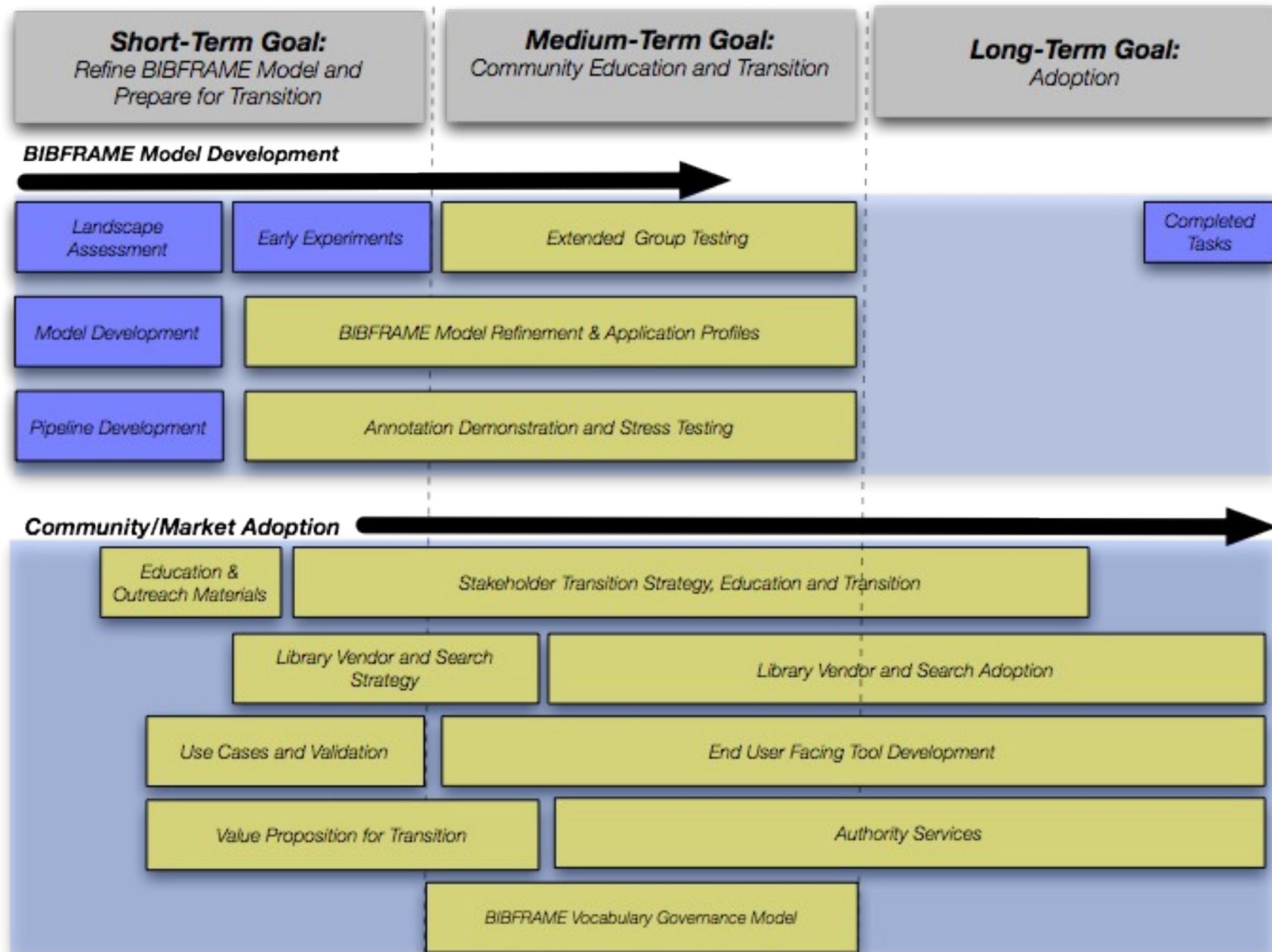# When URIs become authority:
Benefits and challenges of library Linked Data

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BIBFRAME: Proposed Roadmap

Short-Term Goal:
Refine BIBFRAME Model and Prepare for Transition

Medium-Term Goal:
Community Education and Transition

Long-Term Goal:
Adoption

BIBFRAME Model Development

- Landscape Assessment
- Early Experiments
- Extended Group Testing
- Completed Tasks
- Model Development
- BIBFRAME Model Refinement & Application Profiles
- Pipeline Development
- Annotation Demonstration and Stress Testing

Community/Market Adoption

- Education & Outreach Materials
- Stakeholder Transition Strategy, Education and Transition
- Library Vendor and Search Strategy
- Library Vendor and Search Adoption
- Use Cases and Validation
- End User Facing Tool Development
- Value Proposition for Transition
- Authority Services
- BIBFRAME Vocabulary Governance Model

