NISO JATS Standing Committee Recommended Changes Between NISO/JATS 1.1 and JATS 1.2d1 (Committee Draft)

(in Response to Comments on NISO Z39.96-2015 (JATS V1.1) through April 10, 2017)

September 2017

1 Introduction

The NISO JATS Standing Committee has completed reviewing the requests for changes to ANSI/NISO Z39.96-2015 (V1.1) from the release of that version through April 10, 2017. This document lists the JATS Standing Committee recommendations made in response to those change requests. These committee recommendations are reflected in the Committee Draft 1.2d1 non-normative DTDs, XSDs, RNGs, and Tag Library documentation.

1.1 This Report

This document is divided into four sections:

- Comment resolution concerning Tag Set technical changes (to the DTDs and schemas),

- Comment resolution concerning normative documentation changes (to the text of the standard ANSI/NISO Z39.96-2015 JATS Version 1.1),

- Comment resolution concerning non-normative documentation changes (to the three JATS Tag Libraries). and

- Appendix: Technical summary of Tag Set technical changes.

1.2 Comments Not Addressed in This Report

The comments posted to the NISO comment site before April 10, 2017 are addressed in this report, with the following exceptions:

- The following Comments were declined, but consideration of them led to JATS Tag Set change recommendations that are described in this report:
  - #00600 *Use CRediT taxonomy for @person-group-type,*
  - #00655 *Add an <emphasis> tag*,
  - #00656 *Proposing to introduce the <semantic> tag*, and
- The following Comments were declined, but consideration of them led to non-normative Tag Library documentation recommendations that are described in this report:
  - #00621 *Add <italic> to model of <copyright-holder>*,
  - #00666 *Add @specific-use or type to <fig-count>*.
- Comment #00587 *Intramural Funding* was withdrawn. The description of intramural funding will depend on how CrossRef intramural funding will be deposited, which has not yet been established. This issue may be raised for the next version of JATS.

- Comment #00620 *Add <page-count> element for <book-part>s* is outside the scope of the JATS Standing Committee, which does not deal with BITS. The JATS Standing Committee should forward this suggestion to the BITS Working Group.

- Comment #00661 *Add 'attrib' & 'permissions' to inline-graphic* was withdrawn.

- Comments #00664 and #00735 *Add element <article-version>* were accepted (and are described) as part of the larger combined issue #00660/#00664/$00733 *Add article version information.*

1.3 Caveat

The Standing Committee recommendations in this document:

- Have been submitted to NISO,
- Have been approved by the JATS Standing Committee, but
- Have not been approved for incorporation in the NISO JATS Standard.

Thus, any tools and supporting materials based on these recommendations must be considered drafts.

1.4 Key to Tag Set Changes

Key: The following Tag Set icons appear with each suggested change to indicate to which of the Tag Sets a change will apply (Scope):

A Archiving   **A** Article Authoring

P Publishing

2 JATS Standing Committee Recommended Tag Suite Changes

2.1 #00566 Add <disp-formula> element to table-wrap

A P A

Standing Committee Recommendation

The JATS 1.2d1 Tag Sets should permit the <disp-formula> element to be used within <table-wrap> as a sibling to <graphic>, <media>, <chem-struct-wrapper>, and other elements.

2.2 #00581 Add 'ownership' to <inline-supplementary-material>

A P A

Standing Committee Recommendation

Do not add the ownership elements, 'attrib' and 'permissions' *to <inline-supplementary-material>*.

2.3 #00590 Add CRediT contributor role taxonomy to JATS

A P A

The original Comment was augmented and revised in email discussions and phone calls. The final Comment request was to add to JATS the ability to:

- Attach role information to a contributor (<contrib>)
- Support multiple roles for a single contributor
- Support CRediT taxonomy terms to describe this role, but also non-CRediT terms and free-text qualifiers to terms
- Specify the term source (such as the CRediT taxonomy)

- There may be many <role> elements associated with a single contributor (<contrib>). These elements should be used to carry CRediT taxonomy role information, with one <role> element for each type of contribution for the individual.

- The content of each <role> element should be the name of a role, possibly a CRediT taxonomic term, the translation of such a term into another language, free text, a CRediT term with 'free-text qualifiers', or a term from a non-CRediT taxonomy.

- As the <role> element holds the display text version of the contributor's role; the metadata for the vocabulary/taxonomy should be collected in the <role> element's attributes:

    - A @vocab attribute on <role> should be available to name the vocabulary (taxonomy, ontology, database, term list), e.g., "CRediT".

    - A @vocab-identifier attribute should be available to point directly to the vocabulary (using a URI or DOI for example), for vocabularies for which that is possible.

    - A @vocab-term attribute on <role> should be available to contain the vocabulary/taxonomy term (such as the CRediT taxonomic term). This value is the canonical form of the free form prose content of the element. **NOTE**: If the <role> element has no content, the value of this attribute should be considered to be the contributor's given role.

    - A @vocab-term-identifier attribute (also likely a URI) should be available to point directly to the term within the vocabulary, for vocabularies for which that is possible.

2.4   #00594/#00595/#00596: Derestrict @pub-id-type

P

Standing Committee Recommendation

The attribute @pub-id-type should become an unrestricted list (CDATA attribute) with a list of suggested values in the documentation for the Publishing Tag Set.

