



BIBFRAME Beginnings: Educating Ourselves for the Linked Data Future



#AALL17



Presenters

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Presentation Outline

- **BIBFRAME Discussion Group & BIBFRAME Overview**
- Group Learning Approaches
- Experimentation Process, Tools, Results
- Outcomes, Lessons Learned, Next Steps

BIBFRAME Discussion Group

- Participants
 - UT Libraries – Acquisitions and Cataloging & Metadata Services
 - Harry Ransom Center – Book Cataloging
 - Tarlton Law Library – Metadata Services
- Goals
 - Understand BIBFRAME (and linked data) through group learning
 - Experiment and evaluate BF transformation process and related tools
 - Identify and explore linked data projects



BIBFRAME

- Provides a foundation for the future of bibliographic description
- Serves as a data model for resource description
- Designed to integrate with the wider information community while still serving libraries' specific needs
- Designed to make library resources more readily discoverable on the Web

Source: <https://www.loc.gov/bibframe/>; <https://www.loc.gov/bibframe/faqs/>



BIBFRAME

- Is a possible alternative to MARC
- Clarifies and expands on relationships between entities
- Differentiates between content and form
- Uses RDF triple statements



Triple Statements

Jane Austen <<http://id.loc.gov/authorities/names/n79032879.html>>

Authored <<http://id.loc.gov/vocabulary/relators/aut>>

Pride and Prejudice <<http://id.loc.gov/authorities/names/n2002041181>>



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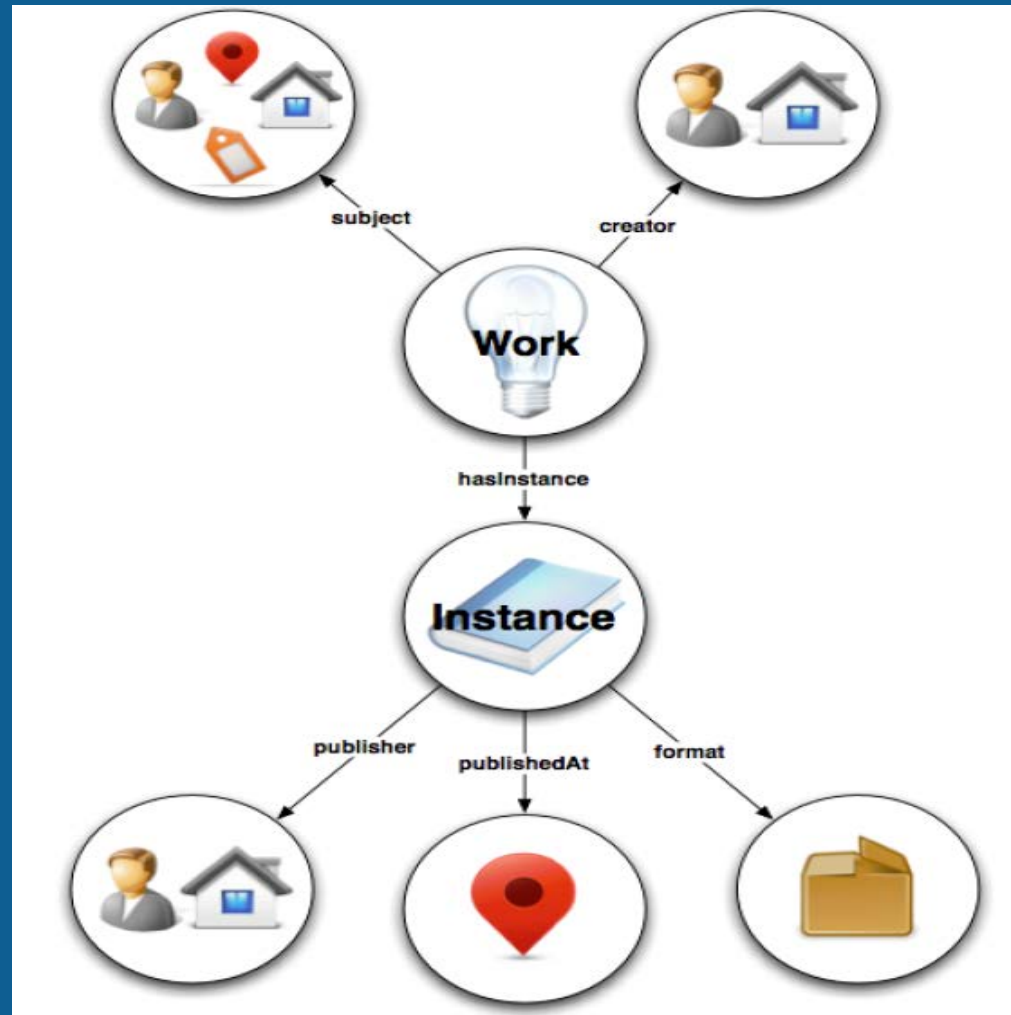
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BIBFRAME [1.0] Model

- 2012-2016
- Library of Congress and Zepheira
- Vocabulary & Tools
- LC Pilot (Phase One)



BIBFRAME Changes: Zepheira & LC part ways ...

