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## Consumer terminal function for access to IPTV and open internet multimedia services – Part 7: Authentication, content protection and service protection

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## FOREWORD

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International Standard IEC 62766 has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment.

The text of this standard is based on the following documents:

| CDV | Report on voting |
|---|---|
| 100/2551/CDV | 100/2665/RVC |

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62766 series, published under the general title *Consumer terminal function for access to IPTV and open Internet multimedia services*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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# INTRODUCTION

The IEC 62766 series is based on a series of specifications that was originally developed by the OPEN IPTV FORUM (OIPF). They specify the user-to-network interface (UNI) for consumer terminals to access IPTV and open internet multimedia services over managed or non-managed networks as defined by OIPF.

# CONSUMER TERMINAL FUNCTION FOR ACCESS TO IPTV AND OPEN INTERNET MULTIMEDIA SERVICES –

# Part 7: Authentication, content protection and service protection

## 1 Scope

This part of IEC 62766 specifies functions for content protection, service protection, service access protection, user identification, user authentication, and user authorisation.

The following clauses contain features for which the criteria that determine under which circumstances these features are implemented are out of the scope of the present document or contain conditional normative statements referring to other parts of IEC 62766:

- 4.2 Terminal-centric approach
- 4.2.5 Protected file formats
- 4.2.6 Protection of MPEG-2 transport streams
- 4.3.4 CI+ based gateway
- 4.3.4.7 Protected streaming and file formats
- 4.3.4.8 Personal video recorder
- 4.3.4.9 Time shifting
- 4.3.5 DTCP-IP based gateway
- 4.3.5.6 Protected streaming and file formats
- 5.4.4 HTTP digest authentication using IMS gateway
- 5.4.5 GBA authentication using IMS gateway

NOTE GBA authentication can be achieved using either the mechanism in 5.4.5 GBA authentication using IMS gateway or the, more general, mechanism in 5.4.4 HTTP digest authentication using IMS gateway. 5.4.4 allows the use of different authentication mechanisms in a way that is transparent to the OITF, including possible future authentication mechanisms, and should preferably be used. It is expected that 5.4.5 GBA authentication using IMS gateway will be deprecated and removed in future versions of this specification.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

IEC 62455:2010, *Internet protocol (IP) and transport stream (TS) based service access*

IEC 62766-1:2017, *Consumer terminal function for access to IPTV and open Internet multimedia services – Part 1:General*

IEC 62766-2-1:2016, *Consumer terminal function for access to IPTV and open Internet multimedia services – Part 2-1: Media Formats*

IEC 62766-3:2016, *Consumer terminal function for access to IPTV and open Internet multimedia services – Part 3: Content Metadata*

IEC 62766-4-1:2017, *Consumer terminal function for access to IPTV and open Internet multimedia services – Part 4-1: Protocols*

IEC 62766-5-1:2017, *Consumer terminal function for access to IPTV and open Internet multimedia services – Part 5-1: Declarative Application Environment*

ISO/IEC 13818-1, *Information technology – Generic coding of moving pictures and associated audio information: Systems*

3GPP TS 24.109, *Bootstrapping interface (Ub) and network application function interface (Ua); Protocol details*

3GPP TS 24.229, *IP Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP) Stage 3 (Release 8)*

3GPP TS 33.203, *Technical Specification Group Services and System Aspects; 3G security; Access security for IP-based services (Release 8)*

3GPP TS 33.220, *Generic Authentication Architecture (GAA); Generic bootstrapping architecture*

ATIS-0800006, *IIF Default Scrambling Algorithm (IDSA)*

Consumer Electronics Assoviation CEA-2014-A (including the August 2008 Errata), *Web-based Protocol Framework for Remote User Interface on UPnP Networks and the Internet (Web4CE)*

CI Plus LLP, CI Plus Specification V1.3 (2011-01), *Content Security Extensions to the Common Interface*, available from:
http://www.CI Plus.com/data/CI Plus_specification_V1.3.1.pdf

DTLA, DTCP *Adopter Agreement, Digital Transmission Protection License Agreement*, available from:
http://www.dtcp.com/agreements.aspx

ETSI ETR 289, *Digital Video Broadcasting (DVB); Support for the use of scrambling and Conditional Access (CA) within digital broadcasting systems*

ETSI EN 50221, *Common Interface Specification for Conditional Access and other Digital Video Broadcasting Decoder Applications*

ETSI TS 101 699 V1.1.1, *Digital Video Broadcasting (DVB); Extensions to the Common Interface Specification*

ETSI TS 103 197 V1.5.1, *Digital Video Broadcasting (DVB); Head-end implementation of DVB SimulCrypt*

ETSI EN 300 468 V1.13.1, *Digital Video Broadcasting (DVB); Specification for Service Information (SI) in DVB systems*

ETSI TS 102 770 V1.1.1, *Digital Video Broadcasting (DVB); System Renewability Messages (SRM) in DVB Systems*

Marlin Developer Community, *Marlin Broadband Transport Stream Specification (BBTS), Version 1.0*, available from:
http://www.marlin-community.com/develop/downloads

Marlin Developer Community, *Marlin – Broadband Network Service Profile Specification (BNSP), Version 1.1*, available from:
http://www.marlin-community.com/develop/downloads

Marlin Developer Community, *Marlin – File Formats Specification (FF), Version 1.1*, available from: http://www.marlin-community.com/develop/downloads

Marlin Developer Community, *Marlin –Simple Secure Streaming Specification (MS3), Version 1.1.1*, available from:
http://www.marlin-community.com/develop/downloads

Marlin Developer Community, *OMArlin Specification, Version 1.0*, available from:
http://www.marlin-community.com/develop/downloads

IETF RFC 2109, *HTTP State Management Mechanism*

IETF RFC 2617, *HTTP Authentication: Basic and Digest Access Authentication*

IETF RFC 5746, *Transport Layer Security (TLS) Renegotiation Indication Extension*

OASIS, *Assertions and Protocols for the OASIS Security Markup Language (SAML) V2.0*, available from:
https://www.oasis-open.org/standards#samlv2.0

OASIS, *Profiles for the OASIS Security Assertion Markup Language (SAML) V2.0*, available from:
https://www.oasis-open.org/standards#samlv2.0