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Authoritative URIs

OUTLINE

Introduction

Authorities and Linked Data
       The ideal and the URI

BIBFRAME Authority
       The reality and the abstraction-layer

LCSH as Linked Data

LCSH as Linked Data meets actual bibliographic description

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Identifying Things


```
001        26132811
008        920608s1992      nyu            0 eng
010        $a92021087
020        $a1555701205
040        $aDLC$cDLC$dAGL
049        $aHNKA
050    00  $aZ678.9$b.C58 1992
082    00  $a025/.0028$220
1      1   $aCohn, John M
       10  $aPlanning for automation :$ba how-to-do it manual for
           librarians /$cJohn M. Cohn, Ann L. Kelsey, Keith Michael
           Fiels
260        $aNew York :$bNeal Schuman Publishers,$c1992
300        $avi, 116 p. ;$c28 cm
440     0  $aHow-to-do it manuals for libraries ;$vno. 25
504        $aIncludes bibliographical references and index
650     0  $aLibraries$xAutomation$xManagement$xHandbooks, manuals, etc
650     0  $aLibrary planning$xHandbooks, manuals, etc
700    10  $aKelsey, Ann L
700    10  $aFiels, Keith Michae
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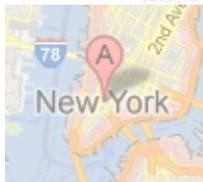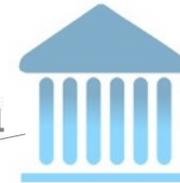
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Identifying Things

http://id.loc.gov/authorities/names/n92062246

http://id.loc.gov/authorities/names/n79007751

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008      920608s1992      nyu           0 eng
010      $a92021087
020      $a1555701205
040      $aDLC$cDLC$dAGL
049      $aHNKA
050   00 $aZ678.9$b.C58 1992
082   00 $a025/.0028$220
     1   $aCohn, John M
     10  $aPlanning for automation :$ba how-to-do it manual for
         librarians /$cJohn M. Cohn, Ann L. Kelsey, Keith Michael
         Fiels
         $aNew York :$bNeal Schuman Publishers,$c1992
300      $avi, 116 p. ;$c28 cm
440   0  $aHow-to-do it manuals for libraries ;$vno. 25
504      $aIncludes bibliographical references and index
650   0  $aLibraries$xAutomation$xManagement$xHandbooks, manuals, etc
650   0  $aLibrary planning$xHandbooks, manuals, etc
700   10 $aKelsey, Ann L
700   10 $aFiels, Keith Michae
```

http://id.loc.gov/authorities/names/n80016154

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The Ideal

```
<Report id = "http://bibframe/work/frbr-report">
    <title>Functional requirements for bibliographic records :</title>
    <titleRemainder>final report / IFLA Study Group on the Functional
        Requirements for Bibliographic Records ; approved by the Standing
        Committee of the IFLA Section on Cataloguing.
    </titleRemainder>

    <creator resource = "http://id.loc.gov/authorities/names/nr98013265" />
</Report>
```

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**The Bibliographic Framework Initiative
will re-imagine and implement a
bibliographic environment
for a post-MARC world.**

Key dates:

May 2011 – Initiative announced.