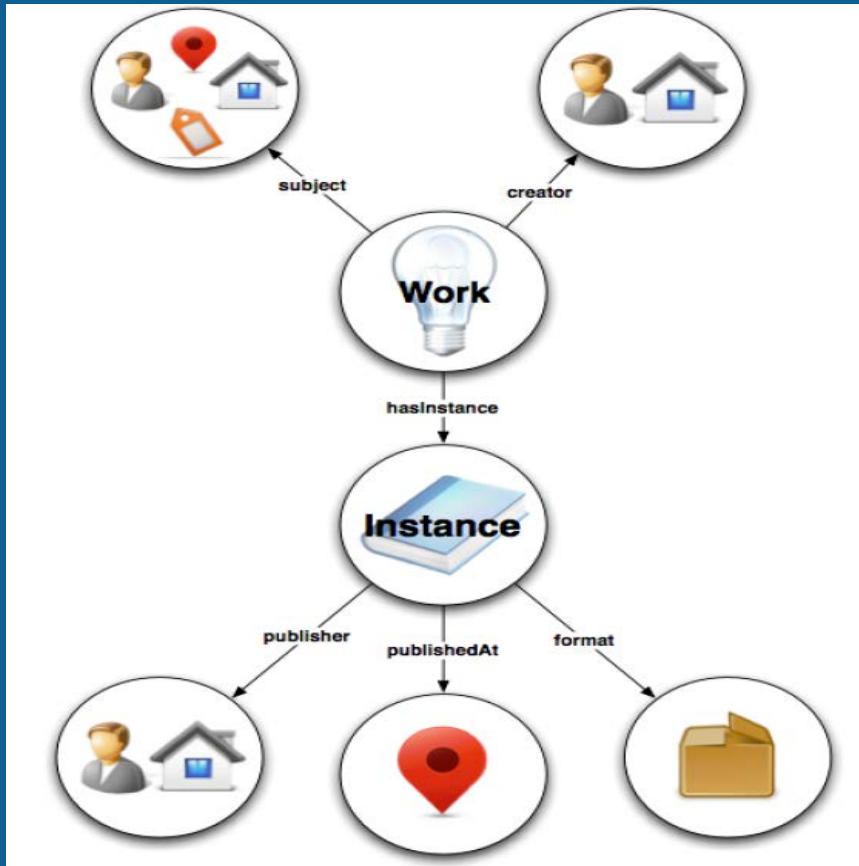


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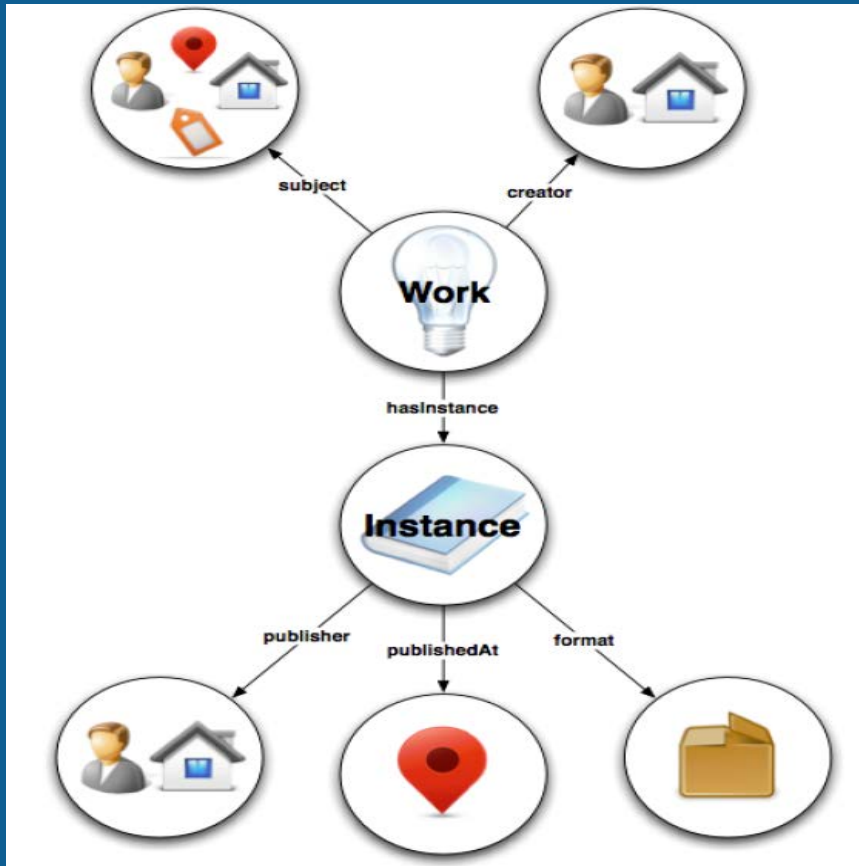
Zepheira

- Bibframe Lite Vocabulary: <http://bibfra.me>
- The Scribe:
<http://editor.bibframe.zepheira.com/static/>
- Library.Link Network: <http://library.link/>

BIBFRAME 1.0 Model

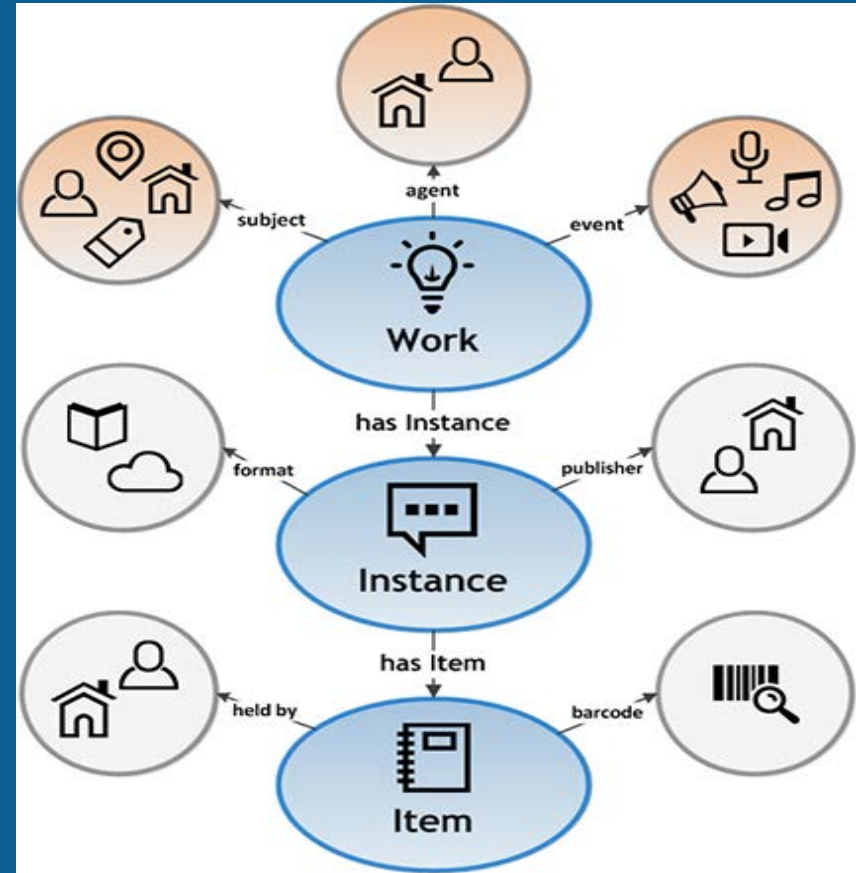


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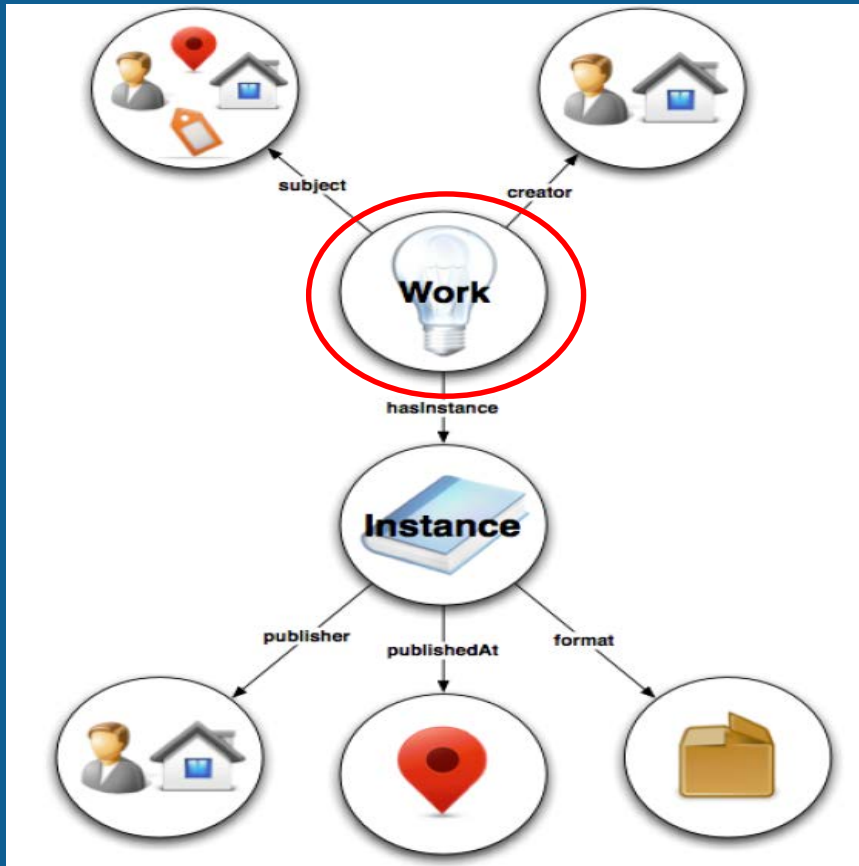
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BIBFRAME 2.0 Model



