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BlogForever: D5.2 Implementation of Case Studies

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Abstract: This document presents the internal and external testing results for the BlogForever case studies. The evaluation of the BlogForever implementation process is tabulated under the most relevant themes and aspects obtained within the testing processes. The case studies provide relevant feedback for the sustainability of the platform in terms of potential users' needs and relevant information on the possible long term impact.

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Executive Summary

This report presents the summary results for the conducted evaluation of the BlogForever platform. The goal is to combine and report outcomes, experiences and feedback recorded while testing the features and user requirements of the developed platform.

In order to achieve this, the evaluation considered the following main aspects:

- **Internal testing processes** and their main results to evaluate the platform via the internal observations of the implemented features within the different collections available at different stages of the platform's development. The internal evaluation led to the design of external usability tests within each case study (CS).

- **External usability tests and evaluation** via four open questions and features usability exercises; recording the users' impressions, anecdotes and sentiments concerning the BlogForever platform. The usability tests produced a combination of fact-based evidence via Google Analytics data and also insight into users' emotional connection with the platform.

We evaluated the two components that are at the heart of the BlogForever platform:

- **The spider software**: also called the "weblog crawler component", which is responsible for weblog data extraction, manipulation and transfer to the digital repository. The evaluation must determine how well the spider harvests blogs.

- **The digital repository web application component**: this will include the public delivery platform, through which renditions of harvested blogs can be viewed; and evaluation of the functionality of the repository is the main purpose of this report.

Throughout evaluation work will be ongoing as the platform is getting developed. The case study programme occurs in phases and the availability of new developed features determines the timeframe of those phases.

The evaluation was conducted under the umbrella of the following broad research questions (RQ):

- RQ1: Are the BlogForever software implementation processes an overall success?
- RQ2: Are complex BlogForever platform search strategies working efficiently when high levels of content are available within the BlogForever platform?
- RQ3: How useful is the BlogForever platform as a whole?
- RQ4: Does the use of the BlogForever repository lead to successful results for the different users?
- RQ5: How user friendly are the BlogForever platform functions for the different designated blog communities?

Research questions are also associated with **expected results**, or outcomes; these outcomes have been used as headings for summarising the results in Section 5 - ***Conclusions***. For the correlation of risks and expected results with Themes, see Table 3 in section 2.1 - ***Research Questions, Themes and Aspects for the Case Studies***.

This report is particularly focused on outcomes from the last four research questions (RQ2-5). See ***BlogForever Internal Testing*** section for details about the role of these research questions.

The key points resulting from this report (see below) are concerned with the *Design and Implementation* as well as the general *Outcomes* of the evaluation.

Key Points: Design and Implementation

- In the implementation phase, the developed platform is being used by the testing team. The testing is being performed within different versions (BF1, BF3 and BF5) and with different blog collections. Those tests are done by several BlogForever partners allocated to the six case studies (CS) of Work Package 5. After the platform is assessed internally by the BlogForever partners, a series of usability activities with external volunteers, are designed, performed and documented as a follow-up evaluation phase.
- This report does not aim to present the latest review of the current state of the platform. It describes the issues and suggestions identified during the testing phases. In some cases, details of actions taken are available as part of the continuous reviewing process within the internal tests.
- The case studies framework used to evaluate the implementation of the BlogForever platform combines the best of traditional software testing but also looks beyond this, at more qualitative research angles to allow each case study to focus on certain key research questions, themes and aspects that WP5 intends to evaluate. See section ***BlogForever Internal Testing*** for more details.
- Specific research questions have been formulated and pursued as part of the evaluation.
- **Themes** have been devised by UL to assist in rationalising the outputs of the tests. The terms used in these themes are intended to be as clear and simple as possible, in order to promote the point of view of a user. The themes were not pre-determined earlier in the project; rather, they emerged from the evaluation itself. WP5 processed the information and represented the most relevant themes at each testing section. In this manner, we provide a landscape of the most relevant results. The case studies results are not evenly distributed among the themes. The evaluation covers all of these themes as a whole. See Section 2.1 - ***Research Questions, Themes and Aspects for the Case Studies*** for more information.
- A comprehensive internal data gathering template has been applied to each feature tested for each case study to provide consistency across case studies to assess a wide range of features.
- The test cases were phased to allow for additional software releases to become available and to provide an opportunity to feed information from the initial cases studies back into the development cycle.
- The external usability tests for each of the case studies provided a range of feedback that have been assessed and linked to different themes. These themes were devised by partner UL to assist in rationalising the outputs of these tests. See section ***BlogForever External Testing*** for more details.
- All the results for the spider testing performed have been gathered at section 3.3 – ***Case Study 3 - Spider Testing***.
- This document presents data for the six BlogForever Case Studies.

1 Introduction

In this section, we present some background information about the BlogForever project as well as details for the WP5. Furthermore, we elaborate on the objectives of this deliverable and the connections with previous and pending work.

1.1 Background

The BlogForever project is creating a software platform capable of aggregating, preserving, managing and disseminating weblogs (blogs). WP5 evaluates the effectiveness of this platform's implementation. The purpose of this report is to present the internal and external evaluation results for the six BlogForever case studies. The evaluation and feedback of the implementation processes is tabulated under the most relevant themes and aspects obtained within the testing processes.

The entire BlogForever platform comprises of two elements:

(1) **The spider**: The BlogForever project aims to develop a weblog spider to capture blogs, blog posts and additional blog content items to be indexed, analysed and preserved by the repository. This spider is expected to crawl and capture a defined set of blogs, as well as identify and capture new blogs submitted by the repository users.

(2) **The repository**: The project aims to develop and implement a digital repository web application, which will index, store, manage, preserve and disseminate large volumes of information from blogs.

1.2 WP5 Tasks and Status

WP5 designs, implements and analyses the case studies that test the BlogForever platform features. The case studies work with diverse blogs collections and infrastructure stages of the weblog spider component and the digital repository system. The impact of the spider component and digital repository is evaluated throughout the life of WP5.

The case studies collections represent a wide array of blog topics and provide the resources to validate the developed features. The ultimate objective for WP5 is to guarantee that the BlogForever platform is successful and widely replicated after the project ends.

WP5 consists of the following tasks and objectives:

- ✓ ***Task 5.1*** - *Specification of the case studies*:
  Design a quantitative software testing approach in conjunction with qualitative criteria to evaluate the advantages and limitations of the BlogForever platform.

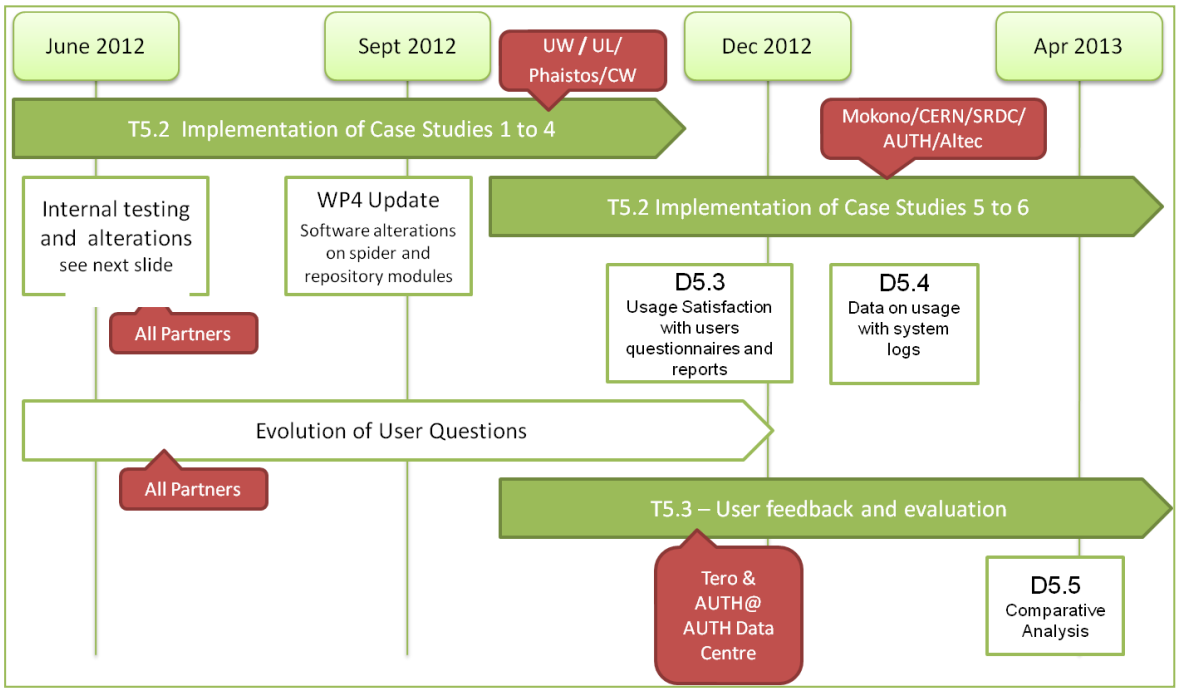
- ✓ ***Task 5.2*** - *Implementation of the case studies*:
  Extensive collection of data from direct observations; users' interviews; Google analytics and log files data.

- ✓ ***Task 5.3*** - *User feedback and evaluation*:
  Evaluation of the case studies through user feedback. T5.3 will provide a comparative analysis and conclusions during the validation process of the system from the users' point of view in conjunction with the outcomes from T5.2.

Task 5.1 was completed in June 2012 with the submission of "D5.1 - Design and Specification of Case Studies" [7]. For Task 5.2 (T5.2) and Task 5.3 (T5.3), the reports for these tasks will be submitted in May 2013.

In the following figure, a summary of the way T5.2 and T5.3 interact and the way WP5 timeline progresses with the collaboration of several BlogForever partners.

Figure 1 - Initial Timeline and Interactions for T5.2 & T5.3 [7]



1.3 Objectives of D5.2

This report is the next step in the planned evaluation of the BlogForever platform. The longer-term objective is to validate the entire system, through a combination of test cases and stress-testing the BlogForever platform. Third parties' needs, observations, contributions and relevant feedback are analysed within this deliverable.

The work within D5.2 represents the reports of the data manually collected for case studies 1 – 6, including data for two small case studies (1 & 2), three medium-size case studies (3, 4 & 5) and a large case study (6). The manual collection of data is being done with questionnaires, direct observations of users and structured interviews.

The work is planned as a programme of continual improvement, testing several versions of the platform (BF1, BF3, BF5 and BF6). It occurs in planned phases; at the same time, parts of the software are developed and implemented. Implementation of the case studies takes place in three rounds, depending directly on the availability of each iteration, within the new developed platform (BF1, BF3, BF5 and BF6).

The results of these tests provide an initial evaluation on those developed components. Any issues identified during these processes, are to be overcome within new alterations of the platform. This report does not reflect the current state of the operation; it simply describes the issues and suggestions identified during the different testing phases.

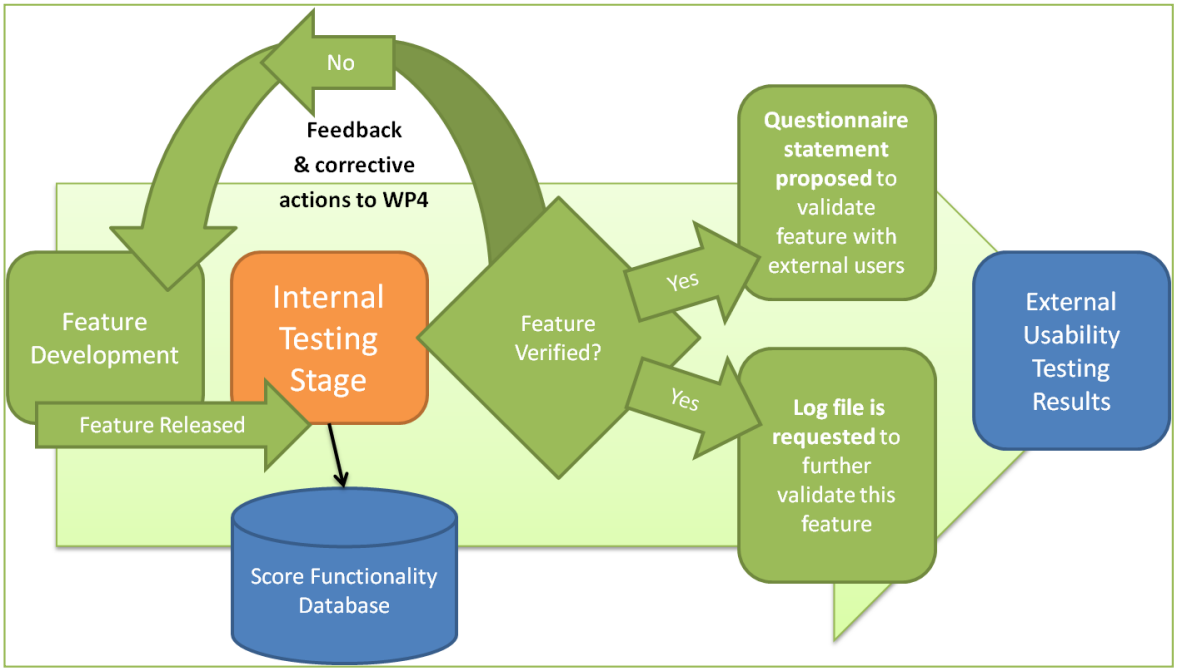
A summary of the case studies designed by D5.1 and Description of Work (DOW) [1] is as follows:

Table 1 - Case Studies Summary Details

ID	Nature	Blog Count	Domain & Content	Work Period	Leader
1	Small & simple	58	Higher & Further Education UK	July - Nov 2012	UL
2	Small & simple	70	Higher & Further Education UK	July - Nov 2012	UW
3	Small & complex	356	Multilingual focused	Oct 2012 - Mar 2013	CW
4	Small & complex	1,000	Multimedia focused	Jan - Apr 2013	Phaistos
5	Large & complex	2,000	Wide range of topics	May – August 2013	Populis
6	Large & complex	500,000	Wide range of topics	May – August 2013	Populis

This report's primary function is to summarise all the relevant feedback gathered through all the tests performed from September 2012. Implementation of the case studies was placed within several rounds. The first round subjected the spider and repository prototypes to testing separately according to the specified case studies of T5.1 (Case Study 1 & 2).

Figure 2 - Feature Testing Illustration [7]

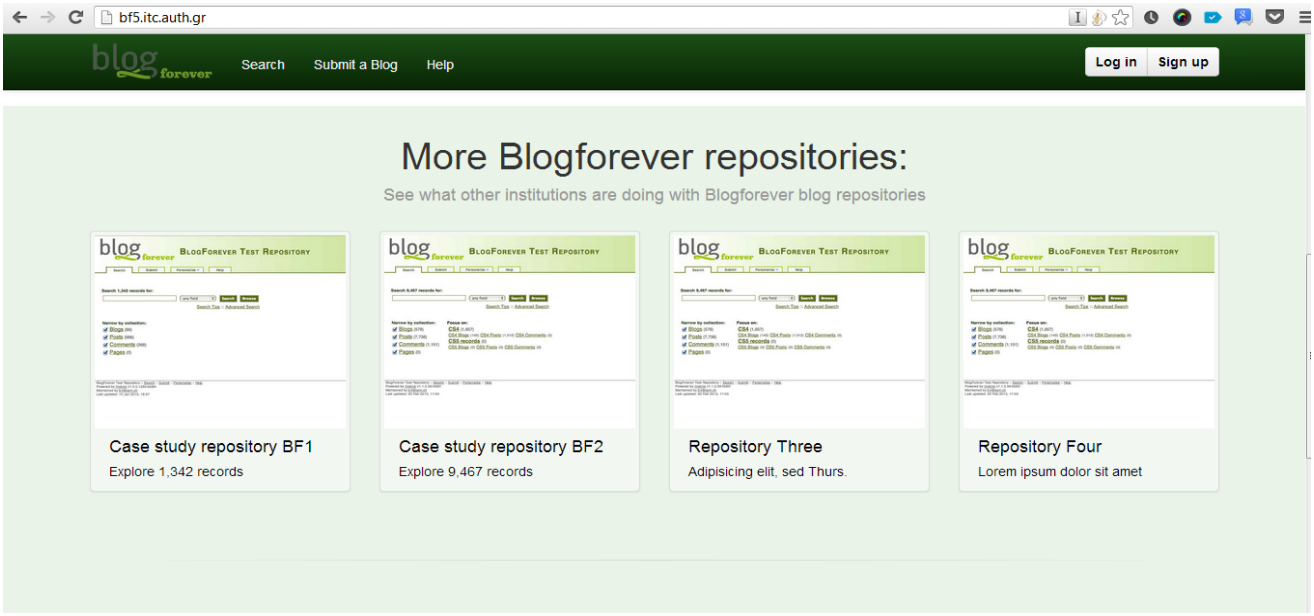


The results of these tests provided an initial evaluation on the developed components. The shortcomings identified during this process are addressed by new alterations made to the spider and repository modules. A fundamental part of the development process is the assessment of the previously implemented case studies in order to improve the latest infrastructure to be tested on new collections of blogs.

After the first prototypes, the entire system was set up at AUTH Data Centre and the integrated BlogForever platform was subject to the second round of testing. For the rest of the project's duration the

specified case studies will be repeated and extra tests will be performed for the unresolved issues presented by some platform features.

Figure 3 - Image of BlogForever Repositories Versions within BF5



1.4 Connections with Previous and Current Work

The results of Task 5.2 are explained in this report. Related to the work of this task are these project documents delivered so far:

- ✓ ***D4.2*** *Weblog Spider Component Design Report* [2] which specifies the design of the spider component in the BlogForever platform. This report aims to facilitate the implementation of the spider. Therefore, the general architecture of the spider is described as well as specific additional features for blog preservation are identified based on the requirement specifications. The report further explains the input for the spider and how it relates to the BlogForever data model. The output is also addressed with a description of the output format supported by practical examples.

- ✓ ***D4.3*** *Initial Weblog Spider Prototype* [3], which presents the progress of the BlogForever weblog spider development. Therefore, it aims to outline the features implemented according to requirement specifications and previous work. Additionally, the report further explains the usage and management of the spider as well as how it interoperates with the BlogForever repository component.

- ✓ ***D4.4*** *Digital Repository Component Design* [4], which describes in detail the design, architecture and features of the BlogForever's weblog digital repository (web application). Furthermore, the report analyses and illustrates how the suggested architecture represents a robust weblog digital repository solution through its various stages: ingestion, management, preservation and dissemination. Finally, the report lists the various features that will be available within the digital repository.

- ✓ ***D4.5*** *Initial Weblog Digital Repository Prototype* [5], which presents the implementation activities carried out for the BlogForever digital repository component. In this respect, it provides detailed implementation descriptions as well as the testing activities of the implemented features according to their feature specifications. Furthermore, this report outlines the adopted collaboration workflow together with the used technologies.

- ✓ ***D4.6*** *Final Weblog Spider Component* [6], which specifies the new implemented features in the final weblog spider and other key updates from the prototype described in D4.3.

- ✓ **D5.1** *Design and Specification of Case Studies* [7], which specifies the design of the six case studies for testing the BlogForever platform implementation process. The report explains the data collection plan where users of the repository provide usability feedback through questionnaires as well as details of scalability analysis through the creation of specific log files analytics. The case studies investigate the sustainability of the platform and its long term impact.

The results from D5.2 are highly connected to the following reports due to be delivered at the same time as D5.2:

- ✓ ***D5.3*** *User Questionnaires and Reports* [8], which specifies the case studies user questionnaires and reports.

- ✓ ***D5.4*** *System Logs* [9], which presents the case studies system weblogs gathered throughout the implementation of the BlogForever platform.

- ✓ ***D5.5*** *Case Studies Comparative Analysis and Conclusions* [10], which evaluates the case studies' outcomes and draws conclusions.

1.5 Software Testing Principles Followed

During the last 40 years, several principles for testing have become accepted as general rules for test work [11]. For the purpose of D5.2 we have followed the following principles:

- ✓ **Principle - Testing shows the presence of defects, not their absence:**
  Testing can show that there are defects. Testing cannot prove that the BlogForever platform is defect-free. Even if no failures are found during testing, this is no proof that there are no defects.

- ✓ **Principle - Exhaustive testing is not possible**:
  Every test is always just a sample. The test effort is therefore controlled, taking into account risk and priorities.

- ✓ **Principle - Testing activities should start as early as possible:**
  Testing activities should start as early as possible in the software lifecycle and should focus on defined goals. This contributes to finding defects early.

- ✓ **Principle - Test is context dependent:**
  Testing must be adapted to the risks inherent in the use and environment of the platform tested. Therefore, no two platforms should be tested in the exactly same way.

- ✓ **Principle - The fallacy of assuming that no failures mean a useful system**

> Finding failures and repairing defects does not guarantee that the system as a whole meets user expectations and needs. Early involvement of the users in the development process and the use of prototypes are preventive measures intended to avoid problems.

The BlogForever platform development is agile, which means the development follows continuous delivery of valuable software, updating working software frequently. Developments for the platform are done incrementally and iteratively, building up each feature to improve the overall outcome. The BlogForever platform testing processes are a fundamental part of the overall incremental and iterative workflow. They assess and feedback relevant information to the development cycles.

Ultimately all the testing processes applied within T5.2 were as objective as possible trying to find issues that will limit the success of the BlogForever platform in the long run. They were intended to test the BlogForever platform extensively; generate feedback from users; and minimise system problems. The purpose of this testing is quality assurance, verification and validation.

The next sections of this report present the internal and external testing results for case study 1 – 6. These results are grouped by relevant themes, aspects, features tested, tests environments, observations noted, suggestions for improvement and performance scoring for the case of internal tests. The external tests results are classified under themes, aspects, observations and suggestions for improvement. As well as the repository features tests at section 2 - ***BlogForever Internal Testing*** and section 3 - ***BlogForever External Testing***, the reader is presented with a specific section for the spider testing results: section 3.3 – ***Case Study 3 - Spider Testing***. Readers could refer to the conclusions of the report at section 5 - ***Conclusions***.

2 BlogForever Internal Testing

This section presents the outcomes of the internal testing conducted by consortium members as part of case studies 1, 2, 3, 4, 5 and 6. The tests have been carried out on the platforms dedicated for each of the case study (BF1, BF3, BF5 and BF6). The results of the evaluation are combined and presented structured by research questions, themes, case studies, aspects, tested features, test environments, observations, suggestions for improvement, actions taken and performance scoring. Please refer to ***Appendix A – CS3 Internal Test Data Example*** for specific internal test data of a reviewed feature.

