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Document Status Sheet

<table>
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<tbody>
<tr>
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<td>CableLabs® VOD Content Specification Version 1.1</td>
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<td>Public</td>
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</tbody>
</table>

Key to Document Status Codes:

**Work in Progress**  An incomplete document, designed to guide discussion and generate feedback, that may include several alternative requirements for consideration.

**Draft**  A document in specification format considered largely complete, but lacking review by Members and vendors. Drafts are susceptible to substantial change during the review process.

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1 INTRODUCTION

1.1 Purpose
This specification describes how to create content for the Video on Demand service.

1.2 Scope
This document describes the specific assets (content and metadata) used by the VOD service that can be distributed using the Asset Distribution Interface [ADI 1.1]. It does not specify a distribution method.

1.3 Requirements
Throughout this document, the words that are used to define the significance of particular requirements are capitalized. These words are:

"MUST" This word or the adjective "REQUIRED" means that the item is an absolute requirement of this specification.

"MUST NOT" This phrase means that the item is an absolute prohibition of this specification.

"SHOULD" This word or the adjective "RECOMMENDED" means that there may exist valid reasons in particular circumstances to ignore this item, but the full implications should be understood and the case carefully weighed before choosing a different course.

"SHOULD NOT" This phrase means that there may exist valid reasons in particular circumstances when the listed behavior is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behavior described with this label.

"MAY" This word or the adjective "OPTIONAL" means that this item is truly optional. One vendor may choose to include the item because a particular marketplace requires it or because it enhances the product, for example; another vendor may omit the same item.
2 REFERENCES

2.1 Normative References

In order to claim compliance with this specification, it is necessary to conform to the following standards and other works as indicated, in addition to the other requirements of this specification. Notwithstanding, intellectual property rights may be required to use or implement such normative references.


[CEP3.0] Content Encoding Profiles 3.0 Specification, OC-SP-CEP3.0-I03-120123, January 23, 2012, Cable Television Laboratories, Inc.¹


2.2 Informative References

[EIDR] Entertainment ID Registry: http://www.eidr.org²

[GENRE] Genres list can be found at: http://mibs.cablelabs.com/namespaces/metadata/lists/


[STUDIO] Studio List can be found at http://mibs.cablelabs.com/namespaces/metadata/lists/

2.3 Reference Acquisition

- Internet Engineering Task Force (IETF) Secretariat, c/o Corporation for National Research Initiatives, 1895 Preston White Drive, Suite 100, Reston, VA 20191-5434, Phone 1-703-620-8990, Fax 1-703-620-9071, Internet: http://www.ietf.org/

- Cable Television Laboratories, Inc. (CableLabs), 858 Coal Creek Circle, Louisville, CO 80027, http://www.cablelabs.com/projects/metadata/

¹ Per VOD-CONTENT1.1-N-11.0087-1

² Per VOD-CONTENT1.1-N-11.0085-1
• ISO Central Secretariat: International Organization for Standardization (ISO), 1, rue de Varembé, Case postale 56, CH-1211 Geneva 20, Switzerland; Internet: http://www.iso.ch/
3 TERMS AND DEFINITIONS

This specification uses the following terms:

**Metadata** Metadata is descriptive data associated with a content asset package or file. It may vary in depth from merely identifying the content package title or information to populate an EPG to providing a complete index of different scenes in a movie or providing business rules detailing how the content package may be displayed, copied, or sold. Separate uses for metadata have originated from the studios, distribution networks (Cable, Satellite), down to the CPE (STBs, PVRs).
4 ABBREVIATIONS AND ACRONYMS

This specification uses the following abbreviations:

ADI  Asset Distribution Interface
CA   Conditional Access
CBR  Constant Bit Rate
CPE  Customer Premise Equipment
GOP  Group of Pictures
MOD  Movies on Demand
MPEG Motion Picture Expert Group
NTSC National Television System Committee
PID  Program Identification
PVR  Personal Video Recorder
SI   Systems Information
SPTS Single Program Transport Stream
STB  Set-Top Box
SVOD Subscription Video on Demand
VOD  Video on Demand
5 ASSET STRUCTURE

The format of the asset structure within the ADI package for the Title asset is defined as follows:

```
Package
  |   package metadata
  +++-title asset
    |   |  title asset metadata
    |   +++-movie asset
    |   |   |  movie asset metadata
    |   |   |  movie asset content
    |   |   +++-still-image asset (box-cover, poster)
    |   |   |  box cover asset metadata
    |   |   |  box cover asset content
    |   |   +++-preview asset
    |   |   |  preview asset metadata
    |   |   |  preview asset content
    |   |   +++-trick asset
    |   |   |  trick file asset metadata
    |   |   |  trick file asset content
    |   |   +++-encrypted asset
    |   |   |  encrypted asset metadata
    |   |   |  encrypted asset content
    |   |   +++-barker asset
    |   |   |  barker asset metadata
    |   |   |  barker asset content
```

However, the distribution of a barker asset is to be performed alone and not in the context of or along with traditional MOD content like the movie, preview, and poster art, as the latter content is not related to a barker. A barker is a stand-alone piece of content that is linked back to descriptive metadata and an associated category or set of categories through its title asset. The actual package structure for distribution of a single barker follows:

```
Package
  |   package metadata
  +++-title asset
    |   |  title asset metadata
    |   |  movie asset metadata
    |   |  movie asset content
    |   |  box cover asset metadata
    |   |  box cover asset content
    |   |  preview asset metadata
    |   |  preview asset content
    |   |  trick file asset metadata
    |   |  trick file asset content
    |   +++-encrypted asset
    |   |  encrypted asset metadata
    |   |  encrypted asset content
    |   |  barker asset metadata
    |   |  barker asset content
```

5.1 Package

This describes the VOD content and metadata for each asset that is part of a Title asset. The names and values of some package-level metadata items are specified here, but the exact format for transmission purposes is described in the appropriate Asset Distribution Interface document. General asset metadata items specified in the ADI are designated with "AMS" and are placed here for informational purposes only. If any discrepancies occur between this specification and the ADI document for the "AMS" fields, the ADI document is the authoritative source. The App Data App element is determined from the "Spec" Column table and has allowed values of "MOD" or "SVOD" to indicate application. Metadata items are identified with "MOD" per prior practice, as they have been specific to the MOD application; however, most of these can be considered to be "VOD" under this specification, where similar assets are used in conjunction with other applications. A subsequent version of this specification will delineate content-specific metadata with "VOD", effectively assigning this "application" tag to the asset repository.

3 Per ECN VOD-CONTENT1.1-N-03.0013-4, 12/22/03, kb
4 Added per ECN VOD-CONTENT1.1-N-06.0032-1, 4/24/06, kb
Although specifically addressed by the ADI specification, the following items are re-stated for the purposes of clarity:

- The XML file shall be named ADI.XML.
- The DTD file shall be named ADI.dtd.

FORMAT: Metadata should be in XML format that is compatible with the W3C Extensible Markup Language (XML) version 1.0 (Second Edition).

### 5.1.1 Package Metadata

<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMS</td>
<td>Provider</td>
<td>A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.</td>
<td>String – ex. &quot;IN Demand&quot; or &quot;HBO&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Product</td>
<td>An identifier for the product offering.</td>
<td>String (Max 20 Chars)</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_Name</td>
<td>A string containing the identifying name of the asset.</td>
<td>String (Max 50 chars)</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Major</td>
<td>An integer representing the major version number.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Minor</td>
<td>An integer representing the minor version number.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Description</td>
<td>A human-readable string describing the Asset.</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Creation_Date</td>
<td>A string representing the date on which the Asset was created.</td>
<td>String – &quot;yyyy-mm-dd&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Provider_ID</td>
<td>A unique identifier for the provider of the Asset. The Provider_ID must be set to a registered internet domain name restricted to at most 20 lower-case characters and belonging to the provider. For example a valid Provider_ID for CableLabs is &quot;cablelabs-films.com&quot; (19 chars).</td>
<td>String- Ex. &quot;indemand.com&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_ID</td>
<td>An identifier for the asset that is unique within a provider's asset ID space. The unique portable identification of an asset is the combinations of its Provider_ID and its Asset_ID.</td>
<td>String (Fixed 20 chars, alpha/numeric) 4 alpha characters followed by 16 numbers, no spaces-Ex. &quot;ABCD1234567890123456&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_Class</td>
<td>A system-level type for the asset. This is intended to be helpful for the application mapping and routing, and expected to be more general than the Type value for the content. Expected Value is &quot;package&quot;.</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Verb</td>
<td>A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string (&quot;&quot;) and &quot;DELETE&quot;.</td>
<td>String</td>
<td>Opt</td>
</tr>
</tbody>
</table>

---

5 Per ECN VC1.1-N-03002, 3/6/03, kb
6 Per ECN VC1.1-N-03008, 3/21/03, kb
### 5.1.2 Content

None.

### 5.1.3 Assets

Title asset.

### 5.2 Title asset

#### 5.2.1 Title Metadata

<table>
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<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMS</td>
<td>Provider</td>
<td>A unique identifier for the provider of the Asset – represents the business</td>
<td>String – ex. &quot;iNDemand&quot; or &quot;HBO&quot;</td>
<td>Req</td>
</tr>
<tr>
<td></td>
<td></td>
<td>relationship between the MSO and the Asset Provider.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMS</td>
<td>Product</td>
<td>An identifier for the product offering.</td>
<td>String (Max 20 Chars)</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_Name</td>
<td>A string containing the identifying name of the asset. Asset names must be</td>
<td>String (Max 50 chars) Ex. &quot;WesCravensDracula2000title&quot;</td>
<td>Req</td>
</tr>
<tr>
<td></td>
<td></td>
<td>unique within a product.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Major</td>
<td>An integer representing the major version number.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Minor</td>
<td>An integer representing the minor version number.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Creation_Date</td>
<td>A string representing the date on which the Asset was created.</td>
<td>String – &quot;yyyy-mm-dd&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Provider_ID</td>
<td>A unique identifier for the provider of the Asset. The Provider_ID must be</td>
<td>String- Ex. &quot;indemand.com&quot; (19 chars).^</td>
<td>Req</td>
</tr>
<tr>
<td></td>
<td></td>
<td>set to a registered internet domain name restricted to at most 20 lower-case</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>characters and belonging to the provider. For example a valid Provider_ID</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>for CableLabs is &quot;cablelabs-films.com&quot; (19 chars).^</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

^ Per ECN VC1.1-N-03002, 3/6/03, kb
<table>
<thead>
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<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMS</td>
<td>Asset_ID</td>
<td>An identifier for the asset that is unique within a provider's asset ID space. The unique portable identification of an asset is the combinations of its Provider_ID and its Asset_ID.</td>
<td>String (Fixed 20 chars, alpha/numeric) 4 alpha characters followed by 16 numbers, no spaces-Ex. &quot;ABCD1234567890123456&quot;³⁾</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_Class</td>
<td>A system-level type for the asset. This is intended to be helpful for the application mapping and routing, and expected to be more general than the Type value for the content. Expected Value is &quot;title&quot;.</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Verb</td>
<td>A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string (&quot;&quot;), and &quot;DELETE&quot;.</td>
<td>String</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Type</td>
<td>The asset or content type that determines how or where it is stored.</td>
<td>&quot;title&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Title_Sort_Name</td>
<td>A string to be used when sorting the title.</td>
<td>String – (max 22 chars) ex. &quot;Blob, The&quot;</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Subscriber_View_Limit</td>
<td>A string representing a period of time and the maximum number of views over the period of time. The separator shall be a &quot;,&quot; between the period start date, period end date and maximum views.</td>
<td>String containing the three components (period start date, period end date, maximum views), one per element Ex. <code>&lt;App_Data App=&quot;MOD&quot; Name=&quot;Subscriber_View_Limit&quot; Value=&quot;2001-11-01,2001-11-15, 5&quot;/&gt;</code> <code>&lt;App_Data App=&quot;MOD&quot; Name=&quot;Subscriber_View_Limit&quot; Value=&quot;2001-12-01,2001-12-15, 5&quot;/&gt;</code></td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Title_Brief</td>
<td>A brief version of the movie title (for display).</td>
<td>String – (max 19 chars)</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Title</td>
<td>Movie title (for display).</td>
<td>String – (Max 128 chars—special characters allowed) ex. &quot;Wes Craven's Dracula 2000&quot;.</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>ISAN¹⁰</td>
<td>International Standard Audiovisual Number (ISAN)</td>
<td>String – ex. &quot;1881-66C7-3420-000-7-9F3A-02450-U&quot;</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Episode_Name</td>
<td>The name of an individual episode of a series.</td>
<td>String – ex. &quot;Hot Child in the City&quot;</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Episode_ID</td>
<td>A unique identifier given to each individual episode of a series.</td>
<td>String – ex. &quot;Episode #45&quot;</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Summary_Long</td>
<td>Movie summary in full.</td>
<td>String – (Max 4096 chars—special characters allowed)</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Summary_Medium</td>
<td>Movie summary paragraph – for EPG-like description.</td>
<td>String – (Max 1024 chars—special characters allowed)</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Summary_Short</td>
<td>Movie summary: sentence.</td>
<td>String – (Max 256 chars—special characters allowed) – ex &quot;Samantha is hired to plan a bat mitzvah; Charlotte tries to improve life with Trey.&quot;</td>
<td>Req</td>
</tr>
</tbody>
</table>

