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MECA model review for JATS compatibility

Summary of compatibility requirements:

- Elements and attributes must have the same semantic meaning
- Item is consistently an element or attribute
- Whitespace handling matches (D for data, mixed-content models; E for element-only)
- Element with a section-like model must be consistent
- Elements that capture alternatives must be consistent
- Attribute defined as ID/IDREF must be the same

Summary Table

* indicates a JATS-compatibility problem

Structure Name	Semantic match Y/N	Model	Element or Attribute	Alt	Section-like	Whitespace handling (D or E)	ID/ IDREF
addr-line	Y	JATS	element			D	
		MECA	element			D	
aff*	Y	JATS	element			**D***	
		MECA	element			**E***	
alt-title	Y	JATS	element			D	
		MECA	element			D	
contrib	Y	JATS	element			E	
		MECA	element			E	
contrib-group	Y	JATS	element			E	
		MECA	element			E	
contrib-id	Y	JATS	element			D	
		MECA	element			D	
date	Y	JATS	element			E	
		MECA	element			E	

day	Y	JATS	element			D	
		MECA	element			D	
degrees	Y	JATS	element			D	
		MECA	element			D	
email	Y	JATS	element			D	
		MECA	element			D	
ext-link	Y	JATS	element			D	
		MECA	element			D	
fax	Y	JATS	element			D	
		MECA	element			D	
given-names	Y	JATS	element			D	
		MECA	element			D	
institution	Y	JATS	element			D	
		MECA	element			D	
institution-id	Y	JATS	element			D	
		MECA	element			D	
institution-wrap	Y	JATS	element			E	
		MECA	element			E	
month	Y	JATS	element			D	
		MECA	element			D	
name*	**N***	JATS	element			**E***	
		MECA	element			**D* (manifest.dtd) E* (reviews.dtd)**	

	Y	JATS	attribute				
		MECA	attribute				
phone	Y	JATS	element			D	
		MECA	element			D	
prefix	Y	JATS	element			D	
		MECA	element			D	
response*	**N***	JATS	element			**E***	
		MECA	element			**D***	
role*	**N***	JATS	**element***			D	
		MECA	**attribute***				
source*	**N***	JATS	element			**D***	
		MECA	element			**E***	
surname	Y	JATS	element			D	
		MECA	element			D	
title*	N	JATS	element			D	
		MECA	element **attribute***			D	
xref	Y	JATS	element			D	
		MECA	element			D	
content-type	Y	JATS	attribute				
		MECA	attribute				
contrib-id-type	Y	JATS	attribute				
		MECA	attribute				
contrib-type	Y	JATS	attribute				
		MECA	attribute				

date-type*	**N* [1.3d1: Y]**	JATS	attribute				
		MECA	attribute				
id	Y	JATS	attribute				ID
		MECA	attribute				ID
pub-id-type	Y	JATS	attribute				
		MECA	attribute				
ref-type	Y	JATS	attribute				
		MECA	attribute				
rid	Y	JATS	attribute				IDREF
		MECA	attribute				IDREF
version*	**N***	JATS	attribute				
		MECA	attribute				

Conflicts noted in summary table

<aff>

JATS name: Affiliation
JATS definition: Name of an institution or organization (for example, university, corporation) with which a contributor is affiliated.

MECA usage: Element-only content

Conflict: JATS defines <aff> as a mixed-content model, MECA defines it as element only. This affects whitespace handling.

Possible solution: Allow mixed-content

<name>

JATS name: Name of Person
JATS definition: Container element for the component elements of personal names, such as a <surname>.

MECA usage: In reviews.dtd, <name> in <contrib>, captures name of a reviewer. In manifest.dtd, <name> in <metadata>, gives the name in a name/value pair for metadata. Model is element-only content in <contrib>, #PCDATA in <metadata>.

Conflict: Inconsistency within the MECA model; the definition in manifest.dtd matches neither the JATS semantic definition nor the whitespace handling properties.

Possible solution: Use different element name in manifest.dtd to identify the name of a name/value pair for metadata. Consider JATS <custom-meta> model.

<response>

JATS name: Response

JATS definition: Reply, response, or commentary concerning the journal article. In the typical case, the response is included in the same XML package as the original article, attached at the end of the article proper. Metadata that differs from that of the original article (for example, title, author), may be captured using the <front-stub> element; if the <front-stub> element is used, any metadata not specifically tagged is inherited from the original article.

MECA usage: In reviews.dtd, a response to a peer review item.

Conflict: Semantic mismatch with JATS as well as whitespace handling mismatch. Element in JATS is element-only content, in MECA, it is #PCDATA.

Possible solution: From the MECA inline documentation: “It is some single piece of data that a reviewer has provided.” Rename the response element in MECA to review-item-data.

