DELIVERABLE

Project acronym: EuDML
Grant agreement number: 250503
Project title: The European Digital Mathematics Library

Deliverable 9.4 Annotation Component Final Version

Revision: 1.1

Authors:

Jake Grimley (MML)
Tim Kitchen (MML)
Krzys Wojciechowski (ICM)
Zuzana Nevěřilová (IMAS)
Jiří Rákosník (IMAS)

---

Dissemination Level

<table>
<thead>
<tr>
<th>P</th>
<th>Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Confidential, only for members of the consortium and the Commission Services</td>
</tr>
</tbody>
</table>

Project co-funded by the European Commission within the ICT Policy Support Programme
## Revision History

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Author</th>
<th>Org.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1</td>
<td>2013-01-08</td>
<td>Jake Grimley</td>
<td>MML</td>
<td>Initial document structure</td>
</tr>
<tr>
<td>0.2</td>
<td>2013-01-11</td>
<td>Tim Kitchen</td>
<td>MML</td>
<td>Additional content and screenshots</td>
</tr>
<tr>
<td>0.3</td>
<td>2013-01-22</td>
<td>Jake Grimley</td>
<td>MML</td>
<td>Revised for circulation</td>
</tr>
<tr>
<td>0.4</td>
<td>2013-01-25</td>
<td>Jake Grimley</td>
<td>MML</td>
<td>Revisions</td>
</tr>
<tr>
<td>0.5</td>
<td>2013-01-25</td>
<td>Zuzana Nevěřilová</td>
<td>IMAS</td>
<td>SPARQL Remote interface write-up</td>
</tr>
<tr>
<td>0.6</td>
<td>2013-01-29</td>
<td>Jiří Rákosník</td>
<td>IMAS</td>
<td>Update to Exec. Summary and Conclusion</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Minor corrections throughout</td>
</tr>
<tr>
<td>0.7</td>
<td>2013-01-31</td>
<td>Jake Grimley</td>
<td>MML</td>
<td>Addition of screenshot for UC7 UC8.</td>
</tr>
<tr>
<td>1.0</td>
<td>2013-02-05</td>
<td>Jiří Rákosník</td>
<td>IMAS</td>
<td>Minor corrections, final version for submission.</td>
</tr>
<tr>
<td>1.1</td>
<td>2013-02-08</td>
<td>Jake Grimley</td>
<td>MML</td>
<td>Minor corrections and updated screenshot</td>
</tr>
</tbody>
</table>

---

### Statement of originality:

This deliverable contains original unpublished work except where clearly indicated otherwise.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

Executive summary ............................................................................................................................................4

1. Introduction ..................................................................................................................................................5

2. Work Undertaken .......................................................................................................................................5
   2.1. Final integration with the web interface ...............................................................................................5
      2.1.1 Comments/Notes .................................................................................................................................5
      2.1.2 Corrections ..........................................................................................................................................6
      2.1.3 Subjects ..............................................................................................................................................7
      2.1.4 Personal Lists .....................................................................................................................................7
      2.1.5 Shared Lists .......................................................................................................................................8
      2.1.6 List Management ...............................................................................................................................9
      2.1.7 Moderation .........................................................................................................................................10
      2.1.8 Linked References within annotations ..............................................................................................11
   2.2. Remote interface ...................................................................................................................................12
   2.3 Widgets ..................................................................................................................................................13
      2.3.1 Ability to embed annotations on an external website ...........................................................................13
      2.3.2 Ability to change how annotations are displayed when embedded .................................................14
      2.3.3 Ability to display the annotations widget at different sizes ..............................................................15
      2.3.4. Ability to view all associated annotations via the annotations widget ..............................................15
      2.3.5. New Annotations Link ......................................................................................................................16
      2.3.6. Ability to embed public lists on an external website .........................................................................16
      2.3.7. Ability to change how lists are displayed when embedded ..............................................................17
      2.3.8. Search Widgets ..................................................................................................................................18

Conclusion ........................................................................................................................................................20

References .........................................................................................................................................................20
Executive summary

The last two tasks to be accomplished within the Work Package 9 – Annotation component implementation were:

- **Task 9.4 – Integration with Web Interface**: Integration may be by direct extension to the YADDA platform, but also via widget/mash-up technologies including JSON, iFrames and REST-based web services.

