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HARMOSEARCH

Harmonised Semantic Meta-Search in
Distributed Heterogeneous Databases

SEVENTH FRAMEWORK PROGRAMME

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Evaluation Report on Validation of Results of the Mapping Tool

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1 INTRODUCTION

1.1 PURPOSE OF THE DOCUMENT

The document at hand reports results and findings of the evaluation process performed during the development of the HarmoSearch mapping tool. The overall goal of the evaluation process is to improve the quality of the mapping tool with regards to software components.

At the beginning of the project a basic evaluation procedure was defined with a set of dedicated activities that have been performed every time a new prototypical release candidate was released. Overall 4 release candidates have been developed. The evaluation procedure covered internal and external evaluations. The internal evaluation was done by the developers, and was focused on testing the developed software artifacts (technical tests), whereas the external evaluation addressed the usability of the main components that provide a graphical user interface (functional tests).

All in all the evaluation results showed that the developed components are of good quality. The expert users judged the usability and functionality of the HarmoSearch mapping tool mostly fulfilled. However, the early releases showed usability deficits regarding the mapping editor.

1.2 DEFINITION OF TERMS AND ABBREVIATIONS

The following terms and definitions are used throughout this document:

- **Release candidate:** The development of the HarmoSearch mapping tool followed an iterative approach. Accordingly, several versions of the HarmoSearch mapping tool had been developed. A release candidate denotes to the most recent version of the prototypical implementation of the HarmoSearch mapping tool ready to be evaluated.
- **Mapping tool:** The HarmoSearch mapping tool is a stand-alone tool dedicated to support domain-experts (expert users of a specific domain) in creating proper mappings between elements of a source schema and elements of a target schema.
- **Internal evaluation [Technical evaluation]:** Defined in details in this document, this evaluation consists of technical unit tests performed by developers in order to ensure the robustness of the developed software artifacts.
- **External evaluation [Functional evaluation]:** Defined in details in this documents, this evaluation consists of using the components of the HarmoSearch system in order to ensure that they meet requirements and can be used by non-technical users.

1.3 RELATIONSHIP WITH OTHER DOCUMENTS

Initial inputs for this document are deliverable *D2.1 Use Case Specification, D2.2 Architectural Design* and *D6.1 First Running Prototype with Main Functionality Integrated*. D2.1 defines the main functionalities and requirements whereas D2.2 is

used to describe the basic architecture of the HarmoSearch as well as the Harmonise system. D6.1 provides detailed information about the main building blocks and functions of the HarmoSearch mapping tool.

Finally, this document is partly related to *D7.1 Compiled Collection of Acceptance Notes*, which addresses the evalution of the HarmoSearch portal. Although the targets of evaluation are different, there are some connections between the portal and the mapping tool that are reflected in the external (functional) evaluation results.

1.4 STRUCTURE OF THE DOCUMENT

The document is structured as follows:

- Section 2 describes the context: first an introduction to the Mapping Tool is given, then the evaluation process is summarized (the complete description is provided in D7.1 – Compiled Collection of Acceptance Notes)
- Section 3 summarizes the content of each release candidate.
- Section 4 lists future recommendations as identified during the external evaluations.
- Appendix A provides the list of requirements for each release candidate.
- Appendix B contains the compiled evaluation documents.
- Appendix C contains the acceptance reports.

2 CONTEXT

2.1 OVERVIEW OF THE MAPPING TOOL FUNCTIONALITIES

The Mapping Tool is a stand-alone application that can be deployed in any harmonisation project. Mapping artefacts are created using a propose-critique-modify approach, i.e., a mixture of automatic matching and user interaction. The tool makes a matching proposal and presents this proposal to the user. The user then supervises the proposal and accepts or rejects it partially or completely, optionally asking for a new proposal. Alternatively, the user may manually manipulate proposals in cases the employed matching algorithms do not come up with a correct solution. Finally, from the defined matches the tool creates a mapping artefact that can then be uploaded to the HarmoSearch portal.

The main functionalities of the Mapping Tool are:

- **Creation of a new mapping project:** to create the central repository which contains all resources that are necessary in order to create a proper mapping.
- **Setting up of the mapping project:** to add the necessary resources that support the development of a proper mapping definition: schema files representing structural information about the source and the target data; mapping patterns to define the actual mappings; transformation configuration file dealing with the basic settings that drive the transformation procedure; mapping filter to guide the user towards a proper mapping definition.
- **Setting up of the mapping file:** to specify the source and the target schema.
- **Creation of the proper mapping definition:** to create the actual mapping. The mapping is done using the HarmoSearch mapping editor graphically supporting the user in creating proper mapping links. A mapping link represents a connection between a source and a target element.
- **Running and testing the transformation:** to create output files according to the process specification (e.g. XML or HTML) in order to visualize the final outcome and thus to provide immediate feedback to the user.
- **Export mechanism:** to save a mapping representation to a specific file, in order to make the transformed mapping available for other applications or further purposes.
- **Automatic upload of the output mapping files to the HarmoSearch portal:** to directly upload the mapping files to the HarmoSearch portal from the Mapping Tool itself, instead of doing it manually through the Mapping Store user interface of the portal.
- **Mapping of reference lists:** to map and combine with an existing data mapping dedicated reference values, i.e. those domain specific values - such as an event category or an hotel classification - that refer to elements that are not part of the data schema but refer to data pieces that only exist in the database of an individual customer. These values usually belong to some kind of list that serves as the reference for several applications and organisations.

- **Definition of mapping variables:** to store and reuse during the creation of a data mapping some mapping parameters, in order to reduce the manual effort for the user when applying a mapping pattern, thus saving time and at the same time decreasing the risk of failure.
- **Import of an existing mapping project:** to import and reuse existing mapping projects as Zip file or from a folder on the local hard-disk.
- **Export of an existing mapping project:** to expoprt mapping projects that exist in the current workspace as an archive file.
- **Installation of third party plug-ins:** to extend the HarmoSearch mapping tool by downloading and installing new software components.
- **Update the HarmoSearch mapping tool:** to update installed software components in the system.

2.2 OVERVIEW OF THE EVALUATION METHODOLOGY

The purpose of the evaluation report is to define the evaluation procedure for the HarmoSearch mapping tool. Since HarmoSearch is an information and communication technology (ICT) research project the main deliverables are software artifacts.

Specific evaluation activities were used to determine if the HarmoSearch mapping tool met the expectations in regard of project execution, usability, and user satisfaction. The activities that were performed during the entire project had been used to determine if the evaluation was effective and how the actual users felt about the final release.

The following activities had been performed during the project:

- During the development phase unit tests have been used evaluating dedicated parts of the developed source code
- Evaluation testing by expert users to evaluate the software quality perceived by the expert and end user

The HarmoSearch mapping tool has been evaluated from two distinct perspectives:

- Internal evaluation
  - The internal evaluation is a technical evaluation, which consists in unit tests and bug fixing, and is conducted by the developers, (RTD partners).
- External evaluation
  - The external evaluation is a functional evaluation, and aims at measuring the success and usability of the tool. It is conducted by three kind of users: expert users that are internal project partners (SME partners), real users that are internal project partners (class OTHER partners in HarmoSearch) and domain-experts that are not participating in the HarmoSearch project.

All partners of the project have been involved as participants in the external (functional) evaluation of the various Mapping Tool release candidates, following the evaluation methodology described in details in the Deliverable D7.1 "Compiled collection of acceptance note".

It was decided not to involve users external to the project to actually perfom evaluation of the first phases of the mapping tool development, in order to avoid the risk of generating discouragement, after all the aim of this project was to develop a prototype. SPK and Museumsmedien were chosen to act out the roles of participant was well as domain-expert as they both represent the cultural heritage users. The portal managed by the SPK, euromuse.net, managged to aggregate the Finnish Museum Association as data provider with use of the prototype, as this was gradually done with each release; SPK took over the actual mapping process with support of TU Wien for the Finnish Museum Association. Understandibly it was never expected for them to yet test the application, for the aforemention reason. The successful result of this connection was presented to the Museum Association and thus now the routine of data exchange between both partners is asured. This real use case was therefore used as show case and for elaborating the manual of the tool (to read more see D6.4 Manual for the HarmoSearch Mapping Tool).

In addition to the external evaluation realised by SPK, the usability of the mapping tool was also assessed by an external domain expert, using the before-last mapping tool candidate (during Release 4). This evaluation is to be found in section 3.6 Evaluation with external domain experts.

3 EVALUATION SESSIONS

The evaluation has been conducted on 4 release candidates of the HarmoSearch mapping tool. All partners were involved and participated in the review meetings, which have been organized in order to share experiences and evaluate if the presented release candidates fulfilled the requirements as expected. The business users as well as the evaluation leader have performed the evaluations. These have been conducted in two phases. In the first phase, the business users were the expert users belonging to the SME partners, as well as the real users belonging to the OTHER partners of the project, and in the later phase, the business users were external domain-experts. TU-Wien as evaluation leader was also responsible for collecting and distributing the results of the evaluations within the HarmoSearch consortium.

All in all 4 external evaluations have been conducted; each, with the corresponding release candidate version of the HarmoSearch mapping tool. The evaluations took place throughout the whole project: M10, M14, M21 and M27.

3.1 THE FOUR RELEASE CANDIDATES

The scope of the first release was to make a domain expert with no previous knowledge of mapping acquainted with the process but also basically present a first proposal in order to gather first impressions of such users, and although the aimed basic functionalities worked as expected, the usability expectations were not met, therefore the following candidate concentrated in offering this integrated help and guidance to the user. The third candidate presented many new components that drastically reduced the time consumed in performing a simple mapping but also evidenced the complexity of the process, so the last fourth candidate focused in fine tuning the developed functionalities towards making them usable and comprehensible to the user.

3.2 EVALUATION OF RC1

The first evaluation was performed in month 10 (M10). Lead by TU-Wien (evaluation leader) SPK (participant) performed the evaluation of release candidate 1 (RC1). RC1 was the first prototypical implementation of the HarmoSearch mapping tool. The main purpose of the RC1 evaluation was to determine if the basic functionality for deliverable D6.1 was fulfilled. The collected results were presented in the next consortium meeting (review meeting). All partners accepted RC1. The identified issues had been discussed and added to the requirements list of the next release candidate.

RC1 presented basic functionalities in order to perform tasks such as opening and closing the application, import and delete files from the workspace a short introduction on the interface (not exhaustive for this was to be improved in later releases) and a more detailed introduction of the data mapping process: to choose the matching data elements and the modelling of this match with use of dialogue windows. Generally, an integrated guidance was missed. The modelling dialogue was too technnical which reduced both understanding and trustworthiness of the tool because the steps were, for non-technical users, completely foreign.

The results of the evaluation are attached in Appendix B.1 - Test cases for release candidate 1.

The Acceptance notes for RC1 are attached in Appendix C.1.

3.3 EVALUATION OF RC2

The second evaluation was done in M14 and it addressed the functional testing of RC2. The participating partners were: TU-Wien (evaluation lead), SPK (participant), and ECTRL (participant). Both partners agreed that the basic requirements for RC2 were fulfilled but identified gaps in the tool's ability to support the user during the mapping process. They suggested overworking the feedback mechanism intended to assist the user (error and warning messages). Furthermore, they requested better help support during the actual mapping procedure since novice users may be overwhelmed by the proposed (and supported) mapping procedure. The collected results were presented in a review meeting. All partners agreed on the basic functionality but shared the obligations about the user's assistance. All partners accepted RC2 but stated that the user assistance had to be improved in the next release. The feedback and results had been collected and added to the list of requirements for the next release candidate.

RC 2 introduces the basic functionality that will solve some of the issues raised by the first candidate by offering the integration extensions such as the xml and text editor to correct or edit the elements used in for the mapping in the same tool, and the infrastructure to introduce help content was introduced. Thourgh wizards the user could get feedback as to how to correctly upload items into the working space. Additionally the transformation of a final mapping file (the outcome) is with this release possible and the user can also preview the mapping connections in an integrated HTML viewer without having to actually export or finalise the whole project. The only problematic issue raised by this release was the non-satisfactory usability and feel of the graphical interface and the modelling dialogues were still too technical.

The results of the evaluation are attached in Appendix B.2 - Test cases for release candidate 2.

The Acceptance notes for RC2 are attached in Appendix C.2.

3.4 EVALUATION OF RC3

The evaluation was conducted in M21 and focused on the functional evaluation of the third release candidate (RC3) of the HarmoSearch mapping tool. Lead by the TU-Wien as evaluation leader SPK (participant) evaluated RC3 with regard to the list of requirements collected in the previous evaluation session. SPK attested significant improvements regarding the usability of the mapping editor and valued the form-based mapping as very helpful for novice users. Furthermore, the overall functionality of the tool improved. However, some issues remained towards the messaging capability of the wizard dialogs and the mapping patterns that were used during the evaluation. The results had been presented to all partners in the next review meeting. All partners accepted the release candidate.

Usability issues were finally handled by RC 3. This candidate offered the possibility to use a "form viewer" which complemented the graphical interface. The time needed

for simple mapping reduced, by means of 'drag and drop' the items to be mapped and a simplification of the steps and dialogues for modelling. A new functionality also allowed defining certain values (such as languages) at the beginning of the mapping which permitted the mapping of multilingual data elements. During the development of this release, it became clear that in certain cases a more complex mapping had to be performed by a technical expert or in case a mapping project was to be interrupted and continued at a later time; two new functionalities were introduced for allowing this: visual indicators that determine the status of the mapping and the possibility to export a bundle file with all elements needed for continuing work in another mapping tool application.

The results of the evaluation are attached in Appendix B.3 - Test cases for release candidate 3.

The Acceptance notes for RC3 are attached in Appendix C.3.

3.5 EVALUATION OF RC4

The last evaluation was performed in month 27 (M27). Lead by Promoter (evaluation leader), most of the partners of the project were involved as participants, in particular as expert users in the first phase of evaluation of release candidate 4 (RC4). Then, in the second phase, representatives of Museumsmedien were involved as domain-experts and real users.

Once the core functionalities, extensions and the usability of the tool were extensively tested and evaluated, the last candidate (RC 4) focused in fine tuning and integration with the HarmoSearch portal. As for the fine tuning, a last component was developed: the mapping of referenced lists called value mapping. This mapping is also integrated in the main mapping file within the tool, and allows transmitting data that is typical of the user's schema.

The last development was introduced towards the integration with the HarmoSearch portal. A wizard dialogue where the user can upload selected items (the outcome with both data and value mapping and local libraries) directly into the portal.

The results of the evaluation are attached in Appendix B.4 - Test cases for release candidate 4.

The Acceptance notes for RC4 are attached in Appendix C.4.

