfSsaPendingBlmRepEntry 10 }

    wranIfSsaPendingBlmRepNumTx   OBJECT-TYPE
        SYNTAX      INTEGER (1..16)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Current number of times that BLM-REP has been
                 resent."
        ::= { wranIfSsaPendingBlmRepEntry 11 }

    wranIfSsaSensingRecordTable   OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfSsaSensingRecordEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "This object contains information the sensing status
                 of each channel. It is made of multiple entries, one
                 for each channel, as defined by
                 wranIfSsaSensingRecordEntry."
        ::= { wranIfSsaMib 5 }

    wranIfSsaSensingRecordEntry   OBJECT-TYPE
        SYNTAX      wranIfSsaSensingRecordEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "This object defines an entry in
                 wranIfSsaSensingRecordTable. The entry is identified
                 by wranIfSsaSensingRecordIndex."
        INDEX { wranIfSsaSensingRecordIndex }
        ::= { wranIfSsaSensingRecordTable 1 }

    wranIfSsaSensingRecordEntry   ::= SEQUENCE {
        wranIfSsaSensingRecordIndex         INTEGER,
        wranIfSsaSensingChannel             INTEGER,
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        wranIfSsaTimeLastSensing            DateAndTime,
        wranIfSsaTimeLastPositive           DateAndTime,
        wranIfSsaSensingPathRssi            INTEGER,
        wranIfSsaWranPathRssi               INTEGER,
        wranIfSsaSignalType                 INTEGER,
        wranIfSsaWranServiceAdvertisement   MacAddress,
        wranIfSsaIdcUpdIndication           TruthValue }

    wranIfSsaSensingRecordIndex   OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in the table."
        ::= { wranIfSsaSensingRecordEntry 1 }

    wranIfSsaSensingChannel OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Channel that sensing has been conducted on, or not
               conducted on if in IPC-UPD."
        ::= { wranIfSsaSensingRecordEntry 2 }

    wranIfSsaTimeLastSensing      OBJECT-TYPE
        SYNTAX      DateAndTime
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Last time that this channel was sensed."
        ::= { wranIfSsaSensingRecordEntry 3 }

    wranIfSsaTimeLastPositive     OBJECT-TYPE
        SYNTAX      DateAndTime
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Last time that signal was positively confirmed on
               this channel."
        ::= { wranIfSsaSensingRecordEntry 4 }

    wranIfSsaSensingPathRssi      OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        UNITS       "dBm"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "RSSI on sensing path, between -104 dBm to +23.5 dBm
               in 0.5 dB steps."
        ::= { wranIfSsaSensingRecordEntry 5 }

    wranIfSsaWranPathRssi   OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        UNITS       "dBm"
        MAX-ACCESS  read-write
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        STATUS      current
        DESCRIPTION
              "RSSI on WRAN signal path., between -104 dBm to
               +23.5 dBm in 0.5 dB steps."
        ::= { wranIfSsaSensingRecordEntry 6 }

    wranIfSsaSignalType     OBJECT-TYPE
        SYNTAX      INTEGER { undetermined(0),
                              ieee802dot22wran(1),
                              atsc(2),
                              dvbt(3),
                              isdbt(4),
                              ntsc(5),
                              pal(6),
                              secam(7),
                              wirelessMicrophone(8),
                              ieee802dot22dot1Sync(9),
                              ieee802dot22dot1Msf1(10),
                              ieee802dot22dot1Msf2(11),
                              ieee802dot22dot1Msf3(12) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Type of signal that was sensed on the channel."
        ::= { wranIfSsaSensingRecordEntry 7 }

    wranIfSsaWranServiceAdvertisement   OBJECT-TYPE
        SYNTAX      MacAddress
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "If signal type was for WRAN, this indicates the BS
               ID of the captured SCH from neighbor WRAN."
        ::= { wranIfSsaSensingRecordEntry 8 }

    wranIfSsaIdcUpdIndication     OBJECT-TYPE
        SYNTAX      TruthValue
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              " Indication if channel is on IPC-UPD."
        ::= { wranIfSsaSensingRecordEntry 9 }

    wranIfSsaSsfMode0OutputTable  OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfSsaSsfMode0OutputEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object contains the current output of SSF Mode
               0 sensing. It is made up of multiple entries, one
               for each signal type that was sensed. Each entry is
               defined by wranIfSsaSsfMode0OutputEntry."
        ::= { wranIfSsaMib 6 }

    wranIfSsaSsfMode0OutputEntry  OBJECT-TYPE
        SYNTAX      wranIfSsaSsfMode0OutputEntry
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
            "This object defines an entry in
             wranIfSsaSsfMode0OutputTable. The entry is
             identified by wranIfSsaSsfMode0OutputIndex."
      INDEX { wranIfSsaSsfMode0OutputIndex }
      ::= { wranIfSsaSsfMode0OutputTable 1 }

wranIfSsaSsfMode0OutputEntry  ::= SEQUENCE {
      wranIfSsaSsfMode0OutputIndex        INTEGER,
      wranIfSsaSsfMode0SignalType         INTEGER,
      wranIfSsaSsfMode0SignalPresent      TruthValue }

wranIfSsaSsfMode0OutputIndex  OBJECT-TYPE
      SYNTAX      INTEGER (1..32)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index of entry in the table."
      ::= { wranIfSsaSsfMode0OutputEntry 1 }

wranIfSsaSsfMode0SignalType   OBJECT-TYPE
      SYNTAX      INTEGER { undetermined(0),
                            ieee802dot22wran(1),
                            atsc(2),
                            dvbt(3),
                            isdbt(4),
                            ntsc(5),
                            pal(6),
                            secam(7),
                            wirelessMicrophone(8),
                            ieee802dot22dot1Sync(9),
                            ieee802dot22dot1Msf1(10),
                            ieee802dot22dot1Msf2(11),
                            ieee802dot22dot1Msf3(12) }
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Type of signal that was sensed."
      ::= { wranIfSsaSsfMode0OutputEntry 2 }

