



# DELIVERABLE

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## D2.2 - Intermediate report on Europeana theme

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P	Public	x
C	Confidential, only for members of the consortium and the Commission Services	

## Revision History

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This deliverable contains original unpublished work except where clearly indicated otherwise.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

In June 2010 partners from six European universities started the project thinkMOTION with the main objective of providing content from the field of motion systems via the Europeana online portal. Therefore, the currently available and all the DMG-Lib content collected in the proposed project must become accessible to Europeana - that means to Europeana users as well as to Europeana tools (e.g. the harvester).

For users a DMG-Lib theme adapted to the Europeana look-and-feel was considered useful. It shall avoid a kind of break when Europeana users enter the DMG-Lib server coming from a Europeana search. The design and evaluation of such a Europeana theme for DMG-Lib is part of task 2.2 and is described in this document.

Task 2.2 is part of WP2 – Adaptation of interfaces to Europeana – included in the “Description of Work” for thinkMOTION project.

## 2 Workflow and results

A theme is a pre-configured graphical interface with an underlying, unifying design. Themes are used to customize the look and feel e.g. of a website.<sup>12</sup> Thus, a DMG-Lib theme can be used to transform the look of the DMG-Lib portal in accordance to the Europeana look-and-feel by adopting styles for the content structure, buttons or text properties. This shall avoid a kind of break when Europeana users enter the DMG-Lib server coming from a Europeana search.

### 2.1 Objective

The goal of task 2.2 is that the DMG-Lib supports a special Europeana theme when accessed by Europeana users.

The study presented in this deliverable aimed to:

- Gather the experience of using Europeana and DMG-Lib together for information retrieval
- Analyze a possible kind of break when entering the DMG-Lib from a Europeana search
- Collect the content and structure of a special Europeana theme for DMG-Lib

### 2.2 Approach

In a first step, it was necessary to identify and analyze a possible kind of break. For this purpose, a focus group was conducted with experts in the form of a cognitive walkthrough. The results of the focus group could be used to develop a special Europeana theme which supports Europeana users when accessing the DMG-Lib and which softens or even abolishes a possible break when switching between these two portals.

Focus groups are structured group discussions which help to uncover the experiences, preferences, priorities, and values of a given target audience.<sup>3</sup> They are especially suitable for use in the early stages of product development, to generate ideas, prioritize features and to give an insight into the expectations and wishes of users.<sup>4</sup>

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<sup>1</sup> *Theme (computing)*. (n.d.). In: Wikipedia. Retrieved August 20, 2012, from [http://en.wikipedia.org/wiki/Theme\\_\(computing\)](http://en.wikipedia.org/wiki/Theme_(computing))

<sup>2</sup> *Themes*. (n.d.). In: WordPress Support. Retrieved August 20, 2012, from <http://en.support.wordpress.com/themes/>

<sup>3</sup> Morgan, David L.: *The focus group guidebook*. Reprint. Thousand Oaks: Sage Publications (Focus group kit, 1), 1999.

<sup>4</sup> Kuniavsky, Mike: *Observing the user experience. A practitioner's guide to user research*. Reprint. San Francisco, Calif.: Morgan Kaufmann, 2009.

An advantage of focus groups is that the results of the discussions not only reflect the opinion of individuals but include exchange and discussion processes among all participants. In addition, specific inquiries by the moderator are possible, e.g. to avoid confusion and misinterpretation or to make causes, motivation and goals of the participants concrete. Hence, focus groups admit a thought for problem discussion and for clarification of action differences. Group dynamics and generation of ideas and solutions as a team perform well on the creative potential of the participants, too.<sup>5</sup>

At a Cognitive Walkthrough experts evaluate a user interface in connection with one or more specific user tasks. The experts play the role of the user and “walk through” the interface to explore how the user would accomplish a determined set of tasks. For successfully completed actions no changes in the user interface are required. For actions where usability problems occurred, alternative solutions are developed by the group of experts that can serve as a basis for a re-design of the user interface. Eligible experts are interface experts, domain experts or double experts in the fields of product design, product development, marketing or training.

