SLOVENSKI STANDARD
SIST EN 62698:2013

01-julij-2013

Sistemi večpredstavnostnih domačih strežnikov - Informacijska medobratovalnost uporabniških pravic pri internetni televiziji (IPTV) (IEC 62698:2013)

Multimedia home server systems - Rights information interoperability for IPTV (IEC 62698:2013)

Multimedia-Homeserversysteme - Interoperabilität von Rechteinformationen für IPTV (IEC 62698:2013)

Systèmes de serveur domestique multimédia - Interopérabilité d'information des droits pour TVIP (CEI 62698:2013)

Ta slovenski standard je istoveten z: **EN 62698:2013**

ICS:

33.160.60	Večpredstavni (multimedijski) sistemi in oprema za telekonference	Multimedia systems and teleconferencing equipment

SIST EN 62698:2013 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

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English version

Multimedia home server systems - Rights information interoperability for IPTV (IEC 62698:2013)

Systèmes de serveur domestique multimédia - Interopérabilité d'information des droits pour TVIP (CEI 62698:2013)

Multimedia-Homeserversysteme - Interoperabilität von Rechteinformationen für IPTV (IEC 62698:2013)

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

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Foreword

The text of document 100/1947/CDV, future edition 1 of IEC 62698, prepared by “Technical Area 8 “Multimedia home server systems” of IEC/TC 100 “Audio, video and multimedia systems and equipment” was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62698:2013.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2014-01-15
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-04-15

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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 62227	2008	Multimedia home server systems - Digital rights permission code	EN 62227	2008
IEC/TR 62636	2009	Multimedia home server systems - Implementation of digital rights permission code	-	-
ISO 3166-1	-	Codes for the representation of names of countries and their subdivisions - Part 1: Country codes	EN ISO 3166-1	-
ITU-T Recommendation H.750	2009	High-level specification of metadata for IPTV services	-	-
ITU-T Recommendation X.509	-	Information technology - Open systems interconnection - The Directory: Public-key and attribute certificate frameworks	-	-

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Multimedia home server systems – Rights information interoperability for IPTV

Systèmes de serveur domestique multimédia – Interopérabilité d'information des droits pour TVIP

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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MULTIMEDIA HOME SERVER SYSTEMS – RIGHTS INFORMATION INTEROPERABILITY FOR IPTV

FOREWORD

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International Standard IEC 62698 has been prepared by technical area 8: Multimedia home server systems, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

Parts of the text of this standard have been developed in collaboration with ITU-T/Study Group 16: Multimedia application platforms and end systems for IPTV.

NOTE The ITU-T Recommendation, which is the parallel text of this standard, is ITU-T Recommendation H.751 "Metadata for rights information interoperability in IPTV services" and is under revision/approval. See ITU website for more details.

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

CDV	Report on voting
100/1947/CDV	100/1998/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.

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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

At present, there are no mechanisms or rules for flexible digital distribution that allow the easy exchange of content based on individual commitments between content creators and consumers. This is because a technological and social environment where there is a sense of trust between copyright holders and consumers who feel safe about information distribution is not always perfectly provided.

To provide content creators and consumers with this type of content usage environment, to give them more opportunities for all kinds of digital content regardless of the support they use to store it, interoperability is required that will enable the IPTV systems and equipment that make up the envisioned value chain to communicate and work with each other across different systems which manage content distribution.

Rights Information Interoperability (RII) solves these issues by helping to provide content rights holders and consumers with common semantics and core elements that extend across different systems which manage content distribution.

MULTIMEDIA HOME SERVER SYSTEMS – RIGHTS INFORMATION INTEROPERABILITY FOR IPTV

1 Scope

This International Standard defines the common semantics and core elements on rights information interoperability for IPTV systems/equipment that is subject to multimedia content to be used across different platforms legally.

The rights information includes rights and security related metadata that is described in ITU-T Recommendation H.750.

Rights related information, such as content ID, permission issuer ID and permission receiver ID, which is used to bridge between rights related metadata, is considered in this standard. On the other hand, rights management and content protection technology are beyond the scope of this standard.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62227:2008, *Multimedia home server systems – Digital rights permission code*

IEC/TR 62636:2009, *Multimedia home server systems – Implementation of digital rights permission code*

ISO 3166-1, *Codes for the representation of names of countries and their subdivisions – Part 1: Country codes*

ITU-T Recommendation H.750:2009, *High-level specification of metadata for IPTV services*

ITU-T Recommendation X.509, *Information technology – Open systems interconnection – The Directory: Public-key and attribute certificate frameworks*

3 Abbreviations and acronyms

For the purposes of this document, the following abbreviations and acronyms apply.