2.1 Research Questions, Themes and Aspects for the Case Studies

The Themes and Aspects presented in this report have been devised by UL to assist in rationalising the outputs of these tests. The terms used do not relate to any technical or development terms previously used within the project (e.g. when building the platform), and are intended to be as clear and simple as possible, in order to promote the point of view of a user.

The Themes were not pre-determined earlier in the project; rather, they emerged from the evaluation itself. WP5 processed the information and represented the most relevant Themes at each testing section. In this manner, we provide a landscape of the most relevant results. Unsurprisingly, the case study results are not evenly distributed among the Themes. The internal evaluation does not cover all the Themes, and the external evaluation misses others. The evaluation covers all of these Themes as a whole. The Themes are a simple way of making the results easier to read and understand. They are not intended to represent validation of the software features.

The Themes are numbered thus:

Table 2 - Themes

Theme Number	Concept
Theme 1	Using blog records
Theme 2	System integrity
Theme 3	Sharing & interaction
Theme 4	Searching
Theme 5	Access
Theme 6	Data integrity
Theme 7	Preservation
Theme 8	Functionality
Theme 9	System navigation
Theme 10	System terminology

The linkage between the Themes presented in this deliverable (D5.2) with the Research Questions from D5.1 [7] is summarised in Table 3 taking into account the following points:

- ✓ RQ1 (Are the BlogForever software implementation processes an **overall success**?) relates to specific features from D4.1; since the Case Studies were designed to address these features, RQ1 implicitly applies to all the themes. For this reason RQ1 is not explicitly included in Table 3.

- ✓ RQ2 (Are complex BlogForever platform search strategies **working efficiently** when high levels of content are available within the BlogForever platform?) relates to the scalability of the system when high volumes of content are searched. RQ2 is linked to most of the themes, in particular to the System Integrity theme. The system tests on how to handle a very large number of content

and users are solely available within case study 6 - feature RF79 (see section 2 - ***BlogForever Internal Testing)***.

- ✓ In the Rationale column, the explicit linkage between a Theme and the expected results from a RQ is further explained and demonstrated by highlighting common terminology between the two in bold type.

Table 3 - Themes and Research Questions Links

Theme	Related Research Questions	Expected results of RQ	Rationale linking Theme to RQ
1: Using blog records	RQ5: How user friendly are the BlogForever platform functions for the different designated blog communities?	Expected results in RQ5: **User satisfaction**, Usability, Strengths, Weaknesses	The theme "Using blog records" refers to the **user experience, satisfaction** and usefulness of the archived blogs collections tested within the different versions of the BlogForever repository.
2: System integrity	RQ2: Are complex BlogForever platform search strategies **working efficiently** when high levels of content are available within the BlogForever platform? RQ3: How useful is the BlogForever platform as a whole?	Expected results in RQ2: Usability and **scalability** strengths. Expected results in RQ3: Platform is **sustainable** and it meets the users' needs	The theme "System Integrity" covers whether the system is logical and secure and can handle a very large number of content and users. The tests are dependent on the **software integrity** level or risk level.
3: Sharing and interaction	RQ5: How user friendly are the BlogForever platform functions for the different designated blog communities?	Expected results in RQ5: User satisfaction, **Usability**, Strengths, Weaknesses	The theme "Sharing and interaction" refers to the ability of **BF users to share** content and metadata with others, including other users of the platform, and any external use via social software.
4: Searching	RQ4: Does the use of the BlogForever repository lead to successful results for the different users?	Expected results in RQ4: Searched content is **found fast** and in an organised manner.	In the "Searching" theme, the tests focused on how the platform performs **searches**, and how users can use and interpret the results of searches.
5: Access	RQ4: Does the use of the BlogForever repository lead to	Expected results in RQ4: Searched content is found fast	The theme "Access" represents **how the platform**

	successful results for the different users?	and **in an organised manner.**	**allows access** to the blog records, and how it **presents dissemination copies** of the content.
6: Data integrity	RQ3: How useful is the BlogForever platform as a whole?	Expected results in RQ3: Platform is **sustainable** and it meets the users' needs	The "Data integrity" theme assesses if the blog datasets are **properly captured, well-maintained and consistent**
7: Preservation	RQ3: How useful is the BlogForever platform as a whole?	Expected results in RQ3: Platform is **sustainable** and it meets the users' needs	The theme "Preservation" provides tests to establish if it is possible to **preserve blogs**.
8: Functionality	RQ3: How useful is the BlogForever platform as a whole?	Expected results in RQ3: Platform is sustainable and it **meets the users' needs**	The "Functionality" theme assesses tests related to the functions available to **users and administrators.**
9: System navigation	RQ5: How user friendly are the BlogForever platform functions for the different designated blog communities?	Expected results in RQ5: User satisfaction, **Usability**, Strengths, Weaknesses	The "System functionality" theme refers to general **navigation** aspects of the system.
10: System terminology	RQ5: How user friendly are the BlogForever platform functions for the different designated blog communities?	Expected results in RQ5: User satisfaction for platform **usability** (strengths and weaknesses)	The "System terminology" theme includes instructions, help pages, and other aspects of **terminology** in the platform.

In tables 5-12 below, the 'Version' column refers to a particular iteration of the platform where the aspect was tested: BF1 as https://bf1.csd.auth.gr/; BF3 as http://bf3.csd.auth.gr/; BF5 as http://bf5.csd.auth.gr/ and BF6 as http://bf6.csd.auth.gr. For the score column, observers at the internal testing stage scored results comparing expected description of the features as described in D4.4 [4] versus actual outputs using the following scale:

Table 4 - Scale Scores References

Score	Results
1	Did not work as expected
2	Some areas worked as expected

3	Most areas worked as expected
4	All work as expected
5	Worked better than expected
N/A	Not applicable

The purpose of these scaled scores the table above is to report scores for all software testers on a consistent scale. The scoring results from all the features tested are extensively analysed at *D5.5 Case Studies Comparative Analysis and Conclusions* [10].

Sections 2.2 – 2.9 below are organised by their parent Themes. Each table contains named Aspects; observations on the behaviour, and suggestions for improvement. These tables also include columns which identify the original feature by its repository feature (RF) number; which case study tested the feature; the test environment or platform version, actions taken and an overall performance score.

2.2 Theme 1: Using Blog Records

This theme refers to the user experience, satisfaction and usefulness of the archived blogs collections tested within the different versions of the BlogForever repository. See following figure as an example of a blog record.

Figure 4 - Example of a Blog Record at BF3

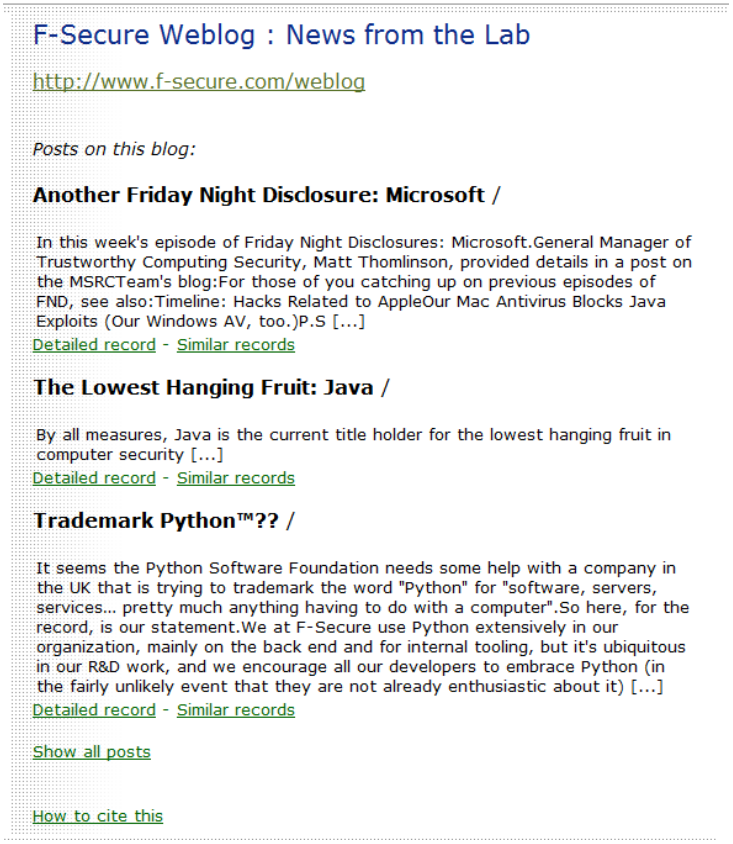


Table 5 - Using Blog Records Theme Details

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
CS1	*Differentiation between elements in blog records*	RF4: Bibformat output templates to display blogs and blog posts differently	BF1	Template works effectively but lacks contextual detail.	Post should have the name of the main blog embedded within it; otherwise there is no context about the post other than the title of the blog post and author's name.	The information is there, but probably needed to be more prominent. This has been solved in BF5.	3
CS1	*Differentiation between elements in blog records*	RF4: Bibformat output templates to display blogs and blog posts differently	BF1	The link to the post is placed in a counter-intuitive position in relation to the title of the post in the listings. It appears immediately above the title of the next post.	Link should be beside the related post.	This has been solved in BF5.	3
CS1	*Differentiation between archived copy and live web*	RF17: Archive displays a notification / disclaimer about the originality of the content	BF1	For each blog/post system states "The content of this blog post is an archived copy and not the original, to go to the original click here"	Make it more prominent.	It is now more prominent in BF5.	4

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
CS1	*Date of addition of content*	RF6: Default interface displays the latest posts added to the archive sorted by date of addition. The same should be available for the latest blog posts of a blog or for any subset of the archive's content.	BF1	The blogs and posts on the first page appear sorted by date of addition, i.e. most recent appears first, but beyond the first page the dates do not appear.	Ensure that all blogs have date stamp (of addition to repository) alongside them.	All records have this information now. In the latest version (BF5) it is always displayed and sorted by date.	2
CS2	*Comments*	RF23 - The archive stores the blog post comments	BF3	You can navigate across comments in the archive.	Currently, comments appear sequentially. A better way to navigate would be to cluster them on a per blog case.		4
CS2	*Tags*	RF25 - The archive displays the tags of a blog and/or blog post	BF3	The tags are displayed properly. However, the values are currently hardcoded due to the spider not sending the proper content. This is expected to be fixed. The tags are presented in a prominent and beautiful way.	The spider should send the correct values for the tags to the repository.	Further assessment of the data the spider is sending to the repository is needed.	3
CS2	*Linked content*	RF24 - Links to other sources within the blog post's and/or comments' content are extracted and displayed also	BF3	The references to external links are displayed properly.	No further suggestions.		4

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
		separately.					
CS2	*List of blogs*	RF26 - The archive holds the list of blogs that it archives. That list can be edited, exported and sent to the spider.	BF3	The list of blogs is provided. The blog submission form is provided.	Currently, the list is provided through a triggered search of record type “blog”. A more sophisticated way would be to provide an export mechanism with the list of blogs in a more complete way (e.g. CSV).		4
CS2	*Author*	RF28 - The archive displays the content author.	BF3	All records display the author of their content.	No further suggestions.		4
CS5	*Timeline navigator*	RF66- The archive provides a historical/chronological navigation	BF5	Requirement is met for a timeline navigation feature on blog posts.	Some attention needs to be paid to the usability of this feature as its function is not immediately clear.	Recommend adding an informative headline or description such as "Scroll the timeline to view posts in chronological order".	4
CS5	*Annotation tool*	RF71- The archive provides a personalized annotating and highlighting tool for users	BF5	There is a tool for a user to highlight text, and to create an annotation associated with the lightlighted text. The highlights and annotations are saved so that they are visible to the user on subsequent visits to the same record.	A list of highlights and annotations on the user dashboard would be a useful addition.	None	4
CS5	*Visualisation tools*	RF72- The archive provides a visualization of	BF5	A MARCXML file exported from the archive can be opened with an external	Integrate functionality of "BlogForever Network Generator" application into	Re-test if development proceeds with	4

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
		the blogs network structure		application, "BlogForever Network Generator", which provides a visualisation of the blog network structure of a collection of blogs. This tool can be used to generate a network file for further analysis in Commetrix or Gephi network visualisation tools.	repository software.	integrated tool	
CS5	*Visualisation tools*	RF65- The archive analyzes blog links and stores the connections between them separately	BF5	The network generator tool described in RF72 may be used to examine links between blogs by selecting the option "Blog Citation Network". A user may then preview the links between blogs, and may export a network file for further analysis using third-party software such as Commetrix or Gephi.	Integrate functionality of "BlogForever Network Generator" application into repository software.	Re-test if development proceeds with integrated tool	3
CS6	*Baskets/Collections*	RF83 - The archive provides multiple different views of the archive for each user	BF6	A user can access their previous searches on the "Searches" widget on their personal dashboard. Each previous search may be re-executed, or a content alert set for results of the search.	None	None	4

2.3 Theme 2: System Integrity

This theme covers whether the system is logical and secure. The tests are dependent on the software integrity level or risk level.

Table 6 - System Integrity Theme Details

Case Study	Aspect	Feature	Version	Observation	Suggestions For Improvement	Further Actions	Score
CS1	*User security*	RF10 - Archive user passwords are stored encrypted in the database	BF1	All user data (included the encrypted password) is stored in the "user" table in the repository database.	No further suggestions.		5
CS2	*User security*	RF32 - When a user is removed from the archive, their personal data should disappear as well.	BF3	It is not possible to test this feature. Moreover, it is not possible to remove your account or request this action from the website administrator.	Discuss about how to evaluate this feature; provide an option to remove your account.	The feedback received states that tester should follow the path: Login->your account->account settings->deactivate now There is a “Remove my personal data” checkbox option.	N/A
CS1	*Deduplication*	RF18 - The archive detects duplicated content and keeps only one copy	BF1	Platform checks for duplicates by running from invenio.dbquery ‘BibMatch’ command.	No further suggestions.		4
CS2	*Unique URLs*	RF27 - The archive displays a unique URL for each record it holds to be used for referencing. DOI can be used.	BF3	All records have unique URLs. A discussion about DOIs and whether BlogForever should use them has started. DOIs are not going to be used.	No further suggestions.		4

CS6	*Records*	RF80 - The archive provides mechanisms to control data redundancy	BF6	A content manager with command-line access to the repository may use the BibMatch tool to determine the presence of duplicate and redundant data in a batch of records.	Integrate tool into front-end so that data redundancy can be controlled via a user interface.	None	3
CS6	*Records*	RF79 - The archive can handle a very large number of content and users	BF6	The BlogForever repository software can handle an inflow of large numbers of new and updating records (8000 new records added in test period of 24 hours). Machine-testing of large numbers of simultaneous requests to the server returns a very positive result of no failed transactions, and a longest transaction time of 12.62 seconds. The repository is capable of handling a large number of user accounts and user activity.	None	None	4

2.4 Theme 3: Sharing and Interaction

This theme refers to the ability of BF users to share content and metadata with others, including other users of the platform, and any external use via social software.

Table 7 - Sharing & Interaction Theme Details

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
CS1	*Social media*	RF15 - User has the option to instantly disseminate archive content in major social web platforms	BF1	Managed to successfully disseminate via Facebook and Twitter.	No further suggestions.		4
CS3	*Social media*	RF50 – The archive offers the option to disseminate newly archived content in external social platforms.	BF3	All the blogs have the option to disseminate the record via different social media platforms. Login done, detailed record and then choose the different options.	No further suggestions.	The explanation and name of this feature is misleading to the tester who tested it as RF15 above. The reality is that RF50 is not going to be implemented.	N/A
CS2	*Sharing statistics / views*	RF35 - The archive displays other blogs that have also been viewed by people that have viewed the current blog.	BF1	For every record page, there is a tab “Usage statistics” which lists blogs viewed by users that viewed the current blog.	No further suggestions.	The most recent repository (BF5) does not contain any usage statistics, possibly due to the records being recently ingested. Therefore, it is not possible to evaluate this feature in the latest version of the repository.	3

CS2	*Sharing between users*	RF38 - The users can communicate within the archive sharing and exchanging resources.	BF3	The feature is not provided properly, since it is not possible to share a resource through the internal userbase of the system. You can share a record through social media though (e.g. Twitter, email, LinkedIn etc). The option to create a collection of records is offered (basket).	Allow sharing of resources (or baskets) among users. Also, sometimes the "Share" sidebar appears to be empty (probably due to bad JavaScript execution? This is non-deterministic).	The feature should be tested again within BF5 environment.	2
CS2	*Adding new blogs*	RF31 - The archive offers a complete blog submission interface to submit, modify and delete blogs/posts.	BF3	I tried to manually add a new blog. The submission was successful.	It is possible to submit the same blog twice. The repository should warn you that the blog has already been added. Moreover, a small caption (page 1:) appears in the submission form which should be removed.	The feature should be tested again within BF5 environment.	2

CS3	*Adding new blogs*	RF31 - The archive offers a complete blog submission interface to submit, modify and delete blogs/posts.	BF3	Some ambiguity as to which is the recid of the blog or post that needs to be suggested for deletion to the administrator. There are no options to suggest deletion of content from the Detailed record option. There are admin rights for activating this feature in full that it is not stated at the description of the requirement.	Advice requested to the development team of the role of 'recid' and the possibility of deleting or modifying at detailed record level. A more intuitive path for the unfamiliar user is expected.	The development team confirmed that the option to ask for the deletion of a record from the detailed view is available for any registered user. In the case of a blog record, there is also an option to 'Ask for modification'. The feature should be tested again within BF5 environment.	3
CS2	*Suggest similar content*	RF34 - The archive displays and suggests similar content to the user.	BF3	Works, minor issue with the message displayed for empty set of similar records. The option to follow similar records is provided to the user.	Fix the message for empty result sets for version BF5.	The feature should be tested again within BF5 environment.	3
CS2	*Citations*	RF47 [old RF87] - Description of how to cite the content of the archive is presented prominently with each content. A citation includes at least author, title, date of creation and URI.	BF3	While the links are provided prominently, the actual citation information is incomplete.	The full citation information needs to be provided.	The feature should be tested again within BF5 environment.	2

CS3	*History*	RF2 - 'Your History' box as part of the user dashboard.	BF3	This feature will gather and display information about the latest user's activities within the repository. These will include activities such as: user searches, user actions on baskets, user messages etc.	It is recommended to keep testing the 'Your History' feature within the new BF5 version dashboard.	The feature should be tested again within BF5 environment.	4
CS3	*Create Favourites*	RF46 - The user can create personal collections of their favorite blogs.	BF3	Login done; Personalize tab chose; Your Baskets tab chosen; previously created Personal basket 'Favourites' chosen.	No further suggestions.		4
CS4	*Ranking*	RF57 - The archive provides a ranking method based on the user rating of content RF58 - A user can rank archive content based on specific users' content rating (user they trust) RF61 - The archive ranks blogs based on their views and downloads	BF3	The only available criteria are rank by word similarity. When option "word similarity" is selected then the message "Records not ranked. The query is not detailed enough, or not enough records found, for ranking to be possible." always appears, regardless of the number of results.	1) Inform the user about what are the ranking criteria. 2) Provide more ranking options. 3) Apply a more appropriate message instead of "Records not ranked..." In case sort by "word similarity" is selected. Features RF57, RF58, RF61 will be tested again in the new dashboard version within BF5 environment.	This set of feature should be tested again within BF5 environment.	2

CS5	*Messaging system*	RF38- Users can communicate within the archive sharing and exchanging re-sources	BF5	A user may share their activity in the archive with another user, and in this way may share blog content, baskets and searches with other users and with groups. The recipient can view the shared activity through the repository messaging system.	If a user shares a basket with another user, the second user should be automatically added to the people who are authorised to view that basket.	None	4
CS5	*Baskets*	RF46- Users can create personal collections of their favorite blogs	BF5	A user is able to create collections of records called "Baskets", and to store records in these baskets.	Link Basket information to the Basket widget on dashboard.	Re-test when WP4 advises on progress with the dashboard widget.	3

2.5 Theme 4: Searching

The tests focused on how the platform performs searches, and how users can use and interpret the results of searches.

Table 8 - Searching Theme Details

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
CS1	*Fuzzy search*	RF69 (old RF68) - The archive facilitates searching by providing fuzzy indexing and stemming	BF1	If you use the repository search interface the record appears in the results (in the very first positions), which is logical and expected. Tests indicate that fuzzy indexing / stemming works as intended.	No further suggestions.	The development team confirmed that the repository is just providing stemming and not fuzzy indexing. It is believe that the searching engine is more than enough without the need of fuzzy indexing.	4
CS1	*Search options*	RF83 - The archive offers a complete range of search options to the user	BF1	Test searched under 2 authors' names and was successful in retrieving posts written by them.	When I click on the authors' names I would like to be taken to a list of the blogs they write, showing context about them and what they write beyond the level of post.	The development team confirmed that since a blog may have different authors, the 'Blog' records do not keep the author in the metadata. Only posts and comments have authors (according to WP2 data model) and this is what is shown when you click in an author's name.	3

CS3	*Search history*	RF43 - For each record the archive stores the search keywords used to find them	BF3	The user must type one or more keywords and press Search in order to achieve this. The user can display the list of past searches through account settings menu. The displayed list of past searches will be in chronological order. The user will be able to execute any past search using exactly the same search settings as before.	No further suggestions.	Further consultation between the tester and the development team concluded that there was a misinterpretation of the results due to the unclear description of the feature. The reality is that RF43 should provide the keywords to get to the record. The feature should be tested again within BF5 environment.	N/A
CS3	*Search related external sources*	RF51 - The archive is able to search within external sources, to provide users with additional sources of information.	BF3	Successfully set up 2 external sources in collection CS3 comments, and searched queries in the collections of external sources.	Since there are no options in the admin interface to configure if the external source will open in a new window, it would be better by default to open in a new window or tab.		4

CS5	*User dashboard*	RF78- The archive displays content after filtering it with user preferences	BF5	A user is able to save searches to act as filters on current and future content of the archive. The "search alert" function contains multiple options to customise the timing of the search alert, and a user can collect the results of a search alert in a basket. The search alert can be used to execute saved searches at any time.	None	None	4
CS5	*Search*	RF69- The archive facilitates searching by providing fuzzy indexing and stemming	BF5	Search works effectively with precise and with partial/related terms.	None	None	4
CS5	*Search*	RF73- The archive recommends blogs to users based on the ratings and preferences	BF5	A user is offered content which may interest them based on past search behaviour	None	None	4

2.6 Theme 5: Access

This theme represents how the platform allows access to the blog records, and how it presents dissemination copies of the content.