3.6 EVALUATION WITH EXTERNAL DOMAIN EXPERTS

A meeting was held by SPK with Jürgen Freundel the developer of the exhibition data base of the State museums of Berlin (SMB -current data provider of euromuse.net). He also manages the event data base of the Kunstsammlungen Karlsruhe. He is familiarized with euromuse.net but never used the Harmonise services before.

The purpose of this meeting was to explain the status of the project to a museum and to introduce, in a more detailed way, the mapping tool.

3.6.1 Evaluation of the functionality

After a short presentation of the mapping tool, we initialised and took some instance data the State Museums of Berlin provide euromuse.net. He had comments respective following functionalities:

- The Schema: It was his opinion that it is an obstacle to require xml. In his opinion there are richer formats that transmit structured data better, such as: a php serialized array, debug or json.
    - Some php instance data here: http://www.smb.museum/smb/export/export_exhibition_list.php?format=php
    - Debug: http://www.smb.museum/smb/export/export_exhibition_list.php?format=debug
    - Json: http://www.smb.museum/smb/export/export_exhibition_list.php?format=json
- The Filter: This element was developed to constraint the possibilities that the HTO ontology offers (more than just event-related fields). This element is a fix set of data, and there were elements omitted that could be mapped to the state museums data. It would be nice to be able to choose wich elements a user wants to map.
- The use of local reference lists in a SKOS format: Referenced values are usually kept in databases that only support exporting data in csv/xml format.

3.6.2 Evaluation of the usability

Mr Freundel can be considered as a technical expert user, but also a domain expert, for he, as well, develops the content management system for the editors of the SMB museums. These editors are domain experts with no technical expertise, but in the case of the SMB museums, they are not confronted with tasks related with the scenarios described in this project. They have also no experience or knowledge about data exchange formats.

From his point of view, a non-technical editor of SMB, will never have the capacity to use such services of the HarmoSearch portal.

It is his opinion that, if the mapping tool responds, he could perform mappings if he was contracted to do so. And he could think of actual situations in which such a service would be useful.

Since he has experience with several museum institutions, he can estimate that this kind of services (including the mapping procedure) could be offered to those museums, with an in-house database administrator. He generally thinks it can be a solution for those museums that already offer the possibility to export the exhibition data.

4 FUTURE RECOMMENDATIONS

In this chapter recommendations for future improvements are provided. The recommendations are thereby based on the findings of the tool evaluations described in the previous chapter.

- Issue filter to reduce hto schema. Instead of a rigid xml filter that is given, a possibility would be to have the possibility to choose whichever 'steps' you wish selecting from a list.
- Issue xsd, the schema is a component that is modelled from instance data, by inserting instance data; the mapping tool could be able to generate a schema without the need of other software.
- Issue automation, the tool could be further developed regarding self-regulation if the tool could detect repeating behavoir; such as, date time formats, which repeat each day of the week or that it generated a repository of options independent from mapping projects, in order to make 'suggestions' to users that make more than one mapping.
- Issue usage of the mappings and integration with the portal, if a mapping file is well compiled and structured and there is only one misconnection, a mechanism is missed that identifies it. Currently, if a line of the mapping file has an error, it discualifies the whole operation.

5 APPENDIX

Table of content of the Appendix section

APPENDIX A. LIST OF REQUIREMENTS

This section contains the final list of requirements that was incrementally built and updated. It was used to validate the actual features of the mapping tool against the requirements per release.

ID	Type	Autho	Group	Action	Requirement	Description	Comment	Release	Implemented	Comment for the release
	RQ	MH	Mapping editor	Mappings	Mapping tool shall support user in making of mappings by making suggestions	e.g. data fields from user's schema similar to a field from ontology are selected as candidates for mapping rules	Will progress in subsequent releases	4	Y	
	RQ	MH	Mapping editor	Mappings	Mapping tool can be used without any technical understanding of making of mappings	but knowledge on concepts and some level of IQ must be given		1	Y	
M1	RQ	TS	Mapping editor	Mapping	Dialogue driven mapping (editor)	user will be asked human-like questions, to define the mapping	Improve according to the comments made by the users	5	Y	xxxdf: add line to improve wording and dialogue for templates likes dates or language
M2	RQ	TS	Mapping editor	Mapping	Easy implementation of mapping updates	The user should be able to update minor changes within the mapping according to the error log		3	Y	
	RQ	TS	Mapping editor	Mapping	Automatic identification of standardardised elements like dates	the mapping editor can identify elements like dates, times and other repeated elements in a provided source (e.g. ids of special entities)	This is ongoing work so something will be possible in release 2 (split)	2	Y	
	RQ	MH	Mapping editor	Mapping trial run	Make trial run with new mappings	After making a mapping, the user shall be able to run a mapping with a sample file to test the mapping		2	Y	But need to have the capacity to see the result in HTO
	RQ	MH	Mapping editor	Mapping	The mapping tool shall integrate knowledge on making of mappings	It shall provide a guide to the process, best practises for mappings, etc.	This is ongoing work so something will be possible in release 2 (split)	2	Y	Partly. This is ongoing work
	RQ	HS	Mapping editor	Mapping	Support the user in finding the right field	in the HTO ontology. This supposes that we can first use the annotation information but also that it is likely to be extended to have a nice name, additional structured information…		4	Y	
	RQ	HS	Mapping editor	Mapping	Allow many to one and one to many mapping	Like Description.Title goes to Title and Like Description.Body goes to long description		3	Y	
	RQ	HS	Mapping editor	Mapping	Improve capacity to integrate new mapping	based on real life schemas in different subdomains		4	Y	
	RQ	HS	Mapping editor	Mapping	Integrate output mapping into the metasearch engine			5	Y	
	RQ	XX	Mapping editor	Transform HTO into output HTML	In order to display results in HTML			3	Y	
	RQ	HS	Mapping Interface	Reference list	Be able to map list of references to generic lists supported by the portal	Mapping between general lists will be performed by Harmosearch		4	Y	
6	RQ	IM	Mapping editor	settings 1	system elements (schema, filters, patterns…) should load automatically	Before the actual beginning of the mapping there are always some SETTINGS to decide, but if the user only parts from the own xsd, other necessary elements (filters, HTO schemata, patterns) should be default settings.		3	Y	
8	RQ	IM	Mapping editor	settings 3	pre-configured type of mapping through dialogue	maybe a pre-configured dataset could be loaded introducing an initial question (i.e. type of event), the fields should be then re-named or fields could be added in case the default "exhibition" fields are insuficient	this would apply certain filters to the hto xsd schema	4	Y	
9	RQ	IM	Mapping editor	Mapping	guidance to the user while linking	if the links can be adjusted in the dialoge-popups, these should contain some information what the user is supposed to do.	the dialogs that shoud allow to define i.e. date format to the individual strings, were no different from those in the RC I tested. It is half covered with task lists.	4	Y	
	RQ	HS	Mapping editor	Query mapping	Perform query mapping in the mapping editor	This is not retainedtutorial		X	Dropped	Since mapping tool is too much behind
	RQ	HS	Mapping editor	Reference list mapping	Perform mapping of reference lists	Could be within the editor or triggerred by the editor and performed in a web application		4	Y	
	RQ	HS	Mapping editor	Wording and templating	Improve wording for the helps and the items in thee list + add capacity to reuse previous mapping	value-of to change into something more user freindly, like mapping of langauge dependent items or opening hours: do it once and they have something in a list + reuse		5	Y	Partial. Could still be cgreatly imporved

APPENDIX B. TEST CASE DOCUMENTS

This section gathers all the test cases that were filled for each release (PDF files extracted from Excel documents).

The following pages contain:

Appendix B.1. Test cases for release candidate 1

Appendix B.2. Test cases for release candidate 2

Appendix B.3. Test cases for release candidate 3

Appendix B.4. Test cases for release candidate 4

Id	Parent	Action	Name	Description	Comment (and alternatives)	20/09/2011	Who	Actual Result
MT1		Mapping Tool RCP	Start mapping application	Used to test if the mapping tool starts as expected from a Windows-based application.	Output: The application should come up as expected from a common Windows application (start). By clicking the X or the menu item "Exit" (File menu) the application windows should dissapeare accordingly (exit).	W	IM	In the location D:\HARMOSEARCH\06_Mapping Tool\Flocke_rc1_.win32.win32.x86 the application did not react. Changed to C/temp/flocke and works Additional comment: After finishing the test cases I was not able to close the mapping tool accordingly.
MT2	MT1	Mapping Tool RCP	Customize mapping tool application window	The user is allowed to make changes to the mapping tool interface. This regards to appearance related issues such as for example window size, open views, position of a view within the tool, etc. For testing purposes the user is required to change the window size and the location of a view by simply drag-and-drop.	Output: The tool reacts according to the changes and displays the view within ist new position and the application window is resized accordingly.	O	IM	Worked as expected
MT3	MT2	Mapping Tool RCP	Exit mapping application	Used to test if the mapping tool can be exited as expected from a Windows-based application.	Output: The application is terminated as expected from a common Windows-based application.	O	IM	Worked as expected
MT4	MT2	Mapping Tool RCP	Auto-apply customiziations	Evaluates if the changes done in Task MT2 are committed and executed to the mapping tool.	Output: The excepted behaviour (see MT2) is still valid after the mapping tool application has been restarted (see MT1 and MT3).	O	IM	Worked as expected
MT5	MT1	Mapping Project Handling	Create a clean mapping project	Clean mapping projects are used to denote mappings that are not realted to any kind of business case (e.g. Euromuse business case). Accordingly, no default resources, such as Schema, Filter, or Patterns are associated and therefore not included in the project from scratch.	Output: The new mapping project is created reflecting the initial project structure. The project structure is visible in the project explorer window in the mapping tool as well as locally in the file system. Thereby, the project root is a folder, which name must be equal to the project name as specified by the user. The root folder has to include the following folders: Filter, Mappings, Output, Pattern, Schema, as well as a configuration file named config.xml.	O	IM	Worked as expected
MT6	MT1	Mapping Project Handling	Create a profile-based mapping project	Profile-based mapping projects are business case specific (e.g. Euromuse) and therefore include distinct resources (Schema, Filter, Patterns, etc.). A profile summarized the included resources.	Output: The new mapping project is created accordingly (see MT5). In contrast to MT5 the folders are now filled with corresponding resources. Again, this can be observed directly in the mapping tool (project explorer) as well as locally in the file system. Since the project has been created using the Euromuse profile the following resources have been added to the corresponding folders: eurmouse_filter.filter, hto_filter.filter (both to the Filter folder); hto.xsl, HTO_Euromuse.xsl (to the Pattern folder); hto.xsd (Schema folder).	O	IM	Worked as expected
MT7		Mapping Project Handling	Open/Close schema file	Schema files are formalized using an XML notation. Thus, it makes sense to open a schema file for editing purposes within the mapping tool.	Output: By double-clicking on a schema file (visible in the project explorer) an XML editor opens and displays the content of the file. In case the schema file is corrupt or not valid (e.g. not well formed) a corresopnding error message is presented to the user. The editor-window is closed by clicking on the "X" button in the upper right corner.	O	IM	Worked as expected
MT8		Mapping Project Handling	Open/Close pattern file	Patterns are XSL templates that transform a given input to a given output. In addition patterns need to be adapted from case to case. Accordingly, the mapping tool needs to allow a technical user to open and change a pattern.	Output: By double-clicking on a pattern file (visible in the project explorer) an XSL editor opens and displays the content of the file. In case the pattern file is corrupt or not valid (e.g. not well formed) a corresopnding error message is presented to the user. The editor-window is closed by clicking on the "X" button in the upper right corner.	O	IM	Worked as expected
MT9		Mapping Project Handling	Open/Close filter file	Filters are simple expressions that put a schema into a strict corset. In order to edit a filter it is necessary to open the filter within a text editor.	Output: By double-clicking on a filter file (visible in the project explorer) a text editor opens and displays the content of the file. In case the pattern file is corrupt a corresopnding error message is presented to the user. The editor-window is closed by clicking on the "X" button in the upper right corner.	O	IM	Worked as expected

Id	Parent	Action	Name	Description	Comment (and alternatives)	20/09/2011	Who	Actual Result
MT10		Mapping Project Handling	Create new mapping model file	In some situations a single mapping file may not be suitable. Therefore, the mapping tool has to be capable of handling an arbitrary number of mapping files. Accordingly, it has to provide an adequate mechanism that allows the user to create new mappings from scratch.	Output: The newly created mapping file is created locally and added to the Mappings folder (visible in the project wizard).	O	IM	Worked as expected
MT11		Mapping Project Handling	Import local schema file	In most cases the user wants to make a mapping from his private data schema to the Harmonise data schema. Thus, he needs to add and open his proprietary schema in the mapping tool.	IM: Select Import Schema. The pop up menu had the option “import…” and I clicked that, another window appeared Output: The newly imported schema file is added to the project and added to the Schema folder in the project structure (both, locally on the file system as well as in the project explorer of the mapping tool). In case the schema file is corrupt or another exception occurs the tool reacts in two ways: First the user will be notified that an error occurred and second a new log message is added to the log file.	W	IM	I was able to accomplish the task, but only at the second try. Calling the wizard was confusing due to missleading wording (see comment).
MT12		Mapping Project Handling	Export mapping project	Exporting a mapping project allows users to share solutions and collaborative work on mappings.	Output: Results in a ZIP file that can be saved locally. The ZIP contains all necessary meta-information and resources. Accordingly, the resulting ZIP contains the project structure and all associated resource-files (e.g. pattern, filter, mappings, schema)	O	IM	Worked as expected
MT13		Mapping Project Handling	Delete mapping project	The mapping tool needs to be capable of deleting a mapping project, which is currently not used but should be kept for further tasks.	Output: The mapping prjoect is deleted from the project explorer. However, not entirely from the local disc. Consequently, the project folder and ist subfolders (including resources) is still available.	O	IM	Worked as expected
MT14		Mapping Project Handling	Permanently delete a mapping project	Some mapping projects are of no use any more. Accordingly, the mapping tool has to provide a delete option that allows the user to permanently remove a project (both locally and from the workspace).	Output: The mapping project is deleted from the project explorer and locally from the file system. As a result the project is not visible in the file system.	O	IM	Worked as expected
MT15		Mapping Project Handling	Import mapping project	To collaborate/extend existing mapping solutions.	Output: Uses the exported project (ZIP file) from MT12. A wizard guides the user trough the import process where he has to provide the location of the target project ZIP file. After all information has been provided the project is visible in the project explorer and the local file system. In case of an error a user notification by means of a dialog is shown and a new log message is added to the log file.	O	IM	Worked as expected
MT16		Mapping Project Configuration	Open/(Clode configuration file editor	Allows users to edit the current profile.	Output: After double-clicking the configuration file (visible in the project explorer) a configuration editor opens. In case of an error (e.g. not well formed) the editor wont open. Instead a corresponding error message is prestented and displayed to the user.	O	IM	Worked as expected
MT17		Mapping Project Configuration	Add/Remove schema file	Adds or removes a schema from the profile and the project.	Output: By checking a schema (and savind the changes) the corresponding file is added to the project explorer. The new file is present in the Schema folder. Removing a file is similar: Uncheck the box and save your choice. The schema file will be removed from the project structure (schema folder).	O	IM	Worked as expected
MT18		Mapping Project Configuration	Add/Remove pattern file	Adds or removes a pattern from the profile and the project.	Output: By checking a pattern (and savind the changes) the corresponding file is added to the project explorer. The new file is present in the Pattern folder. Removing a pattern is similar: Uncheck the box and save your choice. The pattern file will be removed from the project structure (pattern folder).	O	IM	Worked as expected
MT19		Mapping Project Configuration	Add/Remove filter file	Adds or removes a filter from the profile and the project.	Output: By checking a filter (and savind the changes) the corresponding file is added to the project explorer. The new file is present in the Filter folder. Removing a filter is similar: Uncheck the box and save your choice. The filter file will be removed from the project structure (Filter folder).	O	IM	Worked as expected
MT20		Graphical Modeling	Open/Close editor	To conduct mappings a graphical editor is necessary. This editor is called only on mapping files.	Output: The mapping editor is opened by double-clicking a mapping file (Mapping folder). As a result the grahpical editor opens and presents an empty canvas (in case the mapping file has been empty) or an already existing mapping. In case the file is corrupt or damaged the editor wont open corretlcy. Instead a corresponding error message is displayed.	O	IM	Worked as expected
MT21		Graphical Modeling	Load schema to editor	Schemata are the actual subject of mapping and need to be present in a mapping file.	Output: A schema file is deliaged to open within the graphical editor by drag-and-drop the schema file from the project explorer to the already opened editor (see MT20). As a result the schema is opened and displayes accordingly in the editor. In case the user wants to drag-and-drop files others than schema files (*.xsd extension) the drag operation will not work. In such a case the drag coursor provides visual feedback (crossed cicle) to the user.	O	IM	Worked as expected

