



# OXLOD Open Workshop

13 Mar 2018 - OeRC

13.00:

MHS – Stephen Johnston

FIHRIST – Andrew Morrison

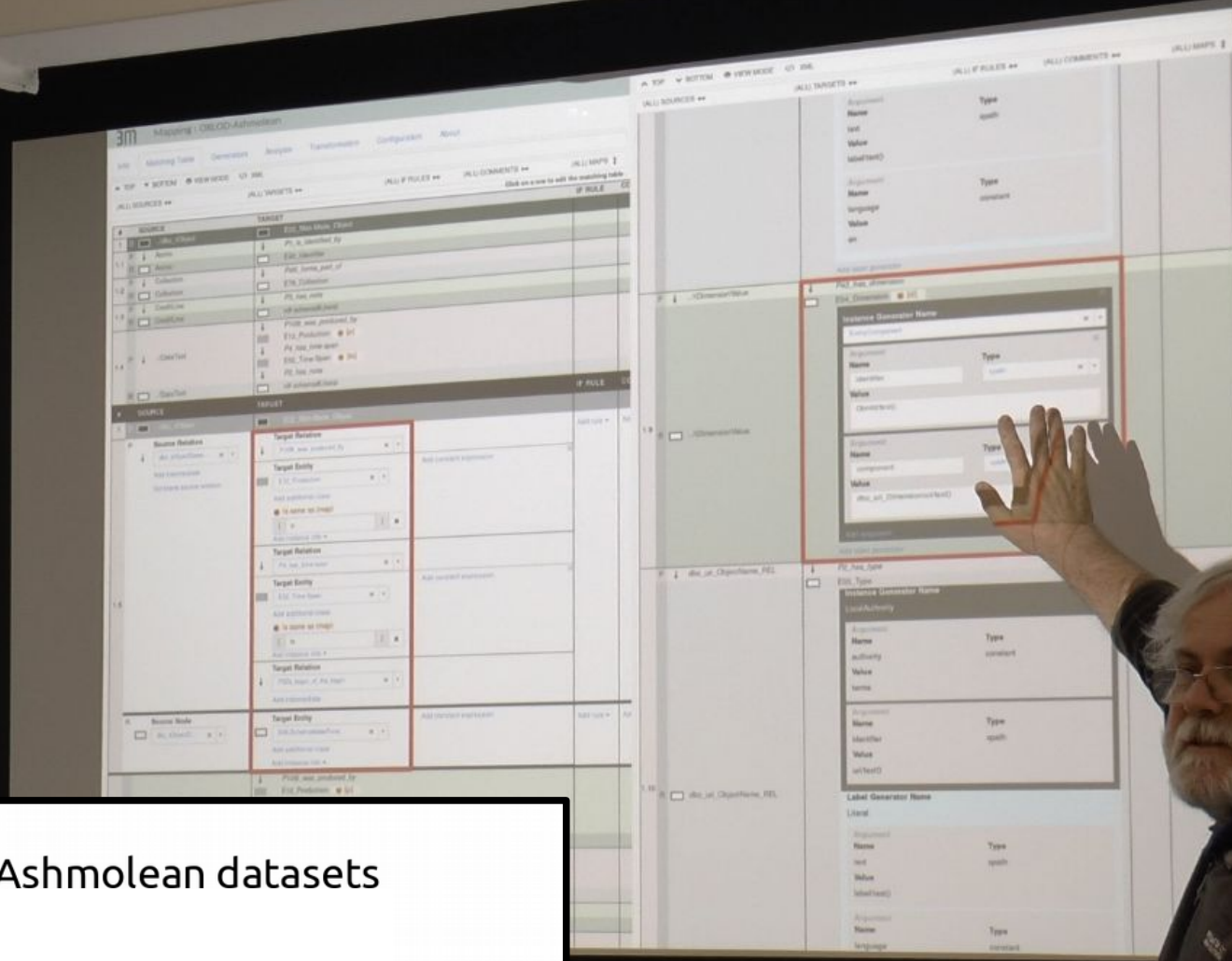
Integration: MHS, FIHRIST, Ashmolean Islamic

Reconciliation workflow



## Ashmolean datasets

- Indian
  - Islamic
  - Chinese
- } Same database structure



object  
photograph of object

curator's text about

curator  
type of object

object production event  
production location  
production technique

production date

production person

material  
dimensions

Model Overview

Enter subject  
<http://www.ashmus.ox.ac.uk/collections/354738>

Choose a Template: Template 1 Expand All Collapse All Mark same instances

relief@en [ E22\_Man-Made\_Object ]

P62i\_is\_depicted\_by  
<http://www.ashmus.ox.ac.uk/collections/429273> [ E36\_Visual\_Item ]

P1\_is\_identified\_by  
\\elias4\images\Archives\Screen\_Masters\Collections\Single\_Objects\EA\EA\_OS\EA\_OS\_0000\EA\_OS\_3-aa-S

P2\_has\_type  
jpg@en [ E55\_Type ]

P3\_has\_note  
Ashmolean Museum, University of Oxford@en

P67i\_is\_referred\_to\_by  
<http://www.ashmus.ox.ac.uk/collections/574948> [ E73\_Information\_Object ]

P3\_has\_note  
catalogue text@en  
Since the Buddha was a historical figure, incidents in his life, as in that of Christ, have always been a favourite with painters and sculptors. Of these, his birth numbers amongst the most important, along with his conception, his achievement of illumination under the Bodhi-tree at Bodhgaya, the first sermon preached in the deer park at Sarnath, the great miracle at Śrāvastī, and the parinirvāna or death, of which the Museum holds the companion piece to the birth. Traditionally, the Buddha is shown being born from the right side of his mother, to be received by the god Indra. He wears a halo, as do the heads of several other male figures, all presumably Hindu gods. Their presence attests ...  
View full text

P94i\_was\_created\_by  
<http://www.ashmus.ox.ac.uk/collections/574948/creation> [ E65\_Creation ]

P4\_has\_time-span  
<http://www.ashmus.ox.ac.uk/collections/574948/time-span> [ E52\_Time-Span ]

P82\_at\_some\_time\_within  
1987-01-01T00:00:00@en

P14\_carried\_out\_by  
J. C. Harle and Andrew Topsfield@en [ E21\_Person ]

P2\_has\_type  
general@en [ E55\_Type ]  
religious/ritual equipment@en [ E55\_Type ]  
relief@en [ E55\_Type ]

P3\_has\_note  
Presented by the Reverend J. C. Murray-Aynsley, 1911.@en

P57\_has\_number\_of\_parts  
1@en

P108i\_was\_produced\_by  
<http://www.ashmus.ox.ac.uk/collections/354738/production> [ E12\_Production ]

P7\_took\_place\_at  
Gandhara@en [ E53\_Place ]  
P1\_is\_identified\_by  
Gandhara@en [ E41\_Appellation ]  
Sikri@en [ E53\_Place ]  
P1\_is\_identified\_by  
Sikri@en [ E41\_Appellation ]

P32\_used\_general\_technique  
carved@en [ E55\_Type ]

P4\_has\_time-span  
<http://www.ashmus.ox.ac.uk/collections/112203> [ E52\_Time-Span ]

P3\_has\_note  
late 2nd century - early 3rd century AD@en  
Kushan Period (AD 50 - 600)@en

P82a\_begin\_of\_the\_begin  
50@en  
171@en

P82b\_end\_of\_the\_end  
230@en  
600@en

P14\_carried\_out\_by  
the Buddha@en [ E21\_Person ]  
P1\_is\_identified\_by  
the Buddha@en [ E41\_Appellation ]

P46i\_forms\_part\_of  
EA India Master@en [ E78\_Collection ]

P45\_consists\_of  
schist@en [ E57\_Material ]

P43\_has\_dimension  
57365: 12@en 57372 [ E54\_Dimension ]

P1\_is\_identified\_by  
<http://www.ashmus.ox.ac.uk/collections/354738/accession-no> [ E42\_Identifier ]

# Authority files

- SQL queries on MS SQL Server
  - People → VIAF
  - Places → Geonames
  - Materials → Getty AAT
  - Object Types → Getty AAT
  - Dimensions → Getty AAT
  - Units → Getty AAT



# OXLOD @ MHS: First Steps



Stephen Johnston  
Head of Research, Teaching and Collections  
Museum of the History of Science

OXLOD workshop  
13 March 2018


## Outline

- MHS collections database – history and background
- OXLOD trial export – object selection and field choice
- Issues in OXLOD mapping process and lessons learnt – the long shadow of legacy data
- Opportunities for controlled vocabularies
- Reflections beyond MHS – the significance of a GLAM initiative and the need for investment

Catalogue (1) - Display

File Edit Select View Tools Tabs Parts Multimedia Window Help

1115  
**Inventory No. 82828, "Diptych Dial, by Hans Tucher, Nuremberg, 1567" [1924-0/part],  
 Tucher, Hans**



Title  
 Main Title: Diptych Dial, by Hans Tucher, Nuremberg, 1567

Object Details  
 Inventory Number: 82828  
 Object Name:   
 Object Type: sundial, diptych dial  
 Collection: 1 Lewis Evans Collection  
 Condition Status:

Accession Details  
 Accession Status: Gift  
 Accession No: 1924-0/part

Handling Instructions  
 Hazardous Materials: ☐ Yes ☒ No  
 Suitable for Education Handling: ☐ Yes ☒ No

Persons

	Name	Role	Date of B...	Date of ...	Nationality
1	Tucher, Hans	Maker (Signed ...			
*					

Date Created: Dated 1567      Earliest: 1567      Latest: 1567

Summary Title Multimedia Narratives Location Creation (1) Creation (2) N

Display Work 1 of 1      stephen Admin emumhsox

MHS EMu catalogue module, Summary view, 2007-2018




Rete from astrolabe for Shah Abbas II, by Muhammad Muqim al-Yazdi,  
Persian, 1647/8 (inv. 45747)



Catalogue (1) - Display

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Display Work 1 of 1      stephen Admin emumhsox

