



DELIVERABLE

Project Acronym: Europeana Cloud

Grant Agreement number: 325091

Project Title: Europeana Cloud: Unlocking Europe's Research via The

Cloud

D3.2 Tools and services: A set of tools and services for researchers that exploit Europeana content

Revision: v1

Authors:

Erik Duval (KU Leuven)
Gonzalo Parra (KU Leuven)
Anja Jentzsch (Open Knowledge Foundation Deutschland)
Hein van den Berg (VU Amsterdam)
Giannis Stoitsis (ARIADNE Foundation)

Project co-funded by the European Commission within the ICT Policy Support Programme						
	Dissemination Level					
Р	Public	х				
С	Confidential, only for members of the consortium and the Commission Services					

Revision History

Revision	Date	Author	Organisation	Description
V1	9 Feb 2014	Erik Duval	KU Leuven	First consolidation of existing material
V2	11 Feb	Giannis	ARIADNE	Information regarding the ARIADNE
	2014	Stoitis	Foundation	Finder
V3	13 Feb	Anja	OKFDE	Integrated information on the
	2014	Jentzsch		TimeMapper
V4	13Fab2014	Hein van	VU	Rewriting, editing
		den Berg	AMsterdam	
V5	14 Feb	Giannis	ARIADNE	Minor changes and updates regarding
	2014	Stoitis	Foundation	the ARIADNE Finder section
V6	14 Feb	Erik Duval	KU Leuven	Finalisation
	2014			

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This deliverable contains original unpublished work except where clearly indicated otherwise.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.





D3.2 Tools and services A set of tools and services for researchers that exploit Europeana content

Executive summary

This deliverable basically consists of software.

The final version of this deliverable is due in M30. The current version is the M12 intermediate version.

This document describes very briefly the software and includes references to where the software can be accessed on the Web.

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Introduction

Work Package 3 aims to develop services and tools that leverage Europeana content in the Europeana Cloud for researchers. During the first months, the work of WP3 focused on the development of personas, scenarios and use cases, in order to understand and analyse the user needs. This initial work on personas, scenarios and use cases was reported in D3.1.

Based on this work, a first set of prototype demonstrator tools has been created, integrated and evaluated. These tools are:

- an ARIADNE finder personalized for the Axiom philosophy group to help researchers search and find content coming from Europeana and other sources;
- the TimeMapper, an integrated visualization tool to visualize the search results into a timeline and an interactive map to further filter the content and get a better overview of the different resources found on Europeana;
- an Activity Stream, integrated in the above tools to capture and present all the different actions taken in this process (search, visualize, explore, annotate, download).

In this document, we present a very short description of each of these tools, with a reference to where the software can be accessed on the web.

We have also evaluated the tools: that evaluation is the subject of D3.3.

The ARIADNE Finder

The first tool is the ARIADNE Finder, a personalized micro-site that can be used by users to search and discover resources. The Finder searches predefined collections of datasets based on user input and presents the results in a uniform way. It comes as a micro-site, built with lightweight web-technologies (HTML, CSS, HTTP, Javascript, AJAX) in order to be easily embedded in sites and web-applications, without the need to make changes for matching the existing technologies of the application. The first prototype of the Finder in WP3 is designed based on the needs of the Axiom philosophy group.

The Finder is a personalized tool in the following two ways: it is graphically designed to be smoothly integrated with the web site of the Axiom group (http://axiom.vu.nl/) and is built on top of collections that have been requested by stakeholders.

The main usage of the ARIADNE Finder is a faceted search interface that allows users to search and quickly filter the results. In addition, predefined categories that allow access over specific content (i.e. philosophers studied by the target audience) are also available.

The prototype has been designed and developed with the constant feedback from the Axiom group in order to better catch and cover their needs. During development, a number of discussions were organized between the group and WP3 in order to gather feedback concerning the collections to search, categories to use, and the facets that the stakeholders would like to use.

In order for the finder to allow faceted search and uniform representation of the metadata from resources coming from different collections, the Finder uses the existing ARIADNE infrastructure to store a repository with all the metadata. In the current development phase, the resources and different collections stored in the repository are limited to two: Europeana and Google Books. In both cases an API is used to filter thematically resources for the dataset. In order to provide this uniform representation and make the resources available throughout the Finder a transformation process took place, where all files were transformed from their original scheme to an internal format. During this transformation procedure metadata has also been enriched.

Finally, the Finder is the main tool on top of other tools that have been integrated with it. On the first page of the Finder, the Activity Stream is integrated in the bottom screen as a floating message, while in the listing of the results a link to visualize the results in the TimeMapper is available. More information on these tools is available in the next chapters. For the integration of the different tools, a number of technical issues had to be resolved, such as passing the POST search activities in the REST service of the activity stream, passing the JSON file to the TimeMapper, etc. Apart from online meetings and when needed bilateral communication, a specific WP3 discussion board was kept to discuss and resolve all technical issues.