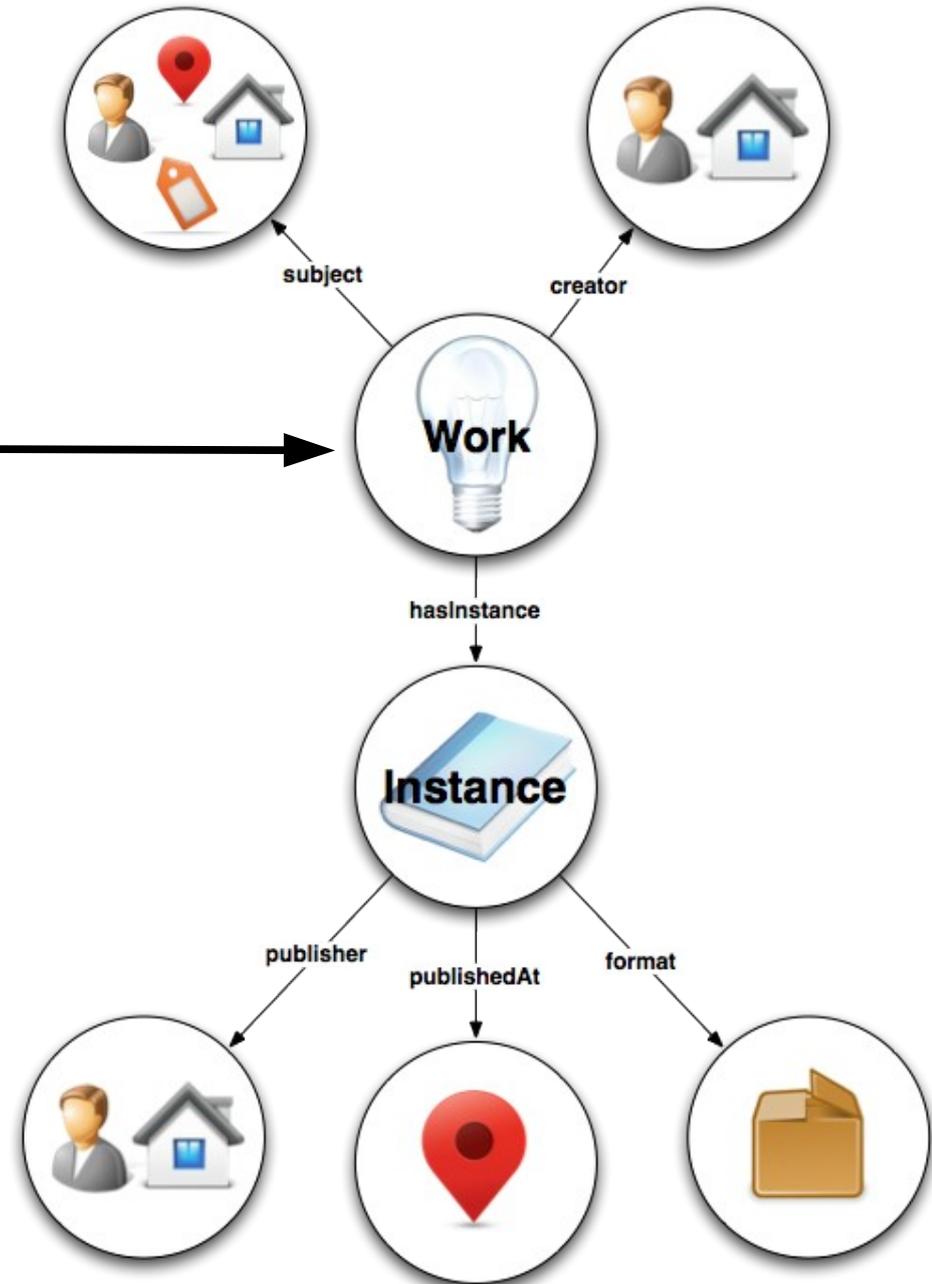October 2011 – LC publishes general plan

May 2012 – Zepheira LLC contracted to evaluate related initiatives and data modeling

