

Metadata Specifications

CableLabs® VOD Content Specification Version 1.1

MD-SP-VOD-CONTENT1.1-I05-060831

ISSUED

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

- [RFC 1035] IETF STD0013 (RFC 1035), Domain Names–Implementation and Specification (Nov. 1987).
- [ADI 1.1] CableLabs Asset Distribution Interface Specification Version 1.1, MD-SP-ADI1.1-I04-060505, May 5, 2006, Cable Television Laboratories, Inc.
- [VOD-CEP] CableLabs Video-on-Demand Content Encoding Profiles Specification, MD-SP-VOD-CEP-I01-040107, January 7, 2004, Cable Television Laboratories, Inc.
- [XML] W3C Extensible Markup Language (XML) 1.0 (Second Edition).
- [RFC 1321] IETF RFC 1321, The MD5 Message-Digest Algorithm (April 1992).
- [RFC 1738] IETF RFC 1738, Uniform Resource Locators (URL) (December 2004).
- [ISO 639] ISO 639-1, 639-2 – Codes for the Representation of Names of Languages - Part 1: Alpha-2 Code, Part 2: Alpha-3 Code.
- [ISO 13818] ISO/IEC 13818-2 Information Technology-Generic Coding of Moving Pictures and Associated Audio Information : Video.
- [ISO 3166-1] Alpha-2 code Elements – English - Country Names and Code Elements

2.2 Informative References

- [GENRE] Genres list can be found at: <http://www.cablelabs.com/projects/metadata>
- [ISAN] International Agency ISAN User Guide: http://www.isan.org/docs/isan_user_guide.pdf
- [STUDIO] Studio List can be found at <http://www.cablelabs.com/projects/metadata>

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 703-620-8990, Fax 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/>
- 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 content1
|   +--barker asset2
|   |   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
|   +--barker asset
|   |   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.

¹ Per ECN VOD-CONTENT1.1-N-03.0013-4, 12/22/03 kb

² 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 1 - Package Metadata

Spec	Metadata Name	Description	Type	Required vs Optional
AMS	Provider	A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.	String – ex. "iN Demand" or "HBO"	Req
AMS	Product	An identifier for the product offering.	String (Max 20 Chars)	Req
AMS	Asset_Name	A string containing the identifying name of the asset. Asset names must be unique within a product.	String (Max 50 chars) Ex. "WesCravensDracula2000 package"	Req
AMS	Version_Major	An integer representing the major version number.	Integer	Req
AMS	Version_Minor	An integer representing the minor version number.	Integer	Req
AMS	Description	A human-readable string describing the Asset.	String Ex. "Wes Craven's Dracula 2000 asset package"	Req
AMS	Creation_Date	A string representing the date on which the Asset was created.	String – "yyyy-mm-dd"	Req
AMS	Provider_ID	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). ³	String- Ex. "indemand.com"	Req
AMS	Asset_ID	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.	String (Fixed 20 chars, alpha/numeric) 4 alpha characters followed by 16 numbers, no spaces-Ex. "ABCD1234567890123456" ⁴	Req

³ Per ECN VC1.1-N-03002, 3/6/03 kb

⁴ Per ECN VC1.1-N-03008, 3/21/03 kb

Spec	Metadata Name	Description	Type	Required vs Optional
AMS	Asset_Class	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 "package".	String	Req
AMS	Verb	A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string ("") and "DELETE".	String	Opt
MOD or SVOD	Provider_Content_Tier	A string representing which provider content tiers are to be identified with the Asset – Can be used to propagate Assets to specific servers.	String – one tier per element. Ex. <App_Data App="MOD" Name="Provider_Content_Tier" Value="HBO1"/> <App_Data App="MOD" Name="Provider_Content_Tier" Value="HBO8"/>	Opt
MOD or SVOD	Metadata_Spec_Version	A string representing the version of the VOD Content Specification for this package.	String "CableLabsVOD1.1"	Req

5.1.2 Content

None.

5.1.3 Assets

Title asset.

5.2 Title asset

5.2.1 Title Metadata

Table 2 - Title Metadata

Spec	Metadata Name	Description	Type	Required vs Optional
AMS	Provider	A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.	String – ex. "iN Demand" or "HBO"	Req
AMS	Product	An identifier for the product offering.	String (Max 20 Chars)	Req
AMS	Asset_Name	A string containing the identifying name of the asset. Asset names must be unique within a product.	String (Max 50 chars) Ex. "WesCravensDracula2000title"	Req

Spec	Metadata Name	Description	Type	Required vs Optional
AMS	Version_Major	An integer representing the major version number.	Integer	Req
AMS	Version_Minor	An integer representing the minor version number.	Integer	Req
AMS	Description	A human-readable string describing the Asset.	String – ex. "Wes Craven's Dracula 2000 title asset"	Req
AMS	Creation_Date	A string representing the date on which the Asset was created.	String – "yyyy-mm-dd"	Req
AMS	Provider_ID	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). ⁵	String- Ex. "indemand.com"	Req
AMS	Asset_ID	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.	String (Fixed 20 chars, alpha/numeric) 4 alpha characters followed by 16 numbers, no spaces-Ex. "ABCD1234567890123456" ⁶	Req
AMS	Asset_Class	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 "title".	String	Req
AMS	Verb	A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string ("") and "DELETE".	String	Opt
MOD or SVOD	Type	The asset or content type that determines how or where it is stored.	"title"	Req
MOD or SVOD	Title_Sort_Name	A string to be used when sorting the title.	String – (max 22 chars) ex. "Blob, The"	Opt