According to Wharton, the Cognitive Walkthrough is a helpful method for evaluating product designs in all phases of the development process.<sup>6</sup> The method is easy to learn and offers a well-structured action for the experts during the evaluation. The Cognitive Walkthrough is well suited to detect methodical, where and why a design complicates individual steps of a task. Furthermore, this method does not require users, and evaluator schedules permitting, it can be conducted relatively quickly with a short lead time.<sup>7</sup>

### 2.3 Implementation

The study was planned with four participants, two domain experts from the field of mechanism science and two interface experts with usability background.

Since the experts evaluated from a user perspective, we first had to define user assumptions. In this case, reasonable assumptions were that the users are academics and researchers in the broadest sense who make use of scientific information as part of their work, that they are competent and frequent web users, but do not necessarily have sophisticated searching skills. The users will generally have good knowledge of their subject, but not necessarily be familiar with the contents of particular libraries. For this study, we assumed that the users are based in Germany.

For the next stage of analysis, the experts worked separately through predefined tasks which were all related to information retrieval. In the following, we want to illustrate the procedure exemplified by the task: find biographical data and a portrait of Franz Reuleaux. Thus, one task sequence (Figure 1) for the experts was to:

- Go to the Europeana homepage
- Enter a search expression such as “Franz Reuleaux” into the search box and press “search”
- View the results
- Select an item provided by DMG-Lib
- Retrieve further information from DMG-Lib directly

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<sup>5</sup> Röse, Kerstin: *Task-Analyse*. In: Sven Heinsen und Petra Vogt (Eds.): *Usability praktisch umsetzen. Handbuch für Software, Web, Mobile Devices und andere interaktive Produkte*. München: Hanser, 2003. Pages 97-114.

<sup>6</sup> Wharton, C.; Rieman, J.; Lewis, C. & Polson, P.: *The Cognitive Walkthrough Method: A Practitioner's Guide*. In: Nielsen, J. & Mack, R.L. (Eds.): *Usability Inspection Methods*. 1. ed., New York, NY: John Wiley & Sons Inc., 1994.

<sup>7</sup> Schweibenz, W. & Thissen, F.: *Qualität im Web: Benutzerfreundliche Webseiten durch Usability Evaluation*. 1. ed., Berlin et al.: Springer, 2003.

Once each expert had worked systematically through a task, the group reconvened to compare notes, to discuss the task sequence and to summarize findings based on the following key questions:

- Were you able to accomplish the task completely?
- How easy was it to complete the task?
- How do you rate the information content?
- Did you feel kind of interrupted in fulfilling the task?