November 2012 – LC publishes high-level model document

Kevin Ford
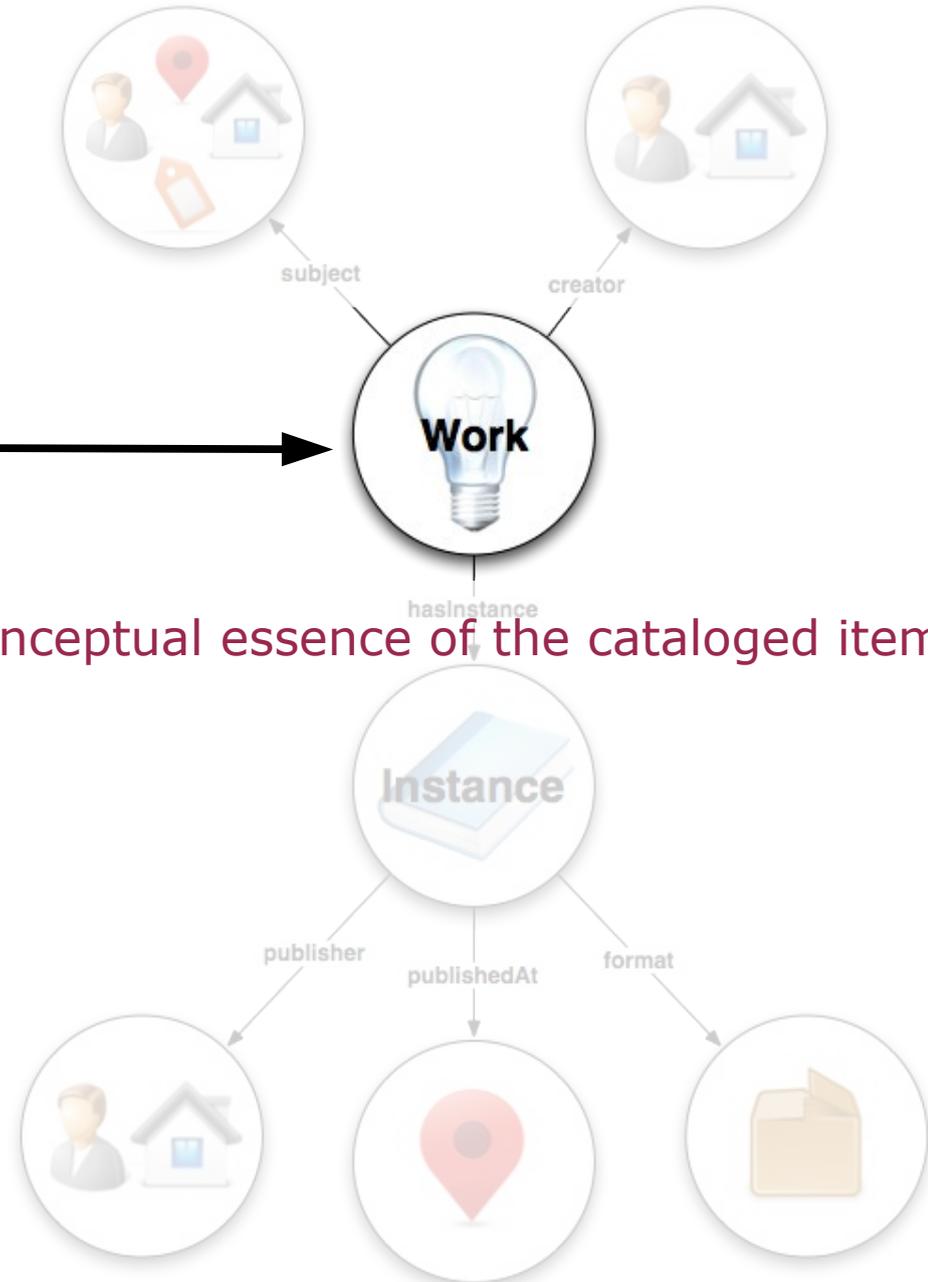NDMSO, Library of Congress
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BIBFRAME