Id	Parent	Action	Name	Description	Comment (and alternatives)	20/09/2011	Who	Actual Result
MT22		Graphical Modeling	Move schema figure	Already loaded schemata need to be moveable in order to keep the editor window usable.	Output: The user is able to move a loaded schema by simple drag-and-drop operations within the editor. As a result the schema can be moved smoothly within the editor window and changes its position according to the user's mous position.	W	IM	Was able to meet expectations. However, some issues are left. The window in the editor's area of the schema seems to be resizable (and it works vertically) but horizontally it won't expand / shorten (okv.xsd has some long tag names
MT23		Graphical Modeling	Tree interaction (collapse/expand)		Output: By clicking the + respectively - buttons near a node the tree can be collapsed or expaned.	O	IM	Worked as expected
MT24		Graphical Modeling	Load second schema		Output: A second schema file is loaded to the editor and visualized as a tree structure (see MT21).	O	IM	Worked as expected
MT25		Graphical Modeling	Perform simple mapping (connect elements)	In general a user can perform two types of mappings: Simple and complex types. The former correspond to mappings that connect two atomic elements (with no further children nodes), whereas the latter corresponds to mappings that describe the linking between elements that have further children.	Output: A connection between two simple elements is visualized. Therby, the connection is drawn as a line leading from one schema-element to its opposite. The opposite is thereby, located in a another schema tree.	O	IM	Worked as expected Additional comments: What if I connect two elements that make no sense? It makes the connection, I can correct with the select tool the end of the link and place it in the correct place, this action was not in the task list. When mouse over the link a pop up info window (yellow) appears, but this appears very far from the mouse, this should appear where the mouse is.
MT26		Graphical Modeling	Delete mapping links		Output: Pressing the delte button on the keyboard or via a left-click on the connection the line bewteen the two elements is erased. As a consequence the line is not visible anymore.	O	IM	Worked as expected Additional comments: The option "Delete proposal" in the upper frame of the editor area is not irreversible!! I clicked it thinking it would be deleting only 1 link but it deleted all my links at once without telling me that all my links would be irreversibly deleted.
MT27		Graphical Modeling	Perform complex mapping		Output: Draws a connection (see MT26) between two complex elements (parent elements) of two distinct schemata.	O	IM	Worked as expected Additional comments: IM: Suggestion for the list: Couldn't it by clicking on the elements to be linked themselves also activate the link pop-up (the lines are hard to click sometimes, specially when 2 lines run together
MT28		Filters	Call filter dialog (select all/deslect all/select single filter)	Allow the user to apply or delete certain filters.	Output: By clicking the + respectively - buttons near a node the tree can be collapsed or expaned.	O	IM	Worked as expected
MT29		Filters	Apply specific filter to schema		Output: The target schema is constrained to the elements that are defined in the filter. Accordingly, the hto schema is constrained to event related information items.	O	IM	Worked as expected Additional comments: Once applied the filter I cannot undo it. If I click undo, the last action performed in the editing area (a link was set) undoes.
MT30		Filters	Add another filter to schema	Allow multiple filters at a time.	Output: Within the filter dialog another filter has to be clicked and committed (by clicking OK). The behaviour follows the same as described in MT29.	O	IM	Worked as expected
MT31		Filters	Clear all filters	Delete all filters from the mapping.	Output: Removes all checked filters in the filter dialog. After clicking the OK button the changes are reflected by a "reset" in the mapping editor.	O	IM	Worked as expected

Id	Parent	Action	Name	Description	Comment (and alternatives)	23/01/2012	Who	Actual Result	31/01/2012	Who	Actual Result
MT1		Import	Import	A user imports an existing mapping project solution pakced within a ZIP file.							
MT1.1	MT1	Call import project wizard	Import project	The user calls the import project wizard that allows him to select an existing ZIP file from the local file system.	The chosen mapping project is imported from the source location (local file system) to the current workspace. The mapping project and ist contents (e.g. patterns, filters, schemata) are (after the import) available in the workspace. Furthermore, the data is also copied "physicall", meaning that all files and folders are also available in the workspace folder on the local file system.	o	TM	worked as expected; used the museolito project as provided by Albert Rainer	o	IM	worked as expected
MT2		Mapping	Mapping	A user is able to perform simple or complex mappings using the HarmoSearch mapping editor.							
MT2.1	MT2	Import schema to editor	Import schema to editor	In order to create a mapping it is necessary that the user is able to import a corresopnding schema to the mapping editor.	The schema resource is a schema (xsd) file located in the current mapping project. Schema resources are located in the project's "Schema" folder. To import the file to the mapping editor the user has to click on the schema file, holding the click and dragging the file onto the mapping editor. As a result the schema (and its elements) are displayed as a tree structure in the mapping editor.	o	TM	worked as expected	o	IM	worked as expected
MT2.2	MT2	Apply filter	Apply filter	Filters are used to constrain the visibility of schema elements that are not relevant for an individual mapping case.	Filters are resources that are captured in the "Filter" folder of the mapping project under consideration. A filter can be applied to a mapping by opening the mapping file in the mapping editor and clicking the "applyFilter" button on the main toolbar. A dialog pops up and provides the user the possibility to select the filers of choice. In case the user has chosen filters before the corresponding ones are already marked as active (check beside the filter). As a result the visible elements of the target schema (ech filter is used to have at least one target schema) is reduced to all those elements that are not filtered.	o		Worked as expected	o	IM	worked as expected
MT2.3	MT2	Create initial mapping	Create initial mapping	The user is able to conduct a graphical mapping by connecting source and target elements of the source respectifely target schema.	The user is able to create a mapping by specifying the elements that should map. Therefore he opens the mapping editor by doule-clicking on the mapping file (located in the "Mapping" folder) and importing the source and target schemata. To associate two mapping candidates the user has to select the "link" component placed on the toolbar (left hand side of the editor). The connection is drawn by drag and click on, first the source element, and second the target element. As a result a black link between those elements is drawn.	o		worked as expected	o	IM	worked as expected
MT2.4	MT2.3	Refine mapping and apply pattern	Refine mapping and apply pattern	The user performs a mapping by applying a pattern.	Click on the “select” element of the palette to enter the “select modus”, then click on the newly created link. A dialogue will open. It shows a list where one can select suitable pre-built methods from the support libraries. As a result the link between source and target element changes its color to green.	o		worked as expected	o	IM	worked as expected the pattern windows are still very uninformative
MT3.1	MT3	Create XSLT transformation file and gain visual feedback	Create XSLT transf	After solving a specific mapping scenario the user is able to transform the mapping to an adequate transformation format (e.g. XSLT).	Press the “createTX” (TX is for transformation) in the action bar. This triggers the transformation process provided by a transformation engine instance file. Transformation process files are stored in the "Input" folder and can contain an arbitrary number of transformation steps (e.g.transform the mapping to harmonise, harmonise to euromuse, and euromuse to a HTML representation). At the end of the transformation process the HTML output (currently set as default) is shown in the internal feedback view. The feedback view pops up automatically.	w		I had to manually change the support library references; may be to complex for a "simple" domain expert. Beside that it worked as expected	w	IM	worked as expected; I had to manually correct and edit the XSLT and have to say that it was very complicated and not so clear after completing some more links: the html preview filled … . A question remainted, if I import the other reference lists available, shouldn't the html view read the new xslt files? Or do they have to be linked? URLS: I could not test the 'en' url because museolitto does not provide links to the exhibition page in English Images:This element has no match in the hto ontology (filtered), had to be added manually by Albert Prices & Categories: Museolitto does not provide this kind of information (museoliitto provides this infromation in other field from other table, it is not necessary). Permanent: It is not so important, if an exhibition has an end data, it is temporary. At the moment we only receive from museolitto temporary exhibitions, so all entries have this field empty the outcome, as i very well asked in my presentation and before, the output mapping file did not work on the server, is it not necessary that i can output a file that works in order to validate? If I recall correctly from my output file to the mapping file uploaded in the server (which works) there are two differences: the image pattern was manually added, so was a path at the beginning of the file.
MT4		User assistance	User assistance	Refers to relevant enhancments helping the user handling the mapping tool							

Id	Parent	Action	Name	Description	Comment (and alternatives)	23/01/2012	Who	Actual Result	31/01/2012	Who	Actual Result
MT4.1	MT4	Automated update	Automated update	Tool updates and realeases should be installed minimal invasive from a user's perspective.	The automatic update is executed after starting the mapping tool. In the background the update component of the mapping tool checks the available repositories if new plugin versions are available or not. In case they are the mapping tool displays a dialog guiding the user through the update process. Otherise a dialog appears that informs the user that no updates were found. The latter case has no effect and the user is able to proceed using the mapping tool. In the former case he be asked to restart the mapping tool in order to apply the changes and make the new updates available in the mapping tool (e.g. add help, menu, alternative editor, etc.)	o		worked as expected	x	IM	After starting the tool it was stuck for nearly 10 minutes. After these 10 minutes a dialog reporting: 'Contacting Software Sites' has encountered a problem. Unable to conecto to repository ... . After reporting this issue to Thomas he disabled the auto-update and I was able to start the editor. A manual update resulted in the same behavior and afterwards the tool took longer to start.
MT4.2	MT4	Add third party extensions	Add third party ext	The user should be able to extend the mapping tool by third party plugins (e.g. editors, transformation routines, etc.)		o		worked as expected	x	IM	??
MT4.3	MT4.1	Integrated help	Integrated help	Help supporting the user handling the main functionalities of the mapping tool.	In case the user is stuck or wants to know more about specific functionality he is able to call the integrated help-documentation. To do so he has to select "Help->Help Contents" from the main menu. After clicking Help Contents a separate window appears showing the documentation separatly.	o		worked as expected	x	IM	No help content (used Cheat Sheets)
MT4.4	MT4.2	Cheatsheet support	Cheatsheet suppor	Neat process descriptions in a tutorial-like way.	In order to use cheatsheets the user has to go to "Help->Cheat Sheets...". A dialog appears listing all available cheatsheets. After selecting the desired cheatsheet a separate view opens and displays the cheatsheet's content providing a step-by-step description of how to reach a specific goal (e.g. create a new mapping project). In addition the cheatsheets are supported by help and wizard support.	o		worked as expected	o	IM	worked as expected I consider these cheatsheet approach as very helpfull
MT4.5	MT4.1	Context-sensitive help	Context-sensitive help	Provides the ability to show context-sensitive help as a hook to the integrated help (documentation).	Context-senstive help can be retreived in two ways: (i) by pressing the F1 button or by clicking the question mark button within a dialog (e.g. wizards, cheatsheets). In both cases a short summary message is displayed in the help view (which might come up). The contextual help points the user to additional resources (often pinpointed under "see also:").	o		worked as expected	x	IM	