MHS EMu catalogue module, Summary view, 2007-2018


	A	B	C
1	TitMainTitle	Title	Combines name, maker, place, date
2	ObjectType	Object Type	No external authority; not properly implemented
3	TitInventoryNo	MHS ID	Multiple instances for objects with parts
4	IRN	Unique EMu ID	
5	CreDateCreated	Date	Free text; earliest and latest fields available but only partly implemented
6	CreCreatorName	Maker	But also other roles such as retailers and owners
7	CreRole_tab	Role of "maker"	
8	CreCreationPlace1_tab	Place	Structured geographical sequence: internal authority
9	CreCreationPlace2_tab	Place	
10	CreCreationPlace3_tab	Place	
11	CreCreationPlace4_tab	Place	
12	CreCreationPlace5_tab	Place	
13	CreBriefDescription	Brief Description	Free text
14	PhyMaterial_tab	Materials	Look up list; requires cleaning and/or integration with external authority file

Fields exported

Catalogue (1) - Display

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	Name	Role	Date of B...	Date of ...	Nationality
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*					

Date Created: Dated 1567      Earliest: 1567      Latest: 1567

Summary Title Multimedia Narratives Location Creation (1) Creation (2) N

Display Work 1 of 1      stephen Admin emumhsox

MHS EMu catalogue module, Summary view, 2007-2018



**Inventory**

Inventory no. **82828**

Diptych Dial, by Hans Tucher, Nuremberg, 1567

Presentable ☒ Complete ☒ Flag ☐ On Display ☒ Indexed ☐ On top ☐

Add New Record

Locations Tree

Rebuild Tree Build All Trees

Accession info | Loan details | Documents | References | Label

Vitals | Indexes | Locations | Classifications | Relations | Images

Date: Dated 1567 0 redisplay potential 10

Maker: Signed by Hans Tucher and punched with his mark

Inscription: "15 67 HANS DVCHER" on the outside of the upper leaf, with the N in Hans reversed. The maker's mark of a crowned snake is punched twice on the outside

Accession, provenance & associations: Presented by Lewis Evans Bought by Lewis Evans from Percy Webster, London, 1901.

Museum Collection: Lewis Evans collection

Place: Nuremberg

Notes, parts, accessories, description: Includes a wind rose, table of latitudes, and dials for Italian, Babylonian and Nuremberg hours. The dial is also inscribed with instructions for its use. The compass needle is missing.

Materials: Ivory and brass

Size: 94 x 61 x 11 mm (closed)

Sources: Epact text

Accession no.: 1924-0/part Other given nos.: Lewis Evans G. 202 Epact no. 78399

Locations

- + Deaccessioned
- + In Store
- + In the Museum
  - + Off Display
    - + Awaiting transit to store
    - + Director's Study
    - + Education Room
    - + Library
    - + Lower Study
    - + Mezzanine Office
    - + Obsolete locations
    - + Studio
  - + On Display
    - + 1. Top Gallery
    - + 2. Entrance Gallery
    - + 3. Large Basement Gallery
    - + 4. Small Basement Gallery
    - + 5. Stairs - Astronomy
    - + 6. Special Exhibition Gallery
- + In Transit
- + Location Unknown
- + On Long-term Loan
- + On Short-term Loan
- + With external conservator

1 of 14958 Show All Filter Find Next Quick Find

Author: GMH Created: 18/01/1996 Edited by: AVS on 30/01/2007

Exact match


MHS "New Inventory" c. 1997: Visual Basic interface to Access database



Catalogue (1) - Display

File Edit Select View Tools Tabs Parts Multimedia Window Help

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Persons

	Name	Role	Date of B...	Date of ...	Nationality
1	Tucher, Hans	Maker (Signed ...			
*					

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Summary Title Multimedia Narratives Location Creation (1) Creation (2) N

Display Work 1 of 1      stephen Admin emumhsox

MHS EMu catalogue module, Summary view, 2007-2018



Who is the maker? BMW, its 3rd-party component suppliers, the workers in the Cowley plant or the robots there?

Catalogue (1) - Display

File Edit Select View Tools Tabs Parts Multimedia Window Help

10888

Inventory No. 91141, "Print (Stipple Engraving) William Lilly, Engraved by R. Cooper, Published by Charles and Henry Baldwin, 19th Century", Lilly, William, Cooper, Robert

Persons

	Name	Role	Date of Bi...	Date of D...	Nationality
1	Lilly, William	Subject	1602	1681	English
2	Cooper, Robert	Engraver			
3	Baldwin, Charles	Publisher			
*					

Place

	Level 1	Level 2	Level 3	Level 4	Level 5	Latitude	Longitude
1	Europe	United Kingdom	England	London			
*							

Details

Date Created:

19th century

Earliest:

1800

Latest:

1900

Creation Notes:

Creation (1)

Creation (2)

Notes

Physical (1)

Physical (2)

Edition

Relationships 1

Relationships 2

Display

Work 1 of 1

stephen






















Admin

emumhsox


More than just makers ....

Catalogue (1) - Display

File Edit Select View Tools Tabs Parts Multimedia Window Help

**10888**  
**Inventory No. 91141, "Print (Stipple Engraving) William Lilly, Engraved by R. Cooper, Published by Charles and Henry Baldwin, 19th Century", Lilly, William, Cooper, Robert**



**Related Parties**

	Relationship	Parties
*		

**Related Events**

	Relationship	Events
*		

**Related Places**

	Relation...	Level 1	Level 2	Level 3	Level 4	Level 5	Latitude	Longitude
*								

Physical (2) Edition Relationships 1 Relationships 2 Parts Status References Cont

Display Work 1 of 1 stephen Admin emumhsox

Related Parties as a ready-made way to accommodate portrait subjects, owners, etc etc



Catalogue (1) - Search

File Edit Select View Tools Tabs Parts Multimedia Window Help

Object Details

Inventory Number:

Object Name:

Object Type:

Collection:

Condition Status:

Accession Details

Accession No:

Accession Status:

Title

Main Title:

Look For:

abacus  
adding machine  
air meter  
air pump  
alembic  
alidade  
almanac  
altazimuth  
altimeter  
amblyoscope  
ammeter  
amulet  
anatomical preparation

OK Cancel

Summary Title Title 2 Multimedia Location Creation (1) Creation (2) No

Search stephen Admin emumhsox

Current implementation of object type – internal drop down list

Thesaurus (1) - Search

File Edit Select View Tools Tabs Multimedia Window Help

Internal Record Number

Summary Data

Legacy Data

Preferred GUID

Type:

GUID:

GUIDs

Preferred:  Type:

GUID:

Insertion Details

Inserted By:

Insertion Date:

Insertion Time:

Modification Details

Modified By:

Modification Date:

Modification Time:

Import Details

Import Identifier:

System Identifier:

History Alerts Notes Multimedia Security Audit Admin

Search stephen Admin emumhsox

Opportunities: Thesaurus module ready to integrate with Getty AAT etc

## Model Overview

Enter subject

[http://www.mhs.ox.ac.uk/object/inv/TitInventoryNo\\_sample\\_data\\_5029](http://www.mhs.ox.ac.uk/object/inv/TitInventoryNo_sample_data_5029)

Choose a Template:

Template 1

Expand All

Collapse All

Mark same instances



TitInventoryNo\_sample\_data\_5029 TitMainTitle\_sample\_data\_5673 [ E22\_Man-Made\_Object ]

P2\_has\_type

label\_sample\_data\_6317@en [ E55\_Type ]

P108i\_was\_produced\_by

[http://www.mhs.ox.ac.uk/object/inv/TitInventoryNo\\_sample\\_data\\_5029/production](http://www.mhs.ox.ac.uk/object/inv/TitInventoryNo_sample_data_5029/production) [ E12\_Production ]

P7\_took\_place\_at

label\_sample\_data\_1735@en [ E53\_Place ]

P1\_is\_identified\_by

label\_sample\_data\_1735@en [ E41\_Appellation ]

label\_sample\_data\_1934@en [ E53\_Place ]

label\_sample\_data\_2910@en [ E53\_Place ]

label\_sample\_data\_1522@en [ E53\_Place ]

collapse list (4 entries)

P01i\_is\_domain\_of

[http://www.mhs.ox.ac.uk/object/inv/TitInventoryNo\\_sample\\_data\\_5029/production-carried-out-by](http://www.mhs.ox.ac.uk/object/inv/TitInventoryNo_sample_data_5029/production-carried-out-by) [ PC14\_carried\_out\_by ]

P02\_has\_range

label\_sample\_data\_3669@en [ E21\_Person ]

P1\_is\_identified\_by

label\_sample\_data\_3669@en [ E41\_Appellation ]

P14.1\_in\_the\_role\_of

label\_sample\_data\_2652@en [ E55\_Type ]

P4\_has\_time-span

uuid:AA [ E52\_Time-Span ]

P3\_has\_note

CreDateCreated\_sample\_data\_9100@en

P102\_has\_title

TitMainTitle\_sample\_data\_5673@en [ E35\_Title ]

P48\_has\_preferred\_identifier

TitInventoryNo\_sample\_data\_5029@en [ E42\_Identifier ]

P45\_consists\_of

label\_sample\_data\_3321@en [ E57\_Material ]

# CRM XX.1 properties

- .1 property is property of a property



## **P14 carried out by (performed)**

Domain: [E7](#) Activity

Range: [E39](#) Actor

Subproperty of: [E5](#) Event. [P11](#) had participant (participated in): [E39](#) Actor

Superproperty of: [E8](#) Acquisition. [P22](#) transferred title to (acquired title through): [E39](#) Actor

[E8](#) Acquisition. [P23](#) transferred title from (surrendered title through): [E39](#) Actor

[E10](#) Transfer of Custody. [P28](#) custody surrendered by (surrendered custody through): [E39](#) Actor

[E10](#) Transfer of Custody. [P29](#) custody received by (received custody through): [E39](#) Actor

Quantification: many to many, necessary (1,n:0,n)

Scope note: This property describes the active participation of an [E39](#) Actor in an [E7](#) Activity.

It implies causal or legal responsibility. The *P14.1 in the role of* property of the property allows the nature of an Actor's participation to be specified.