[*Editor's Note: An important JATS principle was articulated in recommending this Comment: Requests to relax restrictions in the Publishing DTD will be considered on a case-by-case basis and driven by use cases. The @pub-id-type loosening is appropriate because the number of authorities is changing so rapidly. (One of the requesters suggested that a schema grammar may not be the correct layer for enforcing such values.)*]

2.5   #00600 Use CRediT taxonomy for @person-group-type

A P A

Standing Committee Recommendation

This Comment was declined, but a further request bundled with this one (to harmonize @person-group-type and @contrib-type) lead to the @person-group-type in Publishing/Authoring

should be made into CDATA list (as it already is in Archiving). There were also extensive documentation recommendations for all three Tag Sets (See Section 4).

2.6 #00601 Add @xsi:noNamespaceSchemaLocation to <article>

Standing Committee Recommendation

The 'attribute' `@xsi:noNamespaceSchemaLocation` should be added to the document element in each of the JATS DTDs as:

```
xsi:noNamespaceSchemaLocation CDATA #IMPLIED
```

2.7 #00609 Add <long-desc> to <inline-graphic>

Standing Committee Recommendation

The accessibility element <long-desc> should be added to the model of <inline-graphic>.

2.8 #00618 Allow <string-name> as part of <contrib>

Standing Committee Recommendation

In the Publishing and Authoring Tag Sets, the element <contrib> should be allowed to contain either <name> or <string-name>, as <contrib> can do currently in Archiving.

[*Editor's Note: There are known disadvantages to this technique, since presence of name components cannot be guaranteed. Processing systems that need name components will require a second layer of validation (Schematron, PMC stylechecker, or similar) to assure that name parts are present; the tag set will not enforce name components. This opens slightly wider a gate for XML-creators to be sloppy, but the gate was neither closed nor locked, so this seems a small price to pay for the extended name flexibility*.]

2.9 #00626/#00627/#00665 Add xref/@ref-type values "bio" and "award"

Standing Committee Recommendation

Reference types (@ref-type on <xref>) should be made an open CDATA list, with no required values, only a list of suggested values.

2.10 #00650 Allow inline-formula within <source>

Standing Committee Recommendation

- The element <inline-formula> should be allowed inside <source>.

- Based on this Comment, the following elements were added to <source>, to more closely mirror the model of <article-title>:
  - inline-display class (alternatives | inline-graphic | private-char)
  - inline-math class (chem-struct | inline-formula)
  - math class (tex-math | mml:math)
  - simple link class (fn | target |xref)
  - abbrev class (abbrev)

2.11 #00654 Make @fn-type an unrestricted list

Standing Committee Recommendation

The attribute @fn-type should be made into an unrestricted (CDATA) list in Publishing and Authoring, as it already is in Archiving.

2.12 #00655 Add an <emphasis> tag)

Standing Committee Recommendation

The request for a generic emphasis element was denied, since <styled-content> should be used in such cases. However, the request exposed inadequacies in what could be expressed using <styled-content> and its attributes. Many languages (Japanese, Korean, Thai, Chinese, Arabic, Hungarian, and Armenian, to name but a few) use stress marks and similar typographic conventions (such as dots or sesamis) in the same way that English (as one example) uses <bold> or <italic> emphasis. JATS needs a more specific way for publishers to describe non-Latin emphasis options in their content, additional information for <styled-content>.

 The Tag Sets should add a @style-detail attribute (taken from the original request) to the @style and @style-type attributes already available for <styled-content>, thus providing three possibilities for additional style information on <styled-content>: @style, @style-type, and @style-detail.

For example, the following should be able to be tagged in JATS:

```
<p><styled-content specific-use="emphasis" style-type="dot" style-detail="open"
toggle="no">あいうえお</styled-content> ...</p>
```

2.13 #00656 Proposing to introduce the <semantic> tag

Standing Committee Recommendation

This request was denied. However, the request for a <semantic> element exposed the inadequacy of the attributes for <named-content>, for instance, the ability to name a taxonomy for a named component.

Since the <named-content> element holds the display text, the metadata for the CRediT, Dublin Core, or other taxonomy should be collected in the <named-content> element's attributes. The

attributes must be able to name a generic vocabulary ("chemistry"), as well as a specific taxonomy ('CRediT'). The attributes originally defined for the <role> element to hold the CRediT taxonomy should be reused for <named-content>.

Therefore, the following attributes should be added to <named-content>:

- A @vocab attribute to name the vocabulary (taxonomy, ontology, database), (e.g., "dcc").

- A @vocab-identifier attribute to point directly to the vocabulary, for example, using a URI or DOI for vocabularies for which that is possible.

- A @vocab-term attribute to contain the vocabulary/taxonomic term, the canonical form of the free form prose content of the element.

- A @vocab-term-identifier attribute (also likely a URI) to point directly to the term within the vocabulary, for vocabularies for which that is possible.

2.14 #00659 Add attribute @term-type to <term> element

Standing Committee Recommendation

The following attributes should be added and/or documented for <term>:

- The @term-status attribute should talk about the status of the term within its source vocabulary with such suggested values as 'preferred', 'deprecated', 'admitted, etc. [Suggested values in documentation, not a specified value list.]

