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Technical Specification

Access and Terminals, Transmission and Multiplexing (ATTM); Third Generation Transmission Systems for Interactive Cable Television Services - IP Cable Modems; Part 1: General



Reference

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Access, Terminals, Transmission and Multiplexing (ATTM).

The present document is part 1 of a multi-part deliverable covering Third Generation Transmission Systems for Interactive Cable Television Services - IP Cable Modems, as identified below:

- Part 1: "General";**
- Part 2: "Physical Layer; [ITU-T Recommendation J.222.1 (07/2007), modified]";
- Part 3: "Downstream Interface; [ITU-T Recommendation J.210 (11/2006), modified]";
- Part 4: "MAC and Upper Layer Protocols; [ITU-T Recommendation J.222.2 (07/2007), modified]";
- Part 5: "Security Services; [ITU-T Recommendation J.222.3 (07/2007), modified]".

Introduction

This European Standard (Cable DOCSIS 3.0 Network series) has been produced by ETSI Access, Terminals, Transmission and Multiplexing Technical Committee (ATTM), Cable Access Network sub-group.

1 Scope

The present document is an overview of the third generation of transmission systems for interactive cable television systems. It identifies the four components specifying the physical layer interface, downstream interface, the MAC and upper layer protocols interfaces and the security services.

The present document presents an overview of a series of specifications for the third generation of high-speed Data-Over-Cable Systems Interface Specifications (DOCSIS®) applicable to the European region.

They were developed for the benefit of the cable industry, including contributions by operators and vendors from, Europe, North America and other regions.

The source material for this specification was provided by the ITU-T Recommendations J.222 [7] series and J.210 [8] for which the most recent version can be found at <http://www.itu.int/ITU-T/>.

2 References

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.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
 - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
 - for informative references.

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2.1 Normative references

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

- [1] ETSI TS 102 639-2: "Access and Terminals, Transmission and Multiplexing (ATTM); Third Generation Transmission Systems for Interactive Cable Television Services - IP Cable Modems; Part 2: Physical Layer [ITU-T Recommendation J.222.1 (07/2007), modified]".
- [2] ETSI TS 102 639-3: "Access and Terminals, Transmission and Multiplexing (ATTM); Third Generation Transmission Systems for Interactive Cable Television Services - IP Cable Modems; Part 3: Downstream Interface [ITU-T Recommendation J.210 (11/2006), modified]".
- [3] ETSI TS 102 639-4: "Access and Terminals, Transmission and Multiplexing (ATTM); Third Generation Transmission Systems for Interactive Cable Television Services - IP Cable Modems; Part 4: MAC and Upper Layer Protocols ITU-T Recommendation J.222.2 (07/2007), modified]".
- [4] ETSI TS 102 639-5: "Access and Terminals, Transmission and Multiplexing (ATTM); Third Generation Transmission Systems for Interactive Cable Television Services - IP Cable Modems; Part 5: Security Services [ITU-T Recommendation J.222.3 (07/2007), modified]".
- [5] ETSI ES 201 488: "Access and Terminals (AT); Data Over Cable Systems; Part 1: General".

- [6] ETSI ES 202 488: "Second Generation Transmission Systems for Interactive Cable Television Services - IP Cable Modems".
- [7] ITU-T Recommendation J.222: "Third-generation transmission systems for interactive cable television services - IP cable modems".
- [8] ITU-T Recommendation J.210: "Downstream RF Interface for Cable Modem Termination Systems".

2.2 Informative references

The following referenced documents are not essential to the use of the present document but they assist the user with regard to a particular subject area. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Not applicable.

3 Definitions and abbreviations

3.1 Definitions

Void.

3.3 Abbreviations

Void.

4 Overview of the third-generation transmission system

The series of ETSI specifications that define the third generation of high-speed data-over-cable systems, identifies the requirements defining the physical layer interface is given by TS 102 639-2 [1], the MAC and upper layer protocol interfaces is defined by TS 102 639-3 [2] and the security services is defined by TS 102 639-5 [4]. Additionally, TS 102 639-5 [4] defines the downstream physical layer transmission specifications, which are applicable to the third generation of high-speed data-over-cable systems. The third-generation transmission system introduces a number of new features that build upon what was present in previous versions of ES 201 488 [5] and ES 202 488 [6]. A summary of the series of ETSI standards is provided in Table 1. All parts of the present multipart deliverable are required to implement the third-generation transmission system for interactive cable television services.

Table 1: Series of specifications for the third-generation transmission systems

Designation	Title
TS 102 639-2 [1]	Physical layer
TS 102 639-3 [2]	Downstream Interface
TS 102 639-4 [3]	MAC and Upper Layer Protocols
TS 102 639-5 [4]	Security services

History

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