EEXCESS
Enhancing Europe’s eXchange in Cultural Educational and Scientific reSources

Deliverable 7.4

D7.4 - Second Prototype Integration and Deployment

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1 Executive Summary

The deliverable describes the first framework prototype of integrated components that are ready to be deployed in the different test-beds as outcome of Task 7.2 [month 33].

The outcome includes descriptions of testbed specific deployment types. The technical description of the EEXCESS framework components is described in D2.4, D3.3 – D6.3.

The nature of this deliverable is “Prototype”; this report part serves as a hub to the different technical components and available documentations.

The sections for each testbed contain a reference to the public location of the software components, a description how to use them and a short guided tour. For several visualisations the guided tour elements are reused from D2.4. For the case of Moodle-EEXCESS integration which is used in the testbed “Educational support” the guided tour is just included in this document.

This deliverable contains short descriptions of the Testbed plans in the 3 categories Educational Support, Scholarly Communication and General Public Education.
2 Introduction

2.1 Purpose of this Document

The deliverable describes the first framework prototype of integrated components that are ready to be deployed in the single test-beds as outcome of Task 7.2 [month 33]. The outcome includes descriptions of testbed specific deployment types. The technical description of the EEXCESS framework components is described in D2.4, D3.3 – D6.3. This deliverable serves as overview of the implementation of the technical work packages outcomes to real world testbeds. The nature of this deliverable is “Prototype”; this report part serves as a hub to the different technical components and available documentations.

2.2 Scope of this Document

This deliverable reports the deployment of the main EEXCESS components for the different testbeds. The sections for each deployment type contain a reference to the public location of the software components, a description how to use them and a short guided tour. The evaluation plan for the three testbeds is prepared but not included in this deliverable. This topic will be addressed by the next WP7 deliverable – D7.5 Second Evaluation Report Testbeds – which is due in month 36.

2.3 Status of this Document

This is the final version of the Deliverable 7.4 “Second Prototype Integration and Deployment”.

2.4 Related Documents

The technical development is reported in the following documents:

- Deliverable 1.2 Second Conceptual Architecture and Requirements Definition
- Deliverable 2.4 Second Software Components for Presentation and Augmentation Interfaces
- Deliverable 3.3 Second Federated Recommender Prototype
- Deliverable 4.3 Second Integration and Enrichment Services Prototype
- Deliverable 5.3 Second Prototype on User Profile and Context Detection, Usage Analysis Methods and Services
- Deliverable 6.3 Second Security Proxy Prototype and Reputation Protocols
3 Deployments for Testbeds

3.1 Chrome Extension

3.1.1 Code and prototype location
This prototype is an extension to the Chrome web browser and realizes a content consumption scenario. While browsing the web, the extension automatically generates search queries on the level of web page paragraphs. The user then is provided with a result list for further investigations.

Code and documentation
Chrome Extension Source Code and Documentation: https://purl.org/eexcess/components/chrome-extension

Ready to install plugins:
Chrome Web Store URL: https://purl.org/eexcess/clients/chrome-extension

3.1.2 Installation procedure
The extension can be installed from the Chrome Web Store (https://chrome.google.com/webstore/) by

a) either searching the store for “EEXCESS” and clicking on the search results, or
b) using the direct URL https://purl.org/eexcess/clients/chrome-extension.

In both cases, the extension needs to be granted permission to access the site content, thus the appearing dialog has to be confirmed.

When the extension is installed it is listed as an active Chrome extension accessible via chrome://extensions/.

3.1.3 Guided Tour

1. The extension is visible as a light grey bar at the bottom of every web page as shown in Figure 1. The extension automatically detects paragraphs on the present webpage. Upon scrolling the page, the centre paragraph is subsequently selected as active and thus outlined in green. The extracted keywords are visible at the bottom of the page, together with the main topic keyword of the paragraph (bottom left). Additional search tools are available. A query is automatically sent and the number of retrieved results is indicated on the bottom right. Automatically extracted keywords can be deleted. Additional keywords can be added. A keyword can be declared as the main topic keyword by simply dragging it on the main topic field.