- The @term-type" attribute should record information about the term with suggested values such as 'variant', 'borrowed'. abbreviated', etc. [Suggested values in documentation, not a specified value list.]

- All four vocabulary elements (@vocab, @vocab-identifier, @vocab-term, and @vocab-term-identifier).

2.15 #00660/#00664/#00733 Add article version information

Summarized Request

With the recent increase in availability of early versions of journal articles, it is becoming more important to encode information about the article version/status within the XML. These comments requested a new element <article-version> within <article-meta> to hold this information. The element would have one required attribute @article-version-type.

Standing Committee Recommendation

- The complete recommendation, with definitions, valued attributes, examples, etc. is denied. In spite of the existence of NISO-RP-8-2008 (the NISO Journal Article Versions Recommendation (JAV)), there is little overall consensus of what a 'version' is for a journal article, and how to name (or number) them. (The Standing Committee could not even agree whether the value 'proof' is a version, a status, a stage in the publication life-cycle, or something else.)

- However, the Standing Committee agrees that there is a need to be able to record, *in the XML document*, a status or version or lifecycle stage or similar descriptor, because many publishers are making more than one "version" (ordinary English word) of a document available to the public, for example, making public a proof, a corrected proof, and a copy of record (or perhaps that is version 0.1, 0.9, and 1.0). This relatively new practice argues in favor of allowing a "status-version-lifecycle-stage-whatever" element as part of the metadata that travels with an XML document rather than treating it as production information that is stored externally.

- **<article-version>** An <article-version> element should be added as an optional element (not directly repeatable, see <article-version-alternatives> below) inside the <article-meta> element in Publishing, Archiving, and Authoring. [*Editor's Note: The element <article-version> was also added to <front-stub>, <event>, and <event-description>. In <event-description> the element is repeatable.)*]

  The <article-version> element should have textual content (#PCDATA) and can be used to hold version information such as a version type, version status, version statement, or version number. For example, <article-version> may contain a word or phrase from a controlled vocabulary (for example, "revised-proof" from the NISO JAV recommendation), a non-JAV version status ("draft"), a version statement ("Second revised version"), or a version number ("2-a").

- **<article-version-alternatives>** Since the <article-version> element should describe the particular version in which the tag is embedded, the element should only be allowed to repeat when there are alternative current version numbers (for example, a NISO JAV version phrase as well as a publisher or aggregator version number). Since, under these circumstances, there will be more than one version number, JATS should add a new element <article-version-alternatives> to be allowed anywhere <article-version> is allowed. Documentation should make it clear that these alternatives are for the current document, not for prior or subsequent versions, which should most probably be tagged with <related-article>.

- The <article-version> element should take at least the following attributes:
  - The four new vocab attributes, so <article-version> can point to a controlled vocabulary such as NISO JAV when one is being used.
  - An @article-version-type attribute, to be used primarily on those occasions where there are multiple <article-version> elements, to differentiate between them. Such multiples should always be versions of this article in different systems, not versions of this article through time.
  - @specific-use
  - @iso-8601-date attribute
  - @xml:base and @id

2.16 #00663 Storing extended publication events in the XML

A P

Standing Committee Recommendation

There was debate on whether to add <event> to <history> or to add a new element <pub-history> to hold both dates and events. After much discussion, the compromise (not to the complete liking of either side of the discussion) is:

- The model for <history> in both Publishing and Archiving should be unchanged. Publishing and Archiving model history differently, and this should remain so for the current round of changes. In both, history contains <date> elements.

- The model for <article-meta> in both Publishing and Archiving should now include both <history> and <pub-history>:

      history?, pub-history?,

- The model for <pub-history> in both Publishing and Archiving and should be one or more <event> elements. The model for <pub-history> should not, at this time, contain <date> or <string-date> elements as the BITS model does.

      pub-history (event+)

- The <event> element should also contain the possibility of <date> element children.

- The associated <event> attributes from BITS should be added to JATS.

- An optional grouping (<article-version> or <article-version-alternatives>) should be added to <event>, although an <event> need not record the same date and happening as is recorded in an <article-version> element.

2.17 #00710 Make <pub-date> optional in Publishing

P

Standing Committee Recommendation

- A new element <date-not-available> to act as an alternative to the required <pub-date> should be added to <article-meta>, <front-stub>, and <event-desc>, in both Publishing and Archiving. In both Publishing and Archiving, where the element <pub-date> is used now, a JATS user should be able to use either a <pub-date> or a <date-not-available> element, but for Publishing, there must be at least one of these elements in <article-meta>.

- <date-not-available> should be an empty element used as a flag. An article either has a <pub-date> or this flag that means there will not be a <pub-date>. The presence of this flag does not mean that the article is unpublished necessarily; it indicates that a <pub-date> is not available.

- The JATS Standing Committee should mention this element to the BITS Working Group.

2.18 #00731 Presentation/indenting of Verse Lines

A P 𝓐

Standing Committee Recommendation

- An @indent-level attribute should be added to <verse-line>, to hold the relative number of units to be indented.

- For users where something fancier is required: JATS should add the style attributes (@style and @style-type) to <verse-group> and <verse-line>.

- No guidance should be given in the documentation; these changes are just to support a publisher's production requirements. The style attributes need not be used for CSS styles, although such use is common.

