



AdsML™ Framework for E-Commerce Business Standards for Advertising Framework 2 Requirements

Document Authors: AdsML Technical Working Group

Document Number: AdsML2.0-Requirements-AS

Document File Name: AdsML2.0-Requirements-AS.doc

Document Status: Approved Specification

Document Date: 13 September 2005

Draft Number: 1

Table of Contents

1	ADSMML STANDARD DOCUMENTATION	6
1.1	DOCUMENT STATUS AND COPYRIGHT	6
1.2	DOCUMENT NUMBER AND LOCATION	6
1.3	ABSTRACT	6
1.4	AUDIENCE.....	6
1.5	PURPOSE OF THIS DOCUMENT.....	6
1.6	ACCOMPANYING DOCUMENTS	6
1.7	CHANGE HISTORY	6
1.8	ACKNOWLEDGEMENTS	7
1.9	DEFINITIONS OF KEY WORDS USED IN THIS DOCUMENT	7
1.10	REQUIREMENT IDS AND VERSION IDENTIFIERS	7
1.10.1	Requirement IDs.....	7
1.10.2	Version Identifiers.....	7
1.11	OPEN ISSUES AND TO-DO	7
2	OVERVIEW OF FRAMEWORK 2.....	8
3	REQUIREMENTS.....	9
3.1	GENERAL AND NON-FUNCTIONAL	9
3.1.1	Communication [1].....	9
3.1.2	Documentation sets [2].....	9
3.1.3	Ease of implementation [3].....	9
3.1.4	Language [4].....	9
3.1.5	Lifecycle coverage [5]	9
3.1.6	Printed formats [6].....	9
3.1.7	Processing model [7].....	10
3.1.8	Transfer protocols [8]	10
3.2	FUNCTIONAL REQUIREMENTS APPLYING TO ALL OF THE ADSML ITEM-LEVEL STANDARDS	10
3.2.1	AdsML Item Types [9]	10
3.2.2	Compound business objects [10].....	10
3.2.3	Custom list extensions [11].....	11
3.2.4	Custom properties [12].....	11
3.2.5	Digital signatures for business entities [13].....	11
3.2.6	Global identifiers [14].....	11
3.2.7	Interoperability [15].....	11
3.2.8	Locale [16]	12
3.2.9	Mandatory information elements [17].....	12
3.2.10	Message re-sending [18].....	12
3.2.11	Natural language [19].....	12
3.2.12	Participant validation [20]	13
3.2.13	Relation to AdsML Envelope [21].....	13
3.2.14	Replacement for CREST 2.0 [22].....	13
3.2.15	Replacement for Space/XML [23].....	13
3.2.16	Replacement for IfraAdConnexion [24].....	13
3.2.17	Response requirement	13
3.2.17.1	Response message structures [25]	13
3.2.17.2	Response processing [26]	14
3.2.17.3	Response design approach [27]	14
3.2.17.4	Response requests [28]	14
3.2.18	Schema validation and standard processing [29].....	14
3.2.19	System testing [30].....	14
3.2.20	Transaction message sequence numbers [31].....	14
3.3	AD BOOKINGS	15

3.3.1	<i>Vision</i>	15
3.3.2	<i>Scope</i>	15
3.3.2.1	Types of business messages [32]	15
3.3.2.2	Types of media [33].....	16
3.3.2.3	Classes of advertising [34].....	16
3.3.3	<i>Asynchronous communications and long-lived transactions</i> [35].....	16
3.3.4	<i>Business messages</i> [36].....	17
3.3.5	<i>Interoperability with SpaceXML, IfraAdConnexion 2.0 and CREST 2.0</i> [37].....	17
3.3.6	<i>Design approach</i> [38].....	17
3.3.7	<i>Documentation</i> [39].....	18
3.3.8	<i>Relationship to ad materials</i> [40].....	18
3.3.9	<i>Overview of the information in an Ad Bookings message</i>	19
3.3.10	<i>Information relationships</i>	20
3.3.10.1	Multiple bookings in a Bookings message [41].....	20
3.3.10.2	Booking [42].....	20
3.3.10.3	Placement [43].....	20
3.3.10.4	Linked Placements [44]	21
3.3.10.5	Placement Group [45].....	21
3.3.11	<i>Information content</i>	21
3.3.11.1	Advertiser relationships [47]	21
3.3.11.2	Blind boxes or “Box Numbers” [48]	22
3.3.11.3	Booking details [49]	22
3.3.11.4	Changes & cancellations [50].....	22
3.3.11.5	Identifiers.....	22
3.3.11.5.1	Booking IDs [51].....	22
3.3.11.5.2	Placement IDs [52].....	22
3.3.11.5.3	Insertion IDs [53]	22
3.3.11.5.4	Party IDs.....	22
3.3.11.5.4.1	Primary parties	22
3.3.11.5.4.2	Secondary parties	23
3.3.11.6	Placements.....	23
3.3.11.6.1	Alternating ad content [55].....	23
3.3.11.6.2	Cutable sections [56].....	23
3.3.11.6.3	Linked placements [57]	23
3.3.11.6.4	Multiple placements [58].....	23
3.3.11.6.5	Placement classification [59].....	24
3.3.11.6.6	Positioning [60]	24
3.3.11.6.7	Production requests [61].....	24
3.3.11.6.8	Relationship to editorial content [62]	24
3.3.11.7	Pricing and payments.....	25
3.3.11.7.1	Bill-to information [63]	25
3.3.11.7.2	Contracts [64]	25
3.3.11.7.3	Pre-payments [65]	25
3.3.11.7.4	Pricing [66].....	25
3.3.11.7.5	Pricing components [67].....	25
3.3.11.7.6	Relationship of pricing components to a Booking or Placement [68]	25
3.3.11.7.7	Split billing [69]	25
3.3.11.8	Scheduling	26
3.3.11.8.1	Scheduling different media types [70].....	26
3.3.11.8.2	Absolute & relative scheduling [71].....	26
3.3.11.8.3	Conditional scheduling [72]	26
3.3.11.8.4	Til cancelled [73].....	26
3.3.11.9	Umbrella ads [74]	26
3.4	STRUCTURED DESCRIPTIONS OF ADVERTISED ITEMS	27
3.4.1	<i>Vision</i>	27
3.4.2	<i>Scope</i>	27

3.4.2.1	Types of business messages [75]	27
3.4.2.2	Types of media [76]	27
3.4.2.3	Classes of advertising [77]	27
3.4.3	<i>Deliverables [78]</i>	27
3.4.4	<i>Terminology used in this section</i>	28
3.4.5	<i>Illustrative usage scenario</i>	29
3.4.6	<i>Initial design goal [79]</i>	30
3.4.7	<i>Relationship to Advertisements [80]</i>	30
3.4.8	<i>Compound advertisements [81]</i>	31
3.4.9	<i>Creation and transmission of validation rules</i>	31
3.4.9.1	Definition of structural and validation rules [82]	31
3.4.9.2	Exchange and reference of validation rules [83]	31
3.4.9.3	One rule set per item [84]	31
3.4.9.4	One set of properties per item [85]	32
3.4.9.5	Relationship to XML Schema [86]	32
3.4.9.6	Validation against multiple rule sets [87]	32
3.4.10	<i>Human-readable form [88]</i>	32
3.4.11	<i>Information definitions</i>	33
3.4.11.1	Classes [89]	33
3.4.11.2	Class names [90]	33
3.4.11.3	Default values [91]	33
3.4.11.4	Enumerated lists [92]	33
3.4.11.5	Format masks and regular expressions [93]	33
3.4.11.6	Mandatory properties and modifiers [94]	34
3.4.11.7	Minimum and maximum length [95]	34
3.4.11.8	Modifiers [96]	34
3.4.11.9	Modifier data types [97]	34
3.4.11.10	Modifier names [98]	34
3.4.11.11	Minimum and Maximum values [99]	34
3.4.11.12	Number of decimal places [100]	35
3.4.11.13	Properties [101]	35
3.4.11.14	Property and property group names [102]	35
3.4.11.15	Property data types [103]	35
3.4.11.16	Property groups [104]	35
3.4.11.17	Property group attributes [105]	36
3.4.11.18	Property group definitions [106]	36
3.4.11.19	Publishable vs. private properties [107]	36
3.4.11.20	Repeatable properties and property groups [108]	36
3.4.11.21	Searchable properties [109]	36
3.4.12	<i>Message content and usage</i>	37
3.4.12.1	Identification [110]	37
3.4.12.2	Self-contained information [111]	37
3.4.12.3	Property values as “keys” into external lists [112]	37
3.4.13	<i>Sample vocabularies</i>	37
3.4.13.1	Explicitly supported categories of advertised items [113]	37
3.4.13.2	Other classes of advertised items [114]	38
3.4.13.3	Structured description of the Advertiser [115]	38
3.4.13.4	Naming conventions in AdsML-provided sample vocabularies [116]	38
3.4.13.5	User modifications to an AdsML-provided sample vocabulary	38
3.4.13.5.1	Allowed Values [117]	38
3.4.13.5.2	Extension [118]	39
3.4.13.5.3	Regular Expression or Format [119]	39
3.4.13.5.4	Renaming [120]	39
3.4.13.5.5	Restriction [121]	39
3.4.13.5.6	Structural characteristics [122]	39
3.4.13.5.7	Usage characteristics [123]	39

3.5	AD MATERIALS.....	39
3.5.1	<i>Vision</i>	39
3.5.2	<i>Scope</i>	40
3.5.2.1	Types of business messages.....	40
3.5.2.1.1	Ad Materials messages defined in the Advertising Components Interactions.....	40
3.5.2.1.1.1	Message list [124]	40
3.5.2.1.1.2	Message purpose [125]	40
3.5.2.1.2	Booking Information for Materials Delivery message	41
3.5.2.1.2.1	Message list [126]	41
3.5.2.1.2.2	Message purpose [127]	41
3.5.2.1.3	Other message types.....	41
3.5.2.1.3.1	Message list [128]	41
3.5.2.2	Types of media [129].....	41
3.5.2.3	Classes of advertising [130].....	42
3.5.3	<i>Terminology used in this section</i>	42
3.5.4	<i>Relationship of Ad Materials to Bookings</i> [131]	42
3.5.5	<i>Relationship of Ad Materials to structured descriptions of advertised items</i> [132]	43
3.5.6	<i>Revised versions of ad materials</i> [133]	43
3.5.7	<i>Information content of an AM-M* message</i>	43
3.5.7.1	Multiple sets of ad materials [134]	43
3.5.7.2	Information that originated in a Bookings message exchange [135]	43
3.5.7.2.1	No Pricing or Payment information [136]	43
3.5.7.2.2	Placement information [137].....	44
3.5.7.2.3	Production information [138]	44
3.5.7.3	Content conformance; results of most recent preflight checking [139]	44
3.5.7.4	Descriptive name [140].....	44
3.5.7.5	IDs to match advertisements with their orders [141]	44
3.5.7.6	Metadata describing the contents of the advertisement.....	45
3.5.7.6.1	Industry code [142]	45
3.5.7.6.2	Search strings [143].....	45
3.5.7.6.3	Structured descriptions of advertised items [144]	45
3.5.7.6.4	Text [145].....	45
3.5.7.7	Production order-related IDs [146]	45
3.5.7.8	Renderings	45
3.5.7.8.1	Ability to convey zero or more renderings [147]	45
3.5.7.8.2	Types of materials in a rendering [148].....	46
3.5.7.8.3	Conveyance by containership, MIME packaging, location or physical delivery [149] 46	
3.5.7.8.4	Multiple delivery mechanisms [150].....	46
3.5.7.8.5	Partial renderings [151]	46
3.5.7.8.6	Support for multiple objects comprising a single rendering [152]	47
3.5.7.8.7	Support for automated processing [153]	47
3.5.7.8.8	In-line transmission of non-XML renderings [154]	48
3.5.7.8.9	Handling instructions [155].....	48
3.5.8	<i>Information content of a Booking Information for Materials Delivery message</i>	48
3.5.8.1	One placement of one set of Ad Materials [156]	48
3.5.8.2	Types of information [157]	48
3.5.8.3	Publisher's delivery expectations [158]	48
3.5.8.3.1	No Pricing or Payment information [159]	48
4	APPENDIX.....	49
4.1	NEXT REQUIREMENT NUMBER: 160.....	49
4.2	IMPLEMENTATION STATUS	49

1 AdsML Standard Documentation

1.1 Document status and copyright

This is the Approved Specification of the AdsML™ Framework 2 Requirements.

