



Project Acronym: Europeana v2
Grant Agreement number: 270902
Project Title: Europeana Version 2

D7.2: Report of Inventory of FLOSS Documentation and Sustainability

Revision	FINAL
Date of submission	30 May 2014
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Dissemination Level	Public

REVISION HISTORY AND STATEMENT OF ORIGINALITY

Revision History

Revision No.	Date	Author	Organisation	Description
0.1	9/4/2014	Maarten Brinkerink	Beeld en Geluid	Proposed Table of Contents for the WP
0.2	21/5/2014	Maarten Brinkerink	Beeld en Geluid	First draft, for internal discussion
0.3	22/5/2014	Gregory Markus	Beeld en Geluid	Contextual additions
0.4	23/5/2014	Themistoklis Karavellas, Jaap Blom	Beeld en Geluid	Added details on assessment methodology
0.5	23/5/2014	Maarten Brinkerink	Beeld en Geluid	Consolidated draft version, for discussion with WP7
0.6	26/5/2014	Maarten Brinkerink, Gregory Markus	Beeld en Geluid	Amendments based on WP7 feedback and suggestions
0.7	27/5/2014	Gregory Markus, Maarten Brinkerink	Beeld en Geluid	Further amendments
0.8	28/5/2014	Maarten Brinkerink	Beeld en Geluid	Pre-final version

Statement of originality:

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

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1. Executive Summary

The work of 'Subtask 7.1.2: Inventory and documentation of existing applications' within Work Package 7 (WP7), led by Nederlands Instituut voor Beeld en Geluid (Beeld en Geluid), has led to the creation of a vast and diverse FLOSS Inventory, which consists of 214 entries of open source software that is relevant for the EuropeanaTech community – as established within 'Subtask 7.1.1: Research and Development Community' (PM1-29) – the Europeana Network and the wider Cultural Heritage domain.

The creation of this Inventory has been the result of a successful community engagement strategy, and can be seen as a collaborative effort, supported and moderated by Beeld en Geluid, especially with the instillation of a community manager and the use of a social media campaign. The entries came through research, recommendations and engagement within the EuropeanaTech community and wider cultural heritage domain. This community engagement led to contributions from 37 individual contributors, from the EuropeanaTech community and beyond.

The FLOSS inventory is a time capsule for open source cultural heritage software tools. Entries range from 2007-2014 with the majority coming out of the last few years. Analysis of the Inventory shows that half of the tools available are relevant within the current technological landscape, in terms of how up-to-date the codebase is. Quantification shows that within the current Inventory there is an emphasis on collection management, asset management, and tools for handling metadata. About 1/6 of the entries (40) are missing some relevant fields particularly "last activity" and some (~20) have broken links. The task of mending this lack of information is an ongoing effort undertaken by Beeld en Geluid through contact with the EuropeanaTech community as well as personal initiative to track down missing information. The current level of documentation within the FLOSS Inventory is scattered.

In order to provide developers with more extensive information on the 'reusability' of the entries in the FLOSS Inventory, Beeld en Geluid (with help from the Österreichische Nationalbibliothek, ONB) has set up an extensive assessment of a random selection of 83 entries being reviewed according to this process. The assessment of FLOSS entries thus far is mixed. While the majority of rated tools have a positive review there are still a significant amount which fall in the lower half.

WP7 has been coordinating a migration of the FLOSS Inventory to Europeana Labs, which is being developed in the context of Europeana Creative. This is being pursued in order to improve the accessibility, appeal, organisation and overall user experience of the FLOSS Inventory and increase the number of available tools that promote reuse of cultural heritage content available on Europeana Labs. This action also ensures that the work done on the FLOSS Inventory, carried out in the context of Europeana v2, will be sustained and remains publicly accessible for the EuropeanaTech community and a wider audience. Sustainability of the further maintenance is ensured within Europeana v3.0.

2. Introduction

This report concludes the work of ‘Subtask 7.1.2: Inventory and documentation of existing applications’ (PM1-29) with a description of the work executed within the Subtask and a strategy for sustainability of the results after the project.

The deliverable will first provide a recap of the methodology used to compile the FLOSS Inventory. It will then also provide an updated analysis of its content. It will also provide an assessment of a random selection of 83 individual entries (from the perspective of a developer wanting to reuse these tools). The deliverable will also report on the interaction with the EuropeanaTech community and the sustainability of the inventory, as part of Europeana Labs¹. Europeana Labs is part of the Europeana Creative project².

This document will finally describe how the content of the current inventory will be exported to and represented within the Europeana Labs environment. It will provide details on how visitors of Europeana Labs will be provided with additional information about the entries in the inventory, in the form of quality assessments that have been prepared by Work Package 7 (WP7). Finally the deliverable will summarize the lessons learned, recommendations and conclusions that result from this Subtask.

¹ <http://labs.europeana.eu>

² Europeana Creative WP1 Task 1.2 “Build an online Open Culture Lab” to facilitate creative re-use of cultural heritage content.

²

3. Recap of the Inventory Methodology

The aim of the FLOSS Inventory is to create an inventory of open source software that is relevant for the EuropeanaTech community – as established within ‘Subtask 7.1.1: Research and Development Community’ (PM1-29) – the Europeana Network and the wider Cultural Heritage domain.

After initial preparation of a baseline inventory by Nederlands Instituut voor Beeld en Geluid (Beeld en Geluid), based on Europeana-related project outcomes, the first iteration of the core Inventory of FLOSS in the Cultural Heritage Domain was published in April 2012 (as part of ‘MS38: Core Inventory of FLOSS in the Cultural Heritage Domain, first iteration’³). With the publication of this first iteration a call-for-contributions was sent to the EuropeanaTech community and other relevant developer communities in the cultural heritage domain, like Code4Lib⁴, LODLAM⁵ and Open Knowledge Foundation Labs⁶.

To enable collaborative editing of the FLOSS Inventory, a Google Spreadsheet⁷ was prepared by Beeld en Geluid to ensure that all required information could easily be documented by the community. This spreadsheet was disseminated as a public online resource. A call-for-contributions was sent to various relevant developer communities. Those who wished to have editing rights were given them in order to make the Inventory more communal. This sign-up process involved sending an email to a WP7 member, or using the standard Google Spreadsheet functionality to request access to the document.

Within this collaborative editing process, Beeld en Geluid remained responsible for moderation, quality assurance and the contribution of a core set of entries to the resource. If entries lacked crucial information, it was added by Beeld en Geluid to the best of its ability and knowledge. For instance, to ensure standardization of tags which held almost no uniformity, a list⁸ of possible tags was drafted after brainstorming sessions and peer reviewing within WP7 and the EuropeanaTech community. These tags were then implemented through Google Spreadsheet’s scroll down menu feature. All previous tags were changed to the corresponding approved ones.

³ <http://pro.europeana.eu/documents/866067/aedf0625-0520-442e-b670-dddd503377b7>

⁴ <http://code4lib.org/>

⁵ <http://lodlam.net/>

⁶ <http://okfnlabs.org/>

⁷ https://docs.google.com/spreadsheet/ccc?key=0Ag_7rVJwt0CpdFRJOEJxdEk4ZEMxQ01jaDgxQXFSTkE

⁸

<https://docs.google.com/a/beeldengeluid.nl/spreadsheet/ccc?key=0AoN3jJ2PToabdFYtc1c4bUxzRU9RbTVGSE9HT0Q3ZVE&>

4. Analysis of the Inventory

The analysis below that was performed to inform this report is based on an export of the FLOSS Inventory Google Spreadsheet, dating from 22/5/2014⁹. By that time the inventory contained 224 entries. The entries came through research, recommendations and engagement within the EuropeanaTech community and wider cultural heritage domain. This community engagement led to contributions from 37 individual contributors, from the EuropeanaTech community and beyond.

4.1 Clustering Based on Focus Areas

As described in the Description of Work (page 28) relevant topics for collaboration within the context of EuropeanaTech include, but are not limited to:

- Applications for access provision, user interaction and user generated content. Examples are timelines, interactive maps, tagging games and annotation tools. (linked to Task 7.2)
- Applications for metadata management (i.e. the back-office), such as metadata mapping tools, components for metadata harvesting, linked data publishing, recommendation technology, ontology alignment. (linked to Task 7.3)
- Applications for multilingual access and translation. (linked to Task 7.4)

4.2 Organisation of FLOSS Entries

To be able to identify the entries within the FLOSS Inventory that are relevant in relation to the above mentioned topics, categories were introduced that could be used to label entries to describe their focus areas. Multiple categories could be applied per entry and editors of the inventory could also introduce their own categories.

4.2.1 Introduction of New Entry Tags

In the beginning, Beeld en Geluid curated this process by removing duplicates and by adding categories to entries that lacked them. But to provide the list with more structure and cohesion these categories were revamped. This was accomplished through WP7 brainstorming sessions, analysing old categories in FLOSS, ThoughtLab¹⁰ and the Semantic MindMap¹¹ and deciding on 29 new tags that would cover all aspects of cultural heritage software. These tags were then implemented and all tools had their previous categorizations' changed to the most applicable new tags.

4.2.2 Quantification of FLOSS Entry Tags

The current amount of tools that apply to certain tags follows below. Note that many tools have more than one tag applied to them. Therefore the sum of the below numbers do not reflect the number of entries in the inventory but the number of times that tag appears:

- Data Annotation/Curation (7)
- Media Annotation/Tagging (12)
- Exhibition Management (20)
- Metadata Retrieval Services (45)

⁹ Please refer to Appendix 1.

¹⁰ <http://pro.europeana.eu/thoughtlab>

¹¹ <http://pro.europeana.eu/web/network/europeana-tech/-/wiki/Main/Semantic+activities+around+Europeana>

- Content Retrieval Services (24)
- Collection Management (60)
- Digital Asset Management (29)
- Contextualisation (4)
- Geo-spatial Applications (10)
- Metadata Mapping/Conversation/normalisation (26)
- Metadata Checker/Validation (7)
- Alignment Tools (1)
- Ontology/Vocabulary Building and Management (9)
- Linked Open Data (16)
- Media Applications (15)
- Social Applications (11)
- Search and Browsing (15)
- Image Search (2)
- Speech Recognition (3)
- Interactive User Interface (3)
- Repository Software (5)
- Semantic Extraction (10)
- Semantic Enrichment (6)
- Multilinguality (3)
- Image Similarity (4)
- Data Visualisation (11)
- Publication (3)
- Digital Preservation (23)

This quantification shows that within the current Inventory there is an emphasis on collection management, asset management, and tools for handling metadata. These tools can also be multi-faceted. For example TimelineJS¹² is tagged, Exhibition management, Data annotation/curation and Media Applications. The tool contains aspects of all these areas and thus to improve its 'findability' the addition of new tags was necessary. Especially for the transition to Europeana Labs (see section 7). As it stands now, the Inventory fulfills and provides tools relevant to all three tasks listed above.

4.3 State of Development and Documentation

In order to assess the maturity of the current entries in the inventory, information about the release date, latest activity in the code repository and the level of documentation was gathered. Here Beeld en Geluid also curated the process by checking if the information was up-to-date and by adding information that was lacking.

An analysis of this information shows that $\frac{1}{6}$ of the entries (40) are missing some relevant fields particularly "last activity" and some (~20) have broken links. The task of mending these broken links was undertaken by Beeld en Geluid through contact with the EuropeanaTech community as well as personal initiative to track down missing information. This has resulted in multiple tools being revamped within the inventory. Last activity is an ongoing process of research and updating. This category has been deemed irrelevant for Europeana Labs (see section 7) due its constant fluctuation.

4.4 Up-to-Dateness and Relevance of the FLOSS Entries

The FLOSS inventory is a time capsule for open source cultural heritage software tools. Entries range from 2007-2014 with the majority coming out of the last few years. A large

¹² <http://timeline.knightlab.com/>

majority entries have not had recent activity or if there has been activity it has been minimal. Some tools were developed by individuals and not under the umbrella of a university or institution. This explains the lack of activity for such software. More highly developed well funded tools like Omeka¹³ from George Mason University or DSpace¹⁴ from the DSpace Foundation are constantly being updated.

However, based on the analysis of the Inventory we conclude that half of the tools available are relevant within the current technological landscape in terms of how up-to-date the codebase is. That does not mean the other tools are irrelevant. Due to the fact they are open source, the principal is that some form of code exists and can be freely used and expanded upon by anyone. The other half of the inventory in that sense still contains relevant code that could be efficiently utilized by developers.

4.5 Documentation

The current level of documentation within the FLOSS Inventory is scattered. 48 tools have minimal documentation. 63 have a good documentation, 69 have complete documentation and the rest (44) have no documentation available. This is not overly positive with half the inventory not having documentation or very minimal documentation. No documentation makes implementation and use difficult, thereby making said tools more difficult for developers to implement. However, the other half represent valuable tools for the cultural heritage and creative sectors.

¹³ <http://omeka.org/>

¹⁴ <https://github.com/DSpace/DSpace>

5. Assessment of the Entries

5.1 Reviewing the FLOSS Inventory

In order to provide developers with more extensive information on the 'reusability' of the entries in the FLOSS Inventory, Beeld en Geluid (with help from the Österreichische Nationalbibliothek, ONB) has set up an extensive assessment¹⁵ of the entries in the Inventory, based on an exported 'frozen' version of the Inventory number 173 entries, dating from 13/12/13¹⁶. This resulted in a random selection of 83 entries being reviewed according to this process. Ratings were done based on three areas; (1) Quality of Documentation, (2) Ease of Adaptation, and (3) Quality of Code. This work will be continued within Europeana v3.0, with the aim to have all entries assessed accordingly (also for new additions).

In the following image you see a representative example of a review where Quality of Documentation, Ease of adaptation and Code quality are addressed:

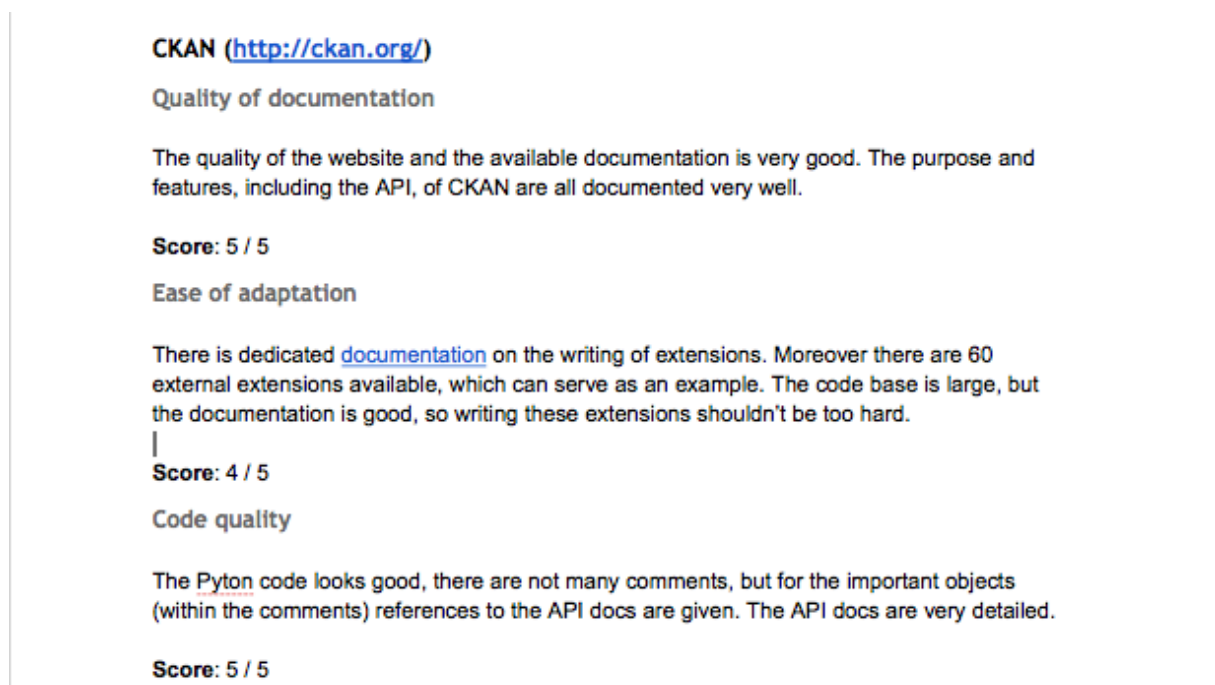


Image 1: Example of a FLOSS assessment

5.1.1 Quality of Documentation

Documentation quality was judged using a set of checklist criteria that prompts reviewers to look at hosting and findability (Github, custom website), whether or not the documentation contains the most necessary information, how well the documentation is written, frequency of documentation updates, availability of tutorials for users, tutorials for programmers and whether or not there were live demos.

The above-mentioned criteria provide a descriptive overview of the documentation quality. When going through the available documentation, the level of detail in the documentation as

¹⁵ Please refer to Appendix 2.

¹⁶ Please refer to Appendix 3.

well as the nature and size of each tool were both taken into account. For small project for instance the inclusion of a README file can suffice, while larger projects often call for community supported issue tracking and resolution.

5.1.2 Ease of Adaptation

Ease of adaptation was judged using a similar checklist. The criteria for adaptation assessment were: the tools ability to plug-in, its ability to be plugged on other tools (e.g API), the available documentation for adapting and extending, availability of developer support via mailing list, and the number or list of known installations, with focus on production and commercial uses.

Even though all the software tools included in the FLOSS Inventory are open-source by nature, the adaptation of each tool is highly dependent on the skills of the person who wants to reuse such a software. For this category the design and implementation of the tools, aspects that could help in portability, and usage over different platforms and together with other tools have been evaluated.

5.1.3 Quality of Code

Code quality was assessed just like the other two, following these criteria: Is the code properly hosted, is the package structure clear, are there any comments in the code? (if not, is the code readable?), is the programming language common or exotic, existence, and other metrics (such as code coverage) of automated tests, does the code have convenient build scripts (is there anything that indicates it's easy to run?), the use of standards (e.g. for data exchange), the number of contributors, the frequency of code updates and releases, existence of active community, and the existence of sustainability plans or a product roadmap?

5.2 Analysis of Assessments

Of the FLOSS entries assessed so far the ratings are as follows:

Quality of Documentation		Ease of Adaptation		Code Quality	
Score:	Entry Number:	Score:	Entry Number:	Score:	Entry Number:
5/5	29	5/5	19	5/5	23
4/5	24	4/5	15	4/5	20
3/5	7	3/5	9	3/5	13
2/5	12	2/5	11	2/5	9
1/5	10	1/5	15	1/5	5
0/5	13	0/5	12	0/5	11

Table 1: Overview of the FLOSS entry ratings

The assessment of FLOSS entries thus far is mixed. While the majority of rated tools have a positive review there are still a significant amount which fall in the lower half. Tools with a 0/5 rating represent entries that have either no documentation, or code which makes implementation impossible, or the links to documentation and source code are broken or missing.

Assets Classification (<http://assets4europeana.eu/>)

Quality of Documentation

The website is a blog titled 'European Education Technology Terms'. There is no search bar, so it would be very tedious to find out whether there is mention of this tool. The link to the code repository is a bare SVN repository without documentation.

Score: 1 / 5

Ease of adaptation

Since there is no documentation and just a bare SVN with a Java (Maven) project, it would be tedious to adapt this tool

Score: 1 / 5

Code Quality

The code looks like a standard Java / Maven project, including tests. There is no documentation whatsoever, so there is no urge to inspect this code any further.

Score: 2 / 5

Image 2: Example of a FLOSS entry with poor reviews

6. Interaction with the EuropeanaTech Community

6.1 Instillation of a Community Manager

The FLOSS Inventory has grown to a total of 224 entries. Since the installment of a EuropeanaTech community manager in January 2014 several actions have been taken to improve the content of the Inventory as well as raise further awareness amongst the EuropeanaTech community and beyond. These actions included cleaning and updating the spreadsheet to make sure all links are properly working and up-to-date, searching for possible new additions, encouraging the people behind FLOSS tools to provide more info or new additions if possible.

Effort has been invested in liaising with other past and current initiatives that create or have created inventories of a similar nature, both within Europeana-related projects (like EuropeanaConnect¹⁷ and Europeana Cloud¹⁸), but also initiatives beyond the scope of Europeana. The EuropeanaTech community manager, for instance, is now also a candidate to be an editor for the DiRT Directory¹⁹. DiRT is a longstanding, well-regarded source of information about tools available to support scholarship in the humanities, which would help expand the EuropeanaTech community and the FLOSS Inventory to higher international level.

6.2 Twitter Campaign

The FLOSS Inventory has also had its profile raised through the 'Did You Remember to #FLOSS?' Twitter campaign, which highlighted a new tool everyday throughout the month of March. The campaign was considered successful due to the amount of traffic brought to the EuropeanaTech Twitter account, including 83 new followers, during that time doubling the amount of new followers garnered the previous two months. Some tweets received over a thousand views.

¹⁷ <http://www.europeanaconnect.eu/>

¹⁸ <http://pro.europeana.eu/web/europeana-cloud>

¹⁹ <http://dirt.projectbamboo.org/news/dirt-seeks-editorial-board>

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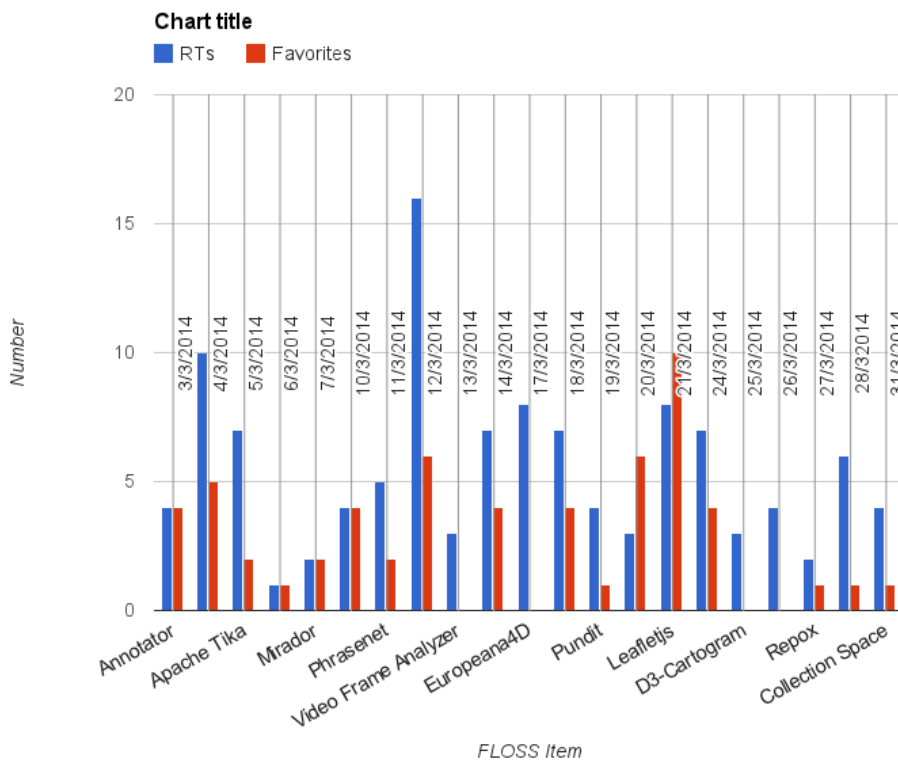


Table 2: RT (Retweet) and Favorites from the Twitter Campaign

In an attempt to keep the momentum from the campaign going, the EuropeanaTech Twitter account regularly (2-3 times per week) mentions a FLOSS entry or the Inventory in general.



Image 3: Example of a successful FLOSS entry tweet, with Twitter statistics included

The campaign shed some light on what the community finds most appealing in terms of interesting or relevant tools. Predicting what an audience will appreciate and share is tricky. The FLOSS entries chosen for the campaign had a wide variety to help discern popularity for future reference.

Item	Tag 1	Tag 2	Tag 3	Interactions
Annotator	Data Annotation/Curation			8

Ilpimage	Exhibition Management	Media Applications		15
Apache Tika	Metadata Retrieval Services	Semantic Enrichment		9
CHcontext	Content Retrieval Services			2
Mirador	Media Applications	Media Annotation/Tagging		4
Annotorious	Media Annotation/Tagging			8
Phrasenet	Collection Management			7
Waisda	Media Annotation/Tagging	Social Applications		22
Video Frame Analyzer	Digital Preservation	Media Annotation/Tagging		3
Blacklight	Search and Browsing			11
Europeana4D	Metadata Retrieval Services	Data Visualisation	Geo-spatial Applications	8
Seadragon	Media Applications			11
Pundit	Semantic Enrichment	Data Annotation/Curation	Linked Open Data	5
Tabula	Semantic Extraction			9
Leafletjs	Data Visualisation	Geo-spatial Applications		18
Gathrit	Social Applications	Data Annotation/Curation	Exhibition Management	11
D3-Cartogram	Geo-spatial Applications	Data Visualisation		3
Omeka/Neatline	Exhibition Management	Social Applications	Media Annotation/Tagging	4
Reposx	Repository Software	Metadata Retrieval Services		3
Timeline JS	Exhibition Management	Data Annotation/Curation	Media Applications	7
Collection Space	Collection Management			5

Table 3: Interactions (RTs and Favorites) related to the tools' tags

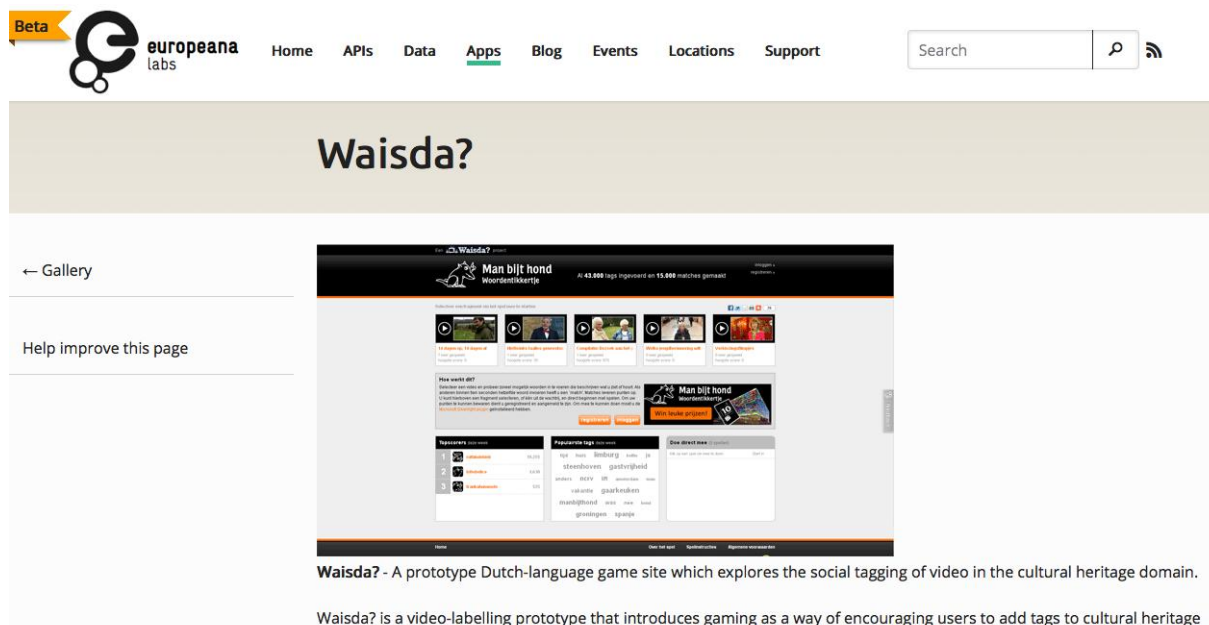
As can be seen in the table above, the most popular tools were those that had to do with “Media” “Social” “Exhibition Management” and “Geo-spatial”. These tools are predominantly interesting for those not directly associated with the technical side of cultural heritage. They are timelines, image annotators, players, viewers etc; front-end tools that end-users can directly interact with, instead of back-end tools. This knowledge is positive because these tools promote the creative reuse of cultural heritage content. A full report of the Twitter campaign can be read in Appendix 4.