- **Task 9.5 – Widgets development**: The annotations will be exposed as HTML widgets that can be integrated onto partner websites with a simple self-serve widget configuration tool. This means that partner organisations can easily integrate annotations onto their own websites in addition to the central EuDML search facility.

This document presents the final state of the Annotation Component and its integration into the main EuDML system. The annotation functionality is now available at user level through the user interface, which is fully integrated into the template layer of the EuDML website that includes the nineteen use cases defined earlier in deliverable D9.1 [1]. The use cases are illustrated by the corresponding screenshots.

The Annotation Component provides also methods for handling annotations and lists via remote calls; In this mode, annotations and lists can only be retrieved (not added nor modified) and the Annotation Component provides only public annotations and lists. There are methods for specific retrieval (annotations by URL or target) as well as general list retrieval (annotations satisfying a SPARQL query). Methods for specific retrieval were made to satisfy the most frequent queries quickly and efficiently. Some of these methods are used by the embed code in widgets, however all methods return objects serialised via JSON which is a widely used format, both for widget style data-exchange using Javascript, and increasingly as a generally accepted format for consuming web services.

A number of widgets are available allowing annotation functionality to be shared on 3rd party websites which enrich their services due to the accessibility of lists within the EuDML system, providing more visibility to and usage of the EuDML lists, that are accessible to registered EuDML users. The widgets are implemented with Javascript, using HTML and iFrames with data exchanged by the EuDML website via JSON.
1. Introduction

The final annotation component integration is currently available on the public EuDML website and integration of the widgets will be complete by the end of January 2013. Both were demonstrated at the EuDML plenary meeting in Birmingham in December 2012.

2. Work Undertaken

2.1. Final integration with the web interface

The annotation functionality is available at user level through the user interface, fully integrated into the template layer of the EuDML website. The following screenshots illustrate the final functionality as available to the user. The descriptions correspond to the use cases definitions in deliverable D9.1 [1].

2.1.1 Comments/Notes

- D9.1 UC1: View all annotations for an item
- D9.1 UC2: Add a comment to an item
- D9.1 UC3: Respond to a comment
- D9.1 UC12: Report an offensive/inappropriate comment
• D9.1 UC19: Withdraw a comment from an item

2.1.2 Corrections

D9.1 UC4 Suggest a correction to the metadata for an item
2.1.3 Subjects

- D9.1 UC9: Suggest a subject for an item: The user is notified by email when the subject suggestion is either accepted or rejected by the provider.

2.1.4 Personal Lists

- D9.1: UC10: Add an item to a personal list
2.1.5 Shared Lists

• D9.1: UC11: Share a list
2.1.6 List Management

- **D9.1 UC14**: Delete list
- **D9.1 UC15**: Change name of a list
- **D9.1 UC16**: Make list public
- **D9.1 UC17**: Make list private
D9.1 UC18: Remove item from a list

2.1.7 Moderation

D9.1 UC5: Accept a suggestion for change in metadata for an item: This sends two emails. One to the provider with information about the correction, and one to the user confirming that the correction has been forwarded.

D9.1 UC6: Reject a correction to metadata for an item: This sends an email to the user notifying them that the correction has been rejected.
• D9.1 UC13: Moderate a comment reported as offensive/inappropriate

2.1.8 Linked References within annotations

• D9.1 UC7 Provide a link or reference to another relevant (non-item) URL
• D9.1 UC8 Provide a link or reference to another relevant EuDML item

These Use Cases were achieved by the addition of code to the Annotation Component to identify URLs within annotations, and highlight and link them appropriately. At the time of writing internal and external references are both highlighted in the same manner.
2.2. Remote interface

The Annotation Component provides methods for handling annotations and lists via remote calls. In this mode, annotations and lists can only be retrieved (not added nor modified) and the Annotation Component provides only public annotations and lists. There are methods for specific retrieval (annotations by URL or target) as well as general list retrieval (annotations satisfying a SPARQL query).

