How to pick the low hanging fruits of Linked Data

Seth van Hooland
Ruben Verborgh

DCMI webinar, May 21st 2014
Linked Data for Libraries, Archives and Museums
How to clean, link and publish your metadata
Seth van Hooland and Ruben Verborgh
Price: £49.95
Price (to CILIP members): £39.96
ISBN: 978-1-85604-964-1

FORTHCOMING
Pre-order at Bookpoint by calling +44 (0)1235 827702, emailing facet@bookpoint.co.uk or faxing +44 (0)1235 827703

This highly practical handbook teaches you how to unlock the value of your existing metadata through cleaning, reconciliation, enrichment and linking and how to streamline the process of new metadata creation.

Libraries, archives and museums are facing up to the challenge of providing access to fast growing collections whilst managing cuts to budgets. Key to this is the creation, linking and publishing of good quality metadata as Linked Data that will allow their collections to be discovered, accessed and disseminated in a sustainable manner.

Metadata experts Seth van Hooland and Ruben Verborgh introduce the key concepts of metadata standards and Linked Data and how they can be practically applied to existing metadata, giving readers the tools and understanding to achieve maximum results with limited resources.

Readers will learn how to critically assess and use (semi-)automated methods of managing metadata through hands-on exercises within the book and on the accompanying website. Each chapter is built around a case study from institutions around the world, demonstrating how freely available Linked open data can be used to improve access to the collections and digital assets held by libraries, archives and museums.
Low hanging fruits

- Clean your metadata
- Reconcile with authoritative sources
- Enrich your metadata
- Publish your metadata
Putting LD in practice

• Clean your metadata:
  • UPenn Schoenberg Database of Manuscripts (Philadelphia)

• Reconcile with authoritative sources:
  • Powerhouse Museum (Sydney)

• Enrich your metadata:
  • British Library (London)

• Publish your added-value metadata:
  • Cooper Hewitt National Design Museum (New York)
### Pablo Picasso

**Picture:**

<table>
<thead>
<tr>
<th>Image</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Image 1" /></td>
<td>Imagine non disponibile</td>
</tr>
<tr>
<td><img src="image2.jpg" alt="Image 2" /></td>
<td>Imagine non disponibile</td>
</tr>
<tr>
<td><img src="image3.jpg" alt="Image 3" /></td>
<td>Pablo Picasso</td>
</tr>
<tr>
<td><img src="image4.jpg" alt="Image 4" /></td>
<td>Pablo Picasso</td>
</tr>
</tbody>
</table>

**Comment:**

- Pablo picasso [7,8,12,14]
- fotos, biografía y cuadros de pablo picasso [16]
- Voir toute l’actualité de Pablo Picasso [20]

**Admins:**

- 729353303 [20]

**App ID:**

- 2490221586 [12,14,16]
- 210301922370857 [20]

**Alternate:**

- [http://www.slideshare.net/rss/latest](http://www.slideshare.net/rss/latest) [12,14,16]
- [http://www.slideshare.net/api/oembed/1?format=xml&url=http://www.slideshare.net/guest1c5fb9/pablo-picasso-2491014](http://www.slideshare.net/api/oembed/1?format=xml&url=http://www.slideshare.net/guest1c5fb9/pablo-picasso-2491014) [16]
- [http://www.slideshare.net/api/oembed/1?format=json&url=http://www.slideshare.net/guest1c5fb9/pablo-picasso-2491014](http://www.slideshare.net/api/oembed/1?format=json&url=http://www.slideshare.net/guest1c5fb9/pablo-picasso-2491014) [16]

[show 46 more values ▾](show-46-more-values)
The MIT Total Data Quality Management Program

MIT TDQM Program Highlight
A joint effort among members of the TDQM Program, MIT Information Quality Program, CITM at UC Berkeley, government agencies such as the U.S. Navy, and industry partners. Activities in the TDQM program has evolved into four key areas:

- MIT Information Quality Program
- The International Conference on Information Quality
- The ACM Journal of Data and Information Quality
- Information Quality Certificate Program

Corporate Householding Research
- CHH White Paper (Size 359KB)
- MIT-CHH Introduction (Size 35KB)
- MIT-CHH Description (Size 163KB)
- MIT-CHH Password required area

Join the MITQ/RQ mailing list
(Note: We do not distribute email addresses)

Search MIT TDQM Web Site

Case-study

• Experiment with cleaning operations in a hands-on manner with the Schoenberg Database of Manuscripts metadata

