MECA and JATS Compatibility: A Case Study

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Manuscript Exchange Common Approach (MECA)

• Cross-industry effort to streamline transmission of manuscripts among publishing partners
• Minimize redundancy for authors, reviewers, publishers
• Emphasis on best practices
• Partners define their own minimal viable product – can provide just enough metadata to get started with submission
Manuscript Exchange Common Approach (MECA)

• Defines DTDs for
  - Manifest
  - Reviews
  - Transfer

• Works with any article schema, including JATS
  - Working Group decided DTDs should be JATS-compatible
JATS Compatibility Meta Model (JCMM)

- Enabling expansion of JATS family of schemas
- Describes compatibility properties
  - Semantic match
  - Element or attribute
  - Section-like model
  - Whitespace handling
  - Contains alternatives
  - ID/IDREF
# JCMC Compatibility Table

## APPENDIX B: JATS COMPATABILITY PROPERTIES CATALOG

<table>
<thead>
<tr>
<th>JATS Structure</th>
<th>Element or Attribute Property</th>
<th>Alternatives Property</th>
<th>Section-like Property</th>
<th>Handling Property</th>
<th>Whitespace Property</th>
<th>Attribute ID or IDREF Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>abbr</td>
<td>attribute</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>abbrev</td>
<td>element</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>D</td>
</tr>
</tbody>
</table>
### Compatibility Analysis Table

**Summary Table**

<table>
<thead>
<tr>
<th>Structure Name</th>
<th>Semantic match Y/N</th>
<th>Model</th>
<th>Element</th>
<th>Attr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>addr-line</td>
<td>Y</td>
<td>JATS</td>
<td>element</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MECA</td>
<td>element</td>
<td>D</td>
</tr>
<tr>
<td>aff*</td>
<td>Y</td>
<td>JATS</td>
<td>element</td>
<td>D*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MECA</td>
<td>element</td>
<td>E*</td>
</tr>
</tbody>
</table>
## Compatibility Analysis Table

<table>
<thead>
<tr>
<th>Structure Name</th>
<th>Semantic match Y/N</th>
<th>Model</th>
<th>Error or Attribute</th>
<th>(D or E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>addr-line</td>
<td>Y</td>
<td>JATS</td>
<td>element</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MECA</td>
<td>element</td>
<td>D</td>
</tr>
<tr>
<td>aff*</td>
<td>Y</td>
<td>JATS</td>
<td>element</td>
<td>D*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MECA</td>
<td>element</td>
<td>E*</td>
</tr>
</tbody>
</table>

* indicates a JATS-compatibility problem.
Comparing the models

MECA manifest.dtd
<!ELEMENT metadata (name, value) >
<!ELEMENT name (#PCDATA) >
<!ELEMENT value (#PCDATA) >

NISO JATS-common1.ent
<!--   NAME OF PERSON (STRUCTURED)   -->
<!-- Wrapper element for personal names.   -->
<!ELEMENT name (((surname, given-names?) |
given-names,prefix?, suffix?) >
<table>
<thead>
<tr>
<th>Structure Name</th>
<th>Semantic match Y/N</th>
<th>Model</th>
<th>Element or Attribute</th>
<th>Alt</th>
<th>Section-like</th>
<th>Whitespace handling (D or E)</th>
<th>ID/IDREF</th>
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</thead>
<tbody>
<tr>
<td>name*</td>
<td>N*</td>
<td>JATS</td>
<td>element</td>
<td></td>
<td>E*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MECA</td>
<td>element</td>
<td></td>
<td>D* (manifest.dtd)</td>
<td>E* (reviews.dtd)</td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td></td>
<td>JATS</td>
<td>attribute</td>
<td></td>
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<tr>
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<td></td>
<td>MECA</td>
<td>attribute</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
<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.

  
</name>

<!ELEMENT metadata (#PCDATA)>
<!ATTLIST metadata
  metadata-name CDATA #REQUIRED>
Resolving Incompatibilities

- Change MECA element model to be compatible JATS
- Change MECA element/attribute name
- Submit change request to NISO JATS Standing Committee
Updating the JATS

JATS/@date-type definition was:

Event in the lifecycle of an article

Attribute was being used to capture dates of non-article objects (date in product); MECA WG submitted request to redefine attribute as:

Event in the lifecycle of an object

NISO JATS Standing Committee accepted the change request
MECA Moving Forward

• NISO MECA Recommended Practice (fully compatible with JATS) published July 2020
• NISO MECA Standing Committee established
• Current work items:
  – Integration with current peer review taxonomies
  – Exploring JSON API
  – Multi-lingual support
Questions?