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SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS

IPTV multimedia services and applications for IPTV –
IPTV metadata

Multimedia content provisioning interface for IPTV services

Recommendation ITU-T H.752



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Recommendation ITU-T H.752

Multimedia content provisioning interface for IPTV services

Summary

Recommendation ITU-T H.752 describes the metadata elements that are necessary for multimedia content provisioning, such as content description, distribution conditions and the usage log report. Compared to the high-level specification of metadata for Internet protocol television (IPTV) services defined in Recommendation ITU-T H.750, multimedia content provisioning interface for IPTV services focuses on the metadata elements to be used at the interface between content providers and IPTV service providers. This Recommendation specifies the requirement for audio and video (AV) content metadata provisioning, AV content metadata elements and data structure, procedure of exchanges for content between the content providers and IPTV service providers.

History

Edition	Recommendation	Approval	Study Group	Unique ID*
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Keywords

Content description, content provider, IPTV services, metadata, service provider, VoD.

* To access the Recommendation, type the URL <http://handle.itu.int/> in the address field of your web browser, followed by the Recommendation's unique ID. For example, <http://handle.itu.int/11.1002/1000/11830-en>.

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The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

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Recommendation ITU-T H.752

Multimedia content provisioning interface for IPTV services

1 Scope

This Recommendation identifies the metadata elements which are necessary for multimedia content provisioning. Two types of audio and video (AV) content metadata are content catalogue metadata and business metadata. Content catalogue metadata describes AV content description and the rights holder of the content. Business metadata describes basic business description and the usage log report.

This Recommendation describes the messages and procedures of exchanges for content between content providers and service providers in the two communication modes (push mode and pull mode).

[ITU-T H.750] already identifies essential elements and attributes concerning content. This Recommendation focuses on the content metadata to be used at the interface between content providers and Internet protocol television (IPTV) service providers.

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

- | | |
|-----------------------|---|
| [ITU-T H.720] | Recommendation ITU-T H.720 (2008), <i>Overview of IPTV terminal devices and end systems</i> . |
| [ITU-T H.750] | Recommendation ITU-T H.750 (2008), <i>High-level specification of metadata for IPTV services</i> . |
| [ITU-T Y.1910] | Recommendation ITU-T Y.1910 (2008), <i>IPTV functional architecture</i> . |
| [ETSI TS 102 471] | ETSI TS 102 471 V1.4.1 (2010), <i>Digital Video Broadcasting (DVB); IP Datacast over DVB-H: Electronic Service Guide (ESG)</i> . |
| [ETSI TS 102 822-3-1] | ETSI TS 102 822-3-1 V1.8.1 (2012), <i>Broadcast and On-line Services: Search, select and rightful use of content on personal storage systems ("TV-Anytime"); Part 3: Metadata; Sub-part 1: Phase 1 – Metadata schemas</i> . |
| [ETSI TS 102 822-3-2] | ETSI TS 102 822-3-2 V1.6.1 (2010), <i>Broadcast and On-line Services: Search, select, and rightful use of content on personal storage systems ("TV-Anytime"); Part 3: Metadata; Sub-part 2: System aspects in a uni-directional environment</i> . |
| [ETSI TS 102 822-3-3] | ETSI TS 102 822-3-3 V1.6.1 (2012), <i>Broadcast and On-line Services: Search, select, and rightful use of content on personal storage systems ("TV-Anytime"); Part 3: Metadata; Sub-part 3: Phase 2 – Extended Metadata Schema</i> . |

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- [ETSI TS 102 822-5-1] ETSI TS 102 822-5-1 V1.7.1 (2012), *Broadcast and On-line Services: Search, select, and rightful use of content on personal storage systems ("TV-Anytime"); Part 5: Rights Management and Protection (RMP) Sub-part 1: Information for Broadcast Applications.*
- [ETSI TS 102 822-6-3] ETSI TS 102 822-6-3 V1.6.1 (2012), *Broadcast and On-line Services: Search, select, and rightful use of content on personal storage systems ("TV-Anytime"); Part 6: Delivery of metadata over a bi-directional network; Sub-part 3: Phase 2 – Exchange of Personal Profile.*
- [ISO/IEC 15938-5] ISO/IEC 15938-5 (2003), *Information technology – Multimedia content description interface – Part 5: Multimedia description schemes.*

3 Definitions

3.1 Terms defined elsewhere

This Recommendation uses the following terms defined elsewhere:

3.1.1 IPTV [b-ITU-T Y.1901]: Multimedia services such as television/video/audio/text/graphics/data delivered over IP-based networks managed to support the required level of QoS/QoE, security, interactivity and reliability.

3.1.2 metadata [b-ITU-T IPTV FG]: Structured, encoded data that describe characteristics of information-bearing entities to aid in the identification, discovery, assessment and management of the described entities.

3.1.3 metadata schema [ITU-T H.750]: A metadata schema is the representation format for a specifying data model describing target instances.

3.1.4 video-on-demand (VoD) [b-ITU-T Y.1901]: A service in which the end-user can, on demand, select and view a video content and where the end-user can control the temporal order in which the video content is viewed (e.g., the ability to start the viewing, pause, fast forward, rewind, etc.)

3.2 Terms defined in this Recommendation

None.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

AV	Audio and Video
CP	Content Provider
DNS	Domain Name System
ECG	Electronic Content Guide
EPG	Electronic Programme Guide
HTTP	Hypertext Transfer Protocol
ID	IDentification
IP	Internet Protocol
IPTV	Internet Protocol Television
ISAN	International Standard Audio-visual Number

SP	Service Provider
TLS	Transport Layer Security
TVA	TV-Anytime
URI	Uniform Resource Indicator
URL	Uniform Resource Locator
VoD	Video on Demand

5 Conventions

None.

6 Introduction

[ITU-T H.750] identifies AV content metadata elements and attributes for IPTV services, for content discovery from IPTV terminal devices based on [ITU-T Y.1910] and [ITU-T H.720].

This Recommendation identifies the requirements for AV content metadata provisioning and the metadata elements and attributes which could be provided by AV content providers. This Recommendation describes AV content metadata elements and attributes which could be transferred from content providers to IPTV service providers, and be integrated by the IPTV service in electronic programme guide (EPG)/electronic content guide (ECG) for content discovery. It also describes the requirements for AV content usage log information of end-user and payment details transferred from an IPTV service provider to content provider.

Two communication modes are specified between content providers and IPTV service providers for the delivery and management of content metadata and content:

- 1) A push mode in which the content providers take the initiative to declare their content to the IPTV service providers.
- 2) A pull mode in which the IPTV service providers, having a reference to particular content, request information about this content.

7 Requirements for AV content metadata provisioning

The metadata schema for the contents to be transferred between the content provider and IPTV service provider is required to support:

- Req1: the intention of the metadata set (new, replace, append).
- Req2: the identification of the content provider, source of the metadata set.
- Req3: the content description with elements such as content identification used by the content provider, title, description, keywords, genre. These elements should be taken from the elements already included in metadata schemas specified for ECG/EPG delivery to end-user terminals.
- Req4: the business information of the content, such as price, charge type.
- Req5: the possibility to describe several contents in the same set.
- Req6: the possibility to group features common to all content such as AV attributes, but also to allow individual contents to have different values for these common features.
- Req7: the possibility to give content location to allow the transfer of the content itself.
- Req8: the possibility to give content delivery information, such as distribution area and terminal device to be allowed to receive.
- Req9: the possibility to get the usage information of the content from the end user.