• Download the data from [http://book.freeyourmetadata.org/chapters/2/](http://book.freeyourmetadata.org/chapters/2/)
<table>
<thead>
<tr>
<th>Catalogue ID</th>
<th>Lot or cat.</th>
<th>Price</th>
<th>Currency</th>
<th>Sold</th>
<th>Source</th>
<th>Current location</th>
<th>Author</th>
<th>Author (variant)</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handschriften, Bücher, Autographen</td>
<td>9</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bruni, Leonardo</td>
<td>Bruni Leonardo</td>
<td>Commentary on Salluas Primo Bello Punico</td>
</tr>
<tr>
<td>No. 51: Handschriften, Bücher, Autographen</td>
<td>2</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Josephus, Flavius</td>
<td>Josephus Flavius</td>
<td>De Bello Judaico De Judeorum Velutatis Sive Contra Aponem</td>
</tr>
<tr>
<td>No. 55: Bücher, Handschriften, Autographen</td>
<td>5</td>
<td>125</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Josephus, Flavius</td>
<td>Josephus Flavius</td>
<td>De Bello Judaico De Judeorum Velutatis Sive Contra Aponem</td>
</tr>
<tr>
<td>No. 103: Bücher, Autographen</td>
<td>3</td>
<td>3750</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bruni, Leonardo</td>
<td>Bruni Leonardo</td>
<td>Commentary on Salluas Primo Bello Punico</td>
</tr>
<tr>
<td>No. 103: Bücher, Autographen</td>
<td>21</td>
<td>1250</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sallust</td>
<td>Crispus Sallust</td>
<td>De Conjuratione Caesinae, de Bello Jugurthino</td>
</tr>
<tr>
<td>No. 124: Bücher, Autographen</td>
<td>10</td>
<td>1750</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sallust</td>
<td>Crispus Sallust</td>
<td>De Conjuratione Caesinae, de Bello Jugurthino</td>
</tr>
<tr>
<td>Boston Pub</td>
<td>122</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Boston Public Library, MS 1544</td>
<td>Jacopo Palladio Teramo</td>
<td>Consiliato Picturabrum Seu Processu Beial</td>
</tr>
<tr>
<td>Livres précieux et manuscrits avec miniatures composant la bibliothèque de M. E.M.B.</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cambridge, MA, Harvard University, Houghton Library, MS Typ 170</td>
<td>Camillo Bonadeo</td>
<td>Book of Hours Which Belonged to Claude de Lorraine and Anne de Vendome, the Ms. Includes Oraison, Specialis En Francais By Pierre Dore At the End</td>
</tr>
</tbody>
</table>
Faceting

• One of the core functionalities of Refine, allowing you to discover quickly the true nature of your metadata

• What’s the difference between Primary Seller and Secondary Seller? Apply a text facet on both
Faceting

• New windows in the left side bar

• By default, ordered alphabetically but click on count

• Apply the same facet on Seller 2, so that we can compare the most popular values of both fields

• Experiment on other fields!

• Also check the outliers!
Clustering

• Aggregate automatically different values regarding the same reality

• One of the best features of Refine

• Example: on the field Artist, apply Edit cells > Cluster and edit

• New window pops up with clustering features and options
Cluster & Edit column "Artist"

This feature helps you find groups of different cell values that might be alternative representations of the same thing. For example, the two strings "New York" and "new york" are very likely to refer to the same concept and just have capitalization differences, and "Gödel" and "Godel" probably refer to the same person. Find out more ...

Method key collision $\rightarrow$ fingerprint $\rightarrow$ 91 clusters found

<table>
<thead>
<tr>
<th>Cluster Size</th>
<th>Row Count</th>
<th>Values in Cluster</th>
<th>Merge?</th>
<th>New Cell Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>19</td>
<td>Robert Boyvin (12 rows)</td>
<td></td>
<td>Robert Boyvin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Robert Boyvin? (6 rows)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Boyvin, Robert (1 rows)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Stefano di Tommaso Lunetti? (4 rows)</td>
<td></td>
<td>Stefano di Tommaso Lunetti</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lunetti, Tommaso di Stefano (1 rows)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stefano di Tommaso Lunetti (1 rows)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>Master of Edward IV (21 rows)</td>
<td></td>
<td>Master of Edward IV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Master of Edward IV? (1 rows)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Master of Edward IV (1 rows)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Girolamo da Cremona (12 rows)</td>
<td></td>
<td>Girolamo da Cremona</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Girolamo, da Cremona (1 rows)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[Girolamo da Cremona] (1 rows)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>Memling, Hans, school (4 rows)</td>
<td></td>
<td>Memling, Hans, school</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Memling, Hans, school? (1 rows)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Mercati, Venturino (2 rows)</td>
<td></td>
<td>Mercati, Venturino</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Venturino Mercati (2 rows)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# Choices in Cluster

