

# Mapping Memory Manager

## 3M

### User Manual

Version 1.0

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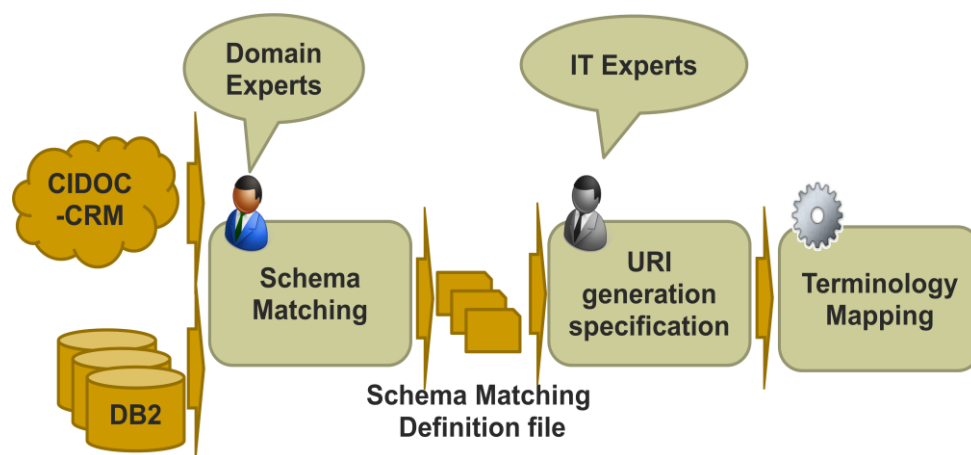
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# 1 Introduction

In order to allow uniform data access to heterogeneous sources we are using CIDOC-CRM and a set of extensions as a common integration target schema. It is therefore required to produce mappings, to link the source schemata by way of an equivalence to similar concepts or relationships of the CIDOC-CRM target schema. This is the mapping definition process and the output of this task is the mapping, i.e., a collection of mapping rules which are a sufficient specification for the transformation of each instance of a source schema into an instance of a target schema while preserving as much as possible its initial 'meaning'. Mapping rules are expressed in X3ML, an XML based language which describes schema mappings in such a way that they can be collaboratively created and discussed by experts.

X3ML is a generic, uniform, interoperable and extensible model for mapping several data models such as CSV, Relational, XML and RDF to a target schema such as CIDOC-CRM and its extensions. This model successfully serves as an interface between the IT and the domain expert. The mapping specification is simple enough to be verified or even defined by a domain expert. Robust cross-reference and interlinking mechanisms are implemented as separate modules and are transparent to the domain expert. The process of mapping needs support from carefully designed tools and a collaborative knowledge base or "mapping memory" designed to support all organizations with differing levels of resourcing.

This document describes 3M, the Mapping Memory Manager which is an editor designed to support all the steps of the mapping process workflow.



## 2 User Interface Description

### 2.1 Login Form

3M is a web application and its login page is available at <http://www.ics.forth.gr/isl/3M/> (Figure 1)

If it is the first time running 3M the user needs to create an account. In the *Login page* select **Sign Up** to create an account by filling the form in the *Sign Up page* (Figure 2). All the fields marked with \* are mandatory and should be filled. If the action completes successfully (Figure 3) select **Return to Login page** and login in with the newly created account.

In the Login page fill the Username and Password and select **Login In**



Figure 1: 3M Login page



Figure 2: Sign Up page

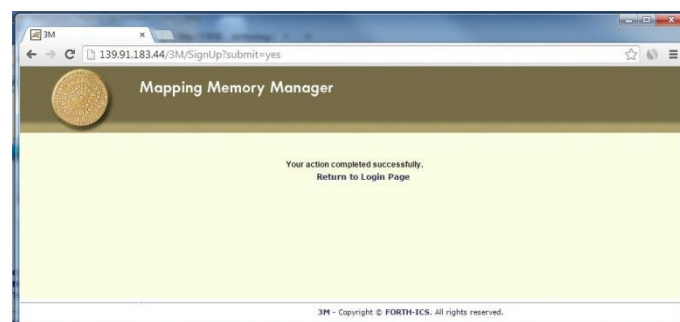


Figure 3: Successful registration

## 2.2 Mappings

When the user logs in 3M successfully, the Mappings' page which includes a list of all the available mappings is displayed (Figure 4).

