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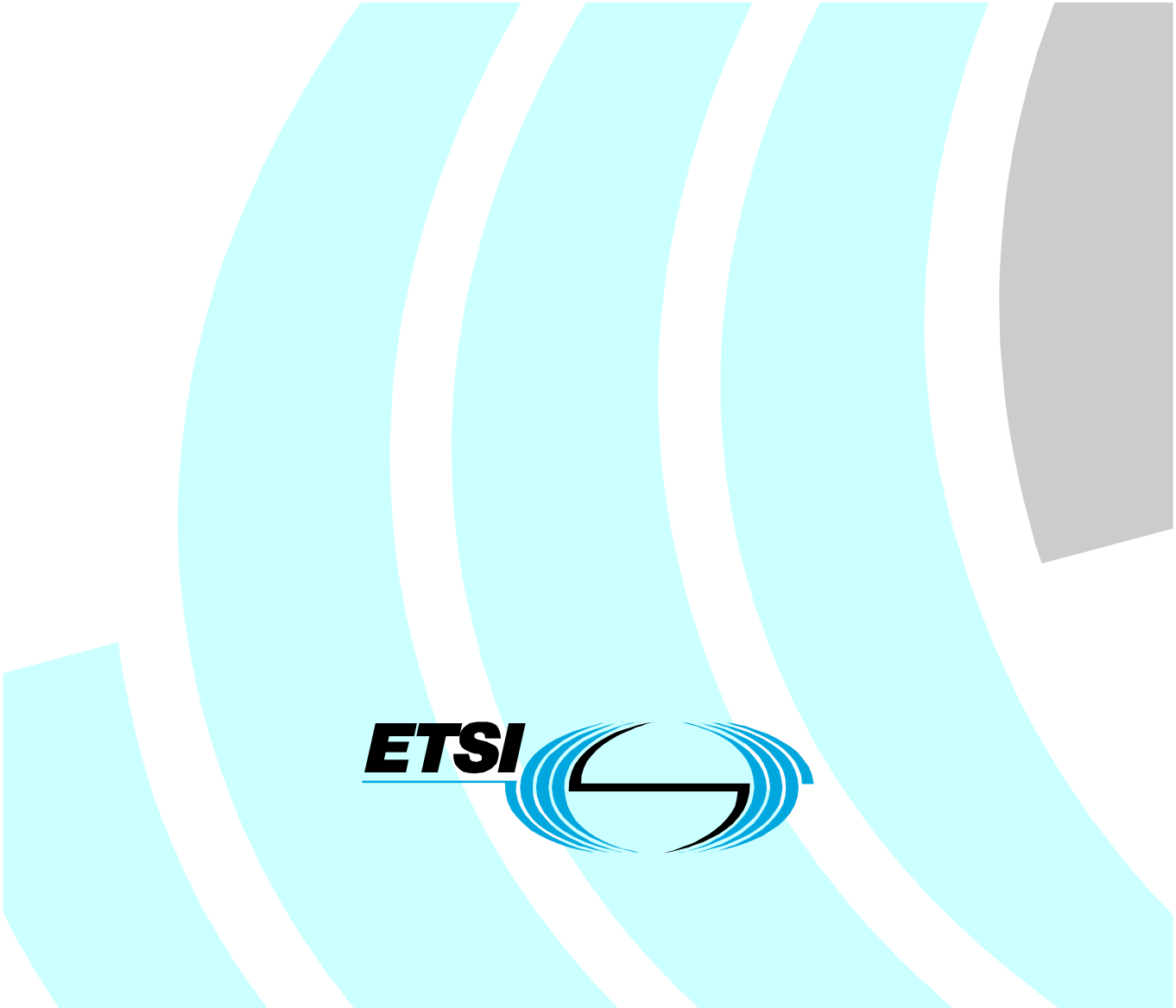
ETSI Standard

Access and Terminals (AT); Data Over Cable Systems; Part 1: General



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Contents

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Foreword

This ETSI Standard (ES) has been produced by ETSI Technical Committee Access and Terminals (AT), and is now submitted for the ETSI standards Membership Approval Procedure.

NOTE: An earlier version of the present document was produced by JTC Broadcast.

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 part 1, a listing of the parts comprising ES 201 488 (see bibliography).

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.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

[1] ETSI ES 201 488-2: "Access and Terminals (AT); Data Over Cable Systems; Part 2: Radio Frequency Interface Specification".

[2] ETSI ES 201 488-3: "Access and Terminals (AT); 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
MSO	Multiple System Operator
QoS	Quality of Service

4 Overview of the multi-part ETSI Standard

4.1 Part 1: General

The present document.

4.2 Part 2: Radio Frequency Interface Specification

ES 201 488-2 [1] 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 MHz to 42 MHz. The other technology option is based on the corresponding European multi-programme television distribution and supports upstream in the region 5 MHz to 65 MHz.

4.3 Part 3: Baseline Privacy Plus Interface Specification

ES 201 488-3 [2], 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".
- ETSI ES 201 488: "Data-Over-Cable Service Interface Specifications Radio Frequency Interface Specification".

History

Document history		
V1.2.1	January 2003	Publication
V1.2.2	August 2003	Membership Approval Procedure MV 20031010: 2003-08-12 to 2003-10-10