⁵ Per ECN VC1.1-N-03002, 3/6/03 kb⁶ Per ECN VC1.1-N-03008, 3/21/03 kb

Spec	Metadata Name	Description	Type	Required vs Optional
MOD or SVOD	Subscriber_View_Limit	A string representing a period of time and the maximum number of views over the period of time. The separator shall be a "," between the period start date, period end date and maximum views.	String containing the three components (period start date, period end date, maximum views), one per element Ex. <App_Data App="MOD" Name="Subscriber_View_Limit" Value="2001-11-01,2001-11-15, 5"/> <App_Data App="MOD" Name="Subscriber_View_Limit" Value="2001-12-01,2001-12-15, 5"/>	Opt
MOD or SVOD	Title_Brief	A brief version of the movie title (for display).	String – (max 19 chars)	Req
MOD or SVOD	Title	Movie title (for display).	String – (Max 128 chars—special characters allowed) ex. "Wes Craven's Dracula 2000".	Req
MOD or SVOD	ISAN ⁷	International Standard Audiovisual Number (ISAN)	String – ex. "1881-66C7-3420-000-7-9F3A-02450-U"	Opt
MOD or SVOD	Episode_Name	The name of an individual episode of a series.	String – ex. "Hot Child in the City"	Opt
MOD or SVOD	Episode_ID	A unique identifier given to each individual episode of a series.	String – ex. "Episode #45"	Opt
MOD or SVOD	Summary_Long	Movie summary in full.	String – (Max 4096 chars—special characters allowed)	Opt
MOD or SVOD	Summary_Medium	Movie summary paragraph – for EPG-like description.	String – (Max 1024 chars—special characters allowed)	Opt
MOD or SVOD	Summary_Short	Movie summary: sentence.	String – (Max 256 chars—special characters allowed) – ex "Samantha is hired to plan a bat mitzvah; Charlotte tries to improve life with Trey."	Req
MOD or SVOD	Rating	MPAA or TV Rating, whichever is appropriate (see Annex A, Ratings and Advisories).	String, one rating per element, <App_Data App="MOD" Name="Rating" Value="TV-G"/> <App_Data App="MOD" Name="Rating" Value="G"/>	Req

⁷ Per ECN VOD-CONTENT1.1-N-06.0034-1, 8/31/06 kb

Spec	Metadata Name	Description	Type	Required vs Optional
MOD or SVOD	MSORating ⁸	MSO applied rating for content not otherwise rated (see Annex A for examples).	String, one rating per element, <App_Data App="MOD" Name="MSORating" Value="Age-14"/>	Opt
MOD or SVOD	Advisories	One content advisory code (see Annex A, Ratings and Advisories).	String, one advisory per element (max 1024 chars for all advisories) <App_Data App="MOD" Name="Advisories" Value="S"/> <App_Data App="MOD" Name="Advisories" Value="V"/> There are at most six occurrences of "Advisories", with a combined maximum of at most 12 characters. ⁹	Opt
MOD or SVOD	Audience ¹⁰	Field to indicate target audience (see Annex A for examples).	String, one rating per element, <App_Data App="MOD" Name="Audience" Value="Adult"/>	Opt
MOD or SVOD	Closed_Captioning	A "Y" or "N" flag indicating Closed Captioning encoding.	String "Y" or "N"	Opt
MOD or SVOD	Run_Time	Run time.	String – "hh:mm:ss"	Req
MOD or SVOD	Display_Run_Time	Run time (for display).	String – "hh:mm"	Req
MOD or SVOD	Year	Year of release.	String – "yyyy"	Opt
MOD or SVOD	Country_of_Origin ¹¹	The Country from where the title originates, e.g., "US" for United States	String – (Max 2 chars)Using the 2-letter country code as defined in [ISO 3166-1]	Opt

⁸ Per ECN VC1.1-N-02007, 3/31/03 kb⁹ Per ECN VC1.1-N-02007, 3/31/03 kb¹⁰ Per ECN VC1.1-N-02007, 3/31/03 kb¹¹ Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06 kb

Spec	Metadata Name	Description	Type	Required vs Optional
MOD or SVOD	Actors ¹²	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.	String – (Max 35 per actor) – one actor per element. Ex. <App_Data App="MOD" Name="Actors" Value="Willis,Bruce"/> <App_Data App="MOD" Name="Actors" Value="Gere,Richard"/>	Opt
MOD or SVOD	Actors_Display ¹³	Actors -- A human-readable string for display; use Name 1, Name 2.	String (1024 chars total all Actors) Ex: "Tom Hanks, Robin Williams"	Opt
MOD or SVOD	Writer_Display ¹⁴	Writer(s)—A human-readable string for display; use Name 1, Name 2.	String (1024 chars total all Writers) Ex: "Francis Ford Coppola, Mario Puzo"	Opt
MOD or SVOD	Director	Directors– Last Name,First Name The separator shall be a "," between the last name and the first name.	String – (Max 35 per director) – one director per element. <App_Data App="MOD" Name="Director" Value="Puzo,Mario"/> <App_Data App="MOD" Name="Director" Value="Lucas,George"/>	Opt
MOD or SVOD	Producers	Producers– Last Name,First Name The separator shall be a "," between the last name and the first name.	String – (Max 91 per producer, 1024 all producers) – one producer per element. <App_Data App="MOD" Name="Producers" Value="Barrymore,Drew"/> <App_Data App="MOD" Name="Producers" Value="Lucas,George"/>	Opt
MOD or SVOD	Studio ¹⁵	Studio (for display).	String - (Max 32 chars) ""Use [STUDIO] for Studio Name.	Opt

¹² Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06 kb¹³ Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06 kb¹⁴ Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06 kb¹⁵ Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06 kb

Spec	Metadata Name	Description	Type	Required vs Optional
MOD or SVOD	Category ¹⁶	A nested list of human readable categories and sub-categories which effect how the UI presents the asset. The value will contain an ordered sequence of components, each component separated using a "/". Each line effectively represents a "categorization" for the Title. Percent signs and forward slashes within a component must be encoded as per section 2.2 of [RFC 1738] to allow use of the forward slash character within a component (e.g., to display "Home/Casa") to be distinguished from the component separator. Literal forward slashes within the App_Data Value represent separators that delineate components. Each portion of the App_Data Value ("Home%2FCasa") goes through URL-style decoding to yield the intended component value ("Home/Casa"). Each resultant component value may then be compared to the 20-character maximum size limit and other applicable constraints. Consumers of this data must accept and properly decode any URL-style encodings present in this value, to allow other characters to be used within component names where XML encoding alternatives cannot accomplish the same task.¹⁷	String – (Max 256 per category component), one category per element. <pre><App_Data App="MOD" Name="Category" Value="Movies/Movies a-z"/> <App_Data App="MOD" Name="Category" Value="Movies/Comedy"/> <App_Data App="MOD" Name="Category" Value="TV/Home%2FCasa"/></pre>	Req
MOD or SVOD	Season_Premiere	A flag indicating Title is a Season Premiere.	String "Y" or "N"	Opt