Id	Parent	Action	Name	Description	Comment (and alternatives)	Expected Outputs	18/07/2012	Who	Actual Result	24/08/2012	Who	Actual Result	Output (XML, Screen)
MT0		**Test Preparation**		**How to install the mapping tool from scratch**									
MT0.1	MT0	Download current version	Download current version	***Prerequisite: You have access to the Internet and are allowed to download files*** Download the mapping tool - go to http://goo.gl/8Sial - download the lattest mapping tool version - enter user name (harmosearch) and password (harmosearch123)		Expected result - Setup file on your local hard disk	o	TM (TU-Wien)		o	IM (SRK)		
MT0.2	MT0	Install the mapping tool	Install the mapping tool	Installation of the mapping tool to your local hard drive - start the setup and follow the wizard instructions - accept the license agreement (currently not specified) - specify the install location on your local hard drive (e.g., C:\Harmosearch)		Expected result - new directory corresponding to the provided installation location during installation - new icon on the desktop 'MappingTool'	o	TM		o	IM	Installed correctly direct access in desktop was created :D	
MT0.3	MT0	Start the mapping tool	Start the mapping tool	***Prerquisite: You have installed the mapping tool accordingly*** Start the mapping tool - double-click the 'MappingTool' shortcut on your Desktop	<u>Alternative:</u> Open the tools installation location; Start the mapping tool by double-clicking the MappingTool.exe	Expected result - mapping tool window appears	o	TM		o	IM		
MT0.4	MT0	Remove the mapping tool	Delete the mapping tool	**AT THE END OF YOUR TESTING** Uninstall the mapping tool - open the tools installation location - double-clicking "uninstall.exe" - follow the instructions of the uninstaller	**NOTE: The uninstaller in its current version is kept very simple and stupid. Thus, the uninstallation procedure will delete ALL data in the respective installation location!**	Expected result - mapping tool has been uninstalled from the local hard disk - desktop icon "MappingTool" has been deleted	w	TM	The installer needs to be refined for the final release since in ist current state it deletes all the content from the installation directory. This may be OK in case the tool has been installed within an isolated location, but causes a lot of trouble if not, e.g., installed on C:\	x	IM	Like in the previous version of the mapping tool, the complete status bar is after a click full, and it does not unistall anything.	
MT0.5	MT0	Update the mapping tool	Update the mapping tool	***Prerequisite: You need to have access to the Internet and the mapping tool needs to have firewall permission to download content; Mapping tool started and running*** Install updates - go to Help > Check for Updates - follow the instructions - restart the mapping tool	In case no updates can be found a respective information is shown to the user: "No updates were found"	Expected results - Update is beeing processed and installed - at the end of the installation process a dialog appears asking wheather to restart the application or not	o	TM		w	IM	is there a way around the firewall (i cannot change my firewall settings, and these do not allow the mapping tool to connect). Alternatively you could ask Adriano or David (or Peter) to do these test lines?	
MT0.6	MT4	Add third party extensions	Add third party extensions	***Prerequisite: You need to have access to the Internet and the mapping tool needs to have firewall permission to download content; Mapping tool started and running*** ***Alternative: Install plugins from a ZIP resource (see Alternatives)*** Add a third party extension - go to Help > Install New Software - select http://www.ec.tuwien.ac.at/projects/harmosearch/mappingtool/repository" from the drop-box - expand "HarmoSearch - Third Party Features - check "HarmoSearch Mapping Tool Cheatsheets" - press "Next" and follow the instructions - restart the mapping tool	<u>Alternative:</u> Install updates from ZIP resource - Click Help > Install New Software - Click "Add..." - Click "Archive" - Navigate to the test data folder (data_tool) and select "Flocke_Additions_Cheatsheet_Support.zip" - Click "OK" - Enter "Cheatsheet Support" in the "Name" field - Click "OK" - Uncheck "Group Items by Category" - Check "HarmoSearch Mapping Tool Cheatsheets" - Click "Next" and follow the instructions - Restart the mapping tool	Expected results - Third party plugin is updated and processed - At the end of the installation procedure a dialog appears asking you to restart the mapping tool - After restarting the mapping tool an additional menu entry should appear under the Help main menu entry - Click "Help > Cheatsheets ..." - A dialog appears and displays HarmoSearch related contents - Expand "HarmoSearch" and make sure it contains two entries (i) "Create a new "Hello World" mapping project" and (ii) "Reuse existing mapping solution"	o	TM	Worked as expected	w	IM	is there a way around the firewall (i cannot change my firewall settings, and these do not allow the mapping tool to connect). Alternatively you could ask Adriano or David (or Peter) to do these test lines?	
MT1		**Typical functionality for a solution developer**											

Id	Parent	Action	Name	Description	Comment (and alternatives)	Expected Outputs	18/07/2012	Who	Actual Result	24/08/2012	Who	Actual Result	Output (XML, Screen)
MT1.1	MT1	Create new project	Create new project	Create a new mapping project - go to File > New > Mapping Project - provide a project name and a mapping file name (set per default) - press "Finish"	Input validation project name - provide no project name - an error message is displayed at the top of the wizard dialog: "Provide a correct project name." Input validation mapping file name - provide a project name - delete the default name of the mapping file - error message appears: "Provide a correct mapping file name." - enter a file name, without file ending ".harmonize" - error message appears: " The mapping file has to have the extentension harmonize"	Expected result - a new project appears in the mapping navigator view - the project contains 6 folders, i.e., Filter, Input, Mappings, Output, Pattern, Schema - the project contains a configuration file, i.e., basic.mappingconfig	o	TM		o	MI	as expected	
MT1.2	MT1	Feedback regarding the new project wizard	Provide feedback about the content and the appearance of the new project wizard.	Typical questions under consideration may be - is the information provided by the dialog sufficient - is the presented information easy to understand and self-explaining - is the feedback in case of an error sufficient							MI	- If you have chosen New>Mapping project there is not much dialogue - having the red cross, when the user has not yet entered a name to the mapping project, leads to think that something is already wrong, maybe only a warning sing (pic warning.png)? - Of course, if the user modifies the file that has to end .harmonise, the red icon should appear. For "harmonise" is not a common extension, maybe write ".harmonise" with "."?	warning.png
MT1.3	MT1	Import schema wizard	Import schema	*Prerequisit: An already existing mapping project* Import a schema resource - go to File > Import - expand "HarmoSearch Wizards" - select "Import Schema File" - check "Choose an existing file from local source" - click "Browse" and navigate to the data folder (data_tool) and select "hto.xsd" - select the target project - click "Finish"	Import a schema resource from a bundle - go to File > Import - expand "HarmoSearch Wizards" - select "Import Schema" - check "Choose a bundle of files packed in a ZIP file" - click "Browse" and navigate to the data folder (data_tool) and select "schemaBundle.zip" - uncheck "KHM.xsd" (optional) - select the target project - click "Finish"	Expected result (single import) - the "Schema" folder of the target project contains the "hto.xsd" schema file Expected result (bundle import) - the "Schema" folder of the target project contains "museolito.xsd" and "KHM.xsd"	o	TM		o	MI	both as expected	
MT1.4	MT1	Import pattern wizard	Import pattern wizard	*Prerequisit: An already existing mapping project* Import a pattern resource - go to File > Import - expand "HarmoSearch Wizards" - select "Import Pattern File" - check "Choose an existing file from local source" - click "Browse" and navigate to the data folder (data_tool) and select "date-time.xsl" - select the target project - click "Finish"	Import a pattern resource from a bundle - go to File > Import - expand "HarmoSearch Wizards" - select "Import Pattern" - check "Choose a bundle of files packed in a ZIP file" - click "Browse" and navigate to the data folder (data_tool) and select "patternBundle.zip" - select the target project - click "Finish"	Expected result (single import) - the "Pattern" folder of the target project contains the "data-time.xsl" pattern file Expected result (bundle import) - the "Pattern" folder of the target project contains multiple pattern files, i.e., data-time.xsl, Euromuse-RL-languages.xslt, euromuse2html.xsl, HTO_Euromuse.xslt, HTO_Euromuse_new.xslt, hto2html.xsl, thov2.xsl	o	TM		o	MI	both as expected	
MT1.5	MT1	Import filter wizard	Import filter wizard	*Prerequisit: An already existing mapping project* Import a filter resource - go to File > Import - expand "HarmoSearch Wizards" - select "Import Filter File" - click "Browse" and navigate to the data folder (data_tool) and select "filter.xml" - select the target project - click "Finish"		Expected result - the "Filter" folder of the target project contains "filter.xml"	o	TM		o	MI	as expected	

Id	Parent	Action	Name	Description	Comment (and alternatives)	Expected Outputs	18/07/2012	Who	Actual Result	24/08/2012	Who	Actual Result	Output (XML, Screen
MT1.6	MT1	Import input file wizard	Import input file wizard	*Prerequisit: An already existing mapping project* Import a input resource, e.g., instance data - go to File > Import - expand "HarmoSearch Wizards" - select "Import Input File" - click "Browse" and navigate to the data folder (data_tool) and select "biellaEvents.xml" - select the target project - click "Finish"	Import an infput file resource from a bundle - go to File > Import - expand "HarmoSearch Wizards" - select "Import Input File" - check "Choose a bundle of files packed in a ZIP file" - click "Browse" and navigate to the data folder (data_tool) and select "inputBundle.zip" - select the target project - click "Finish"	Expected result (single file) - the "Input" folder of the target project contains a new file called "biellaEvents.xml" Expected result (bundle) - the "Input" folder of the target project contains 3 new files called "biellaEvents.xml", "biella2hto.xml", and "process.xml"	o	TM		o	IM	both as expected	
MT1.7	MT1	Feedback regarding the file import wizards	Feedback regarding the file import wizards, which are in puarticular pattern, schema, input file wizard								IM	The import wizard has 2 selections (from single file and from zip) this is clear, but it has a compulsory second step, that is not that clear, namely to select the target folder / project in which the elements are to be imported. Maybe if a warning sign where shown in the upper part of the wizzard (as when something is wrong) with the message "Don't forget to select the target project" would be more clear	
MT1.8	MT1	Feedback regarding the filter file import wizard	Feedback regarding the filter file import wizard								IM	The import wizard has 2 selections (from single file and from zip) this is clear, but it has a compulsory second step, that is not that clear, namely to select the target folder / project in which the elements are to be imported. Maybe if a warning sign where shown in the upper part of the wizzard (as when something is wrong) with the message "Don't forget to select the target project" would be more clear	
MT1.9	MT1	Export	Export project	*Prerequisit: An already existing mapping project* Exporting a project - go to File > Export - select "Archive File" and press "Next" - check the project to be exported from the tree view on the left hand side - make sure all folders are checked - click "Browse" and select the target location on your local hard-drive - select "Save in zip format" - select "Create directory structure for file" - (optional) check "Compress the content of the file" - press "Finish"		Expected result - a new ZIP file has been created in the specified location on your local hard-drive	o	TM		o	IM	as expected	
MT2		Typical functionality for domain experts	Describes typical scenarios a domain expert faces during the mapping cycle using the HarmoSearch mapping tool and the Graph View mapping editor										
MT2.1	MT2	Import test project into workspace	Import test project into workspace	Import a pre-defined mapping project - go to File > Import - expand "General" - select "Existing Projects into Workspace" and click "Next" - select "Select archive file" (default) - click "Browse" and navigate to data folder (data_tool) and select "BiellaDemoProject.zip" - check "BiellaDemoProject" - check "Copy project into workspace" - press "Next"	Project already exists in the workspace (BiellaDemoProject) - left-click "BiellaDemoProject" in the Mapping Navigator view - click "Delete" - check "Delete project contents on disk (cannot be undone) - click "OK" - repeat "Import a pre-defined mapping project"	Expected result - a new project appears in the Mapping Navigator view called "BiellaDemoProject" - expand the project - make sure the project has a "basic.mappingconfig" file - the following folders have to be present: "Filter", "Input", "Mapping", "Output", "Pattern", "Schema" - the folders contain several files, e.g., filter.xml (Filter folder), hto.xsd (Schema folder)	o	TM		o	IM	A) "select archive file" is not set as default, "select root directory" is. B) check copy project into workspace is not an option (it is defaulty checked and greyed, check pic "import_dialogue.png")	import_dialogue.png

Id	Parent	Action	Name	Description	Comment (and alternatives)	Expected Outputs	18/07/2012	Who	Actual Result	24/08/2012	Who	Actual Result	Output (XML, Screen)
MT2.2	MT2	Opening the mapping file	Opening the mapping file	Open the mapping file - in the Mapping Navigator view expand "BiellaDemoProject" - expand the "Mapping" folder - double-click "biella.harmonize"		Expected result - the mapping file will be opened by the maping editor (the editor window appears in the middle of the screen) - the Graph View editor tab is active (highlighted) - the modeling canvas is empty (white area)	o	TM		o	IM		
MT2.3	MT2	Import a schema to editor	Import a schema to editor	Import a schema to the editor - expand the "Schema" folder - click and drag "hto.xsd" onto the modeling canvas (white area) - drop "hto.xsd" onto the modeling canvas - select "event" from the drop-box and press "OK" - click and drag "biella.xsd" onto the modeling canvas - drop "biella.xsd" onto the modeling canvas - select "eventList" from the drop-box and press "OK"		Expected result - two schema figures are shown on the modeling canvas - the schema items are shown as tree-view - the shapes can be moved by simple drag and drop actions	o	TM	wokred as expected; HTO was filtered correctly	o	IM	I LIKE THIS! Here is what I missed in Mint in this step, maybe possible to mend in flocke: define root element: "your schema root element contains one or more datasets with identical structure"	
MT2.4	MT2	Feedback about the import functionality	provide feedback about the import functionality in general								IM	Provided this approach will be given once the user has already perfomed an initial mapping, or continues the work of a colleage, it is very simple and user-friendly . All other possibilities of importing an existing file (Browse root element...) are not covered by testcase, what are they for?	
MT2.5	MT2	Single source target mappings	Single source target mappings	*Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd)* Map a single source element to single target element and accept its value - select the "link" component from the component list next to the modeling canvas (left hand side) - click on "title" in the "biella" schema - click on "mainTitle" in the "hto" schema - select the "Select" component from the component list next to the modeling canvas (left hand side) - click on the newly created link - select "hto:value-of" in the dialog - enter "." (without ") for the value parameter - click "Confirm" - save changes by clicking the save-button in the main toolbar	Alternative: - save the mapping file by pressing STRG + S	Expected result - as soon as the mapping link is created a black line appears connecting both elements - when selecting a link a dialog window appears - confirming the mapping settings changes the color from black to green	o	TM		o	IM	some kind of information in pop up that	
MT2.6	MT2	Perform transformation	Perform transformation	*Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd); existing mapping* Perform transformation - click "createTX" in the main toolbar - check the result in the Feedback View	Make sure potential changes on the mapping have been saved! - changes are indicated by means of a * symbol at the top of the editor pane	Expected result - the Feedback View appears on the right hand side of the modeling canvas - the Feedback View shows 4 events in the HTO format, which is the output of the transformation (XSLT) - each event (starting with <event>) has a <mainTitle> tag - the elements "mainTitle" has a value: Mostra for the first three events, Mostre for the last event **NOTE: The values differ due to the provided instance data!**	o	TM		o	IM	expected	