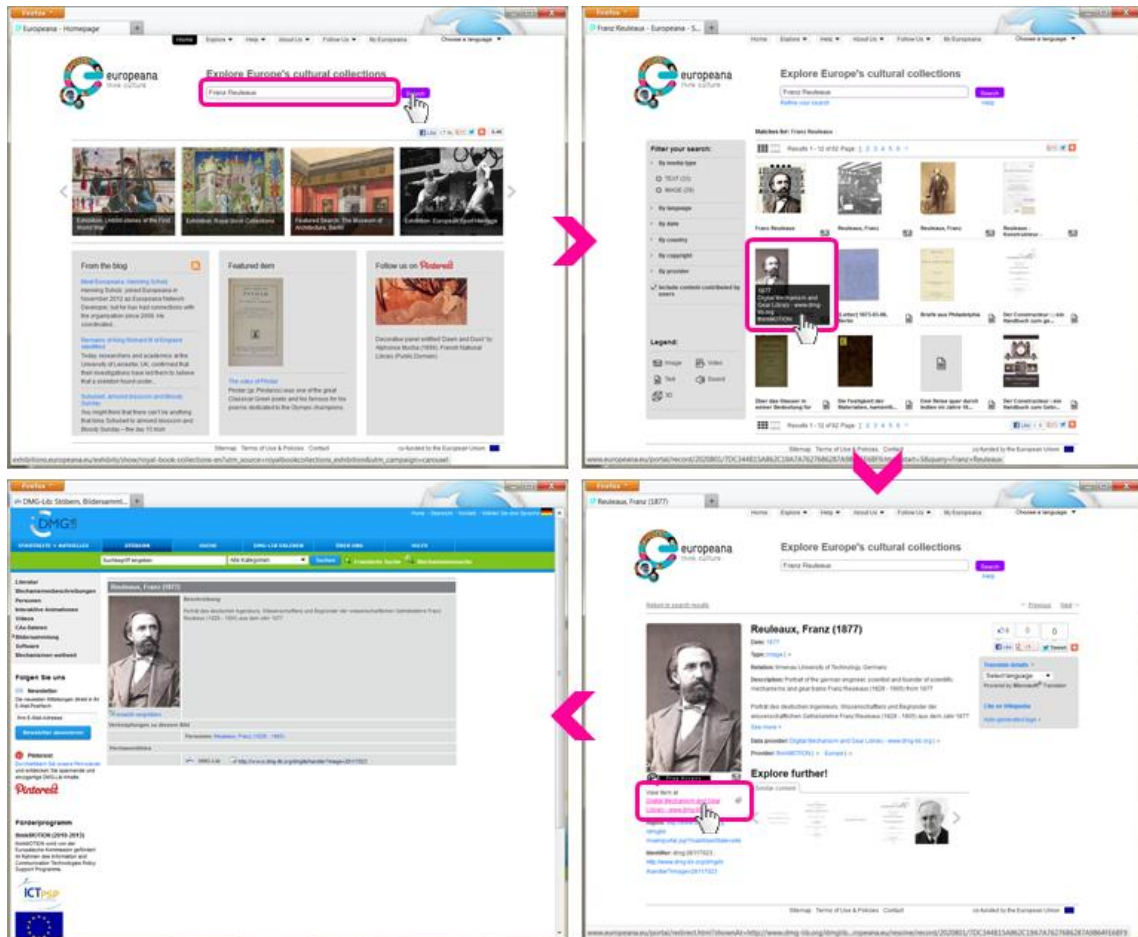


Figure 1. Exemplary task sequence for the Cognitive Walkthrough

## 2.4 Results

First of all, the given task could be handled by all participants completely and easily. All participants received sufficient information regarding their search for Franz Reuleaux within a few minutes, including a brief description of the person, CV details, various images and related text documents.

During task performance, essential metadata such as name, dates or a brief description of the person were available for the participants, clearly identifiable and well-structured in the Europeana portal as well as in the DMG-Lib portal. Identical or synonymous identifiers and the similar structure and categorization of metadata in the two portals were mentioned as particularly helpful, as well as similar functions supporting a deepening search.

Conspicuous for the participants were the design distinctions between the portals. It was discussed whether an adaptation on the part of the DMG-Lib provides an easier access and thus creates added value for Europeana users. The participants were in agreement to a no. An

adaptation of the DMG-Lib design would be more confusing because users may not assign, in which of the two information spaces they are currently located. Rather, the individual designs strengthen the recognition value of each portal. Thus, the design differences carry no weight to the overall evaluation by the expert group, not least because of similar metadata structure and functionalities.

On a less positive note, the participants perceived opening the DMG-Lib in a new window as annoying when clicking on the “View item at” link within Europeana. They expected that the DMG-Lib opens in the same window to minimize the total number of screens. But it was also noted, that opening the DMG-Lib in the same window may result in the loss of the search hit list in Europeana, if a return with the help of the browser history fails.

## 2.5 Conclusion

In summary, the experts agreed that there is no kind of break when Europeana users enter the DMG-Lib server coming from a Europeana search. This stems mainly from the complete and simple execution of the predefined task, as well as from many similarities between the two portals regarding the structure, categorization and preparation of used metadata. Therefore, a special Europeana theme implemented in DMG-Lib is not necessary; it even could be more confusing for users because of not knowing in which information space they are currently located.

Nevertheless, the experts recommended how the transitions from the Europeana search and browse pages to the DMG-Lib pages showing the found items could be designed more smoothly.