¹⁶ Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06 kb

¹⁷ Per ECN VOD-CONTENT1.1-N-04.0021-2, 4/20/06 kb

Spec	Metadata Name	Description	Type	Required vs Optional
MOD or SVOD	Season_Finale	A flag indicating Title is a Season Finale.	String "Y" or "N"	Opt
MOD or SVOD	Genre ¹⁸	Genres – Subject-matter classification of the show. See [GENRE] for values.	String – There may be at most 5 occurrences of "Genre" for one Title. Each value is at most 32 characters long. <App_Data App="MOD" Name="Genre" Value="Action"/> <App_Data App="MOD" Name="Genre" Value="Comedy"/>	Opt
MOD or SVOD	Show_Type ¹⁹	Indicate usage of the release. See suggestions in [GENRE].*	String – one Show_Type of the following: Series Sports Music Ad Miniseries Movie Other	Opt
MOD or SVOD	Chapter	Chapter Location and Heading pair, the location formatted in SMPTE format (HH:MM:SS:FF). The separator shall be a "," between the code and heading. Note that SMPTE time codes must be monotonically increasing although ordering of elements in SMPTE time code order is not required.	String (max 128 chars, 1024 total for all headings) containing the two components (SMPTE time code, heading), one per element. Ex. <App_Data App="MOD" Name="Chapter" Value="01:01:01:01,Opening Scene"/> <App_Data App="MOD" Name="Chapter" Value="01:30:01:01,Max Encounters A Problem"/>	Opt
MOD or SVOD	Box_Office	Box office dollars of revenue.	Integer	Opt

¹⁸ Per ECN VOD-CONTENT1.1-N-06.0035-4, 8/31/06 kb

¹⁹ Per ECN VOD-CONTENT1.1-N-06.0035-4, 8/31/06 kb

Spec	Metadata Name	Description	Type	Required vs Optional
MOD or SVOD	Propagation_Priority	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.	Integer	Opt
MOD or SVOD	Billing_ID	Content provider asset ID to tie into royalty reporting.	Alphanumeric Base 36 (0-9 and A-Z. Max 5 places) ²⁰	Req
MOD or SVOD	Licensing_Window_Start	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. ²¹	String – "yyyy-mm-dd" or "yyyy-mm-ddThh:mm:ss" or "yyyy-mm-ddThh:mm"	Req
MOD or SVOD	Licensing_Window_End	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. ²²	String – "yyyy-mm-dd" or "yyyy-mm-ddThh:mm:ss" or "yyyy-mm-ddThh:mm"	Req
MOD or SVOD	Preview_Period	Preview period in seconds.	Integer	Req (*Opt for SVOD)
MOD or SVOD	Home_Video_Window	Number of days between Home Video release to PPV/MOD Release.	Integer	Opt
MOD or SVOD	Display_As_New	Number of days from the Licensing_Window_Start date that the application should show this title as "New" or similar marking.	Integer – number of days	Opt
MOD or SVOD	Display_As_Last_Chance	Number of days from the Licensing_Window_End date that the application should show this title as "Last Chance" or similar marking.	Integer – number of days	Opt
MOD or SVOD	Maximum_Viewing_Length	Duration of time defining the maximum amount of time a title can be made available for viewing once selected for purchase by a customer.	String – "DD:HH:MM" ex. "00:24:00"	Opt
MOD or SVOD	Provider_QA_Contact	A contact identifier in case there are quality issues relating to this movie.	String	Req (*Opt for SVOD)
MOD or SVOD	Contract_Name	Identifying name of the contract under which this title is licensed.	String	Opt

²⁰ Per ECN VOD-CONTENT1.1-N-06.0027-1, 4/28/06 kb

²¹ Per ECN VOD-CONTENT1.1-N-03.0015-2, 12/22/03 kb

²² Per ECN VOD-CONTENT1.1-N-03.0015-2, 12/22/03 kb; VOD-CONTENT1.1-N-04.0020-1, 4/20/06 kb

Spec	Metadata Name	Description	Type	Required vs Optional
MOD or SVOD	Suggested_Price	Suggested Price to assist in determining the retail pricing.	Currency – ex. 3.95	Opt
MOD or SVOD	Distributor_Royalty_Percent	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.	Numeric-percentage – ex. 52.5	Opt
MOD or SVOD	Distributor_Royalty_Minimum	Minimum royalty in currency that goes to the Distributor (i.e., iN DEMAND). Maximum of 3 digits right of decimal allowed.	Currency – ex. 1.995	Opt
MOD or SVOD	Distributor_Royalty_Flat_Rate	Flat rate royalty in currency that goes to the Distributor (i.e., iN DEMAND). Maximum of 3 digits right of decimal allowed.	Currency – ex. 1.995	Opt
MOD or SVOD	Distributor_Name	The name of the distributor (for reporting).	String (Max 128 Chars)	Opt
MOD or SVOD	Studio_Royalty_Percent	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.	Numeric-percentage – ex. 52.5	Opt
MOD or SVOD	Studio_Royalty_Minimum	Minimum royalty in currency that goes to the Studio (i.e., Warner Brothers). Maximum of 3 digits right of decimal allowed.	Currency – ex. 1.995	Opt
MOD or SVOD	Studio_Royalty_Flat_Rate	Flat rate royalty that goes to the Studio (i.e., Warner Brothers). Maximum of 3 digits right of decimal allowed.	Currency – ex. 1.995	Opt
MOD or SVOD	Studio_Name	The name of the studio (for reporting).	String (Max 128 Chars)	Opt
MOD or SVOD	Studio_Code ²³	A code utilized for billing purposes, typically three digits.	String – (Max 8 char) Studio code from [STUDIO].	Opt

* 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.

²³ Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06 kb

5.2.2 Title Content

None.

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

5.2.3 Title Assets²⁴

- 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).

5.3 Movie asset

5.3.1 Movie Metadata

Table 3 - Movie Metadata

Spec	Metadata Name	Description	Type	Required vs Optional
AMS	Provider	A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.	String – ex. "iN Demand" or "HBO"	Req
AMS	Product	An identifier for the product offering.	String (Max 20 Chars)	Req
AMS	Asset_Name	A string containing the identifying name of the asset. Asset names must be unique within a product.	String (Max 50 chars) Ex. "WesCravensDracula2000movie"	Req
AMS	Version_Major	An integer representing the major version number.	Integer	Req
AMS	Version_Minor	An integer representing the minor version number.	Integer	Req
AMS	Description	A human-readable string describing the Asset.	String – ex. "Wes Craven's Dracula 2000 movie asset"	Req

²⁴ Per ECN VOD-CONTENT1.1-N-03.0013-4, 12/22/03 kb

Spec	Metadata Name	Description	Type	Required vs Optional
AMS	Creation_Date	A string representing the date on which the Asset was created.	String – "yyyy-mm-dd"	Req
AMS	Provider_ID	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). ²⁵	String- Ex. "indemand.com"	Req
AMS	Asset_ID	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.	String (Fixed 20 chars, alpha/numeric) 4 alpha characters followed by 16 numbers, no spaces-Ex. "ABCD1234567890123456" ²⁶	Req
AMS	Asset_Class	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 "movie". ²⁷	String	Req
AMS	Verb	A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string ("") and "DELETE".	String	Opt
MOD or SVOD	Encryption	"Y" or "N" flag indicating encryption is required.	String "Y" or "N" <App_Data App="MOD" Name="Encryption" Value="Y"/>	Opt
MOD or SVOD	Type	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.	"movie"	Req