7. Migration of the FLOSS Entries to Europeana Labs

In an effort to take subtask 7.1.1. “establish and organise collaboration within the community of software developers linked to Europeana” further, Europeana v2 WP7 and EuropeanaCreative WP1 Task 1.2 “Build the Online Open Culture Lab” (herein referred to as Europeana Labs) have been coordinating the transfer of all FLOSS entries and ThoughtLab tools to Europeana Labs.

7.1 Motivation

The motivation for this transfer is to improve the accessibility, appeal, organisation and overall user experience of the FLOSS Inventory and increase the number of available tools that promote reuse of cultural heritage content available on Europeana Labs. This action also ensures that the work done on the FLOSS Inventory, carried out in the context of Europeana v2, will be sustained and remains publicly accessible for the EuropeanaTech community and a wider audience. Sustainability of the further maintenance is ensured within Subtask 2.1.1 of Europeana v3.0, which will “continue work on Europeana FLOSS inventory. The current inventory will be elaborated into wider knowledge base covering: metadata formats and enrichment, media formats, data re- use, metrics and success indicators.”.



Waisda? - A prototype Dutch-language game site which explores the social tagging of video in the cultural heritage domain.

Waisda? is a video-labelling prototype that introduces gaming as a way of encouraging users to add tags to cultural heritage

Image 4: Example of FLOSS Entry on Europeana Labs

7.2 Process

The work undertaken for the migration thus far has primarily been focused on the selection of entries to move, and planning the organisational structure of the FLOSS items on Labs.

7.2.1 Selection

Entries for the migration were selected through several ways. First and foremost the assessments were used. Every tool that had a positive assessment was chosen. Since 83 entries out of the 224 were reviewed the next determiner was well-known entries within the cultural heritage tech community like Annotator²⁰. Next, tools from a highly regarded

²⁰ <http://okfnlabs.org/projects/annotator/index.html>

institution like Mirador²¹, which was developed by Stanford University were chosen. To also provide a mix even tools with lower reviews were selected to provide Labs with diversity. The first batch selected for migration contains 50 entries.

7.2.2 Organisation

Because the FLOSS inventory is so diverse and expansive, discussion between WP7 from Europeana v2 and Europeana Labs has revolved around deciding how to best organise these items on Europeana Labs.

Early meetings allowed each invested party to become more familiar with the other's work. It was essential that everyone understood what the other had developed so far and the vision they had for said development's future. This guaranteed that everyone was on the same page.

Next it was important that WP7 understood how the migration would be accomplished, manually, via Github or via a Google SpreadSheet. It was decided that FLOSS entries will be migrated directly to Europeana Labs, via a separate Google SpreadSheet.

Once it was understood that the migration could be done easily, there were several e-mail threads and Skype calls to brainstorm how the FLOSS tools would be represented on Labs. It was decided that the entries would be featured in the "Apps" section under the umbrella category "Open Source Project".

There was also the need to expand and improve the existing FLOSS tags and metadata fields that would also be utilized on Labs. This resulted in the creation of new tags (see section 3), strategic exclusion of irrelevant or not-up-to-date information fields, and professional evaluation and reviewing of the FLOSS Inventory entries. All of these decisions and actions will ensure a better user experience to end users than the current FLOSS Inventory Google SpreadSheet can provide.



Image 5: "Search and Browsing" tag for ThoughtLab entry on Europeana Labs

7.2.3 Utilisation of Entry Reviews

The assessments and ratings mentioned in section 5 will all be available on Europeana Labs to better guide developers to the best tools. It will also provide an outlet for community discussion through a comments feature. These features are still under discussion between WP7 and Europeana Labs, to ensure the best user experience.

7.2.4 Migration of ThoughtLab to Europeana Labs

Europeana ThoughtLab has tools similar to the FLOSS Inventory but has the same metadata fields currently being used by Europeana Labs. This made it easy to migrate to Europeana Labs via the Europeana Github. FLOSS entries, on the other hand, have more

²¹ <http://iif.io/mirador/>

comprehensive fields, which requires Europeana Labs to develop the platform further before migration can occur.

However, since ThoughtLabs entries are similar and were also given new tags in-line with the ones developed for FLOSS it was used as a test-case scenario which could be used to help better the transfer of FLOSS to Labs.

ThoughtLab entries were structured in Labs within the “R&D Results” section on the Apps page. The migration was successful.

Since ThoughtLab served as a test-case for migrating tools to Europeana Labs we took time to analyze the entries once they were available on labs.

Several questions arose upon investigation:

1. How should entries which are not open source be handled?
 - a. This promoted an ethics discussion over whether or not non-open source tools should be available on Labs. This debate is on-going but for the time being tools which are not open source will remain on Labs while the Europeana Labs team confirms their vision of what Europeana Labs’ app section should and should not contain.
2. How should entries with no working code or working links be handled?
 - a. This case arose because of ThoughtLab tools with broken or missing links to either source code, demo or documentation. It was decided that these tools can stay on Labs as a reference of past work. They have a description and sometimes a URL to a past project website. This allows end users to see what can be developed. There will be a disclaimer on the tool’s designated page noting that the tool is no longer under development and any questions should be to directed towards the developer whose e-mail address will be provided.
 - b. All the developers of these tools were contacted to see if links could be re-established. This was mostly unsuccessful because project funding which spawned the tools ended.

7.2.5 Future of the FLOSS Inventory

The current FLOSS Inventory in its Google Spreadsheet form will remain as a staging area and workspace for community members who want to update their tools with more relevant information or add new ones. A systemic migration process is currently being developed to synchronise the FLOSS Google SpreadSheet with Europeana Labs so that changes made in one will be reflected in the other. This task is still under development. For the time being entries will be migrated manually.

8. Lessons Learned and Recommendations

- Inventory needs to be actively monitored and updated by an approved individual or else it will severely fall out of date quickly. This work will be continued in the context of Europeana v3.0 by the EuropeanaTech community manager as part of task 2.1.1.
- Metadata field standards for the tools must be regulated and systematized or else the inventory will become inconsistent lowering the user experience and deterring use. For example if a tool is uploaded by a community member who chooses a separate tag than the ones provided the tool's 'findability' amongst the others will be severely diminished. This is of particular significance if the FLOSS Inventory Google SpreadSheet is directly synchronized with the entries on Labs.
- Social media campaigns can provide greater exposure and deeper engagement for 'techy' subjects. Integrating such subject in the overall marketing strategy for Europeana might be considered. Within the context of Europeana v3.0 the EuropeanaTech community manager will develop new campaigns. For instance, a webinar format is being considered as model to create deeper community engagement around project and Task Force outcomes. The community manager will and liaise closely with the Europeana Marketing department. Based on the results from the Twitter Campaign, it might be advisable to focus on end-use facing applications, prototypes and tools for a social media audience.
- There is a substantial and diverse offering of open source tools within the cultural heritage domain, aimed at supporting all kinds of relevant purposes. The FLOSS Inventory provides a first step in the process of making better use of this potential, together with the EuropeanaTech community. These next steps will be explored in, amongst other contexts, Europeana v3.0.
- Europeana v2 proved not to be the only project or initiative trying to create an overview of the availability of open source tools in the cultural heritage domain, although other initiatives were often aimed at a more specific type of tools, for specific purposes. Keeping tabs on and trying to engage with other communities and initiatives proved very valuable and has contributed to the extensiveness of the current FLOSS Inventory.
- Open source tools are very diverse in nature and need to be assessed accordingly. In an ideal environment, each tool would fit in a category depending on the nature of the tool (script, stand alone application, web application, etc.), its size, its programming language, etc. But of course these criteria as well would need to be decided depending on the reason of the assessment and the outcome predicated. For the FLOSS Inventory the criteria used are selected in order to be able to describe all the tools found in the list and are expected to produce interesting/helpful views from their results. Further assessments of FLOSS entries should take this into consideration.

9. Conclusions

The FLOSS Inventory serves as a valuable resource for developers within the cultural heritage sector or creative designers who want to integrate cultural heritage content into their work. The Inventory is a result of a truly collaborative community process, that was further boosted by the instillation of a community manager.

While a majority of cultural heritage open source tools have high quality code, documentation and are easily adaptable, there is still a significant portion that does not. This why the reviews and assessments done are so significant. They provide guidance and insight for end-users with the hope of promoting (re)use and further development of such tools.

By transferring the FLOSS entries to Europeana Labs, these tools will be given a better home where they can be more easily browsed through and directly searched for.

10. Appendices

1. FLOSS Inventory (exported to PDF on 22/5/2014, 14 pages)
2. FLOSS Assessments (exported to PFD on 28/5/2014, 40 pages)
3. Frozen version of the FLOSS Inventory, for the FLOSS Assessments planning ('frozen' on 3/12/13, exported to PFD on 23/5/2014, 12 pages)
4. FLOSS Twitter Campaign Report (exported to PDF on 28/5/2014, 6 pages)

Name	Description	Developers	Project website	Europeana Affiliation (if any)	Code repository	Last release	Last activity	Documentation (title/language)	Technical support available	License	Examples	Notes	CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4	CATEGORY 5	Available on Labs
ALTO-Editor	Browser based post correction tool for ALTO XML files	Rene van der Ark	https://github.com/KBNLResearch		https://github.com/KBNLResearch/alto-editor	2012	August 2014	minimal/eg	no	GPL			Digital Asset Management					
Annotator	The Annotator is an open-source JavaScript library and tool that can be added to any webpage to make it annotatable.	Open Knowledge Foundation	http://okfnlabs.org/annotator/		https://github.com/okfn/annotator/	12/3/2013		Complete / EN	yes	either MIT or GNU GPLv3	http://okfnlabs.org/annotator/demo/		Data Annotation/Curation					
Annotorious	Annotorious is a JavaScript annotation library for images and zoomable images. Link the Annotorious source files (CSS and JavaScript) into an existing HTML page, and images inside this page will be enhanced with an interactive drawing and commenting tool.	Rainer Simon Peter Pilgerstorfer Paul Weichhart	http://annotorious.github.io		https://github.com/annotorious/annotorious	v0.6 (14/08/2013)	actively ongoing	yes (english)	Yes	LGPL	http://annotorious.github.io		Media Annotation/Tagging					Staging
Apache PDFBox	The Apache PDFBox™ library is an open source Java tool for working with PDF documents. This project allows creation of new PDF documents, manipulation of existing documents and the ability to extract content from documents.	The Apache Software Foundation	http://pdfbox.apache.org/		http://pdfbox.apache.org/downloads.html			complete / EN	yes, community based	Apache License, Version 2.0			Digital Asset Management	Collection Management				Staging
Apache Stanbol	Apache Stanbol (currently in incubation) is an open source modular software stack and reusable set of components for semantic content management.	http://incubator.apache.org/stanbol/team.html	http://incubator.apache.org/stanbol/	have done a demo with LOD from Europeana		5/31/2012		complete / EN	yes	Apache License, Version 2.0	http://dev.iks-project.eu:8081/enhancer/chair/austrian-national-library		Semantic Enrichment	Collection Management	Digital Asset Management			Staging
Apache Tika	The Apache Tika toolkit detects and extracts metadata and structured text content from various documents using existing parser libraries.		http://tika.apache.org/		http://tika.apache.org/download.html	7/3/2013	actively ongoing	complete / EN	yes	Apache License, Version 2.0			Metadata Retrieval Services	Semantic Enrichment				Staging
Archivematica	Archivematica is a free and open-source digital preservation system that is designed to maintain standards-based, long-term access to collections of digital objects.	This project is managed by Artefactual Systems in collaboration with the UNESCO Memory of the World's Subcommittee on Technology, the City of Vancouver Archives, the Museum of Modern Art (MoMA), the University of Alberta Libraries, the University of British Columbia Library, the Rockefeller Archive Center, Simon Fraser University Archives and Records Management, Yale University Library and a number of other collaborators.	https://www.archivematica.org/wiki/Main_Page		https://github.com/artefactual/archivematica	v0.10.1-vm (beta) May 2013	actively ongoing	yes (EN)	yes	AGPL3 license	sankofa.archivematica.org/administration/accounts/login/ (user name: demo@example.com, password: demo)		Digital Preservation					Staging
ArchivesSpace	A next-generation archives management application that will incorporate the best features of Archivist's Toolkit (AT) and Archon. The project team is developing a technical platform, governance structure, and service model that will provide the archival community with a cutting-edge, extensible, and sustainable platform for describing analog and born-digital archival materials. The ArchivesSpace product is being developed using an Agile scrum process, guided by a Product Vision for ArchivesSpace.	Hudson Molongio	www.archivespace.org		https://github.com/archivespace/archivespace/wiki	ArchivesSpace 1.0.7.1 (March 2014)	on-going	Basic technical / EN	yes	ECL 2.0		This initiative is led by New York University, University of Illinois (Urbana-Champaign), and University of California, San Diego	Collection Management					Staging
Archivist's Toolkit (AT)	The AT is an open source archival data management system to provide support for the management of archives. The main goals of the AT are to support archival processing and production of access instruments, promote data standardization, promote efficiency, and lower training costs. Currently, the application supports accessioning and describing archival materials. Future functionality will be built to support repository user/resource use information, appraisal for archival materials, expressing and managing rights information, and interoperability with user authentication systems.	Nathan Stevens	http://www.archiviststoolkit.org/		http://archiviststoolkit.org/forDevelopers	25/01/2013	actively ongoing	Good / EN	Yes	Educational Community License, v. 1.0			Metadata Mapping/Conversat					Staging
Ar4Europe	Ar4Europe is an application which makes easier for the user to gain their knowledge about historical monuments. During our visit at the museum we can take a picture of a painting and the application will download data for us referring to selected painting by using very sophisticated methods of comparing pictures straight from Europeana API.	iTraff Technology; Tomasz Grzywalski, Jakub Jurkiewicz, Jakub Porzuczek, Marcin Szajek	http://www.ar4Europe.com/	Hackathon winner	N/A	Unreleased prototype	6/8/2011	None	no	Unreleased prototype, but will be open source	http://www.youtube.com/watch?v=C6PEz2d7OLE ; http://www.youtube.com/watch?v=cP3htvZN-Hk	How many times have you been in an	Metadata Retrieval Services	Interactive User Interface				
ASSETS 3D search demo		EKETA-CERT; Michalis Lazaridis	http://ipro.europeana.eu/web/guest/though	ThoughtLab / ASSETS	http://europeanalabs.eu/svn/assets/trunk/services/fr-three/	6/13/2012	6/13/2012	Complete / EN	yes[1]	Open Source	http://assettest.atc.gr/ASSETS3DSearch/		Image Search	Image Similarity				
ASSETS Annotation Propagation		EKETA-CERT; Michalis Lazaridis	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/services/visual-annotationpropagation/			None	no				Enriching metadata					
ASSETS Audio Search		BMAT; Oscar Paytvi	http://www.assets4europeana.eu/	ASSETS				None	no				Information retrieval services	Similarity Search				

Name	Description	Developers	Project website	Europeana Affiliation (if any)	Code repository	Last release	Last activity	Documentation (title/language)	Technical support available	License	Examples	Notes	CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4	CATEGORY 5	Available on Labs
ASSETS Classification		CNR: Fabrizio Sebastiani, Andrea Esuli	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/services/ingestion-metadataclassification/			None	no				Data processing					
ASSETS Image search demo		CNR: Giuseppe Amato	http://www.assets4europeana.eu/8080/assetsIRService/	ThoughtLab / ASSETS	http://europeanalabs.eu/svn/assets/trunk/services/ir-image/	6/12/2012	6/12/2012	none /EN	yes[1]	Open Source	http://www.virservi.cnr.it:8080/assetsIRService/index		Image similarity	Content retrieval services	Image search			
ASSETS Knowledge Extraction		CNR: Fabrizio Sebastiani, Andrea Esuli	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/services/ingestion-knowledgeextraction/			None	no				Data processing					
ASSETS Manual Annotation Tool		INA: Patrick Couronnet	http://www.assets4europeana.eu/	ASSETS				None	no				Enriching metadata					
ASSETS Metadata Cleaning		CNR: Fabrizio Sebastiani, Andrea Esuli	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/services/ingestion-cleaning/			None	no				Data processing					
ASSETS Metadata-based Ranking		CNR: Diego Ceccarelli, Claudio Lucchese	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/services/ir-text/			None	no	Open Source			Information retrieval services					
ASSETS Preservation-Normalization		AJT: Sergiu Gontea, Andrew Lindley, Roman Graf	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/services/preservation/			None	no	Open Source			Digital Preservation					
ASSETS Preservation-Notification		ENG: Luigi Brugnolo, Massimiliano Nigrelli, Marco Guarini	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/services/preservation/			None	no	Open Source			Digital Preservation					
ASSETS Preservation-Risk Management		AJT: Sergiu Gontea, Andrew Lindley, Roman Graf	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/services/preservation/			None	no	Open Source			Digital Preservation					
ASSETS Query Personalization		UPS: Tsuyoshi Sugibuchi, Nicolas Spyrtatos	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/services/community/			None	no				Information retrieval services	User engagement				
ASSETS Query Suggestion		CNR: Diego Ceccarelli, Claudio Lucchese	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/services/ir-text/			None	no	Open Source			Information retrieval services					
ASSETS Relevance Feedback		EKETA-CERT: Michalis Lazardis	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/services/visual-relevancefeedback/			None	no				Information retrieval services					
ASSETS Semantic Cross-Linking		EKETA-CERT: Michalis Lazardis	http://www.assets4europeana.eu/	ASSETS				None	no				Information retrieval services					
ASSETS Taxonomy-based Notification		UPS: Tsuyoshi Sugibuchi, Nicolas Spyrtatos	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/services/community/			None	no				Data processing					
ASSETS User Generated Contents		CNR: Carlo Meghini, Nicola Aloia, Cesare Concordia	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/services/community/			None	no	Open Source			User engagement					
ASSETS Video Summarisation		UAM: Fernando Lopez	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/services/ir-video/			None	no				Information retrieval services	Similarity search				
ASV Toolbox	ASV Toolbox is a modular collection of tools for the exploration of written language data. They work either on word lists or text and solve several linguistic classification and clustering tasks. The topics covered contain language detection, POS-tagging, base form reduction, named entity recognition, and terminology extraction. On a more abstract level, the algorithms deal with various kinds of word similarity, using pattern based and statistical approaches. The collection can be used to work on large real world data sets as well as for studying the underlying algorithms. The ASV Toolbox can work on plain text files and connect to a MySQL database. While it is especially designed to work with corpora of the Leipzig Corpora Collection, it can easily be adapted to other sources.	University of Leipzig	http://wortschatz.uni-leipzig.de/~cbi/ann/software/toolbox/		http://wortschatz.uni-leipzig.de/~cbi/ann/software/toolbox/			good/en/de		MIT			Collection Management	Ontology/Vocabular Building and Management				
Avalon Media System	The Avalon Media System is an open source system for managing large collections of digital audio and video files	Indiana University and Northwestern University	http://www.avalonmediasystem.org/		https://github.com/avalonmediasystem	11/2013	ongoing	Complete / EN	yes, community based	Apache 2.0	http://www.avalonmediasystem.org/try-out-avalon		Collection Management					
AVI MetaEdit	Similar to the BWF MetaEdit tool that AVPS also developed in collaboration with FADGI, AVI MetaEdit supports embedding and validating metadata in RIFF-based AudioVisual Interleave format (AVI) video files. AVI is currently the target format for creation of Preservation Masters within the Digitization Services Branch at NARA.	FADGI / NARA	https://github.com/usnationalarch		https://github.com/usnationalarchives	2/17/2012	2/17/2012	Minimal / EN	yes	NARA OPEN SOURCE AGREEMENT VERSION 1.3			Metadata Mapping/Conversat	Metadata Checker/Validation	Digital Asset Management			
BHL Scan List	This catalogue allows users to browse and search titles held by BHL Europe and BHL member institutions using advanced filtering. It will be further developed and extended towards the Global References Index to Biodiversity (GRIB).	Wolfgang Koller	http://bhl.nhm-wien.ac.at/scanlist/	ThoughtLab	http://code.google.com/p/bhl-bits/source/browse/trunk/scanlist?r=52		2010-05-19	Minimal / EN	yes	BSD	http://bhl.nhm-wien.ac.at/scanlist/		Metadata Retrieval Services					
BIBFRAME	Two tools designed to help you evaluate MARC Bibliographic data in the BIBFRAME model: a companion service and a transformation service	Library of Congress Network Development and MARC Standards Office	http://bibframe.org/		https://github.com/1cneldev/marc2bibframe			Complete / EN	no		http://bibframe.org/demos/		Metadata Checker/Validation	Metadata Mapping/Conversat				
BibServer	BibServer is a tool for quickly and easily sharing collections of bibliographic metadata. By making it simple for people to use this information, we make scholarship better.	Open Knowledge Foundation	https://github.com/okfn/bibserver		https://github.com/okfn/bibserver		June 2012	Minimal / EN	yes	GNU Affero GPL	http://bibsoup.net/		Metadata Retrieval Services	Collection Management				
Blacklight	RoR gem discovery interface for any Solr index		http://projectblacklight.org/		https://github.com/projectblacklight/blacklight	6/25/2012		Good / EN	yes	Creative Commons Attribution-Share Alike 3.0 United States License.	https://github.com/projectblacklight/blacklight/wiki/Example		Search and Browsing					Staging
Bolt	Bolt is a tool for Content Management, which strives to be as simple and straightforward as possible. With this general user manual you will be able to use Bolt to produce and edit content for your website.	Bob den Otter	http://bolt.cm/		https://github.com/bolt/bolt		15/5/2014	good/en					Collection Management					Staging

Name	Description	Developers	Project website	Europeana Affiliation (if any)	Code repository	Last release	Last activity	Documentation (status/language)	Technical support available	License	Examples	Notes	CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4	CATEGORY 5	Available on Labs
BWF MetaEdit Tool	This tool permits embedding, editing, and exporting of metadata in Broadcast WAVE Format (BWF) files. This tool can also enforce metadata guidelines developed by the Federal Agencies Audio-Visual Working Group, as well as recommendations and specifications from the European Broadcasting Union (EBU), Microsoft, and IBC.	FADGI	http://bwfmetaedit.sourceforge.net/		http://bwfmetaedit.sourceforge.net/Download/Source/	3/1/2012		Minimal / EN	yes				Metadata Mapping/Conversion	Metadata Checker/Validation	Digital Asset Management			
Casual Curator	Deceased prototype of the CasualCurator web application developed for the Hack4Europe hackathon	Decipher team: Mike Stapleton, Systems Simulation; Mike Selway, Systems Simulation; Eoin Killeather, Dublin Institute of Technology	http://decipher-research.eu/casual_curator.html	Hackathon winner	https://github.com/ekilleather/Casual-Curator	6/9/2011	6/9/2011	Minimal / EN	no			The Casual Curator prototype is no longer available	Semantic Extraction	Interactive User Interface	Content Retrieval Services			
Catmandu	Catmandu provides a suite of Perl modules to ease the import, storage, retrieval, export and transformation of metadata records.	Nicolas Steenlant, Patrick Hochstetzbach	http://librecat.org/index.html		https://github.com/librecat/catmandu/	11/2013	ongoing	Good / EN	no	GPL-2, or later			Metadata Retrieval Services	Metadata Mapping/Conversion	Collection Management			
CHContext	CHContext is a JavaScript-based widget that is able to provide a list of links to cultural heritage materials based on predefined item of a website on which it is embedded (via given JQuery HTML selector).	Digital Libraries Team of Poznań Supercomputing and Networking Center	https://github.com/psnc-dl/chcontext	Europeana Awareness	https://github.com/psnc-dl/chcontext	10/9/2013		Good / EN	yes	EUPL V. 1.1	https://github.com/psnc-dl/wp-chcontext/wiki/Sites-Using-the-Widget		Content Retrieval Services					Staging
CKAN	CKAN is an open-source DMS (data management system) for powering data hubs and data portals. CKAN makes it easy to publish, share and use data.	Open Knowledge Foundation	http://ckan.org/		https://github.com/okfn/ckan/blob/master/LICENSE.txt	13/08/2013	ongoing	Complete / EN	yes	Affero GNU GPL v3.0	http://ckan.org/case-studies/		Collection Management					Staging
CMUSphinx	CMUSphinx is a speaker-independent large vocabulary continuous speech recognizer released under BSD style license. It is also a collection of open source tools and resources that allows researchers and developers to build speech recognition systems.	Carnegie Mellon University	http://cmusphinx.sourceforge.net/		http://sourceforge.net/projects/cmusphinx/			Complete / EN	yes	BSD license			Enriching metadata	Speech Recognition				Staging
CollectionSpace	CollectionSpace is an open-source collections management application that meets the needs of museums, historical societies, and other collection-holding organizations. CollectionSpace is designed to be configurable to each organization's needs, serving as a gateway to digital and physical assets across an institution. The software is freely distributed via open-source licensing, and an active developer community ensures that CollectionSpace is continually improving.	January 2014: Lyrasis is now the organizational home of CollectionSpace. (The project was initiated and led by Museum of the Moving Image. Transition team includes developers based at University of California, Berkeley and Fluid Project at Ontario College of Art and Design; and Jesse Martinez, Freelance developer and Service Provider.) Project Partners 2008-2013 included: University of California Berkeley, Fluid Project at Ontario College of Art and Design, and Centre for Applied Research in Educational Technologies (CARET) University of Cambridge	www.collectionspace.org		Current release 4.0: https://github.com/collectionspace/	10/2013	on-going	Various guides / EN	yes	ECL 2.0	www.demo.collectionspace.org	Collection Management	Collection Management					Staging
Collective Access		Whirl-i-Gig	http://www.collectiveaccess.org/	None (though used by some Europeana data providers)	http://collectiveaccess.org/support/developers	1/2012		Complete / EN	yes	GNU GPL v.2	http://collectiveaccess.org/about/users	Can act as both OAI-PMH client and server	Collection Management	Content Retrieval Services	Exhibition Management			Staging
COMET	Perl based Marc21 analysis tool and Perl based Marc21 to RDF publishing tool	Ed Chamberlain, Cambridge University Library	http://cul-comet.blogspot.nl/		https://github.com/edchamberlain/COMET	2011		Minimal / EN	no	GPL			Metadata Retrieval Services	Linked Open Data				
Conjecture	Conjecture is a modular, extensible, open-source C++ framework for Optical Character Recognition (OCR). Conjecture is not a single OCR, but rather is an extensible collection of OCRs that can be explored, analyzed, compared, extended, modified, and merged within a unified environment.	unknown	http://conjecture.sourceforge.net/conjecture/index		http://conjecture.sourceforge.net/conjecture/download.php	2007		good/en		GPL			Digital Asset Management					
ConservationSpace	The goal of ConservationSpace is to develop an open-source software application that will address a core need of the conservation community for a shared solution to the problem of documentation management. The conservation community has long recognized that a digital approach to managing its documentation would improve continuity in procedures, increase access, expand research opportunities, and better ensure the preservation of its documents.		www.conservation-space.org/									The project is being led by the National Gallery of Art (Washington, D.C., USA) with participation from Yale University Special Collections Library, Courtauld Institute, British Museum, Indianapolis Museum of Art, Metropolitan Museum of Art, Statens Museum for Kunst, and the Denver Art Museum. Sirma ITT was awarded the development contract in 2013 (http://www.sirma.com/?Sirma_ITT). Version 1.0 is expected to be released in 2014.	Collection Management					
Constraint Analysis Tool	Data and digital analysis tools.	Kathleen Kenney	http://blogs.loc.gov/digitalpreservat		https://github.com/farrell/Constraint-Analysis		11/2011	Minimal / EN	yes				Content Retrieval Services	Crawl analysis				
Coral	CORAL is an Electronic Resources Management System consisting of interoperable modules designed around the core components of managing electronic resources.	University of Notre Dame's Hesburgh Libraries	http://erm.library.nd.edu/		https://github.com/ndlibersa			Complete / EN	yes	General Public License	http://coraldemo.library.tamu.edu/		Metadata Retrieval Services	Collection Management				