wranIfSsaSsfMode0SignalPresent      OBJECT-TYPE
      SYNTAX      TruthValue
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Indication of whether (Truth(1)) or not (Truth(0)) a
             signal of signal type was detected."
      ::= { wranIfSsaSsfMode0OutputEntry 3 }

wranIfSsaSsfMode1OutputTable  OBJECT-TYPE
      SYNTAX      SEQUENCE OF wranIfSsaSsfMode1OutputEntry
      MAX-ACCESS  not-accessible
      STATUS      current
      DESCRIPTION
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                "This object contains the current output of SSF Mode
                 1 sensing. It is made up of multiple entries, one
                 for each signal type that was sensed. Each entry is
                 defined by wranIfSsaSsfMode1OutputEntry."
          ::= { wranIfSsaMib 7 }

    wranIfSsaSsfMode1OutputEntry  OBJECT-TYPE
          SYNTAX      wranIfSsaSsfMode1OutputEntry
          MAX-ACCESS  not-accessible
          STATUS      current
          DESCRIPTION
                "This object defines an entry in
                 wranIfSsaSsfMode1OutputTable. The entry is
                 identified by wranIfSsaSsfMode1OutputIndex."
          INDEX { wranIfSsaSsfMode1OutputIndex }
          ::= { wranIfSsaSsfMode1OutputTable 1 }

    wranIfSsaSsfMode1OutputEntry  ::= SEQUENCE {
          wranIfSsaSsfMode1OutputIndex        INTEGER,
          wranIfSsaSsfMode1SignalType         INTEGER,
          wranIfSsaSsfMode1SignalPresent      TruthValue,
          wranIfSsaSsfMode1SignalConfidence   INTEGER }

    wranIfSsaSsfMode1OutputIndex  OBJECT-TYPE
          SYNTAX      INTEGER (1..32)
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Index of entry in the table."
          ::= { wranIfSsaSsfMode1OutputEntry 1 }

    wranIfSsaSsfMode1SignalType   OBJECT-TYPE
          SYNTAX      INTEGER { undetermined(0),
                                ieee802dot22wran(1),
                                atsc(2),
                                dvbt(3),
                                isdbt(4),
                                ntsc(5),
                                pal(6),
                                secam(7),
                                wirelessMicrophone(8),
                                ieee802dot22dot1Sync(9),
                                ieee802dot22dot1Msf1(10),
                                ieee802dot22dot1Msf2(11),
                                ieee802dot22dot1Msf3(12) }
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "Type of signal that was sensed."
          ::= { wranIfSsaSsfMode1OutputEntry 2 }

    wranIfSsaSsfMode1SignalPresent      OBJECT-TYPE
          SYNTAX      TruthValue
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                "Indication of whether (Truth(1)) or not (Truth(0)) a
                 signal of signal type was detected."
          ::= { wranIfSsaSsfMode1OutputEntry 3 }

    wranIfSsaSsfMode1SignalConfidence   OBJECT-TYPE
          SYNTAX      INTEGER (0..255)
          MAX-ACCESS  read-write
          STATUS      current
          DESCRIPTION
                "Confidence level in signal present decision, where
                 0x00 represents no confidence and 0xFF represents
                 total confidence (see Table 241)."
          ::= { wranIfSsaSsfMode1OutputEntry 4 }

    wranIfSsaSsfMode2OutputTable  OBJECT-TYPE
          SYNTAX      SEQUENCE OF wranIfSsaSsfMode2OutputEntry
          MAX-ACCESS  not-accessible
          STATUS      current
          DESCRIPTION
                "This object contains the current output of SSF Mode
                 2 sensing. It is made up of multiple entries, one
                 for each signal type that was sensed. Each entry is
                 defined by wranIfSsaSsfMode2OutputEntry."
          ::= { wranIfSsaMib 8 }

    wranIfSsaSsfMode2OutputEntry  OBJECT-TYPE
          SYNTAX      wranIfSsaSsfMode2OutputEntry
          MAX-ACCESS  not-accessible
          STATUS      current
          DESCRIPTION
                "This object defines an entry in
                 wranIfSsaSsfMode2OutputTable. The entry is
                 identified by wranIfSsaSsfMode2OutputIndex."
          INDEX { wranIfSsaSsfMode2OutputIndex }
          ::= { wranIfSsaSsfMode2OutputTable 1 }

    wranIfSsaSsfMode2OutputEntry  ::= SEQUENCE {
          wranIfSsaSsfMode2OutputIndex        INTEGER,
          wranIfSsaSsfMode2SignalType         INTEGER,
          wranIfSsaSsfMode2SignalRssiMean     INTEGER,
          wranIfSsaSsfMode2SignalStdDevRssi   INTEGER }

    wranIfSsaSsfMode2OutputIndex  OBJECT-TYPE
          SYNTAX      INTEGER (1..32)
          MAX-ACCESS  read-only
          STATUS      current
          DESCRIPTION
                "Index of entry in the table."
          ::= { wranIfSsaSsfMode2OutputEntry 1 }

    wranIfSsaSsfMode2SignalType   OBJECT-TYPE
          SYNTAX      INTEGER { undetermined(0),
                                ieee802dot22wran(1),
                                atsc(2),
                                dvbt(3),
                                isdbt(4),
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                                ntsc(5),
                                pal(6),
                                secam(7),
                                wirelessMicrophone(8),
                                ieee802dot22dot1Sync(9),
                                ieee802dot22dot1Msf1(10),
                                ieee802dot22dot1Msf2(11),
                                ieee802dot22dot1Msf3(12) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Type of signal that was sensed."
        ::= { wranIfSsaSsfMode2OutputEntry 2 }

