The UC Davis BIBFLOW Project

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Overview of BIBFLOW Project

• A 2-year project of the UC Davis University Library and Zepheira, funded by the Institute of Museum and Library Sciences (May 2014 – April 2016)

What is BibFrame?

• A web-based replacement for the MARC format

• Designed for a linked data model, utilizing Resource Description Framework (RDF) and Uniform Resource Identifiers (URI)

• www.loc.gov/bibframe
Overview of BIBFLOW Project

• A research project that will address questions like “What impact will adoption of BIBFRAME have on technical services workflows in an academic library”?

• Its primary purpose is to understand the ecosystem, test solutions, and provide a roadmap of how libraries can iteratively migrate to linked data without disrupting patron or business services.
Roadmap: Primary Stakeholders

- Human Discovery
- ILS
- LD Catalog Interface
- Vendors
- Machine Discovery

Triplestore
Triplestore

Discovery Interface

SPARQL Endpoint

ILS

MARC

URI

BIBFLOW:SCRIBE LD Cataloging

OCLC

 Authorities

Exchange Circulation Data

Pull Graphs

Push User Contributions

Push Triples

Pull Triples

Push Triples

Pull Triples

Push Triples

Pull Triples

Pull Schema

Pull Authorities

Pull Authority Data

Respond to Machine Queries

Catalogue / Ingest URI Based Marc

Pull

Push

Native Operation or Ingest

Script / Tool (All other transactions are via API / Endpoint)
Discovery Information Flow
Step 1: User Submits Search Query
Step 2: Query Results Returned as Thin Graph
Step 3: User Requests
Detailed Graph for Item
Step 4: Complete Local Graph Returned
Prior to display, returned graph is supplemented with OCLC Schema.org graph data using linked OCLC Work URI.

Step 5: Graph Supplemented by OCLC Schema.org graph
Prior to display, graph is supplemented with authority data linked via local and OCLC graph nodes.

Step 6: Graph Supplemented by Authority Graphs
Graph Building (user inquiry, bibliographic, authority information)

Triples in the rectangle form a record view which is displayed to a user via the discovery interface.
Step 7: Holding and Availability Info Added

Graph data supplemented with holding and availability data from ILS
The detailed view is displayed to the user after the complete graph has been assembled from its various sources. Note that the computer is capable of handling each of the steps involved in the process in fractions of a second, so the user experience no more delay in response than that present using current systems.

Step 8: Completed Graph Displayed to User
Cataloging Data Flow
Step 1: Check to see if record exists. Load for Edit if Yes. New if No.
Step 2: Pull Schema  
Data from OCLC.
Step 3: Pull Data from Authorities
Step 4: Push New Graph to Triplestore.
Step 5: Push Thin MARC to ILS.
Cataloging Data Flow if No Authority Found
Step 1: Check to see if record exists. Load for Edit if Yes. New if No.
Step 2: Pull Schema
Data from OCLC
Step 3: Attempt to Pull Authority, but no Match Found
When an Authority cannot be found, the cataloger enters data (name, dates, etc.) directly into the cataloging interface.

Step 4: Cataloger Enters new Entity Data
Cataloger submits the graph, including information about the new Entity

Step 5: Push New Graph and Entity Data to Triplestore
On submission, a new Entity graph is created in Triplestore with a **unique URI**. New URI is then added to the item graph which is then saved to Triplestore.

**Step 6: Push New Graph and Entity Data to Triplestore**
New entity graph is pushed to OCLC for reconciliation. OCLC service either connects to existing, overlooked authority or creates a new Authority and links entity to the new Authority. The reconciliation service provides a publicly accessible (LOD) and machine actionable map of “Same As” relationships between entities and Authorities.

Step 7: Entity Graph Pushed to OCLC for Authority Reconciliation
What did BIBFLOW achieve?

• A roadmap that serves as a bridge from MARC to linked data

• The roadmap provides intermediate steps for libraries to eventually move away from MARC entirely.
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