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ETSI Standard

Data-Over-Cable Systems;
Part 1: General

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650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Contents

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Foreword

This ETSI Standard (ES) has been produced by Joint Technical Committee (JTC) Broadcast of the European Broadcasting Union (EBU), Comité Européen de Normalisation ELECtrotechnique (CENELEC) and the European Telecommunications Standards Institute (ETSI).

NOTE: The EBU/ETSI JTC Broadcast was established in 1990 to co-ordinate the drafting of standards in the specific field of broadcasting and related fields. Since 1995 the JTC Broadcast became a tripartite body by including in the Memorandum of Understanding also CENELEC, which is responsible for the standardization of radio and television receivers. The EBU is a professional association of broadcasting organizations whose work includes the co-ordination of its members' activities in the technical, legal, programme-making and programme-exchange domains. The EBU has active members in about 60 countries in the European broadcasting area; its headquarters is in Geneva.

European Broadcasting Union
CH-1218 GRAND SACONNEX (Geneva)
Switzerland
Tel: +41 22 717 21 11
Fax: +41 22 717 24 81

The present document is part 1 of a multi-part deliverable covering Data-Over-Cable systems, as identified below:

Part 1: "General";

Part 2: "Radio Frequency Interface Specification";

Part 3: "Baseline Privacy Plus Interface Specification".

1 Scope

The present document is a listing of the parts comprising ES 201 488.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

[ES 201 488-2] ETSI ES 201 488-2: "Data-Over-Cable Systems; Part 2: Radio Frequency Interface Specification".

[ES 201 488-3] ETSI ES 201 488-3: "Data-Over-Cable Systems; Part 3: Baseline Privacy Plus Interface Specification".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

access node: layer two termination device that terminates the network end of a Data-Over-Cable System

NOTE: It is also called an INA or a CMTS.

cable modem: layer two termination device that terminates the customer end of a Data-Over-Cable System

IPCablecom: ETSI deliverables including an architecture and a series of specifications that enable the delivery of real time services (such as telephony) over the cable television networks using cable modems

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

BPI+	Baseline Privacy Plus Interface
CM	Cable Modem
CMTS	Cable Modem Termination System
DOCS	Data-Over-Cable Systems
HFC	Hybrid Fibre Coax
INA	Interactive Network Adapter
IP	Internet Protocol
MAC	Media Access Control
QoS	Quality of Service

4 Overview of the multi-part Technical Specification

4.1 Part 1: General

The present document.

4.2 Part 2: Radio Frequency Interface

[ES 201 488-2] defines the radio-frequency interface specifications for high-speed data-over-cable systems. The intended service will allow transparent bi-directional transfer of Internet Protocol (IP) traffic, between the cable system headend and customer locations, over an all-coaxial or hybrid-fibre/coax (HFC) cable network. The transmission path over the cable system is realized at the headend by a Cable Modem Termination System (CMTS), and at each customer location by a Cable Modem (CM).

There are differences in the cable spectrum planning practices adopted for different networks in the world. Therefore two options for physical layer technology are included, which have equal priority and are not required to be inter-operable. One technology option is based on the downstream multi-programme television distribution that is deployed in North America using 6 MHz channelling, and supports upstream transmission in the region 5-42 MHz. The other technology option is based on the corresponding European multi-programme television distribution and supports upstream in the region 5-65 MHz.

4.3 Part 3: Baseline Privacy Plus Interface Specification

[ES 201 488-3], the Baseline Privacy Plus Interface (BPI+), describes MAC layer security services for Data-Over-Cable Systems (DOCS) CMTS - CM communications. BPI+ security goals are twofold:

- provide cable modem users with data privacy across the cable network, and
- provide MSOs with service protection; i.e., prevent unauthorized users from gaining access to the network's RF MAC services.

BPI+ provides a level of data privacy across the shared medium cable network equal to or better than that provided by dedicated line network access services (analogue modems or digital subscriber lines).

The protected radio frequency MAC data communications services fall into three categories:

- best-effort, high-speed, IP data services;
- QoS (e.g., constant bit rate) data services; and
- IP multicast group services.

Annex A (informative): Bibliography

- ETSI TS 101 909-1: "Access and Terminals (AT); Digital Broadband Cable Access to the Public Telecommunications Network; IP Multimedia Time Critical Services; Part 1: General".

History

Document history		
V1.1.1	November 2000	Publication as ES 201 488
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