Examples:

- the painting of the Sistine Chapel ([E7](#)) *carried out by* Michaelangelo Buonaroti ([E21](#)) *in the role of* master craftsman ([E55](#))

In First Order Logic:

$P14(x,y) \supset E7(x)$

$P14(x,y) \supset E39(y)$

$P14(x,y) \supset P11(x,y)$

$P14(x,y,z) \supset [P14(x,y) \wedge E55(z)]$

Properties: *P14.1 in the role of*: [E55](#) Type

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**Properties:** P14.1 in the role of: [E55](#) Type

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Properties: P14.1 in the role of: [E55](#) Type

# CRM XX.1 properties

- .1 property is property of a property
- works conceptually
- does not work in RDF

production of object → carried out by → person

person → has role of → a role

*domain → property → range*



## Model Overview

Enter subject

[http://www.mhs.ox.ac.uk/object/inv/TitInventoryNo\\_sample\\_data\\_5029](http://www.mhs.ox.ac.uk/object/inv/TitInventoryNo_sample_data_5029)

Choose a Template:

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Expand All

Collapse All

Mark same instances



TitInventoryNo\_sample\_data\_5029 TitMainTitle\_sample\_data\_5673 [ E22\_Man-Made\_Object ]

P2\_has\_type

label\_sample\_data\_6317@en [ E55\_Type ]

P108i\_was\_produced\_by

[http://www.mhs.ox.ac.uk/object/inv/TitInventoryNo\\_sample\\_data\\_5029/production](http://www.mhs.ox.ac.uk/object/inv/TitInventoryNo_sample_data_5029/production) [ E12\_Production ]

P7\_took\_place\_at

label\_sample\_data\_1735@en [ E53\_Place ]

P1\_is\_identified\_by

label\_sample\_data\_1735@en [ E41\_Appellation ]

label\_sample\_data\_1934@en [ E53\_Place ]

label\_sample\_data\_2910@en [ E53\_Place ]

label\_sample\_data\_1522@en [ E53\_Place ]

collapse list (4 entries)

P01i\_is\_domain\_of

[http://www.mhs.ox.ac.uk/object/inv/TitInventoryNo\\_sample\\_data\\_5029/production-carried-out-by](http://www.mhs.ox.ac.uk/object/inv/TitInventoryNo_sample_data_5029/production-carried-out-by) [ PC14\_carried\_out\_by ]

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P14.1\_in\_the\_role\_of

label\_sample\_data\_2652@en [ E55\_Type ]

P4\_has\_time-span

uuid:AA [ E52\_Time-Span ]

P3\_has\_note

CreateDateCreated\_sample\_data\_9100@en

P102\_has\_title

TitMainTitle\_sample\_data\_5673@en [ E35\_Title ]

P48\_has\_preferred\_identifier

TitInventoryNo\_sample\_data\_5029@en [ E42\_Identifier ]

P45\_consists\_of

label\_sample\_data\_3321@en [ E57\_Material ]

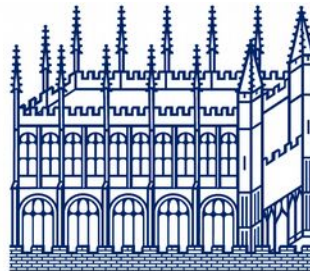
# MHS reconciliation

- VIAF
  - 1 match
- Geonames
  - 48 matches
- BM thesaurus
  - 4 matches
- Getty AAT
  - 3 matches

# Transforming Manuscript Metadata into Linked Data for OXLOD

Andrew Morrison  
Software Engineer  
Bodleian Digital Library Systems and Services

March 2018



Bodleian Libraries  
UNIVERSITY OF OXFORD

# The Fihrist Collection

- “Fihrist” means index or directory
- Union catalogue of manuscripts from the Islamic world
- Collaboration by UK and Ireland universities
- 12,000 manuscripts in total, containing 11,000 items identified as “works” but could be anything, from copies or fragments of the Qur’ān to lists of trees in the garden of an agent of the East India Company
- 4,000 Islamic manuscripts in the Bodleian (plus another 100 in colleges)
- We have been maintaining a legacy system that runs the Fihrist web site for years, but it is a bit of a black box. We’re replacing it with replaceable tiers of open source technologies (Solr, Blacklight, Ruby on Rails, XSL, XQuery)
- New Fihrist web site launching this month

# Union Catalogue of Manuscripts from the Islamicate World

Search the catalogue of manuscripts from the Islamicate world



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**WORKS**

**PEOPLE**

**SUBJECTS**

Limit your search

Language



Century



Physical Form



Materials



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Collection



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20 per page ▼

## MS 5 (Arabic Commentaries on the Hippocratic Aphorisms project)

Contents: This manuscript contains commentary on the book of Aphorisms attributed to Hippocrates .

## Ms. 33 (Old Library, Trinity Hall, Cambridge)

Contents: 11 works by 4 authors



2. ff. 16r-16v

**Author:** Anonymous

**Title:** *A testament of 'Alī (Turkish)*

3. ff. 20r-92r

**Author:** Ṣafī al-Dawlah Mālik al-Najm al-Masīhī (dates uncertain)

**Title:** *Kitāb al-Dustūr*

**Title:** كتاب الدستور

**Title:** *The Book of Rules*

**Title:** *Kitāb al-Dustūr al-bīmāristānī*

**Title:** *Kitāb al-Minhāj wa-dustūr al-‘ilāj*

**Title:** كتاب الدستور البيمارستاني

**Title:** كتاب المنهاج ودستور العلاج

**Title:** *The Book of Hospital Rules*

**Title:** *The Book of the Method and Rules of Therapy*

**Incipit:** بسم الله ... قال العبد الفقير الى الله تعالى المعترف بذنبه الراجي عفو ربه صفى الدوله مالك ابن ابي النجم المسيحي المتطبيب عفا الله عنه سألني بعض الاخوان المتعلمين بصناعة الطب ان اجمع له دستورا يستضي به في حفظ الصحاه وعلاج الامراض العارضه على الاكثر بالادويه والاغذيه

**Explicit:** فقطعه واجب ان امكن والا افسد جملا البدن فاصلح احوال المريض ان يقطع له ذلك العضو ولا يفسد جملة بدنه تم الكتاب بعون الله وتأييده

**Colophon:** وكان الفراغ من نسخه نهار الاثنين اول يوم في [شهـ]ر شعبان المبارك سنه واحد بعد لالف لانيينا [كذا] ادم عليه السلام

This is a unique copy of a medical manual concerned to a large extent with regimen and therapeutics. Nothing is known of its author or compiler, Ṣafī al-Dawlah Mālik ibn Abī al-Najm al-Masīhī al-mutaṭabbib, except that he must have worked between the time of Ibn al-Tilmīdh (d. 549/1154 or 560/1165) and 1593, when the copy was completed. It is stated in the manuscript that it was compiled by Ṣafī al-Dawlah Mālik ibn Abī al-Najm al-Masīhī from extracts taken from the Aqrābādhīn by Ibn al-Tilmīdh. Despite its apparent derivative nature, however, this treatise is quite different from the Aqrābādhīn of Ibn al-Tilmīdh.

The copy was completed by an unnamed copyist on 1 Sha‘bān 1001 (3 May 1593).

The copy is complete. Between the end of the treatise and the colophon (folios 89a4–92a6), the copyist has inserted a statement that all the drug recipes found in this treatise are in reality taken from the formulary aqrābādhīn of Amīn al-Dawlah (ibn al-Tilmīdh), after which he added a number of recipes of his own. وارشاده واعلم وفقك ان جميع ما وصفته في هذه الدستور من الادويه سواكانت سفوفا او حبا او نقوعا او لعوقا او مطبوخا او قتلا او حقنا فان جميع ذلك منقول من اقربادين امين الدوله وهو المشهور في زماننا هذا والمعمول عليه . وقد ذكرت لك ايضا وفقك الله في هذا الدستور من الصناعة الطيبه ما لم تجده مدونا في كتاب وقد ذكرت في هذه الدستور مركبات تدعو الحاجه اليها صفة نقوع حامض ... تم الدستور المبارك المبارك المبارك

Dimensions 19.5 × 13.8 (text area 14.3 × 9.2) cm; 15 lines per page. The author is named at the beginning of the treatise. No clearcut title is given in the treatise itself. Folio 18a is a title page giving the title *Kitāb al-Dustūr al-bīmāristānī* along with the

# Underlying Data

- TEI P5 XML
  - Customized, as TEI is designed to be
- Stored on GitHub
  - Allows versioning
  - Distributed contributors
  - Open data (licence yet to be chosen)
- Variable quality
  - Different cataloguing styles and standards
  - Unknown number of previous conversions



This repository

Search

Pull requests


Issues

Marketplace

Explore



 **bodleian** / **fihrst-mss**

 Unwatch ▾


7


 Star

1

 Fork

0

 Code

 Issues 12

 Pull requests 0

 Projects 0

 Wiki

 Insights

Branch: master ▾

**fihrst-mss** / **collections** /

Create new file

Upload files

Find file
















History



**andrew-morrison** Data fix: Some additional origin date corrections ...

Latest commit 2093fdd 6 days ago

..