Core Classes

Work

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BIBFRAME

Core Classes

Work

Resource reflecting the conceptual essence of the cataloged item
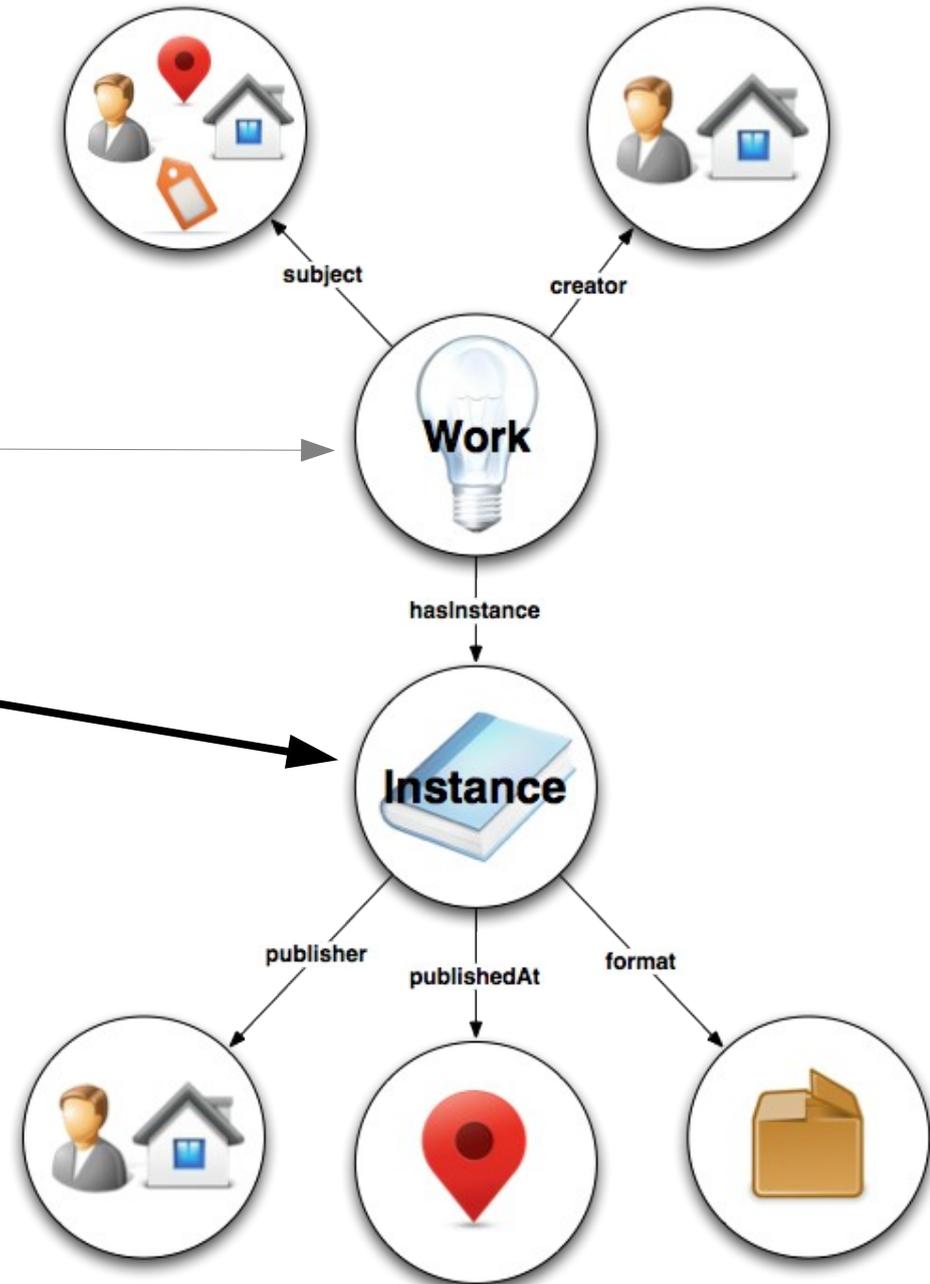
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BIBFRAME