2.19 #00733 - Add @specific-use attribute to <article-version>

A P

Standing Committee Recommendation

A @specific-use attribute should be added to the new <article-version> element.

2.20 #00737 Allow alt-text in Inline Equations

A P 𝓐

Standing Committee Recommendation

The content model for the element <inline-formula> should be altered to allow both <alt-text> and <long-desc> as child elements.

2.21 Add new vocabulary attributes for subjects and keywords

A P 𝓐

Standing Committee Recommendation

The following additions should be made to the JATS models for all 3 Tag Sets:

- Place the following attributes on <kwd-group>, <subj-group>, and (for Archiving) <unstructured-kwd-group>:

  - A @vocab attribute to name the vocabulary (taxonomy, ontology, database), (e.g., CRediT or dcc).

  - A @vocab-identifier attribute to point to the vocabulary, using a URI or DOI for example, for vocabularies for which that is possible.

- Place the following attributes on all the keyword elements inside <kwd-group> (except the unstructured keyword group) and all the subject elements inside <subj-group>:

  - A @vocab-term attribute to hold the canonical form of the free form prose content of the element.]

  - A @vocab-term-identifier attribute (also likely a URI) to point directly to the term within the vocabulary, for vocabularies for which that is possible.

3   Changes to ANSI/NISO Standard Normative Documentation

Changes to content models are direct changes to the text of ANSI/NISO Z39.96-2012. In addition, changes to element names, element descriptions, attribute names, or attribute values are all reflected in the text of the NISO standard. The following changes are documentation-specific change requests as well as change requests repeated from the previous section that led to wording changes in normative text of the NISO standard.

3.1   #00569 Rename @designator Attribute

A **P** *A*

Standing Committee Text Recommendation

- Rename the @designator attribute from 'Designator of the Edition' to 'Designator'.

- Reword the definition of @designator to indicate that it can function for a variety of elements, using <edition> and <version> as examples but not precluding other elements.

These are changes to the wording of ANSI/NISO z39_96-2015 (JATS V1.1), but not to the content models or the intent of the attribute; any documents valid to JATS 1.1 will still be valid.

4   Changes to Non-normative Documentation (Tag Libraries)

The Tag Libraries for the three ANIS/NISO JATS Tag Sets are non-normative documentation written as an aid to JATS users and maintained at the National Library of Medicine (NLM) site (http://jats.nlm.nih.gov/index.html). The following Comments request documentation-specific changes as well as change requests repeated from the previous sections that led to wording changes in non-normative Tag Library documents.

4.1   #00568 No content model is given for <version>

P

Standing Committee Documentation Recommendation

Content model for <version> was added to the Publishing Tag Library for JATS Version 1.1. No action was necessary for JATS Publishing version 1.2d1.

4.2   #00570 Typo in page for @assigning-authority

P

Standing Committee Documentation Recommendation

The word "semantic" was changed to "semantic" in the Publishing Tag Library for JATS Version 1.1. No action was necessary for JATS Publishing version 1.2d1.

4.3   #00579/#00580 Add format description to @start_date

A **P** *A*

Standing Committee Documentation Recommendation

The following *Remark* was added to the "ali" dates in JATS 1.1:

> **Best Practice:** NISO RP-22-2015 recommends that the start date be given in the ISO-8601 format "`YYYY-MM-DD`", without inclusion of a time or a time zone.

4.4 #00590 Add CRediT contributor role taxonomy to JATS

A **P** *A*

Standing Committee Documentation Recommendation

- The <role> of a contributor may be relative to acquiring the data, performing the research, writing the paper, data visualization, or even an organizational role. As JATS is an enabling standard, we are agnostic on this point, and a publisher, archive, aggregator, or other JATS user may identify <role>s for a contributor as they choose.

- Rather than attempting to duplicate the CRediT taxonomy of personal roles (or any other vocabulary or taxonomy) within the JATS as a suggested values list, the documentation for <role> should point to the CRediT taxonomy as one example of a source of roles and provide a few real CRediT-tagged JATS examples.

- A Best Practice Note should advocate use of the CRediT taxonomy for <role>, but the Tag Libraries should also illustrate non-CRediT terms.

- There should be a <role> example for a collaboration (<collab>), when such a group wishes to be considered as a collective author. When the element <collab> is used inside <contrib> in place of a name, the <contrib> element should still hold the <role>. The element <collab> shall also be able to hold a <role> inside it.

4.5 #00592 Put a Closing Slash in the ali: Namespace URI

A **P** *A*

Standing Committee Documentation Recommendation

In JATS 1.1d3, the namespace for "ali" is defined as "`http://www.niso.org/schemas/ali/1.0`" (with no trailing slash). On the NISO site in NISO RP 22-2015, the same reference is given in the examples as "`http://www.niso.org/schemas/ali/1.0/`" (with a trailing slash).

Although this problem was resolved *before* this round of changes (the slash was added to the "ali" namespace URI in JATS 1.1), this information was insufficiently disseminated. The slash controversy is already mentioned in landing pages for the JATS Tag Sets:

- https://jats.nlm.nih.gov/archiving/1.1
- https://jats.nlm.nih.gov/publishing/1.1
- https://jats.nlm.nih.gov/articleauthoring/1.1

In this round of changes, a note should also be placed in the JATS 1.2d1 Change Report and additional discussion should be added to the JATS documentation.