    wranIfSsaSsfMode2SignalRssiMean     OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Mean of RSSI signal measurements, between -104 dBm
               to +23.5 dBm in 0.5 dB steps."
        ::= { wranIfSsaSsfMode2OutputEntry 3 }

    wranIfSsaSsfMode2SignalStdDevRssi   OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Standard Deviation of RSSI signal measurements,
               between -104 dBm to +23.5 dBm in 0.5 dB steps."
        ::= { wranIfSsaSsfMode2OutputEntry 4 }

    wranIfSsaSsfWiMicMSFTable     OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfSsaSsfWiMicMSFEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object contains the current output payload of
               MSF1, MSF1+MSF2, or MSF1+MSF2+MSF3 of IEEE Std
               802.22.1-2010 beacon on recently sensed channels. It
               is made up of multiple entries for each channel one
               or more MSFs have been sensed on. Each entry is
               defined by wranIfSsaSsfWiMicMSFEntry."
        ::= { wranIfSsaMib 9 }

    wranIfSsaSsfWiMicMSFEntry     OBJECT-TYPE
        SYNTAX      wranIfSsaSsfWiMicMSFEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "This object defines an entry in
               wranIfSsaSsfWiMicMSFTable. The entry is identified
               by wranIfSsaSsfWiMicMSFIndex."
        INDEX { wranIfSsaSsfWiMicMSFIndex }
        ::= { wranIfSsaSsfWiMicMSFTable 1 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranIfSsaSsfWiMicMSFEntry     ::= SEQUENCE {
      wranIfSsaSsfWiMicMSFIndex           INTEGER,
      wranIfSsaSsfWiMicMSFChannel         INTEGER,
      wranIfSsaSsfWiMicMSFPayloadSize     INTEGER,
      wranIfSsaSsfWiMicMSFPayload         OCTET STRING,
      wranIfSsaSsfWiMicMSFCrc1Status      TruthValue,
      wranIfSsaSsfWiMicMSFCrc2Status      TruthValue,
      wranIfSsaSsfWiMicMSFCrc3Status      TruthValue }

wranIfSsaSsfWiMicMSFIndex     OBJECT-TYPE
      SYNTAX      INTEGER (1..255)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index of entry in the table."
      ::= { wranIfSsaSsfWiMicMSFEntry 1 }

wranIfSsaSsfWiMicMSFChannel   OBJECT-TYPE
      SYNTAX      INTEGER (0..255)
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Type of signal that was sensed."
      ::= { wranIfSsaSsfWiMicMSFEntry 2 }

wranIfSsaSsfWiMicMSFPayloadSize     OBJECT-TYPE
      SYNTAX      INTEGER { msf1(0), msf12(1), msf123(2) }
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Size of MSF payload stored in
             wranIfSsaSsfWiMicMSFPayload. Indicates whether MSF1
             by itself (15 octets), MSF1+MSF2 (64 octets), or
             MSF1+MSF2+MSF3 (95 octets) have been captured (see
             Figure 16, 7.2.1, 7.2.2, and 7.2.3 of IEEE
             Std 802.22.1-2010). This size does not include
             CRC1/CRC2/CRC3 from the MSFs."
      ::= { wranIfSsaSsfWiMicMSFEntry 3 }

wranIfSsaSsfWiMicMSFPayload   OBJECT-TYPE
      SYNTAX
            OCTET STRING (SIZE(wranIfSsaSsfWiMicMSFPayloadSize))
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Payload of MSF1, MSF1+MSF2, or MSF1+MSF2+MSF3, not
             including CRC1/CRC2/CRC3 fields (see 7.2.1, 7.2.2,
             7.2.3 of IEEE Std 802.22.1-2010)."
      ::= { wranIfSsaSsfWiMicMSFEntry 4 }

wranIfSsaSsfWiMicMSFCrc1Status      OBJECT-TYPE
      SYNTAX      TruthValue
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Indication of whether (Truth(1)) or not (Truth(0))
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                MSF1 passed verification of CRC1."
        ::= { wranIfSsaSsfWiMicMSFEntry 5 }

    wranIfSsaSsfWiMicMSFCrc2Status      OBJECT-TYPE
        SYNTAX      TruthValue
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Indication of whether (Truth(1)) or not (Truth(0))
                 MSF2 passed verification of CRC2."
        ::= { wranIfSsaSsfWiMicMSFEntry 6 }

    wranIfSsaSsfWiMicMSFCrc3Status      OBJECT-TYPE
        SYNTAX      TruthValue
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
                "Indication of whether (Truth(1)) or not (Truth(0))
                 MSF3 passed verification of CRC3."
        ::= { wranIfSsaSsfWiMicMSFEntry 7 }

    wranIfSsaGeolocationTable     OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfSsaGeolocationEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "This object contains the current parameters and
                 calculations being used by the Geolocation component
                 of the SSA. It is made up of one entry to contain
                 current values being used/calculated in the BS-to-
                 CPE fine-ranging, CPE-to-CPE fine ranging,
                 geolocation calculation functions. It is made up of
                 one entry, defined by wranIfSsaGeoLocationEntry. "
        ::= { wranIfSsaMib 10 }

    wranIfSsaGeoLocationEntry     OBJECT-TYPE
        SYNTAX      wranIfSsaGeoLocationEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "This object defines an entry in
                 wranIfSsaGeolocationTable. The entry is identified
                 by wranIfSsaGeoLocationIndex."
        INDEX { wranIfSsaGeoLocationIndex }
        ::= { wranIfSsaGeolocationTable 1 }

    wranIfSsaGeoLocationEntry     ::= SEQUENCE {
        wranIfSsaGeolocationIndex           INTEGER,
        wranIfSsaGeolocationVernier1Size    Integer32,
        wranIfSsaGeolocationVernier1        OCTET STRING
        wranIfSsaGeoLocationVernier2Size    Integer32,
        wranIfSsaGeolocationVernier2        OCTET STRING,
        wranIfSsaGeoLocationVernier3Size    Integer32,
        wranIfSsaGeolocationVernier3        OCTET STRING,
        wranIfSsaGeolocationTRange1         Integer32,
        wranIfSsaGeolocationTACbp           Integer32 }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
wranIfSsaGeoLocationIndex     OBJECT-TYPE
      SYNTAX      INTEGER (1..1)
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Index of entry in the table."
      ::= { wranIfSsaGeoLocationEntry 1 }