2. When the result indicator (bottom right in Figure 1) is clicked, the search result list (see Figure 2) becomes visible. Results can be sorted and filtered.

3. Through the tabs (on the left of the search result list) other visualizations and tools are available.

4. In the Power Search tab (see Figure 3) a more detailed query can be triggered manually, and the result list is updated automatically (see Figure 4).
Figure 1: Initial view of the Chrome Browser Extension showing extracted keywords for the active paragraph.

Figure 2: Display of the search results. Results can be filtered and sorted.
Figure 3: The power search allows adapting the query manually.

Figure 4: The search result list is updated automatically after a manual search.
3.2 Google Docs Add-On

3.2.1 Code and prototype location

This prototype is an add-on for Google Docs Documents realizing a content-creation scenario. While writing a document in Google Docs user can search for EEXCESS content and include the found resources in their editor with one click.

Code and documentation

Google Docs Source Code and Documentation: https://purl.org/eexcess/components/googledocs-plugin

Ready to install plugins:

Google Web Store URL: https://purl.org/eexcess/clients/googledocs-plugin

3.2.2 Installation procedure

The add-on is bound to a Google Account, this means, to install the plugin you need to be logged in with Google.

a) Installation from a Google Docs document: The add-on then can either be installed from any Google Docs document via the menu Add-ons -> Get add-ons, then search for E-Explorer. Click the button to install the plugin. Then a dialogue appears asking you to grant the add-on permissions on your documents.

b) Directly access the Google Web Store page with the URL https://purl.org/eexcess/clients/googledocs-plugin and . Then a dialogue appears asking you to grant the add-on permissions on your documents.

In both cases you have to grant the add-on access to your documents to get installed and work properly as shown in Figure 5.
3.2.3 Guided Tour

To start with the Google Docs add-on follow these steps:

1. Start the add-on from the menu add-ons -> E-Explorer -> Start (see Figure 6).
2. Highlight a phrase in your document. E-Explorer searches related content and displays it on the sidebar (see Figure 7).
3. Explore the content by clicking on the list entry. This brings you to a page with more detailed information about the digital object.
4. If you want to include the resource in your document either include it as a link using the link icon or as an image using the image icon of the result (see Figure 8). In Figure 9 both a link and the image of the portrait of Ada Lovelace have been included in the document.

Figure 5: Permissions that need to be granted to the EEXCESS add-on to work properly. This is standard behaviour for Google Docs add-ons.
A study on Ada Lovelace

Overview
Ada Lovelace was a British mathematician and first programmer. The programming language ADA was named after her.

Historical Impact
Nam liber tempor cum soluta nobis eleifend option congue nihil imperdiet doming id quod maxim placerat facer possim assum. Typi non habent clarimatem insiniram est usus legendaris in iis qui facer eorum clararatem. Investigations demonstravem lectores legere me fusqu id legent seepus.

Figure 6: Starting the add-on from a Google Docs document.

Figure 7: Selecting a phrase automatically searches for related EEXCESS content. Results are displayed on the right. The selected phrase “Lovelace” is automatically copied to the search field on the top right.
A study on Ada Lovelace

Overview
Ada Lovelace was a British mathematician and first programmer. The programming language ADA was named after her.

Historical Impact
Nam liber tempor cum soluta nobis eleifond opto congue nihii imperdiet doming id quod maxim placerate facer posse assum. Tygi non habent darabtem instab, est sus leganto in is qui facili eorum darabtem. Investigationes demonstraverunt lectores legere me faus quid quid legat ut saepus.

Figure 8: Results can either be inserted as link or as image.

Figure 9: A link and an image have been inserted.
3.3 WordPress plugin

3.3.1 Code and prototype location

This plugin is designed to integrate with the EEXCESS recommendation framework while writing a blog post using WordPress. It provides bloggers the possibility to easily enrich the blog with well-selected and high quality content.