Table 9 - Access Theme Details

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
CS1	*Harmonisation of access*	RF5 - The web interface provides harmonized access to all the content and services offered by the platform and ensures compatibility with major browsers	BF1	In general it is not very intuitive as regards presentation.	No further suggestions.		4
CS1	*Browser compatibility*	RF5 - The web interface provides harmonized access to all the content and services offered by the platform and ensures compatibility with major browsers	BF1	Opened platform successfully in both Mozilla and Internet Explorer.	No further suggestions.		4
CS2	*Summary of presentation*	RF33 - The archive displays only the very basic information for each record.	BF3	A short summary for blog posts and comments is provided. Number of comments for posts and other metadata is not provided though.	The feature needs to be developed further, as the details in the observations column. Also a small typo “show **fewer** posts” needs to be fixed.	The feature should be tested within the BF5 environment.	3
CS2	*Topics and categories*	RF37 - The user can navigate through the archive, displaying blogs per topic or category.	BF3	The feature is not provided. Categories are not displayed.	The feature needs to be provided.	The feature should be tested within the BF5 environment.	N/A

CS2	*Annotation*	RF30 - The user can bookmark (add to baskets) archive content, also using external bookmarking engines.	BF3	Both external bookmarking engines and personal bookmarking are available.	No further suggestions.		4
CS1	*Dublin Core export*	RF8 - Export data in the Dublin Core schema	BF1	Managed to successfully export data in the Dublin Core schema	No further suggestions.		4
CS1	*Character encoding*	RF13 - UTF is used as the default character encoding in the archive	BF1	Checked stylesheet (original source HTML) for several pages and each declared character coding as UTF8 for several pages	No further suggestions.		5
CS1	*Languages*	RF11 - The archive web interface is available in many different languages	BF1	Tested each language on various pages of repository. Inconsistencies found. Some languages supported more than others. Afrikaans, Kinyarwanda for example are not translated and yet on the list of languages offered. Not all parts of the page are translated consistently for each language. e.g. 'Narrow by collection' is sometimes translated. Inconsistent.	Most languages worked as expected. Overall, consistent translation across languages is needed.	The BlogForever software offers its web interface available in many different languages. However, the BlogForever repository has many new statements that need translation. The translation is done by volunteers within the Invenio Project.	3

CS1	*METS (Metadata Encoding and Transmission Standard)*	RF12 - The archive can import and export METS	BF1	Managed to successfully export data in METS. The tester took this to mean that we could export the data from Invenio as a METS package[1]. It states on the respository web page that it 'may Export as BibTeX, MARC, MARCXML, METS, DC, EndNote, NLM, RefWorks.'	More clarity about importing in METS is needed. Export feature works well.	The archive imports METS from the spider, not from user submissions.	4
CS1	*External search engines*	RF19 - The archive is accessible for indexing by external search engines	BF1	This feature is not possible to test yet since any of our servers (BF1, BF3) have been indexed by any external search engine as Google.		The feature needs to be tested within BF5 environment.	N/A
CS1	*Open source*	RF39 - Free open-source archive software.	BF1	The BlogForever repository should be licensed under an open source software license. This should be stated on the website and in the source code.	Agreed to amend the footer of the BF test repository to mention: "Powered by the open source software BlogForever/Invenio v1..." instead of "Powered by Invenio v1..."	Overview the footer at version BF5.	4

[1] See http://www.loc.gov/standards/mets/ for more details. The METS schema is a standard for encoding descriptive, administrative, and structural metadata regarding objects within a digital library, expressed using the XML schema language of the World Wide Web Consortium. The standard is maintained in the Network Development and MARC Standards Office of the Library of Congress, and is being developed as an initiative of the Digital Library Federation.

CS1	*Interoperability*	RF84 - The archive provides support for OpenURL & Generic	BF1	Function is not found.	Enhance visibility of function within BF5 environment.	Feedback from the development team: "It is possible to test OpenURL using urls like https://bf5.itc.auth.gr/openurl?title=Wake up BBC This will retrieve the record with title "Wake up BBC". It works in BF1, BF3, and BF5"	1
CS3	*PDF and JPEG export*	RF62 – Export as PDF, JPEG	BF3	Using the web interface of the repository, we tried to export PDF and JPEG from various formats. Record exported in PDF format resulted in a PDF document containing the content twice over. Record export in JPEG format resulted in a JPEG document containing unrendered HTML code.	This feature needs further improvement.	The feature needs to be tested within BF5 environment.	1
CS4	*Snapshots*	RF63 - The archive keeps snapshots of all the different designs of a blog	BF3	The system archives a snapshot of the layout design of blogs each time there is any modification. The snapshots will be provided to the user as attached, detailed image files.	No further suggestions.		4

CS3, CS4	*XML export*	RF59 - Export data using XML (METS, MARC, DC, etc.)	BF3	MARC XML and DC XML work as expected. METS XML does not work for the BF3 environment. Advanced users of the BlogForever repository would be able to export content automatically (via some client software) in XML and be able to use it for their purpose with ease. The support of multiple metadata schemas ensures maximum compatibility.	At home/search page when the query results contain records for posts and comments the RSS feed contains only posts results. For a **blog page**: EndNote format can contain more information like date and URL to the BF3 repository. BibTex format can contain more information like the author, year, and publisher. RefWorks can contain more information like the date (year). METS xml is empty within BF3. For a post page: EndNote format can contain more info like url to BF3 repository. RefWorks format can contain more info like the year.METS xml is empty. For a Comment page: EndNote format can contain more info like date and url to BF3 repository. BibTex format can contain more info like the year. METS xml is empty.	The feature should be tested again within BF5 environment.	3

CS5	*Premium area*	RF70- The archive can provide services under some cost using a billing system	BF5	An administrator is able to restrict access to certain records grouped in a "Collection". When this restriction is in place, a user is able to access these records by purchasing access rights. When a time-limited access period expires, a user is no longer able to access the restricted records without a further purchase.	At the moment a user must click the "Search" button to proceed to payment after being informed that the collection is restricted. This is quite counter-intuitive. A message that "Access to this collection is restricted, ((purchase payment here))" with a clear button to purchase access would be more user-friendly.	None	4
CS5	*User groups and rights*	RF74- The archive enables/disables certain functionalities based on the content rights	BF5	An administrator is able to specify that certain actions in the repository are available to a guest user (non-logged in), a user (logged in) and an administrative user. Users will not be able to access repository functions that are outside of their access scope.	None	None	4

2.7 Theme 6: Data Integrity

The data integrity theme assesses if the blog datasets are properly captured, well-maintained and consistent.

Table 10 - Data Integrity Theme Details

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
CS1	*Timestamp capture*	SF1 - The spider captures the content creation timestamp.	BF1	With admin rights to spider set up, tester was able to see <mets:metsHdr RECORDSTATUS="Complete" CREATEDATE="14.11.2012 11:59:12"	No further suggestions.		5
CS1	*Context of source blog*	SF7 - The spider keeps the information on where content was crawled from.	BF1	Viewed ID 496, called 'Aromacupuncturetherapy. Pine needles'/. Viewed details and it indicated the source URL.	No further suggestions.		5
CS1	*Blog metadata*	RF9 - The archive stores and displays accordingly all the blog and blog post-specific metadata received from the spider.	BF1	When tester exported as METS from Invenio, the tester got the message: 'This XML file does not appear to have any style information associated with it. The document tree is shown below', hence the METS profile was empty.	The spider always needs to provide these metadata to the repository so it can be displayed when requested.	Followed up tests have shown that this feature is working correctly within BF3 environment.	4
CS3	*Validation*	RF40 - The archive validates the content received from the spider.	BF3	Expected outcome unclear. Awaiting screenshots from the repository developers to confirm data integrity.	The tester should check further the screenshots from developers' team	After observing all the screenshots received from the developing team, the tester	4

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
					to confirm the data integrity and how the archive validates the content received from the spider.	confirmed that the feature is working as expected	
CS3	*Spam elimination*	RF41 - The archive detects and eliminates spam content.	BF3	The tester is unable to reproduce this feature.	Tester needs feedback from developing team to consolidate results within BF5 environment.		N/A
CS4	*Capture of embedded content*	RF67 - The archive fetches and stores embedded content.	BF3	Embedded objects of a blog/blog post are stored in the archive. Search was made for embedded content (video, images). Embedded videos don't appear in some cases.	Further checks within BF5 environment are needed for the case of content like videos.	The feature needs to be tested within the BF5 environment.	3
CS4	*Capture of content – text and comments*	RF56 - The archive stores and displays blog posts' text as well as their comments	BF3	Tester visited various blog posts to check their content like comments. The results were mixed: From a comment's page the user can go to the post page in which the comment belongs but from a post's page the user cannot see the comments of the blog post. Moreover, it seems that only the last comment of a post is stored. Also, some comments are	Improvements are necessary to allow the user to see comments of the blog post from a post's page; to avoid that only the last comment of a post is stored and that some comments are not connected with their posts.	The feature needs to be tested within the BF5 environment.	3

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
				not connected with posts.			
CS4	*Versioning*	RF54 - The archive keeps all the different versions of the content in case it is edited or updated	BF3	In "Edit this Record" page there is a History box where the admin can see the dates for the different versions and by clicking on a date the metadata for the specific version are retrieved. In the tab "Files" the versions of a blog page (images, video, audio, original html), due to the authors updates, are displayed. The tester considers that the outcome presents the following issues: 1) A "Version History" button was expected but the data are listed in the tab "Files" 2) For the content administrator it is difficult to recognize which metadata were updated for each specific version.	1) Rename tab "Files" to "Version History". 2) Mark with a different colour the metadata that were updated.	The feature needs to be tested within the BF5 environment.	3
CS5	*Import*	RF12- The archive can import METS	BF5	Blogforever METS files supplied by CERN match the METS standards.	None	None	4

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
CS5	*Image files*	RF67- The archive fetches and stores embedded content	BF5	Media such as images that are contained in a blog post are ingested into the repository and are visible to the user under the tab "Files". These media files are stored within the repository and are viewable by a user.	This feature is functional on some records, but not all.	Ensure embedded media files from all records are fetched and stored in the repository.	3

2.8 Theme 7: Preservation

The theme Preservation provides tests to establish if it is possible to preserve blogs in the long term.

Table 11 - Preservation Theme Details

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
CS1	*Descriptive and technical metadata*	SF16 - The spider captures all the necessary metadata from the content it crawls. Every captured digital object needs a description with regard to the content of the object (e.g. topic, language, etc.) and to technical aspects (e.g. formats).	BF1	There is inadequate metadata being captured by the Spider. Follow up tests for this feature within BF3 showed that this feature was working as expected so tester suggested that the score was moved from 1 to 3.	Every captured digital object needs a description with regard to the content of the object (e.g. topic, language, etc.) and to technical aspects (e.g. formats).	The feature should be tested again within BF5 environment.	3
CS1	*Preservation strategy*	RF9, RF12, RF18, RF23, RF31, RF40, RF54, RF86,	BF1	Tester final feedback was that there is an inadequate	Further assessments within BF5 are	This set of feature should be tested again	N/A

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
		RF87, RF88 and RF89 for DR21: Long term digital preservation requirement.		set of features specified which can enable long term digital preservation. Testing all the features attached to long term digital preservation requirement indirectly provide an overview of the preservation strategy aspect. Tester provided feedback for each of the features listed individually and globally.	required.	within BF5 environment.	
CS3	*Creation of archival packages*	RF87 - The archive transforms the SIPS received from the spider to AIPS	BF3	Expected outcome unclear. Unable to reproduce this feature fully. WP4 claims this feature is working: "Every package received from the spider (every crawled record) is transformed into an archived package (the record you see in the repository). This feature is ready and fully working since the records in BF3 have been fetched from the spider and stored into the repository (therefore, transformed from SIP to AIP)"	Further assessments within BF5 are required.	The feature needs to be tested within the BF5 environment.	2

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
CS3	*Storage of archival packages*	RF88 - The archive stores the content of the AIPS in two different databases for preservation purposes	BF3	Expected outcome unclear. Advice requested on how to proceed with the testing. WP4 claims this feature is working: "Each of the records fetched from the spider is stored in two different databases, in one of them is stored the enriched record, which is the record in the repository, and in the other database is stored the record as it was fetched from the spider for preservation purposes. You need to access to this database to check out that the record is there." CERN provided two examples of this showing that records are stored in the database for preservation purposes.	Further assessments within BF5 are required.	The feature needs to be tested within the BF5 environment.	2
CS5	*Repository ingestion*	RF40- The archive validates the content received from the spider	BF5	The repository validates all the incoming information from the spider, using the cryptographic hash function MD5 (Message-Digest Algorithm 5).	None	None	4
CS5	*Repository ingestion*	RF87- The archive transforms the SIPS received from the spider to AIPS	BF6	The BlogForever repository software contains a tool that can be used by an administrator	As observed, the system is not creating complete Archival Information	BlogForever would also benefit from installing a virus checking stage in the repository; a stage	2

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
				to generate an AIP file, which is then visible to a user of the repository, and may be downloaded. The above refers to the BibArchive export function which was implemented in August 2013. The BibArchive export button does function. But it does not create a complete Archival Information Package (as defined in the OAIS model). The function generates a package in a BagIt wrapper. The package contains data and some technical metadata, including a checksum hash and some basic file format identification metadata. But the package doesn't contain sufficient technical metadata for preservation purposes. In particular significant properties (e.g. of image files) have not	Packages. The system needs to generate more technical metadata of the digital objects, including their significant properties. Introduce a tool that can perform validation of the separate files / digital objects in the harvested blog. Store the extracted technical metadata in the Invenio database.	for validating the checksums that have been created; and some form of automated audit so that these events (and other events) can be recorded in the system. Metadata recording these events and stages could also feasibly form part of the Archival Information Package, since they contribute directly to digital preservation.	

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
				been declared, and there is no evidence of file format validation.			
CS5	*Repository architecture*	RF88- The archive stores the content of the AIPS in two different databases for preservation purposes	BF5	The content of a record is contained in one repository database. After the record has been archived with archive_record (recid), the AIPS generated is stored in a separate database.	None	None	4
CS6	*Media files*	RF89 - The archive carries out the normalization and/or migration of the media attachments	BF6	A repository administrator with command-line access to the repository may perform a migration of files associated with a record from one file format to another. After migration, both versions of the file will be present.	None	None	4

2.9 Theme 8: Functionality

The functionality theme assesses tests related to the functions available to users and administrators.

Table 12 - Functionality Theme Details

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
CS1	*Notifications*	RF16 - The archive offers an RSS channel of its latest updates and/or users can receive notification when new content of their interest is added to the archive.	BF1	Facility exists. Set up alert for 'low carbon' and on execution the search showed a relevant blog post.	Add RSS icon on front page to make it more intuitive.		5
CS1	*System statistics*	RF14 - Descriptive statistics are offered for the archive's full content	BF1	Tester visited the archive's front page. A summary about the total number of records by their type was provided. The feature performs well but is tailored to a traditional library system. Not adapted for the blog content case yet.	Adapt terminology to suit blogs and not journals. After these initial tests, It is confirmed from the development team that those initial statistics tested for RF14 under BF1 and BF3 were never considered enough. It is planned to improve them within BF5.	The feature should be tested within the BF5 environment.	4

CS1	*Export of statistics*	RF20 - The archive's statistics are exported in CSV	BF1	Tester clicked on "Statistics" tab; retrieved statistics about logins and exported them using the CSV option. The data was opened in Notepad.	No further suggestions.		4
CS2	*Software updates*	RF29 - The archive alerts the user when there are software updates.	BF3	Initial tests were problematic due to admin rights restrictions.	It was possible to evaluate the alert of a new software update within BF3 with admin rights. See http://screencast.com/t/LhXRa77GC0 for details.		4
CS4	*System statistics*	RF14 - Descriptive statistics are offered for the archive's full content	BF3	Tester searched and browsed through various posts and blogs. In "Usage Statistics" tab the user could find a graph with the "download history" and what "People who viewed this page also viewed".	1) Rename label "Download History" with a more representative name. 2) Fix empty line that appears in the list with the pages that "People who viewed this page also viewed". 3) Add data points annotations to history graph that explain what the different colours represent. After these initial tests, It is confirmed from the development team that those initial statistics tested for RF14 under BF1 and BF3 were never considered enough. It is planned to improve them within BF5.	The feature should be tested within the BF5 environment.	4
CS5	*Record modification interface for users*	RF31- The archive offers a complete blog submission interface to submit, modify and delete blogs/posts	BF5	Any registered user of a repository may submit a request to add a new blog, modify a blog, delete a blog or delete a post. A	A list of requests pending review could be visible to "Referee" users so that changes can be approved or rejected in batches rather than individually. The "Success" screen at the end of the process could contain a link to the record that has been	None	4

				request to review the change will be sent to a user who is a "referee". The referee can click a link in the review request email to be taken to a screen where they can approve or deny the request. Changes made will then be visible in the repository.	modified, and information about how long the user can expect to wait before the modification is visible.		
CS5	*Record modification interface for administrators*	RF86- The archive offers functions to edit metadata.	BF5	A user with admin-level rights can select an option "Edit this record" and use the "Record Editor" functionality to be able to directly edit the metadata of a record and have this change be visible in the repository.	None	None	4
CS6	*Software architecture*	RF82 - The archive can be deployed using a range of different database server technologies	BF6	The BlogForever repository software can be configured using SQLAlchemy to interact with a range of SQL databases.	None	None	4

CS6	*Software architecture*	RF81 - The archive is built based on a modular service-oriented architecture	BF6	The BlogForever repository is built on Python Flask, a modular, service-based architecture. An administrator of a BlogForever repository may customise modules of the software using the Admin interface.	None	None	4

2.10 Theme 9: System Navigation

This refers to general navigation aspects of the system.

Table 13 - System Navigation Theme Details

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
CS5	*User dashboard*	RF1- Customizable user dashboard	BF5	A user has a personal dashboard with a number of useful widgets providing a tailored experience of the repository. The appearance of the dashboard is customisable by the user.	None	None	4

2.11 Theme 10: System Terminology

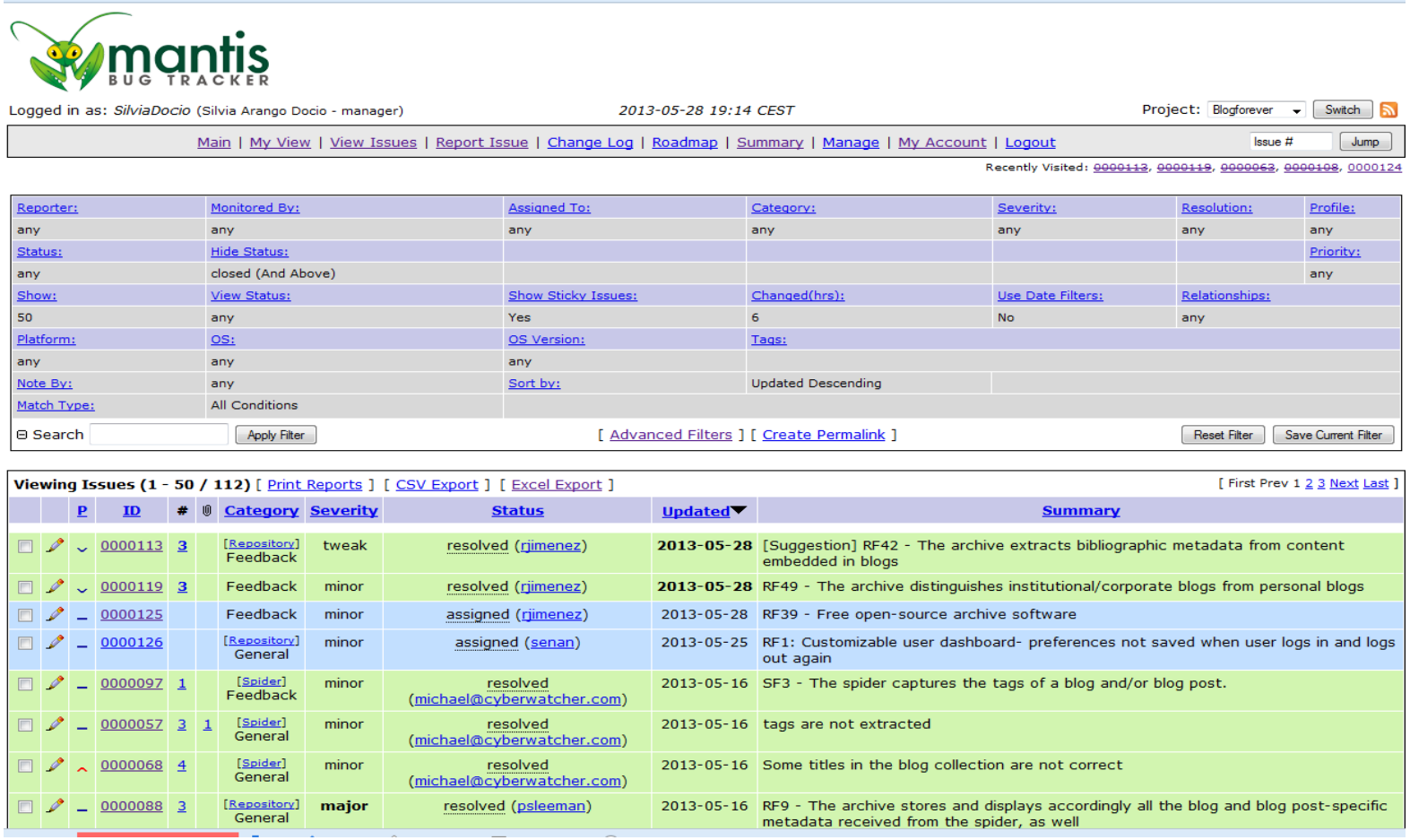
This includes instructions, help pages, and other aspects of terminology in the platform. The general trend is that some of the terminology is unclear to lay users (i.e. non developers).

Table 14 - System Navigation Theme Details

Case Study	Aspect	Feature	Version	Observation	Suggestions for improvement	Further Actions	Score
CS5	*License*	RF53- The archive respects content licenses and displays useful information about them	BF5	License information is displayed, however no "useful information" is displayed with the default license type of "Unknown".	Explanatory text regarding "unknown" or unassigned license types would be useful.	Further testing through RF86 "The archive offers functions to edit metadata" will be necessary to determine if useful information is offered when license type is manually set.	3

All the issues found within all the internal tests were recorded at a dedicated issue tracking system called Mantis. This system provides a unique point of reporting: problematic assessments, suggestions, issues, recommendations and queries. See Figure 5 for details:

Figure 5 - Mantis Issue Tracking System Screenshot



The features tests summarised in this section (2. BlogForever Repository Internal Testing) provided a general view on various aspects of the system. The analyses of the feedback provided valuable insight into the user experiences with the system and the potential directions for improvements. The internal testing data led to the design of the external usability tests exercises.