 <a href="#">arabic commentaries on the hippocratic ap...</a>	Data fix: Origin dates	6 days ago
 <a href="#">british library</a>	Data fix: Some additional origin date corrections	6 days ago
 <a href="#">cambridge university</a>	Data fix: Some additional origin date corrections	6 days ago
 <a href="#">jesus college (cambridge)</a>	Data fix: Origin dates	6 days ago
 <a href="#">new college (university of oxford)</a>	Data fix: Origin dates	6 days ago
 <a href="#">oxford university</a>	Data fix: Some additional origin date corrections	6 days ago
 <a href="#">royal asiatic society of great britain and irel...</a>	Data fix: Some additional origin date corrections	6 days ago
 <a href="#">school of oriental and african studies</a>	Data fix: Some additional origin date corrections	6 days ago
 <a href="#">st antony's college (oxford)</a>	Data fix: Origin dates	6 days ago
 <a href="#">the university of manchester</a>	Data fix: Some additional origin date corrections	6 days ago
 <a href="#">trinity college cambridge</a>	Data fix: Origin dates	6 days ago
 <a href="#">trinity college dublin, the university of dublin</a>	Data fix: Origin dates	6 days ago
 <a href="#">trinity hall (cambridge)</a>	Data fix: Origin dates	6 days ago
 <a href="#">university of birmingham</a>	Data fix: Some additional origin date corrections	6 days ago
 <a href="#">university of st andrews</a>	Data fix: Some additional origin date corrections	6 days ago

# TEI

- Text Encoding Initiative
- Predates XML
- Flexible structure
- Document format
  - As opposed to metadata format exported from a relational database
  - More like Word than Excel
- Elements not in fixed positions

```

1 <?xml version="1.0" encoding="UTF-8"?>
2 <?xml-model href="https://raw.githubusercontent.com/bodleian/consolidated-tei-schema/master/msdesc.rng" type="applic
3 <?xml-model href="https://raw.githubusercontent.com/bodleian/consolidated-tei-schema/master/msdesc.rng" type="applic
4 <TEI xmlns="http://www.tei-c.org/ns/1.0" xml:id="manuscript_4077">
5   <teiHeader>
6     <fileDesc>
7       <titleStmt>
8         <title>MS. A. Walker 105</title>
9         <funder>JISC</funder>
10        <principal>Gillian Evison</principal>
11      </titleStmt>
12      <publicationStmt>
13        <publisher>Bodleian Library</publisher>
14        <date calendar="#Gregorian">[Date when first made available]</date>
15        <pubPlace>
16          <address>
17            <addrLine>Department of Special Collections</addrLine>
18            <addrLine>Bodleian Library</addrLine>
19            <street>Broad Street</street>
20            <settlement>Oxford</settlement>
21            <postCode>OX1 3BG</postCode>
22            <addrLine>
23              <ref target="http://www.bodleian.ox.ac.uk/libraries/collections">Bodleian Library</ref>
24            </addrLine>
25            <addrLine>
26              <email>oriental@bodleian.ox.ac.uk</email>
27            </addrLine>
28          </address>
29        </pubPlace>
30        <idno>OCIMCO</idno>
31        <idno type="msID">MS_A_Walker_105</idno>
32        <idno type="catalogue">Fihrist</idno>
33      </publicationStmt>
34      <sourceDesc>
35        <msDesc xml:id="MS_A_Walker_105" xml:lang="en">
36          <msIdentifier>
37            <country>United Kingdom</country>
38            <region type="county">Oxfordshire</region>
39            <settlement>Oxford</settlement>
40            <institution>Oxford University</institution>
41            <repository>Bodleian Library</repository>
42            <collection type="main">Oriental Manuscripts A. Walker Collection</collection>
43            <idno>MS. A. Walker 105</idno>
44          </msIdentifier>

```



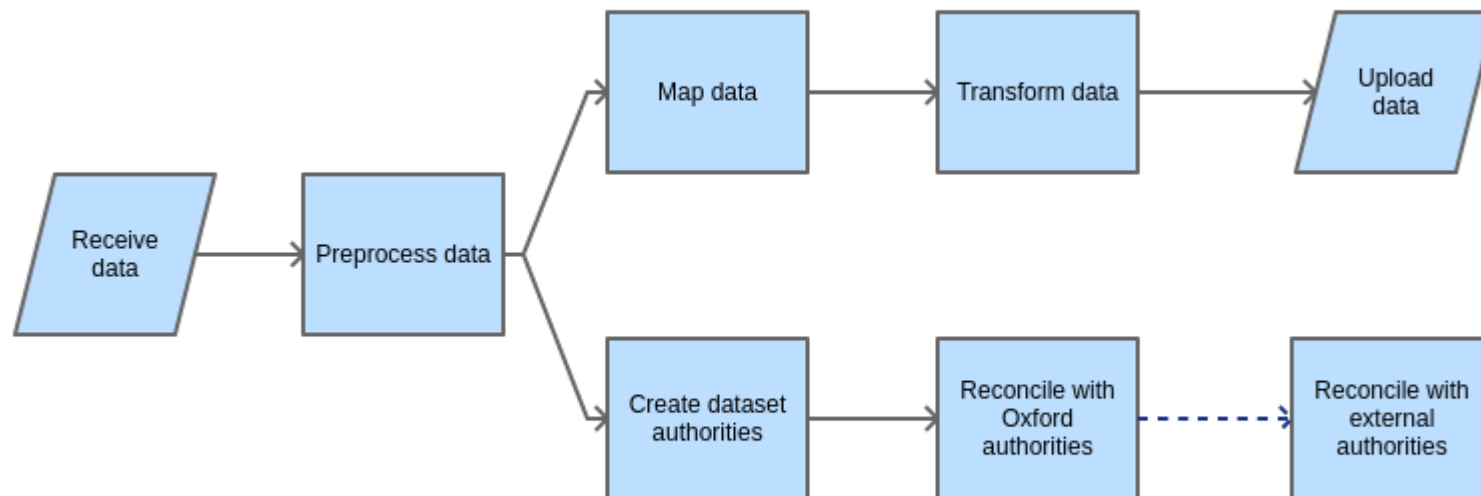
<msItem xml:id="MS\_Marsh\_71-item3" n="3"><locus from="20" to="92">ff. 20r-92r</locus><author key="person\_f5543"><persName type="standard" xml:lang="ar-Latn-x-lc">Şafî al-Dawlah Malik al-Najm al-Masîhî (dates uncertain)</persName></author><title xml:lang="ar-Latn-x-lc">Kitab al-Dustar</title><title xml:lang="ar">كتاب الدستور</title><title xml:lang="en" type="alt">The Book of Rules</title><title xml:lang="ar-Latn-x-lc" type="alt">Kitab al-Dustar al-bimaristanî</title><title xml:lang="ar-Latn-x-lc" type="alt">Kitab al-Minhaj wa-dustar al-'ilaj</title><title xml:lang="ar" type="alt">كتاب الدستور</title><title xml:lang="en" type="alt">The Book of Hospital Rules</title><title xml:lang="ar" type="alt">كتاب المنهاج ودستور العلاج</title><title xml:lang="en" type="alt">The Book of Hospital Rules</title><title xml:lang="en" type="alt">The Book of the Method and Rules of Therapy</title><incipit> بسم الله ... قال العبد الفقير الى الله تعالى المعترف بذنبه الراجي عفو ربه صفى الدوله مالك ابن ابى النجم المسيحى المتطبيب عفا الله عنه سالى بعض الاخوان المتعلمين بصناعة الطب ان اجمع له دستورا يستضى به فى حفظ الصحاه وعلاج الامراض العارضة على الاكثر بالادويه فقطعه واجب ان امكن والا افسد هملا البدن فاصلح احوال المريض ان يقطع له ذالك العضو ولا يفسد همله بدنه تم</incipit><explicit> وكان الفراغ من نسخه نهار الاثنين اول يوم فى [شبه] ر شعبان المبارك سنه واحد بعد لالف</explicit><colophon>الكتاب بعون الله وتاييده</colophon><note>This is a unique copy of a medical manual concerned to a large extent with regimen and therapeutics. Nothing is known of its author or compiler, Şafî al-Dawlah Malik ibn Abî al-Najm al-Masîhî al-mutaṭṭabbib, except that he must have worked between the time of <persName key="person\_f1488">Ibn al-Tilmîdh</persName> (d. 549/1154 or 560/1165) and 1593, when the copy was completed. It is stated in the manuscript that it was compiled by Şafî al-Dawlah Malik ibn Abî al-Najm al-Masîhî from extracts taken from the Aqrabadhîn by Ibn al-Tilmîdh. Despite its apparent derivative nature, however, this treatise is quite different from the Aqrabadhîn of Ibn al-Tilmîdh.</note><note>The copy was completed by an unnamed copyist on 1 Sha'ban 1001 (3 May 1593)</note><textLang mainLang="ar">Arabic</textLang></msItem></msContents><history><provenance>The volume is from the private collection of <persName key="person\_f1659">Jacob Golius (d. 1667)</persName> who acquired manuscripts in the 1620s (mostly in Syria). The manuscript was

```
187         </item>
188     </list>
189 </keywords>
190 </textClass>
191 </profileDesc>
192 <revisionDesc>
193     <change when="2018-03-02" xml:id="fix-dates">
194         <persName>Andrew Morrison</persName> Removed origDate tags around something which is not a da
195     </change>
196     <change when="2017-11-07">
197         <persName>James Cummings</persName> Up-converted the markup using <ref target="https://github
198     </change>
199     <change when="2009-05-14">created this file</change>
200 </revisionDesc>
201 </teiHeader>
202 <facsimile>
203     <graphic url="folio1r.png"/>
204     <graphic url="folio1v.png"/>
205     <graphic url="folio2r.png"/>
206     <graphic url="folio2v.png"/>
207 </facsimile>
208 <text>
209     <body>
210         <p>!--Body paragraph provided for validation and future transcription--></p>
211     </body>
212 </text>
213 </TEI>
```