³⁾ Per ECN VC1.1-N-03008, 3/21/03, kb
⁹⁾ Added by VOD-CONTENT1.1-N-11.0085-1, 10/18/11, kb
¹⁰⁾ Per ECN VOD-CONTENT1.1-N-06.0034-1, 8/31/06, kb
<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOD or SVOD</td>
<td>Rating</td>
<td>MPAA or TV Rating, whichever is appropriate (see Annex A, Ratings and Advisories).</td>
<td>String, one rating per element, &lt;App_Data App=&quot;MOD&quot; Name=&quot;Rating&quot; Value=&quot;TV-14 D, L, S, V&quot;/&gt; &lt;App_Data App=&quot;MOD&quot; Name=&quot;Rating&quot; Value=&quot;PG&quot;/&gt;</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>MSORating[^1]</td>
<td>MSO applied rating for content not otherwise rated (see Annex A for examples).</td>
<td>String, one rating per element, &lt;App_Data App=&quot;MOD&quot; Name=&quot;MSORating&quot; Value=&quot;Age-14&quot;/&gt;</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Advisories</td>
<td>One content advisory code (see Annex A, Ratings and Advisories).</td>
<td>String, one advisory per element (max 1024 chars for all advisories) &lt;App_Data App=&quot;MOD&quot; Name=&quot;Advisories&quot; Value=&quot;S&quot;/&gt; &lt;App_Data App=&quot;MOD&quot; Name=&quot;Advisories&quot; Value=&quot;V&quot;/&gt;</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Audience[^13]</td>
<td>Field to indicate target audience (see Annex A for examples).</td>
<td>String, one rating per element, &lt;App_Data App=&quot;MOD&quot; Name=&quot;Audience&quot; Value=&quot;Adult&quot;/&gt;</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Closed_Captioning</td>
<td>A “Y” or “N” flag indicating Closed Captioning encoding.</td>
<td>String “Y” or “N”</td>
<td>Req[^14]</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Run_Time</td>
<td>Run time.</td>
<td>String – “hh:mm:ss”</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Display_Run_Time</td>
<td>Run time (for display).</td>
<td>String – “hh:mm”</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Year</td>
<td>Year of release.</td>
<td>String – “yyyy”</td>
<td>Req[^15]</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Actors[^17]</td>
<td>Actors – Last Name, First Name (for searching). The separator MUST be a “,” between the last name and the first name. On-air talent MAY be included.</td>
<td>String – (Max 35 per actor) – one actor per element. Ex. &lt;App_Data App=&quot;MOD&quot; Name=&quot;Actor&quot; Value=&quot;Willis,Bruce&quot;/&gt; &lt;App_Data App=&quot;MOD&quot; Name=&quot;Actor&quot; Value=&quot;Gere,Richard&quot;/&gt;</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Actors_Display[^18]</td>
<td>Actors – A human-readable string for display; use Name 1, Name 2.</td>
<td>String (1024 chars total all Actors) Ex: &quot;Tom Hanks, Robin Williams&quot;</td>
<td>Opt</td>
</tr>
</tbody>
</table>

[^1]: Per ECN VC1.1-N-02007, 3/31/03, kb
[^2]: Per ECN VC1.1-N-02007, 3/31/03, kb
[^3]: Per ECN VC1.1-N-02007, 3/31/03, kb
[^4]: Made Req by VOD-CONTENT1.1-N-10.0068-2, 10/18/11, kb
[^5]: Made Req by VOD-CONTENT1.1-N-10.0068-2, 10/18/11, kb
[^6]: Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06, kb
[^7]: Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06, kb
[^8]: Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06, kb
[^9]: Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06, kb
[^10]: Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06, kb
[^11]: Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06, kb
[^12]: Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06, kb
[^13]: Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06, kb
[^14]: Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06, kb
<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOD or SVOD</td>
<td>Writer_Display</td>
<td>Writer(s)—A human-readable string for display; use Name 1, Name 2.</td>
<td>String (1024 chars total all Writers) Ex: &quot;Francis Ford Coppola, Mario Puzo&quot;</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Director</td>
<td>Directors— Last Name, First Name The separator shall be a &quot;,&quot; between the</td>
<td>String – (Max 35 per director) – one director per element.</td>
<td>Opt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>last name and the first name.</td>
<td>&lt;App_Data App=&quot;MOD&quot; Name=&quot;Director&quot; Value=&quot;Puzo,Mario&quot;/&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&lt;App_Data App=&quot;MOD&quot; Name=&quot;Director&quot; Value=&quot;Lucas,George&quot;/&gt;</td>
<td></td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Producers</td>
<td>Producers— Last Name, First Name The separator shall be a &quot;,&quot; between the</td>
<td>String – (Max 91 per producer, 1024 all producers) – one producer per element.</td>
<td>Opt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>last name and the first name.</td>
<td>&lt;App_Data App=&quot;MOD&quot; Name=&quot;Producers&quot; Value=&quot;Barrymore,Drew&quot;/&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&lt;App_Data App=&quot;MOD&quot; Name=&quot;Producers&quot; Value=&quot;Lucas,George&quot;/&gt;</td>
<td></td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Studio</td>
<td>Studio (for display).</td>
<td>String - (Max 32 chars) Use [STUDIO] for Studio Name.</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Category</td>
<td>A nested list of human readable categories and sub-categories which effect the</td>
<td>String – (Max 256 per category component), one category per element.</td>
<td>Req</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UI presents the asset.</td>
<td>&lt;App_Data App=&quot;MOD&quot; Name=&quot;Category&quot; Value=&quot;Movies/Movies a-z&quot;/&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The value will contain an ordered sequence of components, each component</td>
<td>&lt;App_Data App=&quot;MOD&quot; Name=&quot;Category&quot; Value=&quot;Movies/Comedy&quot;/&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>separated using a &quot;/&quot;.</td>
<td>&lt;App_Data App=&quot;MOD&quot; Name=&quot;Category&quot; Value=&quot;TV/Home%2FCasa&quot;/&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Each line effectively represents a &quot;categorization&quot; for the Title.</td>
<td></td>
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<td></td>
<td></td>
<td>Percent signs and forward slashes within a component must be encoded as per</td>
<td></td>
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<td></td>
<td></td>
<td>section 2.2 of [RFC 1738] to allow use of the forward slash character within</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>a component (e.g., to display &quot;Home/Casa&quot;) to be distinguished from the</td>
<td></td>
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<td></td>
<td></td>
<td>component separator.</td>
<td></td>
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<td></td>
<td></td>
<td>Literal forward slashes within the App_Data Value represent separators that</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>delineate components.</td>
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<td></td>
<td></td>
<td>Each portion of the App_Data Value</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>(&quot;Home%2FCasa&quot;) goes through URL-style decoding to yield the intended</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>component value (&quot;Home/Casa&quot;). Each resultant component value may then be</td>
<td></td>
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<td>compared to the 20-character maximum size limit and other applicable</td>
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<td></td>
<td></td>
<td>constraints.</td>
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<td></td>
<td>Consumers of this data must accept and properly decode any URL-style</td>
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<td></td>
<td>encodings present in this value, to allow other characters to be used within</td>
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<tr>
<td></td>
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<td>component names where XML encoding alternatives cannot accomplish the same</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>task.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

19 Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06, kb
20 Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06, kb
21 Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06, kb
22 Per ECN VOD-CONTENT1.1-N-04.0021-2, 4/20/06, kb
<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOD or SVOD</td>
<td>Season_Premiere</td>
<td>A flag indicating Title is a Season Premiere.</td>
<td>String &quot;Y&quot; or &quot;N&quot;</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Season_Finale</td>
<td>A flag indicating Title is a Season Finale.</td>
<td>String &quot;Y&quot; or &quot;N&quot;</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Genre</td>
<td>Genres – Subject-matter classification of the show. See [GENRE] for values.</td>
<td>String – There may be at most 5</td>
<td>Req</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>occurrences of &quot;Genre&quot; for one Title.</td>
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<td></td>
<td>Each value is at most 32 characters</td>
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<td></td>
<td>long.</td>
<td></td>
</tr>
<tr>
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<td></td>
<td>&lt;App_Data App=&quot;MOD&quot; Name=&quot;Genre&quot; Value=&quot;Action&quot;/&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&lt;App_Data App=&quot;MOD&quot; Name=&quot;Genre&quot; Value=&quot;Comedy&quot;/&gt;</td>
<td></td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Show_Type</td>
<td>Indicate usage of the release. See suggestions in [GENRE].:*</td>
<td>String – one Show_Type of the following:</td>
<td>Req</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Series</td>
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<td></td>
<td>Sports</td>
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<td>Music</td>
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<td>Ad</td>
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<td>Miniseries</td>
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<td>Movie</td>
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<td></td>
<td>Other</td>
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<td>Kids</td>
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<td>Events</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lifestyle</td>
<td></td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Chapter</td>
<td>Chapter Location and Heading pair, the location formatted in SMPTE format</td>
<td>String (max 128 chars, 1024 total for all headings) containing the two components (SMPTE time code, heading), one per element. Ex.</td>
<td>Opt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(HH:MM:SS:FF). The separator shall be a &quot;,&quot; between the code and heading.</td>
<td>&lt;App_Data App=&quot;MOD&quot; Name=&quot;Chapter&quot; Value=&quot;01:01:01:01,Opening Scene&quot;/&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note that SMPTE time codes must be monotonically increasing although ordering of elements in SMPTE time code order is not required.</td>
<td>&lt;App_Data App=&quot;MOD&quot; Name=&quot;Chapter&quot; Value=&quot;01:30:01:01,Max Encounters A Problem&quot;/&gt;</td>
<td></td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Box_Office</td>
<td>Box office dollars of revenue.</td>
<td>Integer</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Propagation_Priority</td>
<td>An integer from 1(high) to 10(low) that can be used to assist with determining the priority of propagation within an MSO network. NOTE: This value is set within a Provider/Product, therefore it cannot be used to compare assets outside of that group.</td>
<td>Integer</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Billing_ID</td>
<td>Content provider asset ID to tie into royalty reporting.</td>
<td>Alphanumeric Base 36 (0-9 and A-Z. Max 5 places)27</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Licensing_Window_Start</td>
<td>Start date and time of licensing window; if no time assume 00:00:00; all times are viewer local time on a 24 hour clock. 28</td>
<td>String – &quot;yyyyMMdd-dd&quot; or &quot;yyyyMMddThh:mm:ss&quot; or &quot;yyyyMMdd-ddThh:mm&quot;</td>
<td>Req</td>
</tr>
</tbody>
</table>

23 Per ECN VOD-CONTENT1.1-N-06.0027-1, 4/28/06, kb
24 Made Req by VOD-CONTENT1.1-N-10.0068-2, 10/18/11, kb
25 Per ECN VOD-CONTENT1.1-N-06.0035-4, 8/31/06, kb
26 Made Req by VOD-CONTENT1.1-N-10.0068-2, 10/18/11, kb
27 Per ECN VOD-CONTENT1.1-N-06.0027-1, 4/28/06, kb
28 Per ECN VOD-CONTENT1.1-N-03.0015-2, 12/22/03, kb
<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOD or SVOD</td>
<td>Licensing_Window_End</td>
<td>Ending date and time of licensing window; if no time assume 23:59:59; all times are viewer local time on a 24 hour clock. ²⁹</td>
<td>String – &quot;yyyy-mm-dd&quot; or &quot;yyyy-mm-ddThh:mm:ss&quot; or &quot;yyyy-mm-ddThh:mm&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Preview_Period</td>
<td>Preview period in seconds.</td>
<td>Integer</td>
<td>Req (*Opt for SVOD)</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Home_Video_Window</td>
<td>Number of days between Home Video release to PPV/MOD Release.</td>
<td>Integer</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Display_As_New</td>
<td>Number of days from the Licensing_Window_Start date that the application should show this title as &quot;New&quot; or similar marking.</td>
<td>Integer – number of days</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Display_As_Last_Chance</td>
<td>Number of days from the Licensing_Window_End date that the application should show this title as &quot;Last Chance&quot; or similar marking.</td>
<td>Integer – number of days</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Maximum_Viewing_Length</td>
<td>Duration of time defining the maximum amount of time a title can be made available for viewing once selected for purchase by a customer.</td>
<td>String – &quot;DD:HH:MM&quot; ex. &quot;00:24:00&quot;</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Provider_QA_Contact</td>
<td>A contact identifier in case there are quality issues relating to this movie.</td>
<td>String</td>
<td>Req (*Opt for SVOD)</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Contract_Name</td>
<td>Identifying name of the contract under which this title is licensed.</td>
<td>String</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Suggested_Price</td>
<td>Suggested Price to assist in determining the retail pricing.</td>
<td>Currency – ex. 3.95</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Distributor_Royalty_Perc</td>
<td>Percentage split of the royalty over the minimum that goes to the Distributor (i.e., in DEMAND). Maximum of 2 digits right of decimal allowed.</td>
<td>Numeric-percentage – ex. 52.5</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Distributor_Royalty_Minimum</td>
<td>Minimum royalty in currency that goes to the Distributor (i.e., in DEMAND). Maximum of 3 digits right of decimal allowed.</td>
<td>Currency – ex. 1.995</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Distributor_Royalty_Flat_Rate</td>
<td>Flat rate royalty in currency that goes to the Distributor (i.e., in DEMAND). Maximum of 3 digits right of decimal allowed.</td>
<td>Currency – ex. 1.995</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Distributor_Name</td>
<td>The name of the distributor (for reporting).</td>
<td>String (Max 128 Chars)</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Studio_Royalty_Perc</td>
<td>Percentage split of the royalty over the minimum that goes to the Studio (i.e., Warner Brothers). Maximum of 2 digits right of decimal allowed.</td>
<td>Numeric-percentage – ex. 52.5</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Studio_Royalty_Minimum</td>
<td>Minimum royalty in currency that goes to the Studio (i.e., Warner Brothers). Maximum of 3 digits right of decimal allowed.</td>
<td>Currency – ex. 1.995</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Studio_Royalty_Flat_Rate</td>
<td>Flat rate royalty that goes to the Studio (i.e., Warner Brothers). Maximum of 3 digits right of decimal allowed.</td>
<td>Currency – ex. 1.995</td>
<td>Opt</td>
</tr>
</tbody>
</table>

²⁹ Per ECN VOD-CONTENT1.1-N-03.0015-2, 12/22/03, kb; VOD-CONTENT1.1-N-04.0020-1, 4/20/06, kb
<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOD or SVOD</td>
<td>Studio_Name</td>
<td>The name of the studio (for reporting).</td>
<td>String (Max 128 Chars)</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Studio_Code</td>
<td>A code utilized for billing purposes, typically three digits.</td>
<td>String – (Max 8 char) Studio code from [STUDIO].</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Programmer_Call_Letters</td>
<td>A sequence of characters to be displayed with a title, providing a &quot;brand label&quot; for the title.</td>
<td>String – (Max 6 characters). Restricted to Capital Letters (A-Z), Lower Case Letters (a-z), Numbers (0-9) and/or Approved Symbols (ampersand, exclamation point and period) At most one per title. Examples: &quot;TNT &quot;, &quot;ESPN2&quot;, &quot;RIPE&quot;.</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Recording_Artist</td>
<td>Listing that provides the recording artist of a song in human readable form. Examples include – Bare Naked Ladies, REM, Justin Timberlake, and U2.</td>
<td>String – (Max 25 per one element). One Recording_Artist per asset. Recording_Artist = Bare Naked Ladies Recording_Artist = REM Recording_Artist = Justin Timberlake</td>
<td>Req. if content is a music video or concert</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Song_Title</td>
<td>Listing that provides the name of the song or concert in the video asset. Examples include – “This One Goes Out to the One I Love”, “Sexy Back”, “It’s All Been Done”, “War Tour”.</td>
<td>String – (Max 40 per one element). One Song_Title per asset. Song_Title = This One Goes Out to the One I Love Song_Title = Sexy Back Song_Title = It’s All Been Done Song_Title = War Tour</td>
<td>Req. if content is a music video or concert</td>
</tr>
</tbody>
</table>

*Note:* While the Genre and Show_Type field have recommended associations, Genre text may be applied to any Show_Type if it makes sense for the content applied. Ex. "Sports" as Show_Type and "Food" as Genre.