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Cultural Enrichment Mashificator	Collaboration tools.	Jeremy Ottevaner	http://cogit.ottevaner.plus.com/cgi-bin/ez/index.php	Europeanahackath		Unreleased		None	no				Content Retrieval Services	Metadata Retrieval Services				
D3-cartogram	Continuous area cartograms with d3 and TopoJSON	Shawn Allen	http://pragmaticcode.com/d3-cartogram/		https://github.com/shawnbol/d3-cartogram			None	no	MIT license			Geo-spatial Applications	Data Visualisation				Staging
DAITSS	DAITSS is a digital preservation software application	Florida Center for Library Automation (FCLA)	http://daits.fcla.edu/		https://github.com/daits			Complete / EN	no	GNU General Public License, Version 3	http://daits.fcla.edu/content/download		Digital Preservation					Staging
dat	dat is an open source tool that enables the sharing of large datasets, allowing for a decentralized collaboration flow	Max Ogden	http://dat-data.com/		https://github.com/maxogden/dat	still pre-alpha		Good / EN	no	BSD License			Metadata Mapping/Conversat	Collection Management				Staging
Data Explorer	Data import, graphing and sophisticated data transformation. It builds on RedlineJS + oauth / github connectors borrowed from Prose. It's part of an ongoing plan to create a "Data Orchestra" of lightweight data services that can play nicely together with each other and connect to things like the DataHub or GitHub.	Rufus Pollock, Michael Aufreiter, Chris Herwig, Mike Morris and others	http://explorer.okfnlabs.org/#pp/e3e3e3018dfe15119f7e/view/grid		none	31-07-2012	on-going	Good/EN	no	MIT license	http://explorer.okfnlabs.org/#pp/e3e3e3018dfe15119f7e/view/grid		Metadata Retrieval Services	Data Visualisation				Staging
Data Pipes	Data Pipes is a service to provide streaming "pipe-like" data transformations on the web – things like deleting rows or columns, find and replace, head, grep etc.	Open Knowledge Foundation	http://datapipes.okfnlabs.org/		https://github.com/okfn/datapipes			Good/EN	no	MIT License	http://datapipes.okfnlabs.org/cv/head%20-%20%20%20cut%20delete%2017?/grep%20-%20London/html/Tu+Htt+https://raw.githubusercontent.com/okfn/datapipes/master/test/data/gla.csv		Metadata Mapping/Conversat					Staging
DBpedia Spotlight	DBpedia Spotlight is a tool for automatically annotating mentions of DBpedia resources in text, providing a solution for linking unstructured information sources to the Linked Open Data cloud through DBpedia.	Pablo Mendes (Freie Universität Berlin), Jun 2010-present, Jo Daber (Charles University in Prague), Mar 2011-present, Prof. Dr. Chris Bizer (Freie Universität Berlin), supervisor, Jun 2010-present, Juan Francisco Oneña, Alejandro Peña	https://github.com/okfn/dbpedia-spotlight		https://github.com/okfn/dbpedia-spotlight	10/2012		complete / EN	yes	Apache License, 2.0, LingPipe			Linked Open Data	Data Annotation/Curation				Staging
Dédalo; Intangible Heritage management and Oral History Dedupe	Semantic RDF data sources	Gregg, Forest, and Derek Eder	http://www.fmo.org		http://www.fmo.org/dedalo/pg/download.php	3.5.56	July 2012	Complete / ES	Yes	GNU GPL v3	http://dedalo.antopolis.net/dedalo/home/		Collection Management	Content Retrieval Services				Staging
Delving Platform: CultureHub and SIP-Creator	A python library for accurate and scalable data deduplication and entity-resolution.	Manuel Bernhardt, Gerald de Jong, Eric van der Meulen, Sjoerd Siebinga, Thomas Wikman, Juliane Stiller	https://github.com/dedup/dedup		https://github.com/datamade/dedup		2013	good/en		MIT License			Collection Management					
Delving Platform: CultureHub and SIP-Creator	CIDOC CRM (Conceptual Reference Model)	Sjoerd, Eric, Gerald were original members of the Europeana development team	http://delving.eu		https://github.com/delving	Monthly cycle	Active now	Good / EN	Yes	EUPL, Apache 2.0	http://www.digitalecollectienerland.nl/http://saminger.kultuurnet.nl/	Support contract: Delving Credits	Metadata Mapping/Conversat	Metadata Checker/Validation	Metadata Retrieval Services			
Digital Preservation Software Platform (DPSP)	The DPSP is a collection of software applications which support the goal of digital preservation.	National Archives of Australia	http://idpsp.sourceforge.net/		http://idpsp.sourceforge.net/download.php	7/31/2013		Complete / EN	no	GPLv3			Digital Preservation					Staging
DigitalLabels	Django app to generate an interactive gallery label interface, optimized for touch screens and tablets.	V&A Digital Media team	http://vanda.github.io/DigitalLabels/		http://vanda.github.io/DigitalLabels/			Good / EN	no	BSD License			Exhibition Management					
djatoka	djatoka is open source Java software that builds upon a rich set of APIs and libraries to provide a service framework for the dynamic dissemination of JPEG 2000 image files.	The New York Times	https://sourceforge.net/apps/mediawiki/		http://sourceforge.net/djatoka/code/HEAD/tree/			Complete / EN	yes, community based	LGPLv2	http://sourceforge.net/apps/mediawiki/djatoka/index.php?title=Main_Page&Demo		Content Retrieval Services	Collection Management				
Doc Viewer	HTML5 document viewer	Jeremy Ashkenas, DocumentCloud	https://github.com/documentcloud		https://github.com/documentcloud/document-viewer			Minimal / EN	no	Apache License, v2.0			Media Applications					
DocSplit	Docsplit is a command-line utility and Ruby library for splitting apart documents into their component parts: searchable UTF-8 plain text, page images or thumbnails in any format, PDFs, single pages, and document metadata (title, author, number of pages, ...)	Jeremy Ashkenas, DocumentCloud	http://documentcloud.github.io/docsplit/		https://github.com/documentcloud/docsplit/	v 0.7.2 February 21, 2013		Complete / EN	no	LGPL			Collection Management					Staging
DSpace	DSpace open source software is a turnkey repository application	DSpace Foundation	http://www.dspace.org/		https://github.com/DSpace/DSpace	7/24/2013		Complete/EN	yes	Open Source: http://www.dspace.org/licenses/	demo.dspace.org		Collection Management	Metadata Retrieval Services	Repository Software			Staging
EADitor	Data and digital management tools.	Ethan Gruber, American Numismatic Society	http://eaditor.blogspot.com/		http://code.google.com/p/eaditor/	1.11.2 beta (December 2011)	June 2012	Good / EN	yes	Apache License 2.0	http://numismatics.org/archives/	Supports dissemination through Atom and OAI-PMH	Collection Management	Metadata Retrieval Services				Staging
easyLOD	Simple framework for exposing Linked Open Data from arbitrary sources.	Mark Jordan	https://github.com/mjordan/easyLOD		https://github.com/mjordan/easyLOD			Minimal / EN	no	MIT License			Linked Open Data	Metadata Retrieval Services				
EasyRDF	A PHP library to quickly parse RDF. It supports URIs, redirect and simple "queries" via API.		http://www.easyrdf.org/		http://www.easyrdf.org/downloads	31/21/2013		Good		BSD 3-Clause			Linked Open Data	Metadata Retrieval Services				Staging
Echoprint	Internet design and authoring tools.	The Echonest in partnership with MusicBrainz	http://echoprint.me/		https://github.com/echonest/		22/4/2013	Good / EN	yes	The code generator is MIT and the server is Apache 2			Content Retrieval Services	Metadata Retrieval Services				Staging
EFG Authority File Manager	Web Publication	Paolo Manghi		ThoughtLab		Unreleased		None	no		http://demo.authfile.research-infrastructures.eu/		Enriching metadata					
EFG Metadata Editor		Franca Debole		ThoughtLab		Unreleased		None	no		http://multimatch01.isti.cnr.it/MetadataEditorPublic[2]		Enriching metadata					
ElasticSearch	ElasticSearch is a distributed RESTful search engine built for the cloud.	http://www.elasticsearch.com/about/team/	http://www.elasticsearch.org/		https://github.com/elasticsearch/elasticsearch			Complete / EN	yes	Apache License, Version 2.0			Search and Browsing	Content Retrieval Services	Metadata Retrieval Services	Collection Management		

Name	Description	Developers	Project website	Europeana Affiliation (if any)	Code repository	Last release	Last activity	Documentation (title/language)	Technical support available	License	Examples	Notes	CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4	CATEGORY 5	Available on Labs
ERMeS	Electronic Resource Management (ERM) Software	William Doering, Galadriel Chilton	http://murphylibrary.uwax.edu/erm/		http://murphylibrary.uwax.edu/erm/	6/1/2010		Good / EN	yes	Attribution Assurance License			Metadata Retrieval Services					
Europeana 4D	Our europeana 4D interface - e4D - enables comparative visualisation of multiple queries and supports data annotated with time span data.	Ralf Stockmann, Genik Scheuermann, Stefan Jänicke, Christian Mähne	http://wp1187670.wp212.webpack.hosteurope.de/e4d/?page_id=11	ThoughtLab / EuropeanaConnect	http://wp1187670.wp212.webpack.hosteurope.de/e4d/?page_id=11	Unreleased prototype	2011-07-29	Minimal / EN	yes	Unreleased prototype, but will be open source	http://wp1187670.wp212.webpack.hosteurope.de/e4d/?page_id=9		Metadata Retrieval Services	Data Visualisation	Geo-spatial Applications			
Europeana API geo-wrapper		Adrià Mercader, Independent developer	http://amercader.net/dev/geoeuropea	Hackathon winner	https://github.com/amercader/geoeuropeana	4/2/2011	4/5/2011	Good / EN	No		https://github.com/amercader/geoeuropeana/tree/master/	A thin wrapper around the Europeana API that transforms the results feed in a GeoRSS. It also includes a demo application that uses the geo wrapper to perform spatial queries. http://amercader.net/blog/2011/04/europeana-hackathon	Metadata Retrieval Services	Geo-spatial Applications				Staging
Europeana Geo Search app for Android		Georg Petz, Austrian National Library		Hackathon winner	http://svn3.xp-dev.com/svn/eurohack/trunk/Europeana%20Hackathon/	4/2/2011	4/2/2011	None	No		http://pro.europeana.eu/document_library/get_file?uid=2ab262ca0-a4e7-4ea7-87b-a2828e2e2eb&groupid=462475	This Android App shows you records from Europeana with geo coordinates nearby your location. It uses https://github.com/amercader/geoeuropeana to get GeoRSS results.	Content Retrieval Services	Metadata Retrieval Services	Geo-spatial Applications			
Europeana Language Resource Repository	The Europeana Language Repository collects resources which are necessary for query translation and vocabulary mapping in Europeana.	Aaron Kaplan - EuropeanaConnect	http://europeanalabs.eu/wiki/LinguisticRe	EuropeanaConnect	https://europeanalabs.eu/svn/contrib/in-oes/trunk/	Unknown		Good (EN)	No				Multilinguality	Ontology/Vocabulary Building and Management				
Europeana Search API component for Joomla 1.6	Europeana Search API component for Joomla 1.6.	Pictura: Mark Lindeman	http://eurohack.pictura-dp.nl/	Hackathon winner	http://eurohack.pictura-dp.nl/index.php/download	2011		Minimal / EN	No	GPL			Collection Management	Metadata Retrieval Services				
Europeana4j	A Java library which allows applications to search and retrieve Europeana data.	Andrés Viedma	http://code.google.com/p/europeana4j/	EuropeanaHackathon	http://code.google.com/p/europeana4j/	6/2011		Minimal / EN	No	Apache License 2.0		Java library that makes easier the access to the Europeana API	Metadata Retrieval Services	Linked Open Data				
Europeana Client	Java client for the Europeana Search API. Refactored and Mavenized version of Europeana4j	Sergiu Gordia	https://github.com/europeana/eur	Europeana V 2.0	https://github.com/europeana/europeana-client/	14/2/2014		minimal/EN	no			Improved version of Europeana4j	Metadata Retrieval Services	Linked Open Data				
EuropeanaConnect Gazetteer		André Soares, Gilberto Pedrosa	http://www.europeanaconnect.org/	ThoughtLab / EuropeanaConnect		Unreleased		None	no		http://europeana-geo.ist.cnr.it/gazetteer		Geo-spatial Applications	Metadata Retrieval Services				
EuropeanaConnect Geoparser		Nuno Freire	http://www.europeanaconnect.org/	ThoughtLab / EuropeanaConnect		Unreleased		None	no		http://europeana-geo.ist.cnr.it/geoparser		Metadata Mapping/Conversion					
eXtensible Catalog	eXtensible Catalog is open source, user-centered, next generation discovery interface software for libraries and consortia. It comprises four software components that can be used independently to address a particular need or combined to provide an end-to-end discovery system to connect library users with resources. Image similarity search source code	eXtensible Catalog Organization - University of Rochester	http://www.exlibnecatalog.org/		https://drupal.org/project/xc , http://code.google.com/p/kometadataservicebookit/ , http://code.google.com/p/xcocookit/ , http://code.google.com/p/xcnccp2bookit/	1/28/2014	2/26/2014	complete/EN	yes	MIT License (the Java based Toolkit), GNU General Public License (Drupal Toolkit)	http://catalog.lib.kyushu-u.ac.jp/en/xc/search		Collection Management	Search and Browsing	Linked Open Data			
Image Similarity Client	Image similarity search source code	Sergiu Gordia	https://github.com/europeana/Eur	Europeana Creative	https://github.com/europeana/Europeana-Creative/tree/master/image-similarity-client	October 2013		minimal/en	no		http://image-similarity.at.ac.at/imagdemo/	Server code: https://github.com/europeana/Europeana-Creative/tree/master/image-demo https://github.com/europeana/Europeana-Creative/tree/master/image-similarity	Image Similarity					
EuropeanaXMLBulk	A tool for downloading a full record descriptions in the ESE format from any OAI-PMH-compliant interface.	PCSS Digital Libraries Team	http://dl.pnc.pl/software/EXB/sitk	EuropeanaLocal	http://dl.pnc.pl/software/EXB/site/source-repository.html	Unknown		Good / EN	yes	GNU LESSER GENERAL PUBLIC LICENSE			Metadata Retrieval Services					
Evergreen	Evergreen is a highly-scalable software for libraries that helps library patrons find library materials, and helps libraries manage, catalog, and circulate those materials, no matter how large or complex the libraries.	Various	http://www.open-ils.org/		http://www.open-ils.org/downloads.php	11/16/2011	4/9/2011	Complete / EN	yes	GNU GPL			Collection Management	Search and Browsing				
ExifTool	ExifTool is a platform-independent Perl library plus a command-line application for reading, writing and editing meta information in a wide variety of files.	Phil Harvey	http://www.sno.phy.queensu.ca/~phil/exiftool/		http://www.sno.phy.queensu.ca/~phil/exiftool/			Complete / EN	yes	GNU General Public License, v.1 or later			Metadata Retrieval Services	Metadata Mapping/Conversion	Metadata Validation			Staging
Fedora Commons	Fedora (Flexible Extensible Digital Object Repository Architecture) was originally developed by researchers at Cornell University as an architecture for storing, managing, and accessing digital content in the form of digital objects inspired by the Kahn and Wilensky Framework. Fedora defines a set of abstractions for expressing digital objects, asserting relationships among digital objects, and linking "behaviors" (i.e., services) to digital objects.	various researchers at Cornell University	http://fedora-commons.org/		http://www.fedora-commons.org/software	15/11/2012	actively ongoing	Complete / EN	yes: community based	Apache License, Version 2.0.	http://www.fedora-commons.org/about/examples		Digital Asset Management	Content Retrieval Services	Collection Management			
File Analyzer and Metadata Harvester	This application functions like a digitization Swiss army knife. The application allows a user to analyze the contents of a file system or external drive and generates statistics about the contents of the contained directories. The application can be used to generate checksum values to ensure the bit-level integrity of files after they have been copied to a new device. After a collection of files have been converted from one digital format to another, this application can verify that there is a one-to-one match of before and after files.	NARA	http://blogs.archives.gov/online-public-access/?p=6270		https://github.com/usnationalarchives/File-Analyzer	2011	8/2012	Complete / EN	no	NARA OPEN SOURCE AGREEMENT VERSION 1.3			Digital Preservation	Metadata Mapping/Conversion	Metadata Validation			
File_MARC	Parse, modify, and create MARC records	Dan Scott	http://pear.php.net/package/File_M		http://pear.php.net/package/File_MARC/download	10/30/2013		Complete / EN	yes	GNU Lesser General Public License			Collection Management					

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Fixity	Fixity is a utility for the documentation and regular review of stored files.	AudioVisual Preservation Solutions	http://www.avpreserve.com/avpresresources		https://github.com/avpreserve/fixity	1/13/2014, v.0.3		Good / EN	yes	Apache License, Version 2.0.			Metadata Mapping/Conversat	Media Checker/Validation				
Franken +	The Initiative for Digital Humanities Media and Culture (IDHMC) at Texas A&M University as part of its Early Modern OCR Project (eMOP) has created a new tool called Franken+ that provides a way to create font training for the Tesseract OCR engine using page images. This is in contrast to Tesseract's document method of font training which involves using a word processing program with a modern font. "Franken+ works in conjunction with Pirmu's Aethes tool and allows users to easily and quickly identify one or more idealized forms of each glyph found on a set of page images. These identified forms are then used to generate a set of Franken-page images matching the page characteristics documented in Tesseract's training instructions but using a font used in an actual early modern printed document.	Texas A&M/Bryan Tarpley	http://idh-emopweb.tamu.edu/Franken+/		https://github.com/idhmc-tamu/FrankenPlus	December 2013	January 2014	good/en		unspecified			Collection Management					
Frog	Frog formerly known as Tadpole is an integration of memory-based natural language processing (NLP) modules developed for Dutch. All NLP modules are based on Tmbt the Tübing memory-based learning software package. Most modules were created in the 1990s at the ILK Research Group (Tübing University the Netherlands) and the CLIPS Research Centre (University of Antwerp Belgium). Over the years they have been integrated into a single text processing tool. More recently a dependency parser a base phrase chunker and a named-entity recognizer module were added.	University of Tilburg	http://ik.uvt.nl/frog/		http://ik.uvt.nl/frog/			good/en		GNU GPL			Semantic Extraction					
FromThePage	FromThePage is an open-source tool that allows volunteers to collaborate to transcribe handwritten documents.	Ben W. Brumfield	http://beta.fromthepage.com/		https://github.com/benbrumfromthepage			Minimal / EN	yes	GNU AGPL v3.0			Social Applications	Contextualisation				
GATE (General architecture for text engineering)	GATE is over 15 years old and is in active use for all types of computational task involving human language. GATE solves problems concerning text analysis or human language processing.	Various	http://gate.ac.uk/		http://gate.ac.uk/download/	nov. 2012	actively ongoing	Good / EN	yes: community based	GNU LESSER GENERAL PUBLIC LICENSE v.3.0	http://gate.ac.uk/demos/		Alignment Tools	Metadata Mapping/Conversat	Media Checker/Validation			
Gathrit	The concept of Gathrit is to provide a crowdsourcing toolset for cultural collections.	James Morley	http://gathrit/			Prototype in Nov. 2013		None	no		http://collection.catchingtherain.com/items/show/68		Social Applications	Data Annotation/Curation	Exhibition Management			Staging
Geomapping Web	geomapping service	Sergiu Gordea	https://github.com/europeana/EurCreative	Europeana Creative	https://github.com/europeana/Europeana-Creative/tree/master/geomapping-web	2014		minimal/en	no		http://62.218.164.177-8080/geomapping/		Geo-spatial Applications					
Getty Vocabularies	The AAT, TGN, ULAN, and CONA contain terms and terminology for art and other material culture, archival materials, visual surrogates, and bibliographic materials. Compliant with international standards, they provide authoritative information for catalogers and researchers, and can be used to enhance access to databases and Web sites. See more at: http://www.getty.edu/research/tools/vocabularies/	Getty	http://vocab.getty.edu/		http://vocab.getty.edu/ontology.html	2014		Good/en	no	Open Data Commons Attribution License			Ontology/Vocabulary Building and Management	Linked Open Data				
GIMP	GIMP is the GNU Image Manipulation Program. It is a freely distributed piece of software for such tasks as photo retouching image composition and image authoring.	GIMP Team	http://www.gimp.org/		http://www.gimp.org/downloads/			good/en		GPL			Media Annotation/Tagging					
Global References Index to Biodiversity (GRIB)	Goobi is an open source software application for digitisation projects and workflow management in libraries, museums and archives.	Boris Jacob	http://bibleurope.gbv.de/	ThoughtLab	http://bibleurope.gbv.de/	Unreleased		None	no		http://gso.gbv.de/DB=183/		Metadata Retrieval Services					
Goobi	Goobi is an open source software application for digitisation projects and workflow management in libraries, museums and archives.	Goobi	http://www.goobi.org/en/		https://launchpad.net/goobi			Good / DE	yes: community based	GNU/GPL (General Public License)	http://www.goobi.org/en/references/		Collection Management	Media Checker/Validation	Digital Preservation			
Graphite	Graphite is Free, Open Source software and has been developed to make working with RDF easier and more fun.	Christopher Cutteridge	graphite.ecs.soton.ac.uk		https://github.com/cutteridge/Graphite	3/11/2012		Good / EN	no	LGPL			Collection Management					
gttext	OCR free software and Ground Truthing tool for Color Images with Text. The gttext project helps to create fast and quality Ground Truthed data-sets from color text images.		https://code.google.com/p/gttext/		https://code.google.com/p/gttext/			good/en	no	GPL v2			Metadata Retrieval Services	Metadata Retrieval Services				
Homer	A Windows batch file for renaming, rotating and binding scanned pages	Cosimo Lupo	http://bookscanner.pbworks.com/w/page/45602013/How%20to%20install%20the%20software		http://booksScanner.pbworks.com/w/page/45602013/How%20to%20install%20the%20software			Complete / EN	yes	Open Source			Digital Asset Management					
Hydra	Hydra is a repository solution.		http://projecthydra.org/		https://github.com/projecthydra		ongoing	Complete / EN	yes: community based	Apache 2 license	http://projecthydra.org/apps-demos-2-2/		Digital Preservation	Digital Asset Management				
ICA-AtoM	ICA-AtoM is a web-based archival description software that is based on the International Council on Archives (ICA) standards. 'AtoM' is an acronym for 'Access to Memory'. ICA-AtoM is multi-lingual and supports multi-repository collections.	Artefactual Systems in collaboration with the ICA Program Commission (PCOM)	https://www.ica-atom.org/		https://www.ica-atom.org/download.html	27-08-2012	actively ongoing (new release fall 2013)	Complete / EN	yes: community based	GPL	http://demo.ica-atom.org/		Collection Management	Repository Software				
IPImage	IPImage is an advanced high-performance feature-rich image server system for web-based steamed viewing and zooming of ultra high-resolution images.	Ruven Pillay	http://ipimage.sf.net		https://github.com/ruvenlipr/vtree/iff	4/9/2011		Complete / EN	yes	GNU General Public License, v. 3			Exhibition Management	Media Applications				Staging

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IPMooViewer	IPMooViewer is a high performance light-weight HTML5 Ajax-based javascript image streaming and zooming client designed for the IPImage high resolution imaging system.	Ruven Pilyay	http://ipimage.sourceforge.net		https://github.com/ruven/ipmooviewer			Complete / EN	yes	GNU General Public License	http://ipimage.sourceforge.net/demo/		Media Applications						
ImageJ	It can display, edit, analyze, process, save and print 8-bit, 16-bit and 32-bit images. It can read many image formats including TIFF, GIF, JPEG, BMP, DICOM, FITS and "raw". It supports "stacks", a series of images that share a single window. It is multithreaded, so time-consuming operations such as image file reading can be performed in parallel with other operations.	Wayne Rasband	http://rsbweb.nih.gov/docs/intro.html		http://rsbweb.nih.gov/download.html			complete/en		PD			Media Checker/Validation	Digital Asset Management	Media Applications				Staging
ImageMontage	ImageMontage creates montages of images without the need to load them into a stack first. The source images can be located in one or multiple directories. The images can also have different sizes. To fit images into a montage, the macro scales them vertically to the same user-specified size. Images are added horizontally until they no longer fit on the row and then a new row is started. This process is repeated until all source images are rendered. If you see that the generated montage does not include all source images, change the options to reduce the size of images and/or increase canvas dimensions, and run the macro again.	Lev Manovich, Matias Giachino, Jay Chow.	http://lab.softwarystudies.com/2014/03/how-to-visualize-4512-instagram-selfies.html?utm_content=buffer		http://rsbweb.nih.gov/plugins/image-montage/index.html			good/en		PD			Media Applications	Exhibition Management					
ImagePlot	ImagePlot is a free software tool that visualizes collections of images and video of any size. It is implemented as a macro which works with the open source image processing program ImageJ.	Software Studies Initiative	http://lab.softwarystudies.com/p/imageplot.html#features1		https://docs.google.com/document/d/1zkeik0v2Ljmi1TOK4/			complete/en		PD			Media Applications						
Internet Archive BookReader	The Internet Archive BookReader is used to view books from the Internet Archive online and can also be used to view other books.		https://openlibrary.org/developers/bookr		https://github.com/openlibrary/bookreader			Complete / EN	no	AGPL v3	http://www.archive.org/stream/birdbookillustra00reedrich/page/r		Content Retrieval Services						
Interstitial	Interstitial is a tool designed to detect dropped samples in audio digitization processes.	AudioVisual Preservation Solutions	http://www.avpreserve.com/avpsresources		https://github.com/avpreserve/interstitial			Complete / EN	yes	Apache license, v. 2.			Digital Preservation	Media Checker/Validation					Staging
Islandora	Islandora is an open source framework that combines the Drupal and Fedora open source applications to create a robust digital asset management system that can be fitted to meet the short and long term collaborative requirements of digital data stewardship. Additional open source applications are added to this core stack to create what we call Solution Packs.	Gregory Hagedorn, and Ginger Sidwell at the University of Arizona Libraries	http://islandora.ca/		https://github.com/islandora	16/04/2012	actively ongoing	Complete / EN	yes	GNU-GPL	http://sandbox.islandora.ca/		Digital Asset Management						
JHOVE	JHOVE provides functions to perform format-specific identification, validation, and characterization of digital objects.	JSTOR & the Harvard University Library	http://jhove.sourceforge.net/		http://sourceforge.net/projects/jhove/	9/30/2013		Complete / EN	yes, community based	LGPLv2		JHOVE should not be confused with JHOVE2, a product with similar aims but a completely separate code base.	Digital Preservation	Media Annotation/Tagging					
JHOVE2	JHOVE2 is open source software for format-aware characterization of digital objects.	California Digital Library (CDL), Portico, and Stanford University	https://bitbucket.org/jhove2/main/wiki		https://bitbucket.org/jhove2/main/downloads	03/2013		Complete / EN	yes, community based	Open Source BSD license			Digital Preservation						
Met2Ont	Met2Ont is a mapping tool that transforms XML-based metadata records to ontology-based formats. The source metadata format may be flat (e.g. Dublin Core) or hierarchical (e.g. MARC/XML).	Justyna Walkowska, Krzysztof Sielski (Poznań Supercomputing and Networking Center)	http://fbc.pionier.net.pl/projmet2ont/	This tool was created outside of our cooperation with Europeana, but can be used to produce EDM data from many internal and legacy formats. PSNC is the Polish national library metadata aggregator that passes the metadata to Europeana, we also participate in Europeana Libraries WP5.	http://fbc.pionier.net.pl/projmet2ont/download.html (http://maven.man.poznan.pl/repository/lymat-a10-releases-public/pl/psnc/syntax/Met2Ont/1.3.5 (http://met2ont-1.3.5-executable.jar))	9/10/2012	see http://fbc.pionier.net.pl/projmet2ont/char	Complete / EN	yes	GPL 3 (http://fbc.pionier.net.pl/projmet2ont/licenses) & AGPL	http://fbc.pionier.net.pl/projmet2ont/index.html AND http://fbc.pionier.net.pl/projmet2ont/example.html		Metadata Mapping/Conversion						
Joomia Europeana Search Component	Europeana Search Component for Joomla!	Pictura NL	http://eurohack.pictura-dp.nl/ and http://hack4europe.pictura-dp.nl/		http://eurohack.pictura-dp.nl/index.php/download		1905-07-03	Minimal / EN	no	GPL			Metadata Retrieval Services						
Julius	Julius is a high-performance, two-pass large vocabulary continuous speech recognition (LVCSR) decoder software for speech-related researchers and developers.	LEE Akinobu	http://julius.sourceforge.jp/en_index.php		http://julius.sourceforge.jp/en_index.php		2014-01-15	Complete / JP (are working on an EN version)	yes	Open Source license			Multilinguality	Speech Recognition	Ontology/Vocabulary Building and Management				
Kartograph	Kartograph is a simple and lightweight framework for building interactive map applications without Google Maps or any other mapping service.	Gregor Aisch	http://kartograph.org/		https://github.com/kartograph/kartograph.py and https://github.com/kartograph/kartograph.js			Complete / EN	no	LPGL (Kartograph.js) & AGPL (Kartograph.py)			Geo-spatial Applications	Data Visualisation					
KAT (K-Space Annotation Tool)	The K-Space Annotation Tool (KAT) is a framework for semi-automatic, semantic annotation of multimedia content.	https://launchpad.net/~kat-dev-team	https://launchpad.net/kat			2009	25/7/2009	Minimal	yes	GNU LGPL v3			Digital Asset Management	Media Applications	Media Annotation/Tagging	Social Applications			