Copyright © 2005 AdsML Consortium. All rights reserved. Information in this document is made available for the public good, may be used by third parties and may be reproduced and distributed, in whole and in part, provided acknowledgement is made to AdsML Consortium and provided it is accepted that AdsML Consortium rejects any liability for any loss of revenue, business or goodwill or indirect, special, consequential, incidental or punitive damages or expense arising from use of the information.

1.2 Document Number and Location

This document, Document Number AdsML2.0-Requirements-PS-3, is available only to members of the AdsML Consortium. It will be located in the members area of the AdsML™ website at <http://www.AdsML.org/>.

1.3 Abstract

This document sets out the requirements that the AdsML Technical Working Group has determined regarding the work to be published as part of Version 2 of the AdsML Framework. This work was begun in 2004, and has been carried over into 2005. Therefore, this document takes as its basis the "AdsML Phase 2 Requirements" document, and adds new requirements and edits existing requirements where appropriate. It can be considered a revision and replacement of the earlier document. (Note that the AdsML documentation naming conventions have changed between the two versions of this document.)

1.4 Audience

The intended audience for this document is members and guests of the AdsML Technical Working Group.

Comments on this document should be addressed to the Technical Working Group of the AdsML Consortium (technical.wg@AdsML.org).

1.5 Purpose of this document

This document is intended to provide guidance to developers of the AdsML Phase 2 deliverables.

1.6 Accompanying documents

There are no accompanying documents.

1.7 Change History

Version	Date	Changes	Author
AS	13 September 2005	First Approved draft. Previous change history removed.	TS

1.8 Acknowledgements

This document is a product of the AdsML Technical Working Group.

Primary authorship and editing was performed by:

- Tony Stewart (RivCom) - tony.stewart@rivcom.com

1.9 Definitions of key words used in this document

The key words "**MUST**", "**MUST NOT**", "**REQUIRED**", "**SHALL**", "**SHALL NOT**", "**SHOULD**", "**SHOULD NOT**", "**RECOMMENDED**", "**MAY**", and "**OPTIONAL**" in this document are used as described in IETF RFC 2119. When any of these words do not appear in upper case as above, then they are being used with their usual English language sense and meaning.

1.10 Requirement IDs and Version Identifiers

1.10.1 Requirement IDs

Each requirement in this document is numbered in two ways: by multi-level number at the start of its header (e.g. "3.1.1 Communications"), and by a one- or two-level number in square brackets that is either at the end of the header or immediately after the text of the requirement (e.g. "[60]").

The number at the start of the header is automatically generated by the word processor, and is not guaranteed to remain the same in future versions of this document. For example, the insertion of a new requirement into a section of the document will cause all subsequent requirements in that section to be renumbered.

The number in brackets at the end of the header or text, however, is a permanent ID that will not change in future revisions to this document. Although when these IDs were initially assigned they ran sequentially from the start to end of this document, their sequence is not significant.

1.10.2 Version Identifiers

The text of each requirement ends with a version identifier, which is a string at the right-hand side of the page that indicates the version of this document in which that requirement was most recently added or substantially changed (for example: "AdsML2.0-PS1"). Each identifier string consists of two parts: the version of the Framework that was being developed at the time the requirement was written (e.g. "AdsML2.0"), followed by the draft of this document in which it was introduced (e.g. "PS1").

These identifiers were added to the document in version AdsML2.0-PS1. They are not necessarily accurate with regard to requirements that were developed prior to AdsML2.0-PS1.

1.11 Open issues and To-Do

This section contains notes and to-do items that have not been placed inside one of the sub-sections of the document.

(none)

2 Overview of Framework 2

In 2003, the AdsML Technical Working Group was asked by the Consortium's membership to design a suite of Item-level AdsML standards to convey the following types of information:

- Ad Bookings
- Structured Descriptions of Advertised Items
- Classified Ad Styling Requests
- Delivery of Ad Content

This work, which was then designated "Phase 2" of AdsML development and was publicly released in October 2004, was intended to address what is conceptually a single business requirement: the need to deliver the content, metadata and booking information for an ad or set of ads, where sometimes a set of related information is sent in a single "package", and sometimes the information arrives as discrete objects that must be received one at a time by the recipient and then slowly assembled into the full set of business information.

Unfortunately, it was not possible during a single year to develop robust message formats encompassing all of the intended types of information. At the end of 2004, only part of the vision for Phase II had been achieved. Of the four original goals, only the Bookings and Structured Descriptions formats were released, and the Bookings format did not support all of the intended functionality.

Meeting in a Plenary session in November 2004, membership of the AdsML Consortium voted that the main priority for development in 2005 will be to finish the work that had been started in 2004. This includes:

- Enhance the Booking format so that it supports the booking of Print Inserts, Online Classified Ads, and (if possible) other (non-classified) types of Online Ads
- Enable the delivery of Ad Materials both within a booking message and as part of a standalone message
- Modify the underlying schema architecture so that it better supports modular development and re-use of schema structures across multiple message types
- Create a first draft of an Invoicing message format

As can be seen, these activities largely consist of enhancements to the work that was begun during Phase 2. Therefore, this document takes as its basis the AdsML Phase 2 Requirements document, and adds new requirements and edits existing requirements where appropriate. It can be considered a revision and replacement of the earlier document.

Also at the end of 2004, the AdsML Consortium revised its naming conventions governing releases of the AdsML suite of standards. This work is now part of the ongoing development of the AdsML Framework Version 2.0, and this document has been renamed accordingly.

3 Requirements

3.1 General and non-functional

This section contains requirements governing all of the AdsML Phase 2 deliverables. They are meant to guide and constrain the developers of the standard.

3.1.1 Communication [1]

The AdsML standard **SHALL** be easy to communicate to implementers and users.
AdsML1.0-WD1

3.1.2 Documentation sets [2]

- i. Each release of the AdsML specification **SHALL** consist of a set of related documents. [2.1]
- ii. Each document in the set of related documents comprising a release of the AdsML specification **SHALL** be versioned independently of the others. [2.2]
- iii. Each document in the set of related documents comprising a release of the AdsML specification **SHALL** identify the names and version numbers of the other documents in that set. [2.3]

AdsML1.0-WD1

3.1.3 Ease of implementation [3]

AdsML **SHOULD** be designed so that AdsML systems are relatively easy to implement.
AdsML1.0-WD1

3.1.4 Language [4]

- i. The AdsML standard **SHALL** be written in US English. [4.1]
- ii. AdsML Item-level standards **SHALL** use human-readable element names that are formatted in "CamelCase" (meaning that multi-word element and attribute names are concatenated) and use US English spelling. [4.2]
- iii. Element and Type names **SHALL** begin with capital letters. If an element or type name contains multiple words, then upper camel case (UpperCamelCase) **SHALL** be used. [4.3]
- iv. Attribute names **SHALL** begin with a lower case letter. If an attribute name contains multiple words, then lower camel case (lowerCamelCase) **SHALL** be used. [4.4]

AdsML1.0-WD1

3.1.5 Lifecycle coverage [5]

AdsML **SHALL** provide support for the entire advertisement lifecycle.
AdsML1.0-WD1

3.1.6 Printed formats [6]

All AdsML documentation **SHALL** print acceptably on both A4 and US Letter paper formats.
AdsML1.0-WD1

3.1.7 Processing model [7]

- i. AdsML **SHALL** not force an implementer to follow a particular processing model. [7.1]
- ii. AdsML **SHOULD** support both synchronous and asynchronous transactions. [7.2]
AdsML1.0-WD1

3.1.8 Transfer protocols [8]

AdsML **SHALL** be independent of transfer protocols.

AdsML1.0-WD1

3.2 Functional requirements applying to all of the AdsML Item-level standards

This section contains requirements that affect all of the AdsML Item-level Standards, either individually or taken as a whole.

3.2.1 AdsML Item Types [9]

- i. Each Item-level message format **SHALL** provide a mechanism by which users **MUST** identify the AdsML Item type(s) (i.e. business object name such as "invoice" or "insertion order") that is being conveyed in that message. [9.1]
- i. This mechanism **SHALL** consist of a user-extensible controlled vocabulary. [9.2]
AdsML2.0-WD1

3.2.2 Compound business objects [10]

- ii. AdsML Item-level message formats **SHOULD** be designed so that there is minimal overlap between the classes of business objects (e.g. Booking, Invoice, Ad Materials, etc.) that are contained in a given Item. In other words, each class of business object **SHOULD** be able to be transported in its own Item. [10.1]
- iii. Notwithstanding the above, in order to support certain defined business scenarios, AdsML **SHALL** provide a means for users to transmit "packages" of related business objects in the same AdsML Envelope in such a way that the recipient can process the information as if it had been contained in a single compound Item. [10.2] The scenarios that have been currently identified are:
 - a. Transmission of an Ad Booking for a classified ad accompanied by the Materials for that advertisement. The Ad Materials may or may not include formatting information and Structured Descriptions of Advertisement Items.
 - b. Transmission of an electronic Invoice accompanied by one or more Proof(s) of Publication for the line items on the invoice, and/or one or more sets of Booking information relating to the line items on the invoice.

NOTE: The use of the word "package" in the above paragraph is not meant to suggest any particular technical solution to this requirement.

AdsML2.0-WD1

3.2.3 Custom list extensions [11]

Each Item-level format is expected to contain one or more element or attributes whose values come from a controlled vocabulary. In some cases, users will be able to modify and/or extend the values in these controlled vocabularies.

- i. For each type of list that can be extended, the AdsML standard **SHALL** define a mechanism by which a user can define or extend the applicable controlled vocabulary and make that information available to its trading partners. [11.1]
- ii. This mechanism **SHALL** be the only means by which users will be allowed to extend the lists of allowable values. [11.2]

AdsML2.0-PS1

3.2.4 Custom properties [12]

- i. Each Item-level format **SHALL** contain one or more general-purpose user-definable custom properties. [12.1]
- ii. Each Item-level message format **SHALL** define a mechanism by which a user can specify the names and allowable values of the custom Properties in messages that it receives, and can make that information available to its trading partners. [12.2]
- iii. This mechanism **SHALL** be the only means by which users are allowed to define custom properties. [12.3]

AdsML2.0-WD1

3.2.5 Digital signatures for business entities [13]

It **SHALL** be possible in an AdsML message to associate a digital signature with each business entity mentioned in the message that has a significant relationship to the transaction with which the message is associated. Examples of business entities with significant relationships include advertiser, ad buyer, ad seller, message sender, producer of ad materials, etc.

NOTE: The requirement to be able to carry more than one digital signature has been deprecated because it is not feasible for more than one party to sign a given Item-level message.

AdsML2.0-WD1

3.2.6 Global identifiers [14]

Each AdsML Item-level message **SHALL** be globally uniquely identifiable, and the documentation for that message type **SHALL** recommend an ID format for accomplishing this.

AdsML2.0-WD1

3.2.7 Interoperability [15]

The design of each Item level message format **SHALL** follow an approach that encourages interoperability – in other words, features within the format that allow users to configure and extend message types to meet their local business requirements **SHALL** be balanced by constraints or guidelines that make it possible (and preferably easy) for them to exchange messages with trading partners that have not implemented the same configurations and extensions.

AdsML2.0-WD1

3.2.8 Locale [16]

- i. AdsML Item-level message formats **SHALL** handle country specific attributes such as language, currency, measurements, names and addresses across the range of countries to be served. [16.1]
- ii. All processable date times in an AdsML Item-level message **SHALL** use ISO 8601 format, as implemented by the W3C Date and Time definitions. [16.2]
- iii. Where there is information in an AdsML Item-level message that is regional/locale specific, the AdsML Item-level format **SHALL** convey it using a consistent set of internationally standardized data formats that **SHOULD** support transformation by the recipient into data formats that conform to the local requirements. [16.3]

AdsML2.0-WD1

3.2.9 Mandatory information elements [17]

Each Item-level message format **SHALL** support transmission of at least the following information:

- i. Globally Unique Message ID [17.1]
- ii. Sender Organization Name [17.2]
- iii. Sender Organization ID and ID Type [17.3]
- iv. Sender Organization Address and Phone [17.4]
- v. Sender Organization Digital Signature [17.5]
- vi. Sender Organization's Reply-to Address for messages sent in response to this message [17.6]
- vii. Intended Recipient Organization ID and ID Type [17.7]
- viii. Intended Recipient Address and Phone [17.8]
- ix. Intended Recipient Digital Signature [17.9]
- x. Date/Time the message was created [17.10]
- xi. Whether the sender requires a Response to the message [17.11]
- xii. The XML standard or vocabulary governing this message, including its Version Number [17.12]
- xiii. The Name and Version Number of the Schema that can be used to validate this message [17.13]
- xiv. Whether or not this is a Test message [17.14]
- xv. The number of times this message has previously been transmitted [17.15]
- xvi. The priority of this message [17.16]
- xvii. A list of user-definable Properties that characterize the message [17.17]
- xviii. The type(s) of business object(s) contained within the message [17.18]
- xix. The natural language used for non-controlled business information in the message. (See "Natural language".) [17.19]

AdsML2.0-WD1

3.2.10 Message re-sending [18]

The AdsML Item-level standards **SHALL** enable a user to re-send a message and indicate that it is a copy of a previously sent message.