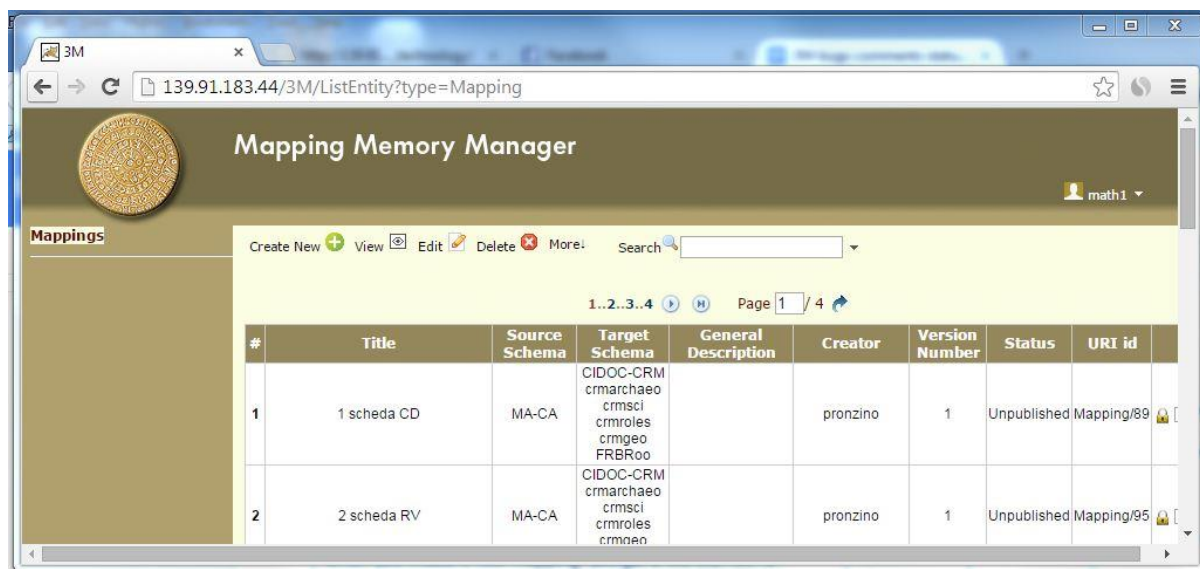


Figure 4: Mappings' page

The following operations are available:

### 2.2.1 Create New

The user selects this option in order to create a new mapping. The New Mapping page (Figure 5) is displayed where the user needs to specify the Title of his mapping. Currently the other fields are fixed and cannot be changed.

Fill in the Title and select **Finish**. If the action completes successfully the id of the newly created mapping is displayed (Figure 6). If the user selects **Back** in this page he will go back to the New Mapping page to create another mapping. In order to go to the Mappings' page, the user should select **Mappings** on the left of the screen.

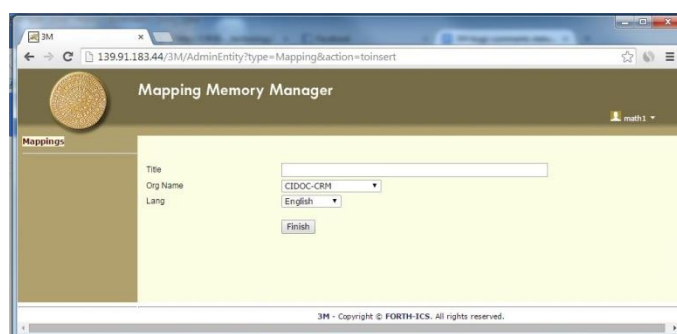


Figure 5: New Mapping page



**Figure 6:** Successful new mapping creation

### 2.2.2 View

View the information contained in a specific mapping. This action **doesn't allow** the user to edit the mapping. In order to perform this action the user should select the desired mapping from the list and then choose from the upper part of the central region the action **View**.

See also the relative functions: [Search](#)

### 2.2.3 Edit

Edit and modify a specific mapping. In order to perform this action the user should select the desired mapping from the list and then choose from the upper part of the central region the action **Edit**. The user can edit only the mappings that he has created or the ones that their creator has given him write rights.