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Koha	Koha is the first free and open source software library automation package (ILS). Development is sponsored by libraries of varying types and sizes, volunteers, and support companies from around the world.	Various	http://koha-community.org/		http://git.koha-community.org/gitweb/		4/13/2012	Complete / EN	yes	GPL-2, or later			Metadata Retrieval Services	Search and Browsing				
Korbo	Korbo is a Semantic Web basket manager. It allows users to search, import and augment Linked Data resources. Personal augmented collections created with Korbo, are then republished in the Linked Data cloud. Korbo is part of the Maruca suite.	Neil7	http://korbo.muruca.org/	DM2E			Not yet production ready but prototype released 1/7/2012	Good / EN	no				Semantic Enrichment					
Kratu	Client-side analysis framework to create simple and powerful renditions of data. It allows you to dynamically adjust your view of the data to highlight opportunities, issues and correlations in the data.	Tarjei Vassbotn	http://google.github.io/kratu/		https://github.com/google/kratu			Good / EN	yes	Apache 2.0	https://github.com/google/kratu/tree/master/examples		Data Visualisation					
Kuali OLE	Kuali OLE is the first system designed by and for academic and research libraries for managing and delivering intellectual information. A community of partners will deliver an enterprise-ready, community-sourced software package to manage and provide access not only to items in their collections but also to licensed and local digital content. Kuali OLE (pronounced oh-LAY, for Open Library Environment) features a governance model in which the entire library community can collaborate to own the resulting intellectual property.	Kuali OLE https://www.kuali.org/ole/organization	www.kuali.org/ole		https://www.kuali.org/download/mobility		9/27/2012	Technical / EN https://wiki.kuali.org/display/MOBILITY	yes	ECL 2.0			Collection Management					
LanguageGrid	Linguagrid is also a family of NLP Web services developed, maintained and published by CELE on Linguagrid	http://www.cel.li/index.shtml	www.linguagrid.org	EuropeanaConnect (multilinguality)			Unreleased	Good	yes	Free for research			Multilinguality					
Leaflet	Leaflet is an open source JavaScript library for mobile-friendly interactive maps	Vladimir Agafonkin	http://leafletjs.com/		https://github.com/Leaflet/Leaflet		11/18/2013	Complete/EN	yes	BSD license			Data Visualisation	Geo-spatial Applications				
LinkSailor	LinkSailor is a Linked Data browser designed to highlight the data it discovers and present it nicely. It works by fetching Linked Data from the URI entered in the text box and then augmenting it with related data found in the Tails Platform.	Ian Davis	http://linksailor.com/nav		http://linksailor.com/nav?url=about%3Ahome&h.html			minimal/en	no				Search and Browsing	Semantic Extraction	Linked Open Data			Staging
LOD Browser Switch	This is really a gateway to other Semantic Web browsers. Feed it a URI and it will create lists of URLs pointing to Semantic Web interfaces, but many of the URLs (Semantic Web interfaces) do not seem to work. Some of the resulting URLs point to RDF serialization converters	Denny Vrandečić	http://browse.semanticweb.org/		http://browse.semanticweb.org/		2010	minimal/en	no	unknown			Search and Browsing	Semantic Extraction				
LodLive	LodLive project provides a demonstration of the use of Linked Data standards (RDF, SPARQL) to browse RDF resources	Diego Valerio Camanda e Silva Mazzini (http://www.regesta.com/), Alessandro Antonuccio (http://www.hstudio.it/)	http://en.lodlive.it/		https://github.com/dvcama/LodLive		7/4/2012	7/4/2012	Minimal (EN/IT)	yes	MIT License		Metadata Retrieval Services					
Loris IIIF Image Server		Jon Stroop	https://github.com/pulibrary/loris		https://github.com/pulibrary/loris			Good / EN	no	GNU General Public License, v. 3 or later	http://bibimages.princeton.edu/iosd-demo/		Media Applications					
Machine Readable Cataloging (MARC)	MARC is a ruby library for reading and writing Machine Readable Cataloging (MARC)	Kevin Clarke, Bill Duerbe, William Gropp, Ross Singer, Ed Summers	http://marc.rubyforge.org/		https://github.com/ruby-marc/ruby-marc/		2012	2012	Minimal / EN	no			Collection Management	Metadata Retrieval Services				
Maphub	Online tool for annotating (historical) maps. Annotations are public and shared.		http://maphub.github.io/		https://github.com/maphub/maphub-portal			Minimal / EN	yes	Apache License, Version 2.0	http://maphub.herokuapp.com/		Geo-spatial Applications	Media Annotation/Tagging				Staging
Map vectorizer	An open-source map vectorizer	Mauricio Giraldo Arteaga / New York Public Library Labs	http://www.nysl.org/collections/labs		https://github.com/NYPL/map-vectorizer			Minimal / EN	no	MIT License			Metadata Retrieval Services	Geo-spatial Applications				
MARC/MODS RDFizer	This is an utility tool to convert MARC records (both in MARCXML and ISO 2709/Z39.2 syntax) to a MODS representation and then from MODS to RDF.	Stefano Mazzocchi	http://wiki/MARC/MODS		http://simile.mit.edu/wiki/MARC/MODS_RDFizer			Minimal / EN	no	BSD License			Metadata Mapping/Conversat					
MARXML Toolkit	The MARXML toolkit is a set of Java programs which allow users to convert to and from the MARC file format (including full character set conversion) and other formats available in the MARXML architecture.		http://www.loc.gov/standards/marc/		http://www.loc.gov/standards/marc/			Good / EN	no	GNU LGPL, Version 2.1			Metadata Mapping/Conversat					
MDQC	A cross-platform tool designed to expedite metadata quality control across large numbers of digital assets.	AudioVisual Preservation Solutions	http://www.avpreserve.com/avpresources		https://github.com/avpreserve/mdqc			Good / EN	yes	Apache License, V. 2			Metadata Retrieval Services	Collection Management	Metadata Mapping/Conversat			
MediaInfo	A convenient unified display of the most relevant technical and tag data for video and audio files.	Digitmetrics	http://mediainfo.sourceforge.net/en				22/10/2012	Minimal / EN	yes	LGPL license			Metadata Mapping/Conversat	Media Applications				Staging
MediaMosa	MediaMosa is open source software to build a Full Featured, Web-service Oriented Media Management and Distribution platform.	MediaMosa	www.mediamosa.org		https://github.com/mediamosa		7/4/2012	Complete/EN	yes	GNU General Public License			Collection Management	Content Retrieval Services	Media Applications			Staging
MFCS Metadata Form Creation System	The Metadata Form Creation System (MFCS) is WVU Libraries answer for providing an easy to use interface for librarians, staff, and students for entering metadata and uploading digital items for our digital collections. MFCS is also our archival and preservation system. MFCS is a delivery and repository agnostic system.	Michael Bond WVU Libraries	https://github.com/wvulibraries/mfcs		https://github.com/wvulibraries/mfcs		20/5/2014	Complete/EN	no	WVU Open Source License	http://www.youtube.com/watch?v=8RVqZNPf8A		Collection Management	Digital Asset Management	Digital Preservation			Staging

Name	Description	Developers	Project website	Europeana Affiliation (if any)	Code repository	Last release	Last activity	Documentation (title/language)	Technical support available	License	Examples	Notes	CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4	CATEGORY 5	Available on Labs	
MIMO-DB: MIMO Aggregator BackOffice	Database manager.	Rodolphe Bailly	http://pro.europeana.eu/mimo-edm	ThoughtLab		Unreleased		None	no		http://194.250.19.151/mimo/infodoc/		Collection Management						
MIMO-VOC: A multilingual vocabulary management tool	Vocabulary management tool.	Rodolphe Bailly	http://pro.europeana.eu/mimo-edm	ThoughtLab		Unreleased		None	no		http://incipioinfodoc.archimed.fr/idea/home.aspx?INSTANCE=MIMO&THESE=IFD_MIMO_CLA		Ontology/Vocabulary Building and Management						
MINT ingestion tool	MINT services compose a web based platform that was designed and developed to facilitate aggregation initiatives for cultural heritage content and metadata in Europe.	Katerina Kominou, Nastos Drosopoulos, Vasilis Tzouvaras, Anna Christaki, Arne Stabenau, Costas Pardalis, Fotis Xenikoudakis, Nikos Simou	http://mint.image.ece.ntua.gr/	ATHENA	https://github.com/mint-ntua/Mint-Athena	11/30/2011		Complete / EN	yes	GNU Affero General Public License	http://oreo.image.ece.ntua.gr:8080/mint/Login_input.action		Metadata Mapping/Conversion	Collection Management	Metadata Retrieval Services				
Mirador	An open-source, web-based 'multi-up' viewer that supports zoom-pan-rotate functionality ability to display/compare simple images, and images with annotations	Stanford University	http://iif.io/mirador/		https://github.com/IIIF/mirador			Minimal / EN	no	Apache License, Version 2.0	http://iif.io/mirador/demo/		Media Applications	Media Annotation/Tagging					Staging
Muse Open Source	Muse Open Source is a free software platform for publishing native iPad apps for digital libraries with cultural heritage content.	Glimworm IT	http://muse-opensource.org/	Europeana Foundation	https://github.com/jathancarter/muse-opensource/wiki	5/30/2013	5/30/2013	Good / EN	yes				Media Applications	Exhibition Management	Social Applications				Staging
Neatline	The Scholars' Lab designed Neatline as a suite of plugins for the open-source Omeka framework, which provides a powerful platform for content management and web publication. Through Neatline, you can create rich representations of places, objects, events, narratives, and documents.	Adam Soroka	http://neatline.org/		https://github.com/scholarslab/Neatline	2012	actively ongoing	Complete / EN	no	Apache License v 2.0	http://neatline.org/neatline-in-action/		Exhibition Management	Social Applications	Media Annotation/Tagging				
NotreDAM	NotreDAM is a multi-user, web-based Digital Asset Management platform		www.notredam.org		http://code.google.com/p/notredam/			Complete / EN	yes	GNU GPL v3	http://notredam.org/demo/		Collection Management	Digital Asset Management	Metadata Retrieval Services				Staging
Numishare	Numishare is an open source suite of applications for managing digital cultural heritage artifacts, with a particular focus on coins and medals.	Ethan Gruber, American Numismatic Society	http://numishare.blogspot.com/		http://code.google.com/p/numishare/	December 2010	26/10/2012 - constant development	Minimal	yes	Apache License 2.0	http://numismatics.org/search/ http://numismatics.org/ocre/	Release packages on google code out of date from subversion code	Collection Management	Metadata Mapping/Conversion	Exhibition Management				
Nuxeo Platform	Nuxeo provides a modular, extensible Java-based open source software platform for enterprise content management, and packaged applications for document management, digital asset management and case management.	Nuxeo	http://www.nuxeo.com		http://nuxeo.github.io/	10/30/2013	actively ongoing	Complete / EN	yes	LGPL			Collection Management	Content Retrieval Services	Digital Asset Management				
OAI-PMH RDFizer	This is a utility tool to convert the metadata contained in an OAI-PMH-capable repository to RDF.	Stefano Mazzocchi	http://simile.mit.edu/wiki/OAI-PMH_RDFizer		http://simile.mit.edu/wiki/OAI-PMH_RDFizer			Minimal / EN	no	BSD License			Metadata Mapping/Conversion						
OAI-Cat	The OAI-Cat Open Source Software (OSS) project is a Java Servlet web application providing a repository framework that conforms to the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) v2.0. This framework can be customized to work with arbitrary data repositories by implementing some Java interfaces.	Jeff Young	http://www.oclc.org/research/activiti		https://code.google.com/p/oai-cat/source/checkou	v1.5.62 October 2013	2013-10-18	Complete / EN	yes	Apache License, Version 2.0	http://alome.oclc.org/oai-cat/index.html		Metadata Retrieval Services	Repository Software					
Ocrad.js	Optical character recognition program that can convert scanned images of text back into text.	Kevin Kwok	http://antimatter15.github.io/ocrad.js/demo.html		https://github.com/antimatter15/ocrad.js	January 2014		good/en		GNU GPL	https://github.com/antimatter15/ocrad.js/tree/master/examples		Content Retrieval Services	Digital Asset Management	Image Similarity				
Omeka	A Collection/Exhibition Management System	Roy Rosenzweig Center for History and New Media, George Mason University	http://omeka.org/	Used by Europeana for virtual exhibitions	http://omeka.org/download/ https://github.com/omeka	2.1.4	2014-02-06	Complete / EN	yes	GNU GPL			Exhibition Management	Collection Management					
Open Exhibits	Multitouch and multiuser software	Ideum	http://openexhibits.org/		http://openexhibits.org/downloads/	v.3.0, 13 November, 2013		Complete / EN	yes, community based	Simplified BSD License			Interactive User Interface	Exhibition Management					Staging
Open Licenses Service	Data on more than 100 open licenses, including all OSI-approved open source licenses and all Open Definition conformant open data and content licenses. Provided in easy to use, machine readable JSON – perfect if you need to drop a license chooser into your app.	Open Knowledge Foundation	http://licenses.opendefinition.org/	DMZE	http://licenses.opendefinition.org/		1/2012	Minimal / EN	yes	MIT License			Linked Open Data	Content Retrieval Services					
Open Sahara		Maintained by TalkingTrends	https://dev.opensahara.com/		https://dev.opensahara.com/projects	10/2012		Minimal / EN	yes				Data processing						
OpenRefine	OpenRefine (ex-Google Refine) is a powerful tool for working with messy data, cleaning it, transforming it from one format into another, extending it with web services, and linking it to databases like Freebase. Free Your Metadata has created an OpenRefine extension for Named-entity recognition.	Free Your Metadata	http://freeyourmetadata.org/		https://code.google.com/p/google-refine/downloads/list?can=1&q=&colspec=FileName+Summa	dec. 2011	actively ongoing	Complete / EN	yes	BSD 3-Clause License			Collection Management	Metadata Mapping/Conversion					

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RDF2RDF	This Java tool converts your RDF files from any format to any format.		http://www.3s.de/~minack/rdf2rdf/		http://www.3s.de/~minack/rdf2rdf/	05-2010		Minimal / EN	no	GPL v2.0	http://www.3s.de/~minack/rdf2rdf/		Metadata Mapping/Conversion						
Recline Chrome CSV Viewer	A Chrome extension which allows you to view, search, graph and map CSV files in the browser.	Enrico Minack	https://chrome.google.com/webstore/detail		https://github.com/igrp/chrome-csv-viewer	5/1/2013		Minimal / EN	no	MIT license			Data Visualisation						
Recline.js	A simple but powerful library for building data applications in pure Javascript and HTML.	Rufus Pollock	http://reclinejs.com/		https://github.com/okfn/recline	sept. 2012	actively ongoing	Complete / EN	no	MIT license	http://reclinejs.com/demos/		Infrastructure						
RecordManager	A metadata record management system written in PHP, intended to be used in conjunction with VuFind or another Solr-based discovery interface.	Max Ogden, Rufus Pollock	https://github.com/KDK-Alli/RecordManager		https://github.com/KDK-Alli/RecordManager/wiki			Good / EN	no	GNU General Public License, Version 2			Collection Management						
ReIFinder	ReIFinder extracts and visualizes relationships between given objects in RDF data and makes these relationships interactively explorable	Philipp Heim, Steffen Lohmann, Timo Siegemann, Gilberto Pedrosa	http://www.visualdataweb.org/refinder.php		https://code.google.com/p/refinder/			Good / EN	no	GNU GPL v3	http://www.visualdataweb.org/refinder/demo.swf?csj1=QWkzXJUEVpbN0ZVuUfGh0dHAGLy		Content Retrieval Services	Contextualisation					
REPOX	REPOX is a framework to manage metadata spaces. It comprises several channels to import metadata from data providers, services to transform metadata between schemas according to user's specified rules, and services to expose the results to the exterior. REPOX aims to provide to all the TEL and Europeana partners a simple solution to import, convert and expose their bibliographic data via OAI-PMH.		http://repop.ist.utl.pt/	EuropeanaConnect	http://repop.ist.utl.pt/download.html	13/12/2012		Complete / EN	yes	GNU			Repository Software	Metadata Retrieval Services					
ReSearcher	ReSearcher is an award-winning integrated suite of open source products for locating and managing electronic information resources, designed for use by students and researchers in academic libraries.	Simon Fraser University Library	http://researcher.sfu.ca/				actively ongoing	Complete / EN	no	GNU GPL			Search and Browsing	Digital Asset Management					Staging
ResearchSpace	ResearchSpace (RS) is aimed at supporting collaborative internet research, information sharing and web applications for the cultural heritage scholarly community. The ResearchSpace environment intends to provide following integrated elements: Data and digital analysis tools; Collaboration tools; Semantic RDF data sources; IDOC CRM (Conceptual Reference Model); Data and digital management tools; Internet design and authoring tools. Web Publication Resourcespace is a web-based, open source digital asset management system (DAM)	Development requirements https://sites.google.com/a/researchspace	www.researchspace.org							ECL 2.0		This project is led by the British Museum	Digital Asset Management	Publication	Collection Management				
ResourceSpace	ResourceSpace is a web-based, open source digital asset management system (DAM)	Montala (under contract with Oxfam)	http://www.resourcespace.org		http://svn.montala.net/svn/resourcespace	10/4/2012	11/23/2012	Good / EN	yes	BSD style license			Collection Management	Digital Asset Management					
Roundware	Roundware is a flexible, distributed framework which collects, stores, organizes and re-presents audio content.		http://www.roundware.org/category/team/		http://sourceforge.net/projects/roundware/			None	no	LGPLv2	http://www.roundware.org/category/examples/		Digital Asset Management						
Sanddragon Image Service	The Sanddragon Image Service is a WCF (Windows Communication Foundation) web service which implements the IIf image API, deployed on Microsoft's IIS (Internet Information Server)	British Library	http://sanddragon.bl.uk/#home		https://github.com/britishlibrary/SanddragonImageSer	2013		Minimal / EN	no	BSD-3 Licence	http://sanddragon.bl.uk/#imageservice		Exhibition Management	Media Applications					
Sanddragon Item Viewer	The Sanddragon Item Viewer is an item navigation control, enabling navigation between a set of images working with the Sanddragon widget.	British Library	http://sanddragon.bl.uk/#home		https://github.com/britishlibrary/SanddragonItemView	2013		Minimal / EN	no	BSD-3 Licence	http://sanddragon.bl.uk/#itemviewer		Exhibition Management						
Sanddragon Widget	The Sanddragon Widget is an image viewer that is based upon Open Seadragon which has been modified to work with an IIf server, such as the Sanddragon Image Service.	British Library	http://sanddragon.bl.uk/#home		https://github.com/britishlibrary/SanddragonWidget	2013		Minimal / EN	no	BSD-3 Licence	http://sanddragon.bl.uk/#widget		Exhibition Management						
Shelf.io	Build virtual shelves for books/record/film collections using linked data	Harvard Library Innovation Lab	http://shelf.io/		https://github.com/harvard-ill/shelfio	2012		good/en	no	MIT License/GPL License			Data Visualisation	Linked Open Data	Social Applications				
SIREn: Efficient semi-structured Information Retrieval for Lucene	Semantic Information Retrieval Engine - a Lucene plugin to efficiently index and query RDF, as well as any textual document with an arbitrary amount of metadata fields.	Max Ogden	http://rdelbru.github.io/SIREn/		https://github.com/rdelbru/SIREn/tags	11/2011	11/2011	Good / EN	yes	GNU Affero General Public License, version 3			Semantic Extraction	Metadata Retrieval Services					
SIWA: The EuropeanaConnect Service Integration Platform		John Glover	http://www.europeanaconnect.org/	ThoughtLab / EuropeanaConnect		Unreleased		None	no				Infrastructure						
SobekCM	SobekCM allows users to discover online resources via semantic and full-text searches, as well as a variety of different browse mechanisms. For each digital resource in the repository there are a plethora of display options, which may be selected by an appropriately authenticated user. This repository includes online metadata editing and online submissions in support of institutional repositories.	Mark Sullivan	http://ufdc.ufl.edu/sobekcm		https://github.com/MarkVSullivan/SobekCM-Web-Application			Complete / EN	yes	GNU General Public License			Content Retrieval Services	Collection Management	Search and Browsing				
Solr	Enterprise search platform	James Casbon	http://lucene.apache.org/solr/		http://www.apache.org/dyn/closer.cgi/lucene/solr/3.6.1			Complete / EN	yes	Apache License Version 2.0	Ubiquitous	Underpins many systems	Search and Browsing	Repository Software					

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Stack View	Library collection visualization tool. Color codes and organizes books based on popularity and use.	Harvard Library Innovation Lab	http://librarylab.harvard.edu/blog/stack-view/		https://github.com/harvard-il/stackview		2012	complete/en	no	MIT License/ GPL		Can be used for things other than books	Collection Management	Data Visualisation				
Stanford Named Entity Recognizer (NER)	Stanford NER is a Java implementation of a Named Entity Recognizer.		http://nlp.stanford.edu/software/CRF-NER.shtml		http://nlp.stanford.edu/software/CRF-NER.shtml#Download	11/12/2013		Minimal / EN	yes	GNU General Public License (v2 or later)	http://nlp.stanford.edu/8080/ner/		Metadata Mapping/Conversat	Metadata Retrieval Services				
SUSHI Py	A lightweight and open-source SUSHI library for Python.	Adrià Mercader	http://sourceforge.net/projects/sushipy		http://sourceforge.net/p/sushipy/code/ref/master/	4/4/2012		Minimal / EN	no				Metadata Retrieval Services	Content Retrieval Services				
Tabula	Tabula is a tool for liberating data tables trapped inside PDF files.	Manuel Arístariz	http://tabula.nerdpower.org/		https://github.com/jazzdotabula			Minimal / EN	yes	MIT license			Semantic Extraction					Staging
TAP	TAP is a collection of free and open-source tools which support the creation and delivery of mobile tours. Currently TAP consists of authoring tools built on top of the content management system Drupal, a native iOS mobile application, and a web-based mobile application built upon the jQuery Mobile library.		http://tapintomuseums.org/TAP		https://github.com/IMAMuseum/tap-cms https://github.com/IMAMuseum/tap-ios https://github.com/IMAMuseum/tap-web-app			Complete / EN	yes	GPLv3 license	http://tapintomuseums.org/case-studies		Exhibition Management					
TemaTres	TemaTres is an open source vocabulary server, web application to manage and exploit vocabularies, thesauri, taxonomies and formal representations of knowledge.	Diego Ferreyra	http://www.vocabularyserver.com/		http://sourceforge.net/projects/tematres/	08/2013		Complete / EN & ES	yes	GPLv2 license	http://r020.com.ar/tematres/demo/index.php?setlang=en		Ontology/Vocabulary Building and Management	Collection Management				
Tesseract	Tesseract is probably the most accurate open source OCR engine available. Combined with the Leptonica Image Processing Library it can read a wide variety of image formats and convert them to text in over 60 languages.	Ray Smith	http://code.google.com/p/tesseract-ocr/		http://code.google.com/p/tesseract-ocr/source/checkout	23/10/2012		Good / EN	yes	Apache License 2.0			Collection Management	Digital Asset Management	Ontology/Vocabulary Building and Management	Digital Preservation		
TEXTUS	Semantic Web "search engine" that links to the open it parses the RDF statements in linked data, allows you to follow links, discover ontologies, and visually graph the data structures.	NUI Galway, FBK, Open Link Software	http://sindice.com/		http://inspector.sindice.com/		10/2012	Minimal / EN	yes		http://beta.openphilosophy.org/		Search and Browsing	Semantic Enrichment				
The ClioPatria semantic search web-server	A freely available tool that allows librarians to quickly and easily create online, interactive tutorials that are based on the principles of authentic and active learning.	Friedrich Lindenberg	http://e-culture.multimediamultimedia.nl/software/ClioPatria/	ThoughtLab / EuropeanaConnect	http://cliopatria.swi-prolog.org/cpack_home		11/22/2011	Complete / EN	yes	GPL-2	http://eculture.cs.vu.nl/europeana/session/search		Search and Browsing					
The Guide on the Side software	A freely available tool that allows librarians to quickly and easily create online, interactive tutorials that are based on the principles of authentic and active learning.	Leslie Sult, Justin Spargur, Gregory Hagedorn, and Ginger Bidwell at the University of Arizona Libraries	http://icode.library.arizona.edu/gots/		https://github.com/uialibraries/Guide-on-the-Side	2012	actively ongoing	Complete / EN	yes: community based	GNU	http://www.library.arizona.edu/applications/quickHelp/tutorial/searching		Social Applications	Collection Management	Linked Open Data			
Timeline JS	TimelineJS is an open-source tool that enables you to build visually-rich interactive timelines and is available in 40 languages.	Northwestern University Knight Lab	http://timeline.knightlab.com/		https://github.com/NUKnightLab/TimelineJS	October 2013	actively ongoing	Complete / EN	yes: community based	Mozilla Public License, v. 2.0	http://timeline.knightlab.com/		Exhibition Management	Data Annotation/Curation	Media Applications			Staging
TimeMapper	TimeMapper is a simple javascript app to create and share timelines and timemaps build using ReclineJS.	Rufus Pollock	http://timemapper.okfnlabs.org/		https://github.com/okfn/timeliner			Minimal / EN		MIT license	http://timeliner.okfnlabs.org/view?url=https://docs.google.com/spreadsheets/ccc?key=0A6m09_3H2PuGZnRjEwUWxOekhre		Exhibition Management					
Traject	Tools for reading MARC records, transforming them with indexing rules, and indexing to Solr.	Jonathan Rockkind (Johns Hopkins Libraries), Bill Dueber (University of Michigan Libraries)	https://github.com/traject-project/traject/		https://github.com/traject-project/traject/		ongoing	Good / EN	yes	MIT License	https://github.com/traject-project/traject/blob/master/test/test_support.t		Collection Management	Metadata Mapping/Conversat				
Triplify	Triplify provides a building block for the "semanticization" of Web applications. Triplify is a small plugin for Web applications, which reveals the semantic structures encoded in relational databases by making database content available as RDF, JSON or Linked Data.	Soren Auer, David Aumüller, Sebastian Tramp	http://triplify.org/Overview		http://sourceforge.net/projects/triplify/?test=b	28/12/2011	28/1/2011	Good / EN		GNU Lesser General Public License			Semantic Enrichment	Collection Management				
Unbindery	Web-based transcription crowdsourcing app, written in PHP and JavaScript.	Ben Crowder	http://bencrowder.net/coding/unbindery		https://github.com/bencrowder/unbindery	30-11-2012	2012	Good / EN	no	MIT	http://bencrowder.net/books/mtp/		Media Annotation/Tagging	Contextualisation	Social Applications			
Unified Digital Format Registry (UDFR)	The UDFR is a reliable, publicly accessible, and sustainable knowledge base of file format representation information for use by the digital preservation community. The UDFR seeks to "unify" the function and holdings of two existing registries, PRONOM and GDFR (the Global Digital Format Registry), in an open source, semantically enabled, and community supported platform.		http://udfr.org/		https://github.com/UDFR/UDFR-Models		2012	Good / EN	no	Information from individual contributors is supplied under the CC-BY license; information from the PRONOM registry is supplied under the OGL license.			Digital Preservation					
Unlock Text	Unlock Text is a powerful geoparser that can search text hosted on the web in txt or html format for references to locations.		http://unlock.edina.ac.uk/texts/introducer				Unreleased	Good / EN	yes				Content Retrieval Services					
Video Frame Analyzer	This application is used to analyze technical properties of individual frames of a video file in order to detect quality issues within digitized video files. Within video files, the quality issues that might arise vary from collection to collection. This application allows the user to configure the tests to be performed against a file and to tailor those setting to a specific collection.	NARA	http://blogs.archives.gov/online-public-access/?p=6270		https://github.com/usnationalarchives/Video-Frame-Analyzer		9/2011	Good / EN	yes	NARA OPEN SOURCE AGREEMENT VERSION 1.3			Digital Preservation	Media Annotation/Tagging				
VoxForge	VoxForge was set up to collect transcribed speech for use with Free and Open Source Speech Recognition Engines		http://www.voxforge.org/home		http://www.voxforge.org/home/dev			Good / Several languages	yes	GPL			Ontology/Vocabulary Building and Management					Staging
VuFind	Library resource portal.	Vilanova University's Falvey Memorial Library.	http://vufind.org/		http://vufind.org/downloads.php	8/26/2013		Good / EN		http://vufind.org/support.php			Collection Management					
Waista?	Crowdsourcing video annotation software.	Q42: Kami Afsar, Martijn van Steenberg	http://blog.waista.nl/	Netherlands Institute for Sound and Vision	https://github.com/beeldengeluid/waista	7/26/2012		Good / EN	no	GPL	www.beeldengeluid.nl		Media Annotation/Tagging	Social Applications				Staging
Wagtail	Content management system designed for the Royal Academy of Art focused on flexibility and user experience. Light, fast, agile, portable.	Torchbox	wagtail.io		https://github.com/torchbox/wagtail/			Good/en http://wagtail.readthedocs.org/en/latest/	yes	https://groups.google.com/forum/#topic/wagtail	https://groups.google.com/forum/#topic/wagtail		Collection Management					Staging

1. what is the meaning of "availability of technical support"?