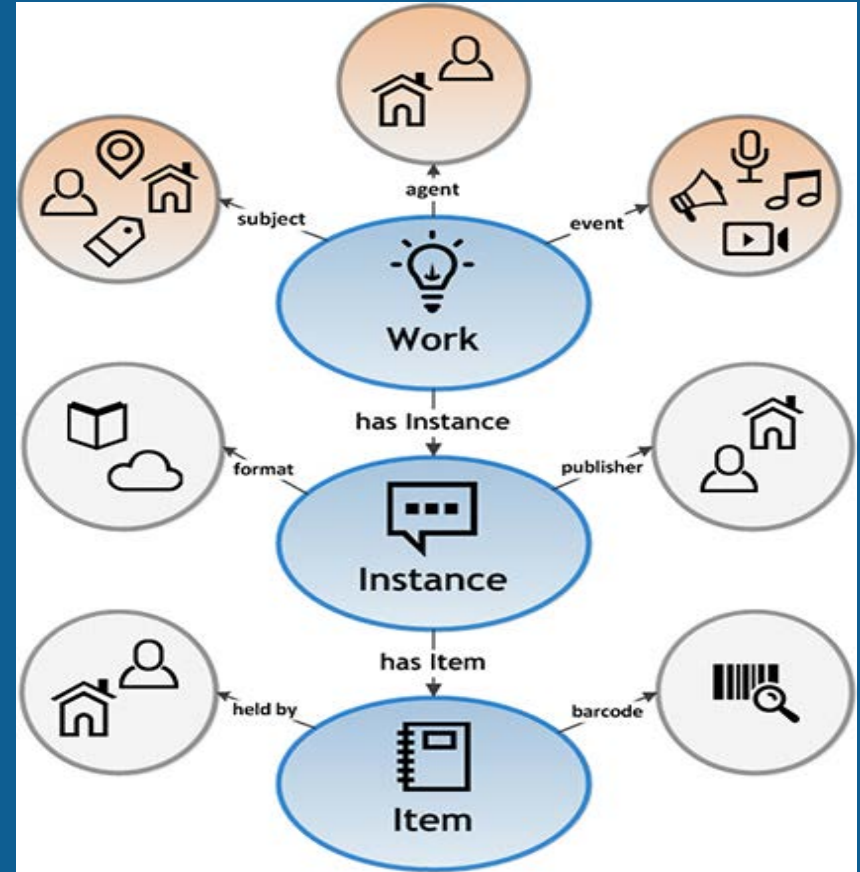
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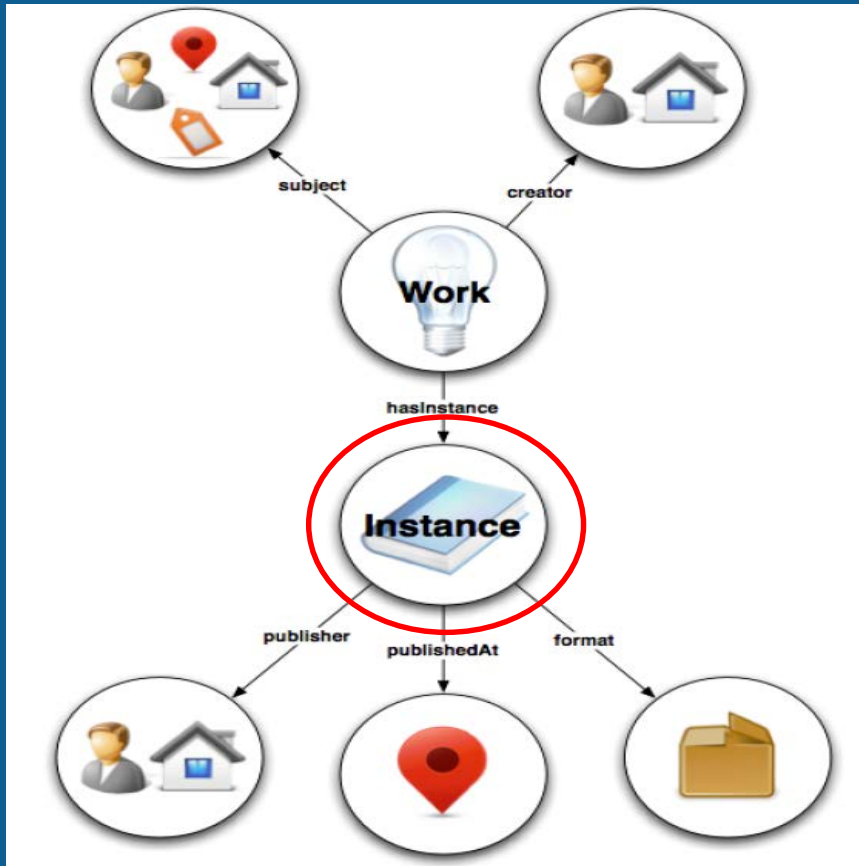
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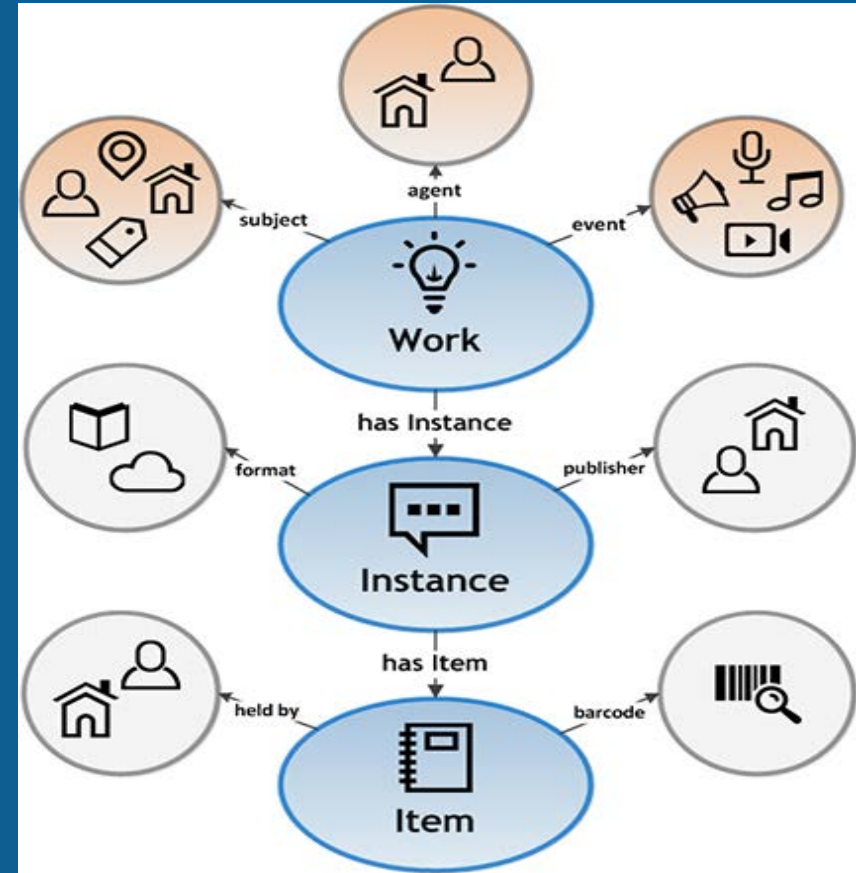
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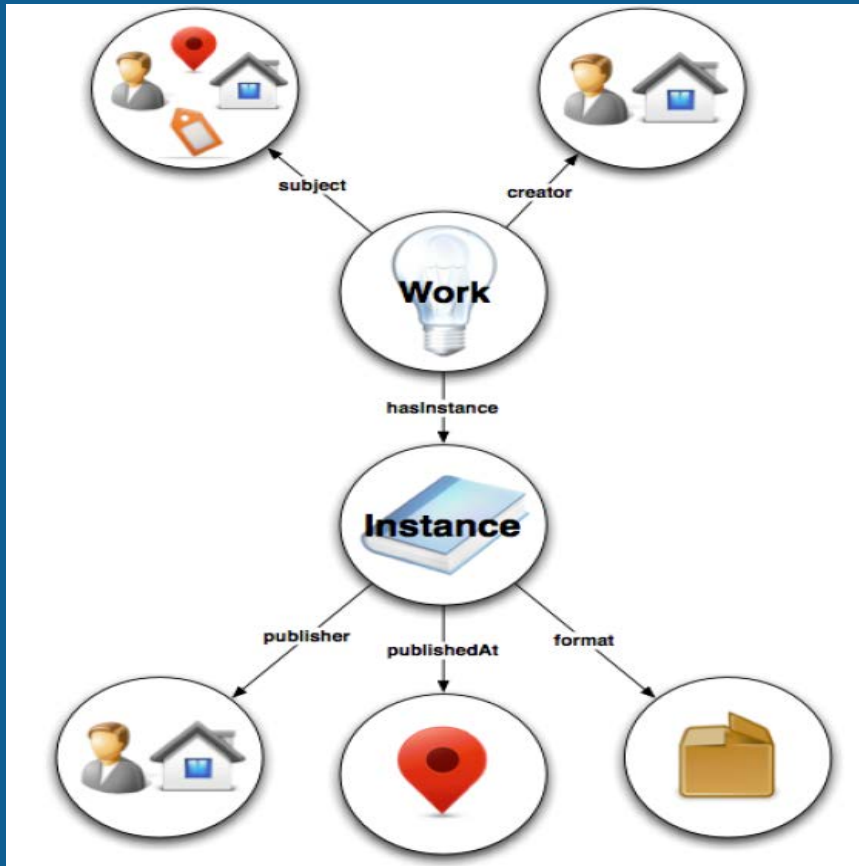