wranIfSsaGeolocationVernier1Size    OBJECT-TYPE
      SYNTAX      Integer32 (1..65535)
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Size of Vernier1 data recorded only at the CPE."
      ::= { wranIfSsaGeoLocationEntry 2 }

wranIfSsaGeolocationVernier1  OBJECT-TYPE
      SYNTAX
            OCTET STRING (SIZE(wranIfSsaGeolocationVernier1Size))
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Vernier1, recorded only at the CPE."
      ::= { wranIfSsaGeoLocationEntry 3 }

wranIfSsaGeolocationVernier2Size    OBJECT-TYPE
      SYNTAX      Integer32 (1..65535)
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Size of Vernier2 data recorded only at the BS."
      ::= { wranIfSsaGeoLocationEntry 4 }

wranIfSsaGeolocationVernier2  OBJECT-TYPE
      SYNTAX
            OCTET STRING (SIZE(wranIfSsaGeolocationVernier2Size))
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Vernier2, recorded only at the BS."
      ::= { wranIfSsaGeoLocationEntry 5 }

wranIfSsaGeolocationVernier3Size    OBJECT-TYPE
      SYNTAX      Integer32 (1..65535)
      MAX-ACCESS  read-write
      STATUS      current
      DESCRIPTION
            "Size of Vernier3 data recorded only at the CPE."
      ::= { wranIfSsaGeoLocationEntry 6 }

wranIfSsaGeolocationVernier3  OBJECT-TYPE
      SYNTAX
            OCTET STRING (SIZE(wranIfSsaGeolocationVernier3Size))
      MAX-ACCESS  read-write
      STATUS      current
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
        DESCRIPTION
              "Vernier3, recorded only at the CPE."
        ::= { wranIfSsaGeoLocationEntry 7 }

    wranIfSsaGeolocationTRange1   OBJECT-TYPE
        SYNTAX      Integer32 (1..1000)
        UNITS       "TU"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "TRange1, also known as T52. Set by BS when
               downstream bust leaves the BS, i.e., at start of
               frame preamble."
        ::= { wranIfSsaGeoLocationEntry 5 }

    wranIfSsaGeolocationTACbp     OBJECT-TYPE
        SYNTAX      Integer32 (-1024..+1024)
        UNITS       "TU"
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "TACBP, Timing advance for CBP burst used in ranging
               calculations."
        ::= { wranIfSsaGeoLocationEntry 6 }

    wranIfSsaTrapControl    OBJECT-TYPE
        SYNTAX      BITS  { wranIfSsaSensingCapChange(0),
                            wranIfSsaStatusChange(1),
                            wranIfSsaBlmRepChange(2),
                            wranIfSsaSensingRecordChange(3),
                            wranIfSsaSsfMode0Change(4),
                            wranIfSsaSsfMode1Change(5),
                            wranIfSsaSsfMode2Change(6),
                            wranIfSsaSsfWiMicMSFChange(7),
                            wranIfSsaGeolocationChange(9) }
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Defines control elements for traps related to
               interaction with the Spectrum Sensing Automaton.
               This is a 9-bit field that enables setting a trap
               for particular CPE events:
               wranIfSsaSensingCapChange, wranIfSsaStatusChange,
               wranIfSsaBlmRepChange, wranIfSsaSensingRecordChange,
               wranIfSsaSsfMode0Change, wranIfSsaSsfMode1Change,
               wranIfSsaSsfMode2Change, wranIfSsaSsfWiMicMSFChange,
               wranIfSsaGeolocationChange."
        ::= { wranIfSsaMib 11 }


    wranIfSsaTrapDefinition             OBJECT IDENTIFIER
                                    ::= { wranIfSsaMib 12 }
    wranIfSsaSensingCapChangeTrap       OBJECT IDENTIFIER
                                    ::= { wranIfSsaTrapDefinition 1 }
    wranIfSsaStatusChangeTrap           OBJECT IDENTIFIER
                                    ::= { wranIfSsaTrapDefinition 2 }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
wranIfSsaBlmRepChangeTrap           OBJECT IDENTIFIER
                                 ::= { wranIfSsaTrapDefinition 3 }
wranIfSsaSensingRecordChangeTrap    OBJEEC IDENTIFIER
                                 ::= { wranIfSsaTrapDefinition 4 }
wranIfSsaSsfMode0ChangeTrap         OBJECT IDENTIFIER
                                 ::= { wranIfSsaTrapDefinition 5 }
wranIfSsaSsfMode1ChangeTrap         OBJECT IDENTIFIER
                                 ::= { wranIfSsaTrapDefinition 6 }
wranIfSsaSsfMode2ChangeTrap         OBJECT IDENTIFIER
                                 ::= { wranIfSsaTrapDefinition 7 }
wranIfSsaSsfWiMicMSFChangeTrap      OBJECT IDENTIFIER
                                 ::= { wranIfSsaTrapDefinition 8 }
wranIfSsaGeolocationChangeTrap      OBJECT IDENTIFIER
                                 ::= { wranIfSsaTrapDefinition 9 }

wranIfSsaSensingCapChangeTrap NOTIFICATION-TYPE
      OBJECTS     { wranIfSsaSensingCapibilityStatus }
      STATUS      current
      DESCRIPTION
            "This trap contains the information related to
             configuration of SSA sensing capabilities."
      ::= { wranIfSsaTrapDefinition 1 }