2 — 3

# Rows in Cluster

2 — 83

Average Length of Choices

6 — 64

Length Variance of Choices

0 — 1.5
Putting LD in practice

- Clean your metadata:
  - UPenn Schoenberg Database of Manuscripts

- Reconcile with authoritative sources:
  - Powerhouse Museum

- Enrich your metadata:
  - British Library

- Publish your added-value metadata:
  - Cooper Hewitt National Design Museum
RDF Refine - a Google Refine extension for exporting RDF

Main features

Reconcile & interlink
- Reconcile against SPARQL endpoints, RDF dumps
- Search the Web for related RDF datasets

Export RDF
- GUI for defining the shape of the RDF graph
- Use your own vocabulary or import existing ones
- Autocomplete for property and class names

Download extension 0.8.0 (Test/ALPHA)
Download ORefine extension 0.9.0

Getting started...

1. Make sure "extensions" folder exists in your Google Refine workspace
2. Download the extension
3. Extract the downloaded zip file to the "extensions" folder
4. Restart Google Refine

Visit the installation guide for more detailed instructions. For tutorials-like material see our showcases. For detailed and technical documentation see the documentation section.

News

2014-03-06: a test version compatible with Open Refine 2.6 beta is released!

2012-07-27: version 0.8.0 released
Support for reconciling using Apache Starbol is added. This feature has been initially implemented for LMF and partially funded by the Republic of Austria within the COMET project Salzburg NewMediaLab.

2012-01-18: version 0.7.5 released

http://refine.deri.ie/
Case study

• Experiment with reconciliation operations in a hands-on manner with the metadata of the Powerhouse museum and the LCSH

• Download the data from http://book.freeyourmetadatadata.org/chapters/3/

• Focus on the Categories field, populated with the Powerhouse museum Object Names Thesaurus (PONT), a locally created vocabulary
<table>
<thead>
<tr>
<th>Record ID</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>Specimens</td>
</tr>
<tr>
<td>80</td>
<td>Botanical specimens</td>
</tr>
<tr>
<td>99</td>
<td>Hand fans</td>
</tr>
<tr>
<td>99</td>
<td>Personal Effects</td>
</tr>
<tr>
<td>99</td>
<td>Clothing and Dress</td>
</tr>
<tr>
<td>222</td>
<td>Specimens</td>
</tr>
<tr>
<td>222</td>
<td>Wool specimens</td>
</tr>
<tr>
<td>223</td>
<td>Animal Samples and Products</td>
</tr>
<tr>
<td>223</td>
<td>Textile Technology</td>
</tr>
<tr>
<td>223</td>
<td>Wool specimens</td>
</tr>
<tr>
<td>226</td>
<td>Specimens</td>
</tr>
<tr>
<td>226</td>
<td>Wool specimens</td>
</tr>
<tr>
<td>226</td>
<td>Animal Samples and Products</td>
</tr>
<tr>
<td>229</td>
<td>Textile Technology</td>
</tr>
<tr>
<td>229</td>
<td>Wool specimens</td>
</tr>
<tr>
<td>229</td>
<td>Animal Samples and Products</td>
</tr>
<tr>
<td>230</td>
<td>Castings</td>
</tr>
<tr>
<td>284</td>
<td>Sculpture</td>
</tr>
<tr>
<td>314</td>
<td>Sculptures</td>
</tr>
<tr>
<td>314</td>
<td>Writing equipment</td>
</tr>
<tr>
<td>373</td>
<td>Castings</td>
</tr>
<tr>
<td>373</td>
<td>Draughts sets</td>
</tr>
<tr>
<td>373</td>
<td>Sculpture</td>
</tr>
</tbody>
</table>
Meteorites

From Library of Congress Subject Headings

Details Visualization Suggest Terminology

Meteorites

URI(s)
› http://id.loc.gov/authorities/subjects/sh85084315
› info:lc/authorities/sh85084315
› http://id.loc.gov/authorities/sh85084315#concept

Instance Of
› MADS/RDF Topic
› MADS/RDF Authority
› SKOS Concept

Scheme Membership(s)
› Library of Congress Subject Headings

Collection Membership(s)
› LCSH Collection - Authorized Headings
› LCSH Collection - General Collection
› LCSH Collection - May Subdivide Geographically

Broader Terms
› Meteor

Narrower Terms
› Achondrites
### Specimens

**From Library of Congress Subject Headings**

<table>
<thead>
<tr>
<th>Details</th>
<th>Visualization</th>
<th>Suggest Terminology</th>
</tr>
</thead>
</table>