Core Classes

Work

Instance

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BIBFRAME

Core Classes

Work

Instance

Resource reflecting a material embodiment of a BIBFRAME Work

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BIBFRAME

Core Classes

Work

Instance

Resource reflecting a material embodiment of a BIBFRAME Work

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BIBFRAME

Core Classes

Work

Instance

Authority

subject

creator
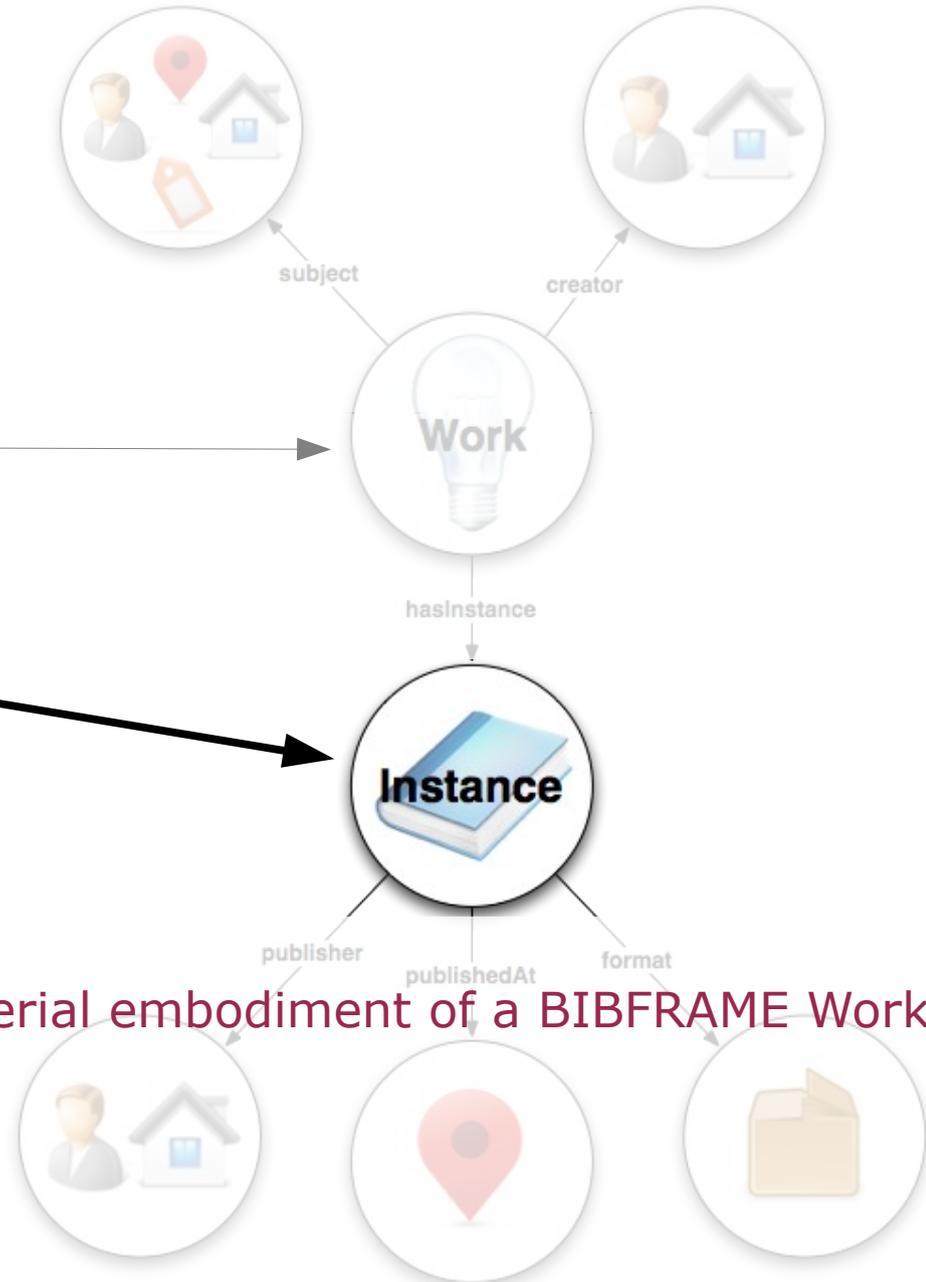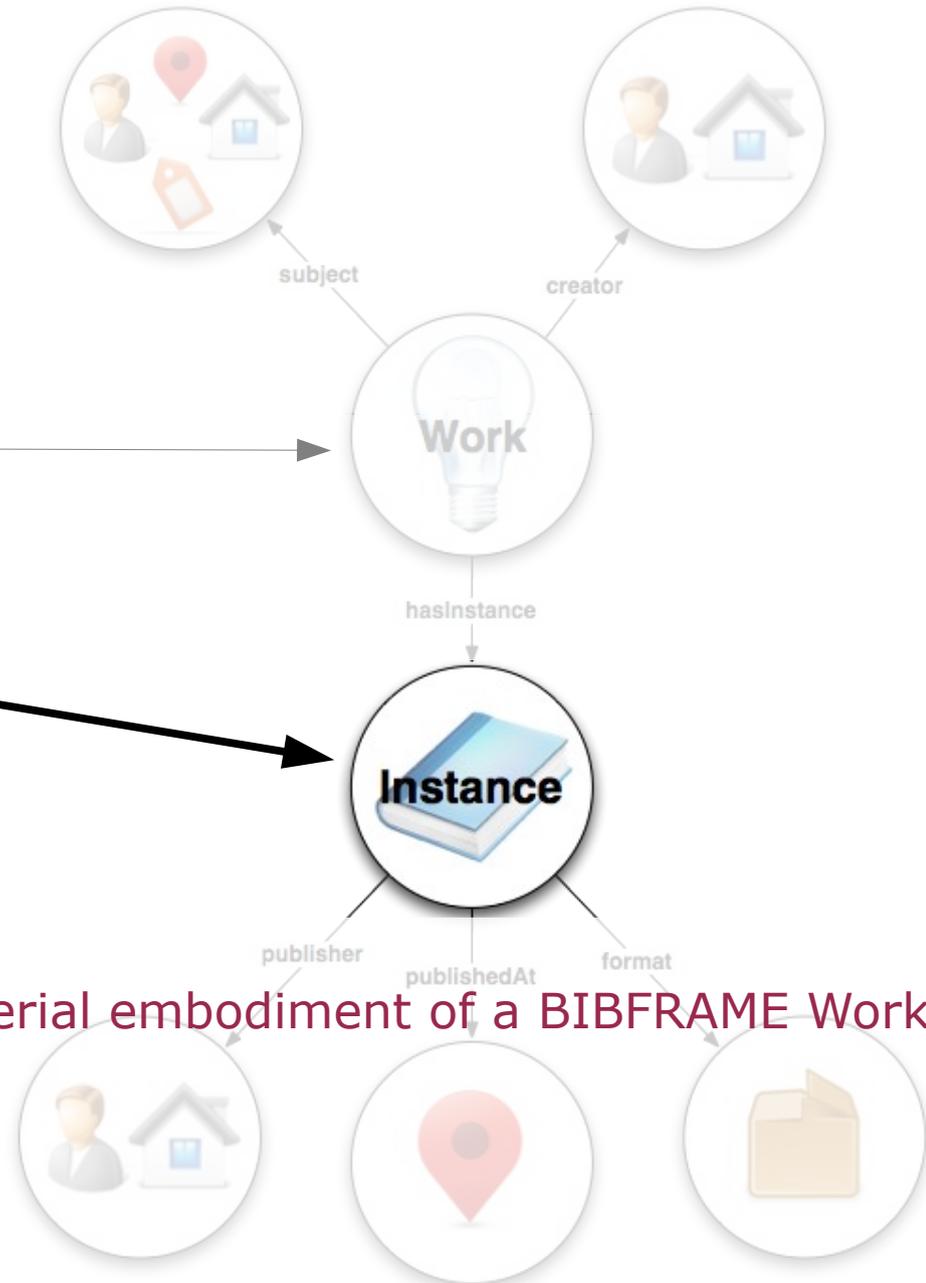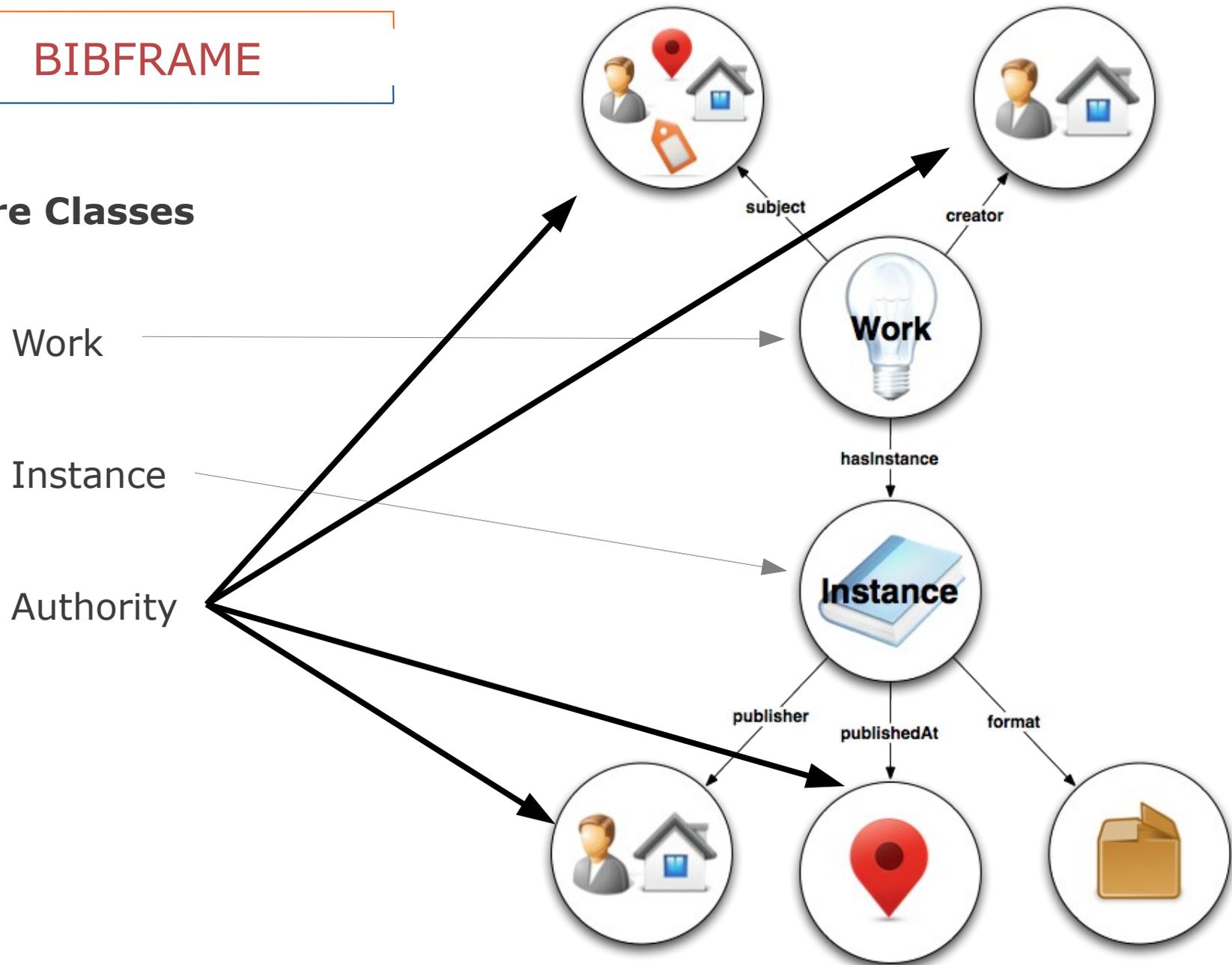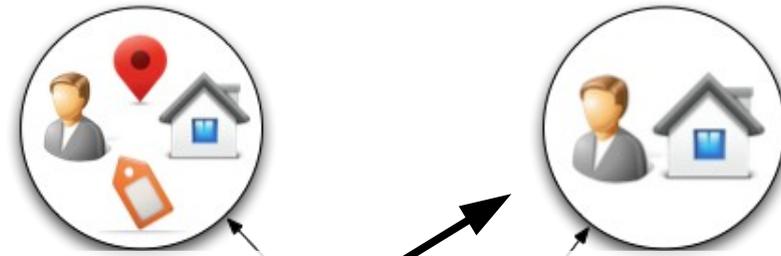
Work

