TODAY CROSSREF, TOMORROW THE WORLD:
MANAGING XML CROSSWALKS WITH ALTOVA MAPFORCE

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AGENDA

• **Background:** IR Services @ Georgia Southern

• **Growing Challenge:** Managing Metadata Transformations

• **Our Current Solution:** Altova Mapforce
  • Software Overview
  • DC → DOAJ Crosswalk

• **Next Steps & Brainstorming**
BACKGROUND: IR SERVICES @ GEORGIA SOUTHERN

Georgia Southern University

- 26,400 students
- 141 degree programs
- 3 Campuses - Statesboro, Savannah, & Hinesville

IR Services

- 28 Conferences & 13 Journals
- 560+ Scholarly Profiles
- 50,600+ Artifacts
- 2.9M Downloads
- 3 FTE Staff
GROWING CHALLENGE: METADATA TRANSFORMATIONS

• EXPANDING REACH AND IMPACT REQUIRES EXTERNALIZING YOUR METADATA
  • DOI Registration (Crossref)
  • Article-level indexing (DOAJ & other 3RD-Party Indexes)
  • ETD cataloging, etc...

• CROSSWALKS REQUIRE XML SKILLS (ESPECIALLY GIVEN ABILITY TO CUSTOMIZE FIELDS)

• OF COURSE, WE JUST HAPPEN TO BE SHORT ON XML EXPERTISE!

• REPOSITORY MANAGERS NEED TOOLS TO SIMPLIFY AND STREAMLINE THE PROCESS.
CURRENT SOLUTION: ALTOVA MAPFORCE

- Intuitive graphical mapping tool for converting any structured data, including OAI-PMH, into any scheme without specialized knowledge of XML or XSLT.

- Has the ability to derive the XML scheme from any example file.

- Outputs XSL stylesheets in either XSLT1 or XSLT2, supporting most transformation workflows (e.g., Notepad++ with XML tools).

- One drawback: $$$$
CURRENT SOLUTION: ALTOVA MAPFORCE

Source XML Scheme.
CURRENT SOLUTION: ALTOVA MAPFORCE
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Function adds a new constant and combines two source fields into a single output field.

Function library for mapping.
CURRENT SOLUTION: ALTOVA MAPFORCE

Navigator for large maps.
CURRENT SOLUTION: ALTOVA MAPFORCE

Displays XSLT in real time.

Displays example output.
Single issue XML file used to derive source scheme.

DOAJ Native XML file used as target scheme.
Digital Commons uses two fields for last name and first name.

Concat function with " " constant inserted.

DOAJ uses one field in "FirstName Lastname" format.
Some functions require XSLT2, which may impact workflow.

First **Replace** function removes "<p>".

Second **Replace** function removes "</p>".

**Example Mapping:** removing HTML tags from the abstract
A perfect forest is a spanning forest of a connected graph G, all of whose components are induced subgraphs of G, and such that all vertices have odd degree in the forest. A perfect forest generalizes a perfect matching since, in a matching, all components are trees on one edge. Suthar proved the Perfect Forest Theorem, namely, that every connected graph of even order has a perfect forest. Gotlib then gave another proof. We give here two very short proofs of the Perfect Forest Theorem which use only elementary notions from graph theory. Both our proofs yield polynomial-time algorithms for finding a perfect forest in a connected graph of even order.
NEXT STEPS & BRAINSTORMING

THANK YOU!

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