**Specimens**

- **URI(s)**
  - http://id.loc.gov/authorities/subjects/sh87008764
  - info:ci/authorities/sh87008764
  - http://id.loc.gov/authorities/sh87008764#concept

**Instance Of**
- MADIS/RDF Topic
- MADIS/RDF Authority
- SKOS Concept

**Scheme Membership(s)**
- Library of Congress Subject Headings
- LCSH Collection - General Collection

**Use as a form subdivision under types of publications, printed matter, etc., for actual specimens of the material.**

- **URI(s)**
  - http://id.loc.gov/authorities/subjects/sh89001749
  - info:ci/authorities/sh89001749
  - http://id.loc.gov/authorities/sh89001749#concept

**Instance Of**
- MADIS/RDF GenreForm
- MADIS/RDF Authority
- SKOS Concept

**Scheme Membership(s)**
- Library of Congress Subject Headings
- LCSH Collection - Subdivisions
- LCSH Collection - GenreForm Subdivisions
- LCSH Collection - General Collection
- Pattern Heading Collection - H1095
Putting LD in practice

- Clean your metadata:
  - UPenn Schoenberg Database of Manuscripts

- Reconcile with authoritative sources:
  - Powerhouse Museum

- Enrich your metadata:
  - British Library

- Publish your added-value metadata:
  - Cooper Hewitt National Design Museum
What is NER?

• Consider the sentence « On 25 September 2006, we visited Washington to see the White House »

• First step => identification
  • 25 September 2006
  • Washington
  • White House

• Second step => disambiguation
What is NER?

- Each entity is associated with a meaning:
  - http://dbpedia.org/resource/White_House
  - http://dbpedia.org/page/Washington,_D.C.

- NE extraction workflow consists of analyzing input content for detecting named entities, assigning them a type weighted by a confidence score and by providing a list of URIs for disambiguation.
Named-Entity Recognition extension for Google Refine / OpenRefine

- 90 commits
- 1 branch
- 5 releases
- 3 contributors

- branch: master

Add WikiMeta service.

RubenVerborgh authored 4 days ago

- module: implement the "reconstruct" method to allow for history-apply / reapply
- src: Add WikiMeta service.
- .classpath: Add base class for NER commands with JSON output.
- .gitignore: Initialize service manager with default list if no previous configura…
- .project: Initialize project with menu placeholders.
- LICENSE.md: Add license.
- README.md: Update paper title.
- build.xml: Added missing line to copy DefaultServices.json to classes dir

latest commit 1879e4e48a

https://github.com/RubenVerborgh/Refine-NER-Extension
Adding extra services

- You need to request an API key to make use of the services of Alchemy and Zemanta:
  - [http://www.alchemyapi.com/api/register.html](http://www.alchemyapi.com/api/register.html)
- Click the Named-entity recognition toolbar button and choose Configure API keys
- Add the keys you received and click Update
Case-study

• Experiment with reconciliation operations in a hands-on manner with the metadata of the British Library (CSV conversion from an RDF file available through Europeana)

• Download the data from

• We’re only interested in the description field
  => Choose View > Collapse other columns
<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>description</th>
<th>AlchemyAPI</th>
<th>Zemanta</th>
<th>DBpedia Spotlight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Sir David  (1758-1825) dancers and musicians</td>
<td>Outline of South Asian history</td>
<td>Choose new match</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sir David</td>
<td>Delhi</td>
<td>Choose new match</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>David</td>
<td>Choose new match</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Watercolor painting</td>
<td>Choose new match</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hookah</td>
<td>Choose new match</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Kashmir</td>
<td>Choose new match</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gouache painting with gold of village life in Kashmir</td>
<td>Gouache</td>
<td>Choose new match</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Kashmir</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Durga Puja</td>
<td>Choose new match</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Watercolour depicting a Durga Puja</td>
<td>Outline of South Asian history</td>
<td>Choose new match</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tamil Nadu</td>
<td>Choose new match</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Vellore</td>
<td>Choose new match</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>India</td>
<td>Tamil Nadu</td>
<td>Vellore</td>
<td>clerks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Outline of South Asian history</td>
<td>Tamil Nadu</td>
<td>Choose new match</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Outline of South Asian history</td>
<td>Vellore</td>
<td>Choose new match</td>
<td></td>
</tr>
</tbody>
</table>
Putting LD in practice

• Clean your metadata:
  • UPenn Schoenberg Database of Manuscripts

• Reconcile with authoritative sources:
  • Powerhouse Museum

• Enrich your metadata:
  • British Library

• Publish your added-value metadata:
  • Cooper Hewitt National Design Museum
Introducing REST

You *don’t* need an API – your *website* is the API.

resources
representations
self-describing messages
hypermedia

REST – REpresentational State Transfer architectural style
Welcome to the beta release of our new collection database!