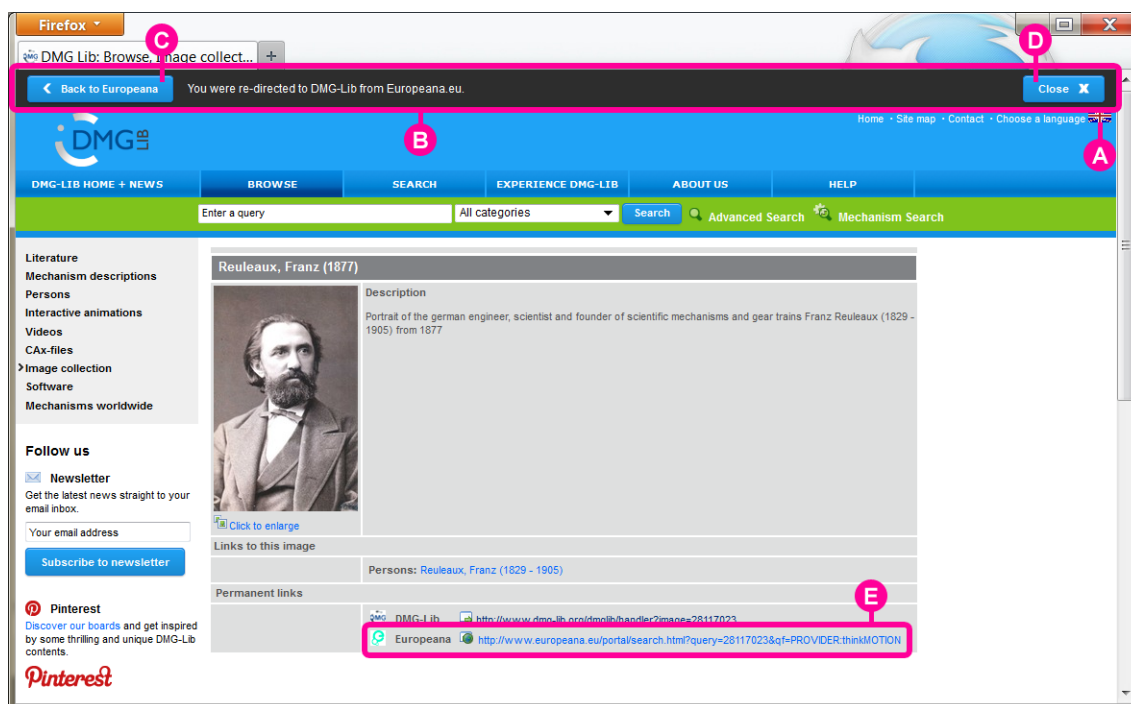


Figure 2. Revised DMG-Lib user interface according to the experts recommendations

So, keeping the users language helps to supply a user-compliant look and feel. The Europeana portal supports 31 languages. If the user selects his preferred language, this is stored on the user side in an access-protected cookie. Due to the access protection, this essential information on the user's language setting cannot be read out by the DMG-Lib scripts. For this reason, the DMG-Lib scripts were refactored to be able to identify the language information supplied by the used browser, assuming that this corresponds to the preferred language of the user (Figure 2 – A). Furthermore, users are able to choose from six languages within the DMG-Lib. Those multilingual translations of important metadata, especially titles, headings and names as well as keywords, overcome language barriers in the textual search made by Europeana users.

To comply with the expert's recommendation to open the DMG-Lib out of Europeana in the same window to minimize the total number of screens, an extension of the DMG-Lib header area was implemented (Figure 2 – B). The DMG-Lib scripts now are able to take care of the referrer, means from which web site the user is directed to DMG-Lib. Users coming from Europeana are supplied with an additional button in a separate line in the header area, which guides them back to their initial Europeana page with just one click (Figure 2 – C). The original link to this Europeana page is stored in the user session and is thus retained, independent of the browser history. Users can browse calmly in the DMG-Lib portal to deepen their research, returning to their Europeana search at any time. An additional "close"-button allows the user to reject the offer of backlinks any time and remove the inserted header line (Figure 2 – D).

To strengthen the connection between the two portals, the DMG-Lib directly links to the Europeana portal (Figure 2 – E). Users can view the corresponding item in Europeana by just one click and draw on this broad knowledge base, e.g. the offer of similar content which provides a variety of links to related items of other content providers. This networking is all the more valuable for the development of a semantic network.