Code and documentation

WordPress Plugin Code and Documentation: https://github.com/EEXCESS/wordpress-plugin

Ready to install plugins:


3.3.2 Installation procedure

The plugin is tailored for the WordPress content Management System. Having access to a running WordPress environment is a prerequisite for using the EEXCESS WordPress Plugin. There are three ways to install the WordPress plugin:

From your WordPress dashboard:
1. Visit 'Plugins > Add New'
2. Search for 'EEXCESS'
3. Activate EEXCESS from your Plugins page.
4. You will see EEXCESS in the top left corner of the editor. Click for recommendations.

From WordPress.org:
1. Download the EEXCESS WordPress Plugin.
2. Upload the whole 'EEXCESS' directory to '/wp-content/plugins/' directory, using your preferred method (ftp, sftp, scp, etc...)
3. Activate EEXCESS from your Plugins page.
4. You will see EEXCESS in the top left corner of the editor. Click for recommendations.

Download From GitHub:
2. Upload the whole 'EEXCESS' directory to '/wp-content/plugins/' directory, using your preferred method (ftp, sftp, scp, etc...)
3. Activate EEXCESS from your Plugins page.
4. You will see EEXCESS in the top left corner of the editor. Click for recommendations.
3.3.3 Guided Tour

To start with the WordPress EEXCESS Plugin follow these steps:

1. Activate the plugin on your WordPress plugin page and you will see the EEXCESS buttons in the top right corner of the WordPress default toolbar (see Figure 10)

2. Create or edit a blog post. Inside the text editor you can get recommendations by selecting the text and click the “Get Recommendations” button - inside the EEXCESS area beneath the editor or by pressing the keyboard shortcut CTRL+E. (see Figure 11)

3. A result list including multimedia and text content will be populated beneath the text editor. Click on the individual result item. A new window showing the recommendations is being opened. (see Figure 12)

4. If you wish to reference one of the recommended text resources, position your cursor at the position where you want the reference to appear. Then select your preferred citation style (see Figure 13) and click the “add citation” button of the corresponding recommendation. (see Figure 12)

5. If you wish to include one of the recommended image-resources, position your cursor at the position where you want to show the picture. Click the “add image” button for the insertion of corresponding recommendation. (see Figure 12, Figure 13)

6. To delete or alter the referenced text item click on the cross button provided in the WordPress toolbar. (see Figure 10)

![Figure 10: EXCESS Buttons in WordPress Toolbar](image)

![Figure 11: Text Selection inside the text editor for recommendations.](image)

---

1 Screenshots of new interface and features will be updated after final deployment of second prototype.
Figure 12 Result List

Figure 13 Additional Features
3.4 Moodle plugin

3.4.1 Code and prototype location

Starting with the provided modules C4, Visualization Widgets and CitationBuilder the Moodle plugin was developed in two parts:

- a Moodle server plugin which serves for content consumption and a separate plugin for Atto editor, the standard editor for Moodle since version 2.4.

Code and documentation

Moodle server plugin: https://purl.org/eexcess/components/moodle-server-plugin
Moodle Atto-editor plugin: https://purl.org/eexcess/components/moodle-atto-editor-plugin

Ready to install plugins:

Moodle server plugin: https://purl.org/eexcess/install/moodle-server-plugin
Moodle Atto-editor plugin: https://purl.org/eexcess/install/moodle-atto-editor-plugin

Test system

http://eexcess-moodle.e-learning.cc

This Moodle system allows self-registration. Two public courses are available, one in English and one in German.

Rights to create own courses and manage groups on the test system may be requested by sending an email to feedback@eexcess.eu

3.4.2 Installation procedure

Both plugins have to be installed by a Moodle administrator in the usual process for adding plugins to Moodle:

**Moodle Server plugin**

Necessary steps:

1. Download the plugin from https://purl.org/eexcess/install/moodle-server-plugin
2. In Moodle: go to Site administration/Plugins/Install plugins.
3. In the section “Install plugin from ZIP file” select the downloaded file or drag it to the specified area
4. Click the button “Install plugin from the ZIP file”.
5. Click the button “Upgrade Moodle database now”.
6. Click “Continue”.
7. Change the settings if it is necessary and click the button “Save changes”.
8. Installing EEXCESS plugin finished.