hasInstance
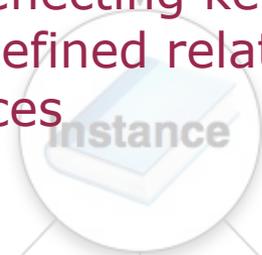
Instance

publisher

publishedAt

format

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BIBFRAME

Core Classes

Work

Instance
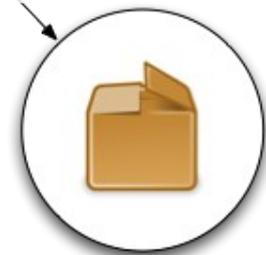
Authority

Resource reflecting key authority concepts that have defined relationships to Works and Instances

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BIBFRAME Authority

From "Bibliographic Framework as a Web of Data: Linked Data Model and Supporting Services"
Pg 11.

Authorities are not designed to compete or replace existing authority efforts but rather provide a common, light-weight abstraction layer over various different Web based authority efforts to make them even more effective.

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BIBFRAME Authority

```
<Report id = "http://bibframe/work/frbr-report">
     <title>Functional requirements for bibliographic records :</title>
     <titleRemainder>final report / IFLA Study Group on the Functional
          Requirements for Bibliographic Records ; approved by the Standing
          Committee of the IFLA Section on Cataloguing.
     </titleRemainder>

     <creator resource = "http://bibframe/auth/org/ifla" />
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     </label>
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The Ideal

```
<Report id = "http://bibframe/work/frbr-report">
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        Records
    </label>
    <link>http://www.ifla.org/</link>
    <hasIDLink resource="http://id.loc.gov/authorities/names/nr98013265" />
</Organization>
```

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BIBFRAME Authority

Present definition of BIBFRAME Authority not wrong but...

the objective, as described in the primer, is achievable without the "abstract layer" construct.

Nevertheless, for other reasons, the abstraction layer becoming unavoidable

100, 110, 111 … $e
700, 710, 711 $i
RDA emphasis on true, faithful transcription

In short:

The "abstraction layer" construct may have always been inevitable.
The ideal has always been envisioned separately from practice/reality.
Reality turns up things you weren't expecting.

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Abstraction Layer

```
<Play id = "http://bibframe/work/burial-thebes">
    <title>Burial at Thebes</title>
    <creator resource = "http://bibframe/auth/person/heaney" />
</Play>


<Person id="http://bibframe/auth/person/heaney">
    <label>Heaney, Seamus, 1939-</label>

    <relationToWork>trans. buy</translationToWork>

    <hasIDLink resource="http://id.loc.gov/authorities/names/n79099140" />
</Person>
```

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Abstraction Layer

```
<Play id = "http://bibframe/instance/burial-thebes">
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<Place id="http://bibframe/auth/place/nyc">
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</Place>


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    <authoritativeLabel>New York (N.Y.)</authoritativeLabel>
</Geographic>
```

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ID: LCSH

Quick facts about LCSH at ID.LOC.GOV:

Available since 2009
Approximately 415,000 resources

Quick facts about LCSH usage in LC's Voyager database:

24,893,391 total LCSH headings
5,692,450 **unique** LSCH headings

5,692,450 (million) > 415,000 (thousand)

LCSH – because of pre-coordination (which is a good thing) is basically an infinite system

ID.LOC.GOV has, at best, a subset of the possible.
ID.LOC.GOV does have the data from which one creates headings (well, mostly).

ID.LOC.GOV is missing, however, at least, about 5.3 MILLION known concepts

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LCSH & Linked Data

Questions

How to best do authority control / LCSH in a real-life Linked Data ecosystem?
How best to do authority control / LCSH in BIBFRAME?

To pre-coordinate or post-coordinate
  No contest: arguments presently overwhelming favor pre-coordination (and rightly so)

Still, distinct flavor for "faceting" with BIB data presently
  Audience designations
  Group characterization of authors
  Medium
  Temporal notions

URIs for the all possibilities?
  Possible
  Changes to LCSH practice?

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LCSH Usage Stats

More about actual subject usage in the catalog*:

Components used ($a + subdivs)	Number of Subject Headings
1	6,781,752
2	10,468,040
3	5,760,110
4	1,611,110
5	244,322
6	25,715
7	2,140
8	171
9	21
10	10

* I'd be interested to know how these stats compare to LCSH usage in the LC database *before* the Airlie House Conference recommendations

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LCSH Usage Stats

More about actual subject usage in the catalog:

Subfield usage	No. of subject headings using the same pattern
a	6,781,717
ax	4,883,546
az	3,096,913
av	2,042,296
azx	1,046,032
axz	887,856
azv	773,085
axy	762,346
axx	709,172
azz	679,781
axv	458,786
ay	301,921
azzx	285,397
azzv	218,017
ayx	183,559

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BIBFRAME Authority

```
<Book id = "http://bibframe/work/acw">
    <title>The American Civil War: A Compilation of primary source materials</title>
    <subject resource = "http://id.loc.gov/authorities/subjects/sh85140253" />
</Book>


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    <authoritativeLabel>
        United States--History--Civil War, 1861-1865—Pamphlets
    </authoritativeLabel>
</Topic>
```

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BIBFRAME Authority

```
<Book id = "http://bibframe/work/acw">
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</Topic>
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BIBFRAME Authority

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<Book id = "http://bibframe/work/acw">
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</Book>


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```

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The Ideal

```
<Book id = "http://bibframe/work/acw">
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    <genreForm resource = "http://id.loc.gov/authorities/subjects/sh99001602" />
</Book>
```

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What might the bibliographic universe be like if every known, legitimate LC subject heading had its own record/resource?

What are the benefits (or not) of removing form subdivisions from subject headings in favor of faceted identification of genre/form in the bibliographic record/resource?

General thoughts on the notion of a BIBFRAME Authority?

Thank you.

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