4.6 #00593 Determine/document proper attributes when <related-object> is an entire book

A **P** *A*

For the element <related-object>, the JATS 1.1 Tag Libraries suggest (Best Practice statement) that whenever an entire book is the related object, there should be no @source-id attribute present, but

the book should be referenced via a @document-id attribute. This statement conflicts with the provided example on the same page.

Standing Committee Documentation Recommendation

A new <related-object> example that follows the stated Best Practice was produced, and it should be included in the Tag Library.

4.7 #00594/#00595/#00596: Derestrict @pub-id-type

Standing Committee Documentation Recommendation

The following @pub-id-type examples should be added to the Publishing and Authoring Tag Libraries:

for the Mathematical Reviews (MR) article id

```
<article-id pub-id-type="mr">1707243</article-id>
```

and Zentralblatt MATH (zbMATH)

```
<article-id pub-id-type="zbl">06451297</article-id>
```

4.7.1 #00600 (sub-point) Harmonize @person-group-type and @contrib-type

Standing Committee Documentation Recommendation

- Document for <person-group>, that to link to the CRediT vocabulary terms explicitly, use <role> instead of @person-group-type-type and explain the use of the vocabulary attributes on <role>.
- Document that the @person-group-type values may include free text, some of the older values given in the JATS 1.1 Tag Library, or the new vocabulary terms, such as the CRediT taxonomy terms.
- Document for <contrib>, that to link to the CRediT vocabulary terms explicitly, use <role> instead of @contrib-type and explain the use of the vocabulary attributes on <role>.
- Document @content-type separately for <contrib-group>, explaining that to link to the CRediT vocabulary terms explicitly, use <role> instead of @content-type and explaining the use of the vocabulary attributes on <role>.
- For @contrib-type, add a list of suggested values to the documentation, using the required values from @person-group-type. Mention the CRediT values on <role>.

4.8 #00618 Allow <string-name> as part of <contrib>

Standing Committee Documentation Recommendation

The description of processing names should focus on the presence of <surname> or <given-names> and not be based on the <name> or <string-name> wrapper.

4.9   #00621 Add <italic> to model of <copyright-holder>

A **P** *A*

Standing Committee Documentation Recommendation

The Tag Library documentation should better explain the content and purpose of <copyright-holder> and <copyright-year> and how they differ from <copyright-statement>, and what it means to say that they contain the same 'information'. The element <copyright-holder> is there for lookup and may not even be displayed, so <italic> should not be added to this model.

4.10   #00622 Add 'preprint' to suggested values @related-article-type

A **P**

Standing Committee Documentation Recommendation

Under CrossRef guidelines, a preprint may take a different DOI from a final article. The element <related-article> can be used to tie the final publication (which has DOI 'X') to the preprint publication (which has DOI 'Y'). The attribute @related-article-type is a CDATA value that can hold values for pointers in both directions (preprint-to-final and final-to-preprint).

The JATS Standing Committee agreed that the values "has-preprint" and "is-preprint" are inward-facing values that cannot express a type for <related-article> and <related-object>, because @related-article-type (and @content-type for <related-object>) always point outward, toward the object being targeted and they do not describe the article that contains the related element.

- The following suggested values should be added to @related-article-type:

  - "preprint" — Used in version of record or published article to point to one of its preprints.

  - "version-of-record" — Used in any article that is not a VoR, to point to the VoR of the article for which the current article is a different version, for example, a 'preprint' manuscript could point to the published article.

- The same attribute values should be added to the discussion of @content-type for <related-object>, with documentation making it clear that this concerns preprints of books, NOT articles.

- The description of @related-article-type should be rewritten to suggest that it describes *how* the related material is related, so "addendum" means that Article X (which contains the <related-article> element) is related to Article Y (the target of the <related-article> element) by virtue of Y adding material to X. Document X is saying of Document Y "I am related to Document Y, because Y is my addendum". Related article describes something about the document to which it is pointing.

Suggested values for the @related-article-type attribute describe how the related article is related to the current article. As an example, the value <quoted><code>addendum</code></quoted> indicates that the article being pointed to is acting as an addendum to the current article, not that the related article is necessarily of type <quoted>addendum</quoted>. Most of the values for

@related-article-type already made it clear that it was the relationship that was being named. The remaining suggested values should be reworded to the following:

- addendum — Additional material for this article, which, for example, was generated too late to be added to the main tex
- commentary — Used in an article to name a commentary or editorial that concerns this article
- commentary-article — Used in a commentary or editorial to name the article on which this one is commenting
- companion — Used in this article to name a companion (related or sibling) article
- corrected-article — Used in a correction to name the article being corrected. Sometimes called "erratum".
- correction-forward — Used in an article to name (point forward to) its associated correction (rarely used)
- in-this-issue — Names a related article in the same journal issue
- letter — Used in this article to name a letter to the publication or a reply to such a letter concerning this article
- partial-retraction — Points to a Retraction or disavowal of part(s) of previously published material
- retracted-article — Used in a retraction to name the article being retracted
- retraction-forward — Used in an article to name (forward) its associated retraction (rare)

4.11 #00626/#00627/#00665 Add xref/@ref-type values "bio" and "award"

A P A

Standing Committee Documentation Recommendation

The values "bio" and "award" should be added to the list of suggested values for @ref-type.