AdsML2.0-WD1

3.2.11 Natural language [19]

- i. All of the business information carried as PCDATA in a given Item-level message (i.e. whose values are not governed by a controlled vocabulary or

- similar mechanism) **SHOULD** be in one and only one natural language (e.g. English or French). [19.1]
- ii. Each Item-level message format **SHALL** provide a mechanism by which users can identify the natural language that applies to the PCDATA business information in that message. [19.2]

AdsML2.0-WD1

Note that this requirement does not refer to advertising content or structured descriptions of advertised items that may be carried within the message.

3.2.12 Participant validation [20]

The AdsML Item-level standards **SHALL** support identification of the sender and recipient in a document exchange.

AdsML2.0-WD1

3.2.13 Relation to AdsML Envelope [21]

AdsML "Item-level" business messages **SHALL** be capable of being included in an AdsML Envelope, and **SHALL** also be capable of being transmitted outside of an AdsML Envelope.

AdsML2.0-WD1

3.2.14 Replacement for CREST 2.0 [22]

AdsML Framework 2.0 **SHALL** include a suite of Item-level standards that, taken together, can serve as a replacement for the CREST 2.0 standard. A user **SHALL** be able to translate the information in a CREST 2.0 message into a set of one or more of the AdsML message types defined without loss of information.

AdsML2.0-WD1

3.2.15 Replacement for Space/XML [23]

AdsML Framework 2.0 **SHALL** include a suite of Item-level standards that, taken together, can serve as a replacement for the SPACE/XML standard. A user **SHALL** be able to translate the information content of a SPACE/XML message into a set of one or more of the AdsML message types without loss of information.

AdsML2.0-WD1

3.2.16 Replacement for IfraAdConnexion [24]

AdsML Framework 2.0 **SHALL** include a suite of Item-level standards that, taken together, can serve as a replacement for the IfraAdConnexion 2.0 standard. A user **SHALL** be able to translate the information content of an IfraAdConnexion 2.0 message into a set of one or more of the AdsML message types without loss of information.

AdsML2.0-WD1

3.2.17 Response requirement

3.2.17.1 Response message structures [25]

- i. Each Item-level standard **SHALL** allow transmission of user-definable administrative responses such as "message received" and common validation or simple business errors. [25.1]
- ii. Each response **SHALL** identify the message to which it is a response. [25.2]

AdsML2.0-WD1

3.2.17.2 Response processing [26]

The documentation for the required processing of each AdsML standard **SHALL** indicate that a response **MUST** be made to any Item-level message that fails validation, and that such response **MUST** indicate the nature of the validation error(s).

AdsML2.0-WD1

3.2.17.3 Response design approach [27]

A single set of response definitions, structures and/or mechanisms **SHOULD** be used for all of the Item-level message standards. In other words, AdsML should provide a single approach and mechanism for sending responses that can be used to respond to any of the Item-level message types.

AdsML2.0-WD1

3.2.17.4 Response requests [28]

Each Item-level standard **SHALL** allow a sender to specify whether or not an administrative response to a given message is required even if that message does not generate any errors.

AdsML2.0-WD1

3.2.18 Schema validation and standard processing [29]

- i. Messages conforming to an Item-level standard **SHALL** be processable with standard XML tools, for example, parsers and stylesheets. [29.1]
- ii. Each Item-level standard **SHALL** be defined using the XML Schema standard and **SHALL** support syntactic and structural validation of messages conforming to that standard by use of an XML Schema processor. [29.2]

AdsML2.0-WD1

3.2.19 System testing [30]

Each Item-level standard **SHALL** support the sending of test messages and the response to such messages.

AdsML2.0-WD1

3.2.20 Transaction message sequence numbers [31]

- i. Each Item-level standard that is designed to convey business transaction information (for example, ad bookings, production orders, invoices, and the responses thereto) **SHALL** provide a mechanism by which trading partners can sequentially number the messages that they generate in such a way that a message recipient can determine which of any two such messages from a given trading partner was sent before the other. [31.1]
- ii. Each Item-level standard that is designed to convey business transaction information **SHALL** provide a mechanism by which trading partners can sequentially number the messages that they generate that pertain to a given business transaction, in such a way that a message recipient can determine whether it has received all of the messages sent by a given trading partner that

pertain to a given transaction, as well as the sequence in which those messages were sent. [32.2]

AdsML2.0-WD1

3.3 Ad bookings

The requirements in this section apply to the structure and content of Ad Booking messages. They are meant to guide and constrain developers of the standard.

3.3.1 Vision

To create a globally applicable XML standard for ad booking transactions (including quotations, reservations and orders) that can support all advertising media – including, but not limited to, print, online, broadcast and outdoor advertisements – based on a technical approach that can easily be extended to accommodate more types of media and booking transactions over time, and that provides mechanisms by which regional associations or groups of trading partners can customize the message formats to meet their needs while still remaining interoperable with message formats in other regions that have been customized differently.

3.3.2 Scope

3.3.2.1 Types of business messages [32]

The Ad Booking standard **SHALL** directly support transmission of at least the following types of business messages (message definitions are copied from the AdsML Advertising Components documentation):

AD-O	Ad Order	A request for publication of an advertisement. It will be sent by the buyer of advertising to the seller of advertising. Note that an Ad Order sent to an agent or other intermediary could contain orders for one or more publishers and could later on be separated into more than one specific ad order.
AD-OC	Ad Order Change	A change to the details of a previously confirmed ad order. Sent by the buyer of advertising to the seller of advertising.
AD-OX	Ad Order Cancellation	A cancellation instruction for all or part of a previously submitted ad order. Sent by the buyer of advertising to the seller of advertising.
AD-OR	Ad Order Response	A response to an ad order, which could be a confirmation (acceptance) of the order, refusal to accept it, or a request for more information. Sent by the seller of advertising to the buyer of advertising. If it is a confirmation it will contain any special instructions about identification, delivery or deadlines. A refusal could be for legal, credit or other reasons.
AD-OS	Ad Order Status	The response to an Ad Order Status Enquiry.
AD-OSE	Ad Order Status Enquiry	A request for information about the status of a previously requested ad order.
AD-RFQ	Ad Quotation Request	A request from a potential buyer of advertising for a quotation or price according to a defined set of included criteria.
AD-Q	Ad Quotation	The price of the advertisement as detailed in an Ad Quotation

		Request. Sent by the seller of advertising to the potential buyer of advertising in response to an AQR.
AD-QS	Ad Quotation Status	The response to an Ad Quotation Status Enquiry.
AD-QSE	Ad Quotation Status Enquiry	A request for information about the status of a previously requested quotation.
AD-R	Ad Reservation	An expression of interest in available ad space or time slots by a buyer of advertising to a seller of advertising. Note that an Ad Space Reservation must be supported by an Ad Order before it will be published or broadcast.
AD-RC	Ad Reservation Change	A change to a previously requested reservation.
AD-RX	Ad Reservation Cancellation	A response to an Ad Reservation by the seller of advertising advising the buyer of advertising that their reservation has been cancelled or has expired.
AD-RR	Ad Reservation Response	The response to a reservation. Could be a confirmation of acceptance of the reservation, refusal to reserve, or a request for more information.
AD-RS	Ad Reservation Status	The response to an Ad Reservation Status Enquiry.
AD-RSE	Ad Reservation Status Enquiry	A request for information about the status of a previously requested ad reservation.

AdsML2.0-WD1

3.3.2.2 Types of media [33]

- i. By the conclusion of its first major release cycle, the Ad Booking standard **SHALL** support transmission of the business messages described above for at least the following types of media: [33.1]
 - i. Print
 - ii. Online
 - iii. SMS/MMS
- ii. By the conclusion of its first major release cycle, the Ad Booking standard **SHOULD** also support transmission of the business messages described above for broadcast media, including radio and TV. [33.2]

AdsML2.0-WD1

3.3.2.3 Classes of advertising [34]

The Ad Booking format **SHALL** support bookings for at least the Display, Classified and Print Insert advertising classes.

AdsML2.0-WD1

3.3.3 Asynchronous communications and long-lived transactions [35]

The Ad Booking standard **SHALL** be able to handle the complexities of asynchronous and long-lived transactions between trading partners, where (for example) messages may not arrive in the order in which they were transmitted, a buyer may need to change the terms of a transaction before receiving the seller's response to its initial order, and both parties to a transaction may simultaneously attempt to change it.

AdsML2.0-WD1

3.3.4 Business messages [36]

The Ad Booking standard **SHALL** be able to convey at least the following types of business messages:

- i. Initiate a Quotation, Reservation or Order [36.1]
- ii. Change the terms of an existing Reservation or Order [36.2]
- iii. Cancel a Reservation or Order [36.3]
- iv. Exchange information about the status of a Reservation or Order [36.4]
- v. Convert a Reservation into an Order [36.5]

AdsML2.0-WD1

3.3.5 Interoperability with SpaceXML, IfraAdConnexion 2.0 and CREST 2.0 [37]

- i. The AdsML Ad Booking standard **SHALL** allow users to “up-translate” all of the booking-related information in a Space/XML, IfraAdConnexion 2.0 or CREST 2.0 message into the Ad Booking standard. In other words, the Ad Booking standard **SHALL** be able to accommodate all of the booking information contained in a message conforming to any of these three standards. [37.1]
- ii. The AdsML Ad Booking standard **SHOULD** allow users to “down-translate” all of the booking-related information from an Ad Booking message into a Space/XML, IfraAdConnexion 2.0 or CREST 2.0 message, provided that all of the information in the original message can be accommodated by the target standard. In other words, any information content in the Ad Booking standard that cannot be accommodated by one or more of these other three standards **SHOULD** be optional rather than mandatory, or if mandatory, then only mandatory under circumstances in which the ability to interoperate with the(se) other standard(s) would not be impacted. [37.2]

AdsML2.0-WD1

NOTE: this requirement only applies to the transmission of SpaceXML, IfraAdConnexion and CREST booking information; it does not apply to other types of information that those standards are capable of conveying. These other types of information may be accommodated in the Ad Booking format, or in one or more of the other message types that we are developing.

3.3.6 Design approach [38]

- i. The technical approach used to develop the Ad Bookings standard **SHALL** follow a modular approach such as the one embodied in the CICA framework for building ecommerce messages that is being developed by the Data Interchange Standards Association (DISA) in the United States. [38.1]
- ii. The structure of the Ad Bookings message format and its XML Schema **SHALL** be designed in such a way that support for other media and classes of advertisements can be added to subsequent releases of the standard at a later date without requiring changes to those portions of the message structure that are already in use at that time. [38.2]
- iii. The architecture of the Ad Bookings message format **SHALL** enable its main sub-structures to be imported or included into other AdsML message formats that need to carry copies of information which was originally part of the bookings

transaction. These other formats include, but are not limited to, the Ad Materials and Financial message suites. [38.3]

AdsML2.0-WD1

3.3.7 Documentation [39]

The documentation set for the Ad Booking format **SHALL** include at least the following documents:

- a) XML Schema files (.xsd)
- b) Schema specification document (textual explanation of the structure and semantics in the message format)
- c) Appropriate documentation of the architectural approach that was followed (the definition of “appropriate” has not been determined)
- d) Implementation guidelines, including:
 - i) Model choreography for the exchange of messages conforming to the standard
 - ii) How to use the provided mechanisms (e.g. controlled vocabularies) to create user-defined extensions
- e) Sample files, including:
 - i) Messages
 - ii) XSLT transformations between AdConnexion and the Ad Booking format, and between SPACE/XML and the Ad Booking format.