After the installation, an EEXCESS button (for displaying the recommendations) will appear on the top in the centre. User settings for changing the preferred citation style will be added to the navigation block.

**Moodle Atto Editor plugin**

The excess atto editor plugin is necessary to insert citations in atto text editor.
Necessary steps:

1. Download the plugin from [https://purl.org/eexcess/install/moodle-atto-editor-plugin](https://purl.org/eexcess/install/moodle-atto-editor-plugin)
2. In Moodle: go to Site administration/Plugins/Install plugins.
3. In the section “Install plugin from ZIP file” select the downloaded file or drag it to the specified area.
4. Click the button “Install plugin from the ZIP file”.
5. Click the button “Upgrade Moodle database now”.
6. Click “Continue”.
7. Installing EEXCESS plugin finished.

After installation an EEXCESS button (for displaying the recommendations) will appear in the Atto toolbar.

![Atto editor toolbar with EEXCESS button](image)

**Figure 14 Atto editor toolbar with EEXCESS button**

**Administrator settings**

In Moodle: go to Site administration/Plugins/Local plugins/EEXCESS

At this stage we have two settings:

- Change default EEXCESS citation style
- Change base URL for recommendations.

The default EEXCESS citation style is applied for new users.

The base URL serves to be quickly able to change between different EEXCESS server implementations, e.g. to use a specific federated recommender with pre-selected providers as sources.

![EEXCESS Citation](image)

**Figure 15 Administrator settings**
User settings

However, users may edit their settings via the navigation block in the section “Eexcess settings”.

![User settings](image)

Figure 16 User settings

3.4.3 Guided Tour

Content consumption

For search: you can select any text on any page in the Moodle site (except inside a text editor). The EEXESS button gets animated while the system is looking for recommendations. As soon as recommendations are found the animation stops and the number of recommendations is displayed.

![Text selection and display of number of recommendations](image)

Figure 17 Text selection and display of number of recommendations
Clicking the button opens the recommendation display.

![Figure 18 Visualisation Dashboard in "content consumption" mode](image)

**Content creation**

While writing a text (e.g. a forum post) the system gets active as soon as a paragraph is finished (by pressing Return). The EEXCESS button gets animated while the system is looking for recommendations. As soon as recommendations are found the animation stops and the number of found recommendations is displayed.

![Figure 19 Paragraph in text editor and display of number of recommendations](image)
Clicking the EEXCESS button in the Atto Editor Toolbar or the EEXCESS button on the top of the page opens the recommendation display.

Now the recommendation display contains 3 elements to enrich your text in the editor:

![Visualisation dashboard with highlighted options to enrich written text](image)

**Figure 20** Visualisation dashboard with highlighted options to enrich written text

These elements serve to:

- Embed an image

![Icon to embed an image](image)

**Figure 21** Icon to embed an image
- Embed a citation (according to the selected preferred citation style)

![Figure 22 Icon to embed a citation](image)

- Embed a screenshot of the visualization (not available for all visualization types)

![Figure 23 Button to embed a screenshot of the actual visualisation](image)

The recommendation gets inserted into the written Text in the editor:
3.5 Narrative paths demonstrator

The narrative paths bookmarklet demonstrator generates a reading list from a given target article that the user wants to understand and contextualize. The aim is, given the user’s current knowledge, to build a narrative path through the topic to the current article being read.

Creating a narrative path across scholarly content from multiple domains (scientific, heritage, cultural) is a significant challenge. Search and navigation logs may not be available for the current user, nor in general for users of a given content resource. There may be little textual metadata associated with a non-textual content resource from which to identify topics, entities or relations. However, one concept that tends to be common across all scholarly content is that of a citation – where the content creator provides an explicit reference or acknowledgement to an earlier piece of work on which the current resource is derived from, is explained by, explains, extends, confirms or perhaps refutes.

In this current piece of work, we have focused on automatically identifying and resolving these citations so that as a subsequent step a citation graph can be automatically created from any collection of resources. Such a citation graph can then be queried and analysed to suggest a path between resources within a collection or between different collections. In this demonstrator, we consider paths within and between two otherwise unconnected collections: the EconBiz Virtual Library for Economics and Business Studies, containing resources in both English and German (http://www.econbiz.de/) and the Mendeley catalogue (https://www.mendeley.com/) of research papers primarily in English.

