



AMWA Specification

AMWA Application Specification

AS-12 Commercial Delivery (Update)

Approved – August 6, 2013

Executive Summary

AS-12 is an addition to the AMWA MXF Application Specifications (such as AS-03 MXF Program Delivery specification). AS-12 adds advertising identification metadata to an advertisement contained in a compliant MXF file.

Note: the initial version of AS-12 focused upon use of AS-03, and envisaged that AS-12 would be used with MXF files compliant with ASes other than AS-03 in future. This update to AS-12 widens the use of AS-12 to all other AMWA MXF Application Specifications, including AS-02, AS-03, AS-10 and AS-11.

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1 Scope

This document describes a vendor-neutral subset of the MXF file format to use for delivery of finished advertising programming from advertising producers and distributors to broadcast stations.

AS-12 is an extension of the AMWA MXF Application specifications. AS-12 files should not require special treatment by systems that already support AS-02, AS-03, AS-10, and AS-11. The additional metadata specified by AS-12 identifies the advertisement so that it can be reliably transferred to broadcasters, identified, and played to air.

2 Conformance Language

Normative text is text that describes elements of the design that are indispensable or contains the conformance language keywords: "shall", "should", or "may". Informative text is text that is potentially helpful to the user, but not indispensable, and can be removed, changed, or added editorially without affecting interoperability. Informative text does not contain any conformance keywords.

All text in this document is, by default, normative, except: the Introduction, any section explicitly labeled as "Informative" or individual paragraphs that start with "Note:"

The keywords "shall" and "shall not" indicate requirements strictly to be followed in order to conform to the document and from which no deviation is permitted.

The keywords, "should" and "should not" indicate that, among several possibilities, one is recommended as particularly suitable, without mentioning or excluding others; or that a certain course of action is preferred but not necessarily required; or that (in the negative form) a certain possibility or course of action is deprecated but not prohibited.

The keywords "may" and "need not" indicate courses of action permissible within the limits of the document.

The keyword "reserved" indicates a provision that is not defined at this time, shall not be used, and may be defined in the future. The keyword "forbidden" indicates "reserved" and in addition indicates that the provision will never be defined in the future.

A conformant implementation according to this document is one that includes all mandatory provisions ("shall") and, if implemented, all recommended provisions ("should") as described. A conformant implementation need not implement optional provisions ("may") and need not implement them as described.

Unless otherwise specified, the order of precedence of the types of normative information in this document shall be as follows: Normative prose shall be the authoritative definition; Tables shall be next; followed by formal languages; then figures; and then any other language forms.

3 Reference Documents

The following standards contain provisions which, through reference in this text, constitute provisions of this recommended practice. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this recommended practice are encouraged to investigate the possibility of applying the most recent edition of the standards indicated below.

AMWA AS-02	MXF Program Versioning
AMWA AS-03	MXF Program Delivery
AMWA AS-10	MXF Program Production
AMWA AS-11	MXF Program Contribution
SMPTE RDD 17:2009	Advertising Digital Identification (Ad-ID)
SMPTE EG 42:2004	Material Exchange Format (MXF) — MXF Descriptive Metadata
SMPTE ST 298:2009	Universal Labels for Unique Identification of Digital Data
SMPTE ST 336:2007	Data Encoding Protocol Using Key-Length-Value

4 Acronyms and Abbreviations

AS-02:	AMWA AS-02 MXF Program Versioning
AS-03:	AMWA AS-03 MXF Program Delivery specification
AS-10:	AMWA AS-10 MXF Program Production
AS-11:	AMWA AS-11 MXF Program Contribution
UL:	SMPTE ST 298:2009 Universal Label
DMS:	Descriptive Metadata Scheme
opt:	optional
req:	required
NA:	not applicable

5 Overview

5.1 AS-12 Summary

AS-12 adds metadata to AMWA MXF Application Specification compliant MXF files. The underlying format specifies the means by which the advertisement's video and audio essence shall be represented in an MXF file. AS-12 adds to this through the addition of advertising identification metadata. Beyond the addition of metadata, no characteristics of an AS-02, AS-03, AS-10 or AS-11 file are affected by AS-12.

The AS-12 metadata additions are specified in two parts:

1. A metadata-provider independent part that identifies the file as AS-12 advertising content that may include advertising identification metadata. This part does not specify the actual advertising identification metadata. This part is referred to simply as the *AS-12 content identification* metadata. Its purpose to identify the file as one that contains an advertisement, but without providing advertising identification metadata.

2. An metadata-provider dependent part that includes the provider's advertising identification metadata. This metadata is specified using an AS-12 shim specification that documents the provider's metadata requirements. This part is referred to as the *AS-12 advertisement identification metadata*. Its purpose is to unambiguously identify the shim specification and, of course, to carry the shim-specified identification metadata.

An AS-12 compliant file shall contain one DMS_AS_12_Framework and one framework as specified by the underlying AMWA MXF Application Specification (for example, DMS_AS_03_Framework). In the case of AS-02 file bundles every AS-02 Version file shall include the AS-12 Framework but no AS-02 Component file shall include the AS-12 Framework

5.2 AS-12 Content Identification Metadata

AS-12 content identification metadata shall be encoded using a dedicated Descriptive Metadata track that is added to the MXF Material Package in the MXF file in accordance with SMPTE EG 42:2004. The descriptive metadata shall contain a DMS_AS_12_Framework object.