AdsML2.0-WD1

3.3.8 Relationship to ad materials [40]

- i. It **SHALL** be possible for users to transmit one or more sets of Ad Materials inside an Ad Bookings message if that Ad Bookings message contains a Placement for each set of ad materials. This is intended to support scenarios in which both the booking transaction and the materials for a given advertisement are transmitted at the same time. However, users are never required to transmit Ad Materials in the same message as their Booking information. [40.1]
- ii. A set of Ad Materials **MAY ONLY** be conveyed inside an Ad Bookings message when the Booking message contains one and only one Placement instruction for those Ad Materials. In other words, this mechanism may only be used in the relatively simple case where a placement for a single ad, and the ad materials that are being placed, are sent in the same message at the same time in a one-to-one relationship. [40.2]
- iii. A single AdsML Booking message may contain many placements and therefore many sets of Ad Materials, provided that each pairing of a placement and its ad materials conforms to these requirements. [40.3]
- iv. In more complex situations, such as when the one set of ad materials is referenced by many placements or when a single placement references multiple sets of ad materials, users **MUST** send the ad materials and booking information separately from each other. [40.4]

AdsML2.0-WD1

3.3.9 Overview of the information in an Ad Bookings message

This is a non-normative “at a glance” overview of the primary information in an ad bookings message.

- **AdsML Bookings message**
 - “A set of one or more booking transactions of the same type”
 - Transaction type, e.g. “Place an Order”, “Change a reservation”, “Cancel a reservation” – applies to all the bookings in this message
 - **Bookings** (one or more)
 - “A transaction affecting one or more ads that will be Placed in one or more products (that may be in more than one medium) by a single booking party on an agreed pricing basis.”
 - Booking party – the buyer of ad space, typically an advertiser, ad agency or media agency
 - Advertiser (repeatable) – this is the name you would normally expect to see in the published advertisement
 - Booking price – a price for the entire booking - allows for the option of top-down pricing of “deals” and “packages”
 - Payment and pricing details (allows for multiple payers, which may not be the same as the booking party)
 - **Placement Groups** (zero or more per Booking)
 - “A set of Placements that share the same payment and/or pricing information.”
 - **Placements** (one or more per Booking)
 - “A request for the publication of a specific set of ad materials in a single product on a specific date or range of dates in a specific location or set of locations (as appropriate to the medium).”
 - A Placement may exist on its own, or as part of a Placement Group.
 - What (the advertising content for this placement)
 - Where (publisher, product, location within product)
 - When (appearance dates and times)
 - How (production details)
 - Payment and pricing details (may be adjusted at the booking level)
 - **Advertising Materials** (zero or one set per placement)
 - The specific materials that are referenced by this placement

- If not included here, the materials will be delivered separately from the booking

AdsML2.0-WD1

3.3.10 Information relationships

3.3.10.1 Multiple bookings in a Bookings message [41]

- i. An AdsML Ad Bookings message **SHALL** contain one or more Bookings. [41.1]
- ii. All of the booking transactions in a given AdsML Bookings message **MUST** be of the same type (e.g. "requests for quotation" or "changes to reservations"), where "type" has two dimensions: the nature of the information, and the business action that is being performed. [41.2]
- iii. The booking transactions in a given AdsML Bookings message **MUST** all relate to one (and only one) of the following: [41.3]
 - a. Quotations
 - b. Reservations
 - c. Orders
- iv. The booking transactions in an AdsML Bookings message **MUST** perform one (and only one) of the following actions: [41.4]
 - a. "initiate" a transaction
 - b. "change" a transaction
 - c. "cancel" a transaction
 - d. "enquire" about the status of a transaction
 - e. "respond to" an initiation, change, cancellation or status query request

AdsML2.0-PS1

3.3.10.2 Booking [42]

- i. A Booking is on behalf of a single Booking Party. [42.1]

The booking party is the business entity that is placing the order and that will have the primary business relationship with the recipient of the order. The booking party may be the original advertiser, or an intermediary (agency) acting on behalf of the advertiser.

- ii. A Booking consists of one or more Placements and/or Placement Groups. [42.2]
- iii. A booking can contain Pricing and Payment information, which applies to the entire Booking. [42.3]

AdsML2.0-PS1

3.3.10.3 Placement [43]

- i. A Placement is for one and only one Product, which **MUST** be in one and only one medium. [43.1]

A Product is whatever a publisher defines as a product in which it sells advertising space or time. Depending on the medium and the publisher's practices, this could be an entire newspaper or magazine title, a specific section of a newspaper (e.g. the TV listings or the weekend magazine), a TV or radio program, a website, a special insert section, etc.

The Placements in a Booking may be in multiple products which, between them, span multiple media.

- ii. A Placement references either a single set of ad materials, or multiple sets of ad materials that are effectively equivalent to each other. [43.2]
- iii. If a Placement is for more than one set of ad materials:
 - a. **MUST** of the alternate sets of Ad Materials specified by the Placement **MUST** be the same physical or temporal size and have the same production requirements. [43.3]
 - b. The Placement **MUST** include the rules or algorithm for how to drive the alternating process. [43.4]
- iv. A Placement Occurs on one or more dates and times. [43.5]

Depending on the media, these can be called Insertions, Run dates, Appearances, etc.

- v. A Placement is in one set of geographic locations. [43.6]
 - vi. A Placement is in a single position within the specified publication. [43.7]
 - iv. A Placement can contain Pricing and Payment information. [43.8]
 - v. A Placement may contain Ad Materials. [43.9]
 - vi. A Placement may belong to zero or one Placement Groups. [43.10]
- AdsML2.0-PS1

3.3.10.4 Linked Placements [44]

- i. Any two or more Placements in a Booking **MAY** be Linked. [44.1]
 - ii. A Placement may participate in more than one Linked group. [44.2]
- AdsML2.0-PS1

3.3.10.5 Placement Group [45]

- i. A Placement Group consists of two or more Placements. [45.1]
 - ii. A Placement Group may contain Payment and Pricing information, which applies to the entire Group. [45.2]
- AdsML2.0-PS1

3.3.11 Information content

This section contains requirements relating to some of the specific types of business information that can be contained in an Ad Booking message. Note that these requirements apply in addition to the requirements regarding interoperability with IfraAdConnexion 2.0, SPACE/XML and CREST 2.0, above.

3.3.11.1 Advertiser relationships [47]

An Ad Booking message **SHALL** be able to reflect the relationship to an advertising transaction of all the parties referenced in that transaction (e.g. "advertiser", "agency", "aggregator", "prepress house", etc.).

AdsML2.0-WD1

3.3.11.2 Blind boxes or “Box Numbers” [48]

An Ad Booking message **SHALL** be able to convey the attributes that will determine the administrative setup of blind boxes or “box numbers” for capturing consumer responses to the advertisements that are being booked.

AdsML2.0-WD1

3.3.11.3 Booking details [49]

An Ad Booking message **SHALL** allow systems to securely exchange details of bookings for any of the media types defined within the scope of the standard.

AdsML2.0-WD1

3.3.11.4 Changes & cancellations [50]

- i. The Ad Booking format **SHALL** facilitate changes and cancellations to ads and/or their content in whole or in part, immediately or at a defined time in the future. [50.1]
- ii. When a Booking is cancelled, all of the placements within that booking **SHALL** be cancelled. It **SHALL NOT** be possible to use an AdsML message to cancel just part of a booking. [50.2]

AdsML2.0-WD1

3.3.11.5 Identifiers

3.3.11.5.1 Booking IDs [51]

Each Booking **MUST** be assigned a unique business-significant ID by each of the primary parties to the transaction (the buyer and the seller).

AdsML2.0-WD1

3.3.11.5.2 Placement IDs [52]

Each Placement **MUST** be assigned a unique business-significant ID by at least one of the two primary parties to the transaction (i.e. the buyer and the seller).

AdsML2.0-PS1

3.3.11.5.3 Insertion IDs [53]

Each Insertion within a Placement **MUST** be assigned a unique business-significant ID by at least one of the two primary parties to the transaction (i.e. the buyer and the seller).

AdsML2.0-PS1

3.3.11.5.4 Party IDs

3.3.11.5.4.1 Primary parties

Each Party referenced within a Booking that plays a primary role in the business relationship described by that message (for example, the buyer, seller, advertiser and payer) **MUST** be assigned both a name and a machine-processable ID, which **MUST** indicate both the type of ID (e.g. “DUNS” or “VAT number”) and an ID value which can be used to unambiguously identify the party. [54]

3.3.11.5.4.2 Secondary parties

Each Party referenced within a Booking that plays a secondary role in the business relationship described by that message **MUST** be able to be identified within the message by its name and its role vis-à-vis that transaction, and **MAY** be able to be assigned a machine-processable ID. [46]

AdsML2.0-WD1

3.3.11.6 Placements

3.3.11.6.1 Alternating ad content [55]

It **SHALL** be possible for a single placement to be for more than one set of ad contents, provided that all such ad contents share the same positioning, classification and production requirements.

AdsML2.0-WD1

3.3.11.6.2 Cuttable sections [56]

- i. An Ad Booking placement for a print ad **SHALL** be able to specify the presence and location of any cuttable sections contained in the ad being placed, so that the production process can ensure that the cuttable sections are printed in acceptable positions. [56.1]
- ii. The Ad Booking standard **SHALL** allow for an extra charge to be incurred because of the inclusion of one or more cuttable sections. [56.2]

AdsML2.0-WD1

3.3.11.6.3 Linked placements [57]

- i. It **SHALL** be possible to indicate groups of ad placements that are related to each other in typed ways. [57.1]
- ii. The Ad Booking standard **SHALL** support positioning such linked ad placements in relation to each other, for example on “facing pages” of a publication, or “separated by 30 seconds of advertisements for other products” in a broadcast medium. [57.2]

AdsML2.0-WD1

Note that in print a placement of a single set of ad materials in a single print product could appear on multiple pages. If those pages are not the centerfold, an ad that covers a double-page spread will be split into two parts during the production process in order to be put on the different plates that will create the matching double pages. However, this is still considered to be a single set of ad materials.

- ***Thus, an ad that spans a double page spread is considered to be a single ad which will have a single set of ad materials.***
- ***However, an ad that appears on consecutive pages other than a double page spread is considered to be linked placements of multiple ads, each of which will have its own set of ad materials.***

3.3.11.6.4 Multiple placements [58]

- i. The Ad Booking standard **SHALL** be able to handle multiple as well as single advertisement placements in a single booking. [58.1]
- ii. It **SHALL** be possible to indicate that a defined “bundle” of placements has been purchased. [58.2]

AdsML2.0-WD1

3.3.11.6.5 Placement classification [59]

- i. An Ad Booking placement **SHALL** be able to express the advertisement's position in the target publication's classification scheme: for example, to indicate that an advertisement should be placed in the "Cars / Classic Cars / Vintage Rolls Royce" section of the publication or website. This mechanism **SHOULD** be able to express very precise positioning within any target publication's classification scheme. [59.1]
- ii. In order to support situations in which the target publication's classification scheme is not known, the Ad Booking standard **SHALL** also provide a means to specify a "virtual" requested classification for a placement, by providing a simple, standardized, relatively shallow vocabulary that can express classifications such as "transportation.cars". Such classifications could then be mapped by a publication into its own classification scheme, although at a relatively high level. [59.2]
- iii. For ads that are booked for multiple placements, the standard **SHALL** provide the ability to classify the ad differently in each such placement. [59.3]

AdsML2.0-WD1

3.3.11.6.6 Positioning [60]

Placement information in an Ad Booking message **SHALL** include multiple positioning characteristics such as:

- The volume(s) or date(s) in/on which the ad should be published [60.1]
- What section of the newspaper or channel of the website it should appear in [60.2]
- What editions or regions it should be published in [60.3]
- Detailed position or timing information [60.4]
- How it should be classified in the publisher's classification scheme [60.5]
- Whether it is part of an umbrella ad, and if so, where it should appear in that ad [60.6]
- Relationship to advertising or editorial content, e.g. "not within x pages of competing product y" [60.7]

AdsML2.0-WD1

3.3.11.6.7 Production requests [61]

- i. An Ad Booking placement **SHALL** provide a structured, machine-processable mechanism for conveying production requests related to that placement. [61.1]
- ii. The standard **SHALL** also enable the inclusion of machine-extractable free text descriptions of production requirements that cannot be expressed using the supplied structured mechanisms. [61.2]

AdsML2.0-WD1

NOTE: "Production requests" includes all activities that occur after order processing, from page layout and pagination downstream to the physical printing or broadcasting.

3.3.11.6.8 Relationship to editorial content [62]

It **SHALL** be possible to indicate that a given placement should or should not appear in conjunction with particular types of editorial content.

AdsML2.0-WD1

3.3.11.7 Pricing and payments

3.3.11.7.1 Bill-to information [63]

The Ad Booking standard **SHALL** be able to indicate the party or parties that should be billed for this booking and how that billing should be performed.

AdsML2.0-WD1

3.3.11.7.2 Contracts [64]

It **SHALL** be possible for an ad booking to reference an existing contract between the advertiser (or its agent) and the publisher.

AdsML2.0-WD1

3.3.11.7.3 Pre-payments [65]

The Ad Booking standard **SHALL** be able to convey the details of pre-payment information captured during the booking process, including customer credit card information.