AAC	Advanced Audio Coding
AACS	Advanced Access Content System
CD	Compact Disc
CGMS	Copy Generation Management System
CM	Commercial Message
CPRM	Content Protection for Recordable Media
DCF	DRM Content Format
DRM	Digital Rights Management

DRPC	Digital Rights Permission Code
DSA	Digital Signature Algorithm
DTCP	Digital Transmission Content Protection
DVD	Digital Versatile Disk
EC-DSA	Elliptic Curve Digital Signature Algorithm
GC	Group Content
GIF	Graphic Interchange Format
HD	High Definition
HDCP	High-bandwidth Digital Content Protection
HDD	Hard Disk Drive
ID	Identifier
IPTV	Internet Profile TeleVision
JPEG	Joint Photographic Experts Group
MP3	MPEG Audio Layer-3
MPEG	Moving Picture Experts Group
MTMO	Marlin Trust Management Organization
OMA	Open Mobile Alliance
PCM	Pulse Code Modulation
PNG	Portable Network Graphics
RII	Rights Information Interoperability
RSA	Rivest Shamir Adleman
SAFIA	Security Architecture For Intelligent Attachment
SHA	Secure Hash Algorithm
VCPS	Video Content Protection System
VOD	Video On Demand
WIPO	World Intellectual Property Organization

4 Systems: the RII environment

4.1 General

This standard gives the high-level standard of the metadata for rights information interoperability, including representation of the minimum required elements.

The RII metadata provides descriptive and contextual classification for representing rights information using the permission framework.

RII is concerned with finding the greatest common denominators in rights expressions that include the minimum required components when trying to implement the mutual use of rights information.

It is about conveying rights information in units of groups of context expressions called permissions.

Here we consider the constituent components of permissions. Permissions can encode “what from whom to whom under what conditions” using context expressions. When permissions are sent to a terminal, the minimum required components are the subject information in the permissions that corresponds to the “what from whom to whom” part, and the content usage information that corresponds to the “under what conditions” part.

4.2 Permission subjects

One permission subject is the issuer information that expresses the “from whom” part of the permissions. This information is held by the service provider, and in RII, its minimum required component is the rights holder ID.

Only the issuer ID is included because in RII, it is sufficient if the service provider and the terminal can identify who is granting the permissions. It is not necessary to send all of the issuer information from the server to the terminal. Therefore, the rights holder ID corresponds to the Issuer ID in RII context expressions. The service provider receives the digital rights permission code from the terminal and loads the rights holder ID included in the Issuer ID to identify the rights holder who granted the permissions.

Another permission subject is receiver information that expresses the “to whom” part of the permissions. In RII, that minimum required component is the User ID/Device ID.

Only the receiver ID is included because in RII, it is sufficient if the service provider and the terminal can identify to whom the permissions are being granted. Therefore, the User ID/Device ID corresponds to the Receiver ID in RII context expressions. The terminal receives the digital rights permission code from the service provider and determines whether or not the User ID/Device ID included in the Receiver ID corresponds to the local terminal, or the service provider receives the digital rights permission code from the terminal and loads the User ID/Device ID included in the Receiver ID to identify the user to whom permissions were granted.

Another permission subject is information about the content for which permissions are being granted, which is expressed in the “what” part. In RII, that minimum required component is the Content ID.

Only the Content ID is included in RII because it is sufficient for the service provider and the terminal to be able to identify the content for which permissions are being granted. The terminal receives the digital rights permission code from the service provider and determines that the content that corresponds to the Content ID is being granted.

4.3 Permission limit components

One permission limit component is the type of the permissions (hereinafter referred to as “the permission classification component”), which expresses stipulations about what is being granted. These permissions are agreed upon between the issuer and the receiver. This is information that the receiver needs to be able to check offline. In RII, those minimum required components are the following: a type that indicates whether the permission content being granted is public or not (hereinafter referred to as “the disclosure class”), a type that indicates the purpose of use being granted (hereinafter referred to as the “purpose class”), a type that indicates the billing format being granted (hereinafter referred to as the “charge model class”), a type that indicates the request format being granted (hereinafter referred to as the “request class”), a type that indicates the sponsor format being granted (hereinafter referred to as the “sponsor class”, a type that indicates the usage format being granted (hereinafter referred to as the “usage class”), and a type that indicates the territory being granted, (hereinafter referred to as the "territory class”). These permission limit components are included in RII because it is necessary to be able to see that information even in an offline environment that is not connected to a network. This is so that the terminal can determine what type of permissions are being granted between the service provider and the terminal.

Another permission limit component contains limiting conditions that are in addition to the restrictions in the items granted above. These are mainly items of information that limit the type of permissions stipulated by the usage class. In RII, those minimum required components are the permission usage format and its limiting conditions (hereinafter referred to as "normal usage limits”), content usage limits for compliant terminals (hereinafter referred to as the “permission management system limits”), and the limits on output of the content to non-compliant terminals or media (hereinafter referred to as the “simultaneous output limits”).