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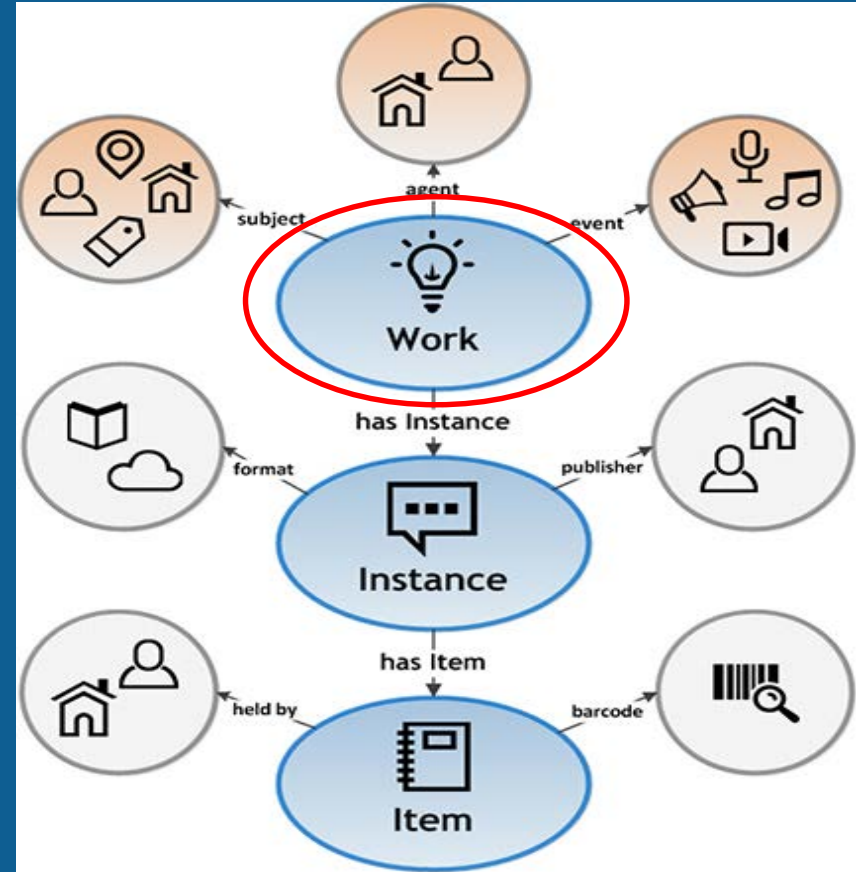
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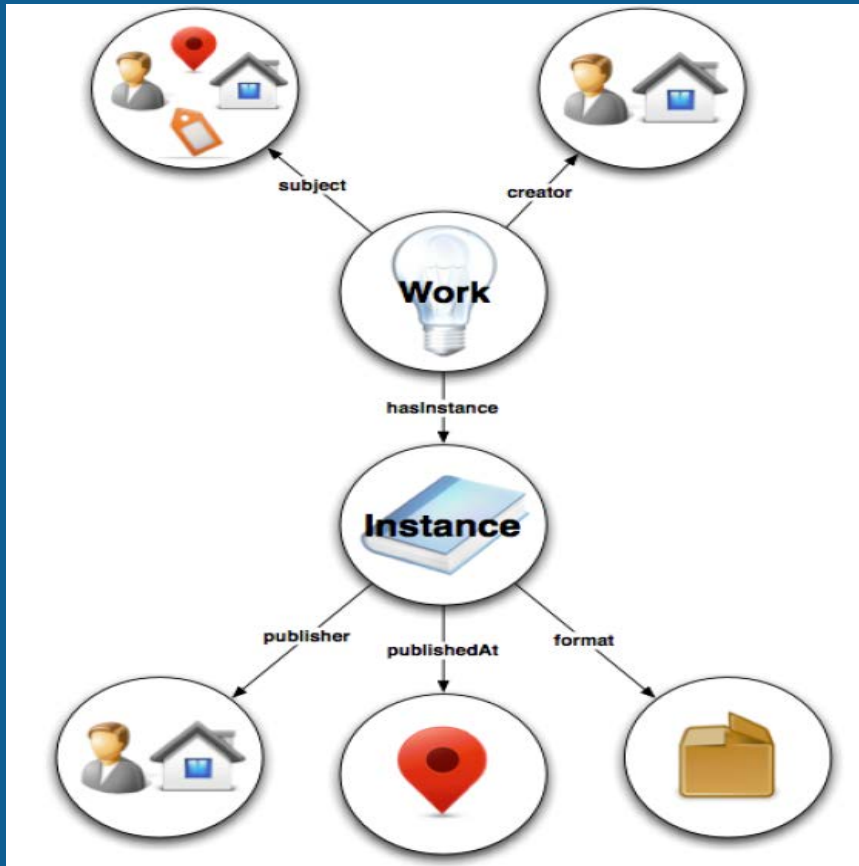
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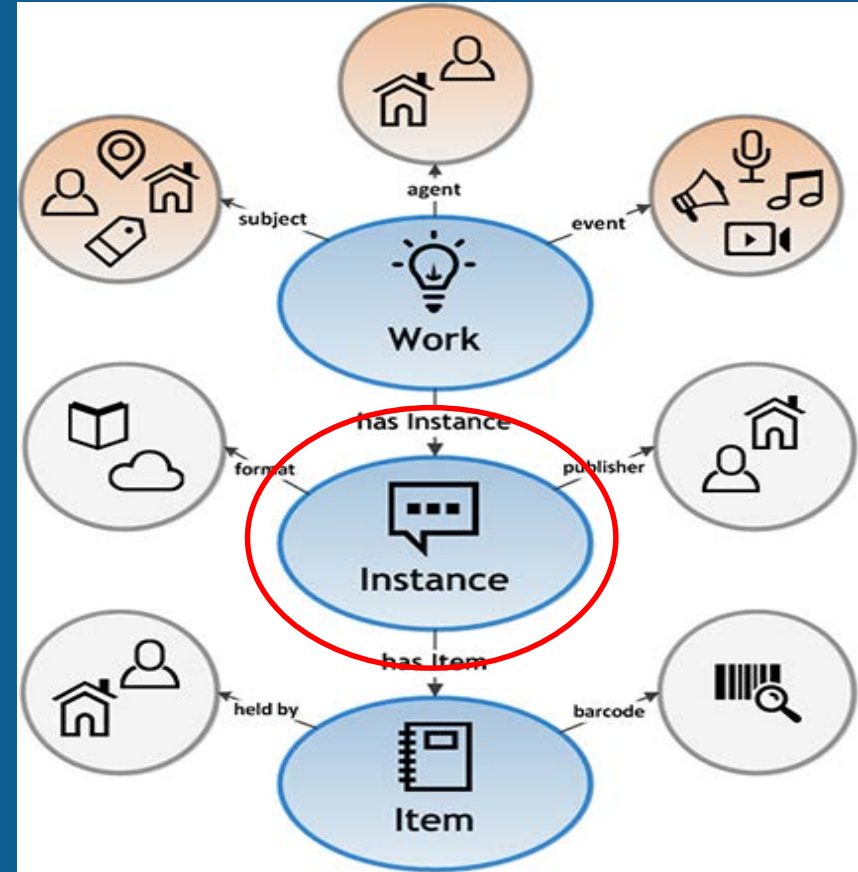
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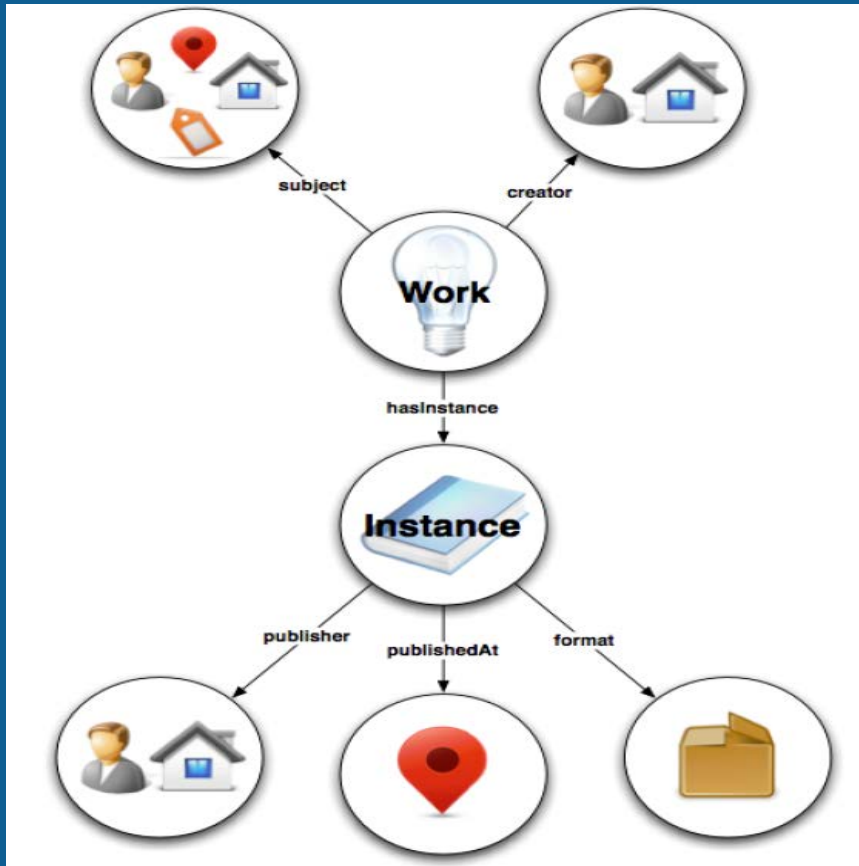