wranIfSsaStatusChangeTrap     NOTIFICATION-TYPE
      OBJECTS     { wranIfSsaCurrentState, wranIfSsaRecentEvent,
                    wranIfSsaRecentAction, wranIfSsaStatus }
      STATUS      current
      DESCRIPTION
            "This trap contains the information related to
             current state of the SSA."
      ::= { wranIfSsaTrapDefinition 2 }

wranIfSsaBlmRepChangeTrap     NOTIFICATION-TYPE
      OBJECTS     { wranIfSsaPendingBlmRepIndex,
                    wranIfSsaBlmRepStatus }
      STATUS      current
      DESCRIPTION
            "This trap contains the information related to
             pending BLM transactions at the SSA."
      ::= { wranIfSsaTrapDefinition 3 }

wranIfSsaSensingRecordChangeTrap    NOTIFICATION-TYPE
      OBJECTS     { wranIfSsaSensingRecordIndex,
                    wranIfSsaSensingRecordStatus }
      STATUS      current
      DESCRIPTION
            "This trap contains the information related to
             sensing records maintained by the SSA."
      ::= { wranIfSsaTrapDefinition 4 }

wranIfSsaSsfMode0ChangeTrap   NOTIFICATION-TYPE
      OBJECTS     { wranIfSsaSsfMode0OutputIndex,
                    wranIfSsaSsfMode0Status }
      STATUS      current
      DESCRIPTION
            "This trap contains the information related to
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                sensing output using Mode 0."
        ::= { wranIfSsaTrapDefinition 5 }

    wranIfSsaSsfMode1ChangeTrap   NOTIFICATION-TYPE
        OBJECTS     { wranIfSsaSsfMode1OutputIndex,
                      wranIfSsaSsfMode1SignalConfidence,
                      wranIfSsaSsfMode1Status }
        STATUS      current
        DESCRIPTION
                "This trap contains the information related to
                 sensing output using Mode 1."
        ::= { wranIfSsaTrapDefinition 6 }

    wranIfSsaSsfMode2ChangeTrap   NOTIFICATION-TYPE
        OBJECTS     { wranIfSsaSsfMode2OutputIndex,
                      wranIfSsaSsfMode2SignalRssiMean,
                      wranIfSsaSsfMode2SignalStdDevRssi,
                      wranIfSsaSsfMode2Status }
        STATUS      current
        DESCRIPTION
                "This trap contains the information related to
                 sensing output using Mode 2."
        ::= { wranIfSsaTrapDefinition 7 }

    wranIfSsaSsfWiMicMSFChangeTrap      NOTIFICATION-TYPE
        OBJECTS     { wranIfSsaSsfWiMicMSFIndex,
                      wranIfSsaSsfWiMicMSFStatus }
        STATUS      current
        DESCRIPTION
                "This trap contains the information related to
                 sensing and capturing wireless microphone beacons
                 (see IEEE Std 802.22.1-2010)."
        ::= { wranIfSsaTrapDefinition 8 }

    wranIfSsaGeolocationChangeTrap      NOTIFICATION-TYPE
        OBJECTS     { wranIfSsaGeolocationStatus }
        STATUS      current
        DESCRIPTION
                "This trap contains the information related to
                 terrestrial geolocation."
        ::= { wranIfSsaTrapDefinition 9 }

    wranIfSsaNotificationObjectsTable   OBJECT-TYPE
        SYNTAX      SEQUENCE OF wranIfSsaNotificationObjectsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
                "This MIB provides a table to track notification
                 objects that have been reported by the traps related
                 to operation of the SSA. It is made up of one entry,
                 containing the objects related to the most recent
                 trap/event. The entry is defined by
                 wranIfSsaNotificationObjectsEntry."
        ::= { wranIfSsaMib 13 }

    wranIfSsaNotificationObjectsEntry   OBJECT-TYPE
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
        SYNTAX      wranIfSsaNotificationObjectsEntry
        MAX-ACCESS  not-accessible
        STATUS      current
        DESCRIPTION
              "Definition of an entry in
               wranIfSsaNotificationObjectsTable. Each entry is
               identified by wranIfSsaNotificationIndex."
        INDEX { wranIfSsaNotificationIndex }
        ::= { wranIfSsaNotificationObjectsTable 1 }

  wranIfSsaNotificationObjectsEntry   ::= SEQUENCE {
        wranIfSsaNotificationIndex                      INTEGER,
        wranIfSsaNotificationCurrentState               INTEGER,
        wranIfSsaNotificationRecentEvent                INTEGER,
        wranIfSsaNotificationRecentAction               INTEGER,
        wranIfSsaNotificationPendingBlmRepIndex         INTEGER,
        wranIfSsaNotificationSensingRecordIndex         INTEGER,
        wranIfSsaSsfNotificationMode0OutputIndex        INTEGER,
        wranIfSsaSsfNotificationMode1OutputIndex        INTEGER,
        wranIfSsaSsfNotificationMode1Confidence         INTEGER,
        wranIfSsaSsfNotificationMode2OutputIndex        INTEGER,
        wranIfSsaSsfNotificationMode2RssiMean           INTEGER,
        wranIfSsaSsfNotificationMode2StdDevRssi         INTEGER,
        wranIfSsaSsfNotificationWiMicMSFIndex           INTEGER,
        wranIfSsaSensingCapibilityStatus                BITS,
        wranIfSsaStatus                                 BITS,
        wranIfSsaBlmRepStatus                           INTEGER,
        wranIfSsaSensingRecordStatus                    BITS,
        wranIfSsaSsfMode0Status                         INTEGER,
        wranIfSsaSsfMode1Status                         INTEGER,
        wranIfSsaSsfMode2Status                         BITS,
        wranIfSsaSsfWiMicMSFStatus                      INTEGER,
        wranIfSsaGeolocationStatus                      INTEGER }

  wranIfSsaNotificationIndex    OBJECT-TYPE
        SYNTAX      INTEGER (1..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in the table."
        ::= { wranIfSsaNotificationObjectsEntry 1 }