²⁵ Per ECN VC1.1-N-03002, 3/6/03 kb²⁶ Per ECN VC1.1-N-03008, 3/21/03 kb²⁷ Per ECN VOD-CONTENT1.1-N-03.0019-1, 12/22/03 kb

Spec	Metadata Name	Description	Type	Required vs Optional
MOD or SVOD	Audio_Type	Audio Types available for this content (Dolby ProLogic, Dolby Digital, Stereo, Mono, Dolby 5.1). NOTE: Per [VOD-CEP], all audio shall be encoded Dolby Digital AC-3 not MPEG-2 Audio.	String – one audio type per element. <App_Data App="MOD" Name="Audio_Type" Value="Stereo"/> <App_Data App="MOD" Name="Audio_Type" Value="Mono"/>	Req
MOD or SVOD	Screen_Format	Screen format (Standard, Widescreen, Letterbox, OAR) (for display).	String	Opt
MOD or SVOD	HDContent ²⁸	Indicates content that is encoded as HD content. HDContent Flag must only be set to "Y" if content is encoded according to the HD Profile described in [VOD-CEP]. If content is not HD and the HD field is present, then HD Content Flag MUST be set to "N".	String <App_Data App="MOD" Name="HDContent" Value="Y">	Req – if content is HD. Opt – if content is not HD.
MOD or SVOD	Languages	Available languages. NOTE: Audio PID(s) shall correspond with Languages. Two character language code from 639-1.	String – (Max 20 per language, 1024 total), one language per element. <App_Data App="MOD" Name="Languages" Value="en"/> <App_Data App="MOD" Name="Languages" Value="es"/>	Opt
MOD or SVOD	Subtitle_Languages	Languages of sub-titles. Two character language code from 639-1.	String – (Max 20 per language, 1024 total), one language per element. <App_Data App="MOD" Name="Subtitle_Languages" Value="en"/> <App_Data App="MOD" Name="Subtitle_Languages" Value="es"/>	Opt
MOD or SVOD	Dubbed_Languages	Available dubbed languages – absent if not dubbed. Two character language code from 639-1.	String – (Max 20 per language, 1024 total), one language per element. <App_Data App="MOD" Name="Dubbed_Languages" Value="en"/> <App_Data App="MOD" Name="Dubbed_Languages" Value="es"/>	Opt

²⁸ Per ECN VOD-CONTENT1.1-N-06.0033-2, 8/31/06 kb

Spec	Metadata Name	Description	Type	Required vs Optional
MOD or SVOD	Copy_Protection	A "Y" or "N" flag indicating copy protection is required.	String "Y" or "N"	Opt
MOD or SVOD	Copy_Protection_Verbose ²⁹	If "Y" asserted, all four (APS, EMI, CIT, and CGMS/A) copy protection fields MUST be included in the content metadata.	String "Y" or "N"	Optional
MOD or SVOD	Analog_Protection_System ³⁰	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 ³¹	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 ³²	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 ³³	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

²⁹ Added by ECN VOD-CONTENT1.1-N-05.0022-2, 4/20/06 kb³⁰ Added by ECN VOD-CONTENT1.1-N-05.0022-2, 4/20/06 kb³¹ Added by ECN VOD-CONTENT1.1-N-05.0022-2, 4/20/06 kb³² Added by ECN VOD-CONTENT1.1-N-05.0022-2, 4/20/06 kb³³ Added by ECN VOD-CONTENT1.1-N-05.0022-2, 4/20/06 kb

Spec	Metadata Name	Description	Type	Required vs Optional
MOD or SVOD	Viewing_Can_Be_Resume ³⁴	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 ³⁵	The overall bit rate of the included content, in kilobits per second. This is an optional informative hint useful for estimation of required resources. Content must comply with [VOD-CEP].	Numeric – ex. 3750	Opt
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

5.3.2 Movie Content

A single MPEG transport stream encoded as described in [VOD-CEP].

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 4 - Still Image Metadata

Spec	Metadata Name	Description	Type	Required vs Optional
AMS	Provider	A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.	String – ex. "iN Demand" or "HBO"	Req
AMS	Product	An identifier for the product offering.	String (Max 20 Chars)	Req

³⁴ Per ECN VOD-CONTENT1.1-N-03.0017-1, 12/22/03 kb

³⁵ Added per ECN VOD-CONTENT1.1-N-05.0023-1, 4/20/06 kb

Spec	Metadata Name	Description	Type	Required vs Optional
AMS	Asset_Name	A string containing the identifying name of the asset. Asset names must be unique within a product.	String (Max 50 chars) Ex. "WesCravensDracula2000boxcover"	Req
AMS	Version_Major	An integer representing the major version number.	Integer	Req
AMS	Version_Minor	An integer representing the minor version number.	Integer	Req
AMS	Description	A human-readable string describing the Asset.	String – ex. "Wes Craven's Dracula 2000 poster asset"	Req
AMS	Creation_Date	A string representing the date on which the Asset was created.	String – "yyyy-mm-dd"	Req
AMS	Provider_ID	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). ³⁶	String- Ex. "indemand.com"	Req
AMS	Asset_ID	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.	String (Fixed 20 chars, alpha/numeric) 4 alpha characters followed by 16 numbers, no spaces-Ex. "ABCD1234567890123456" ³⁷	Req
AMS	Asset_Class	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 "box cover" or "poster".	String	Req
AMS	Verb	A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string ("") and "DELETE".	String	Opt
MOD or SVOD	Type	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.	"box cover" or "poster"	Req

³⁶ Per ECN VC1.1-N-03002, 3/6/03 kb³⁷ Per ECN VC1.1-N-03008, 3/21/03 kb

Spec	Metadata Name	Description	Type	Required vs Optional
MOD or SVOD	Image_Aspect_Ratio	The pixel aspect ration for the image (e.g., "320x240").	String	Opt
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

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

Spec	Metadata Name	Description	Type	Required vs Optional
AMS	Provider	A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.	String – ex. "iN Demand" or "HBO"	Req
AMS	Product	An identifier for the product offering.	String (Max 20 Chars)	Req
AMS	Asset_Name	A string containing the identifying name of the asset. Asset names must be unique within a product.	String (Max 50 chars) Ex. "WesCravensDracula2000 preview"	Req
AMS	Version_Major	An integer representing the major version number.	Integer	Req
AMS	Version_Minor	An integer representing the minor version number.	Integer	Req

