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AMENDMENT 4
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Information technology — Multimedia content description interface —

Part 5:
Multimedia description schemes

AMENDMENT 4: Social metadata

Technologies de l'information — Interface de description du contenu multimédia —

Partie 5: Schémas de description multimédia

AMENDEMENT 4: Métadonnées sociales

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ISO/IEC 15938-5:2003/Amd 4:2012
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b7563360c622/iso-iec-15938-5-2003-amd-4-2012

Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

Amendment 4 to ISO/IEC 15938-5:2003 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

This Amendment provides means for describing a person beyond the context of the `Person` DS. The description especially targets the annotation of a person's interests in the context of social networking platforms as well as the collaborative review and rating of media entities.

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AMENDMENT 4: Social metadata

In 4.4.1, replace the entire text of the subclause with the following text:

4.4.1   Introduction

This subclause specifies the top-level types. The top-level types are used in complete descriptions to describe multimedia content and metadata related to content management. Each top-level type contains the description tools that are relevant for a particular description task, i.e., describing an image or a video. The following top-level types are defined in this subclause:

- `CompleteDescriptionType` (abstract): top-level type for complete descriptions.

  - `ContentDescriptionType` (abstract): top-level type for complete descriptions of multimedia content.

    - `ContentEntityType`: top-level type for describing multimedia content entities such as images, videos, audio, collections, and so forth.

    - `ContentAbstractionType` (abstract): top-level type for describing abstractions of multimedia content:

      - `SemanticDescriptionType`: top-level type for describing semantics of multimedia content.

      - `ModelDescriptionType`: top-level type for describing models of multimedia content.

      - `SummaryDescriptionType`: top-level type for describing summaries of multimedia content.

      - `ViewDescriptionType`: top-level type for describing views and view decompositions of audio-visual signals.

      - `VariationDescriptionType`: top-level type for describing variations of multimedia content.

  - `ContentManagementType` (abstract): top-level type for describing metadata related to content management:

    - `UserDescriptionType`: top-level type for describing a user of a multimedia system.

- ▪ `MediaDescriptionType`: top-level type for describing the media information of multimedia content.

- ▪ `CreationDescriptionType`: top-level type for describing the process of creating multimedia content.

- ▪ `UsageDescriptionType`: top-level type for describing the usage of multimedia content.

- ▪ `ClassificationSchemeDescriptionType`: top-level type for describing a classification scheme for multimedia content.

- ▪ `MediaReviewDescriptionType` (abstract): top-level type for describing collaborative media review and rating:

  - • `IndividualMediaReviewDescriptionType`: top-level type for describing a review conducted by a single entity.

  - • `AggregatedMediaReviewDescriptionType`: top-level type for describing a review that has been aggregated from several individual (or aggregated) reviews.