3 BlogForever External Testing

This section summarises the outcomes of the external testing, which has been conducted with the support of expert users with no direct affiliation to the project. The rationale of conducting external testing was to eliminate any potential bias, which could have been present in internal tests. These tests were more formal in their nature and involved a range of academic and practicing specialists with varied types of expertise – for example, blogging, working with repository software, and computer science.

The themes listed for the external testing results represent only the platform elements that were tested. Any missing themes in the external or internal evaluations do not, in our view, make the evaluation incomplete. The themes are a simple way of making the results easier to read and understand.

3.1 Case Study 1 - External Usability Tests

The external tests for Case Study 1 (CS1) focused on usability of the system within version **https://bf1.csd.auth.gr/**. This section is an analysis of the main results for external exercises with CS1 blog collection.

3.1.1 Participants

Seven volunteers were drawn from the following academic institutions:

- Institute of Historical Research (IHR)
- London School of Economics (LSE)
- Kings College London (KCL)
- University of London (UL)

All the participants were users, editors and creators of blogs within the academic sector.

3.1.2 What method was used?

Separate tests were conducted on seven participants. The test was a combination of three methods:

- Real-time introductory interactions with the system (academics supervised by BlogForever team at their desktops)
- Four prepared questions, asked to the users after they finished the usability tests
- Records made of first-hand specialists and non-specialists impressions about the BlogForever platform.

We also used a consent form (see ***Appendix B – CS1 External Usability Test Example***) to ensure we had permission to record the feedback, the institution participating and the roles of the participants. This allows us to disseminate useful information about potential users of BlogForever, while maintaining anonymity.

3.1.3 What observations did the participants make?

3.1.3.1 Theme 1: Using Blog Records

This refers to the user experience of using blog records and interpreting archived blog content in the platform.

Table 15 - Case Study 1 External Testing Using Blog Records Theme Details

Aspect	Observation	Suggestions for improvement
Most recent blog posts	It is assumed the blog/post on top is most recent (much in same way a blog works). However this is not stated and it needs to be indicated.	More metadata. Insert date of post as well as source blog of each post in association with each post.
Author field	It is unclear if the name associated with the blog/post/comment is the author.	Author field should be labelled as such. More and improved labelling needed.
General lack of differentiation between elements in blog records	Took some users a while to find the detailed blog record.	Indicate blog title, blog author. Fix logical order of title and sub title.
Citations	Citation found easily and quickly, however it lacks context about date used. What is this date?	Date of citation must be made clear. Perhaps it should be the date that it was visited in repository by user. Could it link up with Google scholar?
Look and feel	Whatever preservation strategy is used, the blog will change in appearance.	It would be good to grab a screenshot and upload of the original source blog to preserve look and feel of original.
Contextual information	Many researchers may not understand what a blog.	There should be a simple visual and textual overview of structure of blogs.

3.1.3.2 Theme 3: Sharing and Interaction

This refers to sharing content and metadata with others, including users of the platform and external use via social software.

Table 16 - Case Study 1 External Testing Sharing & Interaction Theme Details

Aspect	Observation	Suggestions for improvement
Sharing	If people land on site from Twitter/Facebook etc. they receive no message.	It would be good to have a welcome message for such users.
Sharing	Not enough automated sharing options.	Why not have a 'copy/share this' version alongside the citation window. Similar to YouTube function which allows one to copy link and allow sharing.
Sharing restrictions		Limit the tabs displayed to people who access the site via

		social media.

3.1.3.3 Theme 4: Searching

This refers to how the platform performs searches, and how users can use and interpret the results of searches.

Table 17 - Case Study 1 External Testing Searching Theme Details

Aspect	Observation	Suggestions for improvement
Search output	Are the posts displayed derived from the same blog I am searching? It is not clear.	Indentations might help indicate this.
Search output	Are the posts displayed derived from different blogs?	Add the title of each blog with the post.
Display of search results	Unclear.	Is BlogForever's default setup to display only three posts? System should state 'First three posts displayed'

3.1.3.4 Theme 8: Functionality

The functionality theme assesses tests related to the functions available to users and administrators. This theme covers users' interactions with the system and administrators functionality.

Table 18 - Case Study 1 External Testing Functionality Theme Details

Aspect	Observation	Suggestions for improvement
Notifications	Using this feature can lead to an email glut of notifications.	Add 'your notifications' to tab to avoid this.
Basket features	Adding items to personal basket was challenging.	Make available at top right hand of the screen, or run alongside from top right hand side of screen. Perhaps name it 'my account' as opposed to 'basket'.
Export features	No PDF option	Why not allow export to PDF?
Browser requirements	Not clearly stated and functionality found to vary. Chrome browser didn't give the option to bypass security on laptop but IE did. Chrome worked on one pc.	Please state clearly browser requirements.

3.1.3.5 Theme 9: System Navigation

This refers to general navigation aspects of the system. The test environment for the usability tests was **https://bf1.csd.auth.gr/**

Table 19 - Case Study 1 External Testing System Navigation Theme Details

Aspect	Observation	Suggestions for improvement
Registration	All testers reported that finding where to register was unclear and most spent one minute locating it at 'login'.	Suggest adding 'login/register' title to this function. Keep it in the same place on the screen.
Tabs and breadcrumbs	Font is far too small.	Think about people with visual disabilities.
Dashboard navigation	Dashboard features were lauded but finding the dashboard was not intuitive, and most testers found it a bit confusing. What happens when you shut down one of the boxes on dashboard? How can you bring it back?	Supply guidance / instructions.
Submitting a blog	Not clear what happens after blog is submitted.	Email depositor to notify events, e.g. when blog submission is live.
Export and basket features	Very nice and good but location-wise they are too low; they seem like footers and not important information.	Promote these features.

3.1.3.6 Theme 10: System Terminology

This includes instructions, help pages, and other aspects of terminology in the platform. The general trend is that some of the terminology is unclear to lay users (i.e. non developers).

Table 20 - Case Study 1 External Testing System Terminology Theme Details

Aspect	Observation	Suggestions for improvement
Submit tab	Not intuitive.	Should be labelled 'submit your blog' or words to this effect.
Show All	What does it mean?	No further suggestions.
Similar Records	What does it mean?	No further suggestions.
Searching	How do we search?	Basic understanding / explanation of terms and how to search, and what results we can expect to find on searching.
Personalise feature	It is clear that some of the options in this drop-down are not relevant to blogs, e.g.: loans and groups.	Please explain or have some help section to expand.
Registration	What are the terms and conditions?	Indicate that registration is free.

Tables 13-18 above highlight the observations identified during the seven external exercises within CS1 and identify further suggestions for improvement. The seven volunteers were drawn from London academic institutions. All the participants were users, editors and creators of blogs. All of the participants followed the same set of exercises and were given the same questions to answer, which enabled the collation of the results above.

The overall impression of the external users about the system was very positive. Many features of the system were praised by the users. They were satisfied with the way the content was organised, the possibilities of disseminating archived blogs within BlogForever, and the availability of citation data.

The evaluation has been very useful in identifying issues and collecting suggestions for further improvements. All the suggestions in this section were reported and brought to the attention of the BlogForever development team.

3.2 Case Study 2 - External Usability Tests

The external tests for Case Study 2 (CS2) focused mainly on use of blog records, including searching and interpretation of the results. In particular, the difference between blogs and their posts, the organisation of the content in a blog, the way citations are expressed, and the accessibility of posts. This section of the report is an analysis of the results.

3.2.1 Participants

Six testers were drawn from departments in the University of Warwick.

All the participants were readers, researchers, repository users, and creators of blog content with an interest in knowledge discovery, educational technology, e-learning, open access etc. Some of them were technicians / managers of digital content.

Testers who agreed to participate in the case study had a varied level of expertise with preservation systems. Some had long-standing professional/library experience, while others had familiarity with using similar systems. However, none of the users were new to the type of the system under evaluation. The evaluation followed the methodology developed for the case study as well as the institutional administrative procedures for conducting studies involving human participation.

We also used a consent form (see ***Appendix C – CS2 External Usability Test Example***) to ensure we had permission to record the feedback, the institution participating and the roles of the participants. This allows us to disseminate useful information about potential users of BlogForever, while maintaining anonymity.

3.2.2 What method was used?

The method used was identical to that described in Section 3.2.1.

3.2.3 What observations did the participants make?

3.2.3.1 Theme 1: Using Blog Records

This refers to the user experience of using blog records and interpreting archived blog content in the platform.

Table 21 - Case Study 2 External Testing Using Blog Records Theme Details

Aspect	Observation	Suggestions for improvement
Most recent blog posts	User visited the blog record page and recognized the list, which is in chronological order, instead of reverse chronological order.	The most recent post should be on the top of the list (i.e. reverse the order).
Most recent blog posts	User would expect that the content is presented chronologically. However, the extracts are mixed up and repeated across the first couple of lines (i.e. the blog entry contains a list of posts and the main body of the post contains the post title, which makes this rather redundant).	The user is assuming that the top is the most recent. The date is not prominent (user makes a general comment about how important the dates in repositories are). User finds out that the order is not reversed chronologically, as someone would have expected.
Most recent blog posts	No information about the creation date of the post. User said that "he can imagine that the top is the most recent, but he cannot verify it".	No further suggestions.
Differentiation between elements in blog records	User pointed to a post in the repository and discussed about its differences to a blog (i.e. blog contains posts).	No further suggestions.
Differentiation between elements in blog records	A blog contains a fixed title, whereas post entries are diverse, depending on what the author would put in.	
Organisation of content	When viewing the blog entry, listing of all posts would have been impossible.	No suggestions made
Organisation of content	Not easy to spot the "homepage" or link for the blog entry when viewing a post.	No suggestions made
Organisation of content	Options for organizing the content were not clear. If one had to visit a blog with 1000 entries, it would have been a lot harder.	No suggestions made
Citations	User was a bit concerned about the date field provided: it currently reports the last access date. This is confusing because it is not annotated.	More citation styles (e.g. Harvard, APA etc.)
Citations	Clicked on "how to cite this"	No suggestions made

	link. The use of JavaScript can be a bit problematic in terms of accessibility.	
Citations	After 1-2 minutes, user found the link, but never clicked it. When asked why, he said that he doesn't want to click, because it might lead outside the repository.	Provide a hint/tooltip to avoid this confusion.
Citations	The citation information contains very short text.	Why hide it and why not provide it from the beginning using smaller font size and grey font colour?
Look and feel	Concerning the content provided in the repository, the text matches the original, but the images are not displayed inline. Moreover, the image links appear to be broken.	No suggestions made
Presentation	Detailed record quite easy to scan; cleanly presented.	Make better use of the white space, reduce scrolling.
Contextual information	Having exactly one option "blogs" might be misleading.	Rename "posts" to "blog posts" under collections.
Contextual information	The title was not very explanatory.	No suggestions made
Images	Pictures are a bit of a problem.	Section "reference links" has the anchored text; for the images, it prints the URL. This is strange. User proposes to have a separate section for images.
Metadata	Some metadata (tags, date etc.) are processed as if they were links.	No suggestions made
Referential integrity	Confusion of missing entries (e.g. a comment was found for a non-existent post, #2206).	Make sure referential integrity is maintained.
Terminology	HTML and "detailed record" are not intuitive.	Explain some terms like "pages", "comments" etc.

3.2.3.2 Theme 4: Searching

This refers to how the platform performs searches, and how users can use and interpret the results of searches.

Table 22 - Case Study 2 External Testing Searching Theme Details

Aspect	Observation	Suggestions for improvement
Search output	Picked a random blog post. Used part of the post title as a search keyword. The first	After several attempts of removing some punctuation characters, removing them all

	attempt to find it failed. The reason for failing is presumably the existence of punctuation characters within the original post title.	worked.
Search output	Unexpected behaviour (no results) happened because the user was searching under "Blogs" collection.	No suggestions made
Searching	Not obvious whether you search blogs or posts.	No suggestions made
Searching	Search by URL was not possible.	Search by URL (in general, provide more fields)
Searching	Search provides too much information.	Suggestion to provide a progressive disclosure approach that would separate the following actions: 1) Search 2) find 3) choose file format
Searching	Advanced search provided many metadata, some of which were from publications terminology.	No suggestions made
Faceted search	Browse through faceted search is almost a required feature nowadays.	No suggestions made
Cross-searching	Search across blogs vs. posts was not very effective.	No suggestions made
Display of search results	See suggestions for improvement	Make clean the formats in search results.
Enhanced searching	See suggestions for improvement	Searching by date/time.
Sharing	See suggestions for improvement	Provide recommendations for related posts (while viewing the post itself)
Sharing restrictions	See suggestions for improvement	If no permission is granted, do not give the option to the user (e.g. rejected blogs).

3.2.3.3 Theme 5: Access

This theme represents how the platform allows access to the blog records, and how it presents dissemination copies of the content.

Table 23 - Case Study 2 External Testing Access Theme Details

Aspect	**Observation**	**Suggestions for improvement**
Timeline display	See suggestions for improvement	Show the activity of a blog in a timeline.
Language	See suggestions for improvement	Language filtering of content (e.g. German, English, French

		etc.)
Content analysis	See suggestions for improvement	Analyse the content either through automated mechanisms like frequency of words or any other post processing way.
Visual representation	See suggestions for improvement	A feature that provides a preview/visual representation of the blog (e.g. through a mouse hover action) would exploit the visual memory and processing capabilities.
Creation dates	The creation time of content is not provided.	This is a crucial missing feature.

3.2.3.4 Theme 8: Functionality

The functionality theme assesses tests related to the functions available to users and administrators.

Table 24 - Case Study 2 External Testing Functionality Theme Details

Aspect	Observation	Suggestions for improvement
Export features	The data provided in the export section are poor.	User doesn't see the point in providing the PDF and JPG options.
Export features	The export links at the bottom of the page have different behaviour. For example, BibTex provides information, whereas JPG provides the actual content.	No suggestions made

3.2.3.5 Theme 9: System Navigation

This refers to general navigation aspects of the system.

Table 25 - Case Study 2 External Testing System Navigation Theme Details

Aspect	Observation	Suggestions for improvement
Registration	The log-in process makes you think you are logged in as a guest.	No suggestions made
Registration	Registration task was not very easy to complete (link is hidden). His experience in computer systems helped him carry out the task assigned. He expects that this task will be much harder for a novel user.	No suggestions made

Dashboard navigation	Sorting, organizing, browsing the information do not facilitate the navigation.	No suggestions made
Navigation	Very easy to navigate. The user especially liked the provision of external links found in a post on the right sidebar. The interface was intuitive.	No suggestions made

The above section highlighted the issues identified during the test as well as included further suggestions coming from the testers. All of the participants followed the same set of tasks and were given the same questions to answer, which enabled a collation of the results.

The overall impression of the testers about the system was positive. Many features of the system were praised by the testers. They were satisfied with the way the content was organised, accuracy of author names and dates, and the availability of citation information. The general view of the system was positive. However, the evaluation has been fruitful in identifying bugs and collecting suggestions for further improvements. All the suggestions were reported in this section and brought to the attention of the development team. Some of the prominent suggestions included various uses of date for changing the presentation order of weblog posts from chronological to reversed chronological and including faceted search by date. Most of the bugs and observations did not suggest a need for a major redesign or changes in the system.

3.3 Case Study 3 - Spider Testing

This section focuses on presenting the results of case study 3 (CS3), which focused on testing key spider features. Case study 3 testing collection consisted of 333 blogs in four different languages (English, Swedish, Norwegian and Finnish). The formats of the blogs for the spider testing were varied: single author blogs; editorial blogs with multiple authors and blog collections with their directories. Some of these blogs were highly active, while others were not updated often. The spider internal testing performed within case study 3 examined the quality of the spider performance. The quality was analysed based on scalability, performance and WP4 requirements.

The actual external tests were performed by five people who tested the overall management of the spider; the actual user interface and specific features that will be detailed later in this section. The test group was given assignments and a test report format to be filled without any assistance.

3.3.1 Spider Internal Testing

The 333 blogs were inserted into a standalone spider service in October 2012. This was done to measure time and success rate of analysing and delivering the new content from the complete list of original blogs. The output was analysed; bugs were declared and issues concerning speed and stability were identified and fixed.

The blogs were inserted into a spider with no history log that could influence the machine learning algorithms. Each test lasted 15 hours and included the observation of the capturing process and the analysis of the source blogs. The tests focused on the repeating harvesting processes while monitoring the updated blog sources with new blog posts. In October 2012, the spider captured

79% of the inserted blogs. The same tests were performed in January 2013, when the spider captured 83% of the inserted blogs.

For the second round of internal spider testing in January 2013, the spider was emptied to avoid advantages due to machine learning capabilities. Afterwards, an entirely new "initial" capturing was done and repeated with the improved spider software. The two outputs were assessed to evaluate: the improvements; the remaining bugs and issues; and other changes that were needed.

3.3.2 Spider Internal Testing Overall Results

The two rounds of tests conducted demonstrated significant improvements in speed, coverage and stability. The summary of results is listed as follows:

1. The spider captured 83% of the inserted blogs in January, up from the 79% captured in October. The remaining blogs were non-standard blogs. More algorithms are needed to increase the January 2013 83% rate.
2. The scalability of the single server spider improved in 200% since October. The average time of initial harvesting and analysis of the blog was 37 seconds. Ongoing harvesting was at a satisfying level of 2.1-2.3 second per source.
3. The speed, database and stability issues on the single server version needed to be sorted before working on the open source version.
4. Blogs' analysis speed increased in 200% since the beginning of the tests. The initial capturing process took 618 minutes, or 111 seconds per source inserted into the spider in October 2012. In January 2013, the same process took only 206 minutes or 37 seconds per source blog inserted.
5. Repeated capturing process took 9.3 minutes or 2.1 seconds per source inserted into the spider. This stayed the same for the January 2013 test; however there was a 5% variation during the test.
6. Blogs not processed properly and presenting bugs decreased from 4% to 0% for January 2013.
7. Percentage of blogs' sources correctly harvested increased from 76.8% to 83% in the second test round.
8. Non existing blogs decreased from 10.5% to 8%.
9. The separate processing of sources for automatic learning in order to develop new filter rules took 11.2 hours, using 100% of the central processing unit (CPU) in the first round of testing. This was not tested in the second round of tests.
10. The spider learning processing is the key challenge to scaling.
11. It is estimated that bug fixing and tuning of the spider after those tests could improve the output of the harvesting by 10 to 11%.

Table 26 - Spider Internal Tests Summary of Results

Spider Test for 333 Blogs Sources	Test 1: October 2012 After 15 hours	Test 2: January 2013 After 15 hours
Initial harvesting: Time spent on harvesting and learning/developing new	37080 sec	12367 sec

filters		
On-going harvesting: **Time spent of checking all sources for updates**	561 sec	551-576 sec
Average time per source captured successfully: **Initial harvesting, per thread and per server**	111 sec	37 sec
Average time per source captured successfully **On-going harvesting per thread and per server**	2.1 sec	2.3 sec
Total harvested out of the (333 sources)	267	246
Not existing anymore – after 21 and 24 months	66 (20%)	87 (26%)
Sources captured successfully	205 sources (76.8%)	204 sources (83%)
Failing, spam	28 sources (10.5%)	20 sources (8%)
Missing rules, needs tuning	23 sources (8.6%)	22 sources (8.9%)
Not processed (bug)	11 sources (4.1%)	0 (0%)

3.3.3 Spider External Testing

The external technical tests were done by five spider competent users (with different levels of expertise). They had an assignment or task description, a user guide and a silent demo-video demonstrating the spider portal. Testers did not receive further assistance. The assignment was supposed to last around 60 minutes, including answering and commenting their experiences in a report format. The spider test environment was System3 at *http://bf.cyberwatcher.com/.* After the assignment, partner CyberWatcher had a short interview to request for additional information from the five volunteers.

The volunteers received the following assignment:

1. Log into the spider using the link *http://bf.cyberwatcher.com/System3* and the given *log in*.
2. Insert 10 URLs from the blog list, in the *URL-field*, and report number of captured: Blog sources, blog posts/comments, and all the blog entities after 20 minutes.
3. View the output from the spider, and control examples of output from the 10 inserted blogs in *Details* and *All Entities*. Use each of them to control if the spider has captured according to the listed requirements of the spider (below).
4. Fill in the *Found* section in the report. If not found, email support morten@cyberwatcher.com and request for assistance to control the output.
5. Insert rest of the blog sources using the CSV option. Control if this is working.
6. Find the sources that are not working.
7. Control if they exist clicking on the s*ource list* in the spider web interface (section *Blog Sources*).
8. Comment few lines about usability and suggestions for improvements of the spider web interface; concerning: usability of the interface; user guide; demo video and conclude with your impression of the service as a spider tool.

The initial overall results were:

- ✓ All 5 users were able to operate the spider without any assistance apart from the provided quick guide.

- ✓ The navigation within the spider felt challenging.
- ✓ For reporting and understanding what was already captured, the video proved to be important.
- ✓ Inserting multiple blogs using CSV files needed to be updated. There was a key problem with the automated numbering of blogs to be ingested.
- ✓ The speed of the spider was perceived very differently by the users. There was positive and negative feedback. This variation might have been because many applications were running on the same platform.
- ✓ Most of the users felt they were working with a state of the art crawler.

3.3.4 Spider External Testing Reports

The following information represents the reports from all five testers participating. Their outcomes were written entirely by the volunteers. They followed a short instruction, a user guide and the given template of the report. The volunteers were:

1. **User 1:** spider expert and support manager for CyberWatcher, Norway.
2. **User 2:** source and spider editor for CyberWatcher, Norway.
3. **User 3**: source and spider specialist for Updatum, UK.
4. **User 4**: monitoring expert for Updatum, UK.
5. **User 5**: source and spider specialist, Nettecture, Poland.

Report of Spider Test 1

Date: 04.01.2013
User: User 1

Table 27- Source List Details Test 1

Initial Source List of 10 blogs	Results after 20 minutes
Number of captured Blog sources	10
Blog posts/comments	190/30
All blog entities	220

Mistakes in using the quick guide to find these numbers:

1. Unclear if the number is represented somewhere – or if I have to count them. I counted manually in the list of entities.
2. More than one person has been adding sources to the index, so it was difficult to find the correct numbers.

There were issues with the given quick guide to find the numbers above.

