

International Telecommunication Union

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

H.750

(10/2008)

SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS

IPTV multimedia services and applications for IPTV –
IPTV metadata

High-level specification of metadata for IPTV services

Recommendation ITU-T H.750

ITU-T H-SERIES RECOMMENDATIONS
AUDIOVISUAL AND MULTIMEDIA SYSTEMS

CHARACTERISTICS OF VISUAL TELEPHONE SYSTEMS	H.100–H.199
INFRASTRUCTURE OF AUDIOVISUAL SERVICES	
General	H.200–H.219
Transmission multiplexing and synchronization	H.220–H.229
Systems aspects	H.230–H.239
Communication procedures	H.240–H.259
Coding of moving video	H.260–H.279
Related systems aspects	H.280–H.299
Systems and terminal equipment for audiovisual services	H.300–H.349
Directory services architecture for audiovisual and multimedia services	H.350–H.359
Quality of service architecture for audiovisual and multimedia services	H.360–H.369
Supplementary services for multimedia	H.450–H.499
MOBILITY AND COLLABORATION PROCEDURES	
Overview of Mobility and Collaboration, definitions, protocols and procedures	H.500–H.509
Mobility for H-Series multimedia systems and services	H.510–H.519
Mobile multimedia collaboration applications and services	H.520–H.529
Security for mobile multimedia systems and services	H.530–H.539
Security for mobile multimedia collaboration applications and services	H.540–H.549
Mobility interworking procedures	H.550–H.559
Mobile multimedia collaboration inter-working procedures	H.560–H.569
BROADBAND, TRIPLE-PLAY AND ADVANCED MULTIMEDIA SERVICES	
Broadband multimedia services over VDSL	H.610–H.619
Advanced multimedia services and applications	H.620–H.629
IPTV MULTIMEDIA SERVICES AND APPLICATIONS FOR IPTV	
General aspects	H.700–H.719
IPTV terminal devices	H.720–H.729
IPTV middleware	H.730–H.739
IPTV application event handling	H.740–H.749
IPTV metadata	H.750–H.759
IPTV multimedia application frameworks	H.760–H.769
IPTV service discovery up to consumption	H.770–H.779

For further details, please refer to the list of ITU-T Recommendations.

Recommendation ITU-T H.750

High-level specification of metadata for IPTV services

Summary

Recommendation ITU-T H.750 gives the high-level specification of the metadata for IPTV services, with its elements and delivery protocols.

IPTV metadata, the information on services and content processed by the service and content delivery infrastructure, provides a descriptive and structural framework for managing IPTV services. The types of metadata for IPTV are service and content metadata, user metadata, metadata for content provisioning and management, metadata aggregation management, and rights and security related metadata. Aspects of discovery, delivery and transport, representation and management of metadata are covered in this Recommendation.

Source

Recommendation ITU-T H.750 was approved on 14 October 2008 by ITU-T Study Group 16 (2005-2008) under Recommendation ITU-T A.8 procedure.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

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.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure e.g. interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

INTELLECTUAL PROPERTY RIGHTS

ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at <http://www.itu.int/ITU-T/ipr/>.

© ITU 2009

All rights reserved. No part of this publication may be reproduced, by any means whatsoever, without the prior written permission of ITU.

CONTENTS

Page

1	Scope	1
2	References.....	1
3	Definitions	3
3.1	Terms defined elsewhere	3
3.2	Terms defined in this Recommendation.....	3
4	Abbreviations and acronyms	3
5	Conventions	4
6	IPTV metadata framework	4
6.1	Metadata framework.....	4
6.2	IPTV metadata service overview.....	4
6.3	Metadata representation.....	4
6.4	Classification scheme	5
6.5	Identity management	5
6.6	Metadata API.....	5
7	Discovery, transport and delivery of metadata.....	5
7.1	Metadata service discovery	5
7.2	Service provider metadata	6
7.3	Metadata delivery method	6
7.4	Updating method	6
7.5	Metadata fragments	7
7.6	Metadata transport container	7
7.7	Metadata change notification	7
8	IPTV service and content metadata	8
8.1	Service and content metadata	8
8.2	User metadata	14
9	Metadata for content provisioning and management.....	16
9.1	Metadata for content provisioning.....	16
9.2	Metadata aggregation management.....	16
10	Rights and security-related metadata for IPTV	16
10.1	Elements required for usage restrictions, usage rules	17
10.2	User metadata security	17
11	Metadata for public interest services	17
	Bibliography.....	18

Recommendation ITU-T H.750

High-level specification of metadata for IPTV services

1 Scope

This Recommendation gives the high-level specification of the metadata for IPTV services, its elements and delivery protocols.