AdsML2.0-WD1

3.3.11.7.4 Pricing [66]

- i. The Ad Booking standard **SHALL** be able to convey all the elements needed to support complex price calculations. [66.1]
- ii. The Ad Booking standard **SHALL** be able to support “top-down” pricing, in which the price of the booking as a whole is not necessarily based on the sum of the prices of the placements within that booking. [66.2]
- iii. The Ad Booking standard **SHALL** be able to support “bottom-up” pricing, in which the total price of a booking is the sum of the prices of the placements within that booking. [66.3]

AdsML2.0-WD1

3.3.11.7.5 Pricing components [67]

It **SHALL** be possible to indicate that one or more publisher-defined pricing components have been purchased, including both “deals” and “bundles” of placements, and upsell components such as boxed ads, boldfaced text, cuttable region, etc.).

AdsML2.0-WD1

3.3.11.7.6 Relationship of pricing components to a Booking or Placement [68]

- i. It **SHALL** be possible to apply purchased pricing components either to the entire Booking, or to an individual Placement within the booking, or to a group of Placements within the Booking. [68.1]
- ii. It **SHALL** also be possible to convey booking, placement and pricing information without referencing any defined pricing components. [68.2]

AdsML2.0-WD1

3.3.11.7.7 Split billing [69]

The Ad Booking standard **SHALL** support split billing, in which more than one party pays for a booking. [69.1]

It **SHALL** be possible to define split billing by specifying amounts per payer, percentage per payer, or a combination of amounts for some payers and percentages of the remainder for the other payer(s). [69.2]

AdsML2.0-WD1

3.3.11.8 Scheduling

3.3.11.8.1 Scheduling different media types [70]

The Ad Booking standard **SHALL** support scheduling for all the media types within the scope of AdsML.

AdsML2.0-WD1

3.3.11.8.2 Absolute & relative scheduling [71]

The Ad Booking standard **SHOULD** support relative as well as absolute scheduling for print ads, e.g. 1st Tuesday in the month.

AdsML2.0-WD1

3.3.11.8.3 Conditional scheduling [72]

The Ad Booking standard **SHALL** support conditional scheduling such as standby ads.

AdsML2.0-WD1

3.3.11.8.4 Til cancelled [73]

The Ad Booking standard **SHALL** support “til cancelled” [also known as “til forbid”] scheduling.

AdsML2.0-WD1

3.3.11.9 Umbrella ads [74]

In an umbrella ad, a single body buys “umbrella” ad space, and then either that body or the publication resells slots in that umbrella ad space to others. For example, a chamber of commerce purchases a full-page ad for its members to advertise in. Each member’s ad is then Placed within the purchased page, and payments for those individual ads are credited against the cost of the page as a whole. When the page is printed, the chamber of commerce pays for any unsold space within the umbrella ad.

- i. The Ad Booking standard **SHALL** support the booking and positioning of umbrella ads. [74.1]
- ii. It **SHALL** be possible to indicate that an ad is an umbrella ad. [74.2]
- iii. It **SHALL** be possible to indicate that an ad should be Placed inside a specific umbrella ad, and that the cost of this ad should be used to offset the cost of the umbrella ad. [74.3]

AdsML2.0-WD1

3.4 Structured descriptions of advertised items

The requirements in this section apply to the structure and content of Structured Descriptions of Advertised Items. They are meant to guide and constrain developers of the standard.

3.4.1 Vision

To create a globally applicable XML message structure and supporting tools (including controlled vocabularies) that are capable of describing the objects offered for sale in any kind of advertisement (including but not limited to Classified ads) in any media, in order to support:

- the process by which two or more trading partners agree on the structure and contents of the information they will exchange about advertised items,
- the controlled capture of this information,
- the automated classification, syndication and aggregation of advertisements by multiple publishers,
- and the searching and querying of the contents of those ads by potential consumers, both within and across international boundaries.

This message structure will provide a replacement for and superset of the equivalent functionality contained in the CREST 2.0 standard, but using an approach that meets the needs of the global market.

3.4.2 Scope

3.4.2.1 Types of business messages [75]

Structured Descriptions of Advertised Items **SHALL** be available in every type of AdsML message that is capable of delivering ad materials.

AdsML2.0-WD1

3.4.2.2 Types of media [76]

Structured Descriptions of Advertised Items **SHALL** be media-independent, and therefore applicable to all media types.

AdsML2.0-WD1

3.4.2.3 Classes of advertising [77]

It **SHALL** be possible to provide Structured Descriptions of Advertised Items for Display and Classified advertisements, and **SHOULD** be possible to use them for any class of advertising.

AdsML2.0-WD1

3.4.3 Deliverables [78]

The deliverables of this activity **SHALL** include:

- i. A documented approach to the design of XML message formats and their constraining schemas that will support transmission of structured descriptions of the properties of advertised items and related information in any type of advertisement [78.1]

- ii. A human-readable Form (e.g. a spreadsheet or document template) that users can populate with the properties of the specific types of advertised items that will be exchanged between their systems [78.2]
- iii. Rules for translating a populated form into a machine-processable rule set that defines and can be used to validate an XML message format suitable for conveying that information. [78.3]
- iv. Rules and techniques for using the governing rule set to validate the structure and contents of messages conforming to the XML message format. [78.4]
- v. Instances of combinations of the human-readable form, rule set and XML message format that have been populated with detailed sample vocabularies for at least the following classes of advertised items: [78.5]
 - a. Transportation
 - b. Real Estate
 - c. Recruitment
 - d. Travel
- vi. Instances of combinations of the human-readable form, rule set and XML message format that have been populated with detailed sample vocabularies for common properties of an Advertiser (for example, the advertiser's name and contact details). [78.6]
- vii. User guide:
 - a. Business level user guide, including [78.7]
 - i. Overview of the business purpose and usage scenarios for the components of this standard
 - ii. Business-level instructions for the use of the human-readable form
 - b. Technical level user guide, including [78.8]
 - i. instructions for the population of the human-readable form, including naming conventions for the classes, properties and modifiers defined on the form
 - ii. instructions for the technical processes involved in converting one or more human-readable forms into interoperable message formats, rule sets and validation routines that can convey and process the information defined in the forms

AdsML2.0-WD1

3.4.4 Terminology used in this section

Advertised Item – an item or service offered for sale in an advertisement, for example, a car, a house, or legal services.

Advertiser – the entity offering the advertised items for sale, for example, a car dealer, a realtor, or an individual.

Category – a grouping of related types of advertised items that share certain characteristics and are generally published in the same section of a publication, for example, "Transportation", "Real Estate" or "Recruitment".

Class – a type of advertised item that might appear in an advertisement, for example, "Car", "Truck", "House", "Job" or "Vacation package".

Compound advertisement – an advertisement containing more than one advertised item.

Default value – a value for a property or modifier that is provided in the governing schema. For example, it is common practice to define the default value for a Currency modifier as the currency in use in the local region. If a property or modifier with a default value is left blank, processing systems will treat that property or modifier as if it contained the default value.

Modifier – a characteristic of a property that helps to define that property, but that has little value on its own. For example, Currency is a modifier of the Price property, because without knowing the currency in which a price is expressed it is impossible to understand the value of the price.

Property – a characteristic of a class of advertised item that may convey significant information about that item. For example, some of the properties of a Car include its Make or Brand, Model, Condition, Color, Engine Type and Price. Properties of a House include Number of Rooms. Some properties, such as Price, are common to many or all classes of advertised items. Others, such as Engine Type or Number of Rooms, apply only to a few classes of advertised items.

Rule set – The definition of a set of Classes, their Properties, and the Modifiers of those properties, embodied in a single document. Typically a rule set will correspond to an entire category of advertised information, so that a Transportation rule set might contain classes such as “Car”, “Truck”, “Motorcycle”, “Power Boat”, “Sailboat”, etc. However, there is no requirement that this be the case, and users may populate a rule set with whatever Classes they need. In the AdsML standard, a rule set can be defined by recording the class definitions in a “human-readable form”, typically a spreadsheet, which is then translated into a machine-readable XML document following procedures defined in the standard. Both of these documents are “rule sets” because they contain the set of rules that define the information that will be exchanged, but one is in a human-readable form and the other is in a machine-readable form. (See the usage scenario below.) Each rule set must be given a globally unique name so that it can be unambiguously referenced from messages that conform to the rule set.

3.4.5 Illustrative usage scenario

- 1) Two or more companies in a given region decide to implement digital exchange of classified advertisement information between their systems. For example, perhaps one company will provide a software interface by which ad buyers will self-book classified ads, while a group of companies will publish the ads that have been booked. The requirement in this example is to transmit the ad booking information, including structured descriptions of the objects offered for sale in those ads, from the system in which it was booked, to the relevant publishers.
- 2) Representatives of the companies get together in order to agree on the information that needs to be exchanged between their systems. For example, if only car ads will be booked in this system, they agree on the properties of a car that users will be allowed or required to enter during the booking process (e.g. its price, make, model, age, identification number, etc.).
- 3) To facilitate this discussion, they use a copy of the spreadsheet containing the AdsML “human readable” Transportation rule set, which was provided as part of the AdsML standard, that has been filled in (by the Consortium) with commonly used properties of Cars, Trucks, Motorcycles, Boats, etc. They edit the

information in this spreadsheet (deleting, renaming and/or adding classes and properties as necessary) until it reflects the information that will be exchanged between their systems. During this process they assign a unique name to this new rule set that they have created.

- 4) A developer working for one of the companies follows the rules defined in the AdsML standard to convert the information in the spreadsheet into a “machine readable” rule set and message format for conveying the agreed set of information.
- 5) The company providing the classified ad booking software configures their system to generate this XML format.
- 6) The companies receiving the classified ad bookings configure their systems to receive this XML format.
- 7) During testing, each company uses the machine-readable rule set to provide front-line validation of such basic features of the messages as their structure and whether all properties that were flagged as “required” on the spreadsheet are actually present in the incoming data.
 - a) Note: in order to perform such validations, the companies use an XSLT stylesheet to transform the machine-readable rule set into a formal XML Schema, and then use another XSLT stylesheet to transform the structured descriptions contained in each set of advertising content into an XML message format that is designed to be validated by that XML Schema. They are then able to use standard XML Schema validation tools to ensure that their systems are correctly generating the structured descriptions. Although this validation process is a little slow, it has the advantage of being performed entirely with off-the-shelf XML tools, and it is only done during the system setup phase. Once the companies are satisfied that their systems are performing correctly, they turn off this type of validation.

3.4.6 Initial design goal [79]

The primary design goal for the first release of the Structured Descriptions of Advertised Items message format **SHALL** be to support the interoperable exchange of structured descriptions of advertised items between software applications.

AdsML2.0-WD1

3.4.7 Relationship to Advertisements [80]

- i. It **SHALL** be possible for users to transmit Structured Descriptions of Advertised Items either on a standalone basis (i.e. as “pure” metadata), or in an XML message that also contains the formatted contents of the advertisement to which they apply. The ability to transmit this metadata on its own is intended to support scenarios in which the formatted ad will be generated at a later stage of processing based on the metadata. [80.1]
- ii. When Structured Descriptions of Advertised Items are transmitted in the same message as the textual contents of the ad to which they apply, if the textual contents are in a format into which it is feasible to place XML tags around individual words or phrases, it **SHALL** be possible to convey links between each word or phrase in the text of the advertisement and the specific metadata

values associated with that word or phrase. Linking from a word or phrase to its associated metadata **SHALL** be supported, while linking from a metadata object to its associated words or phrases **MAY** be supported. [80.2]

- iii. When Structured Descriptions of Advertised Items are transmitted in the same message with the formatted (i.e. non-textual) contents of the ad to which they apply, it **MAY** be possible to indicate links from each advertised item in the advertisement to the specific metadata values associated with that item. This is meant to facilitate automated processing such as, for example, marking one of the cars in a compound display ad as having been sold, by associating the metadata about the car in question with its image or position in the ad. [80.3]
AdsML2.0-WD1

3.4.8 Compound advertisements [81]

The standard **SHALL** support describing multiple advertised items in a compound advertisement, where those items may be homogeneous (e.g. 2 or more cars for sale by a car dealership) or heterogeneous (e.g. many different items for sale in an estate sale).