4.12 #00628 Add a new suggested @date-type value

A P A

Standing Committee Documentation Recommendation

The value 'resubmitted' should be added as a suggested date type in the recommendations for JATS 1.2d1 so that the tagging can be standardized across the JATS community.

4.13 #00633 Tagging Mentions of Clinical Trials

A P A

Standing Committee Documentation Recommendation

Clinical trial registration information from https://clinicaltrials.gov/ is typically a simple link plus the registration number, e.g., "Trial registration: NCT02442440 (https://register.clinicaltrials.gov/)".

- Simple links to Clinical Trials may be tagged as an <ext-link>, while more complex links may need <related-object>. Examples of both should be added to the Tag Libraries.

    - As an External Link — The issue is not about tagging Clinical Trials, but tagging external links to clinical trials that identify the Clinical Trial registry and have a

UID for the trial. This is just like any other link to a known resource. The identifier and the resource information are supplied in the attributes and the link display text is the element content.

- As a Related Object — There are cases where you may need more metadata (for instance a clinical trial title, or a DOI) and a stronger association between an article and a clinical trial than a mere <ext-link>. The following proposal is based on the <related-object> element:

- In the Index "clinical trials" should be cross-referenced to both <ext-link> and <related-object>.

- Two new examples for the Tag Libraries were provided.

4.14 #00653 Correction of the "<date>" example

A P A

Standing Committee Documentation Recommendation

*The third e*xample of <date> in the Tag Library is as follows:

```
<date date-type="received" calendar="Japanese" iso-8601-date="2013-07-01">
  <day>1</day>
  <month>7</month>
  <year>25</year>
  <era>昭和</era>
</date>
```

should be changed to read:

```
<date date-type="received" calendar="Japanese" iso-8601-date="2013-07-01">
  <day>1</day>
  <month>7</month>
  <year>25</year>

  <era>平成</era>
</date>
```

4.15 #00654 Make @fn-type an unrestricted list

P A

Standing Committee Documentation Recommendation

Since the attribute @fn-type should be made into an unrestricted (CDATA) list, the previous allowed values should become a suggested value list.

4.16 #00660/#00664/#00733 Add article version information

A P A

Standing Committee Documentation Recommendation

- Documentation should make it clear that the alternatives inside the <article-version-alternatives> element are for the current document, when that

document has two separate version numbers in two separate systems. Article version alternatives are *not* for prior or subsequent versions, which should most probably be tagged with <related-article>. In any given system, and article can have only one <article-version> at a time.

- Documentation should explain the difference between the singular <article-version> and the production lifecycle changes described by history/date.

- Some users will choose to use the NISO JAV phrases (such as "revised-proof") as content for this element. Some will just use a version number such as "ver 2.0" or "3286". As another example, Elsevier has an extensive taxonomy for version a that is completely unrelated to JAV. Several <article-version> variations should be illustrated.

- For NISO JAV and other controlled vocabularies, show as many vocab attributes as possible in the samples.

- As with other uses of the vocab attributes, the attribute @vocab-term should hold the canonical version of the term in a controlled vocabulary such as NISO JAV and the <article-version> element should hold the display version of the term, possibly the same, but possibly translated into another language or a local variant. [For example, the attribute is: 'vocab-term="post-version-of-record"' and the element content is the phrase-for-display "Post Version-of-Record".

- Documentation can suggest the usefulness of this version metadata when multiple parties are involved, for example, moving XML between a customer and a vendor.

4.17 #00663 Storing extended publication events in the XML

A P

Standing Committee Documentation Recommendation

- If possible, the Tag Libraries should describe attribute best practice recommendations for both <date> and <event> to help make it more obvious how to use <date> inside <event> versus inside <history>.

- Events (<event>) may include those things that are usually handled by <history> such as when the manuscript was received or accepted, but an <event> need not be used for any date in history. An <event> could be pre- or post-publication events including dates, link(s), an article version, and/or descriptive commentary. An <event> element may also contain details of earlier versions of the article. For example, one publisher has articles that have been posted on a preprint server, then one version of an author's accepted manuscript was published, then a subsequent version of this format, then the version of record and then another updated version of record. There are no official corrections published with any of these event changes.

Samples Recommendation

- Of all the dates in an article, the publication date <pub-date> is the most important date, and the publication date is *not* tagged as a <date>. Thus for CrossRef deposit, dates must already be pulled from multiple contexts. A standard can best help folks who ingest JATS by

providing best practice samples. There should be clear date examples to aid CrossRef deposits and other data ingest.

- Samples were provided by the original requestor and edited by the JATS Secretariat should be added to the Tag Libraries.

4.18 #00666 Add @specific-use or type to <fig-count>

A P A

Standing Committee Documentation Recommendation

While the request was denied, it was felt that the fact of the request exposed inadequacies in the descriptions of the specific counts elements (<fig-count>, <word-count>, etc.) in the Tag Libraries. The following text (edited only slightly) should be placed into all three Tag Libraries in the Related Element descriptions of the specific count elements:

RELATED ELEMENTS

Inside the <counts> container element are the counts of various components of the document in two styles: 1) the pre-defined counting elements (specific to an element type and shown below) and 2) the generic count element <count> (which is used to count anything that is *not* one of the pre-defined specific types and for which the @count-type attribute names what is being counted).

