Manuscript Exchange
Common Approach
(MECA)
September 20, 2017
Agenda

• Background, Principles, Use Cases – John
• Project Areas – Joel/Sally
• Action Items & Timeline – Chris
• Commenting Process – Helen

John Sack, HighWire Press
Joel Plotkin, eJournal Press
Sally Ubnoske, Aries
Chris Heid, Clarivate
Helen Atkins, PLOS
Craig Jurney, HighWire Press
What’s the Problem?

Problem
• Authors are irritated at time, effort, delays when re-submitting articles
• Reviewers’ time is wasted when reviews are re-done or replicated
• New publication flows demand transfers to/from preprint servers
• Each workflow system has to implement separate interfaces to each other system – inefficient to work “pairwise”

Opportunity
• A common approach to moving manuscripts solves the above use cases, but can also solve some additional workflow problems!

All we need is for a group of competitors to collaborate!
• A group of vendors and publishers
  – HighWire: BenchPress
  – Aries: Editorial Manager
  – Clarivate: Scholar One
  – PLOS: Aperta

• Develop a common approach
  – Not software, not a central service, not a database
  – Recommended best practices
  – Non-proprietary, CC-BY

• Hope for wide adoption
  – Outreach, NISO, JATS4R, JATSccon
  – Webinar (you... here... now...)
Principles

1. Journals & authors set the rules on what transfers …not MECA
2. Seamless transfer between publications and platforms …but not necessarily complete submission
3. Define minimal required data for transfer
   • The data needed to start a submission
4. Define MVP (Minimal Viable Product)
   • Get going now, but build for future use cases
5. Protocol based on best practices and industry standards
   • Low barriers to entry to use MECA
6. Recommendations, not code
   • No hub, no software, no service
   • Not like Crossref or ORCID; no tracing of manuscripts
Use Cases

Manuscript transfers across boundaries:

**Journal**
- Submission System to Submission System (primary)

**Preprint**
- Preprint System to/from Submission System (primary)

**Syndication: Import from...**
- Authoring Systems to Submission System (primary)

**Syndication: Export from...**
- Submission System to Various Services (secondary)
Project Areas

- Vocabulary
- Packaging
- Tagging
- Peer Review
- Transfer Information
- Identity
- Transmission
Project Areas – Vocabulary

- **Goal**: To provide a **standard nomenclature**
- Provides a baseline for understanding
- Includes 4 Use Cases
- Includes Term, Definition, Synonym, ‘Often-confused-with' alternatives, and Examples
- Includes 70+ Terms
  - Publishing terms like ‘Author', ‘Review', ‘Downstream Processing’
  - Technical terms like ‘BITS’, ‘Interoperability’, ‘Mime Type’
- Can be updated over time
Project Areas - Packaging

• **Goal**: simple, flexible, standard way to assemble files
• Zip File
• Team will register a new ‘mime type’ and file extension for the package
• One manuscript per zip file
• Package contains:
  - **Manifest.xml** * (new DTD for file manifest)
  - **Transfer.xml** * (new DTD for source/destination, contact, and security information)
  - Article.xml (JATS-compliant)
  - PeerReview.xml (optional - JATS-like)
  - Source files