This is our stuff, we have lots of it

show me more things!

This database represents approximately 75% of the Smithsonian Cooper-Hewitt, National Design Museum’s diverse collection spanning thirty centuries of historic and contemporary design, including thoughts on typography, electronic intelligence, a cat wishing it could play the guitar, George “The Iceman” Gervin, a Chinese grocery and icebergs.

A beta release is an early release and means that active development is ongoing — object research is being added, bugs are being fixed, and erroneous terms are being revised. In spite of the eccentricities of raw data, you can begin exploring the collection and discovering unexpected connections among objects and designers.

https://collection.cooperhewitt.org
A URL uniquely identifies a conceptual resource

**Don’t.**

http://example.org/collection/showObject.aspx

What is this?
Can I bookmark this?
Can I share this?

**Do.**

http://example.org/objects/18353113/

What is this?
Can I bookmark this?
Can I share this?
Each resource can have multiple representations

**Don’t.**

http://example.org/objects/18353113/ gives HTML

http://api.example.org/getObjectJson.php?id=18353113 gives JSON

Can I bookmark this?
Can I share this?

**Do.**

http://example.org/objects/18353113/
gives HTML.
gives JSON.
gives RDF.

Can I bookmark this?
Can I share this?
Use self-descriptive messages

Don’t.

/objects?filter=toy

/?page=2

Can I bookmark this?
Can I share this?

Do.

/objects?filter=toy

/objects?
filter=toy&page=2

Can I bookmark this?
Can I share this?
Use hypermedia in all your representations

Don’t.

```json
{
  "title": "Spun Chair",
  "producer": {
    "id": 1804
  }
}
```

Can I act on this?

Do.

```json
{
  "title": "Spun Chair",
  "producer": {
    "url": "/producers/1804"
  }
}
```

Can I act on this?
What happens if you don’t?
See DPLA and Europeana

What people need to do:
http://dp.la/item/ecdafcf9b06be6efed042e40b3923e57

What machines need to do:
Request an API key.
Receive an e-mail with this key.
Find the right URL template for the “API call”.
Fill out details in the template to construct the URL.
Open this URL.
Drawing, "Page from a sketchbook showing St. Luke.", ca. 1590

type: Drawing

See all objects.

Vertical rectangle. The Apostle stands before a niche, thinking about what he will write next. The Bull crouches behind him. The left lower part of the coat shows the correction of a first design. Verso: "B," horizontally. The bull runs towards left. The putto flies beside him, holding his head. Caption: "A and scribbling/ a fare col vise fra le corne e con lemane sula fronte che/ il toro vede lume corendo." Notes vertically, on top: "adi 18 dicembre bighest et fatken van/ 2 trellen tetrinken/ La di 14 di gennaio comenzai a/ bere la botada 4 borili e 1/2."

Participants

Department

Drawings, Prints, and Graphic Design

Images

http://dataplatform.freeyourmetadata.org/
GET http://dataplateform.freeyourmetadatadata.org/objects/18109141

200 OK 4.29 kB 201 ms

HEADERS
Access-Control-Allow-Origin: *
Connection: keep-alive
Content-Encoding: gzip
Content-Type: application/json
Date: Thu, 15 May 2014 19:12:33 GMT
Etag: "136774574"
Server: nginx/1.1.19
Transfer-Encoding: chunked
Vary: Accept-Encoding
X-Powered-By: Express

BODY

```
{
   "accession_number": "1901-39-126",
   "title": "Drawing, Page from a sketchbook showing St. Luke,", ca. 1590",
   "url": "http://dataplateform.freeyourmetadatadata.org/objects/18109141",
   "department_id": "35347493",
   "period_id": "null",
   "media_id": "35365609",
   "type_id": "35237093",
   "date": "ca. 1590",
   "year_start": "null",
   "year_end": "null",
   "year_acquired": "1901",
}
```

http://hurl.it
Give humans and machines the same API: the Web

It’s all you need now and in the future.

Technologies will change, so identify your concepts, not the technology used to retrieve them.

Use the Web’s links and form to navigate between concepts.
Get in touch!

- Handbook will be available from 19th of June - a review copy anyone?
- Follow @freemetadat, @RubenVerborgh and @sethvanhooland
- EU and US promo tour - contact us if you want to collaborate or co-organize a workshop