  wranIfSsaNotificationCurrentState   OBJECT-TYPE
        SYNTAX      INTEGER (0..1)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Current state that SSA is in as defined by current
               value of wranIfSsaCurrentState."
        ::= { wranIfSsaNotificationObjectsEntry 2 }

  wranIfSsaNotificationRecentEvent    OBJECT-TYPE
        SYNTAX      INTEGER (0..6)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                "Recent event that occurred for SSA as defined by
                 current value of wranIfSsaRecentEvent."
        ::= { wranIfSsaNotificationObjectsEntry 3 }

    wranIfSsaNotificationRecentAction   OBJECT-TYPE
        SYNTAX      INTEGER (0..5)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Recent action SSA has taken as defined by current
                 value of wranIfSsaRecentAction."
        ::= { wranIfSsaNotificationObjectsEntry 4 }

    wranIfSsaNotificationPendingBlmRepIndex   OBJECT-TYPE
        SYNTAX      INTEGER (1..10)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Index of entry in wranIfSsaPendingBlmRepTable that
                 indicates the handling of which pending BLM-REP has
                 triggered a trap."
        ::= { wranIfSsaNotificationObjectsEntry 5 }

    wranIfSsaNotificationSensingRecordIndex   OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Index of entry in wranIfSsaSensingRecordTable that
                 indicates the handling of which sensing record
                 triggered a trap."
        ::= { wranIfSsaNotificationObjectsEntry 6 }

    wranIfSsaSsfNotificationMode0OutputIndex  OBJECT-TYPE
        SYNTAX      INTEGER (1..32)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Index of entry in wranIfSsaSsfMode0OutputTable
                 that indicates the handling of which signal type
                 detected by Mode 0 triggered a trap."
        ::= { wranIfSsaNotificationObjectsEntry 7 }

    wranIfSsaSsfNotificationMode1OutputIndex  OBJECT-TYPE
        SYNTAX      INTEGER (1..32)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
                "Index of entry in wranIfSsaSsfMode1OutputTable
                 that indicates the handling of which signal type
                 detected by Mode 1 triggered a trap."
        ::= { wranIfSsaNotificationObjectsEntry 8 }

    wranIfSsaSsfNotificaionMode1Confidence    OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-only
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
        STATUS      current
        DESCRIPTION
              "Confidence value of entry indexed by
               wranIfSsaSsfNotificationMode1OutputIndex in
               wranIfSsaSsfMode1OutputTable that indicates the
               handling of which signal type detected by Mode 1
               triggered a trap."
        ::= { wranIfSsaNotificationObjectsEntry 9 }

    wranIfSsaSsfNotificationMode2OutputIndex  OBJECT-TYPE
        SYNTAX      INTEGER (1..32)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in wranIfSsaSsfMode2OutputTable
               that indicates the handling of which signal type
               detected by Mode 2 triggered a trap."
        ::= { wranIfSsaNotificationObjectsEntry 10 }

    wranIfSsaSsfNotificationMode2SignalRssiMean    OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Current Mean of RSSI signal measurements, between
               -104 dBm to +23.5 dBm in 0.5 dB steps, for which
               trap was caught."
        ::= { wranIfSsaNotificationObjectsEntry 11 }

    wranIfSsaSsfNotificationMode2SignalStdDevRssi   OBJECT-TYPE
        SYNTAX      INTEGER (0..255)
        MAX-ACCESS  read-write
        STATUS      current
        DESCRIPTION
              "Current Standard Deviation of RSSI signal
               measurements, between -104 dBm to +23.5 dBm in
               0.5 dB steps, for which trap was caught."
        ::= { wranIfSsaNotificationObjectsEntry 12 }

    wranIfSsaSsfNotificationWiMicMSFIndex     OBJECT-TYPE
        SYNTAX      INTEGER (1..255)
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "Index of entry in wranIfSsaSsfWiMicMSFTable that
               indicates which channel the capture of a wireless
               microphone beacon MSF has triggered a trap."
        ::= { wranIfSsaNotificationObjectsEntry 13 }

    wranIfSsaSensingCapibilityStatus    OBJECT-TYPE
        SYNTAX      BITS { thresholdIncrease(0),
                           thresholdDecrease(1),
                           recContigPeriodDurationIncrease(2),
                           recContigPeriodDurationDecrease(3),
                           recNumPeriodsIncrease(4),
                           recNumPeriodsDecrease(5),
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
                        recPeriodIntervalIncrease(6),
                        recPeriodIntervalDecrease(7) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "8-bit bitmap that indicates the following changes to
             the sensing capabilities defined in
             wranIfSsaSensingCapTable: Sensing Threshold Increase
             (Bit0), Sensing Threshold Decrease (Bit1),
             Contiguous Recording Period Duration Increase
             (Bit2), Contiguous Recording Period Duration
             Decrease (Bit3), Number of Recording Periods
             Increase (Bit4), Number f Recording Periods Decrease
             (Bit5) Recording Period Interval Increase (Bit6),
             Recording Interval Period Decrease (Bit7). More than
             one bit can be set simultaneously. However, if Bit0
             is set, Bit1 cannot be set. Same goes for the
             relationship between Bit2/Bit3, Bit4/Bit5, and
             Bit6/Bit7."
      ::= { wranIfSsaNotificationObjectsEntry 14 }

wranIfSsaStatus   OBJECT-TYPE
      SYNTAX      BITS { t48expired(0),
                         t49expired(1),
                         t50expired(2),
                         intraFrameQpCycleLengthChanged(3),
                         intraFrameQpCycleOffsetChanged(4),
                         intraFramQpCycleFrameBitmapChanged(5),
                         intraFrameQpDurationChanged(6),
                         interFrameQpDurationChanged(7)
                         interFrameQpOffsetChanged(8)
                         incProhibitedChannelsChanged(9) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Concerning the current state of the SSA, this 10-bit
             bitmap indicates whether T48/T49/T50 have
             expired, whether any of the Quiet Period
             parameters have been affected, or whether the
             prohibited channel list has been updated. More than
             one bit in this bitmap can be set at the same time."
      ::= { wranIfSsaNotificationObjectsEntry 15 }