Methods for specific retrieval were made to satisfy quickly the most frequent queries. Some of these methods are used by the embed code in widgets (see 2.3). All these methods return objects serialised via JSON, a widely used format. Callback function for JSONP is provided for all method calls via the parameter callback. Other parameters are method-specific:

<table>
<thead>
<tr>
<th>URL</th>
<th>parameters</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>list/&lt;listID&gt;.json</td>
<td>start, limit, lang</td>
<td>returns the specified public list</td>
</tr>
<tr>
<td>notes/&lt;itemID&gt;.json</td>
<td>start, limit, lang</td>
<td>returns notes for the specified item</td>
</tr>
<tr>
<td>get-annotationByURI</td>
<td>uri</td>
<td>returns the single annotation (comment, note, correction etc.)</td>
</tr>
<tr>
<td>get-annotations</td>
<td>sparql</td>
<td>returns a list of annotations corresponding to a SPARQL query</td>
</tr>
</tbody>
</table>

Example of get-annotationByURI:

returns:
{"id":"http://eudml.eu/services/annotation/Annotation1359120400719","type":"http://eudml.eu/annotations/comment","owner":"urn:namespace:user:a08186203b41c191013b424f2a0e0001","status":"urn:type:created","target":null,"visibility":"public","created":1359120400719,"primaryTarget":"urn:eudml:doc:116369","annotationBody":{"content":"commenting the text about algebraic analysis"}}

Example of get-annotations – retrieve annotations newer than a certain date, useful for ‘What's new’

PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
PREFIX dc: <http://purl.org/dc/elements/1.1/>

SELECT ?annotation WHERE {
  ?annotation dc:created ?date.
  FILTER (?date="1329120200719"^^xsd:long)
}

returns a list of annotations newer than 2012-02-13.

The method get-annotations is more general but more complicated to use and can be more resource-consuming. However it is flexible enough to retrieve different collections of annotations. All queries must be an RDF SELECT and must contain the variable annotation.
2.3 Widgets
A number of widgets are available allowing annotation functionality to be shared on 3rd party websites. These are accessible to registered EuDML users. The widgets are implemented with Javascript, using HTML and iFrames, with data exchanged with the EuDML website via JSON.

2.3.1 Ability to embed annotations on an external website

Users can embed annotations on their website by clicking an *embed* link next to the annotations in the EuDML website interface. Clicking the embed link will open up an embed dialog with options to configure the widget.
2.3.2 Ability to change how annotations are displayed when embedded

Users can select a language for the widget to display in and choose the number of annotations to show per page from a drop down on the embed dialog.

The language settings change the language of the widget controls (e.g. pagination controls, annotation metadata). The annotations themselves are displayed as authored.

The per page setting determines how many annotations to show at once, additional pagination will be displayed when the total number of annotations is greater than the per page limit as shown in 2.3.4.
2.3.3 Ability to display the annotations widget at different sizes

The annotations widget uses a fluid width and is designed to adapt to the size of whichever container the widget is placed in.

2.3.4. Ability to view all associated annotations via the annotations widget

Users can view all associated annotations using the widget’s pagination controls. Clicking on the Next or Previous controls will load in the next available page of annotations. The pagination is controlled based on the per page limit set via the annotation embed options as described in 2.3.2.
2.3.5. New Annotations Link
An ‘New Note’ link appears at the bottom of the annotation widget. Clicking on this link takes the user to the associated article page on the EuDML website where they will be able to add a new comment.

2.3.6. Ability to embed public lists on an external website

Users can embed public lists on their website by clicking an *embed* link next to the public list title in the EuDML website interface. Clicking the embed link opens an embed dialog with options to configure the widget. The list widget uses a fluid width and is designed to adapt to the size of whichever container the widget is placed in.
2.3.7. Ability to change how lists are displayed when embedded

Users can select a language for the widget to display in and choose the number of list items to show per page from a drop down on the embed dialog.

For the list widget the language settings change the language of the pagination controls; the list items and list title are displayed as authored.

The per page setting determines how many annotations to show at once, additional pagination will be displayed when the total number of annotations is greater than the per page limit.
2.3.8. Search Widgets
Users can configure and embed a search widget, to place on third party websites.

- Configurator and embed code
• Search Widgets, Various banner formats.
Conclusion

The final period of works on the Annotation Component was devoted to integration with Web interface and widget development. The annotation functionality is now available at user level through the user interface, which is fully integrated into the template layer of the EuDML website, providing methods for handling annotations and lists via remote calls. A number of widgets have been developed allowing annotation functionality to be shared on 3rd party websites to enrich their services due to the accessibility of collections within the EuDML system. This method will be followed with all tasks in the Work Package 9 – Annotation component implementation, according to the updated Description of Work that has been accomplished.

References