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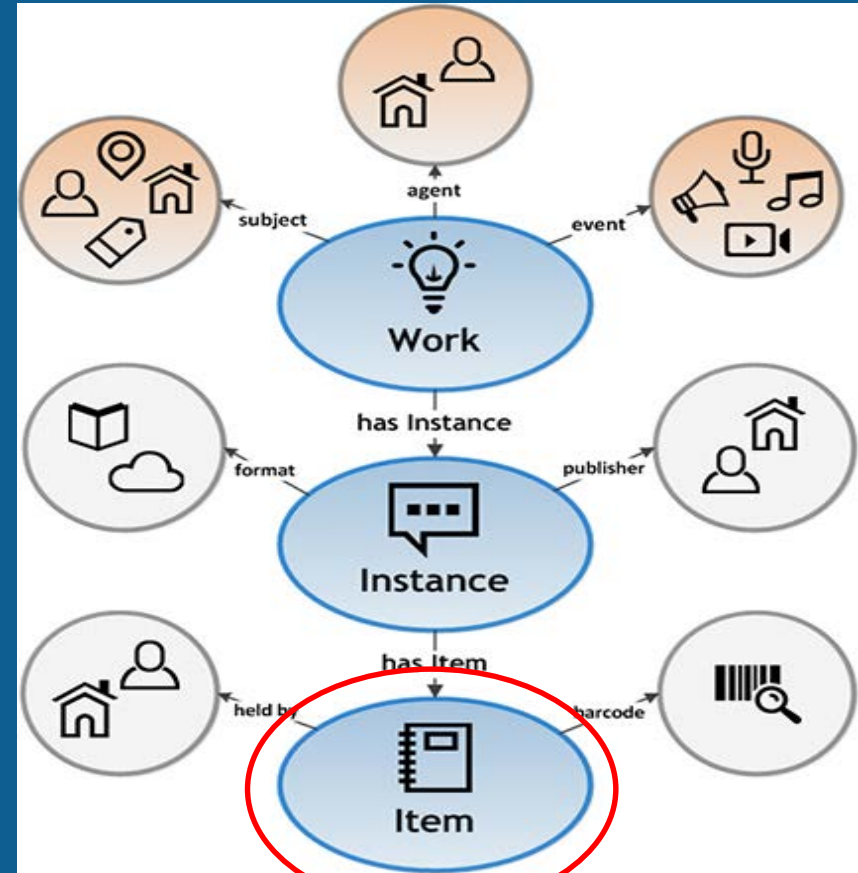
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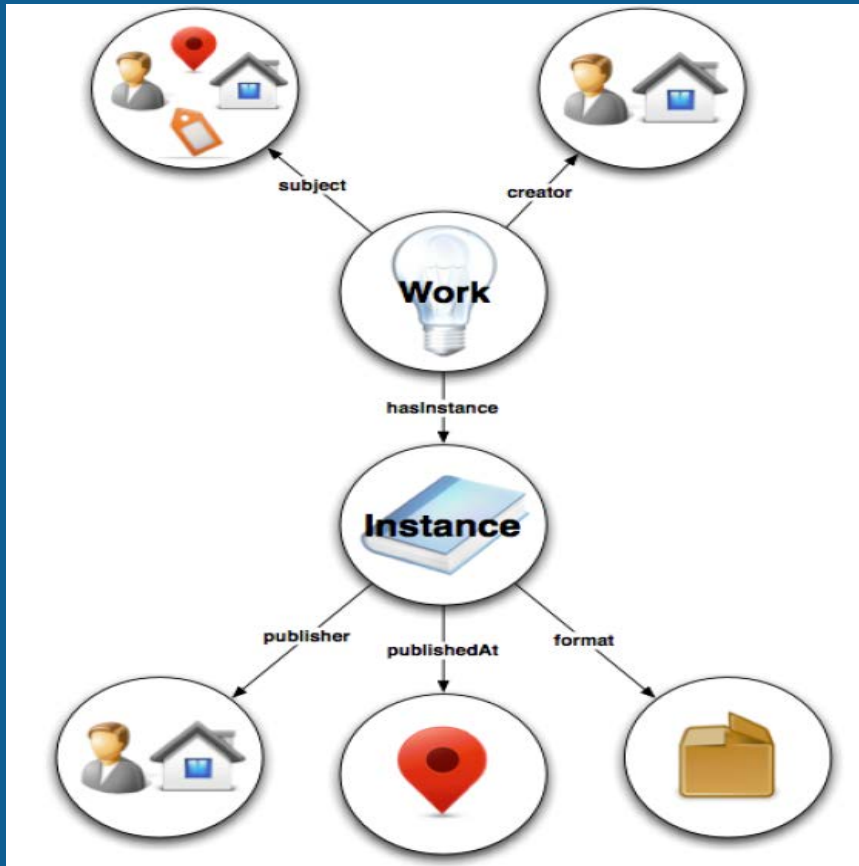
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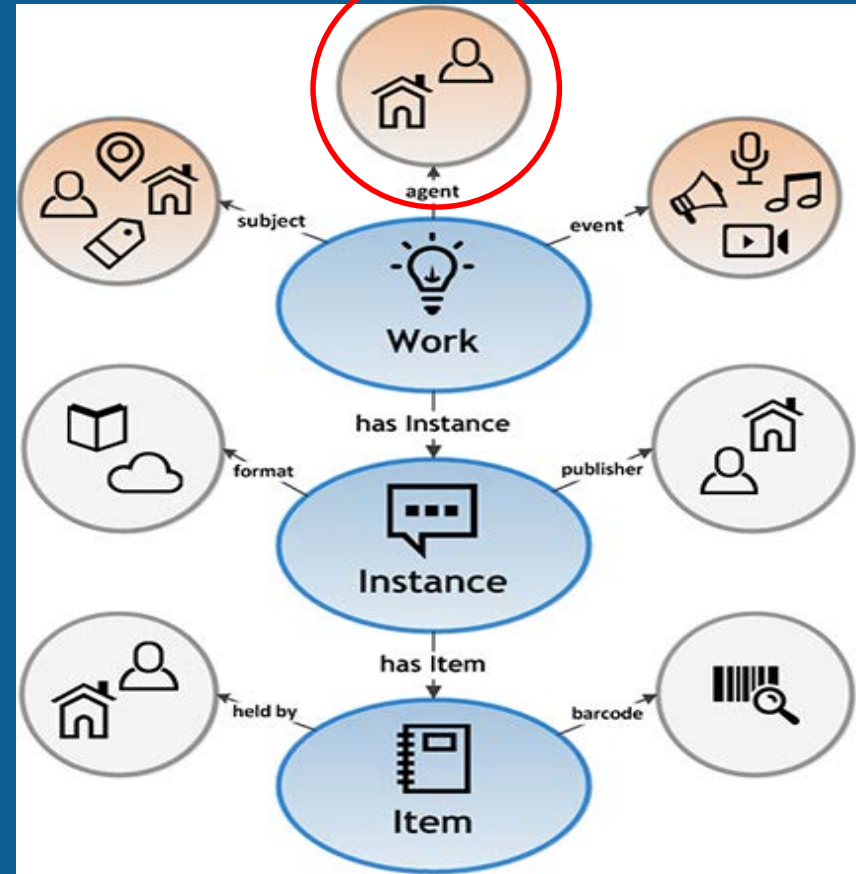