wranIfSsaBlmRepStatus   OBJECT-TYPE
      SYNTAX      INTEGER { blmRspSent(0),
                            blmRepGenerated(1),
                            blmRepSent(2),
                            blmRepAckReceived(3),
                            blmNumTxInc(4)
                            blmNumTxExpired(5) }
      MAX-ACCESS  read-only
      STATUS      current
      DESCRIPTION
            "Concerning the current state of pending BLM-REQ
             messages, this object indicates how far along the
             sensing and report generation process is the SSA.
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
                When == 5, that indicates that the BLM-REP that
                corresponds to entry in wranIfSsaPendingBlmRepTable
                indexed by wranIfSsaNotificationPendingBlmRepIndex
                has been transmitted to the SM == to the maximum
                number of retries as indicated by
                wranIfSsaMaxBlmRepRetries."
        ::= { wranIfSsaNotificationObjectsEntry 16 }

    wranIfSsaSensingRecordStatus  OBJECT-TYPE
        SYNTAX      BITS { timeLastSensedUpdate(0),
                           timeLastPositiveUpdate(1),
                           sensingPathRssiUpdate(2),
                           wranPathRssiUpdate(3),
                           signalTypeUpdate(4) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "5-bit bitmap concerning the update of an entry in
               wranIfSsaSensingRecordTable as indexed by
               wranIfSsaNotificationSensingRecordIndex. More than
               one bit can set simultaneously."
        ::= { wranIfSsaNotificationObjectsEntry 17 }

    wranIfSsaSsfMode0Status OBJECT-TYPE
        SYNTAX      INTEGER { signalNotPresent(0),
                              signalPresent(1) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "wranIfSsaSsfNotificationMode0OutputIndex indexes an
               entry in wranIfSsaSsfMode0OutputTable that has been
               updated. For the signal type in that entry
               (=wranIfSsaSsfNotificationMode0OutputIndex-1), this
               status indicates whether a signal is
               present."
        ::= { wranIfSsaNotificationObjectsEntry 18 }

    wranIfSsaSsfMode1Status OBJECT-TYPE
        SYNTAX      INTEGER { signalNotPresent(0),
                              signalPresent(1) }
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "wranIfSsaSsfNotificationMode1OutputIndex indexes an
               entry in wranIfSsaSsfMode1OutputTable that has been
               updated. For the signal type in that entry
               (=wranIfSsaSsfNotificationMode1OutputIndex-1), this
               status indicates whether a signal is
               present."
        ::= { wranIfSsaNotificationObjectsEntry 19 }

    wranIfSsaSsfMode2Status OBJECT-TYPE
        SYNTAX      BITS { meanRssiIncrease(0),
                           meanRssiDecrease(1),
                           stdDevRssiIncrease(2),
                           stdDevRssiDecrease(3) }
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

```
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                  "4-bit bitmap that indicates what changes to Mean
                   RSSI or Standard Deviation of RSSI for a detected
                   signal whose entry in wranIfSsaSsfMode2OutputTable
                   is indexed by
                   wranIfSsaSsfNotificationMode2OutputIndex. More than
                   one bit can be set simultaneously. However if Bit0
                   is set, Bit1 cannot be set. Same relationship goes
                   for Bit2 and Bit3."
            ::= { wranIfSsaNotificationObjectsEntry 20 }

      wranIfSsaSsfWiMicMSFStatus    OBJECT-TYPE
            SYNTAX      INTEGER { crc1OnlyPassed(0),
                                  crc1And2Passed(1),
                                  crc1And2And3Passed(2) }
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                  "Given entry in wranIfSsaSsfWiMicMSFTable  as indexed
                   by wranIfSsaSsfNotificationWiMicMSFIndex, this
                   status details how much of the microphone beacon has
                   been captured and whether all relevant MSF
                   CRC verifications have passed. "
            ::= { wranIfSsaNotificationObjectsEntry 21 }

      wranIfSsaGeolocationStatus    OBJECT-TYPE
            SYNTAX      BITS { vernier1Updated(0),
                               vernier2Updated(1),
                               vernier3Updated(2),
                               tRange1Updated(3),
                               taCBPUpdated(4) }
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION
                  "5-bit bitmap indicating which aspects of the
                   Geolocation measurement have been updated. More than
                   one bit in this bitmap can be set simultaneously.
                   However, if bit1 (Vernier2 indicator) is set, than
                   Bit0 (Vernier1 indicator) and Bit1 (Vernier3
                   indicator) cannot be set.
            ::= { wranIfSsaNotificationObjectsEntry 22 }

-- wranIfSsaMibGroups: this object helps define which MIB groups are
-- available within this module and which MIB objects are part of each
-- group.

      wranIfSsaMibGroups            OBJECT IDENTIFIER
                                          ::= { wranIfSsaMib 14 }
      wranIfSsaSensingCapGroup      OBJECT IDENTIFIER
                                          ::= { wranIfSsaMibGroups 1 }
      wranIfSsaStatusGroup          OBJECT IDENTIFIER
                                          ::= { wranIfSsaMibGroups 2 }
      wranIfSsaConfigGroup          OBJECT IDENTIFIER
                                          ::= { wranIfSsaMibGroups 3 }
```


Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

```
wranIfSsaPendingBlmRepGroup   OBJECT IDENTIFIER
                                    ::= { wranIfSsaMibGroups 4 }
wranIfSsaSensingRecordGroup   OBJECT IDENTIFIER
                                    ::= { wranIfSsaMibGroups 5 }
wranIfSsaSsfMode0OutputGroup  OBJECT IDENTIFIER
                                    ::= { wranIfSsaMibGroups 6 }
wranIfSsaSsfMode1OutputGroup  OBJECT IDENTIFIER
                                    ::= { wranIfSsaMibGroups 7 }
wranIfSsaSsfMode2OutputGroup  OBJECT IDENTIFIER
                                    ::= { wranIfSsaMibGroups 8 }
wranIfSsaSsfWiMicMSFGroup     OBJECT IDENTIFIER
                                    ::= { wranIfSsaMibGroups 9 }
wranIfSsaGeolocationGroup     OBJECT IDENTIFER
                                    ::= { wranIfSsaMibGroups 10 }
wranIfSsaTrapControlGroup     OBJECT IDENTIFER
                                    ::= { wranIfSsaMibGroups 11 }
wranIfSsaNotificationsGroup   OBJECT IDENTIFIER
                                    ::= { wranIfSsaMibGroups 12 }

wranIfSsaSensingCapGroup            OBJECT-GROUP
      OBJECTS     { wranIfSsaSensingCapIndex,
                    wranIfSsaSensingThreshold,
                    wranIfSsaSensRecConfigPeriodDuration,
                    wranIfSsaSensRecNumPeriods,
                    wranIfSsaSensRecPeriodInterval }
      STATUS      current
      DESCRIPTION
            "This group represents objects related to the
             sensing capabilities supported by the SSA."
      ::= { wranIfSsaMibGroups 1 }

wranIfSsaStatusGroup          OBJECT-GROUP
      OBJECTS     { wranIfSsaStatusIndex, wranIfSsaCurrentState,
                    wranIfSsaRecentEvent, wranIfSsaRecentAction,
                    wranIfSsaIpcUpdChannelsSize,
                    wranIfSsaIpcUpdChannels, wranIfSsaCurrentT48,
                    wranIfSsaCurrentT49, wranIfSsaCurrentT50,
                    wranIfSsaIntraFrameQpCycleLength,
                    wranIfSsaIntraFrameQpCycleOffset,
                    wranIfSsaIntraFrameQpCycleFrameBitmap,
                    wranIfSsaIntraFrameQpDuration,
                    wranIfSsaInterFrameQpDuration,
                    wranIfSsaInterFrameQpOffset }
      STATUS      current
      DESCRIPTION
            "This group represents objects related to the
             current state of the SSA."
      ::= { wranIfSsaMibGroups 2 }

wranIfSsaConfigGroup          OBJECT-GROUP
      OBJECTS     { wranIfSsaConfigIndex, wranIfSsaT19,
                    wranIfSsaT29, wranIfSsaMaxBlmRepRetries,
                    wranIfSsaChAvailabilityCheckTime,
                    wranIfSmSsaNonOccupancyPeriod,
                    wranIfSsaChannelDetectionTime,
                    wranIfSsaChannelSetupTime,
```


Copyright © 2014 IEEE. All rights reserved.

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

© IEEE 2014 – All rights reserved

```
                    wranIfSsaChannelOpeningTxTime,
                    wranIfSsaChannelMoveTime,
                    wranIfSsaChannelClosingTxTime,
                    wranIfSsaMicProtectionRadius, wranIfSsaT41,
                    wranIfSsaT42, wranIfSsaT43, wranIfSsaT44,
                    wranIfSsaT45, wranIfSsaT59, wranIfSsaT47,
                    wranIfSsaT48, wranIfSsaT49, wranIfSsaT50,
                    wranIfSsaT51, wranIfSsaT53, wranIfSsaT54,
                    wranIfSsaT55 , wranIfSsaT60 }
      STATUS      current
      DESCRIPTION
            "This group represents objects related to the
             configuration of the SSA."
      ::= { wranIfSsaMibGroups 3 }

wranIfSsaPendingBlmRepGroup         OBJECT-GROUP
      OBJECTS     { wranIfSsaPendingBlmRepIndex,
                    wranIfSsaPendingBlmReqTransactionId,
                    wranIfSsaPendingBlmReqMsgSize,
                    wranIfSsaPendingBlmReqMsg,
                    wranIfSsaPendingBlmRspSent,
                    wranIfSsaPendingBlmRepGenerated,
                    wranIfSsaPendingBlmRepMsgSize,
                    wranIfSsaPendingBlmRepMsg,
                    wranIfSsaPendingBlmRepSent,
                    wranIfSsaPendingBlmRepAck,
                    wranIfSsaPendingBlmRepNumTx }
      STATUS      current
      DESCRIPTION
            "This group represents objects related to the
             pending BLM transactions and sensing reports
             (BLM-REP) that are to be generated."
      ::= { wranIfSsaMibGroups 4 }

wranIfSsaSensingRecordGroup         OBJECT-GROUP
      OBJECTS     { wranIfSsaSensingRecordIndex,
                    wranIfSsaSensingChannel,
                    wranIfSsaTimeLastSensing,
                    wranIfSsaTimeLastPositive,
                    wranIfSsaSensingPathRssi,
                    wranIfSsaWranPathRssi,
                    wranIfSsaSignalType,
                    wranIfSsaWranServiceAdvertisement,
                    wranIfSsaIdcUpdIndication }
      STATUS      current
      DESCRIPTION
            "This group represents objects related to the
             sensing status of each channel."
      ::= { wranIfSsaMibGroups 5 }

wranIfSsaSsfMode0OutputGroup        OBJECT-GROUP
      OBJECTS     { wranIfSsaSsfMode0OutputIndex,
                    wranIfSsaSsfMode0SignalType,
                    wranIfSsaSsfMode0SignalPresent }
      STATUS      current
      DESCRIPTION
```

STANDARDSISO.COM : Click to view the full PDF of ISO/IEC/IEEE 8802-22:2015/AMD1:2017

Copyright © 2014 IEEE. All rights reserved.

© IEEE 2014 – All rights reserved