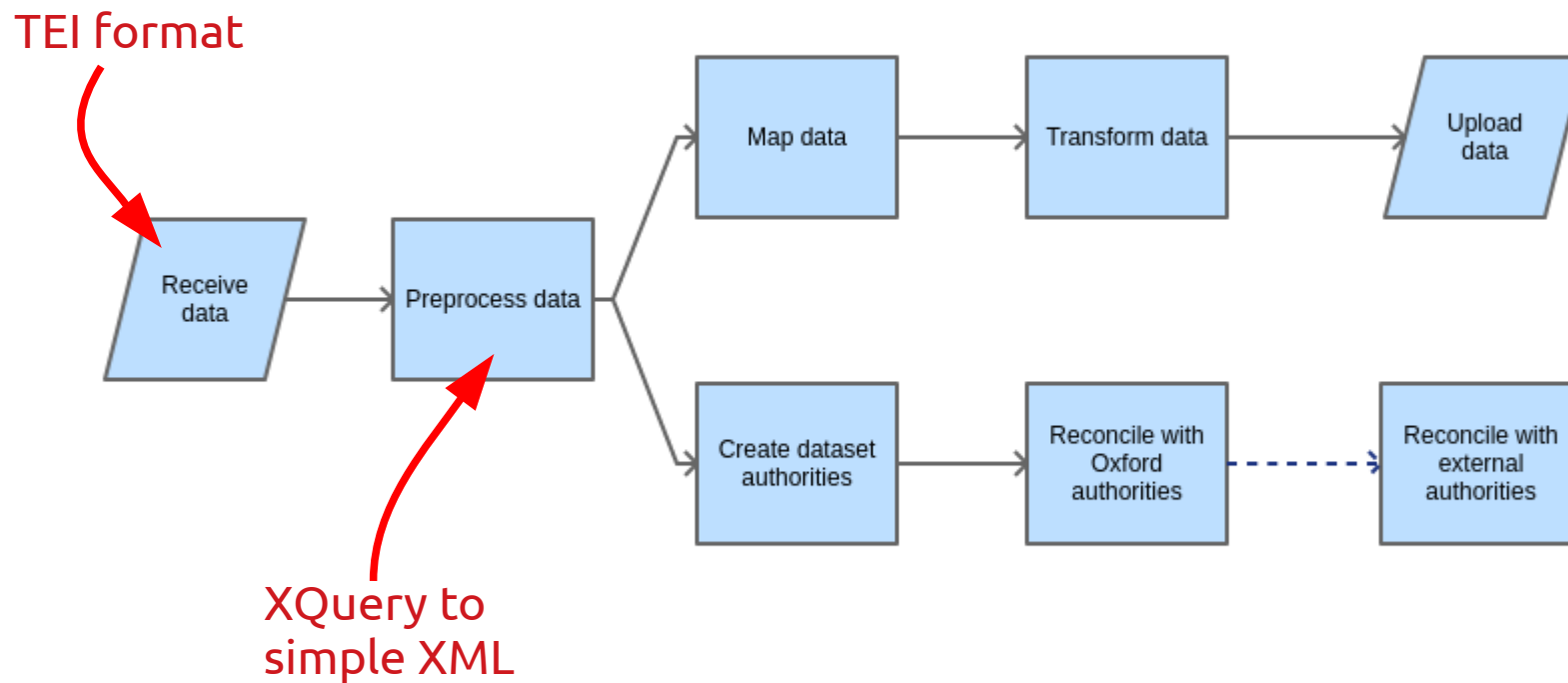
# XQuery

- Intermediate transformation step needed
- Transform document into list of metadata fields
- Utilize local authority files
- Normalize some data (e.g. languages)
- Build URIs

# Workflow



# Workflow





```

1 declare namespace tei="http://www.tei-c.org/ns/1.0";
2 declare namespace bod="http://www.bodleian.ox.ac.uk/bdlss";
3 declare option saxon:output "indent=yes";
4
5 declare function bod:languageCodeLookup($lang as xs:string) as xs:string*
6 ▶ { [52 lines]
59
60 <manuscripts>
61 {
62   let $collection := collection("../collections/oxford%20university?select=*.xml;recurse=yes")
63   let $works := doc("../authority/works.xml")
64   let $people := doc("../authority/persons.xml")
65   let $subjects := doc("../authority/subjects.xml")
66   let $website := 'https://www.fihrist.org.uk'
67   for $manuscript at $pos in $collection/tei:TEI
68     (: Create a small, pseudo-randomized sample by skipping to all but every 200th manuscript :)
69     return if ($pos mod 200 = 0) then
70       <manuscript uri="{ $website }/catalog/{ $manuscript/@xml:id/data() }">
71         <classmark>{ $manuscript/tei:teiHeader/tei:fileDesc/tei:sourceDesc/tei:msDesc/tei:msIdentifier/tei:idno[1]/
72         <collection>{ $manuscript/tei:teiHeader/tei:fileDesc/tei:sourceDesc/tei:msDesc/tei:msIdentifier/tei:collecti
73         <repository>{ $manuscript//tei:teiHeader/tei:fileDesc/tei:sourceDesc/tei:msDesc/tei:msIdentifier/tei:reposit
74         <institution>{ $manuscript//tei:teiHeader/tei:fileDesc/tei:sourceDesc/tei:msDesc/tei:msIdentifier/tei:instit
75       {
76         if ($manuscript//tei:teiHeader/tei:profileDesc/tei:textClass/tei:keywords/tei:list/tei:item/tei:ref/tei:term
77         <keywords>
78         {
79           for $term in $manuscript//tei:teiHeader/tei:profileDesc/tei:textClass/tei:keywords/tei:list/tei:iten
80           let $subject := $subjects//tei:item[@xml:id = $term/@key]
81           let $lcsh := $subject//tei:ref[tei:title/text() = 'LC']
82           return
83           if ($subject and $lcsh) then
84             for $variant in $subject/tei:term
85             return <term uri="{ $website }/catalog/{ $term/@key/data() }" lcsh="{ $lcsh[1]/@target/
86           else if ($subject) then
87             for $variant in $subject/tei:term
88             return <term uri="{ $website }/catalog/{ $term/@key/data() }">{ $variant/text() }</term>
89           else
90             <term>{ $term/text() }</term>

```

```

1 <?xml version="1.0" encoding="UTF-8"?>
2 <manuscripts>
3   <manuscript uri="https://www.fihrist.org.uk/catalog/manuscript_10589">
4     <classmark>MS. Bodl. Or. 300</classmark>
5     <collection>Oriental Manuscripts</collection>
6     <repository>Bodleian Library</repository>
7     <institution>Oxford University</institution>
8     <date>
9       <known>1639</known>
10    </date>
11    <item uri="https://www.fihrist.org.uk/catalog/manuscript_10589#MS_Bodl_Or_300-item1">
12      <id>MS_Bodl_Or_300-item1</id>
13      <title uri="https://www.fihrist.org.uk/catalog/work_3277">
14        <main>al-Mustaṭraf fī kull fann mustaṭraf</main>
15        <alt>المستطرف في كل فن مستطرف</alt>
16      </title>
17      <author uri="https://www.fihrist.org.uk/catalog/person_90039023"
18        viaf="http://www.viaf.org/viaf/90039023/">
19        <main>Ibshīḥ Muḥammad ibn Aḥmad, 1388-ca. 1446</main>
20        <alt>ابشيهي، محمد بن أحمد الكاتب</alt>
21        <alt>الابشيهي، محمد بن أحمد</alt>
22      </author>
23      <language uri="http://vocab.getty.edu/aat/300387843">Arabic</language>
24    </item>
25  </manuscript>
26  <manuscript uri="https://www.fihrist.org.uk/catalog/manuscript_1076">
27    <classmark>MS. Marsh 215</classmark>
28    <collection>Oriental Manuscripts Marsh Collection</collection>
29    <repository>Bodleian Library</repository>
30    <institution>Oxford University</institution>
31    <keywords>
32      <term uri="https://www.fihrist.org.uk/catalog/subject_sh85083064"
33        lcsb="http://id.loc.gov/authorities/sh85083064">Medicine</term>
34    </keywords>
35    <date>
36      <rangefrom>1400</rangefrom>
37      <rangeto>1500</rangeto>
38    </date>
39    <item uri="https://www.fihrist.org.uk/catalog/manuscript_1076#MS_Marsh_215-item1">
40      <id>MS_Marsh_215-item1</id>
41      <title uri="https://www.fihrist.org.uk/catalog/work_4133">
42        <main>A treatise in 10 bābs on every aspect of childbirth from the semen down to children's maladies</main>
43      </title>
44      <author uri="https://www.fihrist.org.uk/catalog/person_f407">

```

# 3M Software

- 3M stands for Mapping Memory Manager
- Web-based
- Painfully slow
- Irritating user interface
- But it simplifies the process by only allowing selection of the targets and relations that make theoretical sense



## Main Menu

### Mappings

[Sample Mappings](#)

### Help

[Quick Start Guide](#)  
[Manual](#)

More ▾



## Mappings - Result of Query

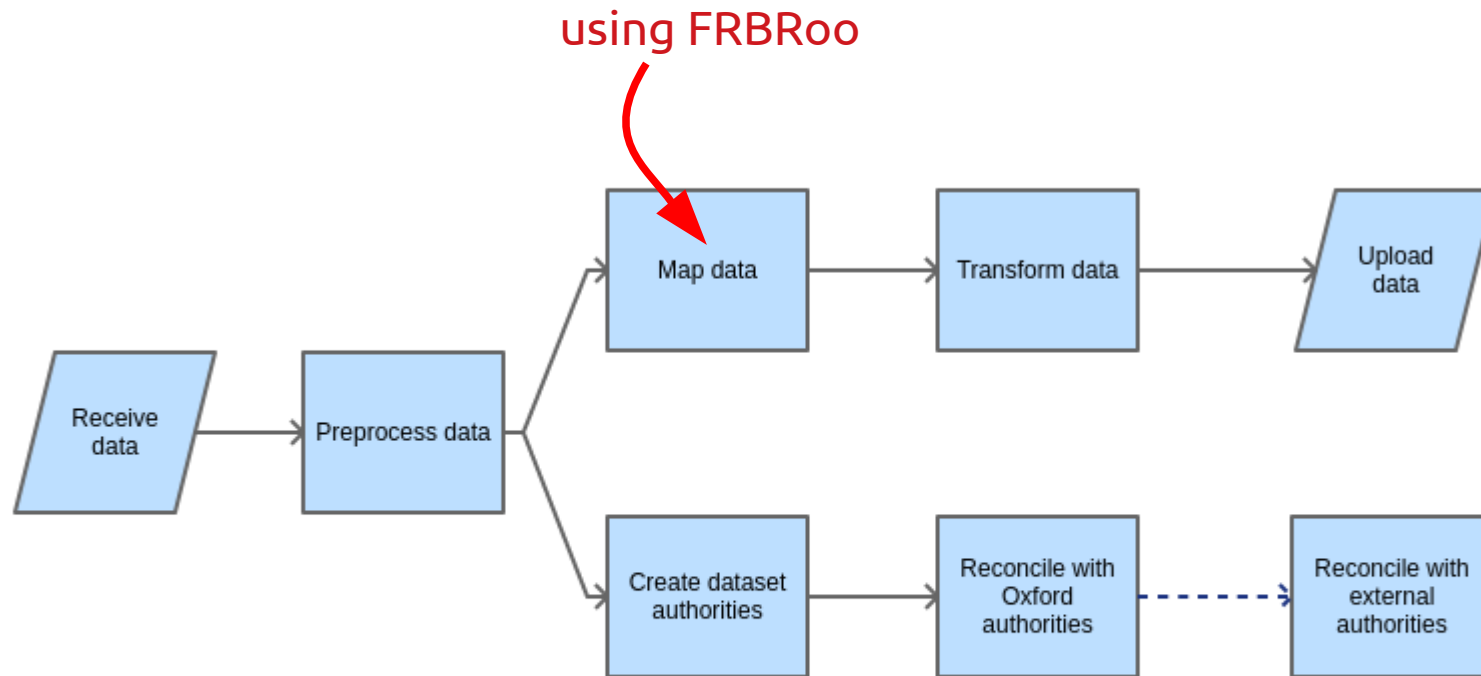
Searching criteria : contains ' OXLOD '