AdsML2.0-WD1

3.4.9 Creation and transmission of validation rules

3.4.9.1 Definition of structural and validation rules [82]

The AdsML standard **SHALL** provide rules and guidelines by which trading partners can define the structural and validation rules (a "rule set") for a class of advertised information in such a way that AdsML-conformant systems can interoperably exchange messages conforming to that rule set, and can use generic XML tools to perform at least the following kinds of validation on exchanged messages:

1. That the message's structure conforms to the governing rule set
2. That the machine readable class and property names that appear in the message belong to the set of class and property names that have been agreed by the trading partners for the exchange of that kind of information
3. That all properties marked as mandatory are present in the message and contain data (i.e. they are not empty)
4. That any properties and modifiers whose values are required to come from a controlled vocabulary that was defined as part of the rule set have been filled with conforming values

AdsML2.0-WD1

3.4.9.2 Exchange and reference of validation rules [83]

The AdsML standard **SHALL** provide a mechanism by which trading partners can exchange a machine-readable instance of the rule set that they are using to describe a class of advertised items just once, and then reference those rules from each message that contains information that is supposed to conform to them.

AdsML2.0-WD1

3.4.9.3 One rule set per item [84]

All of the properties that describe an advertised item **SHALL** conform to one and only one governing rule set. If an advertised item has ten properties, for example, all ten

of those properties must be defined by the same rule set. Users will not be allowed to “mix and match” properties from multiple rule sets.

AdsML2.0-WD1

3.4.9.4 One set of properties per item [85]

Each advertised item in an AdsML message **SHALL** be described by one and only one set of properties. Users will not be allowed to transmit multiple “alternative” property sets for the same item.

AdsML2.0-WD1

3.4.9.5 Relationship to XML Schema [86]

- i. An AdsML machine-readable rule set **SHALL** be an XML document that contains the information necessary to support the processing described in this section. However, this format may or may not conform to the XML Schema standard. [86.1]
- ii. It **SHALL** be possible to use standard XML tools (e.g. XSLT transformations and XML Schema validations) to perform the validation operations described in this section (either because the machine-readable rule sets are themselves stored in XML Schema documents or because they can be transformed into XML Schema documents that accomplish this purpose), and the standard **SHALL** provide instructions for doing so. [86.2]

AdsML2.0-WD1

3.4.9.6 Validation against multiple rule sets [87]

In order to support compound advertisements, the AdsML standard **SHALL** enable transmission in a single message of information describing multiple classes of advertised items (for example, a car and a house) whose structural and validation rules have been defined in different rule sets, provided that each set of properties in the message identifies the rule set to which it conforms, so that the recipient of the message can validate those properties against the relevant rule set.

For example, assuming that two different rule sets have been created to define properties for Real Estate and Transportation classes, then it **SHALL** be possible to describe a compound advertisement for a car and a house by conveying in a single message two sets of properties: one describing the car and specifying that it conforms to the Transportation rule set, and the other describing the house and specifying that it conforms to the Real Estate rule set.

AdsML2.0-WD1

3.4.10 Human-readable form [88]

The standard **SHALL** provide a structured, human-readable form (e.g. a spreadsheet or document template) that can be used by trading partners to record the rule set for the classes of information that they wish to exchange, and for each class, the properties and modifiers that define that class, and the constraints that will be imposed on the values of those properties and modifiers.

For example, this form could be used to define a “Real Estate” rule set consisting of Classes named “House” and “Apartment”, each of which contains Properties or Property Groups such as “Asking Price”, “Location”, “Number of Rooms”, etc.

3.4.11 Information definitions

3.4.11.1 Classes [89]

In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to identify the Class of information that is being described.

AdsML2.0-WD1

3.4.11.2 Class names [90]

- i. In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to assign to each class both a mandatory "internal" name for message processing and an optional user-oriented "display name". [90.1]
- ii. The default display name of a class **SHALL** be the internal name of that class. [90.2]
- iii. The internal name of a class **MUST** be unique within the rule set to which it belongs. [90.3]

AdsML2.0-WD1

3.4.11.3 Default values [91]

In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to specify a default value for any property or modifier.

AdsML2.0-WD1

3.4.11.4 Enumerated lists [92]

- i. In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to provide an enumerated list of textual values that can be used as the source of the value of a given property or modifier. [92.1]
- ii. When an enumerated list is provided, it **SHALL** be possible to specify whether the value of the property or modifier **MAY** come from the list or **MUST** come from the list. [92.2]

AdsML2.0-WD1

3.4.11.5 Format masks and regular expressions [93]

- i. In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to specify for any property or modifier a data entry format "mask" or "regular expression" (e.g. "99,999.99" or "[A-C][C-Z]") that should constrain the values conveyed in that property or modifier.

AdsML2.0-WD1

3.4.11.6 Mandatory properties and modifiers [94]

In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to specify that a given property or modifier is mandatory.

AdsML2.0-WD1

3.4.11.7 Minimum and maximum length [95]

In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to specify the minimum and/or maximum length for any property or modifier whose data type is text or list.

AdsML2.0-WD1

3.4.11.8 Modifiers [96]

In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to specify one or more Modifiers for any property.

AdsML2.0-WD1

3.4.11.9 Modifier data types [97]

- i. In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to specify the data type that applies to the value of a given modifier. [97.1]
- ii. The set of data types that can be specified for a modifier **SHALL** be the same as the set of data types that can be specified for a property. [97.2]
- iii. The default data type for a modifier **SHALL** be text. [97.3]

AdsML2.0-WD1

3.4.11.10 Modifier names [98]

- i. In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to assign to each modifier both a mandatory "internal" name for message processing and an optional user-oriented "display name". [98.1]
- ii. The default display name of a modifier **SHALL** be the internal name of that modifier. [98.2]
- iii. The internal name of a modifier **MUST** be unique within the set of modifiers associated with the same property. [98.3]

AdsML2.0-WD1

3.4.11.11 Minimum and Maximum values [99]

In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to specify minimum and/or maximum values for any property whose data type is integer or decimal.

AdsML2.0-WD1

3.4.11.12 Number of decimal places [100]

In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to specify the number of decimal places for any property whose data type is decimal.

AdsML2.0-WD1

3.4.11.13 Properties [101]

In both the human-readable form and machine-readable the rule set that is derived from that form, it **SHALL** be possible to specify the Properties that comprise the Class of information being described.

AdsML2.0-WD1

3.4.11.14 Property and property group names [102]

- i. In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to assign to each property or property group both a mandatory “internal” name for message processing and an optional user-oriented “display name”. [102.1]
- ii. The default display name of a property or property group **SHALL** be the internal name of that property. [102.2]
- iii. The internal name of a property or property group **MUST** be unique within the set of properties or property groups that share the same parent (class or property group). [102.3]

AdsML2.0-WD1

3.4.11.15 Property data types [103]

In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to specify the data type that applies to the value of a given property. [103.1]

Data types that can be specified for a property **SHALL** include: [103.2]

- Text, optionally accompanied by an enumerated list of values from which selection **MAY** be made
- List, always accompanied by an enumerated list of values from which selection **MUST** be made
- Date
- Date/Time
- Integer
- Decimal
- Boolean

AdsML2.0-WD1

3.4.11.16 Property groups [104]

In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to create Groups of properties that together describe a single aspect of an advertised item. For example, a car engine may be described by a Group of properties such as fuel type, displacement, horsepower, torque, etc. Similarly, a room may be described by a Group of properties such as Name (e.g. “bedroom”), Dimensions, Number-of-closets, etc.

AdsML2.0-WD1

3.4.11.17 Property group attributes [105]

The attributes of a Property Group definition **SHALL ONLY** consist of:

- its display name
- its machine name
- its parent property or group (if appropriate)
- whether or not it is repeatable
- the list of properties contained within it

AdsML2.0-WD1

3.4.11.18 Property group definitions [106]

- i. In a human-readable form, it **SHALL** be possible to define the contents of a property Group either by directly specifying the properties that are contained in that property Group, or by referring to another self-contained section of a human-readable form (e.g. a page of a spreadsheet), in which case the properties defined on the referenced page **SHALL** be considered to be the entire contents of that property group. [106.1]
- ii. External referencing of property groups **SHALL ONLY** be allowed in a human-readable form, and **SHALL NOT** be allowed in the machine-readable rule set that is derived from that human-readable form. Any rule set that is derived from a form containing external references **SHALL** contain within itself the definitions of all of the classes, properties and modifiers that were directly specified in or referenced by the form from which the rule set was derived. [106.2]

AdsML2.0-WD1

3.4.11.19 Publishable vs. private properties [107]

In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to specify whether a given property should be published as part of the advertisement. This is meant to support the definition of “private” properties that are used as part of the maintenance, syndication and publication processes but are not exposed to the public.

AdsML2.0-WD1

3.4.11.20 Repeatable properties and property groups [108]

In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to identify repeatable properties and property groups, whereby a property or property group’s characteristics can be described once in the rule set and then included multiple times in a message conforming to that rule set. For example, a Real Estate rule set could define a Repeatable Group of properties called “Room”, which could then be repeated as often as necessary in a given message in order to define all the rooms in the house being advertised.

AdsML2.0-WD1

3.4.11.21 Searchable properties [109]

In both the human-readable form and the machine-readable rule set that is derived from that form, it **SHALL** be possible to specify whether a given property should be searchable in interactive environments.

AdsML2.0-WD1

3.4.12 Message content and usage

3.4.12.1 Identification [110]

- i. The standard **SHALL** provide a mechanism by which the set of properties pertaining to each advertised item described in a given XML message can optionally be uniquely identified so that they can be referenced from elsewhere in the same XML message. [110.1]
- ii. The standard **SHALL** provide a mechanism by which each individual property described in a given XML message can optionally be uniquely identified so that it can be referenced from elsewhere in the same XML message. [110.2]

AdsML2.0-WD1

3.4.12.2 Self-contained information [111]

- i. The structured information about advertised items in any given message **MUST** be complete and self-contained, to the extent that such information is known at the time the message is created. The standard **SHALL NOT** provide explicit support for the transmission of part of the known set of information about the items for sale in a given advertisement. [111.1]
- ii. Structured information about advertised items in any given message **SHALL** be independent of all aspects of the presentation of those advertised items, including the location of that advertisement in the publisher's classification scheme. [111.2]

AdsML2.0-WD1

3.4.12.3 Property values as "keys" into external lists [112]

The human-readable form and the machine-readable rule set derived from it **SHALL ONLY** support the definition and transmission of single-column enumerated lists of values. Trading partners who wish to maintain multi-column tables of property or modifier values (for example, to support auto translation of user entries into multiple natural languages) are expected to use the list of values defined in the AdsML human-readable form as "keys" into multi-column tables that they and their trading partners will maintain elsewhere.

3.4.13 Sample vocabularies

3.4.13.1 Explicitly supported categories of advertised items [113]

- i. The first release of this AdsML standard **SHALL** provide explicit support for describing at least the following categories of advertised items: [113.1]
 - Transportation
 - Real Estate
 - Recruitment
 - Travel
- ii. This support **SHALL** take the form of a sample vocabulary for each explicitly supported category of advertised items, where each vocabulary consists of a set of class names for common types of advertised items within that category, and for each class of item, a substantially complete set of properties and

modifiers pertaining to that class of item. For example, the vocabulary for the category "Transportation" might include classes such as "Car", "Truck" and "Motorcycle", each of which will have Properties such as "Make", "Model" and "Selling price", and "Selling price" is likely to have a Modifier called "Currency". [113.2]

AdsML2.0-WD1

3.4.13.2 Other classes of advertised items [114]

- i. The standard **SHALL** provide a sample vocabulary to describe common properties of any class of advertised item that is not explicitly supported by the standard (for example, sporting goods, animals, appliances, etc.). [114.1]
- ii. Properties in this sample vocabulary **SHALL** include (but not be limited to): [114.2]
 - Item name (e.g. "Bowling ball")
 - Maker
 - Model
 - Condition
 - List price
 - Asking price
 - Description

AdsML2.0-WD1

3.4.13.3 Structured description of the Advertiser [115]

- i. The standard **SHALL** provide a sample vocabulary for describing the person or entity that is offering the advertised items for sale (the Advertiser). [115.1]
- ii. Properties in this sample vocabulary **SHALL** include (but not be limited to): [115.2]
 - Advertiser's name
 - Location
 - Contact details

AdsML2.0-WD1

3.4.13.4 Naming conventions in AdsML-provided sample vocabularies [116]

The internal names of all properties and attributes in any vocabulary created by the AdsML working group **SHALL** be in US English, and **SHALL** utilize a naming convention that identifies them as having been created by the AdsML Consortium.

AdsML2.0-WD1

3.4.13.5 User modifications to an AdsML-provided sample vocabulary

This section describes the capabilities that will be provided to trading partners who wish to customize one of the AdsML-provided sample vocabularies in order to define the rule set for a category of information that they wish to exchange.

