
**Intelligent transport systems —
Communications access for land mobiles
(CALM) — Data retention for law
enforcement**

*Systemes intelligents de transport — Accès aux communications des
services mobiles terrestres (CALM) — Conservation des données pour
application de la loi*

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Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
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Foreword

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In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

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Intelligent transport systems — Communications access for land mobiles (CALM) — Data retention for law enforcement

1 Scope

This Technical Report reviews the intelligent transport systems (ITS) landscape and the provisions of data retention (DR) to ITS deployments. In particular, it considers the communications access for land mobiles (CALM) environment and the services offered in the IPv6 domain served by CALM and ITS in general.

NOTE The analysis in this Technical Report has been made with respect to the European Data Retention Directive and applies in general.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Directive 2006/24/EC of the European Parliament and of the Council of 15 March 2006 on the retention of data generated or processed in connection with the provision of publicly available electronic communications services or of public communications networks and amending Directive 2002/58/EC

3 Terms and definitions

For the purposes of this document, the terms and definitions given in Directive 2006/24/EC and the following apply.

3.1

retention storage

functional and physical means which serve as the repository where all data to be retained are stored, enforcing all required security measures

3.2

supervisory authority

public authority which has been authorized by national legislation or regulation to act as the supervisor for the data retention (DR) regulations and procedures in accordance with Directive 2006/24/EC

3.3

target

legal entity for which data retrieval is requested from the communications service provider (CSP), through the data retention (DR) system

4 Abbreviated terms

CSP	Communications Service Provider
DR	Data Retention
DSL	Digital Subscriber Line
ECN	Electronic Communication Network
ECS	Electronic Communication Service
IMEI	International Mobile Equipment Identity
IMSI	International Mobile Subscriber Identity
ITS	Intelligent Transport Systems
LEA	Law Enforcement Agency
LEMF	Law Enforcement Monitoring Facility

5 Overview

The act of data retention (DR) is primarily to support the actions of law enforcement agencies acting in support of investigation of criminal and terrorist offences, and for support of general forensic investigation resulting from criminal and terrorist offences. In addition, access to retained data may be used in societal supporting activities, such as the tracking of missing persons.

The EU directive on data retention (DR), Directive 2006/24/EC, defines the set of data to be retained and the conditions under which the retained data is maintained by communications service providers (CSPs) operating within the EU. Within the EU, CSPs are required to retain data sufficient to identify the form of communication and the communicating parties of all complying communications for all users of the CSP's facilities (irrespective of there being a direct relationship between the user and the CSP) for a pre-set period of time, the retention period, after which the data should be deleted. During the retention period the retained data of a subscriber can be made available to authorized law enforcement agencies (LEAs).

As the data may be required to be used in legal processes there is an implicit requirement to maintain and to verify the integrity, validity, and quality of the retained data, that does not compromise the privacy of subscribers and their data. CSPs are also required to report any failure of the DR system.

Data retention applies to all CSPs.

A CSP should provide mechanisms to ensure the retention and handover of signalling of specific CSP users if required to by a lawful authority.

6 Data that can be retained by CSPs

6.1 Data identified in EU Directive 2006/24/EC

Article 5 of the directive identifies a number of categories to be retained. It is only data that falls into these categories that are considered by this report. Table 1 identifies how CALM/ITS systems may meet the requirements established by the directive.

It is important to note that the CALM form of ITS is a data only network.

Table 1 — Retained data identified in Directive 2006/24/EC and provision in CALM/ITS