3.5.1 Code and prototype location

The deployed prototype consists of a REST-ful API that can be used by developers to generate a citation-network based narrative path, and a web browser bookmarklet that can be installed by an end-user so that they can obtain a reading list to contextualize the current article being read online.

API endpoint

http://dslabs.mendeley.com/eexcess/

Example API calls

Get an EconBiz reading list for the Wikipedia article on Keynes:

```bash
```

Create narrative paths between EconBiz records from a given starting record. This would be called recursively over each of the links returned by the first call:

Demonstrator and bookmarklet installation instructions
http://dslabs.mendeley.com/eexcess/narrative_paths

3.5.2 Guided Tour

Install either the Mendeley or the EconBiz bookmarklet according to the instructions at
http://dslabs.mendeley.com/eexcess/narrative_paths

Explore the example reading lists for some sample articles:

- Behavioral economics [Narrative paths from the Wikipedia record to EconBiz]
- Rosetta Stone [Narrative paths from the Wikipedia record to Mendeley]
- Hayek in Freiburg [Narrative paths from the PDF of the EconBiz record to Mendeley]
- Back to J. M. Keynes in regulating international commodity markets [Narrative paths from the PDF to EconBiz records]

Using the bookmarklet with Wikipedia

Currently, the bookmarklet does not support https so the following procedure needs to be followed:

1. In Chrome, navigate to a Wikipedia page of interest, for example
   https://en.wikipedia.org/wiki/Neoliberalism

2. Click on the bookmarklet that you installed in the web browser bookmarks bar, for example
   ![Webpage with bookmarklet in bookmarks bar](en.wikipedia.org)

3. You may see a ‘shield’ icon appear in the URL:
4. Click on the shield icon and click on ‘Load unsafe scripts’

5. Click on the bookmarklet again. The following frame should be displayed
6. After a short time, the frame should display a reading list from the chosen content provider's bookmarklet.
4 Federated Recommender

4.1 Code and prototype location

The federated recommender is a pure server component and does not provide any end user interface. The technical description can be found in Deliverable 3.2 First Federated Recommender Prototype.

Code and documentation: https://github.com/EEXCESS/recommender

Installations used by the client prototypes:

Development system:
http://eexcess-dev.joanneum.at/eexcess-federated-recommender-web-service-1.0-SNAPSHOT/recommender/recommend

Stable system:
http://eexcess.joanneum.at/eexcess-federated-recommender-web-service-1.0-SNAPSHOT/recommender/recommend

4.2 Installation procedure

The federated recommender is not meant to be installed by end users.
5 Testbed Plan Educational Support

5.1 Teacher and Pupil Support: Moodle plugin

5.1.1 Scenario
A teacher writes the task for the pupils’ homework as new entry in a forum on Moodle. He uses recommendations from EEXCESS, in the preferred citation style to show examples of expected responses.

Pupils are requested to answer to the teachers post as part of their homework. They use EEXCESS recommendations to enrich their answers with citations and images.
(Scenario S-I1 from D1.2 Second Conceptual Architecture and Requirements Definition)

5.1.2 Setup
Two different settings are prepared for participating teachers and their pupils:

Use of the provided test system
A specific Moodle installation is prepared at https://eexcess-moodle.e-learning.cc
This server may be used by teachers from schools without the need for any installation on their school’s learning management system.
Teachers and pupils will be asked to register themselves. Teachers will be promoted to a Moodle management role, allowing them to create own courses and forums and to enrol their pupils to their courses.

Using the school’s Moodle system
This requires an installation of the EEXCESS Moodle server plugin and the EEXCESS Atto editor plugin as described above.
Using this method there is no administrative effort of account creation or user management.