Spec	Metadata Name	Description	Type	Required vs Optional
AMS	Description	A human-readable string describing the Asset.	String	Req
AMS	Creation_Date	A string representing the date on which the Asset was created.	String – "yyyy-mm-dd"	Req
AMS	Provider_ID	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). ³⁸	String- Ex. "indemand.com"	Req
AMS	Asset_ID	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.	String (Fixed 20 chars, alpha/numeric) 4 alpha characters followed by 16 numbers, no spaces-Ex. "ABCD1234567890123456" ³⁹	Req
AMS	Asset_Class	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".	String	Req
AMS	Verb	A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string ("") and "DELETE".	String	Opt
MOD or SVOD	Rating	MPAA or TV Rating. (See Annex A, Ratings and Advisories).	String, one rating per element. <App_Data App="MOD" Name="Rating" Value="TV-G"/> <App_Data App="MOD" Name="Rating" Value="G"/>	Req
MOD or SVOD	MSORating ⁴⁰	MSO applied rating for content not otherwise rated (see Annex A for examples).	String, one rating per element, <App_Data App="MOD" Name="MSORating" Value="Age-14"/>	Opt
MOD or SVOD	Audience ⁴¹	Field to indicate target audience (see Annex A for examples).	String, one rating per element, <App_Data App="MOD" Name="Audience" Value="Adult"/>	Opt

³⁸ Per ECN VC1.1-N-03002, 3/6/03 kb³⁹ Per ECN VC1.1-N-03008, 3/21/03 kb⁴⁰ Per ECN VC1.1-N-02007, 3/31/03 kb⁴¹ Per ECN VC1.1-N-02007, 3/31/03 kb

Spec	Metadata Name	Description	Type	Required vs Optional
MOD or SVOD	Run_Time	Run time for this preview.	String – "hh:mm:ss"	Req
MOD or SVOD	Type	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.	"preview"	Req
MOD or SVOD	Audio_Type	Audio Types available for this content (Dolby ProLogic, Dolby Digital, Stereo, Mono, Dolby 5.1). NOTE: Per [VOD-CEP], all audio shall be encoded Dolby Digital AC-3 not MPEG-2 Audio.	String – one audio type per element. <App_Data App="MOD" Name="Audio_Type" Value="Stereo"/> <App_Data App="MOD" Name="Audio_Type" Value="Mono"/>	Req
MOD or SVOD	Screen_Format	Screen format (Standard, Widescreen, Letterbox, OAR) (for display).	String	Opt
MOD or SVOD	HDContent	Indicates content that is encoded as HD content. HDContent Flag must only be set to "Y" if content is encoded according to the HD Profile described in VOD Content Encoding Profiles Specification	String <App_Data App="MOD" Name="HDContent" Value="Y">	Opt
MOD or SVOD	Languages	Available languages. Two character language code from 639-1.	String – (Max 20 per language, 1024 total), one language per element. <App_Data App="MOD" Name="Languages" Value="en"/> <App_Data App="MOD" Name="Languages" Value="es"/>	Opt
MOD or SVOD	Subtitle_Languages	Languages of sub-titles. Two character language code from 639-1.	String – (Max 20 per language, 1024 total), one language per element. <App_Data App="MOD" Name="Subtitle_Languages" Value="en"/> <App_Data App="MOD" Name="Subtitle_Languages" Value="es"/>	Opt

Spec	Metadata Name	Description	Type	Required vs Optional
MOD or SVOD	Dubbed_Languages	Available dubbed languages – absent if not dubbed. Two character language code from 639-1.	String – (Max 20 per language, 1024 total), one language per element. <App_Data App="MOD" Name="Dubbed_Languages" Value="en"/> <App_Data App="MOD" Name="Dubbed_Languages" Value="es"/>	Opt
MOD or SVOD	Bit_Rate ⁴²	The overall bit rate of the included content, in kilobits per second. This is an optional informative hint useful for estimation of required resources. Content must comply with [VOD-CEP].	Numeric – ex. 3750	Opt
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

5.5.2 Preview Content

A single MPEG transport stream encoded as described in [VOD-CEP].

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.

⁴² Added per ECN VOD-CONTENT1.1-N-05.0023-1, 4/20/06 kb

5.6 TRICK Asset⁴³

5.6.1 Trick Metadata

Table 6 - Trick Metadata

Spec	Metadata Name	Description	Type	Required vs Optional
AMS	Provider	A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.	String – ex. "iN Demand" or "HBO"	Req
AMS	Product	An identifier for the product offering.	String (Max 20 Chars)	Req
AMS	Asset_Name	A string containing the identifying name of the asset. Asset names must be unique within a product.	String (Max 50 chars) Ex. "WesCravensDracula2000trick"	Req
AMS	Version_Major	An integer representing the major version number.	Integer	Req
AMS	Version_Minor	An integer representing the minor version number.	Integer	Req
AMS	Description	A human-readable string describing the Asset.	String – ex. "Wes Craven's Dracula 2000 ffwd trick asset"	Req
AMS	Creation_Date	A string representing the date on which the Asset was created.	String – "yyyy-mm-dd"	Req
AMS	Provider_ID	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).	String- Ex. "indemand.com"	Req
AMS	Asset_ID	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.	String (Fixed 20 chars, alpha/numeric) 4 alpha characters followed by 16 numbers, no spaces-Ex. "ABCD1234567890123456"	Req
AMS	Asset_Class	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.	String. Expected value is "trickfile"	Req

⁴³ Per ECN VOD-CONTENT1.1-N-03.0013-4, 12/22/03 kb

Spec	Metadata Name	Description	Type	Required vs Optional
AMS	Verb	A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string ("") and "DELETE".	String	Opt
MOD or SVOD	Vendor_Name	The name of the vendor defining the format under which this asset is recognized.	String	Opt
MOD or SVOD	Vendor_Product	A string identifying the Video Server product under which this trick file format is used.	String	Req
MOD or SVOD	For_Version	The version associated with either the Vendor_Product or the Trick_Mode, as arranged, in order to assure correct processing of the file.	String	Opt
MOD or SVOD	Trick_Mode	Specific trick mode or file type.	String, Ex. "FFWD", "FREV", "Index", "All", "Archive"	Req
MOD or SVOD	Bit_Rate ⁴⁴	The overall bit rate of the included content, in kilobits per second. This is an optional informative hint useful for estimation of required resources. Content must comply with [VOD-CEP].	Numeric – ex. 3750	Opt
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

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 Asset⁴⁵

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.