### 5.2.2 Title Content

None.

File name should be OS independent (i.e., alpha numeric, underscore).

### 5.2.3 Title Assets

- Movie asset.
- Poster asset.
- Box cover asset.
- Preview asset.
- Trick asset (may be multiple).
- Encrypted asset (may be for any asset(s) within the Title).

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30 Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06, kb
31 Added per ECN VOD-CONTENT1.1-N-08.0054-2, 12/18/09, kb
32 Added per ECN VOD-CONTENT1.1-N-08.0056-2, 12/18/09, kb
33 Added per ECN VOD-CONTENT1.1-N-08.0056-2, 12/18/09, kb
34 Per ECN VOD-CONTENT1.1-N-03.0013-4, 12/22/03, kb
### 5.3 Movie asset

#### 5.3.1 Movie Metadata

<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMS</td>
<td>Provider</td>
<td>A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.</td>
<td>String – ex. &quot;IN Demand&quot; or &quot;HBO&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Product</td>
<td>An identifier for the product offering.</td>
<td>String (Max 20 Chars)</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_Name</td>
<td>A string containing the identifying name of the asset. Asset names must be unique within a product.</td>
<td>String (Max 50 chars) Ex. &quot;WestCravensDracula2000movie&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Major</td>
<td>An integer representing the major version number.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Minor</td>
<td>An integer representing the minor version number.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Creation_Date</td>
<td>A string representing the date on which the Asset was created.</td>
<td>String – &quot;yyyy-mm-dd&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Provider_ID</td>
<td>A unique identifier for the provider of the Asset. The Provider_ID must be set to a registered internet domain name restricted to at most 20 lower-case characters and belonging to the provider. For example a valid Provider_ID for CableLabs is &quot;cableLabs-films.com&quot; (19 chars).</td>
<td>String- Ex. &quot;indemand.com&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_ID</td>
<td>An identifier for the asset that is unique within a provider's asset ID space. The unique portable identification of an asset is the combinations of its Provider_ID and its Asset_ID.</td>
<td>String (Fixed 20 chars, alpha/numeric) 4 alpha characters followed by 16 numbers, no spaces- Ex. &quot;ABCD1234567890123456&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_Class</td>
<td>A system-level type for the asset. This is intended to be helpful for the application mapping and routing, and expected to be more general than the Type value for the content. Expected value is &quot;movie&quot;.</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Verb</td>
<td>A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string (&quot;&quot;), and &quot;DELETE&quot;.</td>
<td>String</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Encryption</td>
<td>&quot;Y&quot; or &quot;N&quot; flag indicating encryption is required.</td>
<td>String &quot;Y&quot; or &quot;N&quot;&lt;App_Data App=&quot;MOD&quot; Name=&quot;Encryption&quot; Value=&quot;Y&quot;/&gt;</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Type</td>
<td>The asset type that determines how or where it is stored (e.g., in the repository). Values are expected to be: &quot;movie&quot;, &quot;box cover&quot;, &quot;poster&quot;, and &quot;preview&quot; for the corresponding assets. Other asset types can be specified.</td>
<td>&quot;movie&quot;</td>
<td>Req</td>
</tr>
</tbody>
</table>

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35 Per ECN VC1.1-N-03002, 3/6/03, kb
36 Per ECN VC1.1-N-03008, 3/21/03, kb
37 Per ECN VOD-CONTENT1.1-N-03.0019-1, 12/22/03, kb
<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOD or SVOD</td>
<td>Audio_Type</td>
<td>Audio Types available for this content (Dolby ProLogic, Dolby Digital, Stereo, Mono, Dolby 5.1). NOTE: Per [CEP3.0], all audio shall be encoded Dolby Digital AC-3 not MPEG-2 Audio.</td>
<td>String – one audio type per element.</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Screen_Format</td>
<td>Screen format (Standard, Widescreen, Letterbox, OAR) (for display).</td>
<td>String</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Resolution48</td>
<td>Other values may be supplied. Currently, defined values are one of &quot;480i&quot;, &quot;720p&quot;, &quot;1080i&quot;, or &quot;1080p&quot;</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Frame_Rate39</td>
<td>Other values may be supplied. Currently, defined values are one of 24, 30, or 60.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Codec40</td>
<td>Other values may be supplied. Currently, defined values are one of &quot;MPEG2&quot; or when AVC/MPEG4 one of &quot;AVC MP@L30&quot;, &quot;AVC MP@L40&quot;, &quot;AVC MP@L42&quot;, &quot;AVC HP@L30&quot;, &quot;AVC HP@L40&quot;, &quot;AVC HP@L42&quot;</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Languages</td>
<td>Available languages. NOTE: Audio PID(s) shall correspond with Languages. Two character language code from 639-1.</td>
<td>String – (Max 20 per language, 1024 total), one language per element.</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Subtitle_Languages</td>
<td>Languages of sub-titles. Two character language code from 639-1.</td>
<td>String – (Max 20 per language, 1024 total), one language per element.</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Dubbed_Languages</td>
<td>Available dubbed languages – absent if not dubbed. Two character language code from 639-1.</td>
<td>String – (Max 20 per language, 1024 total), one language per element.</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Copy_Protection</td>
<td>A &quot;Y&quot; or &quot;N&quot; flag indicating copy protection is required.</td>
<td>String &quot;Y&quot; or &quot;N&quot;</td>
<td>Opt</td>
</tr>
</tbody>
</table>

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38 Added per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09, kb
39 Added per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09, kb
40 Added per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09, kb
<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOD or SVOD</td>
<td>Copy_Protection_Verbose$^{41}$</td>
<td>If “Y” asserted, all four (APS, EMI, CIT, and CGMS/A) copy protection fields MUST be included in the content metadata.</td>
<td>String “Y” or “N”</td>
<td>Optional</td>
</tr>
</tbody>
</table>
| MOD or SVOD | Analog_Protection_System$^{42}$ | An integer representing the value of APS.  
0 – Analog protection off  
1 – AGC process on, split burst off  
2 – AGC process on, 2-line split burst on  
3 – AGC process on, 4-line split burst on | Integer – values 0-3 | Optional Required if Copy_Protection and Copy_Protection_Verbose are asserted |
| MOD or SVOD | Encryption_Mode_Indicator$^{43}$ | An integer representing the value of EMI.  
0 – Copying is permitted  
1 – No further copying is permitted  
2 – One generation copy is permitted  
3 – Copying is prohibited | Integer – values 0-3 | Optional Required if Copy_Protection and Copy_Protection_Verbose are asserted |
| MOD or SVOD | Constrained_Image_Trigger$^{44}$ | An integer representing the value of CIT.  
0 – No image constraint asserted  
1 – Image constraint required | Integer – value 0 or 1 | Optional Required if Copy_Protection and Copy_Protection_Verbose are asserted |
| MOD or SVOD | CGMS_A$^{45}$ | An integer representing the value of the Copy Generation Management System (Analog).  
0 – Copying is permitted without restriction  
1 – No further copying permitted  
2 – One generation of copies may be made  
3 – No copying is permitted | Integer – values 0-3 | Optional Required if Copy_Protection and Copy_Protection_Verbose are asserted |
| MOD or SVOD | Viewing_Can_Be_Resumed$^{46}$ | A flag indicating that the Movie can be resumed at a later time. If the flag is not present the attribute defaults to “Y”. | String “Y” or “N” | Opt |
| MOD or SVOD | Bit_Rate$^{47}$ | The maximum overall bit rate of the included content, in kilobits per second. | Numeric – ex. 3750 | Req |
| MOD or SVOD | Content_FileSize | File Size (in bytes) of the included content for Quality Assurance & processing. | Integer – unsigned 64 bit | Req |
| MOD or SVOD | Content_CheckSum | A string containing a hex number representing a MD5 (RFC 1321) message digest value for Quality Assurance. | String - Hex (32 chars) | Req |

$^{41}$ Added by ECN VOD-CONTENT1.1-N-05.0022-2, 4/20/06, kb  
$^{42}$ Added by ECN VOD-CONTENT1.1-N-05.0022-2, 4/20/06, kb  
$^{43}$ Added by ECN VOD-CONTENT1.1-N-05.0022-2, 4/20/06, kb  
$^{44}$ Added by ECN VOD-CONTENT1.1-N-05.0022-2, 4/20/06, kb  
$^{45}$ Added by ECN VOD-CONTENT1.1-N-05.0022-2, 4/20/06, kb  
$^{46}$ Added by ECN VOD-CONTENT1.1-N-05.0022-2, 4/20/06, kb  
$^{47}$ Per ECN VOD-CONTENT1.1-N-03.0017-1, 12/22/03, kb  
$^{47}$ Added per ECN VOD-CONTENT1.1-N-05.0023-1, modified per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09, kb
<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOD or SVOD</td>
<td>trickModesRestricted $^{48}$</td>
<td>Single string comma separated list of restricted trick modes. An enumeration indicating that the referenced content asset may have restricted on trick modes (fast forward/rewind, etc.) and in the event it does, these are what is restricted.</td>
<td>ENUM string list</td>
<td>Opt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt;App_Data App=&quot;MOD&quot; Name=&quot;trickModesRestricted&quot; Value=&quot;FF,RW,Pause&quot;/&gt; &lt;App_Data App=&quot;MOD&quot; Name=&quot;trickModesRestricted&quot; Value=&quot;FF&quot;/&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Selectable_Output_Control $^{49}$</td>
<td>A flag indicating if output control is required. N – No output control asserted Y – Output control required</td>
<td>String &quot;Y&quot; or &quot;N&quot;</td>
<td>Optional Required if Copy_Protection or Copy_Protection and Copy_Protection_Verbose are asserted</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>3D_Mode $^{50}$</td>
<td>An integer representing the value of 3D_Mode: 0 - Each component plane of the decoded frames contains a &quot;checkerboard&quot; based interleaving of corresponding planes of two constituent frames. 1- Each component plane of the decoded frames contains a column-based interleaving of corresponding planes of two constituent frames. 2 - Each component plane of the decoded frames contains a row-based interleaving of corresponding planes of two constituent frames. 3 - Each component plane of the decoded frames contains a side-by-side packing arrangement of corresponding planes of two constituent frames. 4 - Each component plane of the decoded frames contains top-bottom packing arrangement of corresponding planes of two constituent frames. 5 - The component planes of the decoded frames in output order form a temporal interleaving of alternating first and second constituent frames. NOTE: 3D formats are constrained by [CEP3.0].</td>
<td>Integer</td>
<td>Optional Required if content is stereoscopic 3D</td>
</tr>
</tbody>
</table>

**Note:** An implementation of this field needs careful consideration. For example, when contents files with differing trick mode restrictions are used in a playlist implementation that combines two or more 1.1 assets, the current playlist element's trick mode control value takes precedence. When an element with trick mode restrictions is entered during trick mode playout, it may result in a change of stream state (for example, from fast forward to play) and may override the (user) requested trick mode. Subsequent trick mode commands received during the playout of the restricted element will be ignored if they are not compatible with the current trick mode restrictions. Upon exiting the restricted element(s), the stream will remain in its current state if that state is compatible with trick mode restrictions specified for the subsequent element.

$^{48}$ Added by ECN VOD-CONTENT1.1-N-09.0062-2, 12/18/09, kb.
$^{49}$ Added by ECN VOD-CONTENT1.1-N-10.0069-2, 10/18/11, kb.
$^{50}$ Added by ECN VOD-CONTENT1.1-N-10.0070-3, 10/18/11, kb.
It should be noted that placing content files with trick mode restrictions in the middle of a playlist containing unrestricted contents may result in undesirable interactions, particularly if rewind is prohibited. 48

5.3.2 Movie Content

A single MPEG transport stream encoded as described in [CEP3.0].

This asset contains the feature of this movie title. Any trailers for other titles or advertising is included in this transport stream.

File name should be OS independent (i.e., alpha numeric, underscore).

5.3.3 Movie Assets

None.

5.4 Still-Image asset

5.4.1 Still-Image Metadata

<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMS</td>
<td>Provider</td>
<td>A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.</td>
<td>String – ex. &quot;IN Demand&quot; or &quot;HBO&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Product</td>
<td>An identifier for the product offering.</td>
<td>String (Max 20 Chars)</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_Name</td>
<td>A string containing the identifying name of the asset. Asset names must be unique within a product.</td>
<td>String (Max 50 chars) Ex. &quot;WesCravensDracula2000boxcover&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Major</td>
<td>An integer representing the major version number.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Minor</td>
<td>An integer representing the minor version number.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Creation_Date</td>
<td>A string representing the date on which the Asset was created.</td>
<td>String – &quot;yyyy-mm-dd&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Provider_ID</td>
<td>A unique identifier for the provider of the Asset. The Provider_ID must be set to a registered internet domain name restricted to at most 20 lower-case characters and belonging to the provider. For example a valid Provider_ID for CableLabs is &quot;cablelabs-films.com&quot; (19 chars).</td>
<td>String- Ex. &quot;indemand.com&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_ID</td>
<td>An identifier for the asset that is unique within a provider's asset ID space. The unique portable identification of an asset is the combinations of its Provider_ID and its Asset_ID.</td>
<td>String (Fixed 20 chars, alpha/numeric) 4 alpha characters followed by 16 numbers. no spaces-Ex. &quot;ABCD1234567890123456&quot;</td>
<td>Req</td>
</tr>
</tbody>
</table>

51 Per ECN VC1.1-N-03002, 3/6/03, kb
52 Per ECN VC1.1-N-03008, 3/21/03, kb
<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMS</td>
<td>Asset_Class</td>
<td>A system-level type for the asset. This is intended to be helpful for the application mapping and routing, and expected to be more general than the Type value for the content. Expected value is &quot;box cover&quot; or &quot;poster&quot;.</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Verb</td>
<td>A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string (&quot;&quot;), and &quot;DELETE&quot;.</td>
<td>String</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Type</td>
<td>The asset type that determines how or where it is stored (e.g., in the repository). Values are expected to be: &quot;movie&quot;, &quot;box cover&quot;, &quot;poster&quot;, and &quot;preview&quot; for the corresponding assets. Other asset types can be specified.</td>
<td>&quot;box cover&quot; or &quot;poster&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Image_Aspect_Ratio</td>
<td>The pixel aspect ratio for the image (e.g., &quot;320x240&quot;).</td>
<td>String</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Content_FileSize</td>
<td>File Size (in bytes) of the included content for Quality Assurance &amp; processing.</td>
<td>Integer – unsigned 64 bit</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Content_CheckSum</td>
<td>A string containing a hex number representing a MD5 (RFC 1321) message digest value for Quality Assurance.</td>
<td>String - Hex (32 chars)</td>
<td>Req</td>
</tr>
</tbody>
</table>

### 5.4.2 Still-Image Content

A single BMP compressed image.