The presence of the DMS_AS_12_Framework metadata object in the file shall be identified by adding a DMS_AS_12_Scheme label to the file's MXF Preface:DMSchemes property.

DMS_AS_12_Framework and DMS_AS_12 are defined in Section 6.

5.3 AS-12 Advertisement Identification Metadata

An AS-12 file shall contain advertisement identification metadata.

AS-12 advertisement identification metadata shall be encoded using a dedicated Descriptive Metadata Set that is added to the MXF Material Package in the MXF file, in accordance with SMPTE EG 42:2004. The descriptive metadata track (described in section 5.2 above) shall include a property AS_12_Slate that shall strongly reference a specialized DescriptiveObject; the specialized DescriptiveObject contains the metadata-provider dependent metadata that unambiguously identifies the advertisement.

The presence of the shim-specified specialized DescriptiveObject in the file shall be signalled by the AS_12_ShimName property of the DMS_AS_12_Framework.

The specialized DescriptiveObject shall be defined by an AS-12 shim as a subclass of AS_12_DescriptiveObject, in an Annex of this document.

Note that DescriptiveObject is defined by SMPTE 377-1. AS_12_DescriptiveObject is a subclass which is defined by this document.

6 Content Identification Metadata Definition

The following table specifies the DM scheme and framework that is required in all AS-12 files.

Metadata Item	Type	Use	UL	Description
DMS_AS_12	DM_Scheme	NA	060e2b34 04010101 0d010701 0c010000	AS_12 metadata for advertising content identification.
DMS_AS_12_Framework	DM_Framework	NA	060e2b34 02530101 0d010701 0c010100	AS_12 content provider independent metadata framework.

Metadata Item	Type	Use	UL	Description
AS_12_ShimName	UTF16String	req	060e2b34 01010101 0d010701 0c010101	An informative shim name that identifies the specification for provider dependent metadata that may be shimmed into this file. E.g. "Ad-ID Digital Identification". Note, this string is informative therefore should not be considered to be a definitive indication that additional, shiimmed, metadata is present in the file. The definitive indication is the presence of a shim's concrete subclass of "AS_12_DescriptiveObject".
AS_12_Slate	StrongRef to AS_12 Descriptive Object	req	060e2b34 01010101 0d010701 0c010102	A Strong Reference to the provider dependent metadata contained in a Descriptive Object as defined by the provider dependent shim.
AS_12_DescriptiveObject	DescriptiveObject	NA	060e2b34 02530101 0d010701 0c010200	AS_12 Commercial Distribution Slate Metadata

Annex A – AS-12 Shim and Advertisement Identification Metadata Definition, for Ad-ID Digital Identification

When using this shim the informative AS_12_ShimName shall be “Ad-ID Digital Identification”.

The following table specifies the AS_12 Descriptive Object that may be shimmed into an AS-12 file in order to include Ad-ID Digital Identification metadata in another AMWA MXF Format Specification compliant file.

The SMPTE ST 298:2009 Universal Label (UL) values for the Ad-ID metadata items are published at <http://ad-id.org/advertising-interoperability>.

Note that the properties of this Descriptive Object correspond exactly to properties in the existing Ad-ID schema “adid.xsd”. adid.xsd is also published at <http://www.ad-id.org/schemas/adid/2.0/adid.xsd>.

Metadata Item	Type	Use	UL	Description
DMS_AS_12_AdID_Slate	AS_12 Descriptive Object	NA	060E2B34 0253010d 0d0d0100 00000000	AS_12 Ad-ID advertisement identification metadata framework.
adid_prefix	UTF16String	req	060E2B34 0101010d 0d0d0101 00000000	The four character prefix of the advertising asset encoded in the file.
adid_code	UTF16String	req	060E2B34 0101010d 0d0d0102 00000000	The unique identifier for the advertising asset encoded in the file.
ad_title	UTF16String	req	060E2B34 0101010d 0d0d0103 00000000	Alpha-numeric combination that follows the prefix. (128 character string)
Brand	UTF16String	req	060E2B34 0101010d 0d0d0104 00000000	The advertiser brand that is associated to this product. E.g. Joes’s Bakery (64 character string)
Product	UTF16String	req	060E2B34 0101010d 0d0d0105 00000000	The product that is the extension of the brand. E.g Baked Goods. (32 character string)
Advertiser	UTF16String	req	060E2B34 0101010d 0d0d0106 00000000	The company or the agency's client that is advertising. e.g. Joe's Bakery (64 character string)
agency_office_location	UTF16String	req	060E2B34 0101010d 0d0d0107 00000000	The agency working with the advertiser and their office location. (64 character string)
Length	UTF16String	req	060E2B34 0101010d 0d0d0108 00000000	The intended length of the advertisement between SOM and EOM
Medium	UTF16String	req	060E2B34 0101010d 0d0d0109 00000000	Medium - Television/Radio/Print etc.

Metadata Item	Type	Use	UL	Description
sd_flag	UTF16String	req	060E2B34 0101010d 0d0d010a 00000000	SD Flag - CDC Flag for SD Code (video only)
Parent	UTF16String	req	060E2B34 0101010d 0d0d010b 00000000	Parent - the parent company of the advertiser, e.g. JOHNSON & JOHNSON may be the parent, however MCNEIL NUTRITIONALS LLC would be the advertiser.