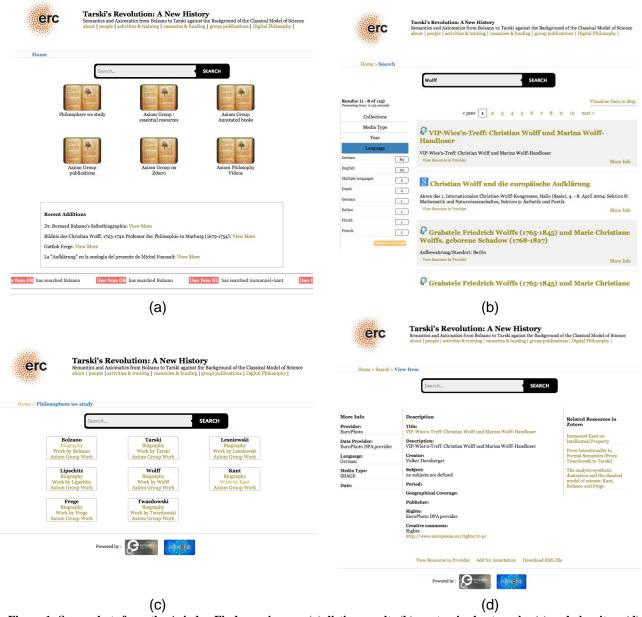


Figure 1: Screenshots from the Ariadne Finder main page (a), listing results (b), customized categories (c) and view item (d)

The above figures show different screenshots from the Finder. In Figure 1-a the main page of the Finder is shown, with the Activity Stream at the bottom. Figure 1-b shows the listing of the results after a search is executed, with the facets that can be used and the button to visualize the results in the TimeMapper. Figure 1-c shows the menu of the predefined customized categories for quick access to specific results. Finally, figure 1-d presents how a specific result can bee seen.

The ARIADNE Finder for the Axiom philosophers group can be accessed at the following url: http://greenlearningnetwork.com/axiom/

The TimeMapper

Europeana provides a variety of metadata for its resources. These might include images, geo-coordinates and time information. Having this metadata available, TimeMapper can help visualizing temporal and geographical overlap and dependencies of resources.

TimeMapper1 is a data visualization tool that allows for the creation of timelines and timemaps using Google spreadsheets.

While the ARIADNEFinder provides the user with a faceted search for Europeana resources, it might still be difficult to navigate through a vast amount of records for specific searches. E.g. the search for "kant" returns 158 results2. Thus we integrated TimeMapper in our tool chain to provide an interactive geo-spatial visualization of these bibliographic metadata. Users are now enabled to navigate the metadata and order the resources on the basis of time and place of publication. By doing this they can identify various (types of) resources worth studying.

Figure 2 shows the TimeMapper when drilling down into resources that match the keyword "kant".

Ultimately, one would also want to be able to visualize different persons and compare their work based on geographical and temporal metadata.

TimeMapper was adjusted for Europeana Cloud to use the JSON format defined by the ARIADNEFinder. It will furthermore be adjusted to meet the specific needs that were pointed out by our user group in a recent study (cf. D3.3).

TimeMapper is available under the MIT licence3.

TimeMapper can be accessed via the ARIADNE Finder's button labelled "Visualize data on map".

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¹ http://timemapper.okfnlabs.org

² http://greenlearningnetwork.com/axiom/listing.html?query=kant#

³ http://opensource.org/licenses/MIT

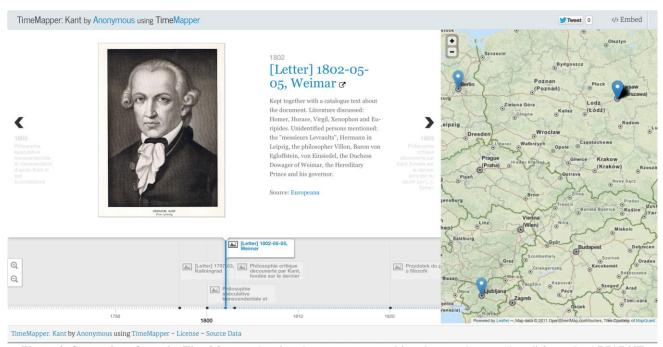


Figure 2: Screenshots from the TimeMapper showing the resources matching the search term "kant" from the ARIADNE Finder

The Activity Stream

Based on the community reading awareness provided by TiNYARM [1] and supporting the Science 2.0 idea of enhancing collaboration among researchers [2], we have deployed a web application called the "Activity Stream (AS)"; enabling researchers to share their work related activities with a community. Specifically, the application aims to aggregate "search" and "visualize" activities, and make researchers aware of what their peers are currently working on.

In this first prototype, the AS presents "searches" that have been performed using the ARIADNE Finder and terms that have been "visualized" using the TimeMapper, as seen in Figure 2. The activities in the scream are structured as: Actor | verb | (Object). For example, User from GR | has searched | Bolzano.



Figure 3: The Activity Stream main screen

The Activity Stream is designed as a web application (using HTML and JavaScript) and deployed using the Google App Engine (GAE). Together with the terms used to perform a search or visualization, a link to the tool showing the outcome of that action is provided. Also, to be able to provide users the flexibility to filter activities, the feature of tool grouping was added to the application. For instance, by clicking on the tool's name (e.g.: Finder or TimeMapper) you can get the stream of activities from that tool only.

The Activity Stream allows us to digest different events sent from different tools (via REST services) used by researchers, but also provides the possibility to embed these on other software components. For example, the application supports RSS syndication as a passive form of notification system. In Figure 3 you can observe the current activity sources and outlets.

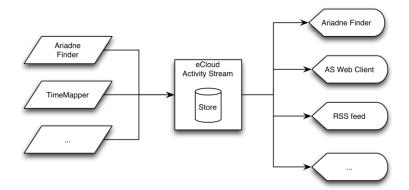


Figure 4: Information sources and outlets of the Activity Stream

The Activity Stream for the Axiom philosophers group can be accessed under the following URL: http://as-ecloud.appspot.com/

References

- 1. Parra Chico, G., Klerkx, J., Duval, E. (2013). TiNYARM: awareness of research papers in a community of practice. i-KNOW13: Proceedings of the 13th International Conference on Knowledge Management and Knowledge Technologies. i-Know '13. Graz, Austria, 04-06 September 2013 (pp. 21:1-21:8). New York, NY, USA: ACM.
- 2. Shneiderman, B. 2008. Science 2.0. Science. Vol. 319, No. 5868, 1349-1350.