Best Practice: For counting *all* of a named element (such as all figures or all tables), the specifically named count elements (<fig-count>, <table-count>) should always be used. The <count> element is reserved for counting elements or conditions for which a *-count element has not been defined (all contributors, all footnotes, etc.) or to count only *some* of a named element. For example, to sub-divide a count into smaller sub-counts, e.g. color figures vs. black-and-white figures, use <fig-count> for the total number of figures, and then use separate <count> elements for the subsets, e.g.:

```
<counts>
  <count count-type="fig-color" count="3"/>
  <count count-type="fig-bw" count="7"/>
  <fig-count count="10"/>
</counts>
```

Named Counting Elements: The JATS pre-defined named counting elements are:

 - **<fig-count>** is the total number of *labeled Figures* (see definition of the element <fig>). This is *not* a count of images or of <graphic> elements. Do not include unlabeled graphics, such as images embedded in table cells, in the count of figures. Also do not make this the count of images *inside* a figure; for example, if a <fig> contains four panels (a-d) and each panel is a separate image file (4 <graphic>s), the <fig-count> would be "1", not "4".

 - **<table-count>** is the total number of tables (<table-wrap>). Do not include uncaptioned/untitled tables (<array>) in this count.

 - **<equation-count>** is the number of display equations (<disp-formula>). Do not include inline equations in this count (<inline-formula>). If you have a display equation that consists of multiple MathML objects, this counts as one equation.

 - **<ref-count>** is the number of bibliographic references *within the bibliographic reference list*. This may be the number of reference elements (<ref>) or the number of mixed or element citations (for publishers who put multiple citations into a single <ref>). Do not include cases of <mixed-citation> or <element-citation> that appear outside of a <ref-list>.

- **\<page-count\>** is the page count of the print or PDF item, including all Roman and Arabic number pages.

- **\<word-count\>** is the number of words in the document.

4.19 Add new vocabulary attributes for subjects and keywords

A P A

Standing Committee Documentation Recommendation

- The current @kwd-group-type (defined as: Keyword Authority — The name of a an ontology, thesaurus, index or other term source where the keywords in this group are defined. Alternatively, the name of the standards organization, indexing service, or other group that established a particular group of keywords, for example, "IEEE", "ISO", "ASTM", "Inspec", etc.) is overloaded.

- JATS should recommend as best practice going forward, to use the new @vocab attribute to name the ontology, thesaurus, taxonomy, index, database, etc.

- The existing attribute @kwd-group-type should be retained to say, for example, that the keywords were supplied by the authors of the article.

4.20 CrossRef Funding Data Example

A P A

Standing Committee Documentation Recommendation

- The recommendations for handling funding data should be the same across all 3 JATS DTDs.

- A series of new finding examples were provided and edited by the Standing Committee through email. Those new examples (some showing the use of the Open Funder Registry and some not) should be added to the Tag Libraries. See new samples for \<funding-group\>, \<award-group\>, \<institution-wrap\>, and their child elements.

4.21 NISO STS Technical Committee Comment

A P A

Standing Committee Documentation Recommendation

Since the \<elocation-id\> is intended as a replacement for page numbers, thus it should be (at least in books and standards) an *internal* link. The JATS standing Committee (at the urging of Standards) should remove all references to DOI or URI and eliminate any examples showing such an \<elocation-id\>.

Since some journal publishers are using a DOI as an \<elocation-id\>, that usage should not be prohibited, but the JATS documentation should not describe it or provide an example.

5 Appendix: Technical Summary

5.1 Changes to Elements

Elements are listed in alphabetical order. All changes are in all Tag Sets unless specifically noted below.

- **\<article\>**

  - Article Version — Added new element \<article-version\> inside \<article-meta\> to hold one version number for the article. Optional in Authoring. In Publishing and Archiving, the \<article-version\> element may repeat inside \<article-version-alternatives\>to hold version numbers for the same article from different systems.

  - Publication Date Alternative — [Publishing only] \<pub-date\> (required repeatable) becomes pub-date.class (required repeatable), with the addition of a new element \<date-not-available\>, a flag for use when there is no available \<pub-date\>.

  - Publication Date Alternative — [Archiving only] \<pub-date\> (optional repeatable) becomes pub-date.class (optional repeatable), with the addition of a new element \<date-not-available\>, a flag for use when there is no available \<pub-date\>.

  - Publication History — \<pub-history\> [Publishing and Archiving only] (optional) Added an optional \<pub-history\> to hold one or more of \<event\>s. New elements: \<event\>, \<event-desc\>.

- **\<chapter-title\>** — Added the following elements to \<chapter-title\>, to more closely mirror the model of \<article-title\>:

  - inline-display.class (alternatives | inline-graphic | private-char)

  - inline-math.class (chem-struct | inline-formula)

  - math.class (mml:math | tex-math) [Authoring mml:math only]

  - phrase-content.class (named-content | styled-content)phrase-content.class (named-content | styled-content)

  - simple-link.class (fn | target | xref)

- **\<code\>** — Both \<inline-graphic\> and \<private-char\> added to elements allowed in \<code\>.

- **\<contrib\> —** Added \<string-name\> as an alternative to \<name\>. All Tag Sets are now the same.