Id	Parent	Action	Name	Description	Comment (and alternatives)	Expected Outputs	18/07/2012	Who	Actual Result	24/08/2012	Who	Actual Result	Output (XML, Screen)
MT2.7	MT2	Single source to multiple target element mappings	Single source to multiple target element mappings	*Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd)* Map a single source element to multiple target elements and accept its value - select the "link" component from the component list next to the modeling canvas (left hand side) - click on "title" in the biella schema - click on "subTitle" in the hto schema - select the "Select" component from the component list next to the modeling canvas (left hand side) - select the newly created link - select "hto:value-of" in the dialog - enter "." (without ") for the value parameter - click "Confirm" - save changes by clicking the save-button in the main toolbar		Expected result - as soon as the mapping link is created a black line appears connecting both elements - when selecting a link a dialog window appears - confirming the mapping settings changes the color from black to green	o	TM		o	IM	expected	
MT2.8	MT2	Perform transformation	Perform transformation	*Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd); existing mapping* Perform transformation - click "createTX" in the main toolbar - check the result in the Feedback View		Expected result - each event (<event>) has an additonal <subTitle> entry - the value for each sub title has to equal the main title's value, i.e., Mostra for the first three, Mostre for the last event **NOTE: The values differ due to the provided instance data!**	o	TM		o	IM	expected	
MT2.9	MT2	Concatination multiple source to single target mapping	Concatination multiple source to single target mapping	*Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd)* Concatinate values from multiple source to single target element - select the "link" component from the component list next to the modeling canvas (left hand side) - click on "articleName" in the "biella" schema - click on "shortDescription" in the "hto" schema - select the "Select" component from the component list next to the modeling canvas (left hand side) - select the newly created link - select "hto:value-of" in the dialog - enter "." (without ") for the value parameter - click "Confirm" - select the "link" component from the component list next to the modeling canvas - click on "contactWeb" in the "biella" schema - click on "shortDescription" in the "hto" schema - select the newly created link - select "hto:value-of" in the dialog - enter "." (without ") for the value parameter - save changes by clicking the save-button in the main toolbar		Expected result - two configured (green) mapping links interlinking the elements "articleName" and "contactWeb" in the biella schema to "shortDescription" in the hto schema	o	TM		o	IM	as expected	
MT2.10	MT2	Perform transformation	Perform transformation	*Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd); existing mapping* Perform transformation - click "createTX" in the main toolbar - check the result in the Feedback View		Expected result - a new <shortDescription> element appears - its value contains the article title and a web link, e.g., Mostrahttp://www.biellesitessitoridiunita.it **NOTE: The values depend on the provided instance data! Thus, they can vary!**	o	TM		o	IM	why not with comma space inbetween, it makes sense to want to have 2 data in one field (I would imagine, e.g., I would like to send data that is not in the hto ontology to a third party (e.g. euromuse), like the webcontact, and I want to add it to the long description, but comma separated, or even in a new line 	

Id	Parent	Action	Name	Description	Comment (and alternatives)	Expected Outputs	18/07/2012	Who	Actual Result	24/08/2012	Who	Actual Result	Output (XML, Screen)
MT2.11	MT2	Date mapping	Date mapping	*Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd)* Map an xsd formated date - select the "link" component from the component list next to the modeling canvas (left hand side) - click on "dateMin" in the biella schema - click on "startDate" in the hto schema - select the "Select" component from the component list next to the modeling canvas (left hand side) - select the newly created link - select "hto:xsd-date-to-hto-date" in the dialog - enter "." (without ") for the "date" parameter - click "Confirm" - save changes by clicking the save-button in the main toolbar	The provided date format in the instance data corresponds to the xsd-date format Evaluation of the input format - Expand "Input" and open "biellaEvents.xml" - check the date format for <dateMin>, it should be 2011-10-15T12:00:00	Expected result - as soon as the mapping link is created a black line appears connecting both elements - when selecting a link a dialog window appears - setting the mapping specifications the link's color is changed to green	o	TM		w	IM	The result is as expected, but it is not easy to guess, which is the right choice... maybe the wording could be different (see comments line 42) dateMin in source biella is start date in hto, the format has to be chosen "hto:xsd-date-to-hto-date", why then for the dateMax (which is the end date in hto) does not work the same "hto:xsd-date-to-hto-date", and has to be chosen "yyyymmdd-date-to-hto-date"? In the xml of the biella event both have the same fortmat (namely: 20112011T12:00:00 / yyyymmddThh:mm:ss)	
MT2.12	MT2	Perform transformaiton	Perform transformation	*Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd); existing mapping* Perform transformation - click "createTX" in the main toolbar - check the result in the Feedback View		Expected result - the output has another new element: <startDate> - the start date has three sub-elements: <year>, <month>, <day> - check the value for each sub-element, e.g., 2011 (year), 10 (month), 15 (day) **NOTE: The values depend on the provided instance data! Thus, they can vary!**	o	TM		o	IM		
MT2.13	MT2	Date mapping	Date mapping	*Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd)* Map a date formated in ddmmyyyy - select the "link" component from the component list next to the modeling canvas (left hand side) - click on "dateMax" in the "biella" schema - click on "endDate" in the "hto" schema - select the "Select" component from the component list next to the modeling canvas (left hand side) - select the newly created link - select "hto:ddmmyyyy-to-hto-date" in the dialog - enter "." (without "") for the "date" parameter - click "Confirm" - save changes by clicking the save-button in the main toolbar	The provided date format in the instance data corresponds to a format like: 20112011T12:00:00 Evaluate the date format of the instance data - Expand "Input" and open "biellaEvents.xml" - check the date format for <dateMax>, it should be something like 20112011T12:00:00	Expected result - as soon as the mapping link is created a black line appears connecting both elements - when selecting a link a dialog window appears - setting the mapping specifications the link's color is changed to green	o	TM		o	IM	See comments in line 42.	
MT2.14	MT2	Perform transformaiton	Perform transformation	*Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd); existing mapping* Perform transformation - click "createTX" in the main toolbar - check the result in the Feedback View		Expected result - the output has another new element: <startDate> - the start date has three sub-elements: year, month, day - check the value for each sub-element, e.g., 2011 (year), 10 (month), 15 (day) **NOTE: The values depend on the provided instance data! Thus, they can vary!**	o	TM		o	IM	as expected	
		Transformation		**Transforms a mapping to XSLT.**									

Id	Parent	Action	Name	Description	Comment (and alternatives)	Expected Outputs	18/07/2012	Who	Actual Result	24/08/2012	Who	Actual Result	Output (XML, Screen)
MT2.16	MT2	Set hto language	Set hto language	*Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd)* Map hto:languageText elements (e.g., long description) - select the "link" component from the component list next to the modeling canvas (left hand side) - click on "longDesc" in the "biella" schema - click on "longDescription" in the "hto" schema - select the "Select" component from the component list next to the modeling canvas (left hand side) - select the newly created link - select "hto:languageText" in the dialog - enter "." (without "") for the "text" parameter - enter 'de' (including the ') for the "language" parameter - click "Confirm" - save changes by clicking the save-button in the main toolbar	**Note: Once a language text has been mapped, the language parameter is saved automatically and available via the drop-down list.**	Expected result - as soon as the mapping link is created a black line appears connecting both elements - when selecting a link a dialog window appears - setting the mapping specifications the link's color is changed to green	o	TM		o	IM	typed 'it' instead	
MT2.17	MT2	Perform transformaiton	Perform transformation	*Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd); existing mapping* Perform transformation - click "createTX" in the main toolbar - check the result in the Feedback View		Expected result - the output has another new element: <longDescription> - <longDescription> has two sub-elements: <text> and <language> - make sure the language-value is set to "de" - check if the text-value is set (may vary depending on the instance data) **NOTE: The values depend on the provided instance data! Thus, they can vary!**	o	TM		o	IM	as expected	
		Delete a mapping link	Delete a mapping link	*Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd); existing mapping* Delete a mapping link as follows - select "Select" from the components list - left-click the link between "articleName" and "shortDescription" - select "delete" - left-click the link between "contactWeb" and "shortDescription" - select "delete" - save your changes		Expected result - the links between "articleName", "contactWeb" and "shortDescription" are deleted and not present anymore	o	TM		o	IM	mac user... everywhere you write left-clicks should be right-clicks!!	
MT2.17	MT2	Perform transformaiton	Perform transformation	*Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd); existing mapping* Perform transformation - click "createTX" in the main toolbar - check the result in the Feedback View		Expected result - the generated output has no <shortDescription> element anymore	o	TM		o	IM	as expected	
MT2.18	MT2	Reuse already set language	Reuse already set language	*Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd)* Reuse language settings - select the "link" component from the component list next to the modeling canvas (left hand side) - click on "longDesc" in the "biella" schema - click on "shortDescription" in the "hto" schema - select the "Select" component from the component list next to the modeling canvas (left hand side) - select the newly created link - select "hto:languageText" in the dialog - enter "." (without "") for the "text" parameter - click the drop-down boxk and select 'de' for the "language" parameter - click "Confirm" - save changes by clicking the save-button in the main toolbar	Note: The Biella schema does not have a short description. However, for demonstration purposes we will map the long description to the	Expected result - mapping dialog: the previously set language ('de') is available via the drop-down box for the langauge parameter - confirming the mapping specifications changes the link's color to green	o	TM		o	IM	as expected	

Id	Parent	Action	Name	Description	Comment (and alternatives)	Expected Outputs	18/07/2012	Who	Actual Result	24/08/2012	Who	Actual Result	Output (XML, Screen)
MT2.19	MT2	Perform transformaiton	Perform transformation	*Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd); existing mapping* Perform transformation - click "createTX" in the main toolbar - check the result in the Feedback View		Expected result - the <shortDescription> element appears again with two sub-elements: <text> and <language> - make sure the language-value is set to 'de' - check if the text-value is set (may vary depending on the instance data) **NOTE: The values depend on the provided instance data! Thus, they can vary!**	o	TM		o	IM	as expected	
MT2.20	MT2	Provide feedback about the graphical feedback (green, black links)	Provide feedback about the graphical feedback (green, black links)	Provide feedback about the graphical feedback (green, black links)							IM	a) The link 'sticky' function... still think there should have an integrated solution to 'guide' the user to the select functionality (maybe the first link could activate a dialoge informing to change into the select function to confirm or edit the link). b) the value mapping condition dialogue disapears if you click on another application on your computer even if you have not set a parameter for value; it could remain there and disapear once the link is confirmed, it is clicked in the white area of the viewer or esc is hit. Or it could have a 'close window' button.	
		Provide feedback about the interlinking method	Provide feedback about the interlinking method	Provide feedback about the interlinking	**Wording** is still very technical ("hto:value-of", "createTX", "hto:xsd-date-to-hto-date"), is not clear. use "target" instead of hto, use "source" instead of xsd, use "test mapping, or view result of mapping" instead of create TX, get the data from the example xml ("mostra"), instead of showing a "." after value	**Simple vs. complex mapping** If most of value mappings are simple: only 'confiming' the link (e.g. title string), why not directly hide the conditioning (havint to enter a "."). Show complex conditioning only for those values that need it (e.g. date). I propose to have the conditions spread when the editor requests it (PIC simple_mapping_confirm.png)					IM	**Interlinking dates:** so ok, it is obvious that you are linking from xsd (source) to hto (target), so why repeat it? Why not offer the user to define their format? E.g. YYYYMMDD DD-MM-YYYY DD.MM.YYYY DDMMYYYY or even better, with a sample-date: 1.1.2000 2000-01-01 ...[more can be found in excel] **interlinking text:** If I where not to have the cheat sheets, how would I know that the language has to be defined by de, it, en... and cannot write deutsch, italiano,... this would be easier if in the window, an example could be provided, also i find weird that I have to set semi-colon 'en'...It is just not intuitive enough.	simple_mapping_confirm.png
		Provide feedback about the Graph View editor	Provide feedback about the Graph View editor	Provide feedback about the Graph View editor							IM	a) An information about the links appears when mousover a link (from/to). This information should not hang around too much (PIC mouseover_limit.png) Another day this did not happen (maybe the computer was running slower, and this is not the mapping tool, but the computer.)	mouseover_limit.png
		Provide general feedback	Provide general feedback	Provide general feedback							IM	At the moment nothing more... see general functionality improvement (languagues and dates). The trouble is, this is not an example that I can then test results, that is still what I am looking for in the test cases, to output a file and actually use it	

Id	Parent	Action	Name	Description	Comment (and alternatives)	Expected Outputs	18/07/2012	Who	Actual Result	24/08/2012	who	Actual Result	Output (XML, Screen)
			Following a strict mapping process	A user follows a defined mapping process that suggests the elements that a domain expert has to map	Prerequisite: Imported demo project and imported schema files (biella.xsd, hto.xsd); existing mapping								
MT2.21	MT2	Delete all mapping links	Delete all mapping links	Delete the previously created mapping links - select each link by a right-click and select "delete" - save your changes - close the mapping file "biella.harmonize" - double-click "biella.harmonize" again in order to re-open the mapping editor	**Note: To refresh the settings it is required to close and re-open the mapping file**	Expected result - all links are deleted and do not appear anymore on the modeling canvas	o	TM		o	IM	as expected	
MT2.22	MT2	Change the mapping editor	Change the mapping editor	Switch to the Form View mapping editor - click the "Form View" tab at the bottom of the mapping editor		Expected result - a form view editor appears in the editor pane - the "Form View" tab is active (highlighted) - the "biella" schema is listed as a tree view on the left hand side of the editor - the right hand side of the editor shows the mapping steps: (i) a table and (ii) 4 bullets (Step 1, Step2, Step3, Step all) - "Step all" is checked	o	TM		o	IM	as expected	
MT2.23	MT2	Mapping the basic description	Mapping the basic description	Mapping the title element - select "Step 1" - select "title" from the table on the right hand side - expand the biella schema shown on the left hand side - drag&drop the "title" element onto the second table (right below the first one) - select "hto:languageText" - type 'en' (including ') as parameter into the drop-box for the "language" parameter - press "Confirm" - save your changes	**Explanation: The form editor is separated into two parts: the left hand side shows the source schema (biella), whereas the right hand side shows the target schema (hto). The mappers task is to provide an adequate mapping for required target elements. These elements are defined by a fixed mapping process. The mapping process in the context of the HarmoSearch mapping tool is called "Filter". The corresponding filter file (filter.xml) is located in the "Filter" folder.** **Note: We leave the subtitle element unmapped since no corresponding opposite element exists in the biella schema!**	Expected result - the "title" tag changes ist color from white to green (showing that the mapping has been completed) - "subtitle" remains in white (not mapped) status	o	TM		o	IM	ohhh!	
MT2.24	MT2	Perform transformaiton	Perform transformation	Perform transformation - click "createTX" in the main toolbar - check the result in the Feedback View		Expected result - the Feedback View appears on the right hand side of the modeling canvas - the Feedback View shows 4 events in the HTO format, which is the output of the transformation (XSLT) - each event (starting with <event>) has a <mainTitle> tag - the elements "mainTitle" should have a value: Mostra for the first three events, Mostre for the last event - make sure no <subTitle> element exists **NOTE: The values differ due to the provided instance data!**	o	TM		o	IM	as expected	