Preparation sessions
These administrative actions are planned for the testbed:

- Provision of teachers’ guidelines for the use of the EEXCESS Moodle Plugin
- Creation of user accounts for the EEXCESS platform for teachers and pupils (in case of using the specific test server)
- Arrangement of two informational sessions to present the functionality and the intended testing to the teachers
- Dissemination of the information material by email
- Support of the teachers during the preparation and testing phase
- Evaluation of the testing phase by questionnaires and written and verbal feedback

5.1.3 Planned evaluation method
A questionnaire regarding user experience and potential improvements will be provided to the participating teachers, targeting their pupils as well.
Feedback and questions by email and phone will be accepted.
A focus group will be held with the teachers in Graz or the surrounding region.
6 Testbed Plan Scholarly Communication

6.1 Blog writers in Cultural Domain

6.1.1 Scenario
Maria-Teresa, from Italy, writes a blog about cultural heritage, looking at the current issues and dealing with subjects she is interested in. Her current entry is about the history of rugby union to celebrate this year’s World Cup in England and Wales. She is looking for images and scholarly articles on the history of rugby union to illustrate and give inspiration to her blog. She uses the EEXCESS’s recommendation technology to identify suitable material. Using these she inserts some images, and references some articles.

6.1.2 Setup

- Creation of user guidelines including screenshots (PowerPoint slides) for the correct handling of the EEXCESS plugin in WordPress;
- Involvement of an experienced WordPress users blogging on cultural heritage;
- Dissemination of the guidelines by email;
- Support of the users during the preparation and testing phase;
- Prepare users for feedback options using an online questionnaire;
- Evaluation of the questionnaires;
- Time frame for testing the plugin will be four weeks;
- Install and run a demo application dedicated for test use by external users.

Two different testing scenarios are envisaged:

For users who can deploy the EEXCESS plugin in their own WordPress set-up
Here the user is familiar with the set-up of WordPress, and in particular the installation and use of plugins. They may also have in-house technical support available to carry out installation. The plugin software, with installation and use instructions, will be available at:

- https://wordpress.org/plugins/eexcess

For users who are unable, or unwilling, to deploy the EEXCESS plugin in their own WordPress set-up
A WordPress environment will be provided at:

- http://mics.fim.uni-passau.de/wordpress-demo/

Users, with login information, will be able to carry out test activities without having to deploy EEXCESS in their live system.

6.1.3 Planned evaluation method
Both test scenario participants will have their experiences and comments collected via a questionnaire. These will be analysed by standard methods.
6.2 Blog writers in Economic Sector

6.2.1 Scenario

Tom is writing a Blog entry on “Promoting Economic Mobility”. While editing / writing he likes to get additional information on “economic mobility”. Upon clicking the EEXCESS recommendation button he is provided with recommendations. The plugin suggests further publications found on EconBiz to be used as references. He reads the abstracts and inserts some publications as references.

6.2.2 Setup

- Creation of user guidelines including screenshots (PowerPoint slides) for the correct handling of the EEXCESS plugin in WordPress
- Involvement of an experienced WordPress user group with a background in Economics
- Dissemination of the information material by email
- Support of the test users during the preparation and testing phase
- Prepare test users for feedback options using an online questionnaire.
- Evaluation of the questionnaires
- Time frame for testing the plugin will be three to four weeks
- Install and run a demo application dedicated for test use by external users

Two different testing environments will be provided:

Use of the provided Testing Environment

A testing environment will be provided at http://mics.fim.uni-passau.de/wordpress-demo/wp-admin/plugins.php; participants are being provided with the login information.

This server may be used by test users without the need for any installation on their local machines and all activities will be performed remotely.

Using the WordPress Plugin in Productive Environment

This requires a running instance of WordPress including the plugin. Test users need to be familiar with the software. The individual participants will be asked to download and install the EEXCESS plugin from the WordPress plugin directory https://wordpress.org/plugins/eexcess/ A short description on how to install and use the plugin is being provided along with the WordPress plugin.