⁴⁴ Added per ECN VOD-CONTENT1.1-N-05.0023-1, 4/20/06 kb

⁴⁵ Per ECN VOD-CONTENT1.1-N-03.0013-4, 12/22/03 kb

5.7.1 Encrypted Asset Metadata

Table 7 - Encrypted Asset Metadata

Spec	Metadata Name	Description	Type	Required vs Optional
AMS	Provider	A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.	String – ex. "iN Demand" or "HBO"	Req
AMS	Product	An identifier for the product offering.	String (Max 20 Chars)	Req
AMS	Asset_Name	A string containing the identifying name of the asset. Asset names must be unique within a product.	String (Max 50 chars) Ex. "WesCravensDracula2000encrypted"	Req
AMS	Version_Major	An integer representing the major version number.	Integer	Req
AMS	Version_Minor	An integer representing the minor version number.	Integer	Req
AMS	Description	A human-readable string describing the Asset.	String – ex. "Wes Craven's Dracula 2000 encrypted movie asset"	Req
AMS	Creation_Date	A string representing the date on which the Asset was created.	String – "yyyy-mm-dd"	Req
AMS	Provider_ID	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).	String- Ex. "indemand.com"	Req
AMS	Asset_ID	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.	String (Fixed 20 chars, alpha/numeric) 4 alpha characters followed by 16 numbers, no spaces-Ex. "ABCD1234567890123456"	Req
AMS	Asset_Class	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 "encrypted".	String	Req
AMS	Verb	A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string ("") and "DELETE".	String	Opt

Spec	Metadata Name	Description	Type	Required vs Optional
MOD or SVOD	Asset_Encrypted	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).	String (per Asset_ID element)	Opt
MOD or SVOD	Vendor_Name	The name of the vendor defining the format under which this asset is recognized.	String	Opt
MOD or SVOD	Receiver_Type	A string identifying the Network or receiving system type for which this encrypted file is targeted.	String (Ex., "Moto", "SA")	Req
MOD or SVOD	Receiver_Version	Version of the Network or receiving system.	Integer	Opt
MOD or SVOD	Encryption_Type	Further identification of the encryption type.	String (Ex., "symmetric", "public key")	Opt
MOD or SVOD	Encryption_Algorithm	Further identification of the encryption type.	String (Ex., DES, 3DES, RC5)	Opt
MOD or SVOD	Encryption_Date	Date	Date	Opt
MOD or SVOD	Encryption_Time	Time	Time	Opt
MOD or SVOD	Encrypting_System_Info	Information pertaining to the encrypting system.	String	Opt
MOD or SVOD	Encryption_Key_Block	As needed by the decryption. Generated by encryption system. (data from encryption system).	String – (Max 4096 characters).	Opt
MOD or SVOD	Bit_Rate ⁴⁶	The overall bit rate of the included content, in kilobits per second. This is an optional informative hint useful for estimation of required resources. Content must comply with [VOD-CEP].	Numeric – ex. 3750	Opt
MOD or SVOD	Content_FileSize	File Size (in bytes) of the included content for Quality Assurance & processing.	Integer – unsigned 64 bit	Req

⁴⁶ Added per ECN VOD-CONTENT1.1-N-05.0023-1, 4/20/06 kb

Spec	Metadata Name	Description	Type	Required vs Optional
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

5.7.2 Encrypted Content

A single encrypted content file.

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

5.8 Barker Asset⁴⁷

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

Spec	Metadata Name	Description	Type	Required vs. Optional
AMS	Provider	A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.	Type: String Length: Max 50 characters Ex: "iN_DEMAND"	Required
AMS	Product	An identifier for the product offering.	Type: String Length: Max 20 characters. Ex: "MOD"	Required

⁴⁷ Section added per ECN VOD-CONTENT1.1-N-06.0032-1, 4/24/06 kb

Spec	Metadata Name	Description	Type	Required vs. Optional
AMS	Asset_Name	A string containing the identifying name of the asset. Asset names must be unique within a product.	Type: String Length: Max 50 characters	Required
AMS	Version_Major	An integer representing the major version number.	Type: Integer	Required
AMS	Version_Minor	An integer representing the minor version number.	Type: Integer	Required
AMS	Description	A human-readable string describing the asset	Type: String Length: Max 128 characters	Required
AMS	Creation_Date	A string representing the date on which the Asset was created.	Type: yyyy-mm-dd formatted string.	Required
AMS	Provider_ID	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"	Type: Domain name (string) Length: Max 20 characters.	Required
AMS	Asset_ID	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.	Type: Fixed 20 chars, alpha/numeric string -- 4 alpha characters followed by 16 numbers Ex: "ABCD1234567890123456"	Required
AMS	Asset_Class	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 "title".	Expected to be "title (case insensitive)	Required
AMS	Verb	A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string ("") and "DELETE".	Expected to be "" OR "Delete"	Required
MOD or SVOD	Type	Keeping consistency with the existing MOD specification, the type is the asset or content type that determines how or where it is stored.	Expected to be "title"	Required
MOD or SVOD	Title	A displayable title for the barker asset.	Type: String Length: Max 128 characters	Required
MOD or SVOD	Summary_Short	A brief, displayable description of the asset.	Type: String Length: Max 128 characters.	Required
MOD or SVOD	Rating	The MPAA rating level.	Type: MPAA rating level, conforming to Annex A, one rating per element.	Required

Spec	Metadata Name	Description	Type	Required vs. Optional
MOD or SVOD	Display_Run_Time	A run time, used for display.	Type: "hh:mm" formatted string.	Required
MOD or SVOD	Run_Time	The run time of the barker.	Type: "hh:mm:ss" formatted string.	Required
MOD or SVOD	Category	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 "/". Each line effectively represents a "categorization" for the Title. The special category string \$ROOT is used for assigning an asset to the top of a category hierarchy.	Type: String (Max 20 per category component), one category per element.) Ex: <App_Data App="MOD" Name="Category" Value="Movies/Movies a -z"/> <App_Data App="MOD" Name="Category" Value="Movies/Comedy"/> <App_Data App="MOD" Name="Category" Value="\$ROOT"/>	Required
MOD or SVOD	Licensing_Window_Start	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.	String – "yyyy-mm-dd" or "yyyy-mm-ddThh:mm:ss" or "yyyy-mm-ddThh:mm"	Required
MOD or SVOD	Licensing_Window_End	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.	String – "yyyy-mm-dd" or "yyyy-mm-ddThh:mm:ss" or "yyyy-mm-ddThh:mm"	Required
MOD or SVOD	Year	The year of release.	Type: YYYY-formatted string	Optional
MOD or SVOD	Studio	The company name that produced the barker.	Type: String Length: Max 128 characters.	Optional
MOD or SVOD	Closed_Captioning	Whether closed captioning is available.	Expected to be "Y" OR "N"	Optional