Id	Parent	Action	Name	Description	Comment (and alternatives)	Expected Outputs	18/07/2012	Who	Actual Result	24/08/2012	Who	Actual Result	Output (XML, Screen)
MT2.25	MT2	Mapping the additional information	Mapping the additional information	Switch to step 2 - select "Step2" Mapping the long description element - select "longDescription" - drag and drop "longDesc" from the biella schema to the table below - select "hto:languageText" - select the already defined language 'en' from the drop-down list - press "Confirm" - save your changes Mapping the Begin Date - select "beginDate" - drag and drop "dateMin" from the biella schema to the table below - select "hto:xsd-date-to-hto-date" - press "Confirm" - save your changes Mapping the End Date - select "endDate" - drag and drop "dateMax" from the biella schema to the table below - select "hto:ddmmyyyy-data-to-hto-date" - press "Confirm"	**Note: Short description and day times will not me mapped since we are not able to find a corresponding opposite in the biella schema**	Expected result - Step 2 is active and the corresponding elements are shown in the table - their default status is not-mapped so far (white box) - after confirming the mappings for "longDescription", "startDate" and "endDate" their status changes to done, wich is illustrated by a green box	o	TM		o	IM	as expected, ant might I say done in less than 1 minute! PS Still thinking we should rephrase the options "hto:xsd-date-to-hto-date" and"hto:ddmmyyy-data to-hto-date"	
MT2.26	MT2	Perform transformaiton	Perform transformation	Perform transformation - click "createTX" in the main toolbar - check the result in the Feedback View		Expected result - the output shows 2 new elements: <description>, <timeline> - <timeline> is composed, among others, of <startDate> and <endDate> elements - check that <startDate> as well as <endDate> have assigned values for <year>, <month> and <day> - <description> contains among others <longDescription> - make sure the sub-elements <text> and <language> contain a value (en in case of <language>) **NOTE: The values depend on the provided instance data! Thus, they can vary!**	o	TM		o	IM	as expected	
MT2.27	MT2	Mapping step 3	Mapping step 3	Switch to step 3 - select "Step 3" Mapping the category - select "category" - drag and drop "kwID" from the biella schema (sub-element of "eventType") - select "hto:Category" select "." from the drop-down list - press Confirm - save your changes	**Note: the remaining elements "organiser id" and "location id" will be mapped in the next step for demonstration purposes of the graphical domain-expert feedback**	Expected result - Step 3 is active and the corresponding elements are shown in the table - their default status is not-mapped (white box) - after applying the mapping "category" switches to done (green box) - organiser id and location id remain white (not mapped at all)	o	TM		o	IM	as expected	
MT2.28	MT2	Perform transformaiton	Perform transformation	Perform transformation - click "createTX" in the main toolbar - check the result in the Feedback View		Expected result - the output shows a new element: <category> - check if the sub-element <domainValue> is set (e.g., exhibition european art before 1800) **NOTE: The values depend on the provided instance data! Thus, they can vary!**	o	TM		o	IM	as expected	
MT2.29	MT2	Set a mapping to status unknown	Set a mapping to status unknown	Indicate organiser id as unsolved mapping - select "organiser id" - drag and drop "pid" onto the table below - save your changes	**In case the domain-expert does not feel confortable with a solution or is not able to do a mapping at all but is sure that a corresponding opposite exists in the source schema he is able to provide graphical feedback.**	Expected result - the "organiser id" changes ist color to black - this indicates that the domain expert is not sure about the correctness of the proposed mapping - the feedback indicates "additional support needed"	o	TM		o	IM	alternativelly, the user (as I did), can open in the viewer in the folder "input" , the "BiellaEvents.xml" where he/she can see the actual values being mapped.	

Id	Parent	Action	Name	Description	Comment (and alternatives)	Expected Outputs	18/07/2012	Who	Actual Result	24/08/2012	who	Actual Result	Output (XML, Screen)
MT2.30	MT2	Set the mapping status to TODO	Set a mapping status to TODO	Mark location id as "TODO" - select "location id" - drag and drop "id" onto the table below - click on "id" - select "TODO" from the drop-box - press "Confirm" - save your changes	**Setting a mapping status to TODO signals the technical expert that the domain expert was not able to solve the mapping. Potential reasons may be missing pattern support. As a consequence the technical expert has an anchor and knows where to hook in in order to solve the problem and finalize the mapping, e.g., by implementing the missing pattern**	Expected result - the "location id" changes ist color to red - such a mapping indicates that the corresponding opposite has been found but cannot be mapped to hto due to technical reasons - such mappings require additional technical support, e.g., implementing the missing pattern	o	TM		o	IM	as expected comment 1: what if the domain expert, has no clue as what to choose? Could not be possible to mark location id in the hto element as TODO? Comment 2: where to set to TODO, in the hto:Referencedvalue or hto:value-of?	
MT2.31	MT2	Reset an already defined mapping	Reset an already defined mapping	Reset the mapping for location id - select "location id" - select "id" - select "reset" from the drop-down box - press "Confirm" - save your changes	**In case the domain expert thinks an already set mapping has to be reset**	Expected result - the "location id" changes ist color to white (no mapping at all)	o	TM		w	IM	it is black (pic reset_mapping.png) What is the difference between reset and delete?	reset_mapping.png
MT2.32	MT2	Functionality feedback	Functionality feedback	Provide feedback about the functionality of the Form View mapping editor							IM	**I am fan!** It can be handled better than the Graphical view, where switching from Link function to Select function and the many windows, added complexity to the process. The form view is more intuitive, once you know you have to activate the element in the hto filter to be mapped, and know the area where the source schema element has to be dropped... is easy peasy!! still, the content of the mapping conditioning could be simplified	
MT2.33	MT2	Feedback about the graphical domain expert feedback functionality	Feedback about the graphical domain expert feedback functionality	Provide additional feedback about the graphical domain expert feedback functionality							IM	?? You mean set a link as TODO? This is great if I knew of a case of a user having a technical expert behind to finish up their work, maybe Sabine, can give you some feedback about this...	
MT2.34	MT2	UI Feedback	UI Feedback	Provide feedback about the Form View UI							IM	I made a pic with comments Form_ui.png	Form_ui.png
MT4		Transformation Process	Potential functionality regarding transformation										
		Use HTML as output format	Use HTML as output format	***Prerequisits: An existing project and corresponding mappings*** ***Requirements: Note, in order to generate HTML output a proper transformation template (XSLT) is required that is suitable to transform the resulting XML output to HTML*** Change the process settings - Expand the "Input" folder - double-click "process.xml" - uncomment "<Xsl>Pattern/hto2html.xsl</Xsl>" by removing "<!--" and "-->" - change the value of "<Output>" to "html" (without ") - save your changes Perform transformation - click "createTX" in the main toolbar - check the result in the Feedback View		Expected result - the standard XML output has changed to HTML listing the corresponding events and mappings in table form	o	TM		o	IM	did this, once I had mapped all fields from the excercise above (including: title, dates, description, categories), and the categories were not outputed in the html output (while they where output in the xml feedback	
MT3		User assistance	User assistance	Refers to relevant enhancments helping the user handling the mapping tool									

Id	Parent	Action	Name	Description	Comment (and alternatives)	Expected Outputs	18/07/2012	Who	Actual Result	24/08/2012	Who	Actual Result	Output (XML, Screen)
MT3.1	MT3	Integrated help	Integrated help	Open the integrated help - Click "Help > Help Contents" in the main menu - Expand the "HarmoSearch Mapping Tool User Guide" node - Expand "Getting Started" - Expand "Basic Tutorial" - Click "Create your first mapping project"	**Note: The documentation is in a pre-leminary state due to the prototypical status of the mapping tool.**	Expected result - The integrated help dialog pops up - The help contents appear on the left hand side and contain two nodes (i) "HarmoSearch Mapping Tool User Guide" and (ii) "XSL Tools User Documentation" - "HarmoSearch Mapping Tool User Guide" contains 4 sub-nodes - "Getting Started" and "Concepts" are further refined by additional sub-nodes	o	TM	Documentation appeared as expected	w		is there a way around the firewall (i cannot change my firewall settings, and these do not allow the mapping tool to connect). Alternatively you could ask Adriano or David (or Peter) to do these test lines?	
MT3.2	MT3	Cheatsheet support	Cheatsheet support	***Prerequisite: To accomplish this task the installation of the third party plugin "harmosearch.mappingtool.cheatsheets" (see task MT0.6)*** Open the cheatsheets - Click "Help > Cheatsheets..." - Expand "HarmoSearch" - Select "Create a new "Hello World" mapping project" - Click "OK" - Start the cheat sheet by clicking "Click on Begin" in the Introduction section - Follow the instructions		Expected result - The "Cheat Sheets" View opens and shows the content of the "Create a new "Hello World" mapping project - The cheatsheet is separated into 5 sections - Interacting with the cheatsheets result in for example calling a wizard or moving to the next explanatory section	o	TM		w		is there a way around the firewall (i cannot change my firewall settings, and these do not allow the mapping tool to connect). Alternatively you could ask Adriano or David (or Peter) to do these test lines?	
MT3.3	MT3	Feedback about the help contents	Feedback about the help contents	Potential question - What are must have criteria for the user documentation provided by the mapping tool			o	TM					
MT3.4	MT3	Feedback about the cheat sheets	Feedback about the cheat sheets	Potential question - What functionality should be covered by means of a cheat sheet									

Id	Parent	Sequence	Name	Description	Comment (and alternatives)	Expected Output	28/1/2013	Who	29/1/2013	Who	5/2/2013	Who	Actual Result	18/2/2013	Who	Actual Result	21/2/2013	Who
RL1				**User creates and uses a mapping of referenced lists**														
RL1.1	RL1	RL1.1 - RL1.11	Download Mapping Tool	Download the Mapping Tool (v4.0.3) from the portal in 'Configurations' -> 'Mapping Store'. To do this you can log in with user 'tester@mapping.tool', password 'testuser'. Choose the 32 or 64 bit version depending on your Windows OS. Alternative (to shorten the download time): Download the Mapping Tool from SVN at "07/Demonstration_Activities/MappingTool_<nn>bit"	*It is important that your installation directory does not contain any spaces, otherwise the tool will not start*		o	Promoter	o	Afidium	o	SPK		o	Afidium		o	ectrl
RL1.2	RL1	RL1.1 - RL1.11	Launch the Mapping Tool	Double click on the 'Flocke.exe' file	*For ease of use, the tool on SVN has already a preloaded project containing the data mapping. The test consists in creating the mapping of reference lists.*		o	Promoter	o	Afidium	o	SPK		o	Afidium		o	ectrl
RL-ext1			Open the editor for creating a mapping of data (between the concepts of two data schemas)	Within the Mapping Navigator View, open 'Mapping->museoliitto_mapping.harmonize' (double click or right-click: 'Open With->Harmonize Model Editor')	*For ease of use, the preloaded project contains already a source and a destination schema, and a preexisting mapping.The test consists in extending the mapping with one new link.*		o	Promoter (7/2/2013)			o	SPK (19/2/2013)		o	Afidium		o	ectrl
RL-ext2			Add a mapping for the concept Category	1. Select Step 3 2. Select 'category' in the Target Schema list. 3. Find the 'categories' element in the Museoliitto source schema 4. Drag it onto the 'Link to Source' list in the Mapping(s) section, and select it (it is grey colored) 5. Select 'hto:SKOSCategory' listed in the Mapping Details section 6. Type 'http://www.tu.at/' (including the ') into the text field of the UniqueID parameter 7. Choose 'category_id' from the drop-down box of the value parameter a. Note, the 'category_id' is a sub element of categories and contains the actual value that has to be mapped. Thus, it must be specified as an input parameter for the hto:SKOSCategory mapping pattern. 8. Confirm your mapping by clicking the Confirm button. ('categories' becomes green colored) - save the project	*This operation creates a new mapping link that maps a concept from the Museoliitto source reference list to a concept of the Harmonise target reference list. Thus, it is necessary to create also the mappings between the single values of the two (source and target) reference lists.*		o	Promoter (7/2/2013)			o	SPK (19/2/2013)		o	Afidium		o	ectrl
RL-ext3			Recreate the output mapping file	1. Double-click the museoliitto_mapping.harmonize mapping file 2. Re-create the transformation output by clicking the 'Create and run Transformation' yellow arrow button in the toolbar 3. Close the Feedback View		The Feedback View shows you the output of running the mapping on a test input file (preloaded in the Input folder)	o	Promoter (7/2/2013)			x	SPK (19/2/2013)	In the feedback view (where I can see the reuslt of the transformation - unfortunately only in xml, not in html-), the category is not matched: "<category>No matching concept found for: http://www.tu.at/Tanz</category>" (see screenshot)	o	Afidium		o	ectrl

Id	Parent	Sequence	Name	Description	Comment (and alternatives)	Expected Output	28/1/2013	Who	29/1/2013	Who	5/2/2013	Who	Actual Result	18/2/2013	Who	Actual Result	21/2/2013	Who
RL1.3	RL1	RL1.1 - RL1.11	Open the editor for creating a mapping of values (between two skosified reference lists)	Within the Mapping Navigator View, open 'Mapping->valuemapping.values' (double click or right-click: 'Open With->Value Mapping')	*For ease of use, the preloaded project contains already a source and a target reference list (represented as skos relations) and a sample mapping between the two (also expressed with skos terminology).* *Note that the source and target reference lists in this demo are loaded from the workspace on your file system (you can check with right-click: 'Open With->Text Editor') . But they could also be loaded from a public URL, clicking on the button above each value tree.*		O	Promoter	O	Afidium	o	SPK		o	Afidium		o	ectrl
RL1.4	RL1	RL1.1 - RL1.11	View the existing mapping	In the central tab below the value tree (Concept A - maps To - Concept B) right-click and select 'Show All Relations'		The concept <http://www.tu.at/Bildhauerei> is mapped to the concept <http://www.harmonet.org/sculpture> .	O	Promoter	O	Afidium	o	SPK		o	Afidium		o	ectrl
RL1.5	RL1	RL1.1 - RL1.11	Modify the existing mapping	In the values tab, select 'Tanz' on the left and 'dance' on the right - right-click and select 'Create Relation' - do the same for 'Malerei' and 'painting' - save the project		If you do again 'Show All Relations' on the below tab, you will see all three concept mappings	O	Promoter	O	Afidium	o	SPK		o	Afidium		o	ectrl
RL1.6	RL1	RL1.1 - RL1.11	Make the values mapping available from a public queryable triple store	This step is done by the administrator, who uploads the file in the Fuseki server (which is the container of the semantic registry) of HarmoSearch. You may ask Claudio Prandoni or Marlis Valentini to substitute the actual file on the server with yours, or just check that your file looks like 'valuemapping-output.values' in the test folder, and proceed with the test.	The mapping of values is represented as skos relations between two skosified reference lists. The triple store is needed in order to interpret such type of mapping specification.	Check that your file looks like 'valuemapping-output.values' in the test folder	O	Promoter	O	Afidium	o	SPK		o	Afidium		o	ectrl
RL1.7	RL1	RL1.1 - RL1.11	Upload the support libraries	This step is already done: the libraries needed by the schema mapping (in 'Museoliitto/Pattern') are already uploaded as private libraries on the portal		<u>Optional:</u> Logged in as tester@mapping.tool (passw: 'testuser') on the portal, you may check in 'Configurations'->'Mapping Store' that there are 4 private libraries for the 'testmappingtool' organization	O	Promoter	O	Afidium	o	SPK		o	Afidium		o	ectrl
RL1.8	RL1	RL1.1 - RL1.11	Update the mapping file to reference correctly the support libraries	Open the file 'Output/museoliitto_mapping2hto.xsl', and, if necessary (*), update the 2 <xsl:include> instructions with: <xsl:include href="../privateSupportLibs/htov2-1-extension.xsl"/> <xsl:include href="../privateSupportLibs/htov2-1.xsl"/>	** When a test transformation is run, the include paths are updated automatically to link to the libraries in your workspace*		O	Promoter	O	Afidium	w	SPK	the output file museoliitto_mapping2hto.xsl" already had both lines	O	Afidium	**Already had 2 lines**	o	ectrl