<role> / @role

JATS name: Role or Function Title of Contributor

JATS definition: Title or role of a contributor to a work (for example, editor-in-chief, chief scientist, illustrator, research associate, conceptualization).

MECA usage: In transfer.dtd, an attribute on <contact>. From examples, describes the role of the contact transferring the data (“Project Manager”).

Conflict: Semantic definition does not match JATS—the role of a contributor to a work vs. the role of an individual transferring data. The JATS Meta Model recommends against having both an element and an attribute with the same name.

Possible solution: Rename the MECA attribute contact-role.

<source>

JATS name: Source

JATS definition: Title of a document (for example, journal, book, conference proceedings) that contains (is the source of) the material being cited in a bibliographic reference or product.

MECA usage: In transfer.dtd, the source of a data transfer.

Conflict: Semantic mismatch with JATS as well as whitespace handling mismatch. JATS is data-like whitespace, MECA is element-only.

Possible solution: Rename MECA element transfer-source.

<title> / @title

JATS name: Title

JATS definition: Heading or title for a structural element (for example, <sec>, <app>, <boxed-text>).

MECA usage: In transfer.dtd, element in <publication>. In reviews.dtd, element in <review-item-question>. In reviews.dtd, attribute on <ext-link>. In manifest.dtd, element in <item> and attribute on <ext-link>.

Conflict: The JATS Meta Model recommends against having both an element and attribute with the same name.

Semantic mismatch with use of <title> in <publication> as <publication> is not a structural element.

No example of <title> in <review-item-question> is given, semantic conflict status undetermined.

Possible solution: On <ext-link>, consider using JATS attribute @xlink:title to be consistent with the JATS <ext-link> model.

In transfer.dtd, consider renaming <title> <publication-title>.

RESOLVED: @date-type

JATS name: Type of Date

JATS definition: Event in the lifecycle of an article that this date is marking (for example, the date the manuscript was received or accepted, the date the electronic preprint was published, or the date of any revision or retraction).

MECA usage: A date is the date on which some relevant event related to a review occurred. For example, when the review was assigned, completed or due

Conflict: Definition in JATS specifies “lifecycle of an article”, MECA specifies events related to “a particular review”

Possible solution: Request NISO JATS Standing Committee revise the definition to broaden it past relevance to articles: Event in the lifecycle of an ***object*** that this date is marking

Note that changing the definition of an element is typically a non-trivial action, however this change does not significantly alter the meaning, nor does it conflict with the demonstrated usage of the element.

RESOLUTION: Request to broaden definition submitted to NISO JATS SC; suggestion accepted; will be updated in v1.3d1.
https://groups.niso.org/apps/group_public/view_comment.php?comment_id=788

UPDATED: @version

JATS name: Version of TeX or LaTeX
JATS definition: Version of TeX or LaTeX used to produce the mathematics.

MECA usage: In all 3 DTDs, used to describe the version of the parent element. In manifest.dtd on <item>, <manifest>. In reviews.dtd on <review>. In transfer.dtd on <transfer>.

Conflict: Semantic conflict. JATS has limited definition to apply ***only*** to the version of the TeX or LaTeX used in a <tex-math> element.

Possible solution: Request NISO JATS Standing Committee revise the title and definition to broaden it beyond TeX or LaTeX. **This is a non-trivial change.** The current attribute title and definition are limited to TeX and LaTeX because the <tex-math> element is the only place where the attribute occurs. While the revision of an attribute name and definition are non-trivial, the change does not conflict with the purpose of the attribute (specify the version of the element on which it is tagged).

Alternatively, consider following the JATS convention used in other scenarios where the element name is included as part of the attribute name: item-version, manifest-version, review-version, transfer-version.

UPDATE: Request to revise definition submitted to NISO JATS SC; suggestion denied; NISO JATS SC recommends naming attributes with the element name: item-version; manifest-version; review-version; transfer-version.
https://groups.niso.org/apps/group_public/view_comment.php?comment_id=789

Potential conflicts with JATS family principles

<comments>

JATS has element <comment>, used for containing comments in citations.

MECA usage: transfer/processing-instructions/comments

@sequence

JATS defines @seq as the sequence number of a document

MECA usage: transfer/processing-instructions/instruction/@sequence

@type

JATS convention is to assign the name based on the element rather than use a single generic attribute; article-type, contrib-type

MECA usage: manifest/item/@type

@href on ext-link

JATS uses the xlink namespace prefix for this attribute: @xlink:href

<department>

In JATS, recording the department is documented in the non-normative documentation as <institution content-type="dept">

Other comments

Consider adding <suffix> to <name> model:

```
<!ELEMENT name (surname, given-names, prefix)>
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