The top-level types are organized under the type hierarchy shown in Figure 3. The `CompleteDescriptionType` forms the root base type of the hierarchy. The top-level types `ContentDescriptionType` and `ContentManagementType` extend `CompleteDescriptionType`. The top-level types `ContentEntityType` and `ContentAbstractionType` extend `CompleteDescriptionType`.
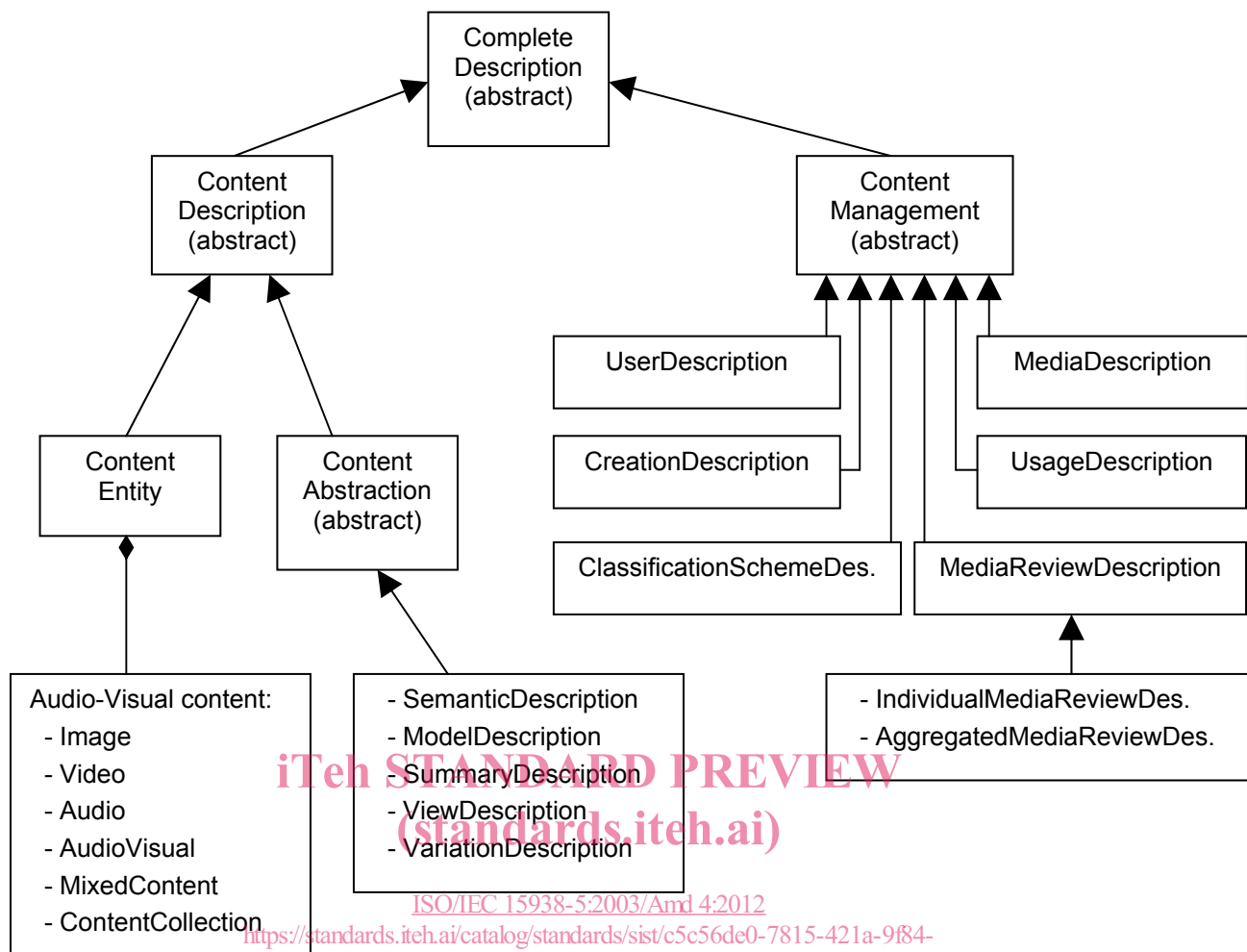
Figure 3 — Illustration of the type derivation hierarchy for top-level types