Id	Parent	Sequence	Name	Description	Comment (and alternatives)	Expected Output	28/1/2013	Who	29/1/2013	Who	5/2/2013	Who	Actual Result	18/2/2013	Who	Actual Result	21/2/2013	Who
RL1.9	RL1	RL1.1 - RL1.11	Upload the schema mapping file on the portal (from your local system to HTO)	log in with user 'tester@mapping.tool', password 'testuser' - go in 'Configurations' -> 'Mapping Store' - insert 'events' as collection id - choose 'Upload mapping from local system to Harmonise ontology (for sending data)' - select the mapping from local system to Harmonise ontology (choose the file 'Output/museoliitto_mapping2hto.xsl') select 'default for sending events' click on 'Send' and check for the success message on top of the page	*The upload of mappings is also be available as Web Service invocation to the portal. However the current version of the Mapping Tool lacks still the GUI that allows this operation.* *The uploaded mapping references on one hand the support libraries and the other hand the separated mapping of values, which is implemented as skos relations between two skosified reference lists. This implies that Fuseki is involved in interpreting the part of mapping between data values.*	The mapping is listed in the box at the end of the page.	o	Promoter		Afidium	o	SPK		o	Afidium		o	ectrl
RL1.10		RL1.1 - RL1.11	Execute a push	logged in as 'tester@mapping.tool', go in 'Exchange Data' -> 'Share Data' and select 'Push Data' select 'Test' as receiver and the file'Museoliitto/Input/museoliitto.xml' (available in the workspace of the MappingTool) as data file click on 'Send'		Screen message and Operation Status report the success of the operation. Log in as 'testuesr@test.user', password 'testuser' - go in 'Data Repository' -> 'Inbox' - download the just received file and check that the occurrence of Tanz has been mapped into 'http://www.harmonet.org/dance'.	o	Promoter		Afidium	o	SPK		o	Afidium		o	ectrl
RL1.11		RL1.1 - RL1.11	Remove schema mapping	log in with user 'tester@mapping.tool', password 'testuser' - go in 'Configurations' -> 'Mapping Store' - delete the mapping from local system to HTO		The mapping is no more listed in the box at the end of the page.	o	Promoter		Afidium	o	SPK		o	Afidium		o	ectrl

APPENDIX C. ACCEPTANCE NOTES

This section gathers all acceptance notes validated by the partners for each release.

Appendix C.1. Acceptance notes for RC1 of the Mapping Tool

The following section is an excerpt, addressing only the Mapping Tool, of the document **Acceptance Notes for Release 2**, which is available in its complete version in D7.1 'Compiled collection of acceptance notes'.

Note: Release candidate 1 of the Mapping Tool was included in release 2 of the overall HarmoSearch system.

Software

Release 2 does not correspond to a specific deliverable but to the second release of the integrated Metasearch Core engine and of the first release of the mapping tool.

Content of release 2 encompasses:

- [...]
- First release of the mapping tool

SME Acceptance

This section contains the list and status for each partner

NR	CHECK	YES / NO / Conditional
1	X+O BUSINESS SOLUTIONS GMBH	**Conditional**
2	ECTRL SOLUTIONS SRL	**Conditional**
3	EC3 Networks GmbH	**Conditional**
4	Lehmann & Werder Museumsmedien	**Conditional**
5	AFIDIUM	**Conditional**

Other partner comments

NO COMMENT

Consortium acceptance

The consortium thereby accepts the Metasearch Core Engine part of the release and considers that it covers requirements.

However, the mapping tool has been accepted with conditions.

Conditions and Non Acceptance Notes

The mapping tool in its present state is not usable for non technical experts. This is not compliant with the initial expectations. To remedy this situation a number of actions have been agreed with the RTD partner (see next section).

Appendix C.1.a. Acceptance Conditions for RC1: Action Plan

This section is the content of the document 'workplan15-11-2011.doc'. It contains the conditions for acceptance of the Release Candidate 1 of the Mapping Tool.

Work Plan November 2011 to end of Project

Albert Rainer

Thomas Motal

The following components, extensions, and focal points have been identified and presented at Paris Meeting November 2011

Recommender:

EPM (Expected Person Month): 2

Proposes matches between source and target schemata ("automatic Mapping").

A basic implementation has been integrated: Editing distance (Levenshtein). The tool should allow specifying the algorithms together with optional parameters that should be used in the schema matching process.

Tasks:

Configuration: An addition to the current project configuration method in order to specify matching algorithms and parameters.

Algorithms: Implementation of a suitable SW-Pattern that can be extended in order to provide concrete algorithm instances.

Status: Basic version available. Next: Halted at the moment, needs review of approach since schemas and data of current harmonize partners are too ill-defined to yield any useful results.

Immediate feedback on transformations:

EPM: 3

Instance data is transformed on-the-fly during the mapping process. The tool shows the result of data mapping to the user. In addition, assertions on instance data may be used for automatic testing purposes. This also corresponds to Task 4.3 - Deployment of processor – and Deliverable 4.2 - Implementation of query processor as contribution to mapping application.

Tasks:

Source: Currently, input is limited to static XML files. The query processor developed in WP 4 is integrated as additional input source.

Transformer-chain: There exists a Transformer-Chain that has been developed for the Harmosearch Metasearch Demonstration in Berlin. This chain has to be integrated to the mapping tool.

Feedback view: A suitable view (XML, HTML Browser) is to be integrated into the mapping tool that is capable to show feedback on-the-fly.

Status: Basic version available. Next: automatic reload on model changes.

XML, XSLT view:

EPM: 1

Both exist as Eclipse components and have to be integrated.

Present mappings to technical experts.

Major challenge here is to synchronize the views for domain experts and technical experts

Tasks:

Configurate Eclipse in order to integrate these views. Implement a mechanism to synchronize views on the model.

Status: Basic version available. Next: Domain expert implementation request to technical expert (create a TODO task with basic template structure)

Request support:

EPM: 3

Main focus of mapping tools (including Flocke) is support for data translations of query outputs or other kind of responses. But support for requests is very important in dialogue situation.

Tasks:

Extension of the current mapping tool in order to support request mappings.

Status: Not started yet

More Pattern support for Harmonise ontology:

EPM: 3

Possibly outsourced to Anna Bruseva as Practical (Professor Dorn). Anna did existing mappings Euromuse – Museums

Patterns are pieces of (XSLT-) Software similar to methods/functions known from programming languages.

Currently, only a few patterns are implemented that support the Harmonise ontology. Needs some research in order to come up with a solution as to which patterns make sense.

Tasks:

Documentation of best practices for code reuse in XSLT projects. This includes methods that describe how code documentation could be done, how code retrieval works, and how code maintenance such as version management could be applied.

Status: Basic version available. Next: Additional elements for the auto-documentation as basis for propose-critique support.

XSLT code generator:

EPM: 5

Current version is only a stub, needs rework in order to create strict XSLT 2.0 code.

One of the most challenging problems, independently of the user interface employed. We see this component as the one that generates a heavy workload and as work in progress until the end of project.

Tasks:

Implementation of extended code generator

Status: Basic version available. Next: Research on existing solutions.

Update mechanism:

EPM: 0.5

Implementation and integration of the equinox update mechanism for Eclipse RCPs. The main purpose of this task is to: (1) Allow a minimal invasive approach for product migration; (2) allow users to add additional functionality provided by third party vendors.

Status: Basic version available

Mapping guidance for the domain expert:

EPM: 6

The purpose of this task is to provide an adequate mechanism to make the underlying mapping process feasible and understandable for the domain expert. Thereby, the focus is on supporting the user to map a concrete XML schema to the Harmonise ontology. The representations of the process as well as the user interface are thereby crucial. Both need to be understandable and adequate by means of identifying and mapping basic mapping scenarios.

Status: Basic version available. Next: List of proposals for extensions.

Configuration mechanism:

EPM: 2

The configuration mechanism is used to control and configure the behaviour of the mapping tool. This includes not only the environmental behaviour (e.g. code highlighting) but also mapping related issues. The latter is addressed by so called domain-specific profiles.

Status: Basic version available

Mapping project management:

EPM: 1.5

Mapping solutions are organized by means of projects. These projects can be manipulated by the user in any direction (create, delete, rename, etc.). Furthermore, several resources (e.g. filter, pattern, schema files) are needed to apply a valid mapping procedure. Creating and managing mappings is complex and time intensive. Thus, it is necessary to (1) provide an adequate and easy to use interface allowing a domain expert to manipulate and interact with projects or resources and (2) make the interface as simple and neat as possible. The latter is especially important for an effective and fast mapping experience.

Status: Basic version available

Documentation and deliverables:

EPM: 2

The purpose of this task is to document components, implementations, and manuals associated with the developed mapping tool. Additionally, some parts of the documentation are integrated into the help system of the HarmoSearch mapping tool.

Status: Ongoing

Scientific work:

EPM: 1.5

This task relates to creation and publishing research results that have been gained during the project period. The overall purpose is to share and distribute the scientific contributions among the research community.

Status: Not started yet

Connection to Harmosearch mapping store:

EPM: 1

Mapping store a component of Harmosearch portal.

Keeps schema mappings and is used by the Reconciliation component (another part of the Harmosearch portal) in order to perform data transformations.

Mapping tool can connect to the portal and upload/download mapping artefacts.

Tasks:

Implement a connector to, respectively, upload or download XSLT artefacts to/from the mapping store. The Interface provided by the Mapping store is described in Deliverable 2.2 Section 5.2.12

Status: Not started yet Next: Basic implementation available for Release 3 (Feb 2012)

NEW: Reference lists handling in mapping editor:

EPM 3

A reference list is a means to overcome the semantic heterogeneity problem of domain values (different naming, similar relations)

Precondition: Needs clarification and mutual agreement on how to represent reference lists

Tasks:

Literature review of existing solutions and presentation of proposal (scheduled February 2012)

Implementation of a mechanism to handle heterogeneous domain values and to create the mappings

Status: Not started yet. Next: Literature review

Appendix C.2. Acceptance notes for RC2 of the Mapping Tool

The following section is an excerpt, addressing only to the Mapping Tool, of the document **Acceptance Notes for Release 3**, which is available in its complete version in D7.1 'Compiled collection of acceptance notes'.

Note: Release candidate 2 of the Mapping Tool was included in release 3 of the overall HarmoSearch system.

Software

Release 3 does not correspond to a specific deliverable but to the first release of the complete Harmosearch system with the mapping tool integrated.

Content of release 3 encompasses for the events subdomain:

- The integration of the mapping tool into the system: download install from portal/ Assisted mapping upload and mapping validation (validation of the html viewer inside the mapping tool that activates when running the transformation)
- The enhance mapping tool to map the queries as well
- [...]

In addition to the actual release additional work has been performed to define how to

- Have reference list mapping methodology with one base reference list for mapping
- Manage parameters on mapping (language, currency...)
- [...]

The enhanced mapping tool is present in the release.

SME acceptance

This section contains the list and status for each partner

NR	CHECK	YES / NO / Conditional
1	X+O BUSINESS SOLUTIONS GMBH	**Conditional**
2	ECTRL SOLUTIONS SRL	**Conditional**
3	EC3 Networks GmbH	**Conditional**
4	Lehmann & Werder Museumsmedien	**Conditional**
5	AFIDIUM	**Conditional**

Other partner comments

NO COMMENT

Consortium acceptance

The consortium thereby accepts this release and considers that it covers requirements on the portal. The mapping tool is accepted as a prototype, provided it is transformed in the next release to take into account the usability requirements.

Conditions and Non Acceptance Notes

Mapping tool is accepted as a prototype, provided that the next versions take into account the usability expected by the SME partners (see next section).

Appendix C.2.a. Acceptance Conditions for RC2: Usability Notes

This section is the content of the document 'MappingToolReview.doc'. It contains the conditions for acceptance of the Release Candidate 2 of the Mapping Tool.

Notes on Usability of the Automatic Mapping Tool

In general, the automatic mapping tool does what it is expected to do, and most of the functionalities are quite intuitive. The possibility to test the mapping immediately seems to be very interesting, as errors can be detected and thus corrected already in this early stage. The entire tool is kept quite simple such that it is not difficult to be used (when having some initial help or guidelines).

Nevertheless, the help functionality is not yet complete (e.g., the help for the different views is missing). Some situations encountered when testing the mapping tool are described in more detail in the following.

Installer:

It would be preferable if the installer would notify the user when installing the automatic mapping tool, if the (pre-)specified directory already exists.

Uninstaller:

The uninstaller deletes the entire directory, and not only the files that were created by the tool or during the installation or usage. In this case, if the directory already existed (or, e.g. if the user chose something like c:/Programs) also files that should not be touched during this process will be deleted. Thus, the user should at least be notified when launching the uninstaller that this will be the behaviour. In this case, the user could "backup" some files or folders before this process.