* Required Item
Project Areas - Tagging

- **Goal:** To be able to pass *submission information* from system to system
- **Article.xml** (file in JATS format – Green DTD compliant)
- Defines minimal required data*
- Only the highest revision of the submission is written to the XML
  - Article Identifiers (Manuscript Number, UUID, DOI)
  - Article Title *
  - Article Type, Category, Classifications, Keywords
  - Corresponding Author* and Co-Authors (with affiliations)
  - Related articles, Preprints
  - Funding Information, Custom Metadata
  - Figures, tables, supplementary material
Project Areas - Tagging

```xml
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE article SYSTEM "JATS-archivearticle1-mathml3.dtd">
<?version 3?>
<!xml-stylesheet type="text/xsl" href="xslt/main/jats-html.xsl"?>
<article>
  <article-meta>
    <article-id pub-id-type="manuscript">DEMO131-D-16-00110</article-id>
    <article-id pub-id-type="doi">10.1234/91.1191023</article-id>
    <article-categories>...</article-categories>
    <title-group>...</title-group>
    <contrib-group>...</contrib-group>
    <history/>
    <related-article related-article-type="Original study">DEMO-D-05-00002</related-article>
    <related-article related-article-type="preprint">10.1372/journal.DEMO.preprint.0000042</related-article>
    <abstract>...</abstract>
    <kwd-group>...</kwd-group>
    <funding-group>...</funding-group>
    <custom-meta-group>...</custom-meta-group>
  </article-meta>
  <body>...</body>
</article>
```
Project Areas – Peer Review Data

• **Goal**: To be able to pass *review information* from system to system
  o Questions/Answers
  o Ratings
  o Comments
  o Annotations
  o Red lines / Marked up files

• **Privacy**
  o Reviewer names/contact information can be redacted
  o Based on sending journal’s privacy policy

• **Reviews.xml** (file is similar to JATS)
  o Decided information does not belong in article.xml
  o Multiple reviews & revisions in one file
  o DTD has ~16 tags/elements

• Just a starting point
  o Looking for feedback and/or refinements
Project Areas – Peer Review - Schema
<review-group>
    <review>
        <contrib-group>
            <contrib contrib-type="editor">
                <contrib-id contrib-id-type="orcid" authenticated="true">http://orcid.org/0000-0002-1825-0111</contrib-id>
                <name name-style="western">
                    <surname>Robers</surname>
                    <given-names>Sally</given-names>
                </name>
                <address>...</address>
                <email>ssmith@google.com</email>
                <role>editor</role>
            </contrib>
        </contrib-group>
        <date date-type="assigned" iso-8601-date="1999-01-29">
            <year>1999</year><month>1</month><day>29</day></date>
        <date date-type="completed" iso-8601-date="1999-01-29">
            <year>1999</year><month>1</month><day>29</day></date>
        <date date-type="due" iso-8601-date="1999-01-29">
            <year>1999</year><month>1</month><day>29</day></date>
        <review-item-group>
            <review-item review-item-type="rating">
                <review-item-question sequence-number="1">
                    <title>Scientifically Novel</title>
                    <alt-title>Novel</alt-title>
                    <text>On a scale from 1 to 10, how "novel" is the idea presented in this manuscript?</text>
                </review-item-question>
                <review-item-response>
                    <rating>5</rating>
                </review-item-response>
            </review-item>
            <review-item review-item-type="single-choice">
                <review-item-question sequence-number="2">
                    <title>Best adjective</title>
                    <alt-title>Adjective</alt-title>
                    <text>What adjective best describes this manuscript?</text>
                </review-item-question>
                <review-item-response>
                    <rating>9</rating>
                    <text>Great</text>
                </review-item-response>
            </review-item>
            <review-item review-item-type="comment">
                <review-item-question sequence-number="3">
                    <title>Comments to the Editor</title>
                    <short-title>Comments to the Editor</short-title>
                    <text>Please provide comments to the editor about the scientific merit or uniqueness of the idea presented in this manuscript?</text>
                </review-item-question>
                <review-item-response is-confidential="yes">
                    <text>The ideas presented in this manuscript are mind blowing. It should get published right away.</text>
                </review-item-response>
            </review-item>
            <review-item review-item-type="annotated-file">
                <title>Red lines and annotations to the authors manuscript</title>
                <ext-link>redlines.doc</ext-link>
            </review-item>
        </review-item-group>
    </review>
</review-group>
Project Areas – Transfer Information