In 4.4.4.2, replace schema definition by the following Schema text:

```
<!-- ######################################################## -->
<!--  Definition of Content management top-level types (4.4.4)  -->
<!-- ######################################################## -->

<!-- Definition of ContentManagement Top-level Type -->
<complexType name="ContentManagementType" abstract="true">
  <complexContent>
    <extension base="mpeg7:CompleteDescriptionType"/>
  </complexContent>
</complexType>

<!-- Definition of UserDescription Top-level Type -->
<complexType name="UserDescriptionType">
  <complexContent>
    <extension base="mpeg7:ContentManagementType">
      <sequence>
        <element name="User" type="mpeg7:AgentType" minOccurs="0"/>
        <element name="UserPreferences" type="mpeg7:UserPreferencesType"
minOccurs="0" maxOccurs="unbounded"/>
        <element name="UsageHistory" type="mpeg7:UsageHistoryType" minOccurs="0"
maxOccurs="unbounded"/>
```

```
        </sequence>
      </extension>
    </complexContent>
  </complexType>

  <!-- Definition of MediaDescription Top-level Type -->
  <complexType name="MediaDescriptionType">
    <complexContent>
      <extension base="mpeg7:ContentManagementType">
        <sequence>
          <element name="MediaInformation" type="mpeg7:MediaInformationType"
maxOccurs="unbounded"/>
        </sequence>
      </extension>
    </complexContent>
  </complexType>

  <!-- Definition of CreationDescription Top-level Type -->
  <complexType name="CreationDescriptionType">
    <complexContent>
      <extension base="mpeg7:ContentManagementType">
        <sequence>
          <element name="CreationInformation" type="mpeg7:CreationInformationType"
maxOccurs="unbounded"/>
        </sequence>
      </extension>
    </complexContent>
  </complexType>

  <!-- Definition of UsageDescription Top-level Type -->
  <complexType name="UsageDescriptionType">
    <complexContent>
      <extension base="mpeg7:ContentManagementType">
        <sequence>
          <element name="UsageInformation" type="mpeg7:UsageInformationType"
maxOccurs="unbounded"/>
        </sequence>
      </extension>
    </complexContent>
  </complexType>

  <!-- Definition of ClassificationSchemeDescription Top-level Type -->
  <complexType name="ClassificationSchemeDescriptionType">
    <complexContent>
      <extension base="mpeg7:ContentManagementType">
        <choice>
          <element name="ClassificationScheme"
type="mpeg7:ClassificationSchemeType" maxOccurs="unbounded"/>
          <element name="ClassificationSchemeBase"
type="mpeg7:ClassificationSchemeBaseType" maxOccurs="unbounded"/>
        </choice>
      </extension>
    </complexContent>
  </complexType>

  <!-- Definition of MediaReviewDescription Top-level Type (AMD/4)  -->
  <complexType name="MediaReviewDescriptionType" abstract="true">
    <complexContent>
      <extension base="mpeg7:ContentManagementType">
        <sequence>
          <element name="ContentRef" type="mpeg7:ReferenceType"/>
```

```
        <element name="Tags" type="mpeg7:KeywordAnnotationType" minOccurs="0"/>
        <element name="FreeTextReview" type="mpeg7:TextualType" minOccurs="0"
maxOccurs="unbounded"/>
        <element name="MediaRating" type="mpeg7:RatingType" minOccurs="0"
maxOccurs="unbounded"/>
        <element name="IdentityRating" type="mpeg7:RatingType" minOccurs="0"/>
        <element name="QualityRating" type="mpeg7:MediaQualityType" minOccurs="0"
maxOccurs="unbounded"/>
      </sequence>
      <attribute name="reviewTime" type="mpeg7:timePointType" use="required"/>
    </extension>
  </complexContent>
</complexType>

<!-- Definition of IndividualMediaReviewDescription Top-level Type (AMD/4)  -->
<complexType name="IndividualMediaReviewDescriptionType">
  <complexContent>
    <extension base="mpeg7:MediaReviewDescriptionType">
      <choice>
        <element name="Reviewer" type="mpeg7:AgentType"/>
        <element name="ReviewerRef" type="mpeg7:ReferenceType"/>
      </choice>
    </extension>
  </complexContent>
</complexType>

<!-- Definition of AggregatedMediaReviewDescription Top-level Type (AMD/4)  -->
<complexType name="AggregatedMediaReviewDescriptionType">
  <complexContent>
    <extension base="mpeg7:MediaReviewDescriptionType">
      <sequence>
        <element name="ObservationPeriod" type="mpeg7:TimeType"
maxOccurs="unbounded"/>
        <element name="ReviewCount" type="nonNegativeInteger"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
```

At the end of 4.4.4.3, add the following:

Semantics of the `MediaReviewDescriptionType`:

Name	Definition
MediaReviewDescriptionType	Top-level type for describing collaborative media review and rating. `MediaReviewDescriptionType` extends `ContentManagementType`.
ContentRef	Reference to the content or identifier of the content that is reviewed.
Tags	Free text descriptive keywords about the content.
FreeTextReview	Textual reviews of the content.