5.8.3 Barker Metadata

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

Table 9 - Barker Metadata

Spec	Metadata Name	Description	Type	Required vs. Optional
AMS	Provider	A unique identifier for the provider of the Asset – represents the business relationship between the MSO and the Asset Provider.	Type: String Length: Max 50 characters Ex: "iN_DEMAND"	Required
AMS	Product	An identifier for the product offering.	Type: String Length: Max 20 characters. Ex: "MOD"	Required
AMS	Asset_Name	A string containing the identifying name of the asset. Asset names must be unique within a product.	Type: String Length: Max 50 characters	Required
AMS	Version_Major	An integer representing the major version number.	Type: Integer	Required
AMS	Version_Minor	An integer representing the minor version number.	Type: Integer	Required
AMS	Description	A human-readable string describing the asset.	Type: String Length: Max 128 characters	Required
AMS	Creation_Date	A string representing the date on which the Asset was created.	Type: yyyy-mm-dd formatted string.	Required
AMS	Provider_ID	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"	Type: Domain name (string) Length: Max 20 characters.	Required
AMS	Asset_ID	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.	Type: Fixed 20 chars, alpha/numeric string -- 4 alpha characters followed by 16 numbers Ex: "ABCD1234567890123456"	Required
AMS	Asset_Class	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 "barker".	Expected to be "barker"	Required
AMS	Verb	A string containing an action to be performed on the asset. The only valid values for the Verb are the empty string ("") and "DELETE".	Expected to be "" OR "Delete"	Required
MOD or SVOD	Type	Keeping consistency with the existing MOD specification, the type is the asset or content type that determines how or where it is stored.	Expected to be "barker"	Required

Spec	Metadata Name	Description	Type	Required vs. Optional
MOD or SVOD	Audio_Type	Audio_Type 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.	Type: String ("Dolby ProLogic", "Dolby Digital", Stereo, "Mono", or "Dolby 5.1")	Optional
MOD or SVOD	Languages	Available languages. Two character language code from ISO 639.1	Type: ISO-639.1 formatted string, one per element	Optional
MOD or SVOD	Subtitle_Languages	Available subtitle languages. Two character language code from ISO 639.1	Type: ISO-639.1 formatted string, one per element	Optional
MOD or SVOD	Dubbed_Languages	Available dubbed languages. Two character language code from ISO 639.1	Type: ISO-639.1 formatted string, one per element	Optional
MOD or SVOD	Content_FileSize	The size of the file, in bytes.	Type: Integer	Required
MOD or SVOD	Content_CheckSum	A string containing a hex number representing an MD5 [RFC 1321] message digest value for Quality Assurance.	Type: String (hexadecimal, 32 characters.)	Required

5.8.4 Barker Content

A single MPEG transport stream encoded as described in the [VOD-CEP].

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.

Trial Use Fields may be freely included in VOD Content transmissions. Notice of intent shall be provided to the Fields Focus Group.⁴⁸

⁴⁸ 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:⁴⁹

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:⁵⁰

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

There are 44 possible combinations of the TV ratings with the indicators. It can be found at <http://www.tvguidelines.org>

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.⁵¹

NR-ADULT
NR
Unrated
X
XX
XXX

⁴⁹ Per ECN VC1.1-N-02007, 3/31/03 kb

⁵⁰ Per ECN VC1.1-N-02007, 3/31/03 kb

⁵¹ Per ECN VC1.1-N-02007, 3/31/03 kb

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

V (Violence)	AL (Adult Language)	AC (Adult Content)	SC (Sexual Content)	N (Nudity)	RP (Rape)
MV (Mild Violence)	GL (Graphic Language)			BN (Brief Nudity)	
GV (Graphic Violence)					

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.

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

A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	AA	AB	AC	AD	AE	AF
	í	í	í	í	í	í	í	í	í	í	í	í	í	í	í
B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	BA	BB	BC	BD	BE	BF
	±	²	³	´	µ	¶	·	¸	¹	º	»	¼	½	¾	¿
C0	C1	C2	C3	C4	C5	C6	C7	C8	C9	CA	CB	CC	CD	CE	CF
À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë	Ì	Í	Î	Ï
D0	D1	D2	D3	D4	D5	D6	D7	D8	D9	DA	DB	DC	DD	DE	DF
Ð	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú	Û	Ü	Ý	Þ	ß
E0	E1	E2	E3	E4	E5	E6	E7	E8	E9	EA	EB	EC	ED	EE	EF
à	á	â	ã	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï
F0	F1	F2	F3	F4	F5	F6	F7	F8	F9	FA	FB	FC	FD	FE	FF
ð	ñ	ò	ó	ô	õ	ö	÷	ø	ù	ú	û	ü	ý	þ	ÿ

Annex C Handling Feeds From Different Time Zones⁵²

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).

⁵² Per ECN VOD-CONTENT1.1-N-03.0015-2, 12/22/03 kb

Annex D Titles with Encrypted Content Only⁵³

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:

⁵³ Added per ECN VOD-CONTENT1.1-N-05.0025-1, 4/20/06 kb

```

Package
| package metadata
+-- title asset
| | title asset metadata
| +-- movie asset
| | movie asset metadata
| |
| +-- 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

```

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 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="CableLabsV0D1.1"/>
</Metadata>
<Asset>
<Metadata>
<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"/>
<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>
<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="Content_FileSize" Value="15235"/>
<App_Data App="MOD" Name="Content_CheckSum" Value="B3258D3269D25852BD26548DC2654CD"/>
```

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

<Asset>
<Metadata>
<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_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"/>
<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="Director" Value="Cameron, James"/>
<App_Data App="MOD" Name="Producer" Value="Cameron, James"/>
<App_Data App="MOD" Name="Studio" Value="Paramount"/>
<App_Data App="MOD" Name="Category" Value="InDemand/Movies A-Z"/>
<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="Season_Premiere" Value="N"/>
<App_Data App="MOD" Name="Season_Finale" Value="N"/>
<App_Data App="MOD" Name="Chapter" Value="00:00:02:00,Opening Scene"/>
<App_Data App="MOD" Name="Chapter" Value="00:15:12:00,They Meet"/>
<App_Data App="MOD" Name="Chapter" Value="02:03:06:00,The Collision"/>
<App_Data App="MOD" Name="Chapter" Value="02:55:15:00,She Goes Under"/>
<App_Data App="MOD" Name="Chapter" Value="03:02:09:00,Final Scene"/>
<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="Preview_Period" Value="300"/>
<App_Data App="MOD" Name="Home_Video_Window" Value="1000"/>
<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="Contract_Name" Value="InDemand"/>
<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="Distributor_Name" Value="InDemand"/>
<App_Data App="MOD" Name="Studio_Royalty_Percent" Value="47.5"/>
<App_Data App="MOD" Name="Studio_Royalty_Minimum" Value="2.826"/>
<App_Data App="MOD" Name="Studio_Royalty_Flat_Rate" Value="2.795"/>
<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"/>
</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="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="Screen_Format" Value="Widescreen"/>
    <App_Data App="MOD" Name="HDCContent" Value="Y"/>
    <App_Data App="MOD" Name="Languages" Value="en"/>
    <App_Data App="MOD" Name="Subtitle_Languages" Value="es"/>
  </Metadata>
</Asset>