Filter Table

Showing **100** ▾ entries

Title	Creator	Card Status	Last Modified	Id	
OXLOD-Ashmolean	avelios	Unpublished	2018-03-11	Mapping/1074	
OXLOD-Ashmolean-remote-authority	avelios	Unpublished	2018-03-11	Mapping/1077	
OXLOD-MHS-catalogue	avelios	Unpublished	2018-03-11	Mapping/1084	
OXLOD-druce-collection-main	avelios	Unpublished	2018-03-10	Mapping/1039	
OXLOD-MNH-Fossils	SarahJoomun	Unpublished	2018-03-10	Mapping/1061	
OXLOD-Bodleian-Fihrist	amorrison	Unpublished	2018-03-09	Mapping/1092	
OXLOD-Bodleian-Chinese-Catalogues	avelios	Unpublished	2018-03-06	Mapping/1004	
OXLOD-bodleian-chinese-classification-authority	avelios	Unpublished	2018-03-06	Mapping/1012	
OXLOD-bodleian-chinese-author-authority	avelios	Unpublished	2018-03-05	Mapping/1011	
OXLOD-bodleian-chinese-corporate-authority	avelios	Unpublished	2018-03-01	Mapping/1018	
OXLOD-druce-collection-remote-authority	avelios	Unpublished	2018-03-01	Mapping/1046	

# Workflow

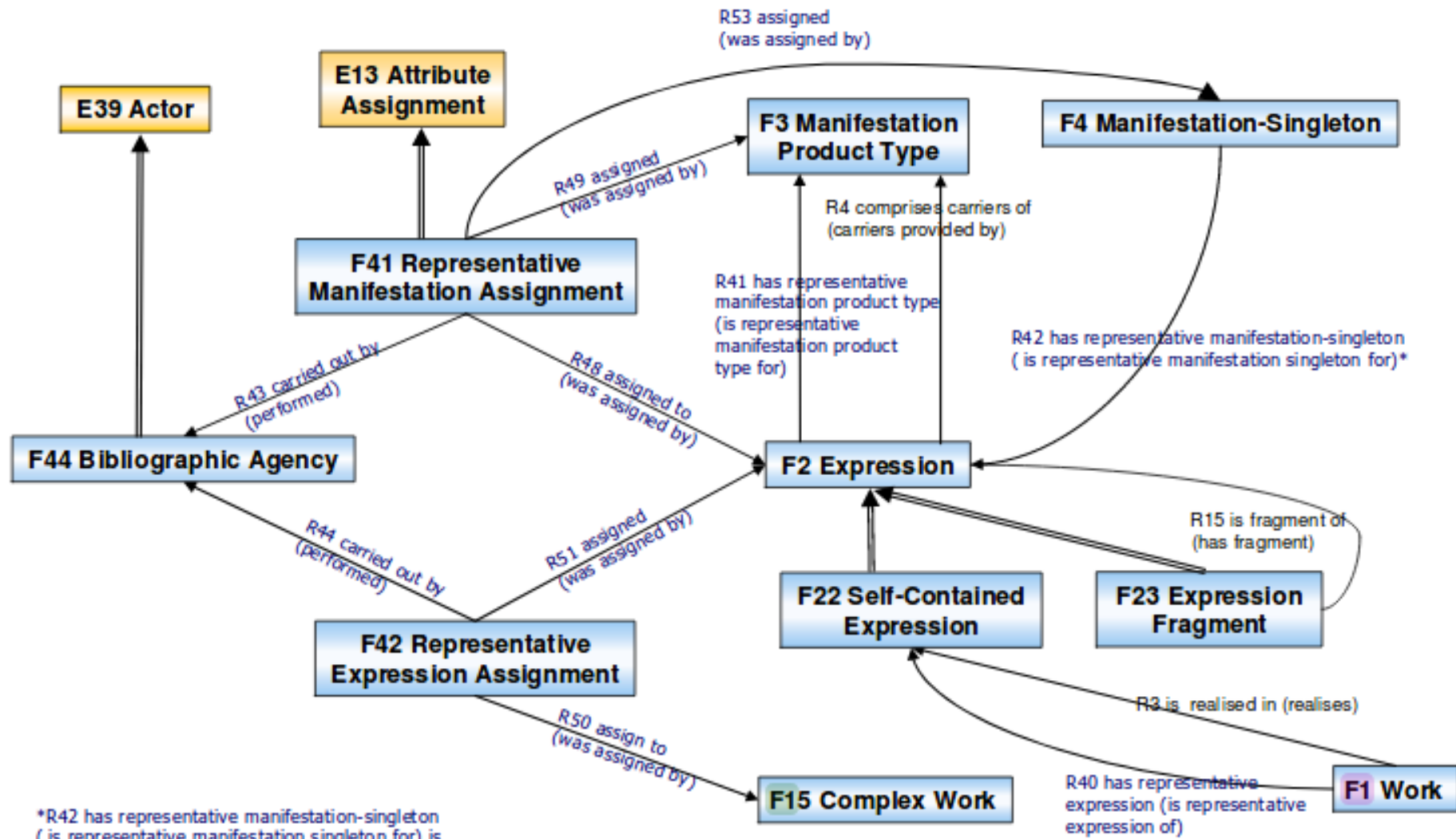




# Mapping Preliminaries

- Pick target ontologies
  - CIDOC-CRM (facilities linking through defining events)
  - FRBRoo (bibliographic information in object-orientated form)
  - CRMext4SKOSandLabel (linking to thesauri)
- Decide what to map as what kinds of entities
  - “Manifestation Singleton” for manuscripts
  - “Work” in Fihrist is not necessarily a work in FRBRoo
  - Insufficient typing in TEI to map precisely
  - Therefore use “Expression” for works















































# How to identify Work?



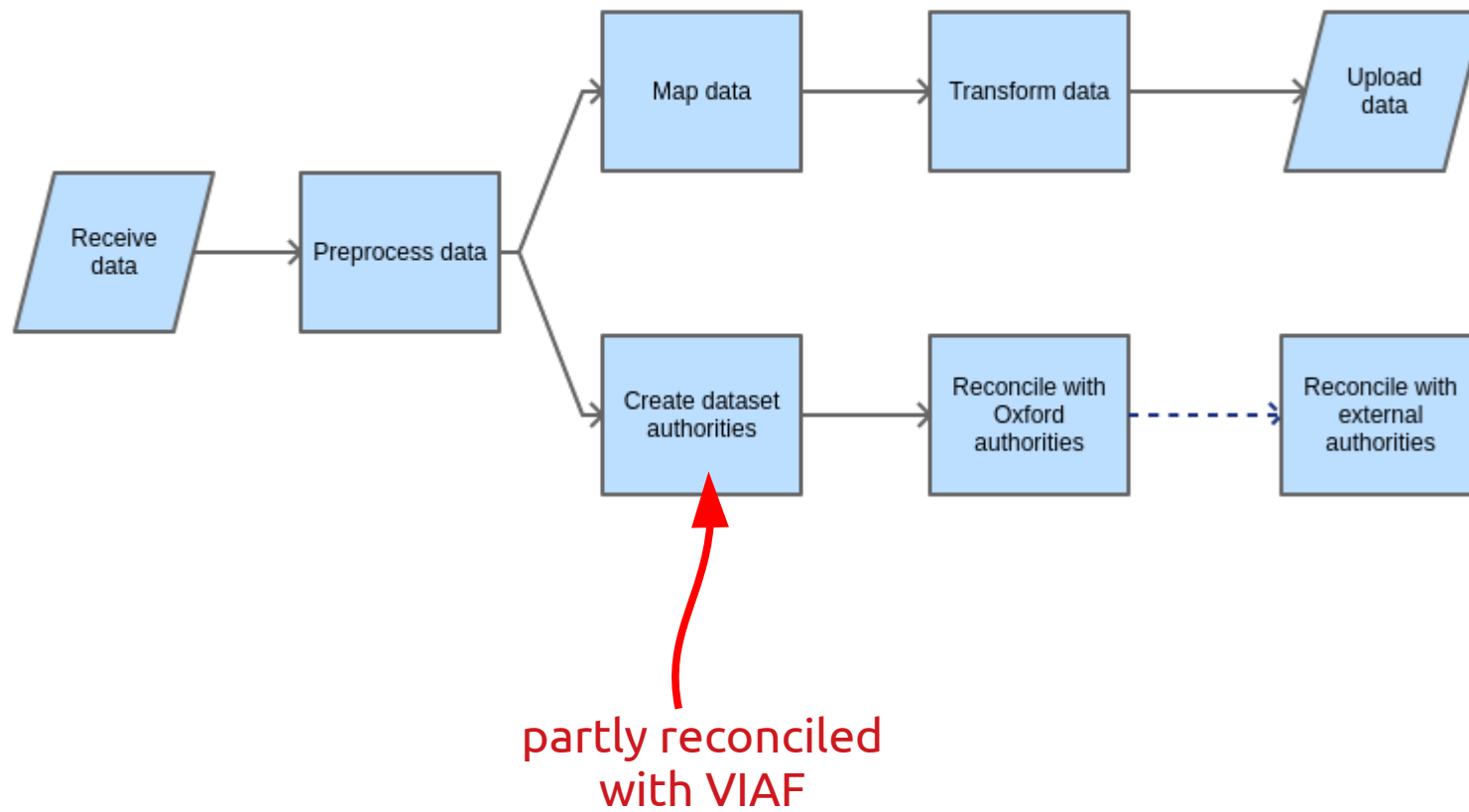
\*R42 has representative manifestation-singleton (is representative manifestation singleton for) is a sub property of P128 carries (is carried by)