Project import:

This step is very intuitive and simple, as far as an entire Flocke project is available. Otherwise, a new project has to be created and possibly existing files can be imported as filters/input/schema/…

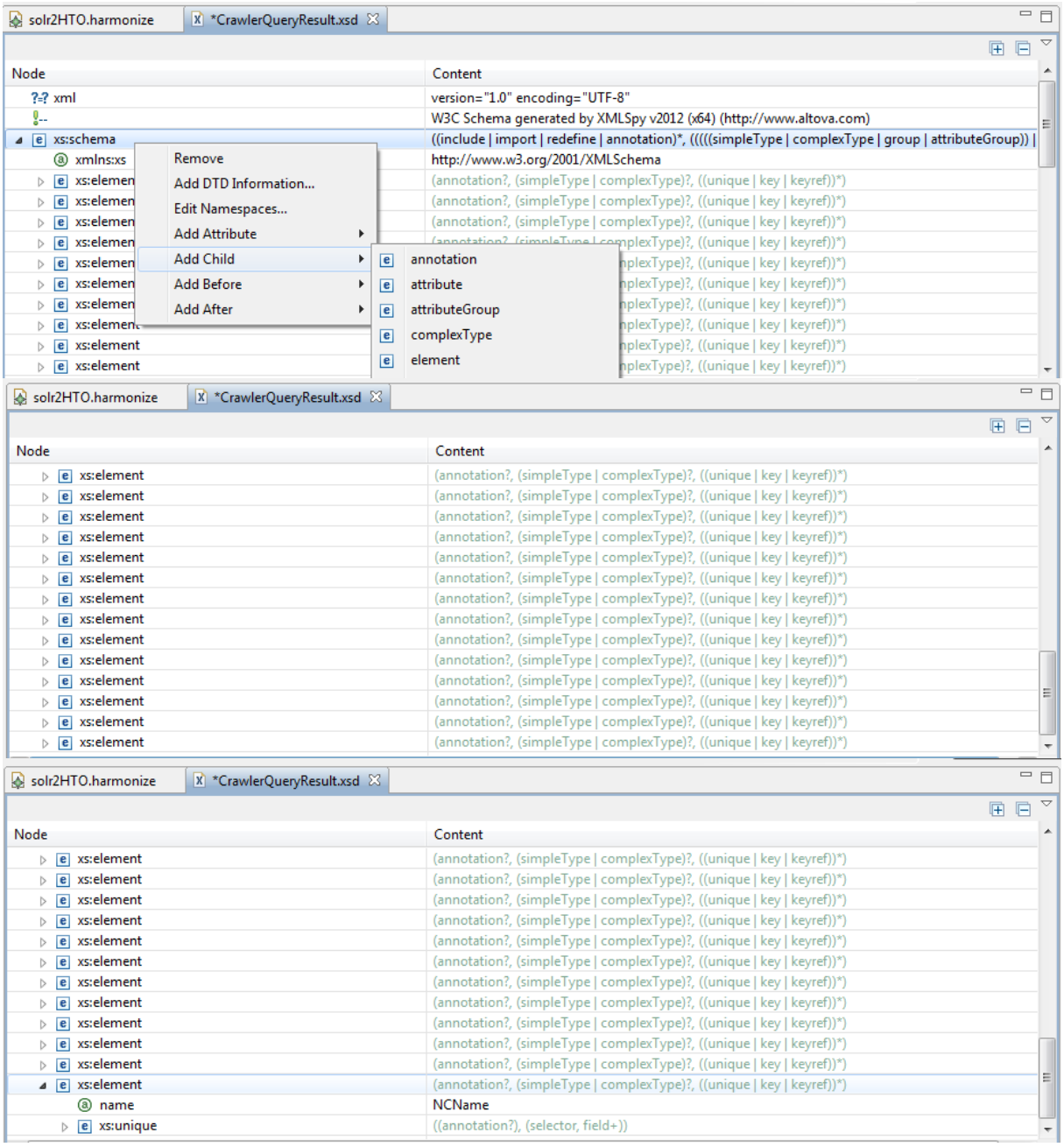
Project export:

The wizard to support the user when exporting a project is very intuitive and simple, such that it is easily possible to export an entire project to an archive that can be shared.

Schema files:

If an XML is available, the process of creating a new XSD schema is very simple and intuitive.

However, when not having such an XML, this might get quiet complicated/annoying: All the elements have to be "opened" (by the arrow on the left hand side) to see the "name" attribute, which is necessary to understand the difference between the single elements. If a new element is added, also this new element is not opened, which makes it a bit complicated to understand what happens: When having a XSD file containing already a certain number of elements, and adding a new child element, this one is added at the end of the list, and it is not opened or marked. Thus, it is difficult to see which one of the elements is new (as all of them are closed by default). So in a first moment one has to look for this new element. In order to specify the name, one has to open the element, click on the name attribute and type it (the default is "NCName"). After that, the default type ("unique") has to be deleted in most cases, and a new type has to be added. It would possibly be easier if the new added element is (by default) opened, and the text field of the name attribute is marked, to be edited immediately.

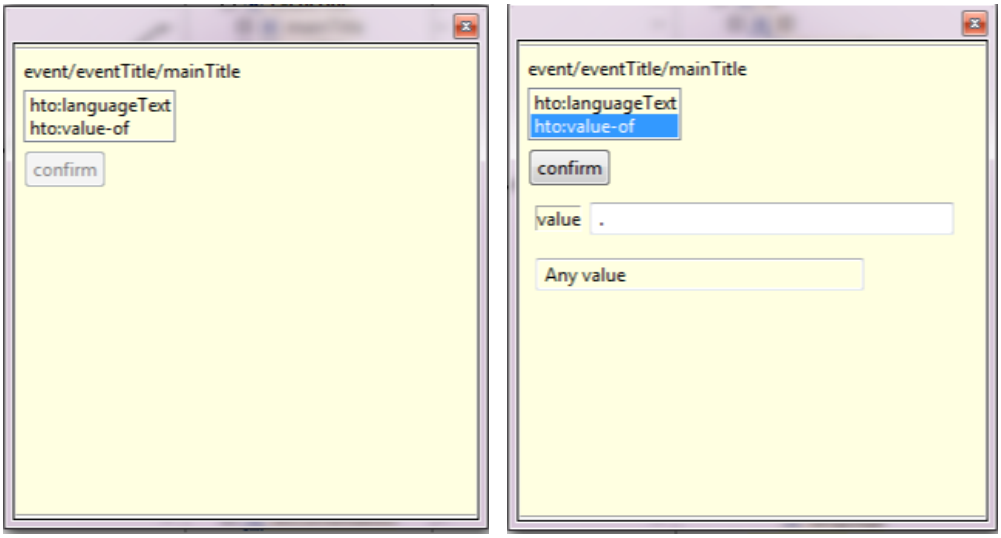


Graphical editor:

The graphical editor is nice and intuitive to be used. It supports the user to create the mapping itself in a simple fashion, without forcing him to write plain XSLT (or similar files). The schema files can simply be dragged and dropped in the graphical view, and they can be moved (using the "select" command). It seems not difficult to understand how to create a new mapping by choosing "link", and dragging a line from one field to another.

In the window, which is opened when clicking on a mapping link line, I found a confusing reaction: In this window the user has to choose a type of mapping (It could be helpful if, in the case where only one type is possible, this one would be selected automatically). As soon as the user chooses one of the possibilities

(screenshot), the "confirm" button is activated. But when clicking on this button, no reaction is shown: The user has to double-click in order to confirm the selection. It was confusing for me, as I intended that perhaps the choice was made in the background (without any visual notification), but I assumed to have confirmed the chosen setting already with a simple click. This could perhaps be changed (or explained).



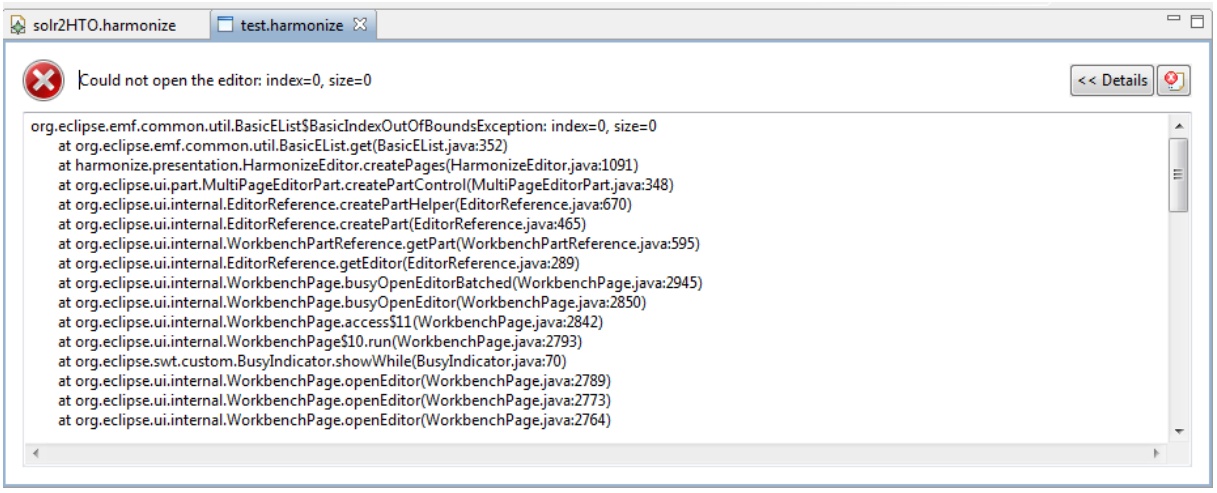
Schema files –> graphical editor:

One aspect that could be considered a bit annoying is related with the schema files and the graphical mapping editor: When having edited an XSD file, someone could consider that these changes are also reflected in the mapping (which is visible in the graphical editor). Perhaps I did not get the correct way how to do this, but in my case, the schema visible in the graphical mapping did not update. So, after having added a few fields to the XSD, I had to add the schema again to the graphical editor, remove the "old" schema, and redo the entire mapping. Perhaps there could be some help or automation when doing so. (Nevertheless, it is clear that this is a complicated process, as possibly "mapped" elements could have been deleted.)

Error feedback:

The feedback the user gets when an error occurred is currently a bit technical, as the stacktrace of the Java error message is shown. It would probably be more informative for non-technical users to get an error message they understand, e.g., the file has a wrong format or it is damaged (or something similar) and cannot be read. (But I assume this will still be changed for a future release).

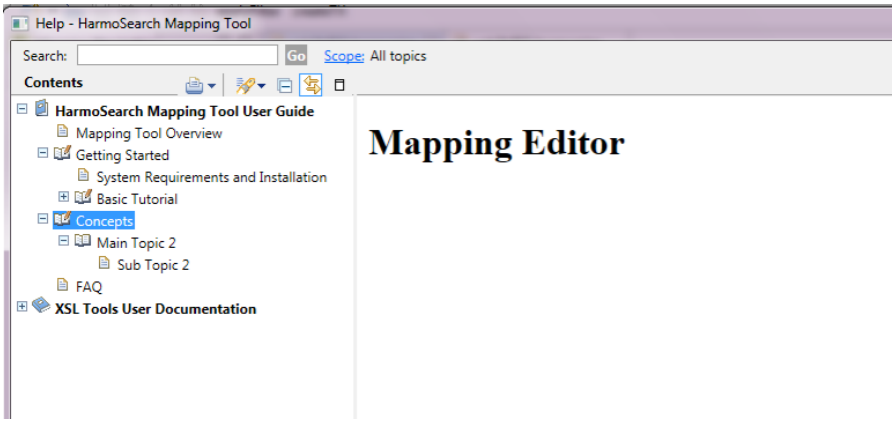
In the case of the screenshot for example a new file in the folder "Mapping" of the project was created with the filename "test.harmonize". When then opening this file (the default editor is the graphical one for harmonize mapping files), an index-out-of-bounds exception is shown:



Help:

The help menu is still in work, and thus not yet complete.

It contains detailed information about how to import an existing project, but the guidelines describing the different views are still empty.



It could perhaps be useful to have some help, explaining which files to put in which folder, when creating a new project (i.e., if the folders are all empty, not as shown in the screenshot). Once one sees where the files are located in an existing project (screenshot), it seems intuitive, but initially, not having this information, it is more difficult to understand that.

Appendix C.3. Acceptance notes for RC3 of the Mapping Tool

The following section is an excerpt, addressing only to the Mapping Tool, of the document **Acceptance Notes for Release 4**, which is available in its complete version in D7.1 'Compiled collection of acceptance notes'.

Note: Release candidate 3 of the Mapping Tool was included in release 4 of the overall HarmoSearch system.

Software

Release 4 does not correspond to a specific deliverable but to the second release of the integrated Metasearch Core engine and integrated mapping tool.

Content of release 4 encompasses the events and accomodation subdomain:

- [...]
- The enhanced mapping tool

SME acceptance

This section contains the list and status for each partner

NR	CHECK	YES / NO / Conditional
1	X+O BUSINESS SOLUTIONS GMBH	**YES**
2	ECTRL SOLUTIONS SRL	**YES**
3	EC3 Networks GmbH	**YES**
4	Lehmann & Werder Museumsmedien	**YES**
5	AFIDIUM	**YES**

Other partner comments

NO COMMENT

Consortium acceptance

The consortium thereby accepts this release and considers that it covers requirements. The consortium acknowledges the numerous improvements in the mapping tool such as the form view that allows more intuitive data mapping. However a complete mapping could still not be performed with this release because of a number of missing functionalities.

Appendix C.4. Acceptance notes for RC4 of the Mapping Tool

The following section is an excerpt, addressing only to the Mapping Tool, of the document **Acceptance Notes for Release 5**, which is available in its complete version in D7.1 'Compiled collection of acceptance notes'.

Note: Release candidate 4 of the Mapping Tool was included in release 5 of the overall HarmoSearch system.

Software

Release 5 does not correspond to a specific deliverable but to the third release of the integrated Metasearch Core engine and integrated mapping tool.

Content of release 5 encompasses for the events subdomain:

- The release 5 contains a complete Harmosearch platform including all the features (past and described below) as well as the latest graphical layout.
    - [...]

The enhanced mapping tool is also present in the release:

- Integration of reference lists and their mapping (categories, countries... but location names such as museums)
- Integration of the management of an organization's mapping of reference list in the mapping tool, and use in the reconciliation engine (for expert users)
- Integration of output mapping in the metasearch
- Overall improvements of the mapping tool (dialog driven, step driven, user support while mapping, easy management of parameters without complex path, differentiation of elements with attributes to map to different items, multilingualism support, and pre-configured mapping).

SME acceptance

This section contains the list and status for each partner

NR	CHECK	YES / NO / Conditional
1	X+O BUSINESS SOLUTIONS GMBH	**Conditional**
2	ECTRL SOLUTIONS SRL	**Conditional**
3	EC3 Networks GmbH	**Conditional**
4	Lehmann & Werder Museumsmedien	**Conditional**
5	AFIDIUM	**Conditional**

Other partner comments

NO COMMENT

Consortium acceptance

The consortium thereby accepts this release and considers that it covers requirements, except for the mapping tool that has only been accepted with conditions.

Conditions and Non Acceptance Notes

The consortium considers that the mapping tool is able to perform simple mapping but does not fully comply with the initial expectations in the sense that users are supported in easily performing mappings.

Furthermore, a number of new mappings performed during the tests were not valid until technical expertise was involved.

For more details on the conditional acceptance of the final Mapping Tool release, see also section 4 - Future Recommendations.