6.2.3 Planned evaluation method

A questionnaire collecting user experiences and inputs for improvements will be provided to the participants. Feedback from the questionnaires will be collected and analysed both statistically and individually.
6.3 Narrative Paths Demonstrator

6.3.1 Scenario

A Mendeley user is reading a recent paper on the web (for example, on arxiv.org or PLoS). She wants to learn more about this topic of the paper, and wants to obtain a reading list that will help her better understand it. In the test bed, candidate items for the constructed reading list are generated by extracting bibliographic references in the target paper, and then these items are automatically located in an online catalogue. Currently two project partner’s catalogues are supported: Mendeley and EconBiz. Those items that exist in the catalogue are re-ranked to form a path through the topic.

Our research question is ‘Given a candidate reading list comprising catalogue entries that match items in a target resource’s bibliography, how best to re-rank this list so that it forms a narrative path from the user’s current knowledge to the target resource’. We have based the re-ranking on the number of readers of each item in the online catalogue, and we evaluate this by surveying Mendeley users on how useful they find this ordering.

6.3.2 Setup

A test bed demonstrator that allows researchers to generate reading lists for the current article they are reading has been deployed at http://dslabs.mendeley.com/eexcess/narrative_paths

A Survey Monkey evaluation questionnaire has been deployed at https://www.surveymonkey.com/r/TSFZFVS

Use of the provided test system

As part of the monthly communications newsletter sent out by the Mendeley Community team, all Mendeley users were invited to read the information about the narrative paths reading list demonstrator at http://dslabs.mendeley.com/eexcess/narrative_paths and to install the bookmarklet and use it as part of their research workflow.

However, the test system is not limited to Mendeley users, as this is a public demonstrator, so feedback can potentially be received by any user of the demonstrator.

Preparation

- Provision of support via email
- Dissemination of information material by email and instructions on the demonstrator page itself
- Evaluation of the demonstrator by questionnaire

6.3.3 Evaluation method

Mendeley users were invited to use the bookmarklet as part of their normal research workflow, and to rate the utility of the reading list on a 5-item questionnaire using a 3-point Likert scale for each item.
7 Testbed Plan General Public Education

7.1 Chrome Extension

7.1.1 Scenario
A general public user browses the Web and wants to have additional resources relevant to his current page, his interests and his search history. The scenario is related (but more open in the task description) to Scenario S-I3 presented in deliverable D1.2.

As an approximation to the general public user participants in the study will be undergraduate students of the University of Passau researching something about her personal interest that is not necessary connected to their studies. This user choice allows setting up a controlled experiment that satisfies our evaluation goals.

7.1.2 Setup
The experiment will take place in a computer lab at the university. Chrome Browsers with pre-installed EEXCESS extensions will be available. The evaluation will take approximately 1 hour. We plan to have at least 50 participants in the evaluation.

The evaluation is comprised of two parts: a formal experiment and an informal part combined with a questionnaire.

The goal of the formal experiment is the collection of test data for bootstrapping and improving the context detection and personalization components for work package 5. More specifically, we focus on the following questions:

- How accurate is the extraction of interesting paragraphs on a page?
- How often and in which way is the automatic query manually changed?
- Are users satisfied with the automatic query, in general?
- When do users (not) want automatic results? When should the extension be switched off?
- Which are the main components the users interact with?

The goal of the informal evaluation part is to assess the usability of the Chrome extension and provide directions for further improvements. Of specific interest is the interaction with the automatic generated query and the automatic paragraph detection. The results are relevant for work package 2, specifically for the development of the augmentation components in the last year.

We will not evaluate the various visualizations present in the Chrome extension (unless the users themselves decide to use them for certain tasks), as they are evaluated separately in work package 2.

Participants will be recruited by the internal University- recruiting system for user experiments. We have good experience with recruiting up to 100 students on short notice.

7.1.3 Planned evaluation method
For the formal evaluation, relevant measures will be collected automatically via log files (e.g. task completion time, number of clicks to improve query keywords, identity of query keywords). The Chrome extension will be adapted accordingly.

A questionnaire regarding user experience and potential improvements will be provided to the participants at the end of the evaluation.
7.2 School of Philosophy: Google Docs and Chrome Extension

### 7.2.1 Scenario

Wissenmedia has investigated the following two use cases:

- **Content Creation via Google Docs Plugin:**
  The scope of the content creation scenario is to support students while they write their thesis with related articles, information and facts. For this scenario we used the Google Docs Plugin.