Class of data	Class of network	Retained data	Provision in CALM/ITS
Data necessary to trace and identify the source of a communication	Fixed network telephony and mobile telephony	The calling telephone number	N/a
		The name and address of the subscriber or registered user	N/a
	Internet access, Internet e-mail and Internet telephony	The user ID(s) allocated	May be available from the CALM CSP Station-ID
		The user ID and telephone number allocated to any communication entering the public telephone network	N/a May be available from VoIP provider
		The name and address of the subscriber or registered user to whom an Internet Protocol (IP) address, user ID or telephone number was allocated at the time of the communication	N/a
Data necessary to identify the destination of a communication	Fixed network telephony and mobile telephony	The number(s) dialled (the telephone number(s) called), and, in cases involving supplementary services such as call forwarding or call transfer, the number or numbers to which the call is routed	N/a
		The name(s) and address(es) of the subscriber(s) or registered user(s)	N/a
	Internet e-mail and Internet telephony	The user ID or telephone number of the intended recipient(s) of an Internet telephony call	N/a
		The name(s) and address(es) of the subscriber(s) or registered user(s) and user ID of the intended recipient of the communication	May be available from the CALM CSP
Data necessary to identify the date, time and duration of a communication	Fixed network telephony and mobile telephony	The date and time of the start and end of the communication	N/a
	Internet access, Internet e-mail and Internet telephony	The date and time of the log-in and log-off of the Internet access service, based on a certain time zone, together with the IP address, whether dynamic or static, allocated by the Internet access service provider to a communication, and the user ID of the subscriber or registered user	May be available from IPv6 host configuration process
		The date and time of the log-in and log-off of the Internet e-mail service or Internet telephony service, based on a certain time zone	May be available from CSP registration process
Data necessary to identify the type of communication	Fixed network telephony and mobile telephony	The telephone service used	N/a
	Internet e-mail and Internet telephony	The Internet service used	May be available in IPv6 header (protocol field)

Table 1 (continued)

Class of data	Class of network	Retained data	Provision in CALM/ITS
Data necessary to identify users' communication equipment or what purports to be their equipment	Fixed network telephony	The calling and called telephone numbers	N/a
	Mobile telephony	The calling and called telephone numbers	May be available from the CALM CSP
		The International Mobile Subscriber Identity (IMSI) of the calling party	Given in CALM Cellular registration process
		The International Mobile Equipment Identity (IMEI) of the calling party	May form part of the user subscriber data but not exchanged over the AI
		The IMSI of the called party	Given in CALM Cellular registration process but only where the called party is on the same CALM CSP
		The IMEI of the called party	May form part of the user subscriber data but not exchanged over the AI
		In the case of pre-paid anonymous services, the date and time of the initial activation of the service and the location label (Cell ID) from which the service was activated	Available at registration with station-Id
	Internet access, Internet e-mail and Internet telephony	The calling telephone number for dial-up access	N/a
		The digital subscriber line (DSL) or other end point of the originator of the communication	N/a
	Data necessary to identify the location of mobile communication equipment	The location label (Cell ID) at the start of the communication	Station-Id (infrastructure)
Data identifying the geographic location of cells by reference to their location labels (Cell ID) during the period for which communications data are retained		Should be available from the CALM CSP	

6.2 Observations on CALM/ITS adherence to Directive 2006/24/EC

CALM provides IPv6 connectivity for a number of wireless based data link technologies by means of a general purpose abstraction layer. In addition CALM provides an option that offers link connectivity without IP connectivity. For consideration of CALM/ITS against Directive 2006/24/EC the characteristics of CALM/ITS as described in available standards are that CALM does not currently define a subscriber management model, therefore from the existing CALM/ITS standards it is not clear how a CALM/ITS environment can comply with any requirement to give data such as name and address of the subscriber or registered user to whom an Internet Protocol (IP) address, user ID or telephone number was allocated at the time of the communication. However if the underlying communication uses the facilities of a Public Land Mobile Network (PLMN) such as Satellite, 2G (GSM, CDMAone) 3G (UMTS, CDMA2000), or any emerging technology such as WiMax, the CSP operating the PLMN may be able to provide such data. Several new access media have been defined within the CALM family of standards, but the standards do not yet define how such media will be integrated into communication systems. Inevitably these systems will be operated by a CSP, who will be required to provide DR and support LI.

Additionally, although the CALM standards do not explicitly define a "home agent" which is required to enable routing of communications to a mobile node this is defined for the underlying mobility services of the Internet Protocol and other Public Land Mobile Services. The provider of a "home agent" service may be classified as a CSP and the obligations outlined in 6.1 apply.