Output analysis:

Table 28 - Details of External Spider Test 1

Features	Description	Found (OK)/ Not Found (NO)/ Don't understand (NA)
SF1 - Capture timestamps for creation and crawling	Finding the publishing time stamp of each blog post and comment	OK
SF2 - Retrieve and Parse semi-structured information from the blog	List of Blog posts and comments from the blog source	OK
SF3 - Capture tags of blogs and blog posts	Extracting date, language e.g. describing blogs and blog posts	OK
SF6 - Crawling of the comments of blog posts	Ability to capture comments in a blog source	OK
SF7 - Information about the crawling source	Finding blog source description and blog posts description (Output - details) relating to posts	OK
SF8 - Spam detection and filtering	Only blogs – no spam/irrelevant content in the post list	OK
SF12 - Detection and crawling of embedded content	Detecting and harvesting pictures, links, and presentation embedded in each blog post. (Output – Preview)	Ok
SF15 - UTF8 as the default character encoding	Handling global format of text encoding, UTF8 (in Source detail)	OK
SF16 - Crawling the author	Capture the blog author of each post or the source, and relating info about the author, such as email	OK
SF18 - Crawling links	Detecting and capture external links per blog posts such as video links, presentations, article references and handle them as separated blog elements	OK
SF19 - Snapshots of blog versions	Capture the HTML of each blog post (Output section) and a thumbnail (Source section -first captured post – entities)	OK
SF20 - Purposive list of crawled blog sources	Sort and list all blog sources captured by the spider.	OK
SF22 – METS packages of crawled content	XML output	OK

If found sources not working, control if they exist clicking on the source list in spider web interface – section blog sources:

Not working of the 10: 0
Exists: 10
URLs/Names

Insert rest of the "367" blog sources using CSV. Control if this is working:

Yes (added 7, see comment)
No

Comments/difficulties:

"The numbers in the document are not supported and needed to be removed before making a .CSV document. This is not explained anywhere. I have therefore only added 7 sources. This worked fine."

Comment about usability and suggestions for improvements of the spider web interface and user guide – concerning usability and impression of potential of such a spider compare to other spider used:

Improvements:

"The different sections are very similar in look. This can cause confusion.
We were two working on the same server, which made it difficult and time consuming to find the numbers. It should also be mentioned that one need to remember which sources you have added for further investigation."

Impression about potential and benefits of this compared to other spiders:

"Seemed to work very fast."

User guide comments:

"I did not read the guide from cover to cover – only for references. Did end up reading most of it though."

Report of Spider Test 2

Date: 04.01.2013
User: User 2

Table 29 - Source List Details Test 2

Initial Source List of 10 blogs	**Results after 20 minutes**
Number of captured Blog sources	8
Blog posts/comments	136/10
All blog entities	146

Mistakes in using the quick guide to find these numbers:

1. It was difficult to understand which numbers you wanted, and how to find them.
2. I had to count every entity; I could not just find a number for all entities.

There were issues with the given quick guide to find the numbers above.
Output analysis:

Table 30 - Details for Spider Test 2

Features	**Description**	**Found (OK)/ Not Found (NO)/ Don't understand (NA)**

SF1 - Capture timestamps for creation and crawling	Finding the publishing time stamp of each blog post and comment	OK
SF2 - Retrieve and Parse semi-structured information from the blog	List of Blog posts and comments from the blog source	OK
SF3 - Capture tags of blogs and blog posts	Extracting date, language e.g. describing blogs and blog posts	OK
SF6 - Crawling of the comments of blog posts	Ability to capture comments in a blog source	OK
SF7 - Information about the crawling source	Finding blog source description and blog posts description (Output - details) relating to posts	OK
SF8 - Spam detection and filtering	Only blogs – no spam/irrelevant content in the post list	NA
SF12 - Detection and crawling of embedded content	Detecting and harvesting pictures, links, presentation embedded in each blog post (Output – Preview)	OK
SF15 - UTF8 as the default character encoding	Handling global format of text encoding, UTF8 (in Source detail)	NA
SF16 - Crawling the author	Capture the blog author of each post or the source, and relating info about the author, such as email	Only first name of author, and no email.
SF18 - Crawling links	Detecting and capture external links per blog posts such as video links, presentations, article references and handle them as separated blog elements	OK
SF19 - Snapshots of blog versions	Capture the HTML of each blog post (Output section) and a thumbnail (Source section -first captured post – entities)	OK
SF20 - Purposive list of crawled blog sources	Sort and list all blog sources captured by the spider.	OK
SF22 – METS packages of crawled content	XML output	OK

If found sources not working. Control if they exist clicking on the source list in spider web interface – section blog sources:

Not working of the 10:
www.techdirt.com
www.theoildrum.com
Exists: URLs/Names

Insert rest of the "367" blog sources using CSV. Control if this is working:

"Don't understand (NA) – coordinated with User 1…"

Comments/difficulties:

"Don't understand (NA)"

Comment about usability and suggestions for improvements of the spider web interface and user guide – concerning usability and impression of potential of such a spider compare to other spider used:

"Don't understand (NA)"

Improvements:

"The sources I have added are in the same list as the rests of the sources, which makes it a bit difficult to control and check the sources I want to check, when they always changes place in the list, as new sources are added."

Impression about potential and benefits of this compared to other spiders:

"I didn't understand how to check if it was only blog, no spam/irrelevant content in the post list."

Report of Spider Test 3

Date: 10.01.2013
User: User 3

Table 31 - Source List Details Test 3

Initial Source List of 10 blogs	Results after 20 minutes
Number of captured Blog sources	313
Blog posts/comments	?/?
All blog entities	?

Mistakes in using the quick guide to find these numbers:

1. There is nothing explaining on how to actually fill this report out
2. I can't see anywhere what "blog posts/comments" xx/xx is and how to fill it in...

Output analysis:

Table 32 - Details for Spider Test 3

Features	Description	Found (OK)/ Not Found (NO)/ Don't understand (NA)
SF1 - Capture timestamps for creation and crawling	Finding the publishing time stamp of each blog post and comment	OK
SF2 - Retrieve and Parse semi-structured information from the blog	List of Blog posts and comments from the blog source	OK
SF3 - Capture tags of blogs and blog posts	Extracting date, language e.g. describing blogs and blog posts	OK
SF6 - Crawling of the comments of blog posts	Ability to capture comments in a blog source	OK
SF7 - Information about the crawling source	Finding blog source description and blog posts description (Output - details) relating to posts	OK
SF8 - Spam detection and filtering	Only blogs – no spam/irrelevant content in the post list	OK

SF12 - Detection and crawling of embedded content	Detecting and harvesting pictures, links, presentation embedded in each blog post.(Output – Preview)	OK
SF15 - UTF8 as the default character encoding	Handling global format of text encoding, UTF8 (in Source detail)	NA
SF16 - Crawling the author	Capture the blog author of each post or the source, and relating info about the author, such as email	NA
SF18 - Crawling links	Detecting and capture external links per blog posts such as video links, presentations, article references and handle them as separated blog elements	NA
SF19 - Snapshots of blog versions	Capture the HTML of each blog post (Output section) and a thumbnail (Source section -first captured post – entities)	NO
SF20 - Purposive list of crawled blog sources	Sort and list all blog sources captured by the spider.	OK
SF22 – METS packages of crawled content	XML output	OK

If found sources not working. Control if they exist clicking on the source list in spider web interface – section blog sources:

Not working of the 10:
http://www.ducttapemarketing.com/blog/
http://www.tarkkamarkka.com/blogi/

Insert rest of the "367" blog sources using CSV. Control if this is working:

"Don't understand (NA)"

Comments/difficulties:

1) *I tried inputting all 10 blogs at the same time, but I kept getting an error message. It happened for about 20 minutes and then I decided to email User 1. She suggested adding them one by one and it worked with the first one. But as soon as I tried adding the second blog http://www.ducttapemarketing.com/blog/, the same error message occurred. I have noticed that, in my case anyway, blogs that have .../blog after the main name don't seem to work in Blog Forever*
2) *After I added all blogs, I clicked on the OUTPUT button. In the video, you could see a lot of different urls but in my case, there was only one usable url and the rest were either blog.rddirections.com or feedproxy.google.com.*
3) *After 3 hours, I went back to the output page, with the same urls used previously and there were a lot more urls, so it was either very slow or not working at the beginning.*

Comment about usability and suggestions to improvements of the spider web interface and user guide – concerning Usability and impression of potential of such a spider compare to other spider used:

"It doesn't work all the time and can't spot a mistake. When adding the urls, I had error messages but there was nothing to indicate what was actually causing the message. I had

to find out myself the problem was with one of the blogs. In my case, leaving it be for 20 minutes wasn't enough – so it might be a bit slow."

Improvements:

"Something needs to be done about highlighting problems instead of just an error message."

User guide – comments*:*

"Don't understand (NA)"

Report of Spider Test 4

Date: 11.01.2013
User: User 4

Table 33 - Source List Details Test 4

Initial Source List of 10 blogs	Results after 20 minutes
Number of captured Blog sources	9
Blog posts/comments	190/190
All blog entities	-

Mistakes in using the quick guide to find these numbers:

"Don't understand (NA)"

Output analysis:

Table 34 - Details for Spider Test 4

Features	Description	Found (OK)/ Not Found (NO)/ Don't understand (NA)
SF1 - Capture timestamps for creation and crawling	Finding the publishing time stamp of each blog post and comment	OK
SF2 - Retrieve and Parse semi-structured information from the blog	List of Blog posts and comments from the blog source	OK
SF3 - Capture tags of blogs and blog posts	Extracting date, language e.g. describing blogs and blog posts	OK
SF6 - Crawling of the comments of blog posts	Ability to capture comments in a blog source	OK
SF7 - Information about the crawling source	Finding blog source description and blog posts description (Output - details) relating to posts	OK
SF8 - Spam detection and filtering	Only blogs – no spam/irrelevant content in the post list	OK

SF12 - Detection and crawling of embedded content	Detecting and harvesting pictures, links, presentation embedded in each blog post (Output – Preview)	OK
SF15 - UTF8 as the default character encoding	Handling global format of text encoding, UTF8 (in Source detail)	NA
SF16 - Crawling the author	Capture the blog author of each post or the source, and relating info about the author, such as email	NA
SF18 - Crawling links	Detecting and capture external links per blog posts such as video links, presentations, article references and handle them as separated blog elements	OK
SF19 - Snapshots of blog versions	Capture the HTML of each blog post (Output section) and a thumbnail (Source section -first captured post – entities)	OK
SF20 - Purposive list of crawled blog sources	Sort and list all blog sources captured by the spider.	OK
SF22 – METS packages of crawled content	XML output	OK

If found sources not working. Control if they exist clicking on the source list in spider web interface – section blog sources:

Not working of the 10: 1

Insert rest of the "367" blog sources using CSV. Control if this is working:

"It wouldn't allow me to upload the CSV file??"

Comments/difficulties:

"I'm not entirely sure what I'm supposed to be doing here as I don't have any technical ability as I've never been involved in adding/maintaining sources?! The portal itself is user friendly, however, the Add button on top of the page doesn't work? I used the ADD button just underneath the box."

Impression about potential and benefits of this compared to other spiders:

"Don't understand (NA)"

User guide – comments:

"The User Guide is OK, however the video takes a very long time to upload and doesn't have any sound so it's difficult to follow and not very informative."

Report of Spider Test 5

Date: 10.01.2013
User: User 5

Table 35 - Source List Details Test 5

Initial Source List of 10 blogs	Results after 20 minutes
Number of captured Blog sources	7
Blog posts/comments	185/35
All blog entities	217

Inserted blogs:
http://www.autobloggreen.com/
http://www.greenbuildinglawupdate.com/
http://annickaengblom.blogspot.com
http://healthyskepticism.org/home.php
http://conversionscientist.com/
http://ekberg.blogspot.com/
http://www.eioototta.fi/
http://www.tuhatsanaa.net/
http://nordnetblogi.fi/
http://qtips.no/

Mistakes in using the quick guide to find these numbers:

"I'm not sure if I counted numbers of blog posts and comments correctly. I can see in section 'sources', how many posts were counted but I couldn't find the same for comments? So simply I subtracted number of posts from number of all blog entities."

Output analysis:

Table 36 - Details for Spider Test 5

Features	Description	Found (OK)/ Not Found (NO)/ Don't understand (NA)
SF1 - Capture timestamps for creation and crawling	Finding the publishing time stamp of each blog post and comment	OK
SF2 - Retrieve and Parse semi-structured information from the blog	List of Blog posts and comments from the blog source	OK
SF3 - Capture tags of blogs and blog posts	Extracting date, language eg describing blogs and blog posts	OK
SF6 - Crawling of the comments of blog posts	Ability to capture comments in a blog source	OK
SF7 - Information about the crawling source	Finding blog source description and blog posts description (Output - details) relating to posts	OK
SF8 - Spam detection and filtering	Only blogs – no spam/irrelevant content in the post list	OK

SF12 - Detection and crawling of embedded content	Detecting and harvesting pictures, links, presentation embedded in each blog post (Output – Preview)	OK
SF15 - UTF8 as the default character encoding	Handling global format of text encoding, UTF8 (in Source detail)	OK
SF16 - Crawling the author	Capture the blog author of each post or the source, and relating info about the author, such as email	OK
SF18 - Crawling links	Detecting and capture external links per blog posts such as video links, presentations, article references and handle them as seperated blog elements	OK
SF19 - Snapshots of blog versions	Capture the HTML of each blog post (Output section) and a thumbnail (Source section -first captured post – entities)	OK
SF20 - Purposive list of crawled blog sources	Sort and list all blog sources captured by the spider.	OK
SF22 – METS packages of crawled content	XML output	OK

If found sources not working. Control if they exist clicking on the source list in spider web interface – section blog sources:

Not working of the 10: 3 not found and 1 has status 'MissingRule'

Insert rest of the "367" blog sources using CSV. Control if this is working:

"Yes, works."

Comments/difficulties:

"I have some long URLs like http://hedgefundmgr.blogspot.com/feeds/posts/default?alt=rss and it's not written in a one line."

Comment about usability and suggestions to improvements of the spider web interface and user guide – concerning Usability and impression of potential of such a spider compare to other spider used:

- To be honest, I haven't used any other Social Media Monitorig Tool. Relating to the spider web interface, I think it would be a good idea to have progress bar in Add-section.
- BlogForever is user-friendly and easy for searching relevant information.
- I like the whole interface, it looks nice and clear.

Improvements:

- Spider does not work in Firefox browser.
- I think the good point would be to have other Social Medias like Twitter, Facebook, and YouTube in the same tool.
- displaying statistics in charts might be very useful.

Impression about potential and benefits of this compared to other spiders:

"To be honest, I haven't used any other Social Media Monitorig Tool but as I wrote above, it would be a good idea to have other types of social monitoring in the one tool."

Comments for the user guide available:

> *"The guide is written in a clear language but user could not find information about some words, like what is 'Watchpoint' or explanation about errors, for example, what means status 'MissingRule' and information if this blog source might work in the future; or what is the difference between State – ready (6) and Status Code ok (7). It would be great if instruction video could have some narration or at least text captions explaining what's going on."*

3.3.5 Spider External Testing Overall Results

Table 37 - Spider Testing Overall Results

	User 1	**User 2**	**User 3**	**User 4**	**User 5**
Instructions	User guide and video	User guide	User guide	User guide	User guide and video
Inserting 10 blogs (success rate)	10 of 10	8 of 10	8 of 10	9 of 10	7 of 10
Any of these not existing	0	2	2	1	2 not found 1 missing rule
Captured from these blogs in 20 minutes	190 posts 30 comments	136 10	NA	190 NA	185 35
Testing CSV	OK (but numbering of blogs created issue)	OK coordinated with User 1	Failed	Failed	OK
Feature checking according to table	All OK	All OK SF8 spam NA SF16 author – no email found	SF 15, SF 16, SF 18 not checked. SF19 snapshot not found	SF15 and SF16 not checked	All OK
Impression of speed	Very fast	Not commented	Slow	OK	OK
Overall strength	Speed and usability	Don't understand (NA)	Don't understand (NA)	User friendly	User friendly Broad potential

3.3.6 Spider Testing Conclusions

Both types of tests have given valuable input to the developers. Some programming was needed for the technical test to read log of performance. However, we are now able to run tests going forward and with some planed for improvements we hope to run additional technical spider tests within the project.

To summarise the user reports, we highlight that all users were given one hour only for the actual testing. The major outcomes are as follows:

- Some minor delays were reported from one tester while the rest fulfilled the test in approximately 60 minutes.
- Managing a spider without any training is challenging. However, out of the 5 user only one failed in managing the spider based upon the quick guide and a 2min 35sec video with no sound.
- Inserting 10 blogs each, proved close to 90% success rate excluding non-existing blog sites. This is according to the internal, technical and scaled test as well.
- In 20 minutes 180-190 blogs and 10-35 comments was captured, which indicates in average 6 seconds per captured post/comment.
- There is a CSV issue with automated numbering of the inserted blog URL into the default CSV file. This feedback is put on the bug list.

- Feature testing: most features were found and accepted by all testers. Also some testers had difficulties finding the features in the spider portal. No documented missing features.

Overall impression:
Strengths: speed and user-friendliness. State of the art: requires no training, efficient and does not need manual work.

Weaknesses: It is difficult to manage multiple lists of sources on the same spider. It is also difficult to find all the output of the spider in the web portal – most users had difficulties finding number of blogs and comments captured. Some lack of explanation "missing rule" and "WatchPoint" has been noted.

Improvements:
- Add a progress bar – for the processing of inserted blog
- Add sound on the instruction video
- Extended status report on the front page
- Graphical representation of the statistics
- Differentiate the pages in the web portal – e.g. with several colours

Bugs:
- CSV Upload fails the required formatting of comma-separated URL fields. This refers to the issue of inserting blogs by Excel into the spider web interface. The testers had numbers included into the Excel which then created numbers and URLs in a mix – which could not be handled by the spider. The spider needs comma separated URLs.
- Issues related to the use of web portal in Firefox were identified. However, these bugs are now fixed.

3.4 Case Study 4 - External Usability Tests

The external tests for Case Study 4 (CS4) focused on information retrieval algorithms using more diverse content and topics since CS4 blogs collection consist of personal blogs and contain multimedia content like images, audio, and video. Specifically, external tests checked the registration process of a user, searching of blog posts, the statistics of a post, the version history of a post and the exportation of a post and its metadata in various formats. The CS4 external tests were conducted in repository http://bf3.csd.auth.gr (BF3), which involves a subset of the CS4 test corpus hosted by http://pblogs.gr (see D5.1 Appendix H: Phaistos Blog Data – Case Study 4 [7])

and a subset of the test corpus of case study 3. Finally, the usability tests lasted 30 to 40 minutes. The following tables summarise the analysis of the results.

3.4.1 Participants

Testers were drawn from the following organisations:

- FORTH Foundation for Research and Technology (Hellas)
- Phaistos Networks S.A.

The participants included: computer scientists, web developers, librarians, researchers involved in digital preservation projects, systems administrators, and bloggers.

The number of participants was 6. It is not a high sample but research has shown that results can produce valuable results from at least 5 evaluators [12].

3.4.2 What method was used?

A test was conducted on 6 participants. The test was a combination of four methods:

- Real-time introductory interactions with the system (supervised by BlogForever team at their desktops)
- 4 prepared questions, asked to the users after they finished the usability tests.
- A 7-point likert scale usability questionnaire with 8 questions (extracted from QUIS[2] and CSUQ[3]), given to the users after the four prepared question. The questionnaire was optional to answer.
- Hand-written notes made with the observations from the BlogForever team and the answers from the participants.

It was also used a consent form (see details at ***Appendix E – CS4 External Usability Test Example***) to ensure that the external users provided permission to record and publish their feedback, their institutions name and their job titles. This allows us to disseminate useful information about potential users of the BlogForever platform, while maintaining some anonymity.

3.4.3 What observations did the participants make?

3.4.3.1 Theme 1: Using Blog Records

This refers to the user experience of using blog records and interpreting archived blog content in the platform.

Table 38 - Case Study 4 External Testing Using Blog Records Theme Details

Aspect	Observation	Suggestions for improvement
Differentiation between elements in blog records	Link to original post is hidden.	Link to the original post should be more visible:

[2] Questionnaire for User Interface Satisfaction, for more information see http://lap.umd.edu/quis/

[3] Computer System Usability Questionnaire, for more information see http://hcibib.org/perlman/question.cgi

		The title of the post in the post page could be link to the original post. Or the link to the original post from the bottom of the page can move to the top of it.
Differentiation between elements in blog records	Regarding the files and the versions it is not clear what you see.	Clarify files and versions.
Differentiation between elements in blog records	"Files" tab can have a different name that includes the word history or versions. Versions refer to the versions of the post content or to versions of the preservation actions performed	Rename it to "Files & Versions" or "Versions" or something that includes the word history. An explanation text should exist to inform the user what he sees.
Differentiation between elements in blog records	All the file names have the same date/time. There is repetition of information so grouping can be applied.	Grouping of files names can be applied in the presentation layer.
Look and feel	Small font size.	Improve font size.
Look and feel	Records don't look like the original posts.	No suggestions made.
Contextual information	Exported PDF does not include basic information.	In PDF exports, provide link to original post, author. If BlogForever generated it then give info about what was the context of the data e.g. when it was crawled.
Organisation of content	[System is] usable but with little content.	Populate the repository with more content.
Presentation	Encoding problem in the .htm pages of Greek posts.	Resolve encoding.
Images	Exported jpeg contains html code. Post's images missing from export.	Exported jpeg should not contain html code and should include the post's images.
Terminology	"Detailed records" unclear term.	Rename "Detailed records" to "show blog"/"show post".
Terminology	It is not clear what the words "collection", "CSIII", "CSIV" refer to.	No suggestions made.
Links	Title of a result/post was not linkable.	In search results: blog/post title should be linked to the record.

3.4.3.2 Theme 4: Searching

This refers to how the platform performs searches, and how users can use and interpret the results of searches.

Table 39 - Case Study 4 External Testing Searching Theme Details

Aspect	Observation	Suggestions for improvement
Search output	Search results titles aren't related with what I searched.	Search keywords could be marked in the results' titles and snippets.
Search output	GUI consistency: Blog results show the available files (.jpeg, .txt, xml_mets,) but post results do not contain them.	Blog post search results should have the same format with the blog search results.
Search output	Unrepresentative of search.	Snippets should be representative (the part of the text I am interested in).
Advanced search	Some of the users noted that if they had seen the advanced search options from the beginning they would use them.	Make advanced search more prominent.
Search options	Options under the search input are incomprehensible.	Explain the options.
Display of search results	In a phrase search with 2 words done that there were no results, there was not a clear message that there were no results and the suggestion of results with each of the words confused the user because there was no explanation text.	Provide clearer messages and explanatory texts.
Display of search results	Search results are not clear if they are ranked and how they are ranked.	Search keywords could be marked in the results' titles and snippets.
Display of search results	Inconsistent size.	Snippets should have the same size (uniform results).
Suggested words	Words suggestion after search: words appear with hyphen in front of them and it is not clear what they represent. HTML tags appear in the suggested words.	Clarify hyphenated words. HTML tags should not appear in the suggested words.