Developers of the service can be contacted.

2. Error page 404 for this link...maybe it is necessary to think to a check

FLOSS quality & usability

[Reviewed by Jaap Blom \(The Netherlands Institute for Sound and Vision\)](#)

[Annotator \(http://okfnlabs.org/annotator/\)](http://okfnlabs.org/annotator/)

[Quality of documentation](#)

[Ease of adaptation](#)

[Code quality](#)

[Annotorious \(http://annotorious.github.io/\)](http://annotorious.github.io/)

[Quality of documentation](#)

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[Code quality](#)

[Apache PDFBox \(http://pdfbox.apache.org/\)](http://pdfbox.apache.org/)

[Quality of documentation](#)

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[Apache Stanbol \(http://stanbol.apache.org/\)](http://stanbol.apache.org/)

[Quality of documentation](#)

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[Apache Tika \(http://tika.apache.org/\)](http://tika.apache.org/)

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[CKAN \(http://ckan.org/\)](http://ckan.org/)

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[CollectionSpace \(http://www.collectionspace.org/\)](http://www.collectionspace.org/)

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[Code quality](#)

[D3-cartogram \(http://prag.ma/code/d3-cartogram\)](http://prag.ma/code/d3-cartogram)

[Quality of documentation](#)

[Ease of adaptation](#)

[Code quality](#)

[DAITSS \(http://daitss.fcla.edu/\)](http://daitss.fcla.edu/)

[Quality of documentation](#)

[Ease of adaptation](#)

[Code quality](#)

[Dat \(http://dat-data.com/\)](http://dat-data.com/)

[Quality of documentation](#)

[Ease of adaptation](#)

[Code quality](#)

[Data Explorer \(http://explorer.okfnlabs.org\)](http://explorer.okfnlabs.org)

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[IIPMooViewer \(http://iipimage.sourceforge.net/\)](http://iipimage.sourceforge.net/)

[Quality of documentation](#)

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[Code quality](#)

[Internet Archive BookReader \(https://openlibrary.org/dev/docs/bookreader\)](https://openlibrary.org/dev/docs/bookreader)

[Quality of documentation](#)

[Ease of adaptation](#)

[Code quality](#)

[MACHINE Readable Cataloging \(MARC\) \(http://marc.rubyforge.org/\)](http://marc.rubyforge.org/)

[Quality of documentation](#)

[Ease of adaptation](#)

[Code quality](#)

[Islandora \(http://islandora.ca/\)](http://islandora.ca/)

[Quality of documentation](#)

[Ease of adaptation](#)

[Code quality](#)

[MARCXML Toolkit \(http://www.loc.gov/standards/marcxml/\)](http://www.loc.gov/standards/marcxml/)

[Quality of documentation](#)

[Ease of adaptation](#)

[Code quality](#)

[MediaInfo \(http://mediainfo.sourceforge.net/en\)](http://mediainfo.sourceforge.net/en)

[Quality of documentation](#)

[Ease of adaptation](#)

[Code quality](#)

[MediaMosa \(www.mediamosa.org\)](http://www.mediamosa.org)

[Quality of documentation](#)

[Ease of adaptation](#)

[Code quality](#)

[MIMO-DB: MIMO Aggregator BackOffice \(http://www.mimo-db.eu/\)](http://www.mimo-db.eu/)

[Quality of documentation](#)

[Ease of adaptation](#)

[Code quality](#)

[MIMO-VOC: A multilingual vocabulary management tool
\(http://pro.europeana.eu/web/guest/thoughtlab/improving-metadata-quality#MIMOVOC\)](http://pro.europeana.eu/web/guest/thoughtlab/improving-metadata-quality#MIMOVOC)

[Quality of documentation](#)

[Ease of adaptation](#)

[Code quality](#)

[MINT ingestion tool \(http://mint.image.ece.ntua.gr/\)](http://mint.image.ece.ntua.gr/)

[Quality of documentation](#)

[Ease of adaptation](#)
[Code quality](#)
[Mirador \(http://iiif.io/mirador/\)](http://iiif.io/mirador/)
[Quality of documentation](#)
[Ease of adaptation](#)
[Code quality](#)
[OpenSeadragon \(http://openseadragon.github.io/\)](http://openseadragon.github.io/)
[Quality of documentation](#)
[Ease of adaptation](#)
[Code quality](#)
[Muse Open Source \(http://muse-opensource.org/\)](http://muse-opensource.org/)
[Quality of documentation](#)
[Ease of adaptation](#)
[Code quality](#)
[xDams Platform OS \(http://www.regesta.com/\)](http://www.regesta.com/)
[Quality of documentation](#)
[Ease of adaptation](#)
[Code quality](#)
[xEAC \(http://wiki.numismatics.org/xead:xead\)](http://wiki.numismatics.org/xead:xead)
[Quality of documentation](#)
[Ease of adaptation](#)
[Code quality](#)
[XTF \(http://xtf.cdlib.org/\)](http://xtf.cdlib.org/)
[Quality of documentation](#)
[Ease of adaptation](#)
[Code quality](#)
[yuma.min.js \(http://yuma-js.github.com\)](http://yuma-js.github.com)
[Quality of documentation](#)
[Ease of adaptation](#)
[Code quality](#)
[REPOX \(http://rebox.ist.utl.pt/\)](http://rebox.ist.utl.pt/)
[Quality of documentation](#)
[Ease of adaptation](#)
[Code quality](#)

Reviewed by Jaap Blom (The Netherlands Institute for Sound and Vision)

Annotator (<http://okfnlabs.org/annotator/>)

Quality of documentation

There is a well structured [Github](#) with well written documentation, including API docs. Also there is a dedicated [website](#) listing information about the tool and providing links to all the important information such as a [tutorial](#), a link to a [live demonstration page](#) where you can test out the tool, a link to a [plugin development page](#), etc.

Score: 5 / 5

Ease of adaptation

The extensibility of the tool is promoted on the main [website](#). There is a link to a [plugin development page](#) containing a well written comprehensive tutorial.

Score: 5 / 5

Code quality

The code is maintained in GitHub. CoffeeScript is used as the main language and all files are packaged in a logical structure. In general, the code includes extensive comments. The code is published for download as a minified JavaScript file. A file with the authors of the code is available, listing 20 contributors to the code.

Score: 5 / 5

Annotorious (<http://annotorious.github.io/>)

Quality of documentation

The main website is very informative and it's main menu includes links to: a demo page, a getting started page, a plugin page an API documentation page and finally an about page.

Score: 5 / 5

Ease of adaptation

There is a [plugin development page](#) available. In combination with a comprehensive [GitHub page](#), it shouldn't be too hard to develop plugins.

Score: 4 / 5

Code quality

The code is maintained in GitHub. The JavaScript (using Google Closure) code seems clearly structured and includes comments. There is a [useful page](#) with information on how the code was built and can be adapted.

Score: 5 / 5

Apache PDFBox (<http://pdfbox.apache.org/>)

Quality of documentation

The main website clearly lists a ton of useful information about the tool, namely e.g. software dependancies, the architecture and it's underlying ideas, API docs and information on individually available command line tools.

Score: 5 / 5

Ease of adaptation

The software does not have a hands on easy to use plugin structure.

Score: 3 / 5

Code quality

The code is hosted in an SVN. [This page](#) explains how to build the software and how to create new branches for further development. Moreover a page on coding conventions is linked from the main site.

TODO (@B&G)

Score: 5 / 5

Apache Stanbol (<http://stanbol.apache.org/>)

Quality of documentation

The main website clearly lists various links with useful information such as: the ideas & architecture of the software, usage scenario's, a comprehensive 'getting started' section.

Score: 5 / 5

Ease of adaptation

There seems to be no direct plugin architecture, however there is extensive documentation on [development practices](#), which includes an overview how to contribute your (Java) code to the SVN by following the [Apache guidelines](#).

Score: 3 / 5

Code quality

When browsing the source code it seems that it is well structured and that it incorporates Maven (pom.xml), which ensures the neat handling of dependencies and versioning. Moreover it includes a benchmark directory, which indicates the system is well tested.

Score: 5 / 5

Apache Tika (<http://tika.apache.org/>)

Quality of documentation

On the home page there are links to a dedicated wiki, an issue tracker, mailing lists and for each version of Tika there is documentation on how to get started (you have to download the sources and build them with Maven), API docs and more.

Score: 5 / 5

Ease of adaptation

Tika has a plugin structure for parsers, which enables developers to extend Tika's [supported formats](#) with their own. Developers are encouraged to use existing libraries to implement these custom parsers.

Score: 4 / 5

Code quality

Because it is from Apache and by looking at the structure of Java classes in the API docs, the quality of the code seems perfectly fine.

Score: 5 / 5

BHL Scanlist (<http://bhl.nhm-wien.ac.at/scanlist/>)

Quality of documentation

There seem to be no mention of any downloadable source code. The only thing that might get you started is to use one of the listed contact email addresses.

Score: 1 / 5

Ease of adaptation

As there seems to be only an email address of the creators available, nothing can be said about the adaptability of the system.

Score: 1 / 5

Code quality

As there seems to be only an email address of the creators available, nothing can be said about the code quality.

Score: 1 / 5

BIBFRAME (<http://bibframe.org/>)

Quality of documentation

Documentation on the concepts behind BIBFRAME are quite extensive, however documentation for developers seems to be limited by a not very descriptive README in GitHub.

Score: 3 / 5

Ease of adaptation

There is no plugin structure mentioned, but the tool's functionalities ("convert MARC/XML Bibliographic records to BIBFRAME resources") are fairly straightforward (there is an XQuery file for each format), so extending the tool for other types of bibliographic records should be not too hard.

Score: 2 / 5

Code quality

The most important bits of code are written in XQuery. Next to this there is an exhibit app in HTML. Both parts seem clear and are not hard to comprehend. However there is not much in the sense of comments.

Score: 3 / 5

BibServer (<https://github.com/okfn/bibserver>)

Quality of documentation

Reading the GitHub page, the functionalities of the tool are quite clearly stated (also a link to a live demo is provided). The link towards the detailed documentation is very useful in providing detailed information about the setup, configuration and usage of the tool. A mailinglist is present as well.

Score: 4 / 5

Ease of adaptation

Other than a dedicated parser directory in the source code, there seems to be no direct explanation or means for extending the tool conveniently.

Score: 2 / 5

Code quality

The code structure seems organized. Besides overall documentation, there are not many comments in the code itself. The (Python) code is well readable.

Score: 3 / 5

Blacklight (<http://projectblacklight.org/>)

Quality of documentation

The home page quickly and clearly gives an introduction to Blacklight and shows all the necessary links, e.g. towards a quickstart guide and the GitHub, to get started as a developer.

The overall documentation is available in a wiki and seems mostly well written and clear.

Score: 4 / 5

Ease of adaptation

There is a dedicated section on how to contribute to Blacklight as well as a page that lists the (un)official add-ons that are available. With several examples and clear instructions, as well as a developer mailing list, it seems fairly straightforward to create custom extensions.

Score: 4 / 5

Code quality

The Ruby code contains useful comments. The main app is nicely structured according to MVC and includes YAML config files. The main JavaScript function clearly explains the structure and rationale of the code; the aim is to use or extend JQuery plugins as much as possible. Overall the code seems to be of good quality.

Score: 4 / 5

BWF MetaEdit (<http://bwfmetaedit.sourceforge.net/>)

Quality of documentation

The documentation is quite technical and not very attractive, but just enough to make use of the tool. There does not seem to be a way to download the source code. The tool itself does work well (used by the reviewer).

Score: 2 / 5

Ease of adaptation

There does not seem to be any way of getting or contributing to the source code.

Score: 1 / 5

Code quality

Nothing can be said of the code quality due to the inavailability of the code.

Score: 1 / 5

Casual Curator (<https://github.com/ekilfeather/Casual-Curator>)

Quality of documentation

The GitHub page clearly states that the tool is no longer under development and is not being supported.

Score: 1 / 5

Ease of adaptation

There is no documentation, so the ease to adapt the system is completely up to the quality of the code and the ease to get the system running.

Score: 1 / 5

Code quality

The Ruby code seems fairly straightforward, but hardly contains comments. Some tests are included.

Score: 3 / 5

Catmandu (<http://librecat.org/index.html>)

Quality of documentation

The main site offers a brief introduction of the capabilities of Catmandu and offers an extensive tutorial. The GitHub code repository also contains developer documentation, but needs to be generated (or you can find it by browsing the code repository) after downloading. The developer documentation seems well written and quite extensive.

Score: 4 / 5

Ease of adaptation

The code repository in GitHub also includes a [page](#) directed to contributors, but does not seem to describe any plugin architecture. Since the code seems professionally maintained and fairly well documented, adding customizations to the code seems worth considering.

Score: 3 / 5

Code quality

The Perl code looks well structured, well written, and contains comments in the form of perldoc. There is a long list of tests available. Also the code is included in CPAN (a repository of Perl libraries).

Score: 5 / 5

CHContext (<https://github.com/psnc-dl/chcontext>)

Quality of documentation

The GitHub page neatly explains how to install, configure and use the widget and also describes in what ways it can be extended.

Score: 4 / 5

Ease of adaptation

The widget can be easily extended with new search providers. Adding new languages and styling the widget is also conveniently adaptable. Other modifications should also be fairly easy because of the minimal amount of code.

Score: 5 / 5

Code quality

There is not a lot of code (most of it is in a single file). The code is not hard to understand.

Score: 4 / 5

CKAN (<http://ckan.org/>)

Quality of documentation

The quality of the website and the available documentation is very good. The purpose and features, including the API, of CKAN are all documented very well.

Score: 5 / 5

Ease of adaptation

There is dedicated [documentation](#) on the writing of extensions. Moreover there are 60 external extensions available, which can serve as an example. The code base is large, but the

documentation is good, so writing these extensions shouldn't be too hard.

Score: 4 / 5

Code quality

The Python code looks good, there are not many comments, but for the important objects (within the comments) references to the API docs are given. The API docs are very detailed.

Score: 5 / 5

CollectionSpace (<http://www.collectionspace.org/>)

Quality of documentation

The home page clearly provides a link to the documentation, which is very thorough and covers the most relevant topics such as: system requirements, how to configure & install it, how to use and maintain it and also how to develop customizations. The overall quality of this documentation is fairly good.

Score: 3 / 5

Ease of adapting

CollectionSpace [describes](#) having a so-called hook system in place (which is used in e.g. Drupal or Wordpress), a design pattern to conveniently extend a system. Hook systems in general take some time to learn and in this case specific documentation on the hooks are yet to be added (some limited examples are available though).

Score: 2 / 5

Code quality

The different parts, namely the UI, services, application, tools, etc, are in different sections in GitHub, making the distinction clear. Each of these sections is sparsely documented, however the code looks good with JavaDoc and maven pom.xml files.

Score: 4 / 5

D3-cartogram (<http://prag.ma/code/d3-cartogram>)

Quality of documentation

The main site briefly describes what the tool is and what dependencies the tool has. A prominent, but somehow easy to overlook, link to GitHub is available. On GitHub there is a short readme, which mainly points to an example index.html.

Score: 2 / 5

Ease of adaptation

The example HTML file includes quite a number of JavaScript functions that need to be examined in order to be able to understand how it all works. Besides this, the code is small and it shouldn't be too difficult to adapt the code to use different (geographical) input.

Score: 2 / 5

Code quality

There is not much code and it does look readable, but there are not many comments to help you. Because the code uses d3.js and uses geographical algorithms, it takes a while to get in to.

Score: 2 / 5

DAITSS (<http://daitss.fcla.edu/>)

Quality of documentation

There is a detailed wiki on how to install the system. The layout of the system architecture is available in well written, and extensive, PDF documents.

Score: 4 / 5

Ease of adaptation

The code base is huge as it is a complete digital preservation system. There does not seem to be a straightforward plugin structure available, but with the available documentation the system could be adapted (if necessary).

Score: 2 / 5

Code quality

The code is very extensive and uses both Ruby and Java and several other different technologies. There are tests available. The code is occasionally commented.

Score: 3 / 5

Dat (<http://dat-data.com/>)

Quality of documentation

The main page embeds a very informative YouTube video on a talk the creator gives about the tool. The documentation on GitHub is extensive, well written and even illustrated. It gets you started and entuses you to contribute.

Score: 4 / 5

Ease of adaptation

The code base is well documented and quite small. Adapting the system, e.g. to support new formats. Should not be too hard.

Score: 3 / 5

Code quality

The code is well documented, concise and straightforward to understand. In the code however, it appears there are no comments.

Score: 4 / 5

Data Explorer (<http://explorer.okfnlabs.org>)

Quality of documentation

The main site basically shows a link towards an example (and a way to try out the tool with your own data) and a link towards GitHub. The GitHub documentation is minimal. Also when finding the developers documentation in a separate folder in GitHub, this documentation is not very extensive, although this part does include a picture of the system architecture.

Score: 2 / 5

Ease of adaptation

There is no particular documentation on how to extend the tool. Also there does not seem to be a straightforward plugin structure. The code base however is not too large, so adaptation could be done with some effort.

Score: 2 / 5

Code quality

There do not seem to be descriptive comments in the code. The JavaScript code uses Backbone.js so it has a logical MVC structure, making it easier to decompose and understand.

Score: 3 / 5

Data Pipes

Quality of documentation

The site starts of with a useful example of what the tool can do. Following the example the API is detailed. At the bottom you can find a link to GitHub, which contains basic practical documentation on how to install & run the tool.

Score: 3 / 5

Ease of adaptation

The documentation mentions that contributing is “super easy” and points you to a list of issues. Other than that there does not seem a specific plugin architecture or obvious way to extend the

tool.

Score: 3 / 5

Code quality

The code base is small. The code looks well written. Occasionally there are comments.

Score: 4 / 5

Reviewed by Georg Petz (Austrian National Library)

ICA-AtoM (<https://www.ica-atom.org/>)

Quality of documentation

The source code is maintained on GitHub <https://github.com/artefactual/atom> where the majority of the additions already happened in October 2012. A live demo of the software is available at <http://demo.ica-atom.org/> and different types of manuals can be found here https://www.ica-atom.org/doc/Main_Page.

Score: 3 / 5

Ease of adaptation

There there are approximately 250 institutions worldwide running ICA-AtoM. A list of them can be found here https://www.ica-atom.org/doc/ICA-AtoM_users.

Score: 3 / 5

Code quality

The code is maintained in GitHub. PHP is used as the main language. There are 8 contributors but only 4 of them are active. The last AtoM maintenance release (2.0.1) was on 16.12.13.

Score: 3 / 5

IIPImage (<http://iipimage.sf.net>)

Quality of documentation

The original source code is available on sourceforge:

<http://sourceforge.net/p/iipimage/code/HEAD/tree/> but Klokan Technologies GmbH offers an updated Version of IIPImage server on GitHub: <https://github.com/klokantech/iipsrv> with a high frequency of updates. A quite comprehensive list of tutorials can be found here: <http://iipimage.sourceforge.net/documentation/>. A live demo is being shown on the official homepage and some additional ones <http://iipimage.sourceforge.net/demo/>.

Score: 5 / 5

Ease of adaptation

You can use the IIPImage Server as it is. If you want to plug in another tool you will have to code it yourself. There is no plug-in ability. Customization is done on the client side (see IIPMooViewer). Quite a lot of institutions are using the IIPImageServer, some of them can be found here: <http://iipimage.sourceforge.net/links/>.

Score: 4 / 5

Code quality

There are installation packages available for Debian/Ubuntu, Fedora/Redhat/CentOS, Windows and Mac OS X. Nevertheless it is recommended that you compile the server, if possible, in order to fully optimize it for your system! The program language being used C++. An iiif (International Image Interoperability Framework) compatible version has been developed for the Austrian National Library and is available on the Klokan GitHub.

Score: 5 / 5

IIPMooViewer (<http://iipimage.sourceforge.net/>)

Quality of documentation

see IIPImage

Score: 5 / 5

Ease of adaptation

If you have an IIPImage Server up and running it is easy to implement a client application with the IIPMooViewer.

Score: 5 / 5

Code quality

The JavaScript files are hosted on GitHub <https://github.com/ruven/iipmooviewer>.

Score: 5 / 5

Internet Archive BookReader (<https://openlibrary.org/dev/docs/bookreader>)

Quality of documentation

Documentation can be found here: <https://openlibrary.org/dev/docs>. Everything necessary seems to be there.

Score: 5 / 5

Ease of adaptation

The easiest way to find out how the Internet Archive BookReader works is to do a “git clone <https://github.com/openlibrary/bookreader.git>” and go to BookReaderDemo/index.html and open it in you Browser. Next have a look at BookReaderDemo/BookReaderJSSimple.js.

Score: 5 / 5

Code quality

All the functionality is more or less put into BookReader/BookReader.js. There are some comments in the code but not too much! There are 8 contributors but only one of them is contributing.

Score: 3 / 5

MAchine Readable Cataloging (MARC) (<http://marc.rubyforge.org/>)

Quality of documentation

A Wiki is set up to provide documentation <https://wiki.duraspace.org/display/ISLANDORA/Islandora>.

Score: 4 / 5

Ease of adaptation

There seems to be a very active user group: <https://groups.google.com/forum/#!forum/islandora-dev> and there are 63 installations listed: <http://islandora.ca/islandora-installations>.

Score: 4 / 5

Code quality

Github: <https://github.com/islandora> hosts all the repositories for Islandora. All of the 58 repositories are public. The code is written mainly in PHP and JavaScript.

Score: 4 / 5

Islandora (<http://islandora.ca/>)

Quality of documentation

Besides a README file: <https://github.com/ruby-marc/ruby-marc/blob/master/README.md> there is no documentation available.

Score: 2 / 5

Ease of adaptation

NA

Score: ? / 5

Code quality

Github: <https://github.com/ruby-marc/ruby-marc> hosts all the ruby scripts. There are 5 contributors. Just one is really active. The project already started in 2005. It seems to be still maintained.

Score: 4 / 5

MARCXML Toolkit (<http://www.loc.gov/standards/marcxml/>)

Quality of documentation

There is no documentation of the source code (marcxml.jar) locatable.

Score: 0 / 5

Ease of adaptation

It is not clear where to find the source code!

Score: 0 / 5

Code quality

A Windows Batch file (marcxml.bat) has to be used to convert to and from the MARC file format. The recommended Java Version is 1.4 which was released in 2002!

Score: 2 / 5

MediaInfo (<http://mediainfo.sourceforge.net/en>)

Quality of documentation

The software is very easy to use. Documentations is not locatable but also not necessary.

Score: 4 / 5

Ease of adaptation

Bug reports (<http://sourceforge.net/p/mediainfo/bugs/>) and feature requests (<http://sourceforge.net/p/mediainfo/feature-requests/>) can be filed and there is also a forum for all other questions (<http://sourceforge.net/p/mediainfo/discussion/>). They are all very active.

Score: 5 / 5

Code quality

The code is hosted on sourceforge http://sourceforge.net/p/mediainfo/code/commit_browser and there seems to be development ongoing. Binaries for nearly all operating systems are available: <http://mediaarea.net/en/MediaInfo/Download>.

Score: 5 / 5

MediaMosa (www.mediamosa.org)

Quality of documentation

It is quite easy to find documentation on <http://www.mediamosa.org>.

Score: 4 / 5

Ease of adaptation

MediaMosa is based on the Representational State Transfer (REST) architecture. This makes it easy to attach your own tools. There is a forum <http://www.mediamosa.org/forum/index.php> for bugs and features requests. The community seems to be very helpful.

Score: 5 / 5

Code quality

Most of the code is written in PHP. There is sufficient documentation in the code. There are 9 contributors registered on GitHub. Two of them are committing the majority of the code. You can find the code here: <https://github.com/mediamosa/mediamosa>.

Score: 4 / 5

MIMO-DB: MIMO Aggregator BackOffice (<http://www.mimo-db.eu/>)

Quality of documentation

No documentation found.

Score: 0 / 5

Ease of adaptation

Makes no sense outside the Europeana context.

Score: 0 / 5

Code quality

No code to review!

Score: 0 / 5

MIMO-VOC: A multilingual vocabulary management tool (<http://pro.europeana.eu/web/guest/thoughtlab/improving-metadata->

[quality#MIMOVOC](#))

Quality of documentation

No documentation found.