See also the relative functions: [Search](#), [Rights](#)

### 2.2.4 Delete

Delete a specific mapping. The deletion removes permanently a mapping from the system. In order to perform this action the user should select the desired mapping from the list and then choose from the upper part of the central region the action **Delete**. A message window pops up asking for confirmation or not of the action. If the user wishes to proceed with deletion of the mapping, he/she clicks the OK button. If the user wishes to cancel the request for publish, he/she clicks the Cancel button and automatically the action is cancelled. The user can delete only the mappings that he has created or the ones that their creator has given him write rights.

See also the relative functions: [Rights](#)

### 2.2.5 More/Request for publishing

Request the publication of an “unpublished” mapping that the user has finished editing. In order to perform this action the user should select the desired “unpublished” mapping from the list and then choose from the upper part of the central region the action **Request for Publish** from the dropdown menu **More**. A message window pops up asking for confirmation or not of the action. If he/she wishes to proceed to the publication of the mapping, he/she clicks the OK button and then the system shows a message informing the user that the mapping is now pending for publishing.

If the user wishes to cancel the request for publish, he/she clicks the Cancel button and automatically the action is cancelled. The system administrator will decide if the mapping will be published. Published mappings cannot be edited anymore and they appear in the CIDOC-CRM site [http://www.cidoc-crm.org/mapping\\_technology.html](http://www.cidoc-crm.org/mapping_technology.html)

### 2.2.6 More/Export to XML

Export a specific mapping at the local file system. In order to perform this action the user should select the desired mapping from the list and then click to the action **Export to XML** from the dropdown menu **More**. After the completion of this action, a zip file with the Id of the mapping (e.g. Mapping82.zip) is downloaded locally. The zip file contains the X3ML definition of the mapping in XML format and all the accompanying source and target schemata and records. Currently this action is necessary when the user wants to get the X3ML definition in order to invoke the X3ML engine (offline tool) that will transform the source records to rdf (target records).

### 2.2.7 More/Import form XML

Import a mapping that has been locally edited in the editor. In order to perform this action the user should select from the local file system the zip file that contains the X3ML definition of the mapping and all the accompanying source and target schemata and records that he aims to import and then click to the action **Import from XML** from the menu **More**.

### 2.2.8 More/Create Version

Create a new version for a specific mapping. In order to perform this action the user should select the desired mapping from the list and then click the action **Create Version** from the dropdown menu **More**. After the completion of this action, a version of the current state of the specific mapping and also of the referenced files is created. Then the user may precede working on the specific mapping.

### 2.2.9 More/View Versions

View the versions for a specific mapping. In order to perform this action the user should select the desired mapping from the list and then click the action **View Versions** from the dropdown menu **More**. The result of this action is a list with the created versions and the user can either **View** or **Export to XML** a specific version.

### 2.2.10 More/Unlock File

Unlock a specific mapping. Editing locks a mapping and the lock remains valid for the whole session of the user unless he explicitly unlocks the mapping through this action. In order to perform this action the user should select the desired mapping from the list and then click the action **Unlock File** from the dropdown menu **More**. The selected mapping is unlocked and can be used by other users that have write rights on it.

See also the relative functions: [Search](#), [Rights](#)

### 2.2.11 More/Copy XML

Aim of this action is to offer the editor the possibility to create a copy of a mapping. In order to perform this action the editor should select the desired mapping from the list and then click to the action **Copy XML** from the dropdown menu **More**.

### 2.2.12 More/Instance Generator

Edit a specific mapping in order to add instance generation functions. In order to perform this action the user should select the desired mapping from the list and then choose from the upper part of the central region the action **Instance Generator** from the dropdown menu **More**.

### 2.2.13 More/Rights

Change the rights of a specific mapping. In order to perform this action the user should select the desired mapping from the list and then choose from the upper part of the central region the action **Rights** from the dropdown menu **More**. A list with all the users will appear and the user can select the users that he wants to give write rights. When he selects all the desired users he must click on **Finish**.

### 2.2.14 Search

This function offers to the user the capability to locate mappings. The user can either type the words he/she likes to search about, restricting in that way the results to those that contain the specific words, or he/she may group the results according to the status of the card (published, pending etc.) which is available in the dropdown menu next to the Search. Search is currently case sensitive.