This image is for the "Additional information" interface or to be shown on the "MOD/VOD" Library screen, and is additionally used as a fallback when the preview is not available. Multiple Still-Image Assets are acceptable, however, only one "box cover" and one "poster" are permitted with this version of the spec.

File name should be OS independent (i.e., alpha numeric, underscore).

### 5.4.3 Still-Image Assets

None.

### 5.5 Preview asset

#### 5.5.1 Preview Metadata

**Table 5 - Preview Metadata**

<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMS</td>
<td>Provider</td>
<td>A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.</td>
<td>String – ex. &quot;IN Demand&quot; or &quot;HBO&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Product</td>
<td>An identifier for the product offering.</td>
<td>String (Max 20 Chars)</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_Name</td>
<td>A string containing the identifying name of the asset. Asset names must be unique within a product.</td>
<td>String (Max 50 chars) Ex. &quot;WesCravensDracula2000 preview&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>Spec</td>
<td>Metadata Name</td>
<td>Description</td>
<td>Type</td>
<td>Required vs Optional</td>
</tr>
<tr>
<td>-------</td>
<td>---------------</td>
<td>-------------</td>
<td>------</td>
<td>----------------------</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Major</td>
<td>An integer representing the major version number.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Minor</td>
<td>An integer representing the minor version number.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Description</td>
<td>A human-readable string describing the Asset.</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Creation_Date</td>
<td>A string representing the date on which the Asset was created.</td>
<td>String – “yyy-mm-dd”</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Provider_ID</td>
<td>A unique identifier for the provider of the Asset. The Provider_ID must be set to a registered internet domain name restricted to at most 20 lower-case characters and belonging to the provider. For example a valid Provider_ID for CableLabs is “cablelabs-films.com” (19 chars).</td>
<td>String- Ex. “indemand.com”</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_ID</td>
<td>An identifier for the asset that is unique within a provider's asset ID space. The unique portable identification of an asset is the combinations of its Provider_ID and its Asset_ID.</td>
<td>String (Fixed 20 chars, alpha/numeric) 4 alpha characters followed by 16 numbers, no spaces- Ex. “ABCD1234567890123456”</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_Class</td>
<td>A system-level type for the asset. This is intended to be helpful for the application mapping and routing, and expected to be more general than the Type value for the content. Expected value is “preview”.</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Verb</td>
<td>A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string (“.”) and “DELETE”.</td>
<td>String</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Rating</td>
<td>MPAA or TV Rating. (See Annex A, Ratings and Advisories).</td>
<td>String, one rating per element.</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>MSORating</td>
<td>MSO applied rating for content not otherwise rated (see Annex A for examples).</td>
<td>String, one rating per element,</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Audience</td>
<td>Field to indicate target audience (see Annex A for examples).</td>
<td>String, one rating per element,</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Run_Time</td>
<td>Run time for this preview.</td>
<td>String – “hh:mm:ss”</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Type</td>
<td>The asset type that determines how or where it is stored (e.g., in the repository). Values are expected to be: “movie”, “box cover”, “poster”, and “preview” for the corresponding assets. Other asset types can be specified.</td>
<td>“preview”</td>
<td>Req</td>
</tr>
</tbody>
</table>

53 Per ECN VC1.1-N-03002, 3/6/03, kb
54 Per ECN VC1.1-N-03008, 3/21/03, kb
55 Per ECN VC1.1-N-02007, 3/31/03, kb
56 Per ECN VC1.1-N-02007, 3/31/03, kb
<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOD or SVOD</td>
<td>Audio_Type</td>
<td>Audio Types available for this content (Dolby ProLogic, Dolby Digital, Stereo, Mono, Dolby 5.1). NOTE: Per [CEP3.0], all audio shall be encoded Dolby Digital AC-3 not MPEG-2 Audio.</td>
<td>String – one audio type per element. &lt;App_Data App=&quot;MOD&quot; Name=&quot;Audio_Type&quot; Value=&quot;Stereo&quot;/&gt; &lt;App_Data App=&quot;MOD&quot; Name=&quot;Audio_Type&quot; Value=&quot;Mono&quot;/&gt;</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Screen_Format</td>
<td>Screen format (Standard, Widescreen, Letterbox, OAR) (for display).</td>
<td>String</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Resolution</td>
<td>Other values may be supplied. Currently, defined values are one of &quot;480i&quot;, &quot;720p&quot;, &quot;1080i&quot;, or &quot;1080p&quot;.</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Frame_Rate</td>
<td>Other values may be supplied. Currently, defined values are one of 24, 30, or 60.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Codec</td>
<td>Other values may be supplied. Currently, defined values are one of &quot;MPEG2&quot; or when AVC/MPEG4 one of &quot;AVC MP@L30&quot;, &quot;AVC MP@L40&quot;, &quot;AVC MP@L42&quot;, &quot;AVC HP@L30&quot;, &quot;AVC HP@L40&quot;, &quot;AVC HP@L42&quot;</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Languages</td>
<td>Available languages. Two character language code from 639-1.</td>
<td>String – (Max 20 per language, 1024 total), one language per element. &lt;App_Data App=&quot;MOD&quot; Name=&quot;Languages&quot; Value=&quot;en&quot;/&gt; &lt;App_Data App=&quot;MOD&quot; Name=&quot;Languages&quot; Value=&quot;es&quot;/&gt;</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Subtitle_Languages</td>
<td>Languages of sub-titles. Two character language code from 639-1.</td>
<td>String – (Max 20 per language, 1024 total), one language per element. &lt;App_Data App=&quot;MOD&quot; Name=&quot;Subtitle_Languages&quot; Value=&quot;en&quot;/&gt; &lt;App_Data App=&quot;MOD&quot; Name=&quot;Subtitle_Languages&quot; Value=&quot;es&quot;/&gt;</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Dubbed_Languages</td>
<td>Available dubbed languages – absent if not dubbed. Two character language code from 639-1.</td>
<td>String – (Max 20 per language, 1024 total), one language per element. &lt;App_Data App=&quot;MOD&quot; Name=&quot;Dubbed_Languages&quot; Value=&quot;en&quot;/&gt; &lt;App_Data App=&quot;MOD&quot; Name=&quot;Dubbed_Languages&quot; Value=&quot;es&quot;/&gt;</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Bit_Rate</td>
<td>The maximum overall bit rate of the included content, in kilobits per second.</td>
<td>Numeric – ex. 3750</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Content_FileSize</td>
<td>File Size (in bytes) of the included content for Quality Assurance &amp; processing.</td>
<td>Integer – unsigned 64 bit</td>
<td>Req</td>
</tr>
</tbody>
</table>

57 Added per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09, kb
58 Added per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09, kb
59 Added per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09, kb
60 Added per ECN VOD-CONTENT1.1-N-05.0023-1, modified per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09, kb
### Spec Metadata Table

<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOD or SVOD</td>
<td>ContentChecksum</td>
<td>A string containing a hex number representing a MD5 (RFC 1321) message digest value for Quality Assurance.</td>
<td>String - Hex (32 chars)</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>trickModesRestricted</td>
<td>Single string comma separated list of restricted trick modes. An enumeration indicating that the referenced content asset may have restricted on trick modes (fast forward/rewind, etc.) and in the event it does, these are what is restricted.</td>
<td>ENUM string list</td>
<td>Opt</td>
</tr>
</tbody>
</table>

#### Note
An implementation of this field needs careful consideration. For example, when contents files with differing trick mode restrictions are used in a playlist implementation that combines two or more 1.1 assets, the current playlist element's trick mode control value takes precedence. When an element with trick mode restrictions is entered during trick mode playout, it may result in a change of stream state (for example, from fast forward to play) and may override the (user) requested trick mode. Subsequent trick mode commands received during the playout of the restricted element will be ignored if they are not compatible with the current trick mode restrictions. Upon exiting the restricted element(s), the stream will remain in its current state if that state is compatible with trick mode restrictions specified for the subsequent element.

It should be noted that placing content files with trick mode restrictions in the middle of a playlist containing unrestricted contents may result in undesirable interactions, particularly if rewind is prohibited.\(^{61}\)

#### 5.5.2 Preview Content

A single MPEG transport stream encoded as described in [CEP3.0].

This asset contains the preview for this title.

File name should be OS independent (i.e., alpha numeric, underscore).

#### 5.5.3 Preview Assets

None.

#### 5.6 TRICK Asset\(^{62}\)

##### 5.6.1 Trick Metadata

#### Table 6 - Trick Metadata

<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMS</td>
<td>Provider</td>
<td>A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.</td>
<td>String – ex. &quot;IN Demand&quot; or &quot;HBO&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Product</td>
<td>An identifier for the product offering.</td>
<td>String (Max 20 Chars)</td>
<td>Req</td>
</tr>
</tbody>
</table>

\(^{61}\) Added per ECN VOD-CONTENT1.1-N-09.0062-2, 12/18/09, kb

\(^{62}\) Per ECN VOD-CONTENT1.1-N-03.0013-4, 12/22/03, kb
<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMS</td>
<td>Asset_Name</td>
<td>A string containing the identifying name of the asset. Asset names must be unique within a product.</td>
<td>String (Max 50 chars) Ex. &quot;WesCravensDracula2000trick&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Major</td>
<td>An integer representing the major version number.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Minor</td>
<td>An integer representing the minor version number.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Creation_Date</td>
<td>A string representing the date on which the Asset was created.</td>
<td>String – &quot;yyyy-mm-dd&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Provider_ID</td>
<td>A unique identifier for the provider of the Asset. The Provider_ID must be set to a registered internet domain name restricted to at most 20 lower-case characters and belonging to the provider. For example a valid Provider_ID for CableLabs is &quot;cableLabs-films.com&quot; (19 chars).</td>
<td>String- Ex. &quot;indemand.com&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_ID</td>
<td>An identifier for the asset that is unique within a provider's asset ID space. The unique portable identification of an asset is the combinations of its Provider_ID and its Asset_ID.</td>
<td>String (Fixed 20 chars, alpha/numeric) 4 alpha characters followed by 16 numbers, no spaces-Ex. &quot;ABCD1234567890123456&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_Class</td>
<td>A system-level type for the asset. This is intended to be helpful for the application mapping and routing, and expected to be more general than the Type value for the content.</td>
<td>String. Expected value is &quot;trickfile&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Verb</td>
<td>A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string (&quot;&quot;), and &quot;DELETE&quot;.</td>
<td>String</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Vendor_Name</td>
<td>The name of the vendor defining the format under which this asset is recognized.</td>
<td>String</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Vendor_Product</td>
<td>A string identifying the Video Server product under which this trick file format is used.</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>For_Version</td>
<td>The version associated with either the Vendor_Product or the Trick_Mode, as arranged, in order to assure correct processing of the file.</td>
<td>String</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Trick_Mode</td>
<td>Specific trick mode or file type.</td>
<td>String, Ex. &quot;FFWD&quot;, FREV&quot;, &quot;Index&quot;, &quot;All&quot;, &quot;Archive&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Bit_Rate</td>
<td>The maximum overall bit rate of the included content, in kilobits per second.</td>
<td>Numeric – ex. 3750</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Content_FileSize</td>
<td>File Size (in bytes) of the included content for Quality Assurance &amp; processing.</td>
<td>Integer – unsigned 64 bit</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Content_CheckSum</td>
<td>A string containing a hex number representing a MD5 (RFC 1321) message digest value for Quality Assurance.</td>
<td>String - Hex (32 chars)</td>
<td>Req</td>
</tr>
</tbody>
</table>

---

63 Added per ECN VOD-CONTENT1.1-N-05.0023-1, modified per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09, kb
5.6.2 TRICK Content

A single content file encoded for trick mode playback.

File name should be OS independent (i.e., alpha numeric, underscore).

5.7 Encrypted Asset[^64]

For a MOD Title, an enclosed Encrypted Asset can be assumed to be of the Movie, unless otherwise specified by the available metadata as defined below.