- **Goal**: To be able to pass transfer information from system to system
  - Source Information
    - Service Provider
    - Contact Information
    - Publication Type, Title, Acronym
  - Destination Information
    - Service Provider
    - Contact Information
    - Publication Type, Title, Acronym
  - Security Information
    - Authentication Code
  - Processing Instructions
    - **Transfer.xml** (new DTD)
Project Areas – Transfer – Sample XML

<transfer>
  <source>
    <service-provider>
      <name>eJournal Press</name>
      <contact role="Project Manager">
        <name>
          <surname>Smith</surname>
          <given-names>John</given-names>
        </name>
        <email>jsmith@ejournalpress.com</email>
        <phone>301-555-1212</phone>
      </contact>
      <publication type="journal">
        <title>The Journal of the American Medical Association</title>
        <acronym>JA MA</acronym>
        <contact role="Managing Editor">
          <name>
            <surname>Smith</surname>
            <given-names>Sally</given-names>
          </name>
          <email>ssmith@jama.com</email>
          <phone>301-555-1212</phone>
        </contact>
      </publication>
    </service-provider>
    <security>
      <authentication-code>abdasa-13123-abae</authentication-code>
    </security>
  </source>
  <destination>
    <service-provider>
      <name>Highwire</name>
      <contact role="Project Manager">
        <name>
          <surname>Rogers</surname>
          <given-names>John</given-names>
        </name>
        <email>jrogers@highwire.com</email>
        <phone>444-555-1212</phone>
      </contact>
      <publication type="preprint-server">
        <title>BioArxiv</title>
        <acronym>BioArxiv</acronym>
        <contact role="Managing Editor">
          <name>
            <surname>Rogers</surname>
            <given-names>Sally</given-names>
          </name>
          <email>jrogers@bioarxiv.com</email>
          <phone>301-555-1212</phone>
        </contact>
      </publication>
    </service-provider>
    <security>
      <authentication-code>abdasr-13123-abae</authentication-code>
    </security>
  </destination>
  <processing-instructions>
    <instruction sequence="1">Verify XML First</instruction>
    <instruction sequence="2">Load XML</instruction>
    <comments>Free form comments</comments>
  </processing-instructions>
</transfer>

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Project Areas - Identity

- **Goal**: Unique, **consistent identity** across systems
- Unique identifier
  - When manuscripts are passed from system to system
  - Article number, but not journal specific
- DOI was considered
  - Need for something without a DOI “prefix” or implied source
- Universally unique identifier - UUID
  - Type 1
    - Date, time, MAC Address, random number
    - d6bf8782-30f7-4cd7-82a8-94ff62352ac4
    - Guarantees no collisions across vendors
    - Support found in many standard coding libraries
Project Areas - Transmission

- **Goal**: Simple, consistent way to send the information across systems

- FTP until January 2018 / SFTP (FTP over SSH) in 2018
  - Phase 1
  - Asynchronous

- Potential future development – move to API (REST, SWORD)
  - Provide status message to sender
  - Synchronous
  - Influenced by specific use cases
### Action Items & Timeline

#### 2017

- Present to organizations and communities of interest
  - JATS-Con, SSP, …
  - Authoring platforms, composition vendors, repositories, preprint servers…
- Gather input from these interested parties
  - Input via manuscriptexchange.org
- Expand the Working Group
  - Looking to include diverse set of stakeholders
  - Interested? Look at manuscriptexchange.org or email info@manuscriptexchange.org

#### Q 1&2

- Host Informational Webinars
  - General and Technical webinar ("you are here")
- Build trial/pilot/reference implementation
  - Refine approach and documentation
  - Implementation website coming soon at: www.manuscriptexchange.org/how-to

#### Q 3&4

- NISO application, if appropriate
  - Will need community volunteers to participate in that process

#### 2018

- Vendor and Supplier Implementations
Want to Participate?

• Contact us:
  o Comment on documents/plans, volunteer
  o Sign up for our mailing list to keep apprised of progress
    info@manuscriptexchange.org

• Additional Information on our web page:
  www.manuscriptexchange.org