Score: 0 / 5

Ease of adaptation

Makes no sense outside the Europeana context.

Score: 0 / 5

Code quality

No code to review!

Score: 0 / 5

MINT ingestion tool (<http://mint.image.ece.ntua.gr/>)

Quality of documentation

The first release of MINT was authored 2 years ago: <https://github.com/mint-ntua/Mint-Athena>. A more recent version is developed by the DM2E (Digitised Manuscripts to Europeana) project: <https://github.com/DM2E/dm2e-mint>. A user manual is available <http://mint.image.ece.ntua.gr/mint2/documentation/> although some screenshots would help for a better understanding.

Score: 4 / 5

Ease of adaptation

Mint was designed to operate on different aggregation schemes. Hence it is easy to plug-in your own schema.

Score: 4 / 5

Code quality

As a programming language mainly Java is used. There are enough comments in the code and a JavaDoc can be created. The main contribution are from EU funded projects. It is hard to say

if there is also a user community outside of these projects.

Score: 5 / 5

Mirador (<http://iiif.io/mirador/>)

Quality of documentation

The quality of the documentation for developers is excellent. Everything you need can be found here: <https://github.com/IIIF/mirador/blob/master/README.md>. There is no tutorial for users available but this is also not necessary.

Score: 5 / 5

Ease of adaptation

Mirador can connect to repositories that provide a IIIF-compliant Metadata API.

Score: 5 / 5

Code quality

The project started in August 2013. At the moment there are 4 contributors. JavaScript is the language of choice. A “first-time-setup” <https://github.com/openseadragon/openseadragon#first-time-setup> is quite easy to do. Just install GRUNT (<http://gruntjs.com/getting-started>) beforehand. On the command line, in the mirador folder type “grunt server” and open in your browser <http://localhost:8000>.

Score: 5 / 5

OpenSeadragon (<http://openseadragon.github.io/>)

Quality of documentation

The quality of the documentation for developers is excellent. Everything you need can be found here: <https://github.com/IIIF/openseadragon/blob/master/README.md>. There is no tutorial for users available but this is also not necessary.

Score: 5 / 5

Ease of adaptation

Plugins can be used to display your image's scale in real-world measurements, enhance

OpenSeadragon, provide coordinate conversion, pan, and zoom methods in a simplified coordinate system and provide hooks into an OpenSeadragon.Viewer and/or OpenSeadragon.MouseTracker for overriding/extending the default user-input event handling behavior. An issue tracker on GitHub is found here:

<https://github.com/openseadragon/openseadragon/issues>.

Score: 5 / 5

Code quality

The project started in January 2013. At the moment there are 23 contributors. JavaScript is the language of choice. A “first-time-setup”

<https://github.com/openseadragon/openseadragon#first-time-setup> is quite easy to do. Just install GRUNT (<http://gruntjs.com/getting-started>) beforehand. On the command line, in the openseadragon folder type “grunt connect watch” and open in your browser <http://localhost:8000/test/demo/basic.html>.

Score: 5 / 5

Muse Open Source (<http://muse-opensource.org/>)

Quality of documentation

The link to the documentation (wiki) does not work!

Score: 0 / 5

Ease of adaptation

The software is based on the Appcelerator Titanium Platform to Create iOS, Android, and mobile web apps from a single code base. There are high dependencies to the Appcelerator Platform.

Score: 1 / 5

Code quality

The Muse Open Source platform seems to be developed by two people. No activities in the last half year.

Score: 3 / 5

xDams Platform OS (<http://www.regesta.com/>)

Quality of documentation

Nearly everything is written in italian! Even <https://github.com/xdamsorg/xDams-core/blob/master/README.md>.

Score: 0 / 5

Ease of adaptation

-

Score: 0 / 5

Code quality

Also comments in the code are in italian.

Score: 0 / 5

xEAC (<http://wiki.numismatics.org/xeac:xeac>)

Quality of documentation

The installation instructions http://wiki.numismatics.org/xeac:generic_installation a quite straight forward. Just configure and deploy the applicaton on Tomcat. You also have to set up an Apache Solr instance. The user manual is a little bit sparse, but there are at least some screenshots and the application does not seem to be too complicated.

Score: 4 / 5

Ease of adaptation

The software seems to be very tailored to the needs of the American Numismatic Society.

Score: 2 / 5

Code quality

xEAC is based on Orbeon Forms (<http://www.orbeon.com/>) a solution to build and deploy web forms.

Score: 3 / 5

XTF (<http://xtf.cdlib.org/>)

Quality of documentation

There is a lot of documentation on the website: <http://xtf.cdlib.org/documentation/>, for the user, the developer and the system administrator.

Score: 4 / 5

Ease of adaptation

A look in the change log shows a steady development since at least 2006. Unfortunately there are no new versions released since July 2012!

Score: 4 / 5

Code quality

Building XTF from the Source Code is quite simple. Apache Ant is used to do it. The Java code looks good.

Score: 5 / 5

yuma.min.js (<http://yuma-js.github.com>)

Quality of documentation

deprecated -> Annotorious

Score: 4 / 5

Ease of adaptation

deprecated -> Annotorious

Score: 5 / 5

Code quality

deprecated -> Annotorious

Score: 5 / 5

REPOX (<http://repo.ist.utl.pt/>)

Quality of documentation

A very thorough manual is available http://repo.ist.utl.pt/doc/REPOX_Light_User%20Manual-V2.0.16.pdf.

Score: 4 / 5

Ease of adaptation

Repos can deal with the metadata format of your choice.

Score: 5 / 5

Code quality

The source code of Repos is included in the Linux Download of the software. The Windows Version comes with an installer. In both cases a Jetty is being used as the application server. If you want to deploy it on your existing application server go to `reposunix/src` and type `“mvn install -Dmaven.test.skip=true”`. The war can then be deployed on your application server. (No documentation for this steps in the installation instructions <http://repo.ist.utl.pt/doc/index.html>).

Score: 4 / 5

Reviewed by Greg Markus (The Netherlands Institute for Sound and Vision)

Assets Annotation Propagation (<http://assets4europeana.eu/>)

Quality of Documentation

Link to website not responding. Code repository link works.

1/5

Ease of adaptation

Code quality

Assets Audio Search (<http://assets4europeana.eu/>)

Quality of Documentation

Link to website not responding. No link to code repository.

0/5

Ease of adaptation

Code quality

Assets Classification (<http://assets4europeana.eu/>)

Quality of Documentation

Link to website not responding. Link to code repository available.

Ease of adaptation

Code Quality

Assets Image Search Demo (<http://assets4europeana.eu/>)

Quality of Documentation

Link to website not responding. Link to code repository available.

Ease of adaptation

Code Quality

Assets Knowledge Extraction (<http://assets4europeana.eu/>)

Quality of Documentation

Link to website not responding. Link to code repository available.

Ease of adaptation

Code Quality

Assets Manual Annotation Tool (<http://assets4europeana.eu/>)

Quality of Documentation

Link to website not responding. Link to code repository available

Ease of adaptation

Code Quality

Easy LOD

Quality of Documentation

Information available on Github page. Documentation and instructions for applying data source plugins, resource URIs and mapping namespaces in resource URIs to data source plugins. Also provides info on installing and testing Easy LOD. Instructions also available within the code repository. Easy to access, read, and follow.

4/5

Ease of adaptation

Code Quality

Echoprint (<http://echoprint.me/>)

Quality of Documentation

Website available that is easy to navigate however it's possible to get linked back to the massive Echonest webpage. Plenty of resources and tutorials to help users get started and along the way. Wrong linked listed for code repository at Github, the current link takes you to all the Echonest apps. This is the more specific link: <https://github.com/echonest/echoprint-codegen>.

5/5

Ease of Adaptation

Code Quality

EFG Authority File Manager

Quality of Documentation

No links or content available. Demo link does not work.
0/5

Ease of Adaptation

Code Quality

EFG Metadata Editor

Quality of Documentation

No available or working links

Ease of Adaptation

Code Quality

ElasticSearch (<http://www.elasticsearch.org/>)

Quality of Documentation

Very user friendly website with extremely thorough documentation. Training, development support, and production support are all available. Github page with notes and directions. Blog is updated regularly and is up-to-date. There are also very interesting and helpful case studies available to see how groups have made use of ElasticSearch.

5/5

Ease of Adaptation

Code Quality

ERMes

Quality of Documentation

Website not very clear and requires a lot of downloading. There is a semi-active forum for discussion and help and some user generated instructional videos have been provided. No readily visible documentation.

3/5

Ease of Adaptation

Code Quality

Evergreen (<http://evergreen-ils.org/>)

Quality of Documentation

Very clear and extensive documentation. Updated regularly. There is a documentation interest group that meets periodically and the minutes are recorded. The meetings are open for anyone to attend. While the documentation is very clear and organized some may find its vastness overwhelming.

5/5

Ease of Adaptation

Code Quality

Fedora Commons (<http://fedora-commons.org/>)

Quality of Documentation

Documentation is not visibly and clearly labeled but when found it is very thorough and fairly organized. The documentation is hard to navigate and not as clear as some others. The project is on going and a new version will be coming out. Explanations about upgrading are provided. No visible community or forum space.

4/5

Ease of Adaptation

Code Quality

File Analyzer and Metadata Harvester (<http://blogs.archives.gov/online-public-access/?p=6270>)

Quality of Documentation

The main homepage for NARA does not say anything about code documentation but rather directs visitors to the Github page. The main Github page does not provide much documentation, it only describes the application's purpose. One has to sift through Github and download a .zip file that has much more extensive documentation but even then, it's not as clear and readable as others. There is no technical support available.

3/5

Ease of Adaptation

Code Quality

File_MARC (http://pear.php.net/package/File_MARC/)

Quality of Documentation

The documentation for File_MARC is very clear and easy to find on the Pear website. The documentation is complete and thorough but lacks the detail that some other documentations have.

3/5

Ease of Adaptation

Code Quality

FromThePage (<http://beta.fromthepage.com/>)

Quality of Documentation

The FromThePage home page provides very little documentation and the Github page also has very little documentation. The documentation that is there is clear and visible but severely lacking in detail.

2/5

Ease of Adaptation

Code Quality

JHOVE 2 (<https://bitbucket.org/jhove2/main/wiki/Home>)

Quality of Documentation

Very extensive, well organized, and well written documentation available for download as a PDF on the front page as well as community technical support.

5/5

Ease of Adaptation

Code Quality

jMet2Ont (<http://fbc.pionier.net.pl/pro/jmet2ont/>)

Quality of Documentation

Documentation is very clear and visible. It is well organized and detailed with sections concerning mapping as well as user documentation.

5/5

Ease of Adaptation

Code Quality

Joomla Europeana Search Component (<http://eurohack.picturadp.nl/index.php/download>)

Quality of Documentation

Whatever documentation exists it is extremely difficult to find and minimal at best. The homepage even announces that the application has not been tested and may break whatever computer or tablet you use it on.

0/5

Ease of Adaptation

Code Quality

Kartograph (<http://kartograph.org/>)

Quality of Documentation

There are two different version of this application with different specialty features that are clearly stated on the main page. Each version has its own clear, descriptive documentation both on the homepage and Github. No technical support available but there are active demos.

5/5

Ease of Adaptation

Code Quality

KAT (K-Space Annotation Tool) (<https://launchpad.net/kat>)

Quality of Documentation

Minimal documentation available on a site that is hard to navigate and has not been updated for a few years.

1/5

Ease of Adaptation

Code Quality

Koha (<http://koha-community.org/>)

Quality of Documentation

Very thorough and detailed documentation that is updated periodically and is extremely easy to navigate on the Koha website. Also the documentation is available in multiple languages but mostly just for older versions. Technical support is also available.

5/5

Ease of Adaptation

Code Quality

Neatline (<http://neatline.org/>)

Quality of Documentation

Neatline is extremely organized and thorough with their documentation. They provide visible demos of the applications and its capabilities. There is no technical support but the website is updated periodically.

5/5

Ease of Adaptation

Code Quality

NotreDAM (<http://notredam.org/>)

Quality of Documentation

The documentation for NotreDAM is very well organized and thorough. There are demos available as well as an active forum.

5/5

Ease of Adaptation

Code Quality

Numishare (<http://numishare.blogspot.nl/>)

Quality of Documentation

The documentation for Numishare is very minimal and not easy to find. There also appear to be no regular updates or an active forum for discussion.

1/5

Ease of Adaptation

Code Quality

Nuxeo Platform (<http://www.nuxeo.com/en>)

Quality of Documentation

The documentation for Nuxeo is very thorough and visible. There is also a very active forum that people actually use and comment on and additionally there are regular blog posts.

5/5

Ease of Adaptation

Code Quality

OAI Cat (<http://www.oclc.org/research/activities/oaicat.html>)

Quality of Documentation

The documentation for OAICat is easy to find and navigate. However, the documentation is not as detailed and clear as it could be. There is plenty of documentation and instruction but it lacks the clear voice and simplicity of other documentations. There is also no documentation on the code repository page and things have not been updated for a while.

3.5/5

Ease of Adaptation

Code Quality

geo	Description	Developers	Project website	Europeana Affiliation (if any)	Code repository	Last release	Last activity	Documentation (status/language)	Technical support available	License	Examples	Notes	CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4	CATEGORY 5
Annotator	The Annotator is an open-source JavaScript library and tool that can be added to any webpage to make it annotatable.	Open Knowledge Foundation	http://okfnlabs.org/annotator/		https://github.com/okfn/annotator	12/3/2013		Complete / EN	yes	either MIT or GNU GPLv3	http://okfnlabs.org/annotator/demo		Enriching metadata	User engagement			
Annotorious	Annotorious is a JavaScript annotation library for images and zoomable images. Link the Annotorious source files (CSS and JavaScript) into an existing HTML page, and images inside this page will be enhanced with an interactive drawing and commenting tool.	Rainer Simon Peter Pilgerstorfer Paul Weichhart	http://annotorious.github.io		https://github.com/annotorious/an	v0.6 (14/08/2013)	actively ongoing	yes (english)	Yes	LGPL	http://annotorious.github.io		Enriching metadata	User Engagement			
Apache PDFBox	The Apache PDFBox™ library is an open source Java tool for working with PDF documents. This project allows creation of new PDF documents, manipulation of existing documents and the ability to extract content from documents.	The Apache Software Foundation	http://pdfbox.apache.org/		http://pdfbox.apache.org/downloads.html			complete / EN	yes, community based	Apache License, Version 2.0			Data processing	Collection management	PDF data management		
Apache Stanbol	Apache Stanbol (currently in incubation) is an open source modular software stack and reusable set of components for semantic content management.	http://stanbol.apache.org/jmc/	http://incubator.apache.org/stanbol/	have done a demo with LOD from Europeana		5/31/2012		complete / EN	yes	Apache License, Version 2.0	http://dev.iks-project.eu:8081/enhancer/cha		Data processing				
Apache Tika	The Apache Tika toolkit detects and extracts metadata and structured text content from various documents using existing parser libraries.		http://tika.apache.org/		http://tika.apache.org/download.html	7/3/2013	actively ongoing	complete / EN	yes	Apache License, Version 2.0			Data processing				
Archivematica	Archivematica is a free and open-source digital preservation system that is designed to maintain standards-based, long-term access to collections of digital objects.	This project is managed by Artefactual Systems in collaboration with the UNESCO Memory of the World's Subcommittee on Technology, the City of Vancouver Archives, the Museum of Modern Art (MoMA), the University of Alberta Libraries, the University of British Columbia Library, the Rockefeller Archive Center, Simon Fraser University Archives and Records Management, Yale University Library and a number of other collaborators.	https://www.archivematica.org/wiki/Main_Page		https://github.com/artefactual/archivematica	v0.10.1-vm (beta) May 2013	actively ongoing	yes (EN)	yes	AGPL3 license	sankofa.archivematica.org/administration/ (user name: demo@example.com, password: demo)		Digital Preservation				
ArchivesSpace	A next-generation archives management application that will incorporate the best features of Archivists' Toolkit (AT) and Archon. The project team is developing a technical platform, governance structure, and service model that will provide the archival community with a cutting-edge, extensible, and sustainable platform for describing analog and born-digital archival materials. The ArchivesSpace product is being developed using an Agile scrum process, guided by a Product Vision for ArchivesSpace.	Hudson Molonglo	www.archivespace.org		https://github.com/archivespace/archivespace	ArchivesSpace 0.3.4 (2013-02-19)	on-going	Basic technical / EN	yes	ECL 2.0		This initiative is led by New York University, University of Illinois (Urbana-Champaign), and University of California, San Diego					
Archivists' Toolkit (AT)	The AT is an open source archival data management system to provide support for the management of archives. The main goals of the AT are to support archival processing and production of access instruments, promote data standardization, promote efficiency, and lower training costs. Currently, the application supports accessioning and describing archival materials. Future functionality will be built to support repository user/resource use information, appraisal for archival materials, expressing and managing rights information, and interoperability with user authentication systems.	Nathan Stevens	http://www.archiviststoolkit.org/		http://archiviststoolkit.org/forDevelopers	25/01/2013	actively ongoing	Good / EN	Yes	Educational Community License, v. 1.0			Enriching metadata	User Engagement			

geo	Description	Developers	Project website	Europeana Affiliation (if any)	Code repository	Last release	Last activity	Documentation (status/language)	Technical support available	License	Examples	Notes	CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4	CATEGORY 5	
Art4Europe	Art4Europe is an application which makes easier for the user to gain their knowledge about historical monuments. During our visit at the museum we can take a picture of a painting and the application will download data for us referring to selected painting by using very sophisticated methods of comparing pictures straight from Europeana API.	iTraff Technology: Tomasz Grzywalski, Jakub Jurkiewicz, Jakub Porzuczek, Marcin Szajek	http://www.art4europe.com/	ThoughtLab / Hackathon winner	N/A	Unreleased prototype	6/8/2011	None	no	Unreleased prototype, but will be open source	http://www.youtube.com/watch?v=C6PEz2d7OLE ; http://www.youtube.com/watch?v=cPI3hvZN-Hk	How many times have you been in an	Information retrieval services	Enriching metadata				
ASSETS 3D search demo		EKETA-CERT: Michalis Lazaridis	http://www.assets4europeana.eu/	ThoughtLab / ASSETS	http://europeanalabs.eu/svn/assets/trunk/	6/13/2012	6/13/2012	Complete / EN	yes[1]	Open Source	http://assetstest.atc.gr/ASSETS3DSearch		Information retrieval services	Similarity Search				
ASSETS Annotation Propagation		EKETA-CERT: Michalis Lazaridis	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/			None	no				Enriching metadata					
ASSETS Audio Search		BMAT: Oscar Paytavi	http://www.assets4europeana.eu/	ASSETS				None	no				Information retrieval services	Similarity Search				
ASSETS Classification		CNR: Fabrizio Sebastiani, Andrea Esuli	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/			None	no				Data processing					
ASSETS image search demo		CNR: Giuseppe Amato	http://www.assets4europeana.eu/	ThoughtLab / ASSETS	http://europeanalabs.eu/svn/assets/trunk/	6/12/2012	6/12/2012	Complete / EN	yes[1]	Open Source	http://viserv.isfi.cnr.it:8080/assets/IRService		Information retrieval services	Similarity Search				
ASSETS Knowledge Extraction		CNR: Fabrizio Sebastiani, Andrea Esuli	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/			None	no				Data processing					
ASSETS Manual Annotation Tool		INA: Patrick Couronnet	http://www.assets4europeana.eu/	ASSETS				None	no				Enriching metadata					
ASSETS Metadata Cleaning		CNR: Fabrizio Sebastiani, Andrea Esuli	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/			None	no				Data processing					
ASSETS Metadata-based Ranking		CNR: Diego Ceccarelli, Claudio Lucchese	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/			None	no	Open Source			Information retrieval services					
ASSETS Preservation-Normalization		AIT: Sergiu Gordea, Andrew Lindley, Roman Graf	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/			None	no	Open Source			Digital Preservation					
ASSETS Preservation-Notification		ENG: Luigi Briguglio, Massimiliano Nigrelli, Marco Guarini	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/			None	no	Open Source			Digital Preservation					
ASSETS Preservation-Risk Management		AIT: Sergiu Gordea, Andrew Lindley, Roman Graf	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/			None	no	Open Source			Digital Preservation					
ASSETS Query Personalization		UPS: Tsuyoshi Sugibuchi, Nicolas Spyrtos	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/			None	no				Information retrieval services	User engagement				
ASSETS Query Suggestion		CNR: Diego Ceccarelli, Claudio Lucchese	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/			None	no	Open Source			Information retrieval services					
ASSETS Relevance Feedback		EKETA-CERT: Michalis Lazaridis	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/			None	no				Information retrieval services					
ASSETS Semantic Cross-Linking		EKETA-CERT: Michalis Lazaridis	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/			None	no				Information retrieval services					
ASSETS Taxonomy-based Notification		UPS: Tsuyoshi Sugibuchi, Nicolas Spyrtos	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/			None	no				Data processing					
ASSETS User Generated Contents		CNR: Carlo Meghini, Nicola Aloia, Cesare Concordia	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/			None	no	Open Source			User engagement					
ASSETS Video Summarisation		UAM: Fernando Lopez	http://www.assets4europeana.eu/	ASSETS	http://www.europeanalabs.eu/svn/assets/trunk/			None	no				Information retrieval services	Similarity search				
AVI MetaEdit	Similar to the BWF MetaEdit tool that AVPS also developed in collaboration with FADGI, AVI MetaEdit supports embedding and validating metadata in RIFF-based AudioVisual Interleave format (AVI) video files. AVI is currently the target format for creation of Preservation Masters within the Digitization Services Branch at NARA.	FADGI / NARA	https://github.com/usnationalarch		https://github.com/usnationalarch	2/17/2012	2/17/2012	Minimal / EN	yes	NARA OPEN SOURCE AGREEMENT VERSION 1.3			Enriching metadata					
Avalon Media System	The Avalon Media System is an open source system for managing large collections of digital audio and video files	Indiana University and Northwestern University	http://www.avalonmediasystem		https://github.com/avalonmediasystem	11/2013	ongoing	Complete / EN	yes, community based	Apache 2.0	http://www.avalonmediasystem		Collection Management					
BHL Scan List	This catalogue allows users to browse and search titles held by BHL-Europe and BHL member institutions using advanced filtering. It will be further developed and extended towards the Global References Index to Biodiversity (GRIB).	Wolfgang Koller	http://bhl.nhm-wien.ac.at/scanlist/	ThoughtLab	http://code.google.com/p/bhl-bits/source/browse/		2010-05-19	Minimal / EN	yes	BSD	http://bhl.nhm-wien.ac.at/scanlist/		Information retrieval services					
BIBFRAME	Two tools designed to help you evaluate MARC Bibliographic data in the BIBFRAME model: a comparison service and a transformation service	Library of Congress Network Development and MARC Standards Office	http://bibframe.org/		https://github.com/lnetdev/marc2			Complete / EN	no		http://bibframe.org/demos/		Enriching metadata	Dataprocessing				
BibServer	BibServer is a tool for quickly and easily sharing collections of bibliographic metadata. By making it simple for people to use this information, we make scholarship better.	Open Knowledge Foundation	http://bibserver.org/		https://github.com/okfn/bibserver		june 2012	Minimal / EN	yes	GNU Affero GPL	http://bibsoup.net/		Information retrieval services	Collection Management				

geo	Description	Developers	Project website	Europeana Affiliation (if any)	Code repository	Last release	Last activity	Documentation (status/language)	Technical support available	License	Examples	Notes	CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4	CATEGORY 5
Blacklight	ROR gem discovery interface for any Solr index		http://projectblacklight.org/		https://github.com/projectblacklight/	6/25/2012		Good / EN	yes	Creative Commons Attribution-Share Alike 3.0 United States License.	https://github.com/projectblacklight/		Information retrieval services				
BWF MetaEdit Tool	This tool permits embedding, editing, and exporting of metadata in Broadcast WAVE Format (BWF) files. This tool can also enforce metadata guidelines developed by the Federal Agencies Audio-Visual Working Group, as well as recommendations and specifications from the European Broadcasting Union (EBU), Microsoft, and IBM.	FADGI	http://bwfmetaedit.sourceforge.net/		http://bwfmetaedit.sourceforge.net/Download/Sour	3/1/2012		Minimal / EN	yes				Enriching metadata				
Casual Curator	Deprecated prototype of the CasualCurator web application developed for the Hack4Europe hackathon	Decipher team: Mike Stapleton; Systems Simulation; Mike Selway; Systems Simulation; Eoin Killeather; Dublin Institute of Technology.	http://decipher-research.eu/casual_curator.html	Hackathon winner	https://github.com/ekilleather/Cas	6/9/2011	6/9/2011	Minimal / EN	no			The Casual Curator prototype is no longer available	Information retrieval services				
Catmandu	Catmandu provides a suite of Perl modules to ease the import, storage, retrieval, export and transformation of metadata records.	Nicolas Steenlant, Patrick Hochstenbach	http://librecat.org/index.html		https://github.com/librecat/catmandu	11/2013	ongoing	Good / EN	no	GPL-2, or later			Collection Management	Information retrieval services	Data processing		
CHContext	CHContext is a JavaScript-based widget that is able to provide a list of links to cultural heritage materials based on predefined item of a website on which it is embedded (via given JQuery HTML selector).	Digital Libraries Team of Poznań Supercomputing and Networking Center	https://github.com/pancdl/chcontext	Europeana Awareness	https://github.com/pancdl/chcontext	10/9/2013		Good / EN	yes	EUPL V. 1.1	https://github.com/pancdl/wp-chcontext/wiki/Sites		Information retrieval services				
CKAN	CKAN is an open-source DMS (data management system) for powering data hubs and data portals. CKAN makes it easy to publish, share and use data.	Open Knowledge Foundation	http://ckan.org/		https://github.com/okfn/ckan	13/08/2013	ongoing	Complete / EN	yes	Affero GNU GPL v3.0	http://ckan.org/case-studies/		Collection Management				
CollectionSpace	CollectionSpace is an open-source collections management application that meets the needs of museums, historical societies, and other collection-holding organizations. CollectionSpace is designed to be configurable to each organization's needs, serving as a gateway to digital and physical assets across an institution. The software is freely distributed via open-source licensing, and an active developer community ensures that CollectionSpace is continually improving.	Museum of the Moving Image; University of California Berkeley; Fluid Project at Ontario College of Art and Design; Centre for Applied Research in Educational Technologies (CARET); University of Cambridge	www.collectionspace.org		http://source.collectionspace.org/pub/collectionspace	12/2012	on-going	Various guides / EN	yes	ECL 2.0	www.demos.collectionspace.org	Collection Management	Collection Management				
Collective Access		Whiri-i-Gig	http://www.collectiveaccess.org/	None (though used by some Europeana data providers)	http://collectiveaccess.org/support/development	1/2012		Complete / EN	yes	GNU GPL v.2	http://collectiveaccess.org/about/users	Can act as both OAI-PMH client and server	Collection Management	Information retrieval services	Exhibition Management		
ConservationSpace	The goal of ConservationSpace is to develop an open-source software application that will address a core need of the conservation community for a shared solution to the problem of documentation management. The conservation community has long recognized that a digital approach to managing its documentation would improve continuity in procedures, increase access, expand research opportunities, and better ensure the preservation of its documents.		www.conservationspace.org									The project is being led by the National Gallery of Art (Washington, D.C., USA) with participation from Yale University Special Collections Library, Courtauld Institute, British Museum, Indianapolis Museum of Art, Metropolitan Museum of Art, Statens Museum for Kunst, and the Denver Art Museum). An RFP for the development of the application was issued in 2012 and a developer has been selected but, not formally announced; that announcement is expected in the first quarter of 2013.					
Constraint Analysis Tool	Data and digital analysis tools.	Kathleen Kenney	http://blogs.loc.gov/digitalpreservation/		https://github.com/SLNC-DIMP/Constraint-Analysis		11/2011	Minimal / EN	yes				Data processing				
Coral	CORAL is an Electronic Resources Management System consisting of interoperable modules designed around the core components of managing electronic resources.	University of Notre Dame's Hesburgh Libraries	http://erm.library.nd.edu/		https://github.com/ndlibersa			Complete / EN	yes	General Public License	http://coraldemo.library.tamu.edu/		Information retrieval services				
Cultural Enrichment Mashficator	Collaboration tools.	Jeremy Ottevaenger	http://cgl.ottevaenger.plus.com/cgi-bin/ez/index.php	EuropeanaHackathon		Unreleased		None	no								Information retrieval services
D3-cartogram	Continuous area cartograms with d3 and TopoJSON	Shawn Allen	http://prag.ma/code/d3-cartogram/		https://github.com/shawnbol/d3-cartogram/			None	no	MIT license			Data processing				
DAITSS	DAITSS is a digital preservation software application	Florida Center for Library Automation (FCLA)	http://daitss.fcla.edu/		https://github.com/daitss			Complete / EN	no	GNU General Public License, Version 3	http://daitss.fcla.edu/content/download		Digital Preservation				
dat	dat is an open source tool that enables the sharing of large datasets, allowing for a decentralized collaboration flow	Max Ogden	http://dat-data.com/		https://github.com/maxogden/dat		still pre-alpha	Good / EN	no	BSD License			Data processing				