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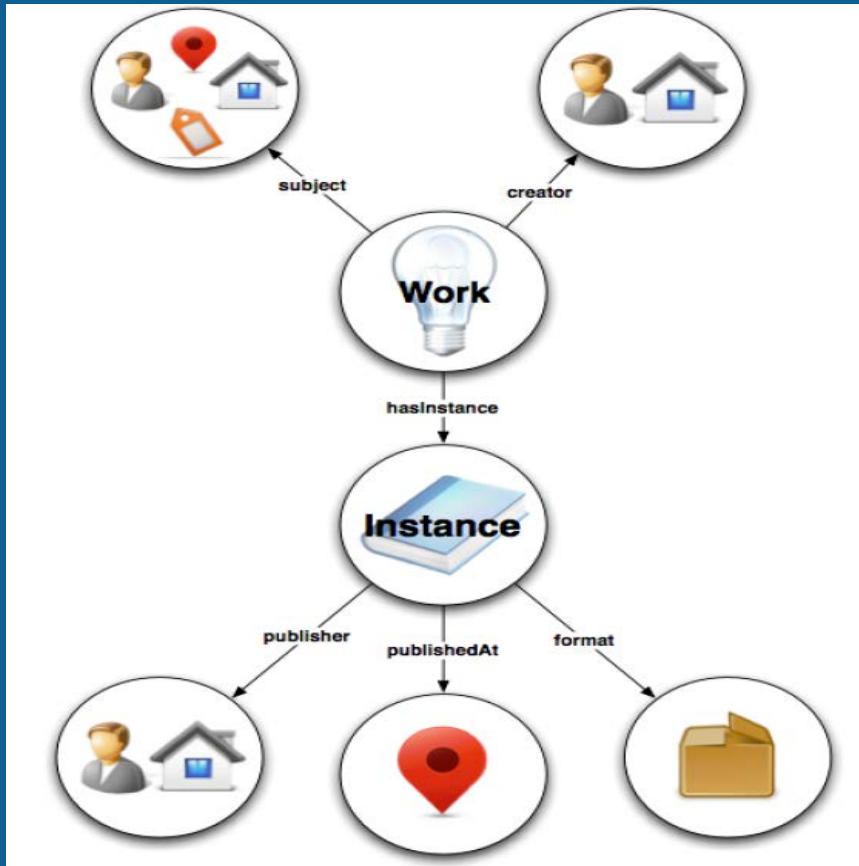
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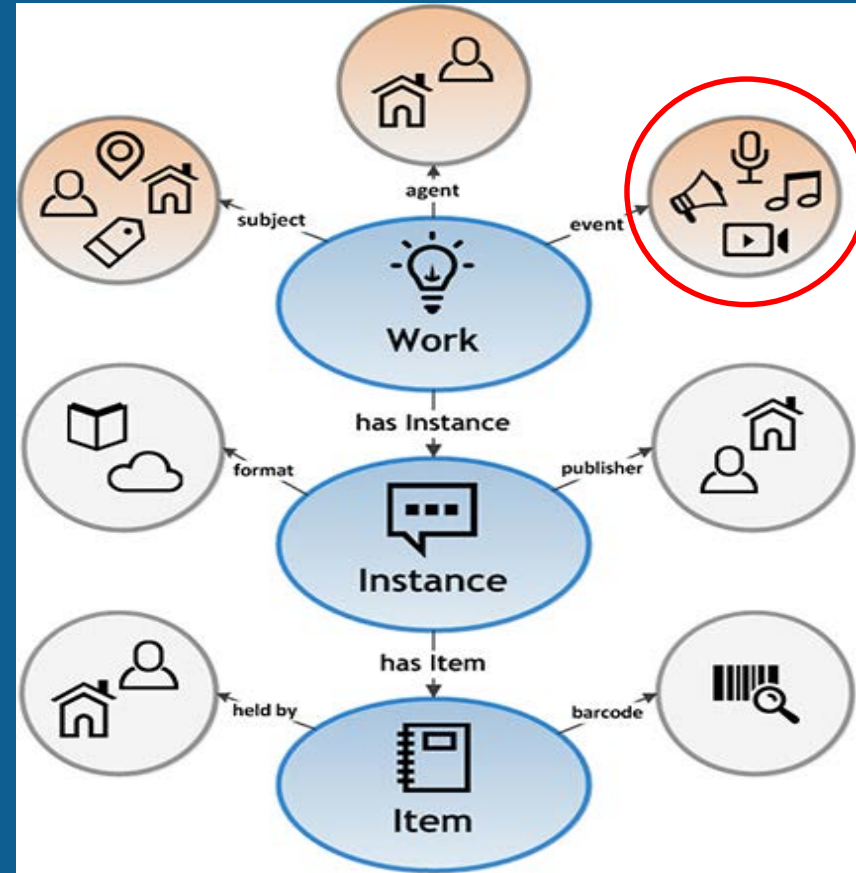
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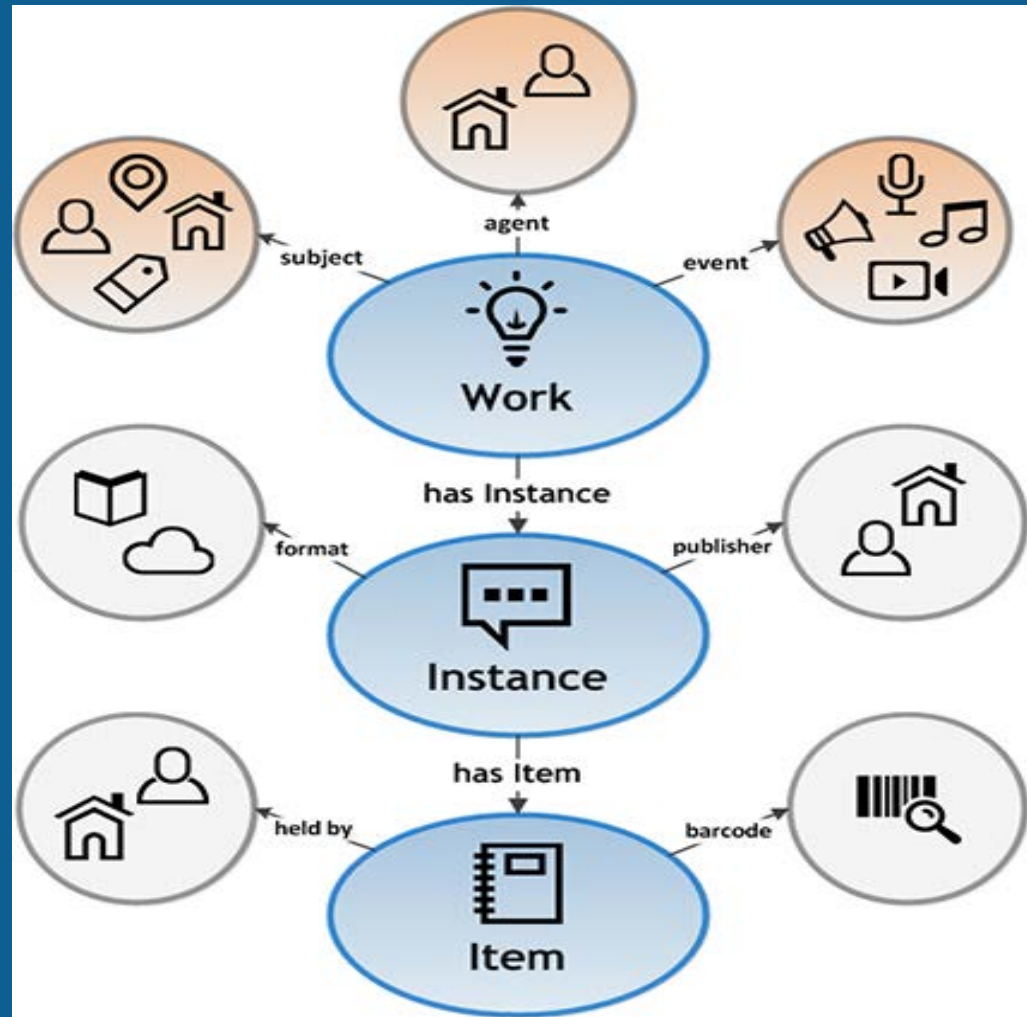
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BIBFRAME 2.0 Model