3.4.3.3 Theme 5: Access

This theme represents how the platform allows access to the blog records, and how it presents dissemination copies of the content.

Table 40 - Case Study 4 External Testing Access Theme Details

Aspect	Observation	Suggestions for improvement
Language	Loss of language: it changes	Fix loss of session's data.

	from Greek to English in different times.	
Language	English and Greek translations are mixed.	Consistent translation.
Language	Some texts/strings are not translated in the Greek language (e.g. texts inside References, Keywords).	Consistent translation.
Statistics	"Statistics" tab graph: strings are not readable; there is no legend; Unclear what the colours represent (purple, blue, grey dotted line). Graph was difficult to understand	Improve legibility and explain colours. When 2 different colours are in the same y-axes value, one of the colours should be transparent.
Statistics	Graph is incomprehensible. Captions are not readable.	Better presentation of the graph, maybe 3D and bigger font-size. Maybe a text "Recorded Downloads: 0" should exist.
Statistics	"Statistics" tab: other posts that other users have seen: not enough data in order to see how the list would appear if there were more links (ranking, "see more" option).	Add explanatory text or more info (like date) if the suggestions are the most recent that other users have seen or if they are the highest ranked or the most viewed/downloaded posts.

3.4.3.4 Theme 8: Functionality

The functionality theme assesses tests related to the functions available to users and administrators.

Table 41 - Case Study 4 External Testing Functionality Theme Details

Aspect	Observation	Suggestions for improvement
Export features	"Export as" options export different elements and not the same element in a different format.	Improve consistency of export.
System timeout	Loss of session info present.	No suggestions made.
Interface	Not user-friendly.	Interface can be more user friendly.
Colours	Colors (green, blue) in my account page don't match.	No suggestion made.
Data missing from export	Post exported as PDF but didn't contain all the post's data.	Improve PDF export.

Data missing from export	Exported PDF didn't contain all the images.	Improve PDF export.

3.4.3.5 Theme 9: System Navigation

This refers to general navigation aspects of the system. The test environment for the usability tests was **http://bf3.csd.auth.gr/**

Table 42 - Case Study 4 External Testing System Navigation Theme Details

Aspect	Observation	Suggestions for improvement
Registration	Registration was an easy task.	"Register" option could be more visible and distinct.
Registration process	After the message that the user received an email with a link to verify his account, a link to register appears again. The message gives the impression that you can login immediately. Wrong encoding to the Greek notification letter for the account verification. Register/login url is not https.	The message should be clearer that you should see the email in order to proceed. Email text: "about 3 days" is not precise, maybe "about" should be removed. Check if username is the same with the password, inform the user if the password is weak/safe.
Tabs	Tabs help in navigation: you can see where you are and the adjacent options.	Add border-radius to tabs. Bigger tabs and bigger font-size.
Tabs	Links open in same window.	Links (from Files and Export as) to open in a new tab.
Tabs	Keywords and references usually was zero.	If they are zero values, then make the tab inactive.
Export As	Element not prominent.	Could be in a more visible position. It can be in another Tab because "Export" is important in the preservation concept. Maybe move the element above its current position.
Fonts	Fonts are not easy to read. Available languages text is too small. Green colour of the fonts makes them unreadable in combination with the green background in the top of the page.	Bigger font-size in the footer. Maybe a background colour instead of the white background.
Tab position	Reference links (right sidebar)	Do not obscure post content

	overlap with the content of the post.	with the design.
Drop down menus	Drop-down menu (any field) show more options in case of the Greek language than in English.	Add more options in English.

3.4.3.6 Theme 10: System Terminology

This includes instructions, help pages, and other aspects of terminology in the platform. The general trend is that some of the terminology is unclear to lay users (i.e. non developers).

Table 43 - Case Study 4 External Testing System Terminology Theme Details

Aspect	Observation	Suggestions for improvement
Export As	Export terms not clear.	Use clearer phrases (e.g. Export metadata records, Export the reference as BibText).
Export As	Export terms not explained.	Use a popup to open on hover with an explanation text.
Loans	Terms badly translated at 'Your Loans' tab.	Greek translations like "Δεν έχετε δανειστεί βιβλίο ή δανεισμό" ("You don't have any book on loan.") need improvement.
Basket	"Basket" (Καλάθι) in Greek is a strange term; it is like a shared repository.	Improve Greek translations.
Browse or Search?	I would click on "Search" button but I don't know what "Browse" button does. The results seem different.	Clarify the differences (if any) between these functions.

The external user tests conducted in April 2013 presented the general intuition of the users for the tasks performed, more specific they gathered views about what aspects of the system were helpful or non-helpful for the user and finally presented suggestions for improvement of the design and functionality of the platform.

Generally, five of the users expressed that they felt well ('good', 'pretty good', 'excellent') about how they performed the tasks set and only one user answered 'so and so'.

Some aspects of the system help more the users to navigate and use the platform. These are the tabs and the links, the search and advance search interface. Also, the users expressed that registration was an easy task, and that most of the tasks were straightforward.

Moreover, the users highlight various aspects of the system where they encountered difficulties and needed improvement. In brief, regarding search results, titles and snippets should be more representative and the search keywords should be marked in them. "Statistics" tab graph can be

improved since strings are not readable, there is no legend and it is unclear what the colours represent. “Export as” options export different elements and not the same element in a different format so a different presentation is needed, and some exported formats need to be fixed. Also, it was not straightforward that the “Files” tab contains the version history of a post so most of the users suggested a different name that includes the word “history” or “versions”. Regarding the language of the system, it was observed that some texts/strings were not translated into the Greek language. In addition, two of the users expected the post content to have the same form as the original. Finally, the users stated that in some cases, an explanation text should exist to inform the user what they were seeing and suggested a more prominent position for some components.

3.5 Case Study 5 & 6 - External Usability Tests

The external tests for Case Study 5 (CS5) and Case Study 6 (CS6) focused on usability of the system within version **https://bf6.csd.auth.gr/**. This section is an analysis of the main results for external exercises with the CS5 and CS6 blog collections.

The external tests focused particularly on the registration process; the navigation through the collection and specific designated blog records using the time slider; locating license information; using the dashboard facilities; using tools to highlight, annotate and visualise relevant content; using the ‘Recent Activities’ widget; and using the card payment option to facilitate the purchasing of an item from the restricted collections.

3.5.1 Participants

Four individuals and a focus group volunteered from different institutions in Germany to participate in the usability tests. Their technical background was diverse: software development, programming, software testing, web content management, academic research, journalism and library information systems management.

The tests participants had a varied level of expertise with preservation systems. Some had long-standing information systems library experience, while others had familiarity with using repository systems.

A consent form was used to ensure we had permission to record the feedback, the institution participating and the roles of the participants. This allows us to disseminate useful information about potential users of BlogForever, while maintaining anonymity.

3.5.2 What method was used?

Separate tests were conducted on four participants and a focus group with another four volunteers. The test was a combination of three methods:

- Real-time introductory interactions with the system (nine exercises).
- Four prepared questions, asking feedback to the users about the repository.
- Optional seven point likert scale questionnaire (six questions), given to the users after the four prepared questions and the exercises, for further feedback about the system.

3.5.3 What observations did the participants make?

3.5.3.1 Theme 1: Using Blog Records

This refers to the user experience of using blog records and interpreting archived blog content in the platform.

Table 44 - Case Study 5 & 6 External Testing Using Blog Records Theme Details

Aspect	Observation	Suggestions for improvement
Visit several blog records	User tried to view a blog and got the message that it needed to be authorised.	No further suggestions by the user but visualising correctly all non restricted blog records, is essential for the success of the system.
Visit several blog records	Users in the focus group tried to view some blog records: some records were not available at the test. Other user feedback was "I am seeing titles, but I cannot click or anything. It doesn't lead me to the post." Participants received an error message when trying to access any blog page.	No further suggestions by the user but visualising correctly all non restricted content, is essential for the success of the system.
Locating a post	Users found no issues with locating the posts in the tests. One user feedback was: 'This worked, but I was a bit confused as there was basically nothing in the blog.'	No further suggestions by the user but visualising correctly all non restricted content, is essential for the success of the system.
Look and feel	User noticed that sections of the blogs overlapped other sections.	User suggested that blog sections were resized or reformatted.
License information	In the focus group, all participants could view the license information without difficulty. However, it was not clear to any of the participants what is meant by license information: "What is the license information? What does it have to do with anything?" One participant was confused about finding a privacy policy in the last of the blog records licensing information. "For the last entry there is some license information, but this is a	Provide clarity about the license information role.

	privacy policy, not a license."	
Contextual information	"I was missing simple and clear explanations about … everything. If I do not know what it is, it does not really tell you and it does not really help you to find out. You already have to know why you need it."	User requested the 'Help' tab to be extended.
Collections	"I had difficulty to understand the collections. I was not aware that 'collections' means blogs or posts. I would maybe not put it to this place to the left; it's such a top level thing. Like Google does it, like little bar right under the search thing."	No further suggestions made.

3.5.3.2 Theme 4: Searching

This refers to how the platform performs searches, and how users can use and interpret the results of searches.

Table 45 - Case Study 5 & 6 External Testing Searching Theme Details

Aspect	Observation	Suggestions for improvement
Search output via 'Recommended Blogposts'	Users performed a brief number of searches based on their interests and visited several actual blog records. They were asked to return to their dashboard to locate their "recommended blogposts": Participants remarked that the recommended blogposts were not very meaningful in consideration of their search or the recommendation did not lead to a post instead to a website within a post: "I searched for journalism and I got some things on Islam and self-help stuff?" "I seem to have gotten some kind of recommendation that is not a blog post but a	It would be good to have the possibility to rate the recommendations or be able to erase some parts of 'recent activity' leading to more search meaningful results.

	website for Alicia Keys." "I did a few searches and looked at a few blogs but didn't get any recommended blog posts out of it."	
Search output	At first, because the participants were using Firefox, they received a strange response to pressing "enter" after inputting a search term. A long string of information appeared in the search bar and brought the participant away from the search bar page.	The search functionality needs to be improved.
Search output	"The search results are not very connected to the search term."	No further suggestions made.
Search options	"Almost every time I used the search. The search was very helpful"	No further suggestions made.
Search output	User searched for the Bavarian state Library and got a list of nearest terms, but when clicked on "Bavaria-film", user got an error.	Facilitate that the searching outputs do not lead to any errors when user access one of the results: 'The search functionality needs to be improved'.
Display of search results	User queried how to return to the search options when viewing one of the results.	Improve breadcrumb navigation.

3.5.3.3 Theme 5: Access

This theme represents how the platform allows access to the blog records, and how it presents dissemination copies of the content.

Table 46 - Case Study 5 & 6 External Testing Access Theme Details

Aspect	Observation	Suggestions for improvement
Access to restricted collections with payment	The PayPal option was not working when one participant attempted to access the collection. The credit card option did allow the participant to gain access to the collection. However, it was not immediately clear to the participants if they now had access to the collection.	Improve messaging around reasons for purchasing and successful completion.

3.5.3.4 Theme 8: Functionality

The functionality theme assesses tests related to the functions available to users and administrators.

Table 47 - Case Study 5 & 6 External Testing Functionality Theme Details

Aspect	Observation	Suggestions for improvement
Annotator pen feature	Users worked with the annotator pen and checked if annotations were saved. Users have no problems using this feature apart from a time lag experienced in the annotations appearance.	No further suggestions made.

3.5.3.5 Theme 9: System Navigation

This refers to general navigation aspects of the system. The test environment for the usability tests was **https://bf6.csd.auth.gr/**

Table 48 – Case Study 5 & 6 External Testing System Navigation Theme Details

Aspect	Observation	Suggestions for improvement
Registration	Participants are not immediately sure if the "sign up" button is what we mean with "registration process" but other than this there was no problem. One user liked the option not to have to register to use the software.	No further suggestions made.
Navigation to account	The word "dashboard" was not immediately clear to participants, in terms of what we meant. Also not that clicking on the user name brought you to the dashboard. One user was not able to figure out how to add widgets, but in the end he was able to figure it out on his own. Additional Comments: "Funny behaviour, not predictable which widget will jump where".	Supply guidance on dashboard functions and its benefits.
Navigation with 'time slider'	Some participants were unable to use the timeline slider to open a blog post. Either the link (accessed by hovering over the bullet point in the timeline slider) was not "alive", or the	No further suggestions made.

	participant could not access the actual post through the link that appeared when hovering over the bullet point in the timeline slider. This was true for several other blog pages that we attempted to access.	
Dashboard navigation	User had a few difficulties returning to the dashboard once user began the searches.	Supply guidance on how to get to the dashboard/account.
Submitting a blog	All participants completed this task successfully, but there was still some confusion in the interface. For example: AS: "What's the difference between referred and not referred? Why do I get to another screen which does nothing else but to ask me to press another button. The Topic List is not very intuitive and does not cover everything. The license type is not intuitive. I think you have to explain, why it's important to have restricted or private access."	Hints or examples for the extra information when submitting a blog are needed.

The usability tests from August 2013 highlight confusion around navigation, especially in relation to the dashboard and around various back scenarios (back from the search, back to the dashboard). The feedback shows issues with clarifying the benefits of some features (for e. g. why purchase restricted content, what is the license copy for, how to use the dashboard).

The searching still seems to be problematic with recommendations that do not seem relevant to users and also inconsistent presentation of the data (often websites are returned not posts.)

However new features like the annotation pen were found to be very intuitive and generally lauded. Also payments tested very well, although some messaging improvements needed there.
Compared with previous case studies, there were fewer issues relating to formatting and visual consistency.

4 Conclusions

This section summarises the results of the evaluation and reports most salient conclusions derived from the conducted case studies (CS1-6) within test environments BF1, BF3, BF5 and BF6.

The approach for evaluating the system included both internal and external tests. Each of the tests employed a structured methodology, which enabled capturing two perspectives and merging the results as presented in this report under themes linked to the original research questions, aspects, observations and suggestions for improvement. The results of the evaluation presented in this report combine both internal and external feedback.

4.1 Summary of Internal Testing Processes

The results of the BlogForever features Internal Testing enabled gathering feedback on the performance of the system from the members of the BlogForever consortium. The testing results were performed using structured scenarios which enabled combining and evaluating the collected feedback from all the participating partners.

The features tests provided a general view on various aspects of the system. The analyses of the feedback provided valuable insight into the user experiences with the system and the potential directions for improvements. The internal testing data led to the design of the external usability tests exercises. These exercises were performed by volunteers and their interaction with the systems was recorded within system logs and Google analytics data. For more details of the log data, refer to *D5.4 System Logs* [9] conclusions.

The feedback from individual users was combined to identify various aspects of the system being tested. All the feedback was collated in templates with summary reports of each of the features tested. This feedback was then collated into ten themes under the general structure of the five research questions. The results of the analysis have been presented in detail in this report. The evaluation of the BlogForever implementation process is tabulated under the most relevant themes and aspects obtained within the testing processes. As a result, the case studies provide relevant feedback for the sustainability of the platform it terms of potential users' needs and relevant information on the possible long term impact.

The internal tests informed further the design and implementation of the external testing exercises. Unsuccessful features for BF1 and BF3 were monitored again within BF5 and BF6 test environments.

4.2 Summary of External Testing Processes

Unlike internal tests, all the external tests have been performed by independent users with experience related to preservation, monitoring spider systems and archiving but with diverse levels of expertise and specialisation. The rationale for external testing was to avoid the potential bias of internal tests. Similarly to internal testing the external tests were implemented under a unified structure to enable collation of the feedback received from different users.

The results identified aspects of the system that perform in line with user expectations as well as aspects of the system that require further improvement. Additional suggestions for enhancing already implemented functionality have already been recorded and presented in this report.

4.3 Summary of Overall Results

The most salient points identified from the whole evaluation processes are presented below.
In each instance, the **expected outcome** from a research question (RQ#) is used as a heading:

1. RQ3: Platform is sustainable and it meets the users' needs

I. Relevant results for *system integrity* tests:

- User passwords are being encrypted as required.
- Deduplication (eliminating duplicate copies of repeating data or single-instance storage) and presentation of a single URL for improving referencing performs as expected.
- The repository is capable of handling a large number of user accounts and user activity.

II. Relevant results for *data integrity* tests:

- The spider captures the timestamp and the original URLs.
- Capture of the blog, its comments and its embedded content performs as expected.
- The updated versions of the same content are captured and stored as expected.
- Insufficient contextual metadata about the crawl and the blog was being received from the spider. (This has improved since CS1).

III. Relevant results for *preservation* tests:

- The evaluation demonstrates that all the data captured by the spider is being ingested into the system; however, improvement is necessary for capturing additional contextual metadata about the crawl and the blog.
- More description is needed with regard to the content of the object (e.g. topic, language, etc.) and to technical aspects (e.g. formats). (This has improved since CS1).
- Content retrieved via APIs is stored in two different databases as part of the preservation strategy.

IV. Relevant results for *functionality* tests:

- The repository provides updates via RSS channel as expected.
- Archive's descriptive statistics and its export operate as expected.
- The platform functions perform as expected to users and administrators.

2. RQ4: Searched content is found fast and in an organised manner.

I. Relevant results for *searching* tests:

- Near-complete search options and features perform as expected, but more salient distinction between record types was recommended.

- External search is also integrated and operates as expected, but additional features for customising are recommended.
- Advanced search included a wide range of metadata options some of which were considered irrelevant.
- The evaluation demonstrates that the system performs well with regards to searching and users' ability to interpret the results.
- The repository is capable of handling a large number of simultaneous searches.

II. Relevant results for *access* tests:

- Some issues related to access to the blog records and representation of dissemination copies of the content were identified.
- The system captures the layout and overall look of blogs as expected.
- The bookmarking, export function and the use of UTF to enable multilingual content operate as expected. However, the translation features perform inconsistently.
- Presented content is harmonised in the repository and is consistently displayed across many different browser types.
- Extraction of content into MARC XML and DC XML performs as expected, but recommendations for including METS/METS XML for import and export are made.
- Extraction as PDF or Image does not perform as expected.
- Support for OpenURL does not perform as expected.
- Navigation of blogs by topics does not perform as expected.
- Improvements are needed for the readability of the statistics graphs.

3. RQ5: Usability satisfaction – strengths and weaknesses

I. Relevant results for *using blog records* tests:

- The evaluation demonstrates that most of the aspects related to the usage of blog records operate as expected.
- Users are able to distinguish between archived and live copies.
- Distinguishing between various types of records was possible, but not intuitive.
- Versioning of records is available, but use of more intuitive terms was deemed necessary.
- Author information and external links are presented as expected.
- The list of blogs is available and navigation through them is possible.
- Further improvements are needed for chronological presentation of blog posts and their tags.
- Improvements were suggested concerning the presentation of posts links.

II. Relevant results for *sharing and interaction* tests:

- The evaluation suggests that content and metadata can be shared with internal and external users through the platform and via social software.
- Dissemination of posts works as expected for various social media services (e.g. Twitter, Facebook), but more sharing options were noted to be desirable.
- Users are able to create personal collections of their favourite blogs and have access to the user history and statistics.

- Citation information and ranking are provided to the user, but improvements in the content as well as the presentation should be made.
- Identifying similar content does not perform as expected.

III. Relevant results for *system terminology* tests:

- The evaluation revealed a number of issues that required clarification of instructions, help pages, and other aspects of terminology in the platform.
- Terminology related to “Submission of Tabs”, “Personalise feature”, “Registration” etc., was often unclear to lay users (i.e. non developers) and required additional information in terms of help pages or change of terms.
- Clarifications in the translations of terms (i.e. Greek) were found necessary. The need for using more specific terms and necessity of additional explanation of the terms was required.

IV. Relevant results for *system navigation* tests:

- The evaluation of general navigational aspects of the platform was performed at various stages of platform’s development. The results suggest the interface to be easy and user-friendly.
- Navigation was generally easy, but improvements were necessary with respect to the prominence of some features (e.g. link to registration, fonts), or system’s feedback messages.
- Navigation through tabs and external links was found useful.

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A. Appendix A – CS3 Internal Test Data Example

BlogForever Platform Case Study Template:

Aim to use the following template to specify details of the implementation of different software features and details of the case study research objectives for the blog group selected.

1. Reasons for selection of the source blog group:

This template covers the internal testing of feature RF46 part of the case study III workload. Case study III is the first multilingual case study, with *356 weblogs in four different languages*. Case study III will be conducted during the first phases of the development. This case study is testing the information **retrieval algorithms** using more diverse content and topics. The size of the content is considerably larger than **Case Studies I-II** for testing the **scalability** of the system. The 356 source blogs are defined as expert blogs covering specific topics where the author has a professional or dedicated expertise (e.g. research blogs hosted by Universities and blogs of Swedish
parliament members).

2. **Objective of the case study**:

This case study examines several repository features and spider features. In each case we will be testing *prototypes* of the repository and the spider, as they are developed. This case study tests http://bf3.csd.auth.gr/

3. **Executive Summary of case study**:

From D4.4 "RF46 - The user can create personal collections of their favorite blogs"

4. Integration and set up:

a. **Description of set up and integration of BF platform**: CW blogs have been submitted to Spider and I accessed at http://bf3.csd.auth.gr/collection/CS3?ln=en platform for testing
b. **Summary of outcome of integration:** http://screencast.com/t/vosrLroQl

5. RQ5.1: BlogForever platform usage satisfaction

Description of the research question	How **user friendly** are the BlogForever platform functions for the different designated blog communities?
Requirement original ID (From D4.1)	FR20 - Favourite list of blogs and topics UI16 - Easy to learn/Intuitive
Feature ID (From WP4)	RF46 - The user can create personal collections of their favorite blogs
Detail of potential stakeholders (External)	Key players identified: bloggers (blog authors); blog providers; libraries, museums, information systems centres and archives; universities and research institutes; hosting companies and blog readers (journalists and businesses

	companies).
Unit of analysis	Repository elements (http://bf3.csd.auth.gr/)
Pre-requisites to enable feature/requirement	http://bf3.csd.auth.gr/ is available to the tester.
Expected Outcome	Users should be able to define personal collections of blogs.
Testing Details	From http://bf3.csd.auth.gr/; login done; Personalize tab chose; Your Baskets tab chosen; previously created Personal basket 'Favourites' chosen http://screencast.com/t/9VNP0uoZe. Favourites_RF46_Testing collection chosen with following 2 items in the collection [http://screencast.com/t/vosrLroQl]
Was the expected outcome achieved (State the Mantis number or link of the bug/issue)	Yes N/A
Report	Actual outcome with specific examples: From http://bf3.csd.auth.gr/; login done; Personalize tab chose; Your Baskets tab chosen; previously created Personal basket 'Favourites' chosen http://screencast.com/t/9VNP0uoZe. Favourites_RF46_Testing collection chosen with following 2 items in the collection [http://screencast.com/t/vosrLroQl]
Does outcome match possible stakeholder expectations?	Yes
Recommended corrective measure	No recommendations in place
Score Functionality	Expected outcome versus actual outcome: 4=All work as expected
Further analysis needed	***Usability test*** *exercise recommended within CS4-CS6 covering the personal baskets/personal collections options*
Research team member name	Silvia Arango

6. **Detailed Summary of evaluation of features:**

As the expected outcome versus actual outcome is 4 (All work as expected) the only future evaluation needed is to check how external users work and benefit from feature RF46. It has been suggested to have and external usability test exercise within CS4-CS6 covering the personal baskets/personal collections options.