- **Content Consumption via Brockhaus Wissensservice (BWS) and Chrome Browser Extension:**
  The scope of the content consumption scenario is to enhance the research process of students while reading and navigating through an online encyclopaedia. For this scenario we used the online encyclopaedia “Brockhaus Wissensservice” (BWS) and the Chrome Browser Extension.

### 7.2.2 Setup

Two different settings have been prepared for the students:

**Use of the Google Docs Plugin**

The students will install the Google Docs Plugin directly from the Google web store:

https://chrome.google.com/webstore/detail/e-explorer/ldhpoddoeakgahcoammcpkbchphakcmh

**Using the Brockhaus Wissensservice**

A specific Brockhaus installation has been prepared at http://eexcess.brockhaus-wissensservice.com

This service may be used by the students after installing the Chrome Browser Extension.

### 7.2.3 Preparation Sessions

These administrative actions are planned for the testbed:

- Introduction into the EEXCESS project and the features of the two prototypes during a seminar session at the Munich School of Philosophy:
  https://www.hfph.de/studium/lehrveranstaltungen/informations-und-kommunikationstechnologie-neue-entwicklungen-philosophische-reaktionen-und-ethische-herausforderungen

- Provision of student guidelines for the use of the two EEXCESS prototypes

- Creation of user accounts for the Brockhaus Wissensservice

- Support of the students during the preparation and testing phase

- Evaluation of the testing phase by using an online questionnaire

- Follow-up session within the ICT seminar at the Munich School at Philosophy

### 7.2.4 Planned Evaluation Method

A questionnaire regarding user experience and potential improvements will be provided to the participating students. A focus group will be formed with the students and teachers of the ICT seminar at the Munich School of Philosophy.
8 Conclusion and Future Work

The deliverable describes the set of results of Task 7.2: Component Integration. This task is planned for Month 17 to Month 40, meaning that the described prototypes are not the final version of development. (This deliverable is due and was written in Month 33).

While additional prototypes have been developed and to some extent already presented in the “technical deliverables” D2.4, D3.3 – D6.3, these elements still have to be improved and applied to test cases and scenarios in the appropriate test beds. This will be a part of the future deliverable D1.3 Third Conceptual Architecture and Requirements Definition (due in Month 36).

Work in Task 7.2 Component Integration will continue with evaluation of the second prototypes and the compilation of evaluation results into D7.4 Second evaluation Report Test Beds (due in Month 36).
9 References

[EEXCESS DoW 2012] EEXCESS Description of Work, Grant agreement no. 600601, Version date: 2012-10-15
10 Glossary

Terms used within the EEXCESS project.

**Partner Acronyms**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Name</th>
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<tbody>
<tr>
<td>JR-DIG</td>
<td>JOANNEUM RESEARCH Forschungsgesellschaft mbH, AT</td>
</tr>
<tr>
<td>Uni Passau</td>
<td>University of Passau, GE</td>
</tr>
<tr>
<td>Know</td>
<td>Know-Center - Kompetenzzentrum für Wissenschaftsbasierte Anwendungen und Systeme Forschungs- und Entwicklungs Center GmbH, AT</td>
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<tr>
<td>INSA</td>
<td>Institut National des Sciences Appliquées (INSA) de Lyon, FR</td>
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<td>BitMedia, AT</td>
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<td>KBL-AMBL</td>
<td>Kanton Baselland, CH</td>
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<td>CT</td>
<td>Collection Trust, UK</td>
</tr>
<tr>
<td>MEN</td>
<td>Mendeley Ltd., UK</td>
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<tr>
<td>WM</td>
<td>wissenmedia, GE</td>
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**Abbreviations**

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<th>Abbr.</th>
<th>Description</th>
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<tr>
<td>EC</td>
<td>European Commission</td>
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<tr>
<td>EEXCESS</td>
<td>Enhancing Europe’s eXchange in Cultural Educational and Scientific resource</td>
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