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Data Explorer	Data import, graphing and sophisticated data transformation. It builds on ReclineJS + oauth / github connectors borrowed from Prose. It's part of an ongoing plan to create a "Data Orchestra" of lightweight data services that can play nicely together with each other and connect to things like the DataHub or GitHub.	Rufus Pollock, Michael Aufreiter, Chris Herwig, Mike Morris and others	http://explorer.okfnlabs.org/#about		https://github.com/okfn/datexplor	31-07-2012	on-going	Good/EN	no	MIT license	http://explorer.okfnlabs.org/#grpe3e0b0f1f		Information retrieval services						
Data Pipes	Data Pipes is a service to provide streaming, "pipe-like" data transformations on the web – things like deleting rows or columns, find and replace, head, grep etc.	Open Knowledge Foundation	http://datapipes.okfnlabs.org/		https://github.com/okfn/datapipes			Good/EN	no	MIT License	http://datapipes.okfnlabs.org/cv/head%20-%2050/cut%200/delete%201:7/grep%20-%20London/html?url=https://raw.githubusercontent.com/okfn/datapipes		Data processing						
DBpedia Spotlight	DBpedia Spotlight is a tool for automatically annotating mentions of DBpedia resources in text, providing a solution for linking unstructured information sources to the Linked Open Data cloud through DBpedia.	Pablo Mendes (Freie Universität Berlin), Jun 2010-present, Jo Daiber (Charles University in Prague), Mar 2011-present, Prof. Dr. Chris Bizer (Freie Universität Berlin), supervisor, Jun 2010-present, Juan Francisco Oniefa, Alejandro Peña	https://github.com/dbpedia-spotlight/dbpedia-spotlight		https://github.com/dbpedia-spotlight/dbpedia-spotlight	10/2012		complete / EN	yes	Apache License, 2.0, LingPipe			Data processing						
Dédalo: Intangible Heritage management and Oral History Delving Platform: CultureHub and SIP-Creator	Semantic RDF data sources	Manuel Bernhardt, Gerald de Jong, Eric van der Meulen, Sjoerd Siebinga, Thomas Wikman, Juliane Stiller	http://www.fnmo.org		http://www.fnmo.org/dedalo/pg/down	3.5.56	July 2012	Complete /ES	Yes	GNU GPL v3	http://dedalo.antropolis.net/dedalo/home/		Collection Management	Information retrieval services					
DigitalLabels	Django app to generate an interactive gallery label interface, optimised for touch screens and tablets.	V&A Digital Media team	http://vanda.github.io/DigitalLabels/		http://vanda.github.io/DigitalLabels/			Good / EN	no	BSD License			Exhibition Management						
Digital Preservation Software Platform (DPSP)	The DPSP is a collection of software applications which support the goal of digital preservation.	National Archives of Australia	http://dpss.sourceforge.net/		http://dpss.sourceforge.net/download.php	7/31/2013		Complete / EN	no	GPLv3			Digital Preservation						
djakota	djakota is open source Java software that builds upon a rich set of APIs and libraries to provide a service framework for the dynamic dissemination of JPEG 2000 image files.		http://sourceforge.net/apps/mediawiki/		http://sourceforge.net/p/djakota/code/			Complete / EN	yes, community based	LGPLv2	http://sourceforge.net/apps/mediawiki/		Data processing						
DocSplit	Docsplit is a command-line utility and Ruby library for splitting apart documents into their component parts: searchable UTF-8 plain text, page images or thumbnails in any format, PDFs, single pages, and document metadata (title, author, number of pages...)	Jeremy Ashkenas, DocumentCloud	http://documentcloud.github.io/docsplit/		https://github.com/documentcloud	v 0.7.2 February 21, 2013		Complete / EN	no	LGPL			Data Processing						
Doc Viewer	HTML5 document viewer	The New York Times	https://github.com/documentcloud		https://github.com/documentcloud			Minimal / EN	no	Apache License, v2.0			Data processing						
DSpace	DSpace open source software is a turnkey repository application	DSpace Foundation	http://www.dspace.org/		https://github.com/DSpace/DSpace	7/24/2013		Complete/EN	yes	Open Source: http://www.dspace.org/license/	demo.dspace.org		Collection Management	Information retrieval services					
EADitor	Data and digital management tools.	Ethan Gruber, American Numismatic Society	http://eaditor.blogspot.com/		http://code.google.com/p/eaditor/	.1112 beta (December 2011)	June 2012	Good / EN	yes	Apache License 2.0	http://numismatics.org/archives/	Supports dissemination through Atom and OAI-PMH	Collection Management	Information retrieval services					
easyLOD	Simple framework for exposing Linked Open Data from arbitrary sources.	Mark Jordan	https://github.com/mjordan/easyLOD		https://github.com/mjordan/easyLOD			Minimal / EN	no	MIT License			Enriching metadata						
Echoprint	Internet design and authoring tools.	The Echonest in partnership with MusicBrainz	http://echoprint.me/		https://github.com/echonest/		22/4/2013	Good / EN	yes	The code generator is MIT and the server is Apache 2			Information retrieval services	Enriching metadata					
EFG Authority File Manager	Web Publication	Paolo Manghi		ThoughtLab		Unreleased		None	no		http://demo.authfile.research-infrastructures.eu/		Enriching metadata						
EFG Metadata Editor		Franca Debole		ThoughtLab		Unreleased		None	no		http://multimatch01.isti.cnr.it/MetadataEditorPu		Enriching metadata						
ElasticSearch	ElasticSearch is a distributed RESTful search engine built for the cloud.	http://elasticsearch.com/about/team/	http://www.elasticsearch.org/		https://github.com/elasticsearch/elasticsearch			Complete / EN	yes	Apache License, Version 2.0			Information retrieval services						

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ERMes	Electronic Resource Management (ERM) Software	William Doering, Galadriel Chilton	http://murphylibrary.uwlax.edu/erm/		https://github.com/murphylibrary.uwlax.edu/erm/	6/1/2010		Good / EN	yes	Attribution Assurance License			Information retrieval services				
Europeana 4D	Our europeana 4D interface – e4D – enables comparative visualisation of multiple queries and supports data annotated with time span data.	Ralf Stockmann, Gerik Scheuermann, Stefan Jänicke, Christian Mahnke	http://wp1187670.wp212.webpack.hosteurope.de/e4d/?page_id=2	ThoughtLab / EuropeanaConnect	http://wp1187670.wp212.webpack.hosteurope.de/e4d/?page_id=11	Unreleased prototype	2011-07-29	Minimal / EN	yes	Unreleased prototype, but will be open source	http://wp1187670.wp212.webpack.hosteurope.de/e4d/?page_id=9 http://dev2.dariah.eu/e4d/		Information retrieval services	Data processing			
Europeana API geo-wrapper		Adrià Mercader, Independent developer	http://americader.net/dev/geoeuropea	Hackathon winner	https://github.com/amercader/gec	4/2/2011	4/5/2011	Good / EN	No		https://github.com/amercader/gec	A thin wrapper around the Europeana API that transforms the results feed in a GeoRSS. It also includes a demo application that uses the geo wrapper to perform spatial queries. http://americader.net/blog/2011/04/europeana-hackathon	Information retrieval services				
Europeana Geo Search app for Android		Georg Petz, Austrian National Library		Hackathon winner	http://svn3.xp-dev.com/svn/eurohack/	4/2/2011	4/2/2011	None	No		http://pro.europeana.eu/c/document_library/getfile?uid=11529&groupId=10124	This Android App shows you records from Europeana with geo coordinates nearby your location. It uses https://github.com/amercader/geoeuropeana to get GeoRSS results.	Information retrieval services				
Europeana Language Resource Repository	The Europeana Language Resource Repository collects resources which are necessary for query translation and vocabulary mapping in Europeana.	Aaron Kaplan - EuropeanaConnect	http://europeanalabs.eu/wiki/LinguisticRe	EuropeanaConnect	https://europeanalabs.eu/svn/contrib/ir-oss/trunk/	Unknown		Good (EN)	No				Language tools				
Europeana Search API component for Joomla 1.6	Europeana Search API component for Joomla 1.6.	Pictura: Mark Lindeman	http://eurohack.pictura-dp.nl/	Hackathon winner	http://eurohack.pictura-dp.nl/index.php/download	2011		Minimal / EN	No	GPL			Information retrieval services				
Europeana4j	A Java library wich allows applications to search and retrieve Europeana data.	Andrés Viedma		EuropeanaHackath	http://code.google.com/p/europeana4j/	6/2011		Minimal / EN	No	Apache License 2.0			Information retrieval services				Java library that makes easier the access to the Europeana API
EuropeanaConnect Gazetteer		André Soares, Gilberto Pedrosa.	http://www.europeanaconnect.org/	ThoughtLab / EuropeanaConnect		Unreleased		None	no		http://europeana-geo.isti.cnr.it/gazetteer		Enriching metadata				
EuropeanaConnect Geoparser		Nuno Freire	http://www.europeanaconnect.org/	ThoughtLab / EuropeanaConnect		Unreleased		None	no		http://europeana-geo.isti.cnr.it/geoparser		Enriching metadata				
EuropeanaXMLBuild	A tool for downloading a full record descriptions in the ESE format from any OAI-PMH-compliant interface.	PCSS Digital Libraries Team	http://dl.pssc.pl/software/EXB/site	EuropeanaLocal	http://dl.pssc.pl/software/EXB/site	Unknown		Good / EN	yes	GNU LESSER GENERAL PUBLIC LICENSE			Data processing				
Evergreen	Evergreen is a highly-scalable software for libraries that helps library patrons find library materials, and helps libraries manage, catalog, and circulate those materials, no matter how large or complex the libraries.	Various	http://www.open-ils.org/		http://www.open-ils.org/downloads.php	11/16/2011	4/9/2011	Complete / EN	yes	GNU GPL			Information retrieval services				
Fedora Commons	Fedora (Flexible Extensible Digital Object Repository Architecture) was originally developed by researchers at Cornell University as an architecture for storing, managing, and accessing digital content in the form of digital objects inspired by the Kahn and Wilensky Framework. Fedora defines a set of abstractions for expressing digital objects, asserting relationships among digital objects, and linking "behaviors" (i.e., services) to digital objects.	various researchers at Cornell University	http://fedora-commons.org/		http://www.fedora-commons.org/software	15/11/2012	actively ongoing	Complete / EN	yes: community based	Apache License, Version 2.0.	http://www.fedora-commons.org/about/examples		data processing	Information retrieval services	Collection Management		
File Analyzer and Metadata Harvester	This application functions like a digitization Swiss army knife. The application allows a user to analyze the contents of a file system or external drive and generates statistics about the contents of the contained directories. The application can be used to generate checksum values to ensure the bit-level integrity of files after they have been copied to a new device. After a collection of files have been converted from one digital format to another, this application can verify that there is a one-to-one match of before and after files.	NARA	http://blogs.archives.gov/online-public-access/?p=6270		https://github.com/usnationalarch	2011	8/2012	Complete / EN	no	NARA OPEN SOURCE AGREEMENT VERSION 1.3			Digital Preservation				
File_MARC	Parse, modify, and create MARC records	Dan Scott	http://pear.php.net/package/File_M		http://pear.php.net/package/File_M	10/30/2013		Complete / EN	yes	GNU Lesser General Public License			Collection Management				
FromThePage	FromThePage is an open-source tool that allows volunteers to collaborate to transcribe handwritten documents.	Ben W. Brumfield	http://beta.fromthepage.com/		https://github.com/benbrum/ft			Minimal / EN	yes	GNU AGPL v3.0			User engagement	Enriching metadata	Data processing		

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GATE (General architecture for text engineering)	GATE is over 15 years old and is in active use for all types of computational task involving human language. GATE solves problems concerning text analysis or human language processing.	Various	http://gate.ac.uk/		http://gate.ac.uk/download/	nov. 2012	actively ongoing	Good / EN	yes: community based	GNU LESSER GENERAL PUBLIC LICENSE v.3.0	http://gate.ac.uk/demos/		Infrastructure	Data processing			
Gathrit	The concept of Gathrit is to provide a crowdsourcing toolset for cultural collections.	James Morley	http://gathrit.it/			Prototype in Nov. 2013		None	no		http://collection.catchintherain.com/items/show/58		User engagement	Enriching metadata			
Global References Index to Biodiversity (GRIB)		Boris Jacob		ThoughtLab		Unreleased		None	no		http://iso.gbv.de/DB-1.83/		Information retrieval services				
Goobi	Goobi is an open source software application for digitisation projects and workflow management in libraries, museums and archives.	Goobi	http://www.goobi.org/en/		https://launchpad.net/goobi			Good / DE	yes, community based	GNU/GPL (General Public License)	http://www.goobi.org/en/references/		Data processing	Enriching Metadata	Digital Preservation		
Graphite	Graphite is Free, Open Source software and has been developed to make working with RDF easier and more fun.	Christopher Cutteridge	graphite.ecs.soton.ac.uk		https://github.com/cgutteridge/Gr	3/11/2012		Good / EN	no	LGPL			Enriching metadata				
Homer	a Windows batch file for renaming, rotating and binding scanned pages	Cosimo Lupo	http://bookscanner.pbworks.com/w/page/456095		http://bookscanner.pbworks.com/w/page/456095			Complete / EN	yes	Open Source			Data processing				
Hydra	Hydra is a repository solution.		http://projecthydra.org/		https://github.com/projecthydra		ongoing	Complete / EN	yes: community based	Apache 2 license	http://projecthydra.org/apps-demos-2-2/		Digital Preservation	Digital Asset Management			
ICA-Atom	ICA-Atom is a web-based archival description software that is based on the International Council on Archives (ICA) standards. 'Atom' is an acronym for 'Access to Memory'. ICA-Atom is multi-lingual and supports multi-repository collections.	Artefactual Systems in collaboration with the ICA Program Commission (PCOM)	https://www.ica-atom.org/		https://www.ica-atom.org/download.html	27-08-2012	actively ongoing (new release fall 2013)	Complete / EN	yes: community based	GPL	http://demo.ica-atom.org/		Collection Management	Enriching metadata			
IIPImage	IIPImage is an advanced high-performance feature-rich image server system for web-based streaming viewing and zooming of ultra high-resolution images.	Ruven Pillay	http://iipimage.sourceforge.net		https://github.com/ruveni/ipsrvtr	0.9.9: 4/9/2011		Complete / EN	yes	GNU General Public License, v. 3			Exhibition Management				
IIPMooViewer	IIPMooViewer is a high performance light-weight HTML5 Ajax-based javascript image streaming and zooming client designed for the IIPImage high resolution imaging system	Ruven Pillay	http://iipimage.sourceforge.net		https://github.com/ruveni/iipmoo			Complete / EN	yes	GNU General Public License	http://iipimage.sourceforge.net/demo/		Data processing				
Internet Archive BookReader	The Internet Archive BookReader is used to view books from the Internet Archive online and can also be used to view other books		https://openlibrary.org/dev/docs/bookr		https://github.com/openlibrary/bookr			Complete / EN	no	AGPL v3	http://www.archive.org/stream/birdbook		Data processing				
Islandora	Islandora is an open source framework that combines the Drupal and Fedora open software applications to create a robust digital asset management system that can be fitted to meet the short and long term collaborative requirements of digital data stewardship. Additional open source applications are added to this core stack to create what we call Solution Packs.	Gregory Hagedorn, and Ginger Bidwell at the University of Arizona Libraries	http://islandora.ca/		https://github.com/Islandora	16/04/2012	actively ongoing	Complete / EN	yes	GNU-GPL	http://sandbox.islandora.ca/		data processing				
JHOVE2	JHOVE2 is open source software for format-aware characterization of digital objects.	California Digital Library (CDL), Portico, and Stanford University	https://bitbucket.org/jhove2/main/wik		https://bitbucket.org/jhove2/main/doc	03/2013		Complete / EN	yes, community based	Open Source BSD license			Digital Preservation				
Jmet2Ont	Jmet2Ont is a mapping tool that transforms XML-based metadata records to ontology-based formats. The source metadata format may be flat (e.g. Dublin Core) or hierarchical (e.g. MARCXML).	Justyna Walkowska, Krzysztof Sielski (Poznań Supercomputing and Networking Center)	http://fbc.pionier.net.pl/proj/jmet2ont/	This tool was created outside of our cooperation with Europeana, but can be used to produce EDM data from many internal and legacy formats. PSNC is the Polish national library metadata aggregator that passes the metadata to Europeana, we also participate in Europeana Libraries WPS.	http://fbc.pionier.net.pl/proj/jmet2ont/dow	9/10/2012	see http://fbc.pionier.net.pl/proj/jmet2ont/cha	Complete / EN	yes	GPL 3 (http://fbc.pionier.net.pl/proj/jmet2ont/licer)	http://fbc.pionier.net.pl/proj/jmet2ont/index AND http://fbc.pionier.net.pl/proj/jmet2ont/exar		Enriching metadata	Data Processing			
Joomla Europeana Search Component	Europeana Search Component for Joomla.	Pictura NL	http://eurohack.pictura-dp.nl/ and http://hack4europe.pictura-dp.nl/	None formally but is based on the Europeana Open Search API			1905-07-03	Minimal / EN	no	GPL			Information retrieval services				
Kartograph	Kartograph is a simple and lightweight framework for building interactive map applications without Google Maps or any other mapping service.	Gregor Aisch	http://kartograph.org/		https://github.com/kartograph/kar and https://github.com/kartograph/kar			Complete / EN	no	LPGL (Kartograph.js) & AGPL (Kartograph.py)			Data processing				
KAT (K-Space Annotation Tool)	The K-Space Annotation Tool (KAT) is a framework for semi-automatic, semantic annotation of multimedia content.	https://launchpad.net/~kat-dev-team	https://launchpad.net/kat			2009	25/7/2009	Minimal	yes	GNU LGPL v3			Data processing				
Koha	Koha is the first free and open source software library automation package (LS). Development is sponsored by libraries of varying types and sizes, volunteers, and support companies from around the world.	Various	http://koha-community.org/		http://git.koha-community.org/gitweb/		4/13/2012	Complete / EN	yes	GPL-2, or later			Information retrieval services				

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Korbo	Korbo is a Semantic Web basket manager. It allows users to search, import and augment Linked Data resources. Personal augmented collections created with Korbo, are then republished in the Linked Data cloud. Korbo is part of the Muraça suite.	Net7	http://korbo.muraca.org/	DM2E		Not yet production ready but prototype released 1/7/2012		Good / EN	no				Data processing				
Kratu	Client-side analysis framework to create simple and powerful renditions of data. It allows you to dynamically adjust your view of the data to highlight opportunities, issues and correlations in the data	Tarjei Vassbotn	http://google.github.io/kratu/		https://github.com/google/kratu			Good / EN	yes	Apache 2.0	https://github.com/google/kratu/tr		Data processing				
Kuali OLE	Kuali OLE is the first system designed by and for academic and research libraries for managing and delivering intellectual information. A community of partners will deliver an enterprise-ready, community-source software package to manage and provide access not only to items in their collections but also to licensed and local digital content. Kuali OLE (pronounced oh-LAY, for Open Library Environment) features a governance model in which the entire library community can collaborate to own the resulting intellectual property.	Kuali OLE https://www.kuali.org/ole/organization	www.kuali.org/ole		https://www.kuali.org/download/mobile	9/27/2012	on-going	Technical / EN https://wiki.kuali.org/display/MOBIL	yes	ECL 2.0							
LanguageGrid	Linguagrid is also a family of NLP Web services developed, maintained and published by CELI on Linguagrid	http://www.celi.it/index.shtml	www.linguagrid.org	EuropeanaConnect (multilinguality)		Unreleased		Good	yes	Free for research			Data processing				
Leaflet	Leaflet is an open source JavaScript library for mobile-friendly interactive maps	Vladimir Agafonkin	http://leafletjs.com/		https://github.com/Leaflet/Leaflet	11/18/2013		Complete/EN	yes	BSD license			Data processing				
LodLive	LodLive project provides a demonstration of the use of Linked Data standards (RDF, SPARQL) to browse RDF resources	Diego Valerio Camarda e Silvia Mazzini (http://www.regesta.com/), Alessandro Antonuccio (http://www.hstudio.it/)	http://en.lodlive.it/		https://github.com/dvcama/LodLive	7/4/2012	7/4/2012	Minimal (EN/IT)	yes	MIT License			Data processing				
Loris IIIF Image Server		Jon Stroop	https://github.com/pulibrary/loris		https://github.com/pulibrary/loris			Good / EN	no	GNU General Public License, v. 3 or later	http://libimages.princeton.edu/oss-demo/		Data processing				
Machine Readable Cataloging (MARC)	MARC is a ruby library for reading and writing Machine Readable Cataloging (MARC)	Kevin Clarke, Bill Dueber, William Gropp, Ross Singer, Ed Summers	http://marc.rubyforge.org/		https://github.com/ruby-marc/ruby-marc/	2012	2012	Minimal / EN	no	MIT License			Data processing	Information retrieval services			
MARXML Toolkit	The MARXML toolkit is a set of Java programs which allow users to convert to and from the MARC file format (including full character set conversion) and other formats available in the MARXML architecture.		http://www.loc.gov/standards/marc		http://www.loc.gov/standards/marc			Good / EN	no	GNU LGPL, Version 2.1			Data processing				
MediaInfo	A convenient unified display of the most relevant technical and tag data for video and audio files.	Digitmetrics	http://mediainfo.sourceforge.net/en			22/10/2012		Minimal / EN	yes	BSD-style license			Data processing				
MediaMosa	MediaMosa is open source software to build a Full Featured, Webservice Oriented Media Management and Distribution platform.	MediaMosa	www.mediamosa.org		https://github.com/mediamosa	9/12/2013		Complete/EN	yes	GNU General Public License			Collection Management	Information retrieval services			
MIMO-DB: MIMO Aggregator BackOffice	Database manager.	Rodolphe Bailly	http://www.mimo-db.eu/	ThoughtLab		Unreleased		None	no		http://194.250.19.151/mimo/infodoc/		Enriching metadata				
MIMO-VOC: A multilingual vocabulary management tool	Vocabulary management tool.	Rodolphe Bailly	http://pro.europeana.eu/web/guest/thoug	ThoughtLab		Unreleased		None	no		http://incipioinfodoc.archimed.fr/Idesia/home.aspx?INSTANCE=MIMO&		Enriching metadata				
MINT ingestion tool	MINT services compose a web based platform that was designed and developed to facilitate aggregation initiatives for cultural heritage content and metadata in Europe.	Katerina Komninou, Nasos Drosopoulos, Vasilis Tzouvaras, Anna Christaki, Arne Stabenau, Costas Pandalis, Fotis Xenikoudakis, Nikos Simou	http://mint.image.ece.ntua.gr/	ATHENA	https://github.com/mint-ntua/Mint-Athens	11/30/2011		Complete / EN	yes	GNU Affero General Public License	http://oreo.image.ece.ntua.gr:8080/mint/Login_in		Enriching metadata	Infrastructure			
Mirador	An open-source, web-based "multi-up" viewer that supports zoom-pan-rotate functionality, ability to display/compare simple images, and images with annotations	Stanford University	http://iiif.io/mirador/		https://github.com/IIIF/mirador			Minimal / EN	no	Apache License, Version 2.0	http://iiif.io/mirador/demo/		Data processing				
Muse Open Source	Muse Open Source is a free software platform for publishing native iPad apps for digital libraries with cultural heritage content. Apps made with the Muse make history come to life and create new opportunities.	Glimworm IT	http://muse-opensource.org/	Europeana Foundation	https://github.com/jonathancarter	5/30/2013	5/30/2013	Good / EN	yes				Information retrieval services	Exhibition Management			

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Neatline	The Scholars' Lab designed Neatline as a suite of plugins for the open-source Omeka framework, which provides a powerful platform for content management and web publication. Through Neatline, you can create rich representations of places, objects, events, narratives, and documents.	Adam Soroka	http://neatline.org/		https://github.com/scholarslab/Neatline	2012	actively ongoing	Complete / EN	no	Apache License v 2.0	http://neatline.org/neatline-in-action/		Exhibition Management				
NotreDAM	NotreDAM is a multi-user, web-based Digital Asset Management platform		www.notredam.org		http://code.google.com/p/notredam/			Complete / EN	yes	GNU GPL v3	http://notredam.org/demo/		Collection Management	Information retrieval services			
Numishare	Numishare is an open source suite of applications for managing digital cultural heritage artifacts, with a particular focus on coins and medals.	Ethan Gruber, American Numismatic Society	http://numishare.blogspot.com/		http://code.google.com/p/numishare/	December 2010	26/10/2012 - constant development	Minimal	yes	Apache License 2.0	http://numismatics.org/search/ http://numismatics.org/ocre/	Release packages on google code out of date from subversion code	Collection Management	Enriching metadata	Exhibition Management		
Nuxeo Platform	Nuxeo provides a modular, extensible Java-based open source software platform for enterprise content management, and packaged applications for document management, digital asset management and case management.	Nuxeo	http://www.nuxeo.com		http://nuxeo.github.io/	10/30/2013	actively ongoing	Complete / EN	yes	LGPL			Collection Management	Information retrieval services			
OAI-Cat	The OAI-Cat Open Source Software (OSS) project is a Java Servlet web application providing a repository framework that conforms to the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) v2.0. This framework can be customized to work with arbitrary data repositories by implementing some Java interfaces.	Jeff Young	http://www.oclc.org/research/activities/		https://code.google.com/p/oai-cat/source	v1.5.62 October 2013	2013-10-18	Complete / EN	yes	Apache License, Version 2.0	http://alcm.oclc.org/oai-cat/index.html		Information retrieval services				
Omeka	A Collection/Exhibition Management System	Roy Rosenzweig Center for History and New Media, George Mason University	http://omeka.org/	Used by Europeana for virtual exhibitions	http://omeka.org/download/ https://github.com/omeka	1.5.1	2012-01-11	Complete / EN	yes	GNU GPL			Exhibition Management	Collection Management			
Open Exhibits	Multitouch and multuser software	Ideum	http://openexhibits.org/		http://openexhibits.org/downloads/	v.3.0, 13 November, 2013		Complete / EN	yes, community based	Simplified BSD License			User Engagement	Exhibition Management			
Open Licenses Service	Data on more than 100 open licenses. Including all OSI-approved open source licenses and all Open Definition conformant open data and content licenses. Provided in easy to use, machine readable JSON -- perfect if you need to drop a license chooser into your app.	Open Knowledge Foundation	http://licenses.opendefinition.org/	DM2E	http://licenses.opendefinition.org/		1/2012	Minimal / EN	yes	MIT License			Infrastructure				
OpenRefine	OpenRefine (ex-Google Refine) is a powerful tool for working with messy data, cleaning it, transforming it from one format into another, extending it with web services, and linking it to databases like Freebase. Free Your Metadata has created an OpenRefine extension for Named-entity recognition.	Free Your Metadata	http://freeyourmetadata.com/		https://code.google.com/p/google-refine/downloads/list	dec. 2011	actively ongoing	Complete / EN	yes	BSD 3-Clause License			Collection Management	Enriching metadata			
Open Sahara		Maintained by Talking Trends	https://dev.opensahara.com/		https://dev.opensahara.com/projects	10/2012		Minimal / EN	yes				Data processing				
OpenScribe	OpenScribe is an online community where people interested in handwritten material such as letters, diaries, journals etc can join together to help convert these documents into digital text.	Google Project Hosting: jcdar...@gmail.com	https://code.google.com/p/openscribe/	none	http://openscribe.googlecode.com/svn/trunk/all/ac				no	GNU			User Engagement				
OpenSeadragon	An open-source, web-based viewer for zoomable images, implemented in pure JavaScript.		http://openseadragon.github.io/		https://github.com/openseadragon	12/2013		Complete / EN	yes	BSD license http://openseadragon.github.io/license/			Data processing				
Payola	Payola is an HTML5 web application which lets you visualize Linked Data using several preinstalled plugins as graphs, tables, etc.	Jirka Helmich, Ondra Hermánek, Ondrej Kudláček, Honza Široký, Kryštof Váša	http://payola.cz/		https://github.com/payola/Payola			Good / EN	no	GNU General Public License			Data processing				
pdfhtmlEX	pdf2htmlEX renders PDF files in HTML, utilizing modern Web technologies, aims to provide an accuracy rendering, while keeping optimized for Web display.	Lu Wang	http://coolwanglu.io/pdf2htmlEX/		https://github.com/coolwanglu/pdf2htmlEX			Good / EN	yes	GPLv3 with additional terms			Data processing				