7. **Appendix of evaluation of features:**

http://screencast.com/t/9VNP0uoZe

http://screencast.com/t/vosrLroQl

B. Appendix B – CS1 External Usability Test Example

Abstract: Details of the usability test taking place on 10.10.2012 with the Head of Publications & IHR Digital) at the Institute of Historical Research.

Background of the tester:

The volunteer is responsible for the IHR's publishing and scholarly communications strategy, including the management of a range of research projects focusing on the provision of digital resources for historians. Currently, the volunteer is Co-Director of the JISC-funded Connected Histories project; Principal Investigator of the AHRC-funded Early English Laws project to digitise Anglo-Saxon legal texts; and Publishing Editor of the Bibliography of British and Irish History. The volunteer is also Executive Editor of the IHR's journal, Historical Research.

The volunteer's research interests include the forest law of 13th-century England, digital humanities, peer review in the digital environment, text editing, the use of social media in an academic context, e-repositories, and open access publishing.

The volunteer is a Fellow of the Royal Historical Society, and a founder member of the Porta Historica network of editors of historical texts.

(Tester could be classified as Content Administrator)

Consent Script

Each tester has to be informed about the testing conditions and has to declare her/his consent.

1. We first wanted to thank you for agreeing to participate in this important usability test.
2. We have prepared a consent script to get your consent to go forward with the interview.
3. May we read you the consent script now?
4. This test will last approximately 30 minutes. Your participation in this test is completely voluntary. This means that you do not have to participate in this test unless you want to.
5. There are no other expected risks to you for helping us with this testing. There is no financial benefit for your participation. The cost to participate is your time, and for that we are very appreciative.
6. **For partners recording the test** - We would like to record this test. The digital recording will be maintained by us, with only access by BlogForever project members who are involved in the analysis of the testing. The recording will be permanently deleted after completion of our analysis.
7. **Identification of use**r: We would like to refer to your institution and role in the final report for implementation of external testing of the BlogForever platform. Your name will not be revealed but we would appreciate if we can use your job title and/or your designated user profile and the name of your institution. Do we have your permission to do this? .....***YES***..... (***If yes, continue)***
8. Thank you. At this point, do you have any questions for us? [***Respond to any inquiries***]. ***No queries***
9. Do I have your permission to begin the usability testing and take notes during this session?.....***YES***.....(**If *yes, continue*)**
10. Lastly, you may contact as well the management of the BlogForever project, anonymously if you wish, with any questions or concerns. We will provide you with the corresponding details if needed.

Test Schedule

Part A) *(approx. 5 min)*

Give a brief description of BlogForever and clearly state to the interviewee the purpose of the testing

> "As you may already know, we are members of the EU-funded project BlogForever. In the project, we aim on the development of an archiving and preservation system for weblogs. We would like to test the system regarding certain functions of its repository."

Question	Supervisor's Notes
First, we would like to understand your background with digital archives or repositories. Do you use or manage any digital repositories or digital archives? [Please details if only access] If **Yes** go to following question. If **No** go to part B) Tasks	*Involved with School of Advanced Studies repository (SAS Space) as manager, chair of the working group of this repository. She has not direct hands on the repository but involved in provision and strategic development.* *Project leader on project to encourage researchers' archive engagement with BL UK Web Archive (Analytical Access to the Domain Dark Archive Project - http://domaindarkarchive.blogspot.co.uk/)*
Do you actively engage with these digital collections? If yes, which services or products you use or manage?	*Yes as she deposits and uses other people's material.*
Which of the following roles best matches your connection with the discussed digital collections? Are you a: Technical Administrator Content Administrator Registered User Guest User?	*Registered user and content manager in a strategic planning sense.*

Part B) *(approx. 20 min)*

Tasks	Supervisor's Notes
Complete the registration process [at http://bf1.csd.auth.gr/]	Provide the tester with the link: **http://bf1.csd.auth.gr/?ln=en** **NOTES:** *At ease and confident with process. No problems. Email registration came through as expected. Working well.* *Security certificates issues arise: http://screencast.com/t/6SXF0BUjBi4 meant we changed from Chrome to IE as user was in her laptop and that was the best way to continue the test. We checked using the http connection instead of https and the browser will end up using https links once we started the exercise.*
Submit a blog URL [Home page + Register/Login page + Submit page + Blog submission interface page + Submit new record link + Confirmation that a blog is submitted (goal) page] [The body will be available when the spider crawls that submitted URL] [Does the user get to submit a blog that will be crawled by the spider and he/she receives an email explaining the situation about this submit record?]	**http://bf1.csd.auth.gr/?ln=en** **Check latest additions few minutes later or at the end of the session: https://bf1.csd.auth.gr/collection/Initial%20Blogs?ln=en** **NOTES:** *Topic list undefined...license list undefined. User performed a random selection of topic and license.* *Submission completed successfully. Used the current process of submission smoothly.* *Email arrived at 11.13 letting user know details of the new blog record. Testing of submission started 11.10. Clicked on link and went through to the new blog record.* *The restricted red logo was displayed upside down in IE.Not like in the left hand side corner of this example in Firefox (http://screencast.com/t/MWhtsHBFpJW)*

<u>Using the saving favourites/add to basket function</u> **[Can the user manage to store their favourite blogs in their basket in their dashboard?]**	**https://bf1.csd.auth.gr/?ln=en** **Search using keyword JISC** In the results page with JISC blogs, select any blog that looks interesting and try to use the 'Add to personal basket' option. Fill 'add to basket page' options Display baskets page using 'proceed to the basket' option **NOTES:** *Conducted search without any problem. User unclicked all the collections apart from the blog collection before started the requested search.* *Didn't scroll down to the base so there was a need of help on how to find the basket option. Happy with process once the option was found at the bottom right hand side corner after scrolling further.*

Get to the detailed record of a blog **Can the users differentiate between blogs and their posts?** **Is the content in a blog organised well?** **Are the latest posts easy to access within a blog?**	Ask the Tester to find one of the following blogs: **'Alumni Engagement'** (title) **'JISC Innovation Forum 2008'** (title) '**Welsh Repository Network**' **Can the user differentiate between the blog and its posts?** *OK* *Went straight to home page. At arrival at detailed full record, She felt it is clear but authoring is odd as just having' Ian' for example beside a post without any reference that this is the original authors name was not intuitive.* *Clear formatting and intuitive. She explained the role of header blog title bigger size for blog title in connection with the posts titles. Structure differentiates well between blog and its posts and it makes sense. Not entirely clear what you would get if you click on author's name. Generally pretty clear structure.* **Is the content in this blog organised well?** *OK* *Yes pretty good. If you click on author's name it takes you to all posts under that author. User tested that option out of her curiosity.* **Are the latest posts easy to access within this blog?** *OK* *Assumes the one at top is most recent much in same way a blog works.* *Chose latest post and opened it without a problem.* *Is the default setup to show only three posts? User said: Should state '1st three posts displayed'* *Gif not working in IE: http://screencast.com/t/PnlR3VkFmh*
Show citation description within a blog [The goal is to see the citation information link]	**https://bf1.csd.auth.gr/?ln=en** **Of the blogs listed in previous exercise, please search one of them and view its detailed information page** **Find and discover the citation information link within that detailed record** **NOTES:** *User noticed this citation option straight away and she really liked it. Citation doesn't have date you accessed it. It needs this.*

Part C) *(approx. 5 min)*

Questions about the repository	Supervisor's Notes
Please elaborate on how well or badly you feel you performed the exercises/solve the tasks set for you?	*Export features within detailed record of a blog (Add to the basket as well) very nice and good but design wise they are too low; they seem like footers and not important information. Adding to personal basket was challenging. She rather it was available in the screen of the detailed record and there was a need to scroll to find them as a footer option outside the record box.*
What aspects of the system supported you to perform the exercises or solve the tasks set for you today?	*Labelling all very clear; as a user you can get to everything you want. Hierarchy of information is very good. The home page is not cluttered.* *Do not need to spend a lot of time familiarising yourself with it.*
What aspects of the system made it difficult for you to perform the exercises or solve the tasks?	*Information which appears at base of page is not intuitive or easy to find and feels outside the record.* *http://screencast.com/t/y4b7reTeFpL* *She is very used to shopping sites where baskets etc. are on top of page.* *The export functions are too low down.*
How could the system be improved?	*Restrictions: Chrome browser didn't give the option to bypass security on laptop but IE did. Chrome worked on her pc. http://screencast.com/t/6SXF0BUjBi4* *Generally seems very well structured.* *Search options...narrowing it down, she knew to do this. Perhaps we need an option to narrow it once you get search results. Yes you can narrow it down by collection user viewed that option.* *It seems special characters can cause problems in the title at the moment depending on the type of apostrophe (curly or non curly ')* *Slowness may be an issue if connection is not fast like in her laptop but the search results came very fast.*

C. Appendix C – CS2 External Usability Test Example

Abstract: Details of the usability test taking place on 16.01.2013 with an Assistant Professor at the University of Warwick.

Background of the tester:

The volunteer's work has contributed to advances in knowledge discovery from corpora, automation of scientific experimentation and automatic extraction of information from the scientific literature. In recent years she has focused on the annotation and automatic identification of discourse structure in scientific literature in terms of the core components of scientific investigations. She has used these annotations to create automatic summaries and in a number of other biomedical applications with a potential impact in healthcare, such as the dynamic enhancement of drug package information interactions and the facilitation of cancer risk assessment.

Consent Script

Each tester has to be informed about the testing conditions and has to declare her/his consent.

1. We first wanted to thank you for agreeing to participate in this important usability test.
2. We have prepared a consent script to get your consent to go forward with the interview.
3. May we read you the consent script now?
4. This test will last approximately 30 minutes. Your participation in this test is completely voluntary. This means that you do not have to participate in this test unless you want to.
5. There are no other expected risks to you for helping us with this testing. There is no financial benefit for your participation. The cost to participate is your time, and for that we are very appreciative.
6. **For partners recording the test** - We would like to record this test. The digital recording will be maintained by us, with only access by BlogForever project members who are involved in the analysis of the testing. The recording will be permanently deleted after completion of our analysis.
7. **Identification of use**r: We would like to refer to your institution and role in the final report for implementation of external testing of the BlogForever platform. Your name will not be revealed but we would appreciate if we can use your job title and/or your designated user profile and the name of your institution. Do we have your permission to do this? .....***YES***..... (***If yes, continue)***
8. Thank you. At this point, do you have any questions for us? [***Respond to any inquiries***]. ***No queries***
9. Do I have your permission to begin the usability testing and take notes during this session?.....***YES***.....(**If *yes, continue*)**
10. Lastly, you may contact as well the management of the BlogForever project, anonymously if you wish, with any questions or concerns. We will provide you with the corresponding details if needed.

Test Schedule

Part A) *(approx. 5 min)*

Give a brief description of BlogForever and clearly state to the interviewee the purpose of the testing

> "As you may already know, we are members of the EU-funded project BlogForever. In the project, we aim on the development of an archiving and preservation system for weblogs. We would like to test the system regarding certain functions of its repository."

Question	Supervisor's Notes
First, we would like to understand your background with digital archives or repositories. Do you use or manage any digital repositories or digital archives? [Please details if only access] If **Yes** go to following question. If **No** go to part B) Tasks	Neither use nor manage currently. Have used in the past EPrints, CADAIR and JISC.
Do you actively engage with these digital collections? If yes, which services or products you use or manage?	See answer above.
Which of the following roles best matches your connection with the discussed digital collections? Are you a: Technical Administrator Content Administrator Registered User Guest User?	Registered user and guest.

Part B) *(approx. 20 min)*

Tasks	Supervisor's Notes
Complete the registration process [at http://bf3.csd.auth.gr/] There will be an email in their inbox	Clicked at the top right screen. Followed links and filled in form. Confirmation email received and attached link was followed. User is now logged in.
Randomly select a blog: • Go to home [https://bf1.itc.auth.gr/?ln=en] • click on Blogs [https://bf1.itc.auth.gr/collection/Blogs?ln=en] • follow one link of type blog https://bf1.csd.auth.gr/record/1329?ln=en	**NOTES:** Selected by searching for "warwick". Picked record entry #673. Clicked on "HTML" and not "Detailed record".
Visit the blog itself Exit from a page like https://bf1.csd.auth.gr/record/1329?ln=en	**NOTES:** Done

Try to find it in BF repository on their own Use searching for the entry	**NOTES:** Adding “warwick+term” returned no results. Searching for “term” returned no results. Free text date returns no results. This unexpected behavior happened because the user was searching under “Blogs” collection.
Get to the detailed record of a blog Can the users differentiate between blogs and their posts? Is the content in a blog organised well? Are the latest posts easy to access within a blog? [Posts don't have the dates when the whole blog body is available, so we assume they are the latest at the top]	https://bf1.csd.auth.gr/?ln=en **Can the user differentiate between the blog and its posts?** Yes. Posts are part of blogs. **Is the content in this blog organised well?** When viewing the blog entry, listing of all posts would have been impossible. Also, not easy to spot the “homepage” or link for the blog entry when viewing a post. **Are the latest posts easy to access within this blog?** **NOTES:** The most recent post should be on the top of the list (i.e. reverse the order)

Show citation description within a blog [The goal is to see the citation information link]	https://bf3.csd.auth.gr/?ln=en **Of the blogs listed in previous exercise, please search one of them and view its detailed information page** **Find and discover the citation information link within that detailed record** **NOTES:** The entry that was viewed earlier has disappeared. It was not possible to find the original post. When the entry id was typed in the URL, an error popped (screenshot attached). The user could spot the "citation information" link. Update: the post entry is now found (#752)

Part C) *(approx. 5 min)*

Questions about the repository	Supervisor's Notes
Please elaborate on how well or badly you feel you performed the exercises/solve the tasks set for you?	Could have been more efficient. Didn't spot some things immediately (e.g. link to blog entry when viewing a post entry).
What aspects of the system supported you to perform the exercises or solve the tasks set for you today?	Searching, tabs, top navigation.
What aspects of the system made it difficult for you to perform the exercises or solve the tasks?	Some links not prominent. Confusion of missing entries (e.g. a comment was found for a non existent post, #2206) The log-in process makes you think you are logged in as a guest

How could the system be improved?	- Rename “posts” to “blog posts” under collections (having exactly one option “blogs” might be misleading) - Explain some terms like “pages”, “comments” etc. - Make sure referential integrity is maintained (e.g. see comment #2206, which links to a non-existent post). - Search across blogs vs. posts was not very effective. “external services” text wasn’t intuitive. - If no permission is granted, do not give the option to the user (e.g. rejected blogs). - Show the activity of a blog in a timeline. - Searching by date/time. - Make clean the formats in search results. HTML and “detailed record” are not intuitive.

D. Appendix D – CS3 User Guide for the Spider Testing

This is a quick guide for users of the spider web interface.

The spider is to be used according to these steps – to capture blog content and feeding this content into repository:

1. **Inserting blogs:** Blog ULRs are inserted by user into the spider web interface available at: http://bf.cyberwatcher.com/System3 - with two insert options: An insert field for less than 100 URLs; whereas for above 100 URLs there is a link to upload CSV-file (or Excel file) where URLs can be copied into the spider.
2. **Blog content output:** The spider analyses the blog content and fetches the content. The output can be viewed by the user in the Spider interface – in 4 formats: HTML, listed entities, thumbnail, XML (METS). All of this will be exported to an archive (repository).
3. **Spider monitoring:** The spider will monitor the inserted blogs and continue to deliver output from any updates of content. The user can follow status of the spider as of how much content being captured, and analyse which sources not working as expected.

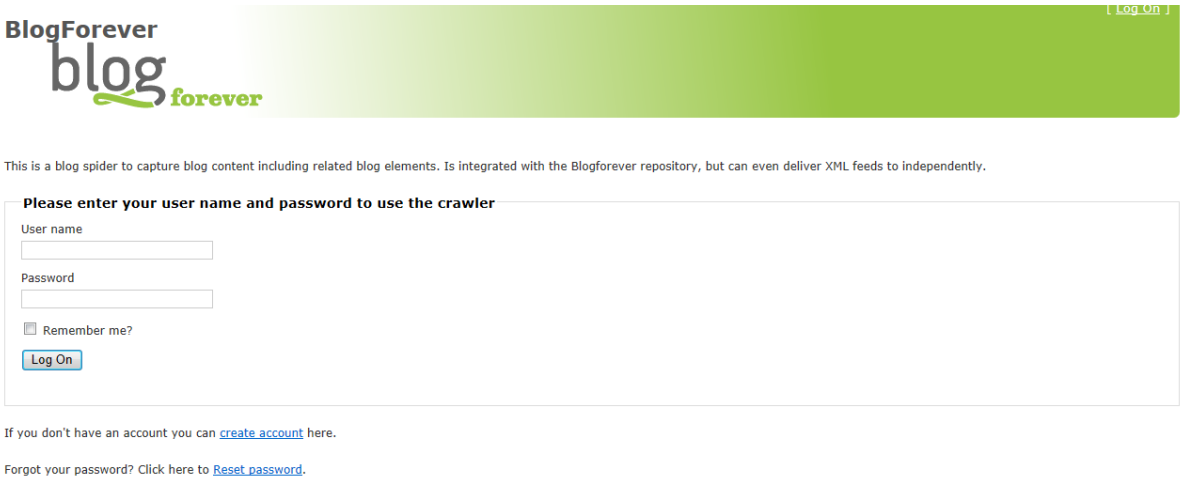
Not managed by Spider users:

- **Connecting towards the repository:** The repository retrieves the output from the spider through a web service API.

1. Registration - Log on page

This page will have a link to this quick user guide, plus an introduction video.
New users without username are guided to a separate register page. Registering includes a user name and password which is sent to the administrator for confirmation. After the administrator has connected the user with the right repository, the user receives a confirmation email enabling the log in.
Users with username – just fill in the fields and click log on

Figure 6 - Spider Login Page Details



2. *Adding new blogs for crawling and monitoring*

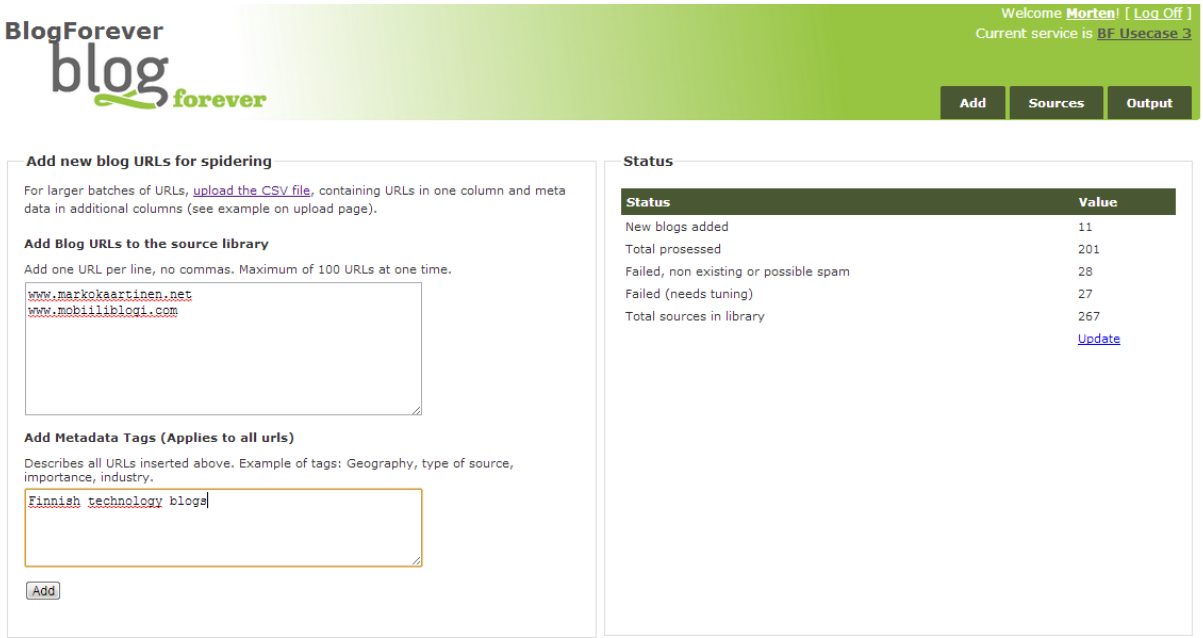
Add-page is for inserting the blog source to be monitored by the spider. Only a list of blog links is needed. By inserting a list of blog source URLs – the spider analyses the blog source to capture all type of content and elements.

Example: Adding two URLs to blog sources:

www.markokaartinen.net
www.mobiiliblogi.com

These sources are pasted into the first field "add blog URL's to the source library", with one URL per line, and no commas between them. The list can contain up to 100 URLs inserted into this field at a time (Figure 7).
For larger number of sources, the user can click on the "upload CSV file" and insert both URLs and potential metatags into a spreadsheet. An upload of a CSV template makes it easier to insert huge list of URLs.
Below the insert field for URLs, there is an additional field for inserting metadata and description of the inserted blogs.
In the case of the two Finnish blogs, the user describes these blogs as "Finnish mobile corporate blogs". This can then be used as metadata description in the repository, and for categorizing of all inserted blogs according to industry, geography, topic, importance e.g. the description will be included in the spider source library – and exported as metadata in the XML – to the repository.
After inserting blogs into the spider, the user can view the status of the spider in the input page.