- April 2016 –
- BIBFRAME 2.0 Vocabulary
- LC Editor 2.0 coming soon
- LC Transformation Tool 2.0 coming soon
- LC pilot June – Nov. 2017





Challenges

- Different & evolving models, tools, and vocabularies
- Aligning various bibliographic models
- Idealized bibliographic world vs. The Real World
- Model and Technology

Presentation Outline

- BIBFRAME Discussion Group & BIBFRAME Overview
- **Group Learning Approaches**
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BIBFRAME Discussion Group

Fall 2014-Spring 2016

- UT Libraries – Acquisitions, Cataloging & Metadata Services
- Harry Ransom Center – Book Cataloging
- Tarlton Law Library – Metadata Services

Goals

- Understand BIBFRAME (and Linked Data) through group learning
- Experiment and evaluate BF transformation process and related tools
- Identify and monitor linked data projects, e.g. LD4L, BIBFLOW

Group learning approaches

- 13 members
- Monthly meetings
- Critical discussion
- Centralized online documentation portal
- Turnaround training
- Experimentation & reporting
- Monitoring developments
- Synthesizing lessons learned

Group learning successes

- Effective learning through group collaboration and experimentation
- Broadened perspectives beyond BIBFRAME
- Fostered/strengthened collaborative relationships across campus

Group learning challenges

- How do we keep up with constant changes in linked data development?
- How do we begin conversations with the rest of the library about linked data?