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	PDFMiner is a tool for extracting information from PDF documents.	Yusuke Shinyama	http://www.unixuser.org/~euske/python/		https://github.com/euske/pdfminer			Good / EN	yes, community based	MIT License	http://pdf2html.tabesugi.net:8080/		Data processing				
	Phraseanet is an Open Source Digital Asset Management (DAM) software.	Alchemy	https://www.phraseanet.com/		http://sourceforge.net/projects/phraseanet/	12/12/2011		Complete / EN	yes	GNU General Public License version 3.0 (GPLv3)	https://www.phraseanet.com/en/community/		Collection Management				
	Plumi is a Free Software video-sharing web application based on Plone	EngageMedia in collaboration with Unweb.me	http://blog.plumi.org/		https://github.com/plumi/plumi.app			Complete / EN	yes	As Plumi pulls together a range of different products, different licenses apply to different elements of the software. However most are covered either by the GNU GPL or the Zope Public License	http://blog.plumi.org/sites-using-plumi/		Exhibition Management				
	Once this manuscript material is available as digital text, it can be made easily searchable and available online, and can then be found and used by many more people than when it only exists as a physical document.	Net7, UNIVPM	http://thepund.it	DM2E		07/2012	07/2012	Good / EN	yes	b) the "Artistic License".	http://thepund.it/latest/examples/a		Data processing	Enriching metadata	User Engagement		
	PyBossa is a free, open-source, platform for creating and running crowd-sourcing applications that utilise online assistance in performing tasks that require human cognition, knowledge or intelligence such as image classification, transcription, geocoding and more!	Open Knowledge Foundation	http://www.pybossa.com	DM2E	https://github.com/PyBossa/pybossa		07/2012	Complete / EN	yes	GNU Affero General Public License	http://pybossa.com/app/		Data processing	Enriching metadata	User Engagement		
	read, write and modify MARC bibliographic data	Gabriel Farrell, Mark Maltenzo, Ed Summers	http://pypi.python.org/pypi/pymarc		https://github.com/edsu/pymarc		3/2012	Good / EN	yes	BSD			Data processing				
	Website that generates random images	Willem Jan Faber	http://europeana-fe2.nl/	Hackathon winner	http://europeana-fe2.nl/static/rie_europeana/	4/5/2012		Minimal / EN	no		http://europeana-fe2.nl/		Information retrieval services				
	Open source digital asset management		http://razuna.org/		https://github.com/razuna/razuna	10/2013		Good / EN	yes	GNU Affero Public License v.3 or later			Collection Management	Information retrieval services			
	RDF.rb is a pure-Ruby library for working with Resource Description Framework (RDF) data.	Razuna Arto Bendiken, Ben Lavender, Gregg Kellogg	http://rubygems.org/gems/rdf and http://ruby-rdf.github.io/		https://github.com/ruby-rdf/rdf	11/8/2013		Complete / EN	yes	Public Domain			Enriching metadata				
	a Google Refine extension for exporting RDF		refine.deri.ie		https://github.com/fadma/grefine			Complete / EN	yes	BSD License	http://refine.deri.ie/showcases		Data processing	Collection Management			
	A simple but powerful library for building data applications in pure Javascript and HTML.	Fadi Maali and Richard Cyganiak	http://reclinejs.com/		https://github.com/okfn/recline	sept. 2012	actively ongoing	Complete / EN	no	MIT license	http://reclinejs.com/demos/		Infrastructure				
	A Chrome extension which allows you to view, search, graph and map CSV files in the browser	Max Ogden, Rufus Pollock	https://chrome.google.com/webstore/detail		https://github.com/grp/chrome-csv-viewer	5/1/2013		Minimal / EN	no	MIT license			Data processing				
	A metadata record management system written in PHP, intended to be used in conjunction with VuFind or another Solr-based discovery interface.	Rufus Pollock	https://github.com/KDK-Allii/RecordManager		https://github.com/KDK-Allii/RecordManager			Good / EN	no	GNU General Public License, Version 2			Collection Management				
	REPOX is a framework to manage metadata spaces. It comprises several channels to import metadata from data providers, services to transform metadata between schemas according to user's specified rules, and services to expose the results to the exterior. REPOX aims to provide to all the TEL and Europeana partners a simple solution to import, convert and expose their bibliographic data via OAI-PMH.	Gilberto Pedrosa	http://rebox.ist.utp.pt/	EuropeanaConnect	http://rebox.ist.utp.pt/download.html	30/10/2013		Complete / EN	yes	LGPL v3			Infrastructure				
	ReSearcher is an award-winning integrated suite of open source products for locating and managing electronic information resources, designed for use by students and researchers in academic libraries.	Simon Fraser University Library	http://researcher.sfu.ca/				actively ongoing	Complete / EN	no	GNU GPL			Data processing	Information retrieval services			

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ResearchSpace	ResearchSpace (RS) is aimed at supporting collaborative internet research, information sharing and web applications for the cultural heritage scholarly community. The ResearchSpace environment intends to provide following integrated elements; Data and digital analysis tools; Collaboration tools; Semantic RDF data sourcesCIDOC CRM (Conceptual Reference Model); Data and digital management tools; Internet design and authoring tools; Web Publication	Development requirements https://sites.google.com/a/researchspace.org/	www.researchspace.org							ECL 2.0		This project is led by the British Museum					
ResourceSpace	ResourceSpace is a web-based, open source digital asset management system (DAM)	Montala (under contract with Oxfam)	http://www.resourcespace.org		http://svn.montala.net/svn/resourcespace	10/4/2012	11/23/2012	Good / EN	yes	BSD style license			Collection management	Digital Asset Management			
Roundware	Roundware is a flexible, distributed framework which collects, stores, organizes and re-presents audio content.	http://www.roundware.org/category/team/	http://www.roundware.org/		http://sourceforge.net/projects/roundw			None	no	LGPLv2	http://www.roundware.org/category/exampl		User engagement				
SIREn: Efficient semi-structured Information Retrieval for Lucene	Semantic Information Retrieval Engine - a Lucene plugin to efficiently index and query RDF, as well as any textual document with an arbitrary amount of metadata fields.	Max Ogden	http://siren.sindice.com/		https://github.com/idebru/SIREn/	11/2011	11/2011	Good / EN	yes	GNU Affero General Public License, version 3				Information retrieval services			
SWA: The EuropeanConnect Service Integration Platform		John Glover	http://www.europeanconnect.org	ThoughtLab / EuropeanConnect		Unreleased		None	no				Infrastructure				
SobekCM	SobekCM allows users to discover online resources via semantic and full-text searches, as well as a variety of different browse mechanisms. For each digital resource in the repository there are a plethora of display options, which may be selected by an appropriately authenticated user. This repository includes online metadata editing and online submissions in support of institutional repositories.	Mark Sullivan	http://sobek.ufl.edu/		https://github.com/MarkVSullivan			Complete / EN	yes	GNU General Public License			Information retrieval services	Enriching metadata			
Solr	Enterprise search platform	James Casbon	http://lucene.apache.org/solr/		http://www.apache.org/dyn/closer.cgi/lucene/solr/3.6.1			Complete / EN	yes	Apache License Version 2.0	Ubiquitous	Underpins many systems	Information retrieval services	Infrastructure			
Stanford Named Entity Recognizer (NER)	Stanford NER is a Java implementation of a Named Entity Recognizer.		http://nlp.stanford.edu/software/CRF-NER.shtml			11/12/2013		Minimal / EN	yes	GNU General Public License (v2 or later)	http://nlp.stanford.edu:8080/ner/		Enriching metadata	Data processing			
SUSHI Py	A lightweight and open-source SUSHI library for Python.	Adrià Mercader	http://sourceforge.net/projects/sushipy		http://sourceforge.net/p/sushipy/code/	4/4/2012		Minimal / EN	no				Data processing				
Tabula	Tabula is a tool for liberating data tables trapped inside PDF files.	Manuel Aristrán	http://tabula.nerdpower.org/		https://github.com/jazzdot/tabula			Minimal / EN	yes	MIT license			Data processing				
TAP	TAP is a collection of free and open-source tools which support the creation and delivery of mobile tours. Currently TAP consists of authoring tools built on top of the content management system Drupal, a native iOS mobile application, and a web-based mobile application built upon the jQuery Mobile library.		http://tapintomuseums.org/TAP		https://github.com/IMAMuseum/tap https://github.com/IMAMuseum/tap https://github.com/IMAMuseum/tap			Complete / EN	yes	GPLv3 license	http://tapintomuseums.org/case-studies		Exhibition management				
TemaTres	TemaTres is an open source vocabulary server, web application to manage and exploit vocabularies, thesauri, taxonomies and formal representations of knowledge.	Diego Ferreyra	http://www.vocabularyserver.com/		http://sourceforge.net/projects/tematres	08/2013		Complete / EN & ES	yes	GPLv2 license	http://r020.com.ar/tematres/demo/fr		Language tools	Collection Management			
Tesseract	Tesseract is probably the most accurate open source OCR engine available. Combined with the Leptonica Image Processing Library it can read a wide variety of image formats and convert them to text in over 60 languages.	Ray Smith	http://code.google.com/p/tesseract-ocr/		http://code.google.com/p/tesseract-ocr/source/checkou	23/10/2012		Good / EN	yes	Apache License 2.0			Data processing				
TEXTUS	Open source platform for working with public domain texts and associated metadata	Dominik Moritz	http://textusproject.org	DM2E	https://github.com/okfn/textus		10/2012	Minimal / EN	yes		http://beta.openphilosophy.org/		Enriching metadata				
The ClioPatris semantic search web-server	Semantic search webserver.	Friedrich Lindenberg	http://e-culture.europa.eu/	ThoughtLab / EuropeanConnect	http://cliopatris.swi-prolog.org/cpack_home		11/22/2011	Complete / EN	yes	GPL-2	http://eculture.cs.vu.nl/europeana/semantic		Information retrieval services				
The Guide on the Side software	A freely available tool that allows librarians to quickly and easily create online, interactive tutorials that are based on the principles of authentic and active learning	Leslie Sult, Justin Spargur, Gregory Hagedorn, and Ginger Bidwell at the University of Arizona Libraries	http://code.library.arizona.edu/gots/		https://github.com/uallibraries/Guide	2012	actively ongoing	Complete / EN	yes: community based	GNU	http://www.library.arizona.edu/applications/qui		Infrastructure				
Timeline JS	TimelineJS is an open-source tool that enables you to build visually-rich interactive timelines and is available in 40 languages.		http://timeline.knightlab.com/		https://github.com/NUKnightLab/T	October 2013	actively ongoing	Complete / EN	yes: community based	Mozilla Public License, v. 2.0	http://timeline.knightlab.com/		Exhibition management				

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	TimeMapper(ex. Timeliner) TimeMapper is a simple javascript app to create and share timelines and timemaps build using ReclineJS.	Rufus Pollock	http://timemapper.okfnlabs.org (ex. http://timeliner.okfnlabs.org/)		https://github.com/okfn/timemapper (ex. https://github.com/okfn/timeliner)			Minimal / EN		MIT license	http://timemapper.okfnlabs.org/view?url=https%3A%2F%2Fdocs.google.com%2Fspreadsheets%2Fccc%3Fkey%3D0A16m09_3Hr2P (ex. http://timeliner.okfnlabs.org/view?url=https://docs.google.com/spreadsheets/https://github.com/traject-project/traject/blob/r)		Exhibition management					
	Traject Tools for reading MARC records, transforming them with indexing rules, and indexing to Solr.	Jonathan Rockkind (Johns Hopkins Libraries), Bill Dueser (University of Michigan Libraries)	https://github.com/traject-project/traject/		https://github.com/traject-project/traject/		ongoing	Good / EN	yes	MIT License			Collection management					
	Triplify Triplify provides a building block for the "semanticification" of Web applications. Triplify is a small plugin for Web applications, which reveals the semantic structures encoded in relational databases by making database content available as RDF, JSON or Linked Data.	Sören Auer, David Aumüller, Sebastian Tramp	http://triplify.org/Overview		http://sourceforge.net/projects/triplify/	28/1/2011	28/1/2011	Good / EN		GNU Lesser General Public License			Data processing	Enriching metadata				
	Unbindery Web-based transcription crowdsourcing app, written in PHP and JavaScript.	Ben Crowder	http://bencrowder.net/coding/unbindery		https://github.com/bencrowder/unbindery	30-11-2012	2012	Good / EN	no	MIT	http://bencrowder.net/books/mtp/		Enriching metadata	User Engagement				
	Unified Digital Format Registry (UDFR) The UDFR is a reliable, publicly accessible, and sustainable knowledge base of file format representation information for use by the digital preservation community. The UDFR seeks to "unify" the function and holdings of two existing registries, PRONOM and GDFR (the Global Digital Format Registry), in an open source, semantically enabled, and community supported platform.		http://udfr.org/		https://github.com/UDFR/UDFR-Models		2012	Good / EN	no	Information from individual contributors is supplied under the CC-BY license; information from the PRONOM registry is supplied under the OGL license.			Digital preservation					
	Unlock Text Unlock Text is a powerful geoparser that can search text hosted on the web in txt or html format for references to locations.		http://unlock.edina.ac.uk/texts/introduction				Unreleased	Good / EN	yes				Data processing					
	Video Frame Analyzer This application is used to analyze technical properties of individual frames of a video file in order to detect quality issues within digitized video files. Within video files, the quality issues that might arise vary from collection to collection. This application allows the user to configure the tests to be performed against a file and to tailor those setting to a specific collection.	NARA	http://blogs.archives.gov/online-public-access/?p=6270		https://github.com/usnationalarch		9/2011	Good / EN	yes	NARA OPEN SOURCE AGREEMENT VERSION 1.3			Digital preservation					
	VuFind Library resource portal.	Villanova University's Falvey Memorial Library.	http://vufind.org/		http://vufind.org/downloads.php	8/26/2013		Good / EN	http://vufind.org/support.php	GPL			Collection management					
	Waisda? Crowdsourcing video annotation software.	Kamil Afsar, Martijn van Steenberg	http://blog.waisda.nl/	Netherlands Institute for Sound and Vision	https://github.com/beeldengeluid/	7/26/2012		Good / EN	no	GPL	woordentikkertje.manbijthond.nl		Enriching metadata	User Engagement				
	Wandora Wandora is a general purpose information extraction, management and publishing application based on Topic Maps and Java.	Wandora Team	http://www.wandora.org		http://www.wandora.org/wiki/Download	2012	2012-06-21	Good / EN	yes	GNU GPL v3	http://kokoelmat.fng.fi/		Data processing					
	Wikipedia JS Wikipedia.js is a small Javascript library for accessing information in Wikipedia articles such as dates, places, abstracts and more ...	Open Knowledge Foundation Labs (Rufus Pollock)	http://okfnlabs.org/wikipediajs/		https://github.com/okfn/wikipedia.js			Minimal / EN	no	MIT License			Information retrieval services					
	WorldCat Search		http://worldcat.org/devnet/code/devnet		http://worldcat.org/devnet/code/devnet	Unreleased prototype		None	no	GNU Lesser General Public License v2			Information retrieval services					
	xDams Platform OS xDams is a web based platform for creating, managing and publishing finding aids EAD and EAC-CPF schema compliant.		http://www.xdams.org/		https://github.com/xdamsorg/xDams	7/10/2012	7/10/2012	Minimal / IT	yes	GNU GPL v3	http://www.youtube.com/user/xdamsplatform		Information retrieval services	Collection Management	Exhibition Management			
	xEAC xEAC is an XForms-based prosopographical information management system for creating and publishing Encoded Archival Context (EAC-CPF) records	Ethan Gruber, American Numismatic Society	http://wiki.numismatics.org/xeac.xeac		https://github.com/ewg18/xEAC		July 2012	Minimal / EN	yes			Development began in June 2012	Collections Management	Data processing				
	XTF The eXtensible Text Framework (XTF) is a powerful open source platform for providing access to digital content.	California Digital Library (CDL)	http://xtf.cdlib.org/		http://xtf.cdlib.org/download/	7/27/2012		Yes (EN)	yes	Mozilla Public License 1.0 (MPL), BSD License, Apache Software License	http://xtf.cdlib.org/xtf/		Information retrieval services					
	yuma.min.js Open Source media annotation toolkit that makes content on a Web page annotatable with just a few lines of JavaScript. **Deprecated** Cf. 'Annotorious'	Austrian Institute of Technology, Rainer Simon, Joachim Jung, Bernhard Hashhofer	http://yuma.js.github.com	ThoughtLab / EuropeanaConnect	https://github.com/rsimon/yuma.min.js	1/18/2012	June 2012	Minimal / EN	yes	GPL v.3	http://yuma.js.github.com/demos.html		Enriching metadata	User Engagement				

1. what is the meaning of "availability of technical support"?

Developers of the service can be contacted.

2. Error page 404 for this link...maybe it is necessary to think to a check

3. not working!

Report on [@EuropeanaTech](#) FLOSS Inventory 03/2014 Twitter Awareness Campaign

Author: Gregory Markus (NISV)

Motivation

In accordance with Europeana v 2.0 The Netherlands Institute for Sound and Vision (NISV) is to establish and manage the [FLOSS Inventory](#), a public list with over 200 open source tools and applications relevant to heritage institutions and creative industries. In an effort to raise awareness and heighten Europeana TECH's presence on social media NISV's the Europeana TECH Community Manager ran a month-long Twitter campaign during which one entry from FLOSS was tweeted daily.

Expected outcomes were to 1) generate more traffic to the Europeana TECH Twitter account which had only 1,099 followers when the campaign started, 2) generate traffic to the FLOSS Inventory, 3) disseminate useful tools that can stimulate re-use of cultural heritage content by creative industries under the Europeana flag.

Strategy

Deciding which entries to use was based on several criteria:

1. Entries with high scores on the ongoing FLOSS Scoring document
2. Entries with all working links and substantial documentation
3. Ensure variety but focus on popular and easily understandable entries like media annotation and social tools

Tweets were separated accordingly to make certain that similar entries would not be tweeted back-to-back.

Results

Results from the campaign were mixed and are dependent on juxtaposition with other similar Twitter accounts and [@EuropeanaTech](#) before the campaign.

Followers

Over the 1 month campaign [@EuropeanaTech](#) gained **83 new followers** taking the total from **1,099 to 1,182**. Compared to the previous 2 months months which only saw an increase in 71 followers, the campaign almost doubled the rate at which new [@EuropeanaTech](#) followers are gained. In the 43 months that [@EuropeanaTech](#) has been active there has been an average of 27 new followers per month. The campaign tripled that amount. This is most likely directly correlated to the persistent activity which should encourage more active use of the account.

Interactions

Prior to the campaign @EuropeanaTech was not actively tweeting but rather focused on re-tweeting (RT). Most tweets before focused on conference announcements or big news developments like the publication of a paper or report. These actions received moderate interactions but due to their spacing did not make significant waves.

The FLOSS campaign increased the activity level of @EuropeanaTech substantial through tweets of substance. All campaign related tweets had links to tools and applications from the FLOSS Inventory or ThoughtLab. Some gained more attention than others. Overall the campaign resulted in **115 RTs and 58 Favorites from 22 tweets.**

Thanks to Twitter's newly employed "[Week in Review](#)" e-mails we were able to see the number of views some tweets had as well as how many link visits.

[Annotorious](#), a media annotation tool from The Austrian Institute of Technology received quite a bit of attention.



Nice. People got into this Tweet.

Image annotation makes cultural heritage more participatory. Need a tool? Annotorious is easy to adapt! annotorious.github.io/index.html#allezculture

09:00 AM - 10 Mar 14

1,645 Views 9 Favorites 32 Link Visits 18 Retweets

Another popular tweet was for [Leaflet](#), an open source JavaScript library for mobile friendly interactive maps.



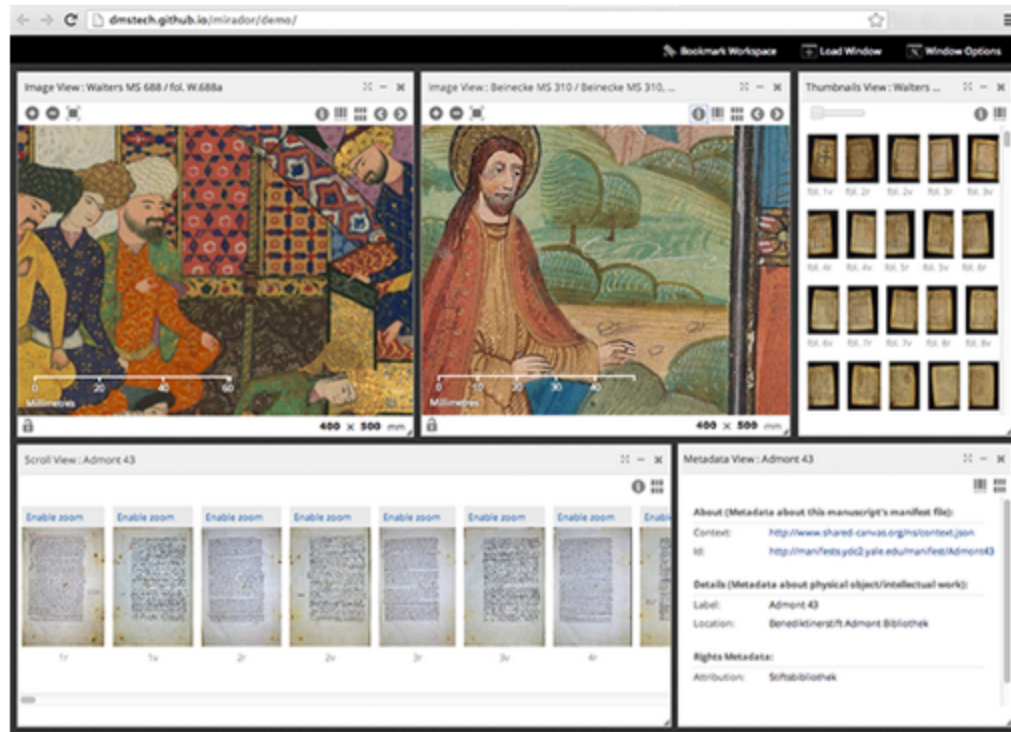
One interesting example worth examining is “The @Europeanaeu Effect”, meaning the influence of Europeana’s main Twitter account which has 15,000 followers.

Europeana shared Stanford University's [Mirador](#) an image viewer tool referencing @EuropeanaTech in the FLOSS Inventory. This tweet received far more attention than any other @EuropeanaTech tweet including its own tweet for Mirador. But also to the surprise of the Europeana team, the tweet received more attention than their standard tweets which reflect on interesting digital items within Europeana. This serves a clear example of the value that the FLOSS Inventory has and the importance of maintaining and growing it as well as raising awareness. Hopefully, if the latter is emphasized the former two will follow.



Europeana @Europeanaeu · Mar 7

Check out @Stanford's tool for image comparison and inspection: iiif.io/mirador/
#FLOSS /via @EuropeanaTech



RETWEETS

31

FAVORITES

26



10:53 AM - 7 Mar 2014 · Details

Flag media

Collapse



More communication with @Europeanaeu and cooperation between the two Twitter accounts should be stressed during future campaigns. Correspondence was indeed done between the managers of both Twitter accounts but planned actions were not fully realized.

Regardless, the month long campaign stimulated far more interaction and awareness for @EuropeanaTech than in the past and gave FLOSS entries as well as their developers attention.

Popularity of Tweets and Relation to Tool's Function

Predicting what an audience will appreciate and share is tricky. The FLOSS entries chosen for the campaign had a wide variety to help discern popularity for future reference.

Item	Tag 1	Tag 2	Tag 3	Interactions
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Annotator	Data Annotation/Curation			8
Ilpimage	Exhibition Management	Media Applications		15
Apache Tika	Metadata Retrieval Services	Semantic Enrichment		9
CHcontext	Content Retrieval Services			2
Mirador	Media Applications	Media Annotation/Tagging		4
Annotorious	Media Annotation/Tagging			8
Phrasenet	Collection Management			7
Waisda	Media Annotation/Tagging	Social Applications		22
Video Frame Analyzer	Digital Preservation	Media Annotation/Tagging		3
Blacklight	Search and Browsing			11
Europeana4D	Metadata Retrieval Services	Data Visualisation	Geo-spatial Applications	8
Seadragon	Media Applications			11
Pundit	Semantic Enrichment	Data Annotation/Curation	Linked Open Data	5
Tabula	Semantic Extraction			9
Leafletjs	Data Visualisation	Geo-spatial Applications		18
Gathrit	Social Applications	Data Annotation/Curation	Exhibition Management	11
D3-Cartogram	Geo-spatial Applications	Data Visualisation		3

Omeka/Neatline	Exhibition Management	Social Applications	Media Annotation/Tagging	4
Repos	Repository Software	Metadata Retrieval Services		3
Timeline JS	Exhibition Management	Data Annotation/Curation	Media Applications	7
Collection Space	Collection Management			5

As can be seen in the chart above, the most popular tools were those that had to do with “Media” “Social” “Exhibition Management” and “Geo-spatial”. These tools are predominantly interesting for those not directly associated with the technical side of cultural heritage because they are timelines, image annotators, players, viewers etc; front end tools that end users interact with instead of back end tools.

Conclusion

While not raising the profile of @EuropeanaTech to astonishing levels, the FLOSS Campaign significantly increased traffic to @EuropeanaTech, raised awareness for the FLOSS Inventory and the bounty of tools that lay within.

Suggestions

- Very important for FLOSS scores and ranking to be finished and reported so that visitors can better discern which tools have complete documentation and have proper coding.
- FLOSS Inventory needs to be cleaned out and updated due to broken links or missing information.
- Keep a steady pace of several tweets a week on @EuropeanaTech
- Call for more developers to contribute their tools and apps to FLOSS via Twitter