5.7.1 Encrypted Asset Metadata

<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMS</td>
<td>Provider</td>
<td>A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.</td>
<td>String – ex. &quot;IN Demand&quot; or &quot;HBO&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Product</td>
<td>An identifier for the product offering.</td>
<td>String (Max 20 Chars)</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_Name</td>
<td>A string containing the identifying name of the asset. Asset names must be unique within a product.</td>
<td>String (Max 50 chars) Ex. &quot;WesCravensDracula2000encrypted&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Major</td>
<td>An integer representing the major version number.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Minor</td>
<td>An integer representing the minor version number.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Creation_Date</td>
<td>A string representing the date on which the Asset was created.</td>
<td>String – &quot;yyyy-mm-dd&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Provider_ID</td>
<td>A unique identifier for the provider of the Asset. The Provider_ID must be set to a registered internet domain name restricted to at most 20 lower-case characters and belonging to the provider. For example a valid Provider_ID for CableLabs is &quot;cableLabs-films.com&quot; (19 chars).</td>
<td>String- Ex. &quot;indemand.com&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_ID</td>
<td>An identifier for the asset that is unique within a provider's asset ID space. The unique portable identification of an asset is the combinations of its Provider_ID and its Asset_ID.</td>
<td>String (Fixed 20 chars, alpha/numeric) 4 alpha characters followed by 16 numbers, no spaces-Ex. &quot;ABCD1234567890123456&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_Class</td>
<td>A system-level type for the asset. This is intended to be helpful for the application mapping and routing, and expected to be more general than the Type value for the content. Expected value is &quot;encrypted&quot;.</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Verb</td>
<td>A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string (&quot;&quot;), and &quot;DELETE&quot;.</td>
<td>String</td>
<td>Opt</td>
</tr>
</tbody>
</table>

[^64]: Per ECN VOD-CONTENT1.1-N-03.0013-4, 12/22/03, kb
<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOD or SVOD</td>
<td>Asset_Encrypted</td>
<td>Asset ID of the asset for which content is encrypted. It is assumed that the Provider_ID for that asset is the same as for this asset, or, is within this same Title asset.</td>
<td>String (per Asset_ID element)</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Vendor_Name</td>
<td>The name of the vendor defining the format under which this asset is recognized.</td>
<td>String</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Receiver_Type</td>
<td>A string identifying the Network or receiving system type for which this encrypted file is targeted.</td>
<td>String (Ex., &quot;Moto&quot;, &quot;SA&quot;)</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Receiver_Version</td>
<td>Version of the Network or receiving system.</td>
<td>Integer</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Encryption_Type</td>
<td>Further identification of the encryption type.</td>
<td>String (Ex., &quot;symmetric&quot;, &quot;public key&quot;)</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Encryption_Algorithm</td>
<td>Further identification of the encryption type.</td>
<td>String (Ex., DES, 3DES, RC5)</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Encryption_Date</td>
<td>Date</td>
<td>Date</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Encryption_Time</td>
<td>Time</td>
<td>Time</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Encrypting_System_Info</td>
<td>Information pertaining to the encrypting system.</td>
<td>String</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Encryption_Key_Block</td>
<td>As needed by the decryption. Generated by encryption system. (data from encryption system).</td>
<td>String – (Max 4096 characters).</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Resolution</td>
<td>Other values may be supplied. Currently, defined values are one of &quot;480i&quot;, &quot;720p&quot;, &quot;1080i&quot;, or &quot;1080p&quot;.</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Frame_Rate</td>
<td>Other values may be supplied. Currently, defined values are one of 24, 30, or 60.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Codec</td>
<td>Other values may be supplied. Currently, defined values are one of &quot;MPEG2&quot; or when AVC/MPEG4 one of &quot;AVC MP@L30&quot;, &quot;AVC MP@L40&quot;, &quot;AVC MP@L42&quot;, &quot;AVC HP@L30&quot;, &quot;AVC HP@L40&quot;, &quot;AVC HP@L42&quot;</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Bit_Rate</td>
<td>The maximum overall bit rate of the included content, in kilobits per second.</td>
<td>Numeric – ex. 3750</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Content_FileSize</td>
<td>File Size (in bytes) of the included content for Quality Assurance &amp; processing.</td>
<td>Integer – unsigned 64 bit</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Content_CheckSum</td>
<td>A string containing a hex number representing a MD5 (RFC 1321) message digest value for Quality Assurance.</td>
<td>String - Hex ( 32 chars)</td>
<td>Req</td>
</tr>
</tbody>
</table>

---

65 Added per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09, kb
66 Added per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09, kb
67 Added per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09, kb
68 Added per ECN VOD-CONTENT1.1-N-05.0023-1, modified per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09, kb
5.7.2 Encrypted Content

A single encrypted content file.

File name should be OS independent (i.e., alpha numeric, underscore).

5.8 Barker Asset

5.8.1 Package Metadata

The Package metadata is meant to be the container for the Barker asset. The fields allowable are the same as referenced in Section 5.1.

5.8.2 Barker Title Metadata

The Barker Title Metadata is a subset of the existing title metadata detailed in Section 5.2.1. This metadata acts as an anchor for the child content element; however, the purpose of including a title metadata asset is as follows:

Familiarity: Adding title metadata keeps the document structure similar to the existing VOD standard, which should aid in rapid deployment of a Barker standard.

Extensibility: As business rules evolve, more fields from the VOD Title Metadata can be added to the Barker Title Metadata.

Special note should be drawn to the "Category" field, as it is now required; Barkers must be assigned to a category for operation.

Also note the absence of a "Billing_ID" field. While this field can be added as business rules dictate, the functionality it allows isn't currently necessary for Barkers.

Table 8 - Barker Title Metadata

<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs. Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMS</td>
<td>Provider</td>
<td>A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.</td>
<td>Type: String Length: Max 50 characters Ex: &quot;IN_DEMAND&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Product</td>
<td>An identifier for the product offering.</td>
<td>Type: String Length: Max 20 characters. Ex: &quot;MOD&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_Name</td>
<td>A string containing the identifying name of the asset. Asset names must be unique within a product.</td>
<td>Type: String Length: Max 50 characters</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Major</td>
<td>An integer representing the major version number.</td>
<td>Type: Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Minor</td>
<td>An integer representing the minor version number.</td>
<td>Type: Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Description</td>
<td>A human-readable string describing the asset</td>
<td>Type: String Length: Max 128 characters</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Creation_Date</td>
<td>A string representing the date on which the Asset was created.</td>
<td>Type: yyyy-mm-dd formatted string.</td>
<td>Req</td>
</tr>
</tbody>
</table>

Section added per ECN VOD-CONTENT1.1-N-06.0032-1, 4/24/06, kb
<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs. Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMS</td>
<td>Provider_ID</td>
<td>A unique identifier for the provider of the Asset. The Provider_ID must be set to a registered Internet domain name restricted to at most 20 lower-case characters and belonging to the provider. For example a valid Provider_ID for CableLabs is “cablelabs-films.com”</td>
<td>Type: Domain name (string) Length: Max 20 characters.</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_ID</td>
<td>An identifier for the asset that is unique within a provider's asset ID space. The unique portable identification of an asset is the combination of its Provider_ID and its Asset_ID.</td>
<td>Type: Fixed 20 chars, alpha/numeric string -- 4 alpha characters followed by 16 numbers Ex: “ABCD1234567890123456”</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_Class</td>
<td>A system-level type for the asset. This is intended to be helpful for the application mapping and routing, and expected to be more general than the Type value for the content. Expected Value is &quot;title&quot;.</td>
<td>Expected to be &quot;title (case insensitive)&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Verb</td>
<td>A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string (&quot;&quot;), and &quot;DELETE&quot;.</td>
<td>Expected to be &quot;&quot; OR &quot;Delete&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Type</td>
<td>Keeping consistency with the existing MOD specification, the type is the asset or content type that determines how or where it is stored.</td>
<td>Expected to be &quot;title&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Title</td>
<td>A displayable title for the barker asset.</td>
<td>Type: String Length: Max 128 characters</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Summary_Short</td>
<td>A brief, displayable description of the asset.</td>
<td>Type: String Length: Max 128 characters.</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Rating</td>
<td>The MPAA rating level.</td>
<td>Type: MPAA rating level, conforming to Annex A, one rating per element.</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Display_Run_Time</td>
<td>A run time, used for display.</td>
<td>Type: &quot;hh:mm&quot; formatted string.</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Run_Time</td>
<td>The run time of the barker.</td>
<td>Type: &quot;hh:mm:ss&quot; formatted string.</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Category</td>
<td>A nested list of human readable categories and sub-categories that effect how the UI presents the asset. The value will contain an ordered sequence of components, each component separated using a &quot;,&quot;, each line effectively represents a &quot;categorization&quot; for the Title. The special category string $ROOT is used for assigning an asset to the top of a category hierarchy.</td>
<td>Type: String (Max 20 per category component, one category per element.) Ex:</td>
<td>Req</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt;App_Data App=&quot;MOD&quot; Name=&quot;Category&quot; Value=&quot;Movies/Movies a -z&quot;/&gt; &lt;App_Data App=&quot;MOD&quot; Name=&quot;Category&quot; Value=&quot;Movies/Comedy&quot;/&gt; &lt;App_Data App=&quot;MOD&quot; Name=&quot;Category&quot; Value=&quot;$ROOT&quot;/&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Licensing_Window_Start</td>
<td>Start date and time of licensing window; if no time assume 00:00:00; all times are viewer local time on a 24-hour clock.</td>
<td>String – &quot;yyyy-mm-dd&quot; or &quot;yyyy-mm-ddTh:mm:ss&quot; or &quot;yyyy-mm-ddTh:mm&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Licensing_Window_End</td>
<td>Ending date and time of licensing window; if no time, assume 23:59:59; all times are viewer local time on a 24-hour clock.</td>
<td>String – &quot;yyyy-mm-dd&quot; or &quot;yyyy-mm-ddTh:mm:ss&quot; or &quot;yyyy-mm-ddTh:mm&quot;</td>
<td>Req</td>
</tr>
</tbody>
</table>
5.8.3 Barker Metadata

The Barker asset contains the metadata relating to the physical properties of the barker content MPEG file.

<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs. Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOD or SVOD</td>
<td>Year</td>
<td>The year of release.</td>
<td>Type: YYYY-formatted string</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Studio</td>
<td>The company name that produced the barker.</td>
<td>Type: String Length: Max 128 characters.</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Closed_Captioning</td>
<td>Whether closed captioning is available.</td>
<td>Expected to be &quot;Y&quot; OR &quot;N&quot;</td>
<td>Opt</td>
</tr>
</tbody>
</table>

Table 9 - Barker Metadata

<table>
<thead>
<tr>
<th>Spec</th>
<th>Metadata Name</th>
<th>Description</th>
<th>Type</th>
<th>Required vs. Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMS</td>
<td>Provider</td>
<td>A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.</td>
<td>Type: String Length: Max 50 characters Ex: &quot;IN DEMAND&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Product</td>
<td>An identifier for the product offering.</td>
<td>Type: String Length: Max 20 characters. Ex: &quot;MOD&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_Name</td>
<td>A string containing the identifying name of the asset. Asset names must be unique within a product.</td>
<td>Type: String Length: Max 50 characters</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Major</td>
<td>An integer representing the major version number.</td>
<td>Type: Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Version_Minor</td>
<td>An integer representing the minor version number.</td>
<td>Type: Integer</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Description</td>
<td>A human-readable string describing the asset.</td>
<td>Type: String Length: Max 128 characters</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Creation_Date</td>
<td>A string representing the date on which the Asset was created.</td>
<td>Type: yyyy-mm-dd formatted string.</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Provider_ID</td>
<td>A unique identifier for the provider of the Asset. The Provider_ID must be set to a registered Internet domain name restricted to at most 20 lower-case characters and belonging to the provider. For example a valid Provider_ID for CableLabs is &quot;cablelabs-films.com&quot;</td>
<td>Type: Domain name (string) Length: Max 20 characters.</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_ID</td>
<td>An identifier for the asset that is unique within a provider's asset ID space. The unique portable identification of an asset is the combination of its Provider_ID and its Asset_ID.</td>
<td>Type: Fixed 20 chars, alpha/numeric string -- 4 alpha characters followed by 16 numbers Ex: &quot;ABCD1234567890123456&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Asset_Class</td>
<td>A system-level type for the asset. This is intended to be helpful for the application mapping and routing, and expected to be more general than the Type value for the content. Expected Value is &quot;barker&quot;.</td>
<td>Expected to be &quot;barker&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>AMS</td>
<td>Verb</td>
<td>A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string (&quot;&quot;) and &quot;DELETE&quot;.</td>
<td>Expected to be &quot;&quot; OR &quot;Delete&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>Spec</td>
<td>Metadata Name</td>
<td>Description</td>
<td>Type</td>
<td>Required vs. Optional</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Type</td>
<td>Keeping consistency with the existing MOD specification, the type is the asset or content type that determines how or where it is stored.</td>
<td>Expected to be &quot;barker&quot;</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Audio_Type</td>
<td>Audio Types available for this content (Dolby ProLogic, Dolby Digital, Stereo, Mono, Dolby 5.1). NOTE: All audio shall be encoded Dolby Digital AC-3, NOT MPEG-2 Audio.</td>
<td>Type: String (&quot;Dolby ProLogic&quot;, &quot;Dolby Digital&quot;, &quot;Stereo&quot;, &quot;Mono&quot;, or &quot;Dolby 5.1&quot;)</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Languages</td>
<td>Available languages. Two character language code from ISO 639.1</td>
<td>Type: ISO-639.1 formatted string, one per element</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Subtitle_Languages</td>
<td>Available subtitle languages. Two character language code from ISO 639.1</td>
<td>Type: ISO-639.1 formatted string, one per element</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Dubbed_Languages</td>
<td>Available dubbed languages. Two character language code from ISO 639.1</td>
<td>Type: ISO-639.1 formatted string, one per element</td>
<td>Opt</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Content_FileSize</td>
<td>The size of the file, in bytes.</td>
<td>Type: Integer</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Content_CheckSum</td>
<td>A string containing a hex number representing an MD5 [RFC 1321] message digest value for Quality Assurance.</td>
<td>Type: String (hexadecimal, 32 characters.)</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Resolution</td>
<td>Other values may be supplied. Currently, defined values are one of &quot;480i&quot;, &quot;720p&quot;, &quot;1080i&quot;, or &quot;1080p&quot;</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Frame_Rate</td>
<td>Other values may be supplied. Currently, defined values are one of 24, 30, or 60.</td>
<td>Integer</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Codec</td>
<td>Other values may be supplied. Currently, defined values are one of &quot;MPEG2&quot; or when AVC/MPEG4 one of &quot;AVC MP@L30&quot;, &quot;AVC MP@L40&quot;, &quot;AVC MP@L42&quot;, &quot;AVC HP@L30&quot;, &quot;AVC HP@L40&quot;, &quot;AVC HP@L42&quot;</td>
<td>String</td>
<td>Req</td>
</tr>
<tr>
<td>MOD or SVOD</td>
<td>Bit_Rate</td>
<td>The maximum overall bit rate of the included content, in kilobits per second.</td>
<td>Numeric – ex. 3750</td>
<td>Req</td>
</tr>
</tbody>
</table>

### 5.8.4 Barker Content

A single MPEG transport stream encoded as described in the [CEP3.0].

This asset contains the physical barker asset, and it is required. The file name should be OS independent (i.e., alpha numeric, underscore).

### 5.9 Trial Use Fields

A Trial Use Field is an App_Data element with a Name attribute that differs from any of those listed under "Metadata Name" in the preceding sections of Section 5.

