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Information technology — Rich media user interfaces —

Part 3: Conformance and reference software

AMENDMENT 1: Conformance and reference software for widget extension and AUI

Technologies de l'information — Interfaces d'utilisateur au support riche —

Partie 3: Conformité et logiciel de référence

AMENDEMENT 1: Conformité et logiciel de référence pour l'extension widget et l'AUI

Reference number
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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword — Supplementary information.

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

Information technology — Rich media user interfaces —

Part 3:
Conformance and reference software

AMENDMENT 1: Conformance and reference software for widget extension and AUI

Replace Clause 1 with the following:

1 Scope

This part of ISO/IEC 23007 specifies how to test whether data and decoders meet requirements specified by ISO/IEC 23007. In this part of ISO/IEC 23007, widget generators are not addressed specifically. A generator may be said to be an ISO/IEC 23007 generator if it generates widgets compliant with the syntactic and semantic requirements specified in ISO/IEC 23007-1.

Procedures are described for testing conformance of widgets and widget managers to the requirements defined in ISO/IEC 23007-1 and conformance of xml instances to the requirements defined in ISO/IEC 23007-2.

In Clause 2, add the following:

ISO/IEC 23007-2, *Information technology — Rich media user interfaces — Part 2: Advanced user interaction interface*

Move content of Clause 5 Conformance of Widget Managers to 5.1 Non normative behaviour.

Add 5.2:

5.2 Normative behaviour

Conformant widget managers implement a service of type "`urn:mpeg:mpeg-u:standard-service:widget-manager`". Conformance testing of this feature does not require additional test sequences: any test sequence from clause 6 below can be used.

The testing procedure of the "startWidget" message is:

— launch a widget manager A on a device connected to the network;

— launch a widget manager B on the same device or another device connected to the network;

— start any widget in widget manager A;

— in the widget manager A user interface, trigger sending of the startWidget message: this step may be decomposed into a choice of which widget to send, a choice of which visible widget managers to send the widget to, where at least widget manager B should be present; there should be a way to choose widget manager B and a final validation.

Upon completion of the procedure, the transferred widget is executing in widget manager B and has disappeared from widget manager A; if the widget has an execution state, the execution state has been transferred with the widget.

The testing procedure of the "listWidgets" and "getWidget" messages is:

— launch a widget manager A on a device connected to the network;

— launch a widget manager B on the same device or another device connected to the network;

— start any widget C in widget manager A;

— in the widget manager B user interface, trigger sending of the listWidgets message: this step may be decomposed into:

  — showing a choice of visible widget managers, which should include widget manager A, and provide a way to choose widget manager A and validate;

  — then the response of widget manager A should be presented as the list of available widgets currently executing on widget manager A, which should include the widget C;

  — a way to select widget C and to validate should be provided.

— upon selection of widget C, a "getWidget" message is sent by widget manager B to widget manager A; widget manager A then prepares widget C for transfer by creating its execution context, powering it down and making it available to widget manager B.

— upon reception of the reply from widget manager A, widget manager B loads the widget C and its execution context, and runs widget C.

Upon completion of the action, widget C runs in widget manager B instead of widget manager A, with the same execution context.

Add to 6.2:

6.2.11 cmain4

This widget uses requestMigrationTargets to find another widget manager. If multiples are present, it activates its component and then applies migrateComponent to it, sending it to the first widget manager in the list returned by requestMigrationTargets.

Directory: widgets/cmain4

In 7.2.4, replace download URL with:

http://download.tsi.telecom-paristech.fr/gpac/MPEG-U/

Add Clause 8:

8 Reference software of AUI

8.1 Conformance of AUI

Since ISO/IEC 23007-2 provides a xml schema which defines a set of data formats for advanced user interaction devices, the reference software is responsible to validate xml instances against the xml schema in terms of conformance. Hence, this clause describes the reference software of ISO/IEC 23007-2 which consists of two parts. The first part provides an xml parsing function which receives an xml instance and returns a validated result with appropriate errors. The other part is an application to generate xml instances from user's inputs.