```

```
<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>

</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"/>
  </Metadata>

  <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, JDoe@InDemand.com"/>
      </Metadata>

    <Asset>

```

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

```
</Asset>
```

```
</Asset>
</ADI>
```

I.3 SVOD Example

```
<?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="HB01"/>
    <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"/>
      <App_Data App="SVOD" Name="Subscriber_View_Limit" Value="2002-03-01,2002-03-31,6"/>
    </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>
  <Content Value="Arli_35.mpg"/>
</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>
  <Content Value="Arli_35_Preview.mpg"/>
</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="SVOD" Name="Type"                 Value="box cover"/>
    <App_Data App="SVOD" Name="Image_Aspect_Ratio"   Value="320x240"/>
    <App_Data App="SVOD" Name="Content_FileSize"     Value="15235"/>
```

```

<App_Data App="SVOD" Name="Content_CheckSum"
Value="B3258D3269D25852BD26548DC2654CD"/>
</Metadata>
<Content Value="Arli_35_Box_Cover.bmp"/>
</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="TVN55583PKG0000000000"
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"/>

<App_Data App="MOD" Name="Metadata_Spec_Version" Value="CableLabsVOD1.1"/>
</Metadata>
<Asset>
<Metadata>
<AMS Asset_Class="title" Asset_ID="TVN55583TIT0000000000"
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"/>

<App_Data App="MOD" Name="Type" Value="title"/>
<App_Data App="MOD" Name="Title" Value="Comcast Barker TVGuide Concurrent/Moto2"/>
<App_Data App="MOD" Name="Summary_Short" Value="Video On Demand offers you so many
choices of entertainment, where you're in control. Check out what's available right
now!"/>
<App_Data App="MOD" Name="Rating" Value="TVG"/>
<App_Data App="MOD" Name="Display_Run_Time" Value="00:07"/>
<App_Data App="MOD" Name="Run_Time" Value="00:06:53"/>
<App_Data App="MOD" Name="Category" Value="$R00T"/>
<App_Data App="MOD" Name="Licensing_Window_Start" Value="2004-06-13"/>
<App_Data App="MOD" Name="Licensing_Window_End" Value="2004-07-31"/>
<App_Data App="MOD" Name="Year" Value="2004"/>
<App_Data App="MOD" Name="Studio" Value="TVN Entertainment"/>
</Metadata>
<Asset>
<Metadata>
<AMS Asset_Class="barker" Asset_ID="TVN55583BAR0000000000"
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"/>

<App_Data App="MOD" Name="Type" Value="barker"/>
<App_Data App="MOD" Name="Audio_Type" Value="AC-3"/>
<App_Data App="MOD" Name="Languages" Value="en"/>
<App_Data App="MOD" Name="Subtitle_Languages" Value="en"/>
<App_Data App="MOD" Name="Dubbed_Languages" Value="en"/>
<App_Data App="MOD" Name="Content_FileSize" Value="173529324"/>
<App_Data App="MOD" Name="Content_CheckSum" Value="7d65bb15b26a7a470079d616fac2d462"/>
</Metadata>
<Content Value="TVNX5558300000000000000_barker.mpg"/>
</Asset>
</Asset>
</ADI>

```

Appendix II Revision History

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

ECN	Author	ECN Approval Date	Problem Description
VC1.1-N-03002	Neville Black	3/6/03	Expand Provider_ID description in Tables 1 through 5. Add new item [RFC 1035] to section 2.1 Normative References.
VC1.1-N-03004	Neville Black	3/17/03	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.
VC1.1-N-03006	Yasser Syed	3/21/03	Change Asset_ID Numbers in Example 2; needs to reflect the constancy of Asset-ID numbers to content.
VC1.1-N-03008	Dave Bartolone	3/21/03	Fix Asset_ID at 20 characters.
VC1.1-N-03011	Yasser Syed	3/31/03	Clarify Licensing_Window_End date to indicate the viewing window includes the end date.
VC1.1-N-02007	David Ludder	3/31/03	Additional ratings added to accommodate more granular control over adult content. Introduce new optional field "MSORating".

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

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

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

ECN	Author	ECN Approval Date	Problem Description
VOD-CONTENT1.1-N-04.0020-1	Yasser Syed	4/29/04	Correct ending time of Licensing_Window_End field
VOD-CONTENT1.1-N-04.0021-2	Michael Chen	9/7/04	Accommodate forward slash in component names within Category field of Title asset
VOD-CONTENT1.1-N-05.0022-2	Bill Helms	1/30/05	Add Copy Control Information (CCI) fields to CL 1.1 Metadata
VOD-CONTENT1.1-N-05.0023-1	Michael Chen	1/30/05	Content Bit Rate Field
VOD-CONTENT1.1-N-05.0025-1	Michael Chen	4/5/05	Encrypted only
VOD-CONTENT1.1-N-06.0027-1	David Ludder	4/28/06	Field type change for "billing id"
VOD-CONTENT1.1-N-06.0032-1	Ken Barringer	4/21/06	Apply changes from ADI1.1-N-05.0026-3 to VOD-CONTENT1.1 spec.

The following Engineering Changes are incorporated in MD-SP-VOD-CONTENT1.1-I05-060831

ECN	Author	ECN Approval Date	Problem Description
VOD-CONTENT1.1-N-06.0033-2	Caroline Brown	7/28/06	Metadata clarifications for 1.1
VOD-CONTENT1.1-N-06.0034-1	Neville Black	7/28/06	ISAN
VOD-CONTENT1.1-N-06.0035-3	Caroline Brown	8/25/06	Metadata clarifications and genre standard
VOD-CONTENT1.1-N-06.0039-1	Steve Young	8/25/06	Schema Sample Update