---

70 Added per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09, kb
71 Added per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09, kb
72 Added per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09, kb
73 Added per ECN VOD-CONTENT1.1-N-09.0066-3, 12/18/09 kb
Trial Use Fields may be freely included in VOD Content transmissions. Notice of intent shall be provided to the Fields Focus Group.74

74 Per ECN VC1.1-N-03004, 3/17/03, kb
Annex A  Ratings and Advisories

A.1  MPAA Ratings

Standard MPAA Movie Ratings are as follows:75

G
PG
PG-13
R
NC-17

A.2  TV Ratings

There are six different TV Ratings for programming that has not been rated by the MPAA. They are as follows:

TV-Y
TV-Y7
TV-G
TV-PG
TV-14
TV-MA

Content Labels: To help parents identify the specific content in a program, the TV ratings system includes additional labels that are added, where appropriate, to programs rated TV-Y7, TV-PG, TV-14 and TV-MA. These indicators are as follows:76

FV (Fantasy Violence) (Usually only applies to TV-Y7 rating)
D (Dialogue)
L (Language)
S (Sexual Content)
V (Violence)

As an example, one of the longest possible TV ratings (16 characters) would appear like this:

TV-MA D, L, S, V

TV Ratings are composed of an Audience and one or more optional Content Labels. There are 44 possible combinations of the Audience and Content Labels (see Table 10). If Content Labels are used, there MUST be a space as a delimiter between the Audience and the first Content Label; additional Content Labels MUST be delimited by either a comma, or a comma and a space. Additional information on TV Ratings can be found at http://www.tvguidelines.org

<table>
<thead>
<tr>
<th>TV-Y</th>
<th>TV-Y7</th>
<th>TV-G</th>
<th>TV-PG</th>
<th>TV-14</th>
<th>TV-MA</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV-Y7-FV</td>
<td></td>
<td></td>
<td>TV-PG D, L, S</td>
<td>TV-14 D, L, S</td>
<td>TV-MA L, S</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TV-PG D, L, V</td>
<td>TV-14 D, L, V</td>
<td>TV-MA L, V</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TV-PG D, S, V</td>
<td>TV-14 D, S, V</td>
<td>TV-MA S, V</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TV-PG L, S, V</td>
<td>TV-14 L, S, V</td>
<td>TV-MA L</td>
</tr>
</tbody>
</table>

Table 10 - Valid TV Rating and Content Label Combinations77

75 Per ECN VC1.1-N-02007, 3/31/03, kb
76 Per ECN VC1.1-N-02007, 3/31/03, kb
77 Table added per VOD-CONTENT1.1-N-10.0073-3, 10/18/11, kb
A.3 Other Ratings

These are ratings that do not fall into either of the above categories but are necessary for more granular control over content.\(^{78}\)

- NR-ADULT
- NR
- Unrated
- X
- XX
- XXX

A.4 Content Advisories

The content advisories are separate from the ratings. The indicators listed with the TV Ratings above (FV, D, L, S, V) are not content advisories. They are actually part of the TV Rating. Following are the different content advisories:

Table 11 - Content Advisories (developed as part of an HBO/Showtime joint venture)

<table>
<thead>
<tr>
<th>V (Violence)</th>
<th>AL (Adult Language)</th>
<th>AC (Adult Content)</th>
<th>SC (Sexual Content)</th>
<th>N (Nudity)</th>
<th>RP (Rape)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MV (Mild Violence)</td>
<td>GL (Graphic Language)</td>
<td></td>
<td></td>
<td>BN (Brief Nudity)</td>
<td></td>
</tr>
<tr>
<td>GV (Graphic Violence)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Within each of the content advisory categories only one specific content may be used. For example, if a film contains Violence, it cannot also contain Mild Violence or Graphic Violence.

If a GUI were to display the largest possible combination using only one space and no commas to separate the different abbreviations, 17 characters would be required.

\(^{79}\) Per ECN VC1.1-N-02007, 3/31/03, kb
A.5  MSO Ratings

All-Ages
Age-7
Age-14
Age-21

These examples are informative only; they are not meant to be suggested values. It is intended that MSOs are free to provide their own values.

A.6  Audience

Adult
Mature
General
Family
Teen
Children
Annex B  Special Characters

B.1  ISO-8859-1 (Latin1)

Latin1 covers most West European languages, such as French (fr), Spanish (es), Catalan (ca), Basque (eu), Portuguese (pt), Italian (it), Albanian (sq), Rhaeto-Romanic (rm), Dutch (nl), German (de), Danish (da), Swedish (sv), Norwegian (no), Finnish (fi), Faroese (fo), Icelandic (is), Irish (ga), Scottish (gd), and English (en), incidentally also Afrikaans (af) and Swahili (sw), thus in effect also the entire American continent, Australia and much of Africa. The most notable exceptions are Zulu (zu) and other Bantu languages using Latin Extended-B letters, and of course Arabic in North Africa, and Guarani (gn) missing GEIUY with ~ tilde. The lack of the ligatures Dutch IJ, French OE, and German " quotation marks is considered tolerable. The lack of the new C= resembling Euro currency symbol U+20AC has opened the discussion of a new Latin0.

B.2  Character Set
Annex C  Handling Feeds From Different Time Zones\textsuperscript{79}

Not all headends receive a particular content provider's linear feeds from the same timezone as the provider. For instance, a headend in the U.S. Central timezone might receive provider example.com's feed from the East Coast, so a 3:00 PM show on the East Coast actually plays at 2:00 PM local time. Neither a local nor an absolute time suffices for specifying the earliest a title should be available on-demand. Assuming we want a pitched asset to start on 10/20/2003 one hour after the show ends, the Licensing_Window_Start passed would be "2003-10-20T16:00." Even though this is local time, in our example headend this needs to be interpreted as 15:00 PM local time.

Unfortunately, what the offset should be is a detail specific to headend, Provider_ID, and perhaps even Provider_Content_Tier. It cannot be specified in the metadata. These offsets may also have to be adjusted for daylight savings time to ensure local times are still adjusted properly at the changeover.

In the absence of other information the system should not make adjustments: if the start time is specified as 16:00 it should start at 16:00 local (e.g., if the reference feed is broadcast nationally).

\textsuperscript{79} Per ECN VOD-CONTENT1.1-N-03.0015-2, 12/22/03, kb
Annex D  Titles with Encrypted Content Only

Section 5 contains an illustration of the asset structure of a Title asset, reproduced below.

```
Package
 | package metadata
 | title asset
 | title asset metadata
 | movie asset
 | movie asset metadata
 | movie asset content
 | still-image asset (box-cover, poster)
 | box cover asset metadata
 | box cover asset content
 | preview asset
 | preview asset metadata
 | preview asset content
 | trick asset
 | trick file asset metadata
 | trick file asset content
 | encrypted asset
 | encrypted asset metadata
 | encrypted asset content
```

For titles with unencrypted content, no encrypted assets are present.

For titles with both unencrypted and encrypted movie content, an encrypted asset corresponding to the movie asset is required, and the asset structure thus becomes:

(Underlined items are required; other items are optional.)

```
Package
 | package metadata
 | title asset
 | title asset metadata
 | movie asset
 | movie asset metadata
 | movie asset content
 | still-image asset (box-cover, poster)
 | box cover asset metadata
 | box cover asset content
 | preview asset
 | preview asset metadata
 | preview asset content
 | trick asset
 | trick file asset metadata
 | trick file asset content
 | encrypted asset
 | encrypted asset metadata
 | encrypted asset content
```

For titles with encrypted movie content only, an encrypted asset corresponding to the movie asset is required, but there is no unencrypted movie asset content, and the asset structure thus becomes:

```
Package
 | package metadata
 | title asset
```

---

80 Added per ECN VOD-CONTENT1.1-N-05.0025-1, 4/20/06, kb
This asset structure for titles with encrypted movie content only is illustrated in the following example XML, which contains required fields only for brevity.

The movie asset metadata is expressed in its entirety, but the movie asset content tag is omitted.

The encrypted asset metadata must contain an Asset_Encrypted field with value equal to the Asset_ID of the movie asset. This is required to convey the correspondence between encrypted asset and movie asset.

```xml
<?xml version="1.0" encoding="ISO-8859-1"?>
<ADI>
  <Metadata>
    <AMS Provider="InDemand" Product="First-Run" Asset_Name="The Titanic" Version_Major="1" Version_Minor="0" Description="The Titanic asset package" Creation_Date="2002-01-11" Provider_ID="indemand.com" Asset_ID="UNVA2001081701004000" Asset_Class="package"/>
    <App_Data App="MOD" Name="Metadata_Spec_Version" Value="CableLabsVOD1.1"/>
  </Metadata>

  <Asset>
    <AMS Provider="InDemand" Product="First-Run" Asset_Name="The Titanic_Title" Version_Major="1" Version_Minor="0" Description="The Titanic title metadata" Creation_Date="2002-01-11" Provider_ID="indemand.com" Asset_ID="UNVA2001081701004001" Asset_Class="title"/>
    <App_Data App="MOD" Name="Title_Brief" Value="The Titanic"/>
    <App_Data App="MOD" Name="Title" Value="The Titanic"/>
    <App_Data App="MOD" Name="Type" Value="title"/>
    <App_Data App="MOD" Name="Summary_Short" Value="Fictional romantic tale of a rich girl and poor boy who meet on the ill-fated voyage of the 'unsinkable' ship"/>
    <App_Data App="MOD" Name="Rating" Value="R"/>
    <App_Data App="MOD" Name="Run_Time" Value="03:14:00"/>
    <App_Data App="MOD" Name="Display_Run_Time" Value="03:14"/>
    <App_Data App="MOD" Name="Billing_ID" Value="56789"/>
    <App_Data App="MOD" Name="Licensing_Window_Start" Value="2002-02-01T00:00:00"/>
  </Asset>
</ADI>
```
<App_Data App="MOD" Name="Licensing_Window_End" Value="2002-03-31T11:59:59"/>
<App_Data App="MOD" Name="Provider_QA_Contact" Value="John Doe, JDoe@InDemand.com"/>
<App_Data App="MOD" Name="Contract_Name" Value="InDemand"/>
</Metadata>
<Asset>
<Metadata>
<AMS Provider="InDemand"
Product="First-Run"
Asset_Name="The Titanic.mpg"
Version_Major="1"
Version_Minor="0"
Description="The Titanic Movie"
Creation_Date="2002-01-11"
Provider_ID="indemand.com"
Asset_ID="UNVA2001081701004002"
Asset_Class="movie"/>
<App_Data App="MOD" Name="Type" Value="movie"/>
<App_Data App="MOD" Name="Audio_Type" Value="Dolby Digital"/>
<App_Data App="MOD" Name="Content_FileSize" Value="3907840625"/>
<App_Data App="MOD" Name="Content_CheckSum" Value="12558D3269D25852BD26548DC2654CA"/>
</Metadata>
</Asset>
<Asset>
<Metadata>
<AMS Provider="InDemand"
Product="First-Run"
Asset_Name="The Titanic_Preview.mpg"
Version_Major="1"
Version_Minor="0"
Description="The Titanic Preview"
Creation_Date="2002-01-11"
Provider_ID="indemand.com"
Asset_ID="UNVA2001081701004003"
Asset_Class="preview"/>
<App_Data App="MOD" Name="Rating" Value="G"/>
<App_Data App="MOD" Name="Run_Time" Value="00:00:45"/>
<App_Data App="MOD" Name="Type" Value="preview"/>
<App_Data App="MOD" Name="Audio_Type" Value="Dolby Digital"/>
<App_Data App="MOD" Name="Content_FileSize" Value="25284375"/>
<App_Data App="MOD" Name="Content_CheckSum" Value="A1258D3269D25852BD26548DC2654C1"/>
</Metadata>
</Asset>
<Asset>
<Metadata>
<AMS Provider="InDemand"
Product="First-Run"
Asset_Name="The Titanic_Box_Cover.bmp"
Version_Major="1"
Version_Minor="0"
Description="The Titanic Box Cover"
Creation_Date="2002-01-11"
Provider_ID="indemand.com"
Asset_ID="UNVA2001081701004004"
Asset_Class="box cover"/>
<App_Data App="MOD" Name="Type" Value="box cover"/>
<App_Data App="MOD" Name="Content_FileSize" Value="15235"/>
<App_Data App="MOD" Name="Content_CheckSum" Value="B3258D3269D25852BD26548DC2654CD"/>
</Metadata>
</Asset>
</Asset>
</Asset>
<AMS Provider="InDemand"
  Product="First-Run"
  Asset_Name="The_Titanic_Encrypted.mpg"
  Version_Major="1"
  Version_Minor="0"
  Description="The Titanic Movie Encrypted"
  Creation_Date="2002-01-11"
  Provider_ID="indemand.com"
  Asset_ID="UNVA2001081701004005"
  Asset_Class="encrypted"/>
  <App_Data App="MOD" Name="Asset_Encrypted" Value="UNVA2001081701004002"/>
  <App_Data App="MOD" Name="Receiver_Type" Value="SomeReceiverType"/>
  <App_Data App="MOD" Name="Content_FileSize" Value="3907840625"/>
  <App_Data App="MOD" Name="Content_CheckSum" Value="DC2654CA12558D3269D25852BD26548"/>
</Metadata>
<Content Value="The_Titanic_Encrypted.mpg"/>
</Asset>
</ADI>

Similar cases can be constructed for titles with encrypted preview or trick content only, but these cases are not illustrated here.
Appendix I  VOD Examples (Informative)

I.1 VOD Example 1

<?xml version="1.0" encoding="ISO-8859-1"?>
<ADI>
</Metadata>
</Asset>

</Metadata>
</Asset>

<App_Data App="MOD" Name="Provider_Content_Tier" Value="InDemand1"/>
<App_Data App="MOD" Name="Metadata_Spec_Version" Value="CableLabsVOD1.1"/>
</Metadata>
</Asset>