3.4.13.5.1 Allowed Values [117]

Users **SHALL NOT** be allowed to change the Allowed Values or Range of any AdsML-provided property or modifier.

AdsML2.0-WD1

3.4.13.5.2 Extension [118]

Users **SHALL** be allowed to add their own properties or modifiers to the vocabulary, and thereafter to modify any aspect of the properties and modifiers that they have added.

AdsML2.0-WD1

3.4.13.5.3 Regular Expression or Format [119]

Users **SHALL** be allowed to change the Regular Expression or Format for any AdsML-provided property or modifier.

AdsML2.0-WD1

3.4.13.5.4 Renaming [120]

Users **SHALL** be allowed to rename the Display name (but not the Machine name) of any AdsML-provided property or modifier.

AdsML2.0-WD1

3.4.13.5.5 Restriction [121]

Users **SHALL** be allowed to remove any AdsML-provided property or modifier from an AdsML-supplied vocabulary except for those whose Usage is "Required".

AdsML2.0-WD1

3.4.13.5.6 Structural characteristics [122]

Users **SHALL NOT** be allowed to change the Machine name, Property Type, Parent Property or Data Type attributes of any AdsML-provided property or modifier.

AdsML2.0-WD1

3.4.13.5.7 Usage characteristics [123]

Users **SHALL** be allowed to change the Usage, Publishable, Searchable and Description attributes of any AdsML-provided property or modifier, except that users **SHALL NOT** be allowed to change the Usage of a property or modifier whose Usage is "Required".

AdsML2.0-WD1

3.5 Ad Materials

The requirements in this section apply to the structure and content of Ad Materials information, which occurs in several different AdsML messages. They are meant to guide and constrain developers of the standard.

3.5.1 Vision

To create an XML format for the transmission of formatted or unformatted ad materials during the final stages of its pre-publication life (e.g. to a preflighting agency, delivery service, or publisher), including both delivery metadata and structured descriptions of the items that are being advertised. The message format should be able to convey ad materials in any medium, and to be transmitted either on its own or in conjunction with an Ad Booking message.

At least initially, the focus of the Ad Materials message standard **SHALL** be to support the delivery of a single set of advertising materials to a publisher, in order to allow the publisher to use those materials to publish one or more placements. The standard **SHALL** support both initial delivery of the ad materials, and subsequent delivery of revised versions. Although the standard **SHOULD** also provide other benefits, such as facilitating accurate automated preflighting of the ad materials, the achievement of those other benefits **SHOULD NOT** be allowed to distract from the fulfillment of its primary purpose.

3.5.2 Scope

3.5.2.1 Types of business messages

During its initial release the Ad Materials standard **SHALL** directly support transmission of at least the following types of business messages.

3.5.2.1.1 Ad Materials messages defined in the Advertising Components Interactions

3.5.2.1.1.1 Message list [124]

AM-M	Ad Material	The materials constituting an advertisement in a format acceptable to its intended recipient. Depending on the medium this could be a graphical image file, XML document, video file, audio file, etc. Typically created by a production facility or agency and then sent to various parties including the advertiser (for approval), a delivery agency (for distribution to multiple publishers), and one or more publishers. Because of different media and publisher's requirements, there can be more than one set of Ad Materials for a given advertisement.
AM-MC	Ad Material Change	A changed version of some previously sent ad material. Replaces the earlier set of materials.
AM-MR	Ad Material Receipt	The receipt for a set of ad materials.

NOTE: This is not the entire set of "AM" messages: those messages that are not likely to contain a set of ad materials (e.g. "enquiry", "approval" and "receipt") have been excluded, as well as messages that are used for initial creation and approval of ad materials (e.g. "component", "request for proof", "request for approval," etc.) There will need to be another round of work to define the structure of these other Ad Materials messages.

AdsML2.0-WD1

3.5.2.1.1.2 Message purpose [125]

The purpose of an Ad Materials message **SHALL** be to accompany and facilitate the delivery of digital advertising materials from a creator of such materials to a publisher or broadcaster. This delivery can be accomplished either within the message itself, or by use of a digital channel which is described in the message, or by physical means which are described in the message. [125.1]

Ad Materials messages **SHALL** contain sufficient information so that the recipient of the message can receive or retrieve the advertising materials, un-pack or un-encode them if necessary, and efficiently insert them into the appropriate workflow. [125.2]

AdsML2.0-WD1

3.5.2.1.2 Booking Information for Materials Delivery message

3.5.2.1.2.1 Message list [126]

The Ad Materials standard **SHALL** define a "Booking Information for Materials Delivery" message that can be sent by either a buyer or seller of an advertising placement to either a producer or deliverer of the advertising materials referenced by that placement.

AdsML2.0-PS1

Note: This message is not yet included in the Advertising Components Interactions Analysis.

3.5.2.1.2.2 Message purpose [127]

The purpose of a Booking Information for Materials Delivery message **SHALL** be to convey to a producer or deliverer of a set of ad materials the expectations (or requirements) that have been set by an intended publisher of those materials regarding their eventual delivery to that publisher, along with such other information copied from the booking that may facilitate the production, pre-flighting and/or delivery of that set of ad materials.

AdsML2.0-PS1

3.5.2.1.3 Other message types

3.5.2.1.3.1 Message list [128]

The Ad Materials standard **SHALL** define the structures that will be used in an AdsML message whenever the message either serves as a delivery vehicle for a set of advertising materials, or describes in a machine-processable manner the actual or expected delivery of advertising materials.

This includes (but is not limited to) the following Bookings-related messages:

AD-O	Ad Order	A request for publication of an advertisement. It will be sent by the buyer of advertising to the seller of advertising. Note that an Ad Order sent to an agent or other intermediary could contain orders for one or more publishers and could later on be separated into more than one specific ad order.
AD-OC	Ad Order Change	A change to the details of a previously confirmed ad order. Sent by the buyer of advertising to the seller of advertising.
AD-OR	Ad Order Response	A response to an ad order, which could be a confirmation (acceptance) of the order, refusal to accept it, or a request for more information. Sent by the seller of advertising to the buyer of advertising. If it is a confirmation it will contain any special instructions about identification, delivery or deadlines. A refusal could be for legal, credit or other reasons.

AdsML2.0-WD1

3.5.2.2 Types of media [129]

- i. With the exception of placement and production details, Ad Materials information **SHALL** be media-independent, and therefore applicable to all media types. [129.1]

- ii. By the conclusion of its first major release cycle, the Ad Materials standard **SHALL** support transmission of materials for at least the following types of media: [129.2]
 - i. Print – classified
 - ii. Print - display
 - iii. Online - classified
- iii. In the longer term, the Ad Materials standard **SHALL** support transmission of materials for all media types. [129.3]

AdsML2.0-WD1

3.5.2.3 Classes of advertising [130]

The Ad Materials standard **SHALL** support at least the Display and Classified advertising classes.

AdsML2.0-WD1

3.5.3 Terminology used in this section

Ad Materials – A version of an advertisement that is designed to run in a single medium.

Ad Materials message - An XML message that is capable of containing one or more sets of Ad Materials.

Ad Materials structure – An XML structure used to convey the materials for a single advertisement. This structure can be used in many different messages.

Rendering - A set of materials that can be used to produce a physical representation of an advertisement in its intended medium.

3.5.4 Relationship of Ad Materials to Bookings [131]

- i. It **SHALL** be possible for users to transmit one or more sets of Ad Materials inside an Ad Bookings message if that Ad Bookings message contains a Placement for each set of ad materials. This is intended to support scenarios in which both the booking transaction and materials for a given advertisement are transmitted at the same time. However, users are never required to transmit Ad Materials in the same message as their Booking transaction. [131.1]
- ii. A set of Ad Materials **MAY ONLY** be conveyed inside an Ad Bookings message when the Booking message contains one and only one Placement instruction for those Ad Materials. In other words, this mechanism may only be used in the relatively simple case where a placement for a single ad, and the ad materials that are being placed, are sent in the same message at the same time in a one-to-one relationship. [131.2]
- iii. A single AdsML Booking message may contain many placements and therefore many sets of Ad Materials, provided that each pairing of a placement and its ad materials conforms to these requirements. [131.3]

- iv. In more complex situations, such as when one set of ad materials is referenced by many placements, users **MUST** send the ad materials and booking information in separate messages. [131.4]

AdsML2.0-WD1

3.5.5 Relationship of Ad Materials to structured descriptions of advertised items [132]

Whenever users are able to convey Ad Materials by means of an AdsML message, it **SHALL** be possible in the same message to transmit a set of Structured Descriptions of some or all of the items in that advertisement.

AdsML2.0-WD1

3.5.6 Revised versions of ad materials [133]

- i. It **SHALL** be possible to convey a revised version of a previously-delivered set of ad materials. This **SHALL** be accomplished by providing an AM-MC (Ad Material Change) version of the Ad Materials Message. [133.1]
- ii. The recipient of an AM-MC message should assume that its contents completely replace any previously-received versions of that advertisement. Therefore, when a revised version of ad materials is transmitted, it **MUST** be sufficiently complete so that its recipient can use it in place of any previously-received versions of those materials. [133.2]

AdsML2.0-WD1

3.5.7 Information content of an AM-M* message

3.5.7.1 Multiple sets of ad materials [134]

- i. An AdsML Ad Materials message **SHALL** be able to convey within itself one or more sets of Ad Materials.

AdsML2.0-WD1

3.5.7.2 Information that originated in a Bookings message exchange [135]

- i. It **SHALL** be possible to include within an Ad Materials message a copy of the placement and production information that relates to those materials. [135.1]
- ii. The structures used to convey this information **SHALL** be the same as used for the equivalent information in the Ad Bookings format. [135.2]
- iii. Although a given set of ad materials can be used for many placements, only one set of booking-related information **SHALL** be made available for each set of Ad Materials. [135.3]

AdsML2.0-WD1

3.5.7.2.1 No Pricing or Payment information [136]

Ad Materials messages **SHALL NOT** include details of the pricing or payment arrangements relating to the placement of the materials in question.

AdsML2.0-WD1

3.5.7.2.2 Placement information [137]

For each set of ad materials contained within an Ad Materials message, the message **SHALL** be able to convey potentially relevant placement information such as the location within the publication in which the advertisement is supposed to appear and the date/time of initial publication.

Note: The structures used to convey this information are expected to be media-dependent.

AdsML2.0-WD1

3.5.7.2.3 Production information [138]

- i. For each set of ad materials contained within an Ad Materials message, the message **SHALL** be able to convey potentially relevant production information such as its size, color, technical format, cuttable region, etc., provided that all such information is specific to the particular booking. [138.1]
- ii. An Ad Materials message structure **SHALL NOT** be used to convey relatively static production information such as the publisher's technical requirements, allowed preflight tool(s), etc. [138.2]

AdsML2.0-WD1

Note: The structures used to convey production information are expected to be media-dependent.

3.5.7.3 Content conformance; results of most recent preflight checking [139]

- i. For each rendering contained in an AdsML Ad Materials structure, it **SHALL** be possible to indicate the conformance of that rendering against previously defined quality criteria such as pre-flight checking. [139.1]

Information conveyed for this purpose **SHALL** include:

- ii. The name and version of the tool that was used [139.2]
- iii. A high-level description of the result (e.g. "pass" or "fail") [139.3]
- iv. A copy of the preflight report that was produced by the testing tool, [139.4] and/or
- v. A reference to the external location (e.g. URL) where the report can be found [139.5]

AdsML2.0-WD1

3.5.7.4 Descriptive name [140]

An AdsML Ad Materials structure **SHALL** be able to convey a descriptive name (e.g. "slugline") for the Ad Materials, for example: "Acme Stores February Sale".

AdsML2.0-WD1

3.5.7.5 IDs to match advertisements with their orders [141]

- i. For each set of Ad Materials, the standard **SHALL** be able to convey all of the business IDs that may be useful in matching those materials to any Placements that reference those Ad Materials. These IDs **SHOULD** support the performance of such matching by the publisher that receives the Ad Materials, and/or by a delivery agency, preflighting agency or similar intermediary. [141.1]

- ii. Each such ID **SHALL** be identifiable both as to the type of ID (e.g. Booking ID, Placement ID, Ad Materials ID, etc.) and the party that created that ID (e.g. the advertiser, media buyer, ad space seller, production house, etc.). [141.2]
AdsML2.0-WD1

3.5.7.6 Metadata describing the contents of the advertisement

3.5.7.6.1 Industry code [142]

An AdsML Ad Materials structure **SHALL** be able to convey a single industry code that applies to the advertisement contained in the structure.