# Mapping Fields in Manuscripts

- Date fields
  - Already conform to xsd:DateTime
- Library of Congress Subject Headings
  - Are instances of SKOS concept
- Places
  - Far less common than in other manuscript collections
  - Very rarely tagged semantically
  - Not mapped to GeoNames

#	SOURCE	TARGET
1	D  //manuscript	 frbr:F4_Manifestation_Singleton
1.1	P  classmark	 <i>crm:P48_has_preferred_identifier</i>
	R  classmark	 <i>crm:E42_Identifier</i>
1.2	P  date/(rangefrom known)	 <i>crm:P108i_was_produced_by</i>
		 <i>crm:E12_Production</i>
		 <i>crm:P4_has_time-span</i>
		 <i>crm:E52_Time-Span</i>
	R  date/(rangefrom known)	 <i>crm:P82a_begin_of_the_begin</i>
		 <a href="http://www.w3.org/2001/XMLSchema#dateTime">http://www.w3.org/2001/XMLSchema#dateTime</a>
1.3	P  date/(rangeto known)	 <i>crm:P108i_was_produced_by</i>
		 <i>crm:E12_Production</i>
		 <i>crm:P4_has_time-span</i>
		 <i>crm:E52_Time-Span</i>
	R  date/(rangeto known)	 <i>crm:P82b_end_of_the_end</i>
		 <a href="http://www.w3.org/2001/XMLSchema#dateTime">http://www.w3.org/2001/XMLSchema#dateTime</a>
1.4	P  item/@uri	 <i>frbr:R42_is_representative_manifestation_singleton_for</i>
	R  item/@uri	 <i>frbr:F2_Expression</i>
1.5	P  institution	 <i>crm:P52_has_current_owner</i>
	R  institution	 <i>crm:E40_Legal_Body</i>
1.6	P  repository	 <i>crm:P52_has_current_owner</i>
	R  repository	 <i>frbr:F44_Bibliographic_Agency</i>
1.7	P  collection	 <i>crm:P46i_forms_part_of</i>
	R  collection	 <i>crm:E78_Collection</i>
1.8	P  keywords/term	 <i>crm:P2_has_type</i>
	R  keywords/term	 <i>crm:E55_Type</i>
1.9	P  keywords/term /(@uri @lcsh)	 <i>crm:P2_has_type</i>
	R  keywords/term /(@uri @lcsh)	 <i>skos:Concept</i>





















# Workflow



# Mapping Fields in Works

- Languages
  - Mapped to Getty AAT (mostly)
- VIAF for people
  - Under half of authors reconciled with VIAF
  - But the Fihrist group now has a mechanism to improve that (local authority file)



#	SOURCE		TARGET
2	D	 //item	 frbr:F2_Expression crm:E33_Linguistic_Object
2.1	P	↓ id	↓ <i>crm:P48_has_preferred_identifier</i>
	R	 id	 crm:E42_Identifier
2.2	P	↓ title/(main alt)	↓ <i>crm:P102_has_title</i>
	R	 title/(main alt)	 crm:E35_Title
2.3	P	↓ author/(@uri @viaf)	↓ <i>crm:P94i_was_created_by</i>  crm:E65_Creation ↓ <i>crm:P14_carried_out_by</i>
	R	 author/(@uri @viaf)	 crm:E21_Person
2.4	P	↓ author/(main alt)	↓ <i>crm:P94i_was_created_by</i>  crm:E65_Creation ↓ <i>crm:P14_carried_out_by</i>  crm:E21_Person ↓ <i>crm:P1_is_identified_by</i>
	R	 author/(main alt)	 crm:E41_Appellation
2.5	P	↓ language	↓ <i>crm:P72_has_language</i>
	R	 language	 crm:E56_Language
2.6	P	↓ language/@uri	↓ <i>crm:P72_has_language</i>
	R	 language/@uri	 skos:Concept
2.6	P	↓ title/@uri	↓ <i>frbr:R5_has_component</i>  frbr:F22_Self-Contained_Expression ↓ <i>frbr:R3i_realises</i>
	R	 title/@uri	 frbr:F1_Work

# Next steps

- Complete transformation script with URI generators
- Attempt to reconcile non-VIAF authors
- Transform entire Bodleian subset of Fihrist
- See if any links are found with other datasets

Questions?

# Integration

- Ashmolean Islamic
  - VIAF, Geonames, BM thesaurus and Getty AAT
- MHS
  - Geonames, BM thesaurus
- Fihrist archive
  - VIAF (transformation yet to be completed)

# Integration

- Ashmolean Islamic
  - VIAF, **Geonames**, BM thesaurus and Getty AAT
- MHS
  - **Geonames**, BM thesaurus
- Fihrist archive
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Europe	France
Egypt	India
Turkey	Gujarat
Asia	Spain
USA	Spain?
Africa	Lahore
Syria	Paris
Germany	Pakistan

```

SELECT DISTINCT ?mnhppl WHERE {
  SERVICE <https://antheia-blazegraph.oerc.ox.ac.uk/blazegraph/namespace/history-of-science/sparql> {
    ?mhso a crm:E22_Man-Made_Object .
    ?mhso crm:P108i_was_produced_by ?mnhpe .
    ?mnhpe crm:P7_took_place_at ?mnhpp .
    ?mnhpp rdfs:label ?mnhppl .
    ?mnhpp owl:sameAs ?geopp
  }
  SERVICE <https://antheia-blazegraph.oerc.ox.ac.uk/blazegraph/namespace/ashmolean/sparql> {
    ?asho a crm:E22_Man-Made_Object .
    ?asho crm:P108i_was_produced_by ?ashpe .
    ?ashpe crm:P7_took_place_at ?ashpp .
    ?ashpp owl:sameAs ?geopp
  }
}

```

Europe  
Egypt  
Turkey  
Asia  
USA  
Africa  
Syria  
Germany

France  
India  
Gujarat  
Spain  
Spain?  
Lahore  
Paris  
Pakistan

```
SELECT DISTINCT ?mnhppl WHERE {  
  SERVICE <https://antheia-blazegraph.oerc.ox.ac.uk/blazegraph/namespace/history-of-science/sparql> {  
    ?mhso a crm:E22_Man-Made_Object .  
    ?mhso crm:P108i_was_produced_by ?mnhpe .  
    ?mnhpe crm:P7_took_place_at ?mnhpp .  
    ?mnhpp rdfs:label ?mnhppl .  
    ?mnhpp owl:sameAs ?geopp  
  }  
  SERVICE <https://antheia-blazegraph.oerc.ox.ac.uk/blazegraph/namespace/ashmolean/sparql> {  
    ?asho a crm:E22_Man-Made_Object .  
    ?asho crm:P108i_was_produced_by ?ashpe .  
    ?ashpe crm:P7_took_place_at ?ashpp .  
    ?ashpp owl:sameAs ?geopp  
  }  
}
```

<http://www.mhs.ox.ac.uk/object/inv/37148>	37148 Astrolabe with Lunar Mansions, by Abd al-Karim, Jazira (Mesopotamia)?, 1227/8
<http://www.mhs.ox.ac.uk/object/inv/49861>	49861 Astrolabe, by Hasan `Ali, Egyptian, 1282/3
<http://www.mhs.ox.ac.uk/object/inv/54471>	54471 Celestial Globe, by 'Abd ar-Rahmân b. Burhân al-Mawsilî, Syro-Egyptian?, 1318/19
<http://www.ashmus.ox.ac.uk/collections/238500>	textile
<http://www.ashmus.ox.ac.uk/collections/238501>	textile
<http://www.ashmus.ox.ac.uk/collections/238502>	textile
<http://www.ashmus.ox.ac.uk/collections/352047>	calligraphy
<http://www.ashmus.ox.ac.uk/collections/352095>	figurine
<http://www.ashmus.ox.ac.uk/collections/352721>	bowl
<http://www.ashmus.ox.ac.uk/collections/352722>	dish
<http://www.ashmus.ox.ac.uk/collections/352823>	bowl
<http://www.ashmus.ox.ac.uk/collections/352827>	bowl
<http://www.ashmus.ox.ac.uk/collections/356371>	religious/ritual equipment
...	
...	
...	

```

SELECT DISTINCT ?object ?label WHERE {
  {
    SELECT (?mhsol AS ?label) (?mhsol AS ?label) WHERE {
      SERVICE <https://antheia-blazegraph.oerc.ox.ac.uk/blazegraph/namespace/history-of-science/sparql> {
        ?mhsol a crm:E22_Man-Made_Object .
        ?mhsol rdfs:label ?mhsol .
        ?mhsol crm:P108i_was_produced_by ?mnhpe .
        ?mnhpe crm:P7_took_place_at ?mnhpp .
        ?mnhpp rdfs:label ?mnhppl .
        FILTER (regex(?mnhppl, '^Egypt')) .
        ?mnhpp owl:sameAs ?geopp
      }
    }
  } UNION {
    SELECT (?ashol AS ?label) (?ashol AS ?label) WHERE {
      SERVICE <https://antheia-blazegraph.oerc.ox.ac.uk/blazegraph/namespace/ashmolean/sparql> {
        ?ashol a crm:E22_Man-Made_Object .
        ?ashol rdfs:label ?ashol .
        ?ashol crm:P108i_was_produced_by ?ashpe .
        ?ashpe crm:P7_took_place_at ?ashpp .
        ?ashpp owl:sameAs ?geopp
      }
    }
  }
}