<App_Data App="MOD" Name="Provider" Value="InDemand"/>
<App_Data App="MOD" Name="Product" Value="First-Run"/>
<App_Data App="MOD" Name="Asset_Name" Value="The_Titanic_Title"/>
<App_Data App="MOD" Name="Version_Major" Value="1"/>
<App_Data App="MOD" Name="Version_Minor" Value="0"/>
<App_Data App="MOD" Name="Description" Value="The Titanic title metadata"/>
<App_Data App="MOD" Name="Creation_Date" Value="2002-01-11"/>
<App_Data App="MOD" Name="Provider_ID" Value="indemand.com"/>
<App_Data App="MOD" Name="Asset_ID" Value="UNVA2001081701004001"/>
<App_Data App="MOD" Name="Asset_Class" Value="title"/>
<App_Data App="MOD" Name="Title_Sort_Name" Value="Titanic, The"/>
<App_Data App="MOD" Name="Title_Brief" Value="The Titanic"/>
<App_Data App="MOD" Name="Title" Value="The Titanic"/>
<App_Data App="MOD" Name="Type" Value="title"/>
<App_Data App="MOD" Name="ISAN" Value="1881-66C7-3420-000-7-9F3A-02450-U"/>
<App_Data App="MOD" Name="Episode_Name" Value="Collision With destiny"/>
<App_Data App="MOD" Name="Episode_ID" Value="The only one"/>
<App_Data App="MOD" Name="Summary_Long" Value="Fictional romantic tale of a rich girl and poor boy who meet on the ill-fated voyage of the 'unsinkable' ship"/>
<App_Data App="MOD" Name="Summary_Medium" Value="Fictional romantic tale of rich girl and poor boy who meet on the ill-fated voyage of the 'unsinkable' ship"/>
<App_Data App="MOD" Name="Summary_Short" Value="Fictional romantic tale of a rich girl and poor boy who meet on the ill-fated voyage of the 'unsinkable' ship"/>
<App_Data App="MOD" Name="Rating" Value="R"/>
<App_Data App="MOD" Name="Advisories" Value="AL"/>
<App_Data App="MOD" Name="Advisories" Value="N"/>
<App_Data App="MOD" Name="Closed_Captioning" Value="N"/>
<App_Data App="MOD" Name="Run_Time" Value="03:14:00"/>
<App_Data App="MOD" Name="Display_Run_Time" Value="03:14"/>
<App_Data App="MOD" Name="Year" Value="1997"/>
<App_Data App="MOD" Name="Country_of_Origin" Value="US"/>
<App_Data App="MOD" Name="Actors" Value="Winslet,Kate"/>
<App_Data App="MOD" Name="Actors" Value="DiCaprio, Leonardo"/>

81 Modified per ECNs VOD-CONTENT1.1-N-08.0056-2, 08.0054-2, and 09.0055-3, 12/18/09, kb
<App_Data App="MOD" Name="Actors" Value="Zane,Billy"/>
<App_Data App="MOD" Name="Actors_Display" Value="Kate Winslet,Leonardo DiCaprio, Billy Zane"/>
<App_Data App="MOD" Name="Writer_Display" Value="James Cameron"/>
<App_Data App="MOD" Name="Genre" Value="Drama"/>
<App_Data App="MOD" Name="Genre" Value="Romance"/>
<App_Data App="MOD" Name="Show_Type" Value="Movie"/>
<App_Data App="MOD" Name="Box_Office" Value="1835000000"/>
<App_Data App="MOD" Name="Propagation_Priority" Value="1"/>
<App_Data App="MOD" Name="Billing_ID" Value="56789"/>
<App_Data App="MOD" Name="Licensing_Window_Start" Value="2002-02-01T00:00:00"/>
<App_Data App="MOD" Name="Licensing_Window_End" Value="2002-03-31T11:59:59"/>
<App_Data App="MOD" Name="Display_As_New" Value="7"/>
<App_Data App="MOD" Name="Display_As_Last_Chance" Value="7"/>
<App_Data App="MOD" Name="Maximum_Viewing_Length" Value="00:24:00"/>
<App_Data App="MOD" Name="Provider_QA_Contact" Value="John Doe, JDoe@InDemand.com"/>
<App_Data App="MOD" Name="Suggested_Price" Value="5.95"/>
<App_Data App="MOD" Name="Distributor_Royalty_Percent" Value="52.5"/>
<App_Data App="MOD" Name="Distributor_Royalty_Minimum" Value="3.124"/>
<App_Data App="MOD" Name="Distributor_Royalty_Flat_Rate" Value="3.155"/>
<App_Data App="MOD" Name="Studio_Name" Value="Paramount"/>
<App_Data App="MOD" Name="Studio_Code" Value="PAR"/>
<App_Data App="MOD" Name="Subscriber_View_Limit" Value="2002-02-01,2002-02-28,5"/>
<App_Data App="MOD" Name="Subscriber_View_Limit" Value="2002-03-01,2002-03-31,5"/>
<App_Data App="MOD" Name="Programmer_Call_Letters" Value="IND"/>
<App_Data App="MOD" Name="Recording_Artist" Value="Celine Dion"/>
<App_Data App="MOD" Name="Song_Title" Value="My Heart Will Go On"/>
</Metadata>

<Asset>
<AMS Provider="InDemand"
Product="First-Run"
Asset_Name="The_Titanic.mpg"
Version_Major="1"
Version_Minor="0"
Description="The Titanic Movie"
Creation_Date="2002-01-11"
Provider_ID="indemand.com"
Asset_ID="UNVA2001081701004002"
Asset_Class="movie"/>
</Asset>
<App_Data App="MOD" Name="Audio_Type" Value="Dolby Digital"/>
<App_Data App="MOD" Name="Screen_Format" Value="Widescreen"/>
<App_Data App="MOD" Name="Languages" Value="en"/>
<App_Data App="MOD" Name="Subtitle_Languages" Value="es"/>
<App_Data App="MOD" Name="Dubbed_Languages" Value="es"/>
<App_Data App="MOD" Name="Copy_Protection" Value="N"/>
<App_Data App="MOD" Name="Content_FileSize" Value="3907840625"/>
<App_Data App="MOD" Name="Content_CheckSum" Value="12558D3269D25852BD26548DC2654CA"/>
</Metadata>

<Content Value="The_Titanic.mpg"/>
</Asset>

<Asset>
<Metadata>
<AMS Provider="InDemand" Product="First-Run" Asset_Name="The_Titanic_Preview.mpg" Version_Major="1" Version_Minor="0" Description="The Titanic Preview" Creation_Date="2002-01-11" Provider_ID="indemand.com" Asset_ID="UNVA2001081701004003" Asset_Class="preview">
  <App_Data App="MOD" Name="Rating" Value="G"/>
  <App_Data App="MOD" Name="Run_Time" Value="00:00:45"/>
  <App_Data App="MOD" Name="Type" Value="preview"/>
  <App_Data App="MOD" Name="Audio_Type" Value="Dolby Digital"/>
  <App_Data App="MOD" Name="Screen_Format" Value="Widescreen"/>
  <App_Data App="MOD" Name="Languages" Value="en"/>
  <App_Data App="MOD" Name="Subtitle_Languages" Value="es"/>
  <App_Data App="MOD" Name="Dubbed_Languages" Value="es"/>
  <App_Data App="MOD" Name="Content_FileSize" Value="25284375"/>
  <App_Data App="MOD" Name="Content_CheckSum" Value="A1258D3269D25852BD26548DC2654C1"/>
</Metadata>

<Content Value="The_Titanic_Preview.mpg"/>
</Asset>

<Asset>
<Metadata>
<AMS Provider="InDemand" Product="First-Run" Asset_Name="The_Titanic_Box_Cover.bmp" Version_Major="1" Version_Minor="0" Description="The Titanic Box Cover" Creation_Date="2002-01-11" Provider_ID="indemand.com" Asset_ID="UNVA2001081701004004" Asset_Class="box cover">
  <App_Data App="MOD" Name="Type" Value="box cover"/>
  <App_Data App="MOD" Name="Image_Aspect_Ratio" Value="320x240"/>
  <App_Data App="MOD" Name="Content_FileSize" Value="15235"/>
  <App_Data App="MOD" Name="Content_CheckSum" Value="B3258D3269D25852BD26548DC2654CD"/>
</Metadata>

<Content Value="The_Titanic_Box_Cover.bmp"/>
</Asset>

</ADI>
I.2 VOD Example 2

<?xml version="1.0" encoding="ISO-8859-1"?>
<ADI>
  <Metadata>
    <AMS Provider="InDemand" Product="MOD"
      Asset_Name="The_Titanic"
      Version_Major="1"
      Version_Minor="0"
      Description="The Titanic asset package"
      Creation_Date="2002-01-11"
      Provider_ID="indemand.com"
      Asset_ID="UNVA2001081701004000"
      Asset_Class="PACKAGE">
      <App_Data App="MOD" Name="Provider_Content_Tier" Value="InDemand1"/>
      <App_Data App="MOD" Name="Metadata_Spec_Version" Value="CableLabsVOD1.1"/>
    </AMS>
    <Asset>
      <Metadata>
        <AMS Provider="InDemand" Product="MOD"
          Asset_Name="The_Titanic_Title"
          Version_Major="1"
          Version_Minor="0"
          Description="The Titanic title metadata"
          Creation_Date="2002-01-11"
          Provider_ID="indemand.com"
          Asset_ID="UNVA2001081701004001"
          Asset_Class="title">
          <App_Data App="MOD" Name="Title_Sort_Name" Value="Titanic, The"/>
          <App_Data App="MOD" Name="Title_Brief" Value="The Titanic"/>
          <App_Data App="MOD" Name="Title" Value="The Titanic"/>
          <App_Data App="MOD" Name="Type" Value="title"/>
          <App_Data App="MOD" Name="Summary_Short" Value="Fictional romantic tale of a rich girl and poor boy who meet on the ill-fated voyage of the 'unsinkable' ship'"/>
          <App_Data App="MOD" Name="Rating" Value="R"/>
          <App_Data App="MOD" Name="Advisories" Value="AL"/>
          <App_Data App="MOD" Name="Advisories" Value="N"/>
          <App_Data App="MOD" Name="Run_Time" Value="03:14:00"/>
          <App_Data App="MOD" Name="Display_Run_Time" Value="03:14"/>
          <App_Data App="MOD" Name="Year" Value="1997"/>
          <App_Data App="MOD" Name="Actors" Value="Winslet,Kate"/>
          <App_Data App="MOD" Name="Actors" Value="DiCaprio,Leonardo"/>
          <App_Data App="MOD" Name="Actors" Value="Zane,Billy"/>
          <App_Data App="MOD" Name="Director" Value="Cameron,James"/>
          <App_Data App="MOD" Name="Studio" Value="Paramount"/>
          <App_Data App="MOD" Name="Category" Value="InDemand/Movies/Drama"/>
          <App_Data App="MOD" Name="Genre" Value="Drama"/>
          <App_Data App="MOD" Name="Genre" Value="Romance"/>
          <App_Data App="MOD" Name="Billing_ID" Value="56789"/>
          <App_Data App="MOD" Name="Licensing_Window_Start" Value="2002-02-01T00:00:00"/>
          <App_Data App="MOD" Name="Licensing_Window_End" Value="2002-03-31T11:59:59"/>
          <App_Data App="MOD" Name="Preview_Period" Value="300"/>
          <App_Data App="MOD" Name="Provider_QA_Contact" Value="John Doe, J Doe@InDemand.com"/>
        </AMS>
      </Metadata>
    </Asset>
  </Metadata>
</ADI>
<Metadata>
  <AMS Provider="InDemand"
    Product="MOD"
    Asset_Name="The Titanic.mpg"
    Version_Major="1"
    Version_Minor="0"
    Description="The Titanic Movie"
    Creation_Date="2002-01-11"
    Provider_ID="indemand.com"
    Asset_ID="UNVA2001081701004002"
    Asset_Class="movie"/>
  <App_Data App="MOD" Name="Encryption" Value="N"/>
  <App_Data App="MOD" Name="Type" Value="movie"/>
  <App_Data App="MOD" Name="Audio_Type" Value="Dolby Digital"/>
  <App_Data App="MOD" Name="Content_FileSize" Value="3907840625"/>
  <App_Data App="MOD" Name="Content_CheckSum"
    Value="12558D3269D25852BD26548DC2654CA"/>
</Metadata>
</Content>
</Asset>
<Asset>
  <Metadata>
    <AMS Provider="InDemand"
      Product="MOD"
      Asset_Name="The Titanic Preview.mpg"
      Version_Major="1"
      Version_Minor="0"
      Description="The Titanic Preview"
      Creation_Date="2002-01-11"
      Provider_ID="indemand.com"
      Asset_ID="UNVA2001081701004003"
      Asset_Class="preview"/>
    <App_Data App="MOD" Name="Rating" Value="G"/>
    <App_Data App="MOD" Name="Run_Time" Value="00:00:45"/>
    <App_Data App="MOD" Name="Type" Value="preview"/>
    <App_Data App="MOD" Name="Audio_Type" Value="Dolby Digital"/>
    <App_Data App="MOD" Name="Content_FileSize" Value="25284375"/>
    <App_Data App="MOD" Name="Content_CheckSum"
      Value="A1258D3269D25852BD26548DC2654C1"/>
  </Metadata>
  <Content Value="The Titanic Preview.mpg"/>
</Asset>
<Asset>
  <Metadata>
    <AMS Provider="InDemand"
      Product="MOD"
      Asset_Name="The Titanic Box Cover.bmp"
      Version_Major="1"
      Version_Minor="0"
      Description="The Titanic Box Cover"
      Creation_Date="2002-01-11"
      Provider_ID="indemand.com"
      Asset_ID="UNVA2001081701004004"
      Asset_Class="box cover"/>
    <App_Data App="MOD" Name="Type" Value="box cover"/>
    <App_Data App="MOD" Name="Image_Aspect_Ratio" Value="320x240"/>
    <App_Data App="MOD" Name="Content_FileSize" Value="15235"/>
    <App_Data App="MOD" Name="Content_CheckSum"
      Value="B3258D3269D25852BD26548DC2654CD"/>
  </Metadata>
  <Content Value="The Titanic Box Cover.bmp"/>
1.3  **SVOD Example**82

```xml
<?xml version="1.0" encoding="ISO-8859-1"?>
<ADI>
  <Metadata>
    <AMS Provider="HBO" Product="HOD" Asset_Name="Arli$$_35"
      Version_Major="1" Version_Minor="0"
      Description="Arli$$_35 asset package"
      Creation_Date="2002-01-11" Provider_ID="indemand.com"
      Asset_ID="UNVA2001081701006000"
      Asset_Class="package"/>
    <App_Data App="SVOD" Name="Provider_Content_Tier" Value="HBO1"/>
    <App_Data App="SVOD" Name="Metadata_Spec_Version" Value="CableLabsVOD1.1"/>
  </Metadata>

<Asset>
  <Metadata>
    <AMS Provider="HBO" Product="HOD" Asset_Name="Arli$$_35_Title"
      Version_Major="1" Version_Minor="0"
      Description="Arli$$_35 title metadata"
      Creation_Date="2002-01-11" Provider_ID="indemand.com"
      Asset_ID="UNVA2001081701006001"
      Asset_Class="title"/>
    <App_Data App="SVOD" Name="Title_Sort_Name" Value="Arli$$ 35"/>
    <App_Data App="SVOD" Name="Title_Brief" Value="Arli$$ 35"/>
    <App_Data App="SVOD" Name="Title" Value="Arli$$ 35"/>
    <App_Data App="SVOD" Name="Type" Value="title"/>
    <App_Data App="SVOD" Name="Summary_Short" Value="'Cause and Effect.' Arliss has a
health scare while Kirby tries to 'assist' an old lady with her baseball
memorabilia."/>
    <App_Data App="SVOD" Name="Rating" Value="TV-MA"/>
    <App_Data App="SVOD" Name="Advisories" Value="AL"/>
    <App_Data App="SVOD" Name="Run_Time" Value="00:29:29"/>
    <App_Data App="SVOD" Name="Display_Run_Time" Value="00:29"/>
    <App_Data App="SVOD" Name="Year" Value="1999"/>
    <App_Data App="SVOD" Name="Actors" Value="Wuhl,Robert"/>
    <App_Data App="SVOD" Name="Actors" Value="Turner,Jim"/>
    <App_Data App="SVOD" Name="Actors" Value="Oh,Sandra"/>
    <App_Data App="SVOD" Name="Actors" Value="Boatman,Michael"/>
    <App_Data App="SVOD" Name="Category" Value="HBO/HBO Series/Arli$$"/>
    <App_Data App="SVOD" Name="Genre" Value="Comedy"/>
    <App_Data App="SVOD" Name="Billing_ID" Value="01429"/>
    <App_Data App="SVOD" Name="Licensing_Window_Start" Value="2002-02-01T00:00:00"/>
    <App_Data App="SVOD" Name="Licensing_Window_End" Value="2002-03-31T11:59:59"/>
    <App_Data App="SVOD" Name="Subscriber_View_Limit" Value="2002-02-01,2002-02-28,5"/>
  </Metadata>
</Asset>
```