The IPTV metadata is the information on services and content processed by service and content delivery infrastructure and provides a descriptive and structural framework for managing IPTV services.

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 F.750] | Recommendation ITU-T F.750 (2004), <i>Metadata framework</i> .
< http://www.itu.int/rec/T-REC-F.750 > |
| [ISO/IEC 15706] | ISO/IEC 15706:2002/7, <i>Information and documentation – International Standard Audiovisual Number (ISAN) – Parts 1 and 2</i> .
< http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=28779 >
< http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=35581 > |
| [ISO/IEC 15938-5] | ISO/IEC 15938-5:2003, <i>Information technology – Multimedia content description interface – Part 5: Multimedia description schemes</i> .
< http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=34232 > |
| [ISO/IEC 21000-7] | ISO/IEC 21000-7:2007, <i>Information technology – Multimedia framework (MPEG-21) – Part 7: Digital Item Adaptation</i> .
< http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=46501 > |
| [ETSI TS 102 034] | ETSI TS 102 034 V1.3.1 (2007), <i>Digital Video Broadcasting (DVB); Transport of MPEG-2 TS Based DVB Services over IP Based Networks</i> .
< http://pda.etsi.org/pda/queryform.asp > |
| [ETSI TS 102 471] | ETSI TS 102 471 V1.2.1 (2006), <i>Digital Video Broadcasting (DVB); IP Datacast over DVB-H: Electronic Service Guide (ESG)</i> .
< http://pda.etsi.org/pda/queryform.asp > |
| [ETSI TS 102 472] | ETSI TS 102 472 V1.2.1 (2006), <i>Digital Video Broadcasting (DVB); IP Datacast over DVB-H: Content Delivery Protocols</i> .
< http://pda.etsi.org/pda/queryform.asp > |
| [ETSI TS 102 539] | ETSI TS 102 539 V1.2.1 (2008), <i>Digital Video Broadcasting (DVB); Carriage of Broadband Content Guide (BCG) information over Internet Protocol (IP)</i> .
< http://pda.etsi.org/pda/queryform.asp > |

- [ETSI TS 102 822-3-1] ETSI TS 102 822-3-1 V1.4.1 (2007), *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.*
<<http://pda.etsi.org/pda/queryform.asp>>
- [ETSI TS 102 822-3-2] ETSI TS 102 822-3-2 V1.4.1 (2007), *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.*
<<http://pda.etsi.org/pda/queryform.asp>>
- [ETSI TS 102 822-3-3] ETSI TS 102 822-3-3 V1.2.1 (2007), *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.*
<<http://pda.etsi.org/pda/queryform.asp>>
- [ETSI TS 102 822-3-4] ETSI TS 102 822-3-4 V1.2.1 (2008), *Broadcast and On-line Services: Search, select, and rightful use of content on personal storage systems ("TV-Anytime"); Part 3: Metadata; Sub-part 4: Phase 2 – Interstitial metadata.*
<<http://pda.etsi.org/pda/queryform.asp>>
- [ETSI TS 102 822-4] ETSI TS 102 822-4 V1.3.1 (2007), *Broadcast and On-line Services: Search, select, and rightful use of content on personal storage systems ("TV-Anytime"); Part 4: Phase 1 – Content referencing.*
<<http://pda.etsi.org/pda/queryform.asp>>
- [ETSI TS 102 822-5-1] ETSI TS 102 822-5-1 V1.3.1 (2008), *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.*
<<http://pda.etsi.org/pda/queryform.asp>>
- [ETSI TS 102 822-6-1] ETSI TS 102 822-6-1 V1.4.1 (2007), *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 1: Service and transport.*
<<http://pda.etsi.org/pda/queryform.asp>>
- [ETSI TS 102 822-6-3] ETSI TS 102 822-6-3 V1.2.1 (2008), *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.*
<<http://pda.etsi.org/pda/queryform.asp>>
- [ETSI TS 102 822-8] ETSI TS 102 822-8 V1.2.1 (2007), *Broadcast and On-line Services: Search, select, and rightful use of content on personal storage systems ("TV-Anytime"); Part 8: Phase 2 – Interchange Data Format.*
<<http://pda.etsi.org/pda/queryform.asp>>
- [IETF RFC 3265] IETF RFC 3265 (2002), *Session Initiation Protocol (SIP) – Specific Event Notification.*
<<http://www.ietf.org/rfc/rfc3265.txt>>
- [IETF RFC 4287] IETF RFC 4287 (2005), *The Atom Syndication Format.*
<<http://www.ietf.org/rfc/rfc4287.txt>>