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Experimentation

- Phase 1: BIBFRAME transformation (Fall 2015)
 - Convert existing metadata to BIBFRAME 1.0
- Phase 2: BIBFRAME 1.0 editors (Spring 2016)
 - Enter metadata in native BIBFRAME 1.0 interface

BIBFRAME Transformation: Goals

- Learn about the BIBFRAME 1.0 transformation process
- Learn to use data clean-up tools
- Assess BIBFRAME 1.0 transformation results

BIBFRAME Transformation: Initial Steps

Group 1

Ransom Center

Digitized
manuscripts

Dublin Core

Group 2

Primeros Libros

Rare Books

MARC, Dublin Core

Group 3

Various resources

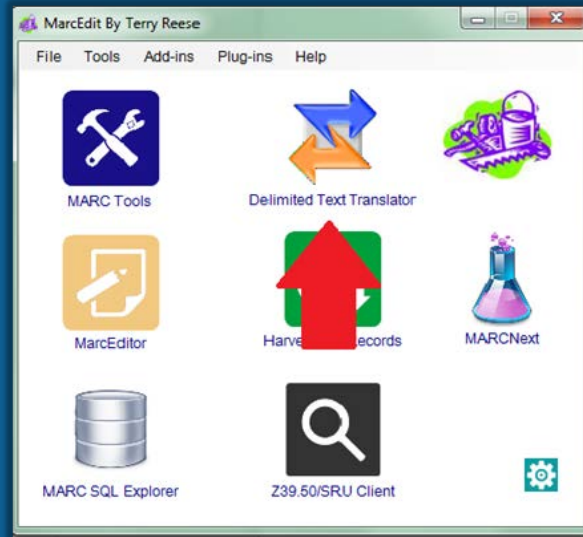
Streaming videos, maps,
serials, audio recordings,
music scores

MARC, MODS

Data Clean-up Tools



Source:
<https://academictechnologymenu.dpsk12.org/images/Sierra.jpg>



Source:
<http://s3.amazonaws.com/libapps/accounts/58824/images/image004.png>



Source:
<https://archive.bigdatauniversity.com/bdu-wp/wp-content/uploads/2015/09/OpenRefine-BDU-logo.png>

Assessing Zepheira, LC BIBFRAME 1.0 Transformation Tools

- Accepted data files of limited size
- Difficult to assess transformation of multiple records
- Display of entities (works, instances, etc.) not meaningful

Assessing BIBFRAME 1.0 Results

- MARC conversions generally good
 - Some incorrect mappings
- Many problems with non-MARC conversions
 - Significant data loss, lack of granularity, incorrect mappings
 - Conversion to MARCXML

Dublin Core/CSV → **MARC** → MARCXML

- Required customizing MARCEdit's XSLT stylesheets for DC to MARC

Observations (BF 1.0)

- BF conversion of MARC produced better results than non-MARC
- Non-MARC data required additional work to prepare for BF conversion

Phase 2: BIBFRAME 1.0 Editors

LC BIBFRAME Editor

- Profile list incomplete
- FRBR, RDA terminology
- Design influenced by catalogers

Zepheira Scribe

- Profile list incomplete; unconventional profile names
- BIBFRAME Lite terms, definitions
- Need to consult catalogers on design

Experimentation Outcomes

- Successes
 - Gained knowledge of linked data, BIBFRAME
 - Increased knowledge of data transformation tools
- Challenges
 - Keeping up with changes in BF and linked data in libraries
 - Building linked data knowledge and skills

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Outcomes: BIBFRAME (BFDG) Discussion Group

- Coordinating group communications and efforts
- Building knowledge and skills
- Monitoring Linked Data developments on multiple fronts



Outcomes: Group communications and efforts

- BFDG: strengthened collaborative relationships among partner institutions on campus
- Recognized need for stronger relationship with IT units
- Formalized unit priorities and activities beyond MARC

Outcomes: Building knowledge and skills

- BFDG: training & experimentation (BF focus)
- Completed Library Juice Academy Certificate in XML and RDF-Based systems
- Ongoing engagement in Fedora user community
- Coordinating viewing of webinars and virtual conferences
- Expanding metadata outreach

Outcomes: Monitoring Linked Data developments

- BFDG: LC, PCC, OCLC, national projects
- Ongoing national initiatives and discussions
- Vendor products and services
- Regional research, initiatives, and collaborative opportunities



Lessons Learned

- Coordination efforts are significant
- Organizational priorities shift
- Champions/advocates in leadership are key
- Low-hanging fruit is a practical focus



Lingering Questions

- How do we maintain our momentum towards Linked Data?
- How best to keep up with BIBFRAME and Linked Data developments?
- How to establish strong Linked Data expertise in our organization?
- How should we develop services around Linked Data?

Possible Next Steps

- Expand involvement/consultation on system implementations
- Engage in metadata outreach
- Create workflows for batch metadata enhancement and transformation
- Explore new avenues of authority work

Questions and Answers

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Alan Ringwood

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Selected Resources

LC resources

[BIBFRAME listserv](#)

[BIBFRAME Update Forum at ALA Midwinter Meeting 2017](#)

[BIBFRAME webcast updates](#)

[LC BIBFRAME Pilot \(Phase 1\): Report and Assessment](#)

Selected Resources

OCLC Resources

Common Ground: Exploring Compatibilities Between the Linked Data Models of the Library of Congress and OCLC (2015)

The Relationship between BIBFRAME and OCLC's Linked-Data Model of Bibliographic Description: A Working Paper (2013)

Selected Resources

PCC resources

Linked Data Infrastructure Models: Areas of Focus for PCC Strategies prepared by members of the PCC
Linked Data Advisory Committee (June 2017)

Name Authorities in Transition: Implications for the PCC by the PCC Advisory Committee on Initiatives
(ACI)

The PCC and Continuing Resources by Regina Romano Reynolds, Library of Congress

PCC Strategic Directions (January 2015 - December 2017) Discussion 3 (February 16, 2015)

Strategic Directions for the Program for Cooperative Cataloging by Philip E. Schreur, Stanford University
(and Past-Chair of PCC)

Selected Resources

Tools

MarcEdit: [download](#), [video tutorials](#), [MARCNext: BibFrame TestBed video](#)

[OpenRefine: official documentation for users](#), [ALCTS webinar](#), [data cleanup tutorial](#), [full tutorial list](#)

Selected Resources

Authority control

[ISNI and VIAF: Transforming ways of trustfully consolidating identities](#) (2014) Discussion 4

Selected Resources

Other Library Linked Data initiatives

[BIBFLOW](#)

[BIBFRAME-NLM on github](#)

[LD4L](#) (Linked Data 4 Libraries)

[Libhub](#)

[LODLAM](#) (Linked Open Data in Libraries Archives and Museums)

[*Migrating Library Collections to Linked Data*](#) by Carl G. Stahmer and MacKenzie Smith (December 2016)