- **\<data-title\>** — Both \<inline-graphic\> and \<private-char\> added to elements allowed inside \<data-title\>.

- **\<front-stub\>** [in all Publishing and Archiving Tag Sets]

- Article Version — Added new element <article-version> inside <front-stub> to hold one version number for the article. <article-version> element may repeat inside <article-version-alternatives>to hold version numbers from different systems.

- Publication Date Alternative — <pub-date> (optional repeatable) becomes pub-date.class (optional repeatable), with the addition of a new element <date-not-available>.

- Publication History — <pub-history> (optional) added to hold one or more of <event>s. New internal elements: <event>, <event-desc>.

- **<inline-formula>** — Added accessibility elements <alt-text> and <long-desc> to the model of inline formula.
- **<inline-graphic>** — Added <long-desc> to <inline-graphic>, where it joins <alt-text>.
- **<part-title>** — Added the following elements to <chapter-title>, to more closely mirror the model of <article-title>:

  - <abbrev>

  - inline-display.class (alternatives | inline-graphic | private-char)

  - inline-math.class (chem-struct | inline-formula)

  - math.class (mml:math | tex-math) [Authoring mml:math only]

  - phrase-content.class (named-content | styled-content)phrase-content.class (named-content | styled-content)

  - simple-link.class (fn | target | xref)

- **<pub-history>** — Added <pub-history> to hold <event>s. Unlike in BITS, <pub-history> will contain ONLY <event>s

  - Added <event>, which will reside only inside <pub-history>. Took model from BITS.

  - Took <event> attributes from BITS.

  - Added <article-version> to JATS model of <event>

- **<source>** — Added the following elements to <source>, to more closely mirror the model of <article-title>:

  - inline-display.class (alternatives | inline-graphic | private-char)

  - inline-math.class (chem-struct | inline-formula)

  - math.class (mml:math | tex-math) [Authoring mml:math only]

  - phrase-content.class (named-content | styled-content)phrase-content.class (named-content | styled-content)

  - simple-link.class (fn | target | xref)

- **\<std\>** — Both \<inline-graphic\> and \<private-char\> added to elements allowed inside Standard \<std\>.

- **\<table-wrap\>** — Added \<disp-formula\> as a sibling to \<graphic\>, \<list\>, etc. as the content of a \<table-wrap\> that does not contain a \<table\>.

- **\<x\>** — [Archiving Only] Both \<inline-graphic\> and \<private-char\> added to elements allowed inside \<x\>.

5.2 Changes to Attributes

Attributes on \<article\>

- **@dtd-version** becomes FIXED "1.2d1" rather than "1.1".

- **Pseudo-attribute xsi:noNamespaceSchemaLocation** added to attribute list of \<article\>. Most modern processors do not need this, but a user with an older processor requested it, so the JATS Standing Committee acquiesced. This pseudo-attribute cannot be used with a DOCTYPE declaration.

Other Attribute Changes

- **\<article-version-type\>** — Attributes defined as @article-version-type, @designator, @specific-use, @content-type, @iso-8601-date, the four vocabulary attributes, the two JATS base attributes @id and @xml:base, and the linking attributes.

- **@fn-type** — Made @fn-type into a CDATA from a restricted list. Deleted fn-types PE, which used to name the types, and added values "illustrator" and "research-assistant" to list of suggested values. All three Tag Sets are now the same.

- **@person-group-type** — Made value CDATA (replacing a parameter entity of value types) and added values "illustrator" and "research-assistant" to list of suggested values. All three Tag Sets are now the same.

- **@pub-id-type** — @pub-id-type changed from a fixed list to CDATA for all usages of the attribute. All three Tag Sets are now the same.

- **@ref-type** — Changed @ref-type from a fixed value list to CDATA. Now all three Tag Sets are the same.

- **@style-detail** — Added to \<styled-content\>, \<verse-line\>, and \<verse-group\>.

- To **\<term\>** — Added attributes @term-type, @term-status, and the four Vocabulary/Taxonomy attributes described below.

- **Verse Attributes** —

  - Added @indent-level, @style, @style-detail, and @style-type to \<verse-line\>.

  - Added @style, @style-detail, and @style-type to \<verse-group\>

- **Vocabulary/Taxonomy attributes** — Added four new attributes for naming (and possibly linking to) a general or controlled taxonomy, vocabulary, index, database or other source of terms: @vocab, @vocab-identifier, @vocab-term, and @vocab-term-identifier.

  - Attributes @vocab and @vocab-identifier were added to the elements:
    - \<article-version\>
    - \<institution-id\>
    - \<kwd-group\>

- <named-content>
- <role>
- <subj-group>
- <term>
- <unstructured-kwd-group>

- Attributes @vocab-term and @vocab-term-identifier were added to the elements:

  - <article-version>
  - <compound-kwd>
  - <compound-subject>
  - <institution-id>
  - <kwd>
  - <named-content>
  - <nested-kwd>
  - <role>
  - <subject>
  - <term>

5.3 Element/Parameter Entity Changes Made to Authoring

- **<mml:math>** — Added math class (which in Authoring is just <mml:math>) to simple phrase parameter entity, adding it to many places, including <article-title>.

- **<person-group>** — Removed string-name.class PE from PE person-group-elements because <string-name> was added to name.class, which person-group-elements already used. No model change.