Name	Definition
MediaRating	Rating of the media content (i.e., how much the User likes the media content). RatingType is defined in 8.2.6. Terms for the RatingScheme of the media rating are specified by the MediaRatingSchemeCS.
IdentityRating	Rating that indicates whether the content is the actual content it should be (i.e., to mark fakes). RatingType is defined in 8.2.6. Terms for the RatingScheme of the identity rating are specified by the IdentityRatingSchemeCS.
QualityRating	Rating of the media quality of the content. MediaQualityType is defined in 8.2.6. The terms defined in the QualityRatingSchemeCS can be used in the RatingScheme.
reviewTime	Date and time when the review was conducted.

Semantics of the IndividualMediaReviewDescriptionType:

Name	Definition
IndividualMediaReviewDescriptionType	Top-level type for a review conducted by a single entity. IndividualMediaReviewDescriptionType extends MediaReviewDescriptionType.
Reviewer	Entity that performed the review. AgentType is defined in 7.5.2. Note: the RatingSource of the QualityRating should not differ from the Reviewer.
ReviewerRef	Reference to the entity that performed the review. Note: the RatingSource of the QualityRating should not differ from the ReviewerRef.

Semantics of the AggregatedMediaReviewDescriptionType:

Name	Definition
AggregatedMediaReviewDescriptionType	Top-level type for a review that has been aggregated from several individual (or aggregated) reviews. AggregatedMediaReviewDescriptionType extends MediaReviewDescriptionType.
ObservationPeriod	Time period in which all individual reviews that this

Name	Definition
	aggregated review aggregates where conducted.
ReviewCount	Number of all individual reviews that this aggregated review aggregates.

At the end of 4.4.4.4, add the following:

The following example shows the use of the content management type `MediaReviewDescriptionType` for describing media review information for an individual media review and for an aggregated media review.

```
<Mpeg7>
  <Description xsi:type="IndividualMediaReviewType" reviewTime="2011-12-
01T17:40:00">
    <ContentRef href="http://example.com/content/some.content"/>
    <IdentityRating>
      <RatingValue>0</RatingValue>
      <RatingScheme style="higherBetter" worst="-1" best="0"
href="urn:mpeg:mpeg7:cs:IdentityRatingSchemeCS:2012:1">
        <Name>Identity</Name>
      </RatingScheme>
    </IdentityRating>
    <QualityRating>
      <QualityRating type="objective">
        <RatingValue>40.05</RatingValue>
        <RatingScheme style="higherBetter"
href="urn:mpeg:mpeg7:cs:QualityRatingSchemeCS:2001:2.3">
          <Name>PSNR Y</Name>
        </RatingScheme>
      </QualityRating>
    </QualityRating>
    <ReviewerRef href="http://example.com/user/john.doe"/>
  </Description>

  <Description xsi:type="AggregatedMediaReviewType" reviewTime="2011-12-
02T00:00:01">
    <ContentRef href="http://example.com/content/some.content"/>
    <FreeTextReview>Nice movie, but the end was quite sad.</FreeTextReview>
    <FreeTextReview>Best movie I have seen in years.</FreeTextReview>
    <MediaRating>
      <RatingValue>4.5</RatingValue>
      <RatingScheme style="higherBetter" worst="1" best="5"
href="urn:mpeg:mpeg7:cs:MediaRatingSchemeCS:2012:1">
        <Name>Five-Star</Name>
      </RatingScheme>
    </MediaRating>
    <ObservationPeriod>
      <TimePoint>2011-12-01T00:00:00</TimePoint>
      <Duration>P1D</Duration>
    </ObservationPeriod>
    <ReviewCount>42</ReviewCount>
  </Description>
</Mpeg7>
```