```

# Turkey

< <a href="http://www.mhs.ox.ac.uk/object/inv/35612">http://www.mhs.ox.ac.uk/object/inv/35612</a> >	35612 Horary and Sinecal Quadrant, Turkish, 1925/6
< <a href="http://www.mhs.ox.ac.uk/object/inv/43559">http://www.mhs.ox.ac.uk/object/inv/43559</a> >	43559 Astrolabe, Turkish, 1678
< <a href="http://www.mhs.ox.ac.uk/object/inv/53307">http://www.mhs.ox.ac.uk/object/inv/53307</a> >	53307 Astrolabe, Turkish, 17th Century?
< <a href="http://www.mhs.ox.ac.uk/object/inv/15598">http://www.mhs.ox.ac.uk/object/inv/15598</a> >	15598 Astrolabe-Quadrant, by Ahmad al-Ayyûbî', Turkish, 1682/3
< <a href="http://www.mhs.ox.ac.uk/object/inv/32534">http://www.mhs.ox.ac.uk/object/inv/32534</a> >	32534 Astrolabe-Quadrant, by Muhammad (Mehmet), ?Turkish, 1749-50
< <a href="http://www.mhs.ox.ac.uk/object/inv/39955">http://www.mhs.ox.ac.uk/object/inv/39955</a> >	39955 Astrolabe, by `Adbi, Turkish, 1713/14
< <a href="http://www.mhs.ox.ac.uk/object/inv/47792">http://www.mhs.ox.ac.uk/object/inv/47792</a> >	47792 Astrolabe, by Shaykh Sakkut, Turkish, c. 1800?
< <a href="http://www.ashmus.ox.ac.uk/collections/237674">http://www.ashmus.ox.ac.uk/collections/237674</a> >	textile
< <a href="http://www.ashmus.ox.ac.uk/collections/237675">http://www.ashmus.ox.ac.uk/collections/237675</a> >	textile
< <a href="http://www.ashmus.ox.ac.uk/collections/237676">http://www.ashmus.ox.ac.uk/collections/237676</a> >	textile
< <a href="http://www.ashmus.ox.ac.uk/collections/237677">http://www.ashmus.ox.ac.uk/collections/237677</a> >	textile
< <a href="http://www.ashmus.ox.ac.uk/collections/237678">http://www.ashmus.ox.ac.uk/collections/237678</a> >	textile
< <a href="http://www.ashmus.ox.ac.uk/collections/237679">http://www.ashmus.ox.ac.uk/collections/237679</a> >	textile
< <a href="http://www.ashmus.ox.ac.uk/collections/237710">http://www.ashmus.ox.ac.uk/collections/237710</a> >	curtain
< <a href="http://www.ashmus.ox.ac.uk/collections/237711">http://www.ashmus.ox.ac.uk/collections/237711</a> >	textile
< <a href="http://www.ashmus.ox.ac.uk/collections/237712">http://www.ashmus.ox.ac.uk/collections/237712</a> >	textile
< <a href="http://www.ashmus.ox.ac.uk/collections/237713">http://www.ashmus.ox.ac.uk/collections/237713</a> >	textile
< <a href="http://www.ashmus.ox.ac.uk/collections/237714">http://www.ashmus.ox.ac.uk/collections/237714</a> >	textile
< <a href="http://www.ashmus.ox.ac.uk/collections/237715">http://www.ashmus.ox.ac.uk/collections/237715</a> >	textile
< <a href="http://www.ashmus.ox.ac.uk/collections/237716">http://www.ashmus.ox.ac.uk/collections/237716</a> >	textile
...	
...	
...	

# Gujarat

<<http://www.mhs.ox.ac.uk/object/inv/23600>> 23600 Quadrant, by Sonîmorârjî, Surât, India, c. 1814  
<<http://www.ashmus.ox.ac.uk/collections/361890>> painting  
<<http://www.ashmus.ox.ac.uk/collections/361891>> painting  
<<http://www.ashmus.ox.ac.uk/collections/361892>> painting  
<<http://www.ashmus.ox.ac.uk/collections/361894>> painting  
<<http://www.ashmus.ox.ac.uk/collections/361902>> hanging scroll  
<<http://www.ashmus.ox.ac.uk/collections/361949>> gui  
<<http://www.ashmus.ox.ac.uk/collections/361982>> mirror  
<<http://www.ashmus.ox.ac.uk/collections/361987>> funerary equipment  
<<http://www.ashmus.ox.ac.uk/collections/362146>> hu  
<<http://www.ashmus.ox.ac.uk/collections/362147>> zhong  
<<http://www.ashmus.ox.ac.uk/collections/362171>> belt-buckle  
<<http://www.ashmus.ox.ac.uk/collections/362172>> belt-buckle  
<<http://www.ashmus.ox.ac.uk/collections/362173>> belt-buckle  
<<http://www.ashmus.ox.ac.uk/collections/362223>> funerary equipment  
<<http://www.ashmus.ox.ac.uk/collections/362237>> ceremonial equipment  
<<http://www.ashmus.ox.ac.uk/collections/362239>> funerary equipment  
<<http://www.ashmus.ox.ac.uk/collections/362351>> brush-rest  
<<http://www.ashmus.ox.ac.uk/collections/362360>> ink-stone

...

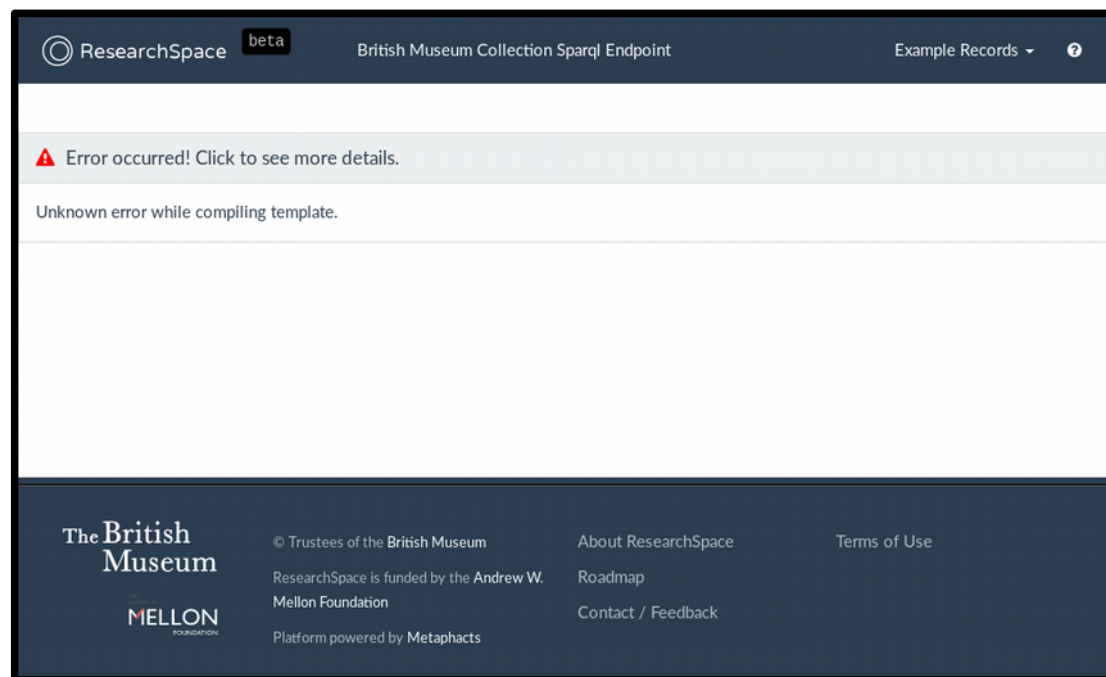
...

...

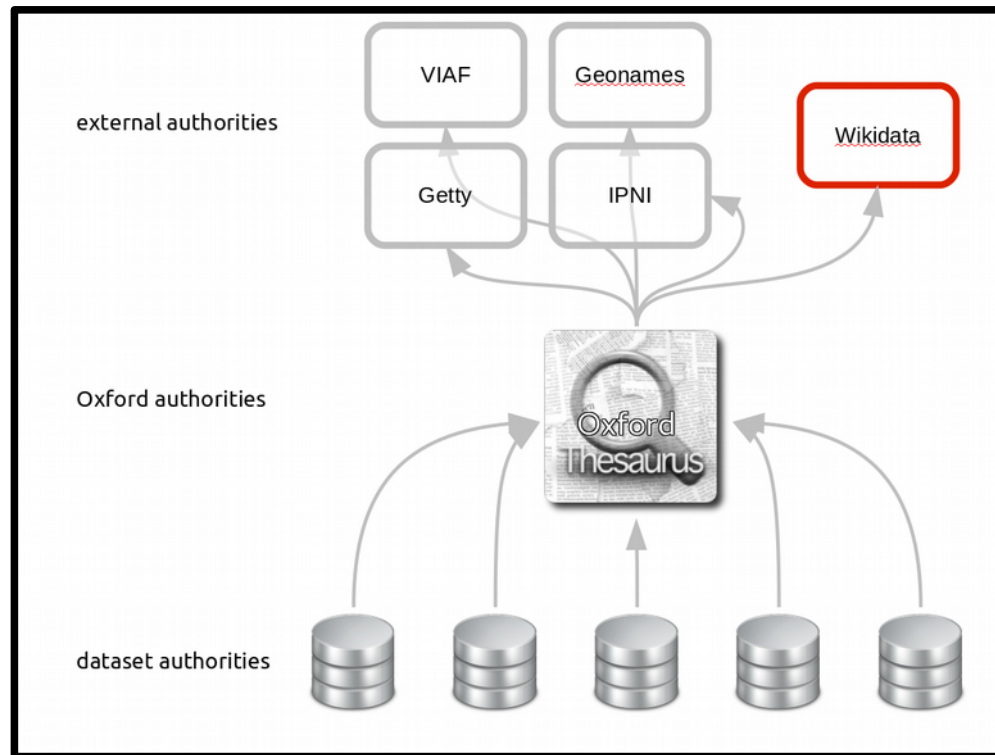


# Integration with BM

- Demonstrated for Ashmolean Indian
  - works with Ashmolean Islamic
  - BM currently revamping endpoint
  - retry



# Reconciliation strategy



# Reconciliation strategy

- Option 1: Reconcile with external authorities
  - CMS need to store local and global IDs
  - Reconciliation managed by collection managers
  - GLAM not in control of authorities
  - GLAM depends on wikidata or similar for authority reconciliation

# Reconciliation strategy

- Option 2: Reconcile with an internal authority
  - CMS use weak IDs (i.e. labels)
  - Reconciliation from internal to external authorities required
  - GLAM in control of authorities
  - Requires resources to maintain and manage internal authority

# Reconciliation strategy

- Option 1: Better solution
  - slow (many years)
  - less work
  - difficult to show Oxford links now
- Option 2: Less good solution
  - fast to showcase Oxford links
  - more work
  - long-term support by GLAM



# Next steps

- Ashmolean Chinese
- Compton Verney



# Next Open Workshop

8 May 2018 - OeRC