---

82 Modified per ECNs VOD-CONTENT1.1-N-08.0056-2 and 08.0054-2, 12/18/09, kb
<App_Data App="SVOD" Name="Subscriber_View_Limit" Value="2002-03-01,2002-03-31,6"/>
<App_Data App="SVOD" Name="Programmer_Call_Letters" Value="HBO"/>
<App_Data App="SVOD" Name="Recording_Artist" Value="Dusty Springfield"/>
<App_Data App="SVOD" Name="Song_Title" Value="I Only Want To Be With You"/>
</Metadata>

<Asset>
<Metadata>
<AMS Provider="HBO"
Product="HOD"
Asset_Name="Arli$$_35.mpg"
Version_Major="1"
Version_Minor="0"
Description="Arli$$_35 Movie"
Creation_Date="2002-01-11"
Provider_ID="indemand.com"
Asset_ID="UNVA2001081701006002"
Asset_Class="movie"/>
<App_Data App="SVOD" Name="Encryption" Value="N"/>
<App_Data App="SVOD" Name="Type" Value="movie"/>
<App_Data App="SVOD" Name="Audio_Type" Value="Dolby Digital"/>
<App_Data App="SVOD" Name="Content_FileSize" Value="3907840625"/>
<App_Data App="SVOD" Name="Content_CheckSum" Value="12558D3269D25852BD26548DC2654CA"/>
</Metadata>
</Asset>

<Asset>
<Metadata>
<AMS Provider="HBO"
Product="HOD"
Asset_Name="Arli$$_35_Preview.mpg"
Version_Major="1"
Version_Minor="0"
Description="Arli$$_35 Preview"
Creation_Date="2002-01-11"
Provider_ID="indemand.com"
Asset_ID="UNVA2001081701006003"
Asset_Class="preview"/>
<App_Data App="SVOD" Name="Rating" Value="TV-MA"/>
<App_Data App="SVOD" Name="Run_Time" Value="00:01:00"/>
<App_Data App="SVOD" Name="Type" Value="preview"/>
<App_Data App="SVOD" Name="Audio_Type" Value="Dolby Digital"/>
<App_Data App="SVOD" Name="Content_FileSize" Value="25284375"/>
<App_Data App="SVOD" Name="Content_CheckSum" Value="A1258D3269D25852BD26548DC2654C1"/>
</Metadata>
</Asset>

<Asset>
<Metadata>
<AMS Provider="HBO"
Product="HOD"
Asset_Name="Arli$$_35_Box_Cover.bmp"
Version_Major="1"
Version_Minor="0"
Description="Arli$$_35 Box Cover"
Creation_Date="2002-01-11"
Provider_ID="indemand.com"
Asset_ID="UNVA2001081701006004"
Asset_Class="box cover"/>
</App_Data>
</App_Data>
</App_Data>
</App_Data>
</App_Data>
</Asset>
</Asset>
</Asset>
</Asset>
</ADI>

I.4 Barker Example

<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<!DOCTYPE ADI SYSTEM "ADI.DTD">
<ADI>
<Metadata>
<AMS Asset_Class="package" Asset_ID="TVN55583PKG000000000"
Asset_Name="ComcastBarTVGuidConc2_55583_Package" Creation_Date="18-Jun-2004"
Description="ComcastBarTVGuid/Conc2 Package" Product="MOD" Provider="150"
Provider_ID="tvn.com" Version_Major="1" Version_Minor="0"/>
</Metadata>
</Asset>
<Metadata>
<AMS Asset_Class="title" Asset_ID="TVN55583TIT000000000"
Asset_Name="ComcastBarTVGuidConc2_55583_Title" Creation_Date="18-Jun-2004"
Description="ComcastBarTVGuid/Conc2 Metadata" Product="MOD" Provider="150"
Provider_ID="tvn.com" Version_Major="1" Version_Minor="0"/>
</Metadata>
</Asset>
<Metadata>
<AMS Asset_Class="barker" Asset_ID="TVN55583BAR000000000"
Asset_Name="ComcastBarTVGuidConc2_55583_Feature" Creation_Date="18-Jun-2004"
Description="ComcastBarTVGuid/Conc2 Feature" Product="MOD" Provider="150"
Provider_ID="tvn.com" Version_Major="1" Version_Minor="0"/>
</Metadata>
<Content Value="TVNX5558300000000000_barker.mpg"/>
</Asset>
</Asset>
</ADI>
## Appendix II  Revision History

The following Engineering Changes are incorporated in MD-SP-VOD-CONTENT1.1-I02-030415.

<table>
<thead>
<tr>
<th>ECN</th>
<th>Author</th>
<th>ECN Approval Date</th>
<th>Problem Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC1.1-N-03002</td>
<td>Neville Black</td>
<td>3/6/03</td>
<td>Expand Provider_ID description in Tables 1 through 5. Add new item [RFC 1035] to section 2.1 Normative References.</td>
</tr>
<tr>
<td>VC1.1-N-03004</td>
<td>Neville Black</td>
<td>3/17/03</td>
<td>Allow Providers to freely add App_Data elements with Name and other attributes that are not specified in this specification. Allow non-specified fields for Trial Use.</td>
</tr>
<tr>
<td>VC1.1-N-03006</td>
<td>Yasser Syed</td>
<td>3/21/03</td>
<td>Change Asset_ID Numbers in Example 2; needs to reflect the constancy of Asset-ID numbers to content.</td>
</tr>
<tr>
<td>VC1.1-N-03008</td>
<td>Dave Bartolone</td>
<td>3/21/03</td>
<td>Fix Asset_ID at 20 characters.</td>
</tr>
<tr>
<td>VC1.1-N-03011</td>
<td>Yasser Syed</td>
<td>3/31/03</td>
<td>Clarify Licensing_Window_End date to indicate the viewing window includes the end date.</td>
</tr>
<tr>
<td>VC1.1-N-02007</td>
<td>David Ludder</td>
<td>3/31/03</td>
<td>Additional ratings added to accommodate more granular control over adult content. Introduce new optional field &quot;MSORating&quot;.</td>
</tr>
</tbody>
</table>

The following Engineering Changes are incorporated in MD-SP-VOD-CONTENT1.1-I03-040107.

<table>
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</thead>
<tbody>
<tr>
<td>VOD-CONTENT1.1-N-03.0012-1</td>
<td>Craig Cuttner</td>
<td>12/17/03</td>
<td>Remove and separate revised SD Encoding spec. into draft standalone document</td>
</tr>
<tr>
<td>VOD-CONTENT1.1-N-03.0013-4</td>
<td>Rick Qualters</td>
<td>12/17/03</td>
<td>Add optional vendor-specific trick and/or encrypted files to a distribution package as children of the MOD title</td>
</tr>
<tr>
<td>VOD-CONTENT1.1-N-03.0015-2</td>
<td>Kyle Downey</td>
<td>12/9/03</td>
<td>Allow Licensing_Window_Start and Licensing_Window_End to specify local time as well as date</td>
</tr>
<tr>
<td>VOD-CONTENT1.1-N-03.0017-1</td>
<td>Stephen Kaiman</td>
<td>12/17/03</td>
<td>Add an optional attribute to the Movie asset definition, Viewing_Can_Be_Resumed, which indicates whether viewing of the asset can be resumed</td>
</tr>
<tr>
<td>VOD-CONTENT1.1-N-03.0019-1</td>
<td>Stephen Kaiman</td>
<td>12/17/03</td>
<td>Corrects a typographic error in the definition of the Asset_Class attribute for movie metadata</td>
</tr>
</tbody>
</table>

The following Engineering Changes are incorporated in MD-SP-VOD-CONTENT1.1-I04-060505.

<table>
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<th>Author</th>
<th>ECN Approval Date</th>
<th>Problem Description</th>
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<tbody>
<tr>
<td>VOD-CONTENT1.1-N-04.0020-1</td>
<td>Yasser Syed</td>
<td>4/29/04</td>
<td>Correct ending time of Licensing_Window_End field</td>
</tr>
<tr>
<td>VOD-CONTENT1.1-N-04.0021-2</td>
<td>Michael Chen</td>
<td>9/7/04</td>
<td>Accommodate forward slash in component names within Category field of Title asset</td>
</tr>
<tr>
<td>VOD-CONTENT1.1-N-05.0022-2</td>
<td>Bill Helm</td>
<td>1/30/05</td>
<td>Add Copy Control Information (CCI) fields to CL 1.1 Metadata</td>
</tr>
<tr>
<td>VOD-CONTENT1.1-N-05.0023-1</td>
<td>Michael Chen</td>
<td>1/30/05</td>
<td>Content Bit Rate Field</td>
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<td>VOD-CONTENT1.1-N-05.0025-1</td>
<td>Michael Chen</td>
<td>4/5/05</td>
<td>Encrypted only</td>
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<tr>
<td>VOD-CONTENT1.1-N-06.0027-1</td>
<td>David Ludder</td>
<td>4/28/06</td>
<td>Field type change for &quot;billing id&quot;</td>
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<tr>
<td>VOD-CONTENT1.1-N-06.0032-1</td>
<td>Ken Barringer</td>
<td>4/21/06</td>
<td>Apply changes from ADI1.1-N-05.0026-3 to VOD-CONTENT1.1 spec.</td>
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The following Engineering Changes are incorporated in MD-SP-VOD-CONTENT1.1-I05-060831.

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<th>ECN</th>
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<tr>
<td>VOD-CONTENT1.1-N-06.0033-2</td>
<td>Caroline Brown</td>
<td>7/28/06</td>
<td>Metadata clarifications for 1.1</td>
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<td>VOD-CONTENT1.1-N-06.0034-1</td>
<td>Neville Black</td>
<td>7/28/06</td>
<td>ISAN</td>
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<td>VOD-CONTENT1.1-N-06.0035-3</td>
<td>Caroline Brown</td>
<td>8/25/06</td>
<td>Metadata clarifications and genre standard</td>
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<tr>
<td>VOD-CONTENT1.1-N-06.0039-1</td>
<td>Steve Young</td>
<td>8/25/06</td>
<td>Schema Sample Update</td>
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The following Engineering Changes are incorporated in MD-SP-VOD-CONTENT1.1-I06-091229.

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<tr>
<td>VOD-CONTENT1.1-N-08.0054-2</td>
<td>Kristin Fitzgerald</td>
<td>6/3/09</td>
<td>Programmer Call Letters</td>
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<td>VOD-CONTENT1.1-N-08.0056-2</td>
<td>Caroline Brown</td>
<td>6/3/09</td>
<td>Recording Artist and Song Title</td>
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<tr>
<td>VOD-CONTENT1.1-N-09.0062-2</td>
<td>Christopher Halverson</td>
<td>11/6/09</td>
<td>Addition of trickplay control field</td>
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<tr>
<td>VOD-CONTENT1.1-N-09.0066-3</td>
<td>Bryan Santangelo</td>
<td>11/6/09</td>
<td>Video Profiles</td>
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The following Engineering Changes are incorporated in MD-SP-VOD-CONTENT1.1-C01-120803.

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<tr>
<td>VOD-CONTENT1.1-N-10.0068-2</td>
<td>Angie Britten</td>
<td>9/16/2010</td>
<td>Change some Title Metadata from optional to required</td>
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<tr>
<td>VOD-CONTENT1.1-N-10.0069-2</td>
<td>Dave Bartolone</td>
<td>10/7/2010</td>
<td>Add Support for Selectable Output Control (SOC)</td>
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<tr>
<td>VOD-CONTENT1.1-N-10.0070-3</td>
<td>Dave Bartolone</td>
<td>10/7/2010</td>
<td>Add 3D Format Indicator</td>
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<tr>
<td>VOD-CONTENT1.1-N-10.0073-3</td>
<td>Walter Michel</td>
<td>10/7/2010</td>
<td>Clarify values for TV ratings</td>
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<tr>
<td>VOD-CONTENT1.1-N-11.0085-1</td>
<td>David Agranoff</td>
<td>10/18/2011</td>
<td>Addition of EIDR field</td>
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