AdsML2.0-WD1

3.5.7.6.2 Search strings [143]

An AdsML Ad Materials structure **SHALL** be able to convey zero or one sets of search text, which is the text that should be made available to indexing engines if this advertisement is published in an interactive environment.

AdsML2.0-WD1

3.5.7.6.3 Structured descriptions of advertised items [144]

An AdsML Ad Materials structure **SHALL** be able to convey zero or one sets of “structured descriptions of advertised items” describing some or all of the objects in the advertisement.

AdsML2.0-WD1

3.5.7.6.4 Text [145]

An AdsML Ad Materials structure **SHALL** be able to convey the textual contents of the advertisement, in either structured or unstructured form.

Note: These are not the same as formal delivery instructions, which should be conveyed in an AM-DO (Ad Materials Delivery Order) message.

AdsML2.0-WD1

3.5.7.7 Production order-related IDs [146]

- i. An AdsML Ad Materials structure **SHALL** be able to convey all of the production order related IDs that any of the parties involved in the creation of the ad materials may have assigned to them. [146.1]
- ii. Each such ID **SHALL** identify the type of ID and the party that created it. [146.2]

AdsML2.0-WD1

3.5.7.8 Renderings

3.5.7.8.1 Ability to convey zero or more renderings [147]

- i. The Ad Materials structure **SHALL** be able to convey the materials that are necessary to create zero, one or more Renderings of that advertisement. [147.1]
- ii. When two or more renderings are provided for a single set of ad materials, they **MUST** be equivalent to each other except for their technical format – for

example, a PDF and a JPEG version of the same ad, or a high-resolution and a low-resolution version. The two or more renderings **MUST NOT** contain versions of the ad that are intended to appear in different regions or publications. [147.2]

- iii. It **SHALL** be possible to label each rendering with a text description that can be used by the recipient to determine which one to use. [147.3]

NOTE: The party providing alternative renderings cannot specify which version is to be used by the recipient of the message. It is up to the party that receives these materials to decide which rendering to use, based on its production requirements and capabilities. Therefore, the ability to provide multiple renderings cannot be used to transmit versions of an ad that should appear in different regions or publications, such as French vs. English versions, different key codes or reply coupons, etc.

NOTE: The ability to send a set of ad materials that does not contain a rendering is designed to support scenarios in which the recipient of the materials generates a rendering based on the Structured Descriptions or similar metadata that is provided.

AdsML2.0-WD1

3.5.7.8.2 Types of materials in a rendering [148]

The materials comprising a rendering **MAY** consist of any combination of the following:

- i. Unstructured text
- ii. Structured (tagged) text
- iii. Binary components

AdsML2.0-WD1

3.5.7.8.3 Conveyance by containership, MIME packaging, location or physical delivery [149]

- i. The materials constituting a rendering **SHALL** be able to be conveyed either by containership within the message, or as part of a MIME package to which the message belongs, or by reference to a unique location from which they can be retrieved, or by physical delivery (e.g. a CD sent by messenger). [149.1]
- ii. If a rendering is composed of multiple objects, they **MUST** all be conveyed by the same transmission method. [149.2]

AdsML2.0-WD1

3.5.7.8.4 Multiple delivery mechanisms [150]

When two or more renderings are provided for a given set of Ad Materials, it **SHALL** be possible to specify a different delivery mechanism for each such rendering. For example, a thumbnail image might be embedded in an Ad Materials structure, while the matching high-resolution PDF/X might be transmitted through an artwork delivery service.

AdsML2.0-WD1

3.5.7.8.5 Partial renderings [151]

- i. It **SHALL** be possible to convey just some (i.e. not all) of the objects comprising a given rendering. This capability is intended to support situations in which the recipient of the materials will provide the missing components, such as a logo or a key code, during the production process. AdsML does not support

incremental delivery over the course of two or more messages of the objects comprising a rendering, since each successive Ad Materials message will be deemed by its recipient to replace (rather than supplement) any previously received versions of those ad materials. [151.1]

- ii. Partial renderings **MAY ONLY** be conveyed in an Ad Materials structure when the rendering in question is associated with at least one placement, and the instructions necessary for completing the Ad Materials have been included in the production information for that placement. [151.2]
- iii. An Ad Materials structure **MAY NOT** be used for the delivery of components that are not related to a given placement, such as a logo that will be used in many advertisements. Components such as these should be delivered using the “Ad Component” message suite: AM-PT, AM-PTR, etc. [151.3]

AdsML2.0-WD1

3.5.7.8.6 Support for multiple objects comprising a single rendering [152]

A rendering may consist of any number and combination of objects such as XML documents with accompanying stylesheets or templates, and/or non-XML media files such as PDF, EPS, Jpeg, Mpeg, etc.

- i. For each rendering within an Ad Materials structure, the structure **SHALL ONLY** be able to convey (by containership or reference) a single digital object or text string containing the object(s) for that rendering. [152.1]
- ii. When users wish to transmit renderings that consist of multiple objects, they **MUST** package those objects into a single composite file (i.e. zip or tar), which can be conveyed or referenced by the Ad Materials structure. [152.2]

AdsML2.0-WD1

3.5.7.8.7 Support for automated processing [153]

- i. For each rendering contained in an AdsML Ad Materials structure, the sender **SHALL** be able to include at least the following metadata to facilitate automated processing:
 - a. File format [153.1]
 - b. Encryption type and mechanism[153.2]
 - c. MIME type[153.3]
 - d. Size in bytes[153.4]
 - e. File name[153.5]
- ii. In cases where one or more of the objects in a rendering have been packaged in a composite or archive (e.g. zip or tar) file, the metadata **SHALL ONLY** describe the outer package, not the objects within it. [153.6]
- iii. Other than the information described above, in its initial release the Ad Materials structure **SHALL NOT** provide metadata to support the automated assembly of the complete rendering and its further processing. In particular, unlike the JDF standard for example, it will not include a “run list” of all of the files that would be necessary to recreate the intended rendering. It will be up to the recipient of the rendering to decide how best to unzip or unpack it and then to determine whether all of the necessary objects are present and how

they should be processed. It is expected that human intervention will be required during this step. [153.7]

AdsML2.0-WD1

3.5.7.8.8 In-line transmission of non-XML renderings [154]

Users **SHALL** be able to convey non-XML renderings as in-line content by encoding each such rendering into a format that can safely be contained in an XML message. In such cases, the standard **SHALL** allow the sender to identify the encoding mechanism that was used, so that the recipient can properly decode the rendering.

AdsML2.0-WD1

3.5.7.8.9 Handling instructions [155]

Users **SHALL** be able to convey textual instructions for the handling of a given rendering.

AdsML2.0-WD1

3.5.8 Information content of a Booking Information for Materials Delivery message

3.5.8.1 One placement of one set of Ad Materials [156]

The information in the message **SHALL** pertain to a single Placement of a single set of Ad Materials.

AdsML2.0-PS1

3.5.8.2 Types of information [157]

This message **SHALL** enable the transmission of any combination of:

- i. The buyer's booking, placement and materials IDs for the placement in question [157.1]
- ii. The seller's booking, placement and materials IDs for the placement in question [157.2]
- iii. A copy of the placement and production information for that placement [157.3]
- iv. The publisher's Delivery Expectations indicating when and by what method the ad materials for that placement should be delivered [157.4]

AdsML2.0-PS1

3.5.8.3 Publisher's delivery expectations [158]

It **SHALL** be possible to include in a Booking Information for Materials Delivery message the publisher's delivery expectations for the materials referenced by a placement in a booking, including the date/time by which the artwork must be received, and any particular delivery method, channel or address that should be used.

AdsML2.0-PS1

3.5.8.3.1 No Pricing or Payment information [159]

The Booking Information for Materials Delivery message **SHALL NOT** include details of the pricing or payment arrangements relating to the placement of the materials in question.

AdsML2.0-PS1

4 Appendix

The Appendix contains information that is used by the Technical Working Group to maintain this document. It is not a normative part of the Requirements.

4.1 Next requirement number: 160

4.2 Implementation status

Date table last updated: 31 May 2005

Requirement	Status (done, pending, in progress, deprecated)	Notes
1	In progress	
2	In progress	
3	In progress	
4	In progress	
5	In progress	
6	In progress	
7	In progress	
8	In progress	
9	Done / in progress	
10	In progress	
11	Done	
12	Done	
13	Deprecated	Unrealistic and unnecessary
14	Done	
15	In progress	
16.1	In progress	
16.2	Done	
16.3	In progress	
17.1	Done	
17.2	Done	
17.3	Done	
17.4	Done	
17.5	Done	
17.6	?	
17.7	Done	
17.8	Done	
17.9	Deprecated	Unrealistic – only senders can sign the messages
17.10	Done	
17.11	Done	
17.12	Done	
17.13	Done	
17.14	Done	
17.15	Done	
17.16	?	
17.17	Done	

Requirement	Status (done, pending, in progress, deprecated)	Notes
17.18	Done	
17.19	?	
18	Done	
19	?	
20	Done	
21	Done	
22	In progress	
23	In progress	
24	Done	
25	Done	
26	In progress	
27	Done	
28	Done	
29	Done	
30	Done	
31	Done	
32	In progress	
33	In progress	Initial release is for print only
34	In progress	Initial release is for display and classified but not inserts
35	In progress	
36.1	Done ?	
36.2	Done ?	
36.3	Done ?	
36.4	Done ?	
36.5	Done ?	
37	In progress	
38	Done	
39	In progress	
40	Done	
41	Done	
42	Done	
43	Done	
44	Done	
45	Done	
46	Done	
47	Done	
48	?	
49	In progress	Done for print display and classified
50	Done	"Future" cancellations are implemented via Change messages
51	Done	
52	Done	
53	Done	
54	Done	
55	Done	
56	Done	CutablePosition
57.1	Done	

Requirement	Status (done, pending, in progress, deprecated)	Notes
57.2	?	
58	Done	Need to document how a “bundle” is purchased
59.1	Done	
59.2	In progress	The code can be carried in PlacementInBook, but we have not yet defined the list of AdsML calssifications
59.3	Done	
60.1	Done for print	InsertionPeriod
60.2	Done for print	PlacementInBook
60.3	Done	Targeting
60.4	Done for print	PositionOnPage
60.5	Done	PlacementInBook
60.6	?	
60.7	Done	PlacementInBook/RequirementText
61	Done	
62	Done	PlacementInBook/RequirementText
63	Done	
64	Done	Either AmountToPay/DescriptionLine or PriceComponent/CalculationSpecifcation
65	In progress	
66	Done	PriceComponent and SubTotal can convey the results of complex calculations, including line items and subtotals, but is not intended to drive them
67	Done	
68	Done	
69	Done	
70	In progress	Done for print
71	Done	RecurrencePattern
72	?	Can be indicated using InsertionPeriod/Status
73	Done	RecurrencePeriod
74	?	
75	In progress	
76	Done	
77	Done	
78	In progress	Mostly done
79	Done	
80.1	Done	
80.2	Done	Users can reference the propertyID of the AdObjectDescription/Property for each item mentioned in the text of the ad

Requirement	Status (done, pending, in progress, deprecated)	Notes
80.3	Deprecated	
81	Done	
82	Done	
83	Done	
84	Done	
85	Done	
86	Done	
87	Done	
88	Done	
89	Done	
90	Done	
91	Done	
92	Done	
93	Done	
94	Done	
95	Done	
96	Done	
97	Done	
98	Done	
99	Done	
100	Done	
101	Done	
102	Done	
103	Done	
104	Done	
105	Done	
106	Done	
107	Done	
108	Done	
109	Done	
110.1	Done	AdObjectDescription/@objectDescriptionID
110.2	Done	Property/@propertyID
111	Done	
112	Done	
113	Partly done	We have not provided a sample Travel vocabulary
114	Done	
115	Done	
116	Done	Naming convention is implemented in the Machine Name
117	Done	
118	Done	
119	Done	
120	Done	
121	Done	
122	Done	
123	Done	

Requirement	Status (done, pending, in progress, deprecated)	Notes
124	In progress	
125	In progress	
126	Pending	
127	Pending	
128	In progress	
129	In progress	
130	Done	
131	Done	
132	Done	
133	Pending	
134	Done	
135	Done	
136	Done	
137	Done	
138	Done	
139	Done	
140	Done	
141	Done	
142	Done	We have gone beyond the stated requirement by allowing a structure of industry codes
143	Done	
144	Done	
145	Done	
146	Done	OtherReference
147	Done	147.3 is implemented in RenderingType
148	Done	
149	Done	
150	In progress	
151	Done	
152	Done	
153	Done	ContentProperties
154	Done	
155	Done	
156	Pending	
157	Pending	
158	Pending	
159	Pending	

(end)