8.2 XML parser for AUI

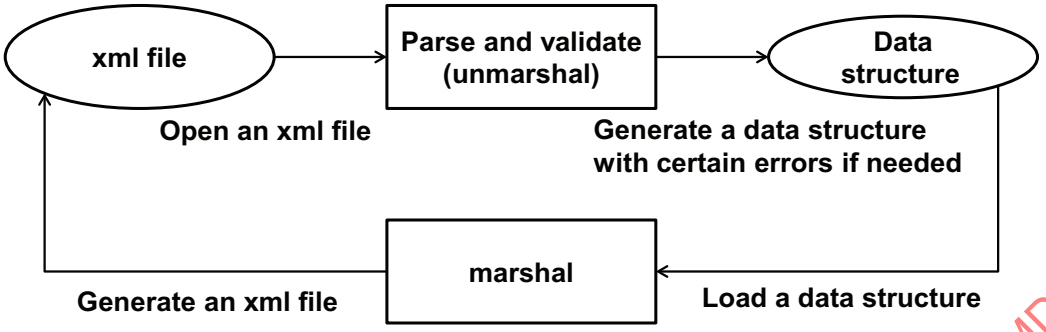

Figure — AMD1.1 — Process of XML parser for AUI

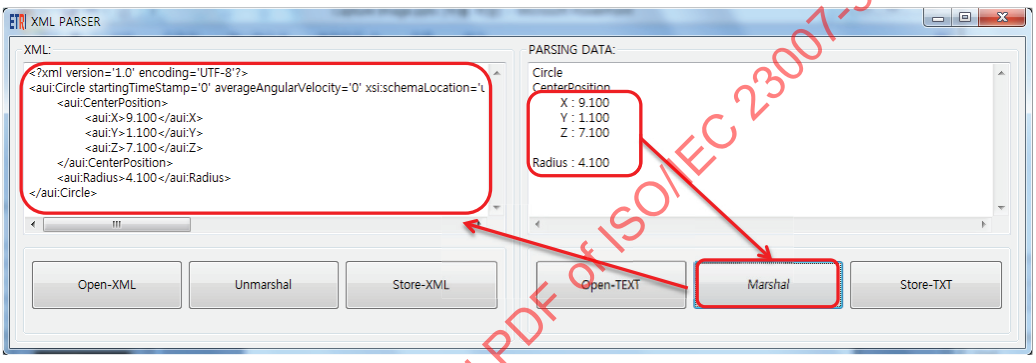

Figure — AMD1.2 — Screen shot of XML parser for AUI

Figure AMD1.1 shows a processing routine of the XML parser part of the reference software and Figure AMD1.2 shows a screen shot of the XML parser. At first, a user tries to open an xml file stored in the local storage and the XML parser examines the loaded xml file with the contained schema file. Then the XML parser shows the results as a data structure with contained values. If the loaded xml file has some errors, the xml parser provides appropriate error messages. On the other hand, a user can change the value of the data structure and user requests to generate the modified xml file.

8.3 AUI Application

This subclause introduces a simple application which utilizes a set of data formats from ISO/IEC 23007-2, because this application helps to understand how AUI is used with real implementations. Figure AMD1.3 shows added components to the XML parser for AUI. A user selects an expecting AUI pattern and gives several mouse clicks. The AUI application translates the received inputs to an appropriate AUI data structure which is already operated to the XML parser.

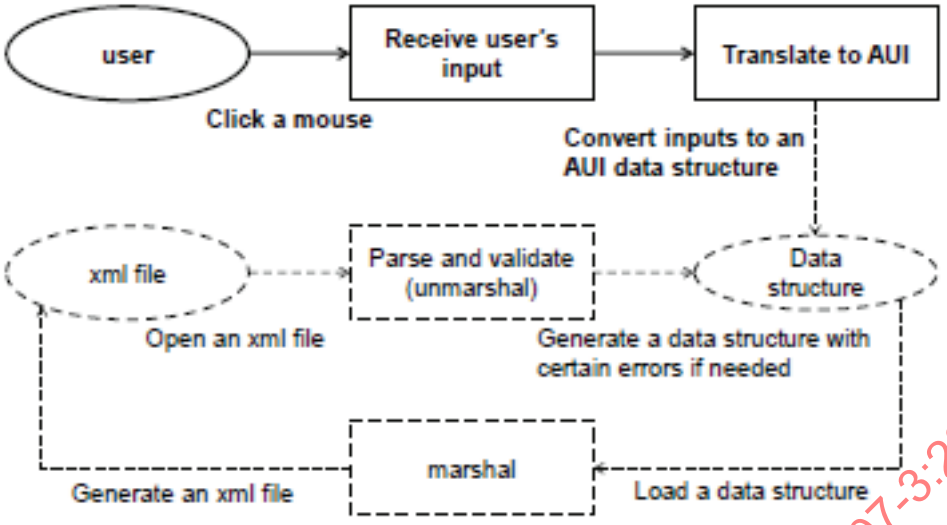

Figure — AMD1.3 — Process of a simple AUI application

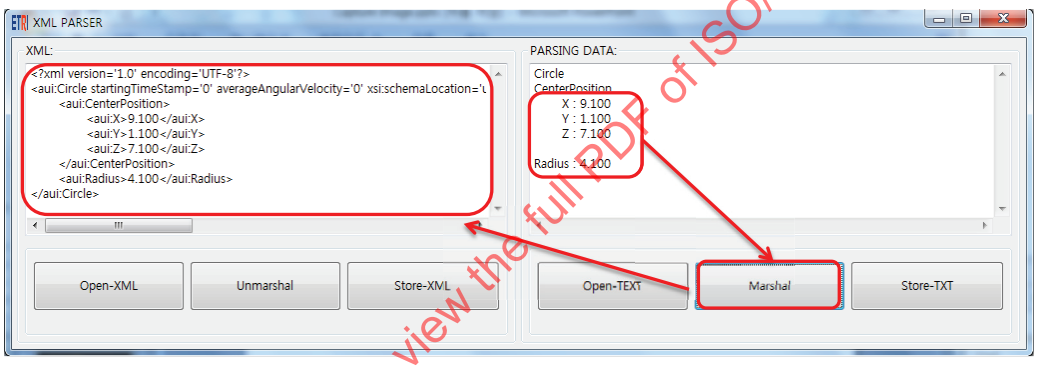

Figure — AMD1.4 — Screen shot of an AUI application

Figure AMD1.4 shows an example of the simple AUI application. A user already selected a line pattern with two mouse clicks. The detected two points are converted to a line data structure and the XML parser generates an xml file which contains the line pattern with the two position values.

8.4 Operating environment

The reference software of ISO/IEC 23007-2 is implemented based on SWT (Standard Widget Toolkit) and JAXB (Java Architecture for XML Binding). SWT provides a graphic framework to build a dialog box while JAXB helps a java application to access XML documents. For convenience, the references software is managed by ISO/IEC JTC 1/SC 29/WG 11 which provides two types of the reference software: a binary for the Windows platform and a set of java sources. The reference software have been developed and tested on the Windows 7 (32bit and 64bit) platforms.

Replace electronic attachment with the one attached.