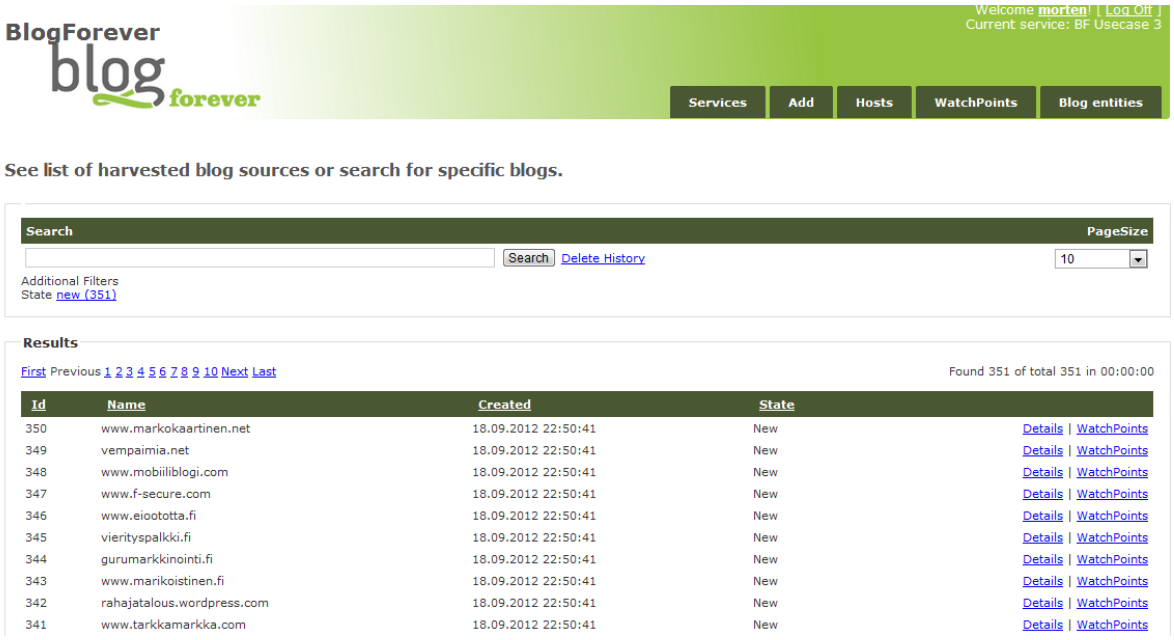
Figure 7 - Section Add Details



3. Listing all added blogs for reviews

Most users would prefer to visit the repository to utilize the content, or potentially view the HTML of the output. Figure 8 demonstrates the list of all inserted blogs and possible actions. We may put a direct link from add section - to list of processed entities and the full HTML of the output as shown in Figure 11.
In the current version of the interface, the user can see the status by either visiting the "Source" section from the top menu, as shown below in Figure 8.
The Source section[4] lists all blog sources processed successfully and included in the source library. In the case below, 351 sources have been processed, including the two Finnish sources we inserted in the "Add" section as examples.

Figure 8 - List of Spider Source Collection to Harvest



4. Review extracted content from inserted blogs

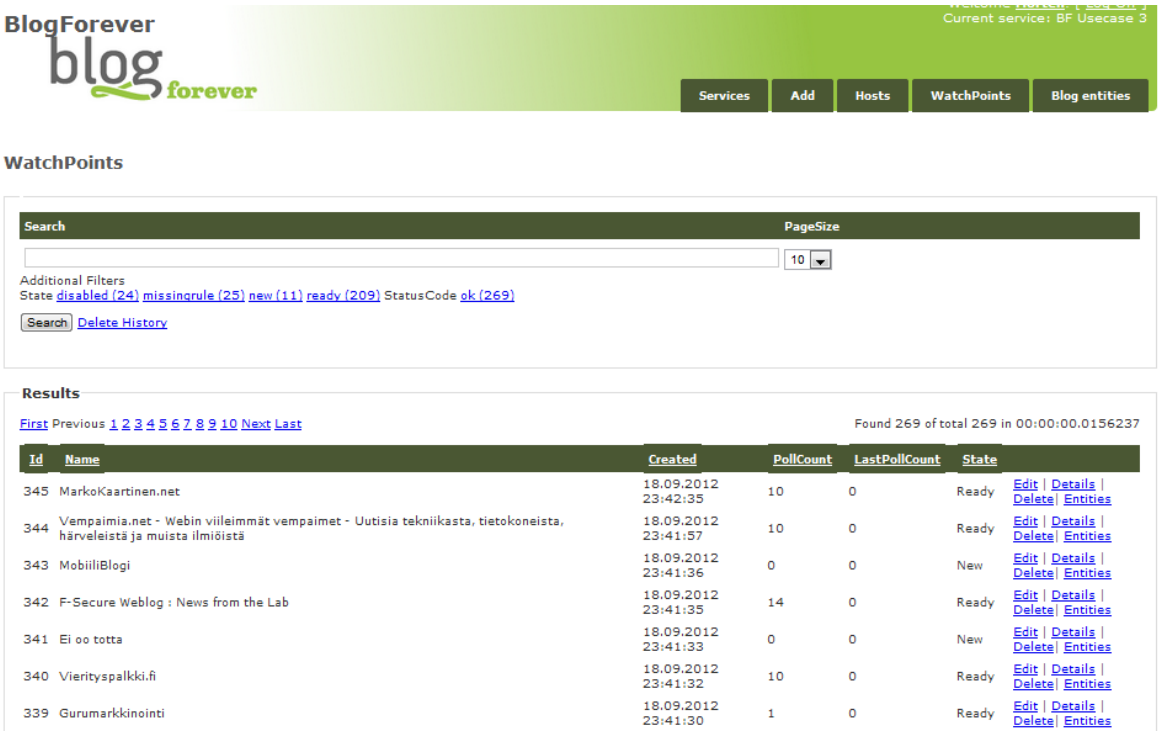
There are currently two relevant sections from the top menu in order to review status:

- The "Source" (WatchPoint) section that shows number of blog posts and comments found per source (Figure 9).
- The "Output" (Blog entity) section that lists all blog posts and blog comments found from the inserted blog sources (Figure 10).

Both sections include a search engine to search for specific words. In addition, all sources, posts, ids etc. can be sorted according to parameters and columns above the list. The sorting is initiated by clicking upon the parameter text above the list. In the described scenario with the two Finnish blog sources, the findings (Figure 9) have been:
www.markokaartinen.net: 10 posts have been found
www.mobiiliblogi.com 0 posts have been found

[4] Currently named Host and Watchpoint sections – these will both be put into a Source section in the next update of the user interface

Figure 9 - Source Section Details



The source section, when displaying status of monitored domains, contains a link to “WatchPoint”, which displays the name of the blog, number of blog posts captured from that blog, state and creation date. WatchPoint represents a useful link to acquire a summary data from the blog being crawled and monitored.

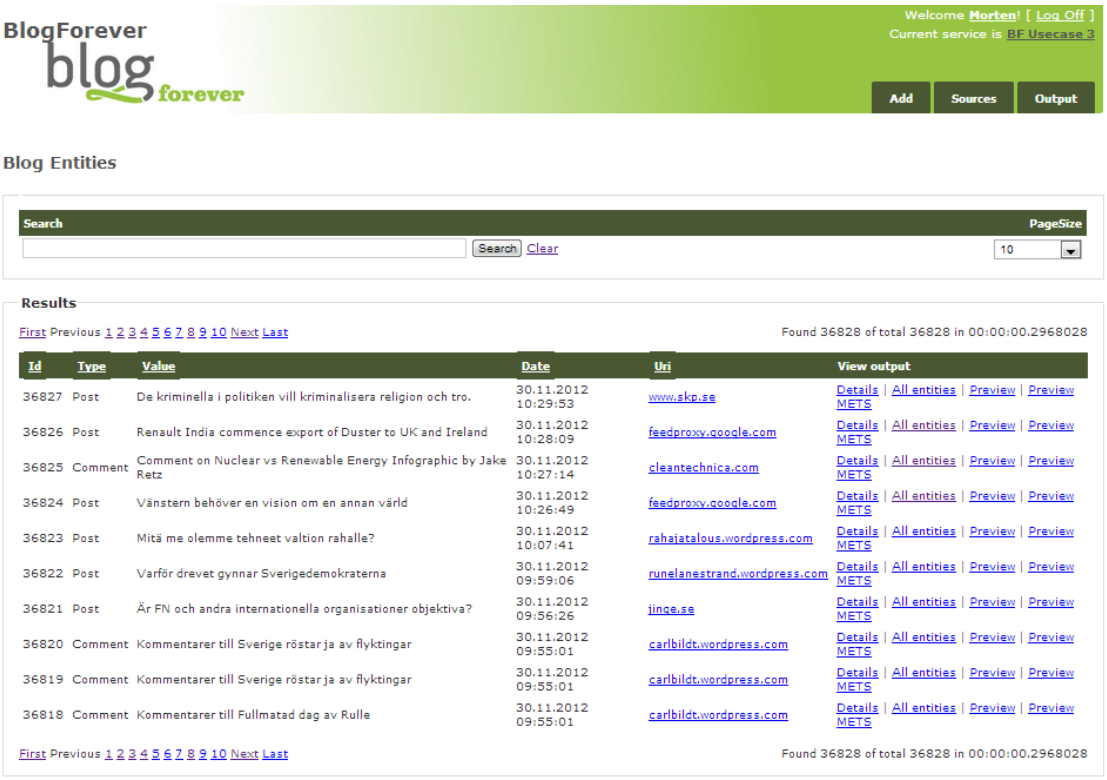
5. Output from the spider

After inserting the URLs the user can view and control the output – using the Output section in the spider’s web interface.

The output page lists all entities captured and on the top right corner, the total number of found entities is listed.

The user can view the output in 3 formats: *Details, All entities, XML*. These are all available as links on the right column, relating to each piece of content output captured from the blogs and listed at this page.

Figure 10 - Output Page Details

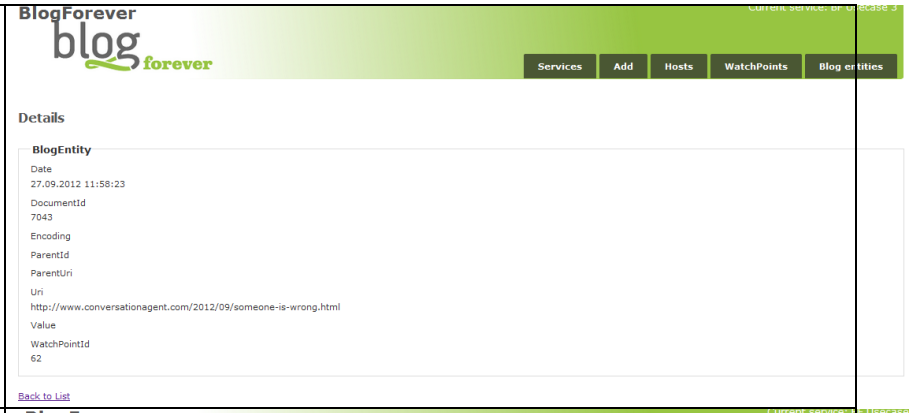
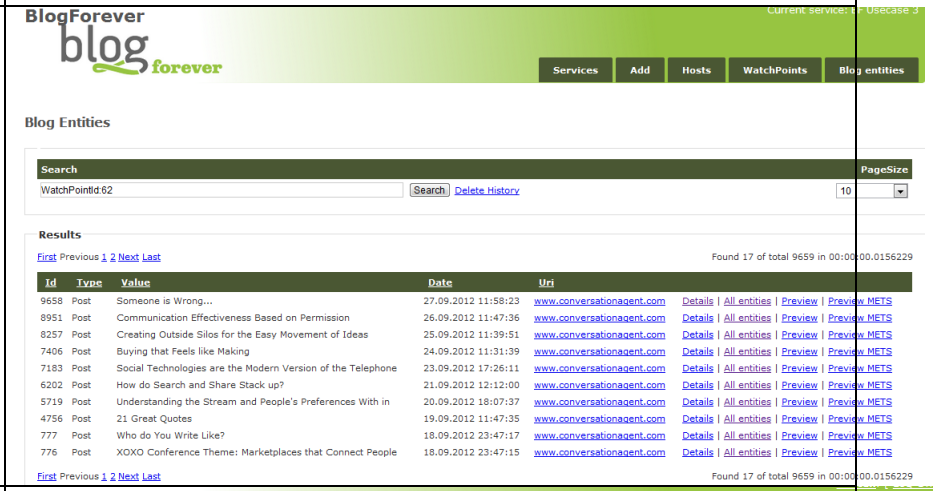
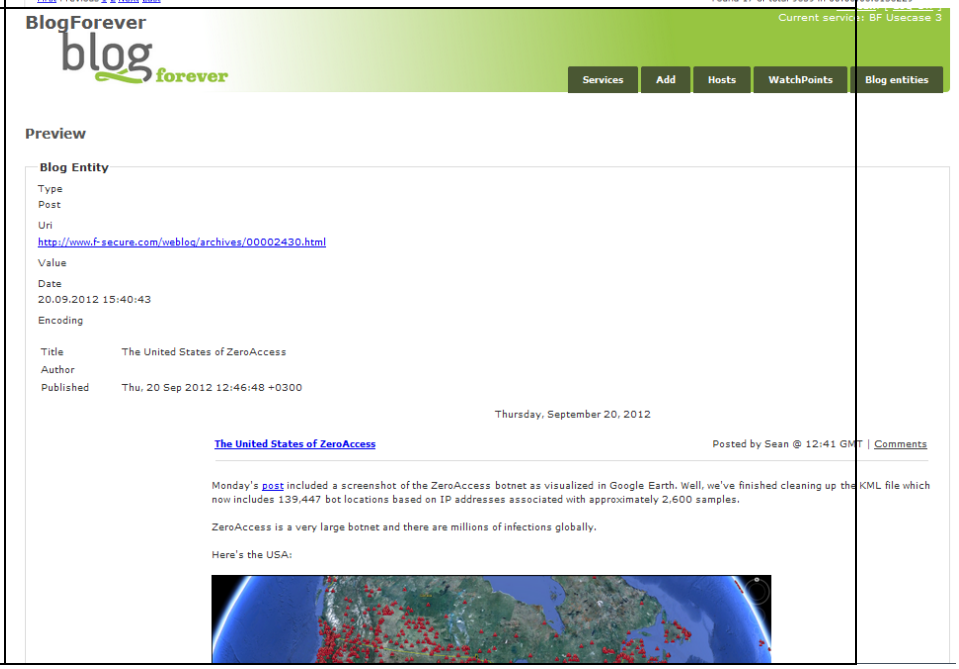


The Output section enables to have quick access to the *Details* of the captured entry including: Record Type, ID, Value, Date and URI. It is also possible to get the list of all entries and preview individual human readable records as well as METS XML formats.

Details: States key information about this content element. Which blog source it was found, time, format and language.
All entities: Here each piece of entity from this blog content is found on a very long website.
XML: Here the user can view the XML format.

The user interested in study the output of the spider processing and performing extraction of the entities, can select from several link options on the right column. The screenshots demonstrating various views of the Output section are presented in Figure 11.

Figure 11 - Different Views Spider Outputs

Details	Shows short description of which source the entity relates to , date, URL and document ID of each entity	
All entities	List of all other blog posts and comments from the same blog source or Watchpoint	
Preview	Preview of all captured elements to this entity. Meta data, full text, pictures, links etc.	

Preview XML	Showing the XML of the entities in METS format, which the repository can import for archiving Includes even HTML and Thumbnail of the post	

E. Appendix E – CS4 External Usability Test Example

Abstract: Details of the usability test taking place on 05.04.2013 with a Computer Scientist for ISL of FORTH/ICS

Background of the tester:
The volunteer is a Computer Scientist and Researcher involved in digital preservation projects.

Consent Script

Each tester has to be informed about the testing conditions and has to declare her/his consent.

1. We first wanted to thank you for agreeing to participate in this important usability test.
2. We have prepared a consent script to get your consent to go forward with the interview.
3. May we read you the consent script now?
4. This test will last approximately 30 minutes. Your participation in this test is completely voluntary. This means that you do not have to participate in this test unless you want to.
5. There are no other expected risks to you for helping us with this testing. There is no financial benefit for your participation. The cost to participate is your time, and for that we are very appreciative.
6. **For partners recording the test** - We would like to record this test. The digital recording will be maintained by us, with only access by BlogForever project members who are completion of our analysis.
7. **Identification of use**r: We would like to refer to your institution and role in the final report for implementation of external testing of the BlogForever platform. Your name will not be revealed but we would appreciate if we can use your job title and/or your designated user profile and the name of your institution. Do we have your permission to do this? .....***YES***..... (***If yes, continue)***
8. Thank you. At this point, do you have any questions for us? [***Respond to any inquiries***]. ***No queries***
9. Do I have your permission to begin the usability testing and take notes during this session?.....***YES***.....(**If *yes, continue*)**
10. Lastly, you may contact as well the management of the BlogForever project, anonymously if you wish, with any questions or concerns. We will provide you with the corresponding details if needed.

Test Schedule

Part A) *(approx. 5 min)*
Give a brief description of BlogForever and clearly state to the interviewee the purpose of the testing

> *"As you may already know, we are members of the EU-funded project BlogForever. In the project, we aim on the development of an archiving and preservation system for weblogs. We would like to test the system regarding certain functions of its repository."*

Question	Supervisor's Notes
First, we would like to understand your background with digital archives or repositories. Do you use or manage any digital repositories or digital archives? [Please details if only access] If **Yes** go to following question. If **No** go to part B) Tasks	No.
Do you actively engage with these digital collections? If yes, which services or products you use or manage?	
Which of the following roles best matches your connection with the discussed digital collections? Are you a: Technical Administrator Content Administrator Registered User Guest User	

Part B) *(approx. 20 min)*

Tasks	Supervisor's Notes
1. Complete the registration process [at http://bf3.csd.auth.gr] There will be an email in their inbox	Provide the tester with the link: **http://bf3.csd.auth.gr/?ln=el** **NOTES:** a. Home page b. Login page c. Register page d. Click register button *"Registration is not necessary to see the posts."* *The user registered in a later stage because he wanted to make a comment.*

1. Get to a detailed record of a blog post [(Home page + Register/Login page)? + Search a query + Select (click on) a blog post]	**https://bf3.csd.auth.gr/?ln=el** Search using a keyword for anything you are interested in. In the results page, select any blog that looks interesting **NOTES:** a. Home page url b. Register/Login page c. Search a query d. click on a post's link: Detailed record of 1 blog post
2. Show version history of a blog post [(Home page + Register/Login page + Search a query + Select (click on) a blog post)? + click on the Files tab]	**http://bf3.csd.auth.gr/?ln=el** View the "Files" tab of the blog post opened in the previous task. **NOTES:** Home page URL b. Register/Login page c. Search a query d. click on a post's link: Detailed record of 1 blog post e. click on Files Tab
3. View statistics of a post [(Home page + Register/Login page + Search a query + Select (click on) a blog post)? + click on the Usage statistics tab]	**http://bf3.csd.auth.gr/?ln=el** View the "Usage statistics" tab of the blog post opened in the previous task. **NOTES:** a. Home page URL b. Register/Login page c. Search a query d. click on a post's link: Detailed record of 1 blog post e. click on Usage statistics Tab

1. Export a post as one of the available formats [(Home page + Register/Login page)? + Search a query + Select (click on) a blog post + export as]	**https://bf1.csd.auth.gr/?ln=en** Search using a keyword for anything you are interested in. In the results page, select any post that looks interesting **NOTES:** a. Home page url b. Register/Login page c. Search a query d. click on a post's link: Detailed record of 1 blog post e. click on Export as options

Part C) *(approx. 5 min)*

Questions about the repository	Supervisor's Notes
Please elaborate on how well or badly you feel you performed the exercises/solve the tasks set for you?	Excellent.
What aspects of the system supported you to perform the exercises or solve the tasks set for you today?	-Tabs: you can see where you are and the adjacent options. -Search: --only one text box, so directly I saw the results, each record and the similar records --interaction was helpful in order to understand what are the elements of the system
What aspects of the system made it difficult for you to perform the exercises or solve the tasks?	-Loss of language: it changes from Greek to English in different times; loss session info. -Statistics tab: --graph was difficult to understand -Files Tab: regarding the files and the version it is not clear what you see -Export different elements and not the same element in a different format

How could the system be improved?	-Information consistency in the exported formats: --visually there should not be difference -Export as: --clearer phrases (e.g. Export metadata records, Export the reference as BibText) --or minimal (as it is) with a popup to open on hover with an explanation text --it is not visible in its position; it can be in another Tab because it is important in the preservation concept. --exported pdf does not include basic information; link to original post, author, if BlogForever generated it then give info about what was the context of the data e.g. when it was crawled -Registration process: check if username is the same with the password, inform the user is the password is weak/safe -Wrong encoding to the Greek notification letter for the account verification. -Reference links (right sidebar) overlap with the content of the post. -"Files" tab: --Rename it to "Files & Versions". --only version one --all the file names have the same date/time. There is repetition of information so grouping can be applied. --versions refer to the versions of the post content or to versions of the preservation actions performed? --an explanation text should exist to inform the user what he sees. -Keywords and references usually was zero. If they are zero then the tab to be inactive. -"Statistics" tab: --other posts that other users have seen: there were not enough data in order to see how the list will appear if there were more links (ranking?, more?). --graph: captions are not readable --there is not graph for all the posts, maybe a text "Recorded Downloads: 0" should exist. -Some texts are not translated in the Greek language (e.g. texts inside References, Keywords).

Part D) (optional)

Usability Questionnaire

		1	2	3	4	5	6	7		N/A
1. The repository was simple to use	**DISAGREE**					x			**AGREE**	
2. It is easy to find the blog information I needed	**DISAGREE**					x			**AGREE**	
3. Details of the requested archived blog are clear	**DISAGREE**				x				**AGREE**	
4. The information in the repository is clearly organized	**DISAGREE**					x			**AGREE**	
5. I can download the requested information easily	**DISAGREE**				x				**AGREE**	
6. The repository has an efficient search interface engine	**DISAGREE**							x	**AGREE**	
7. The repository has all the functions and capabilities I expect it to	**DISAGREE**					x			**AGREE**	
8. Overall, I am satisfied with this repository	**DISAGREE**					x			**AGREE**	

F. Appendix F – CS1 Re-tests

Features to be retested in BF5	Score in BF1	Score in BF5
RA2 – Correct information in the archive		4
RF4 - Create the adequate bibformat output templates to display blogs and blog posts differently	3	4
RF12 - The archive can import and export METS	3	4
RF11 - The archive web interface is available in many different languages	3	4
RF8 - Export data in the Dublin Core schema	1	5
LR5 – Open source software license is preferable	0	5
RA1 – Recovery of the system	0	Untestable
RF5 - The web interface provides harmonized access to all the content and services offered by the platform and ensures compatibility with major browsers	3	4
RF14 - Descriptive statistics are offered for the archive's full content	0	3
RF15 - User has the option to instantly disseminate archive content in major social web platforms	1	5
RF19 - The archive is accessible for indexing by external search engines	0	5
RF83 - The archive offers a complete range of search options to the user	3	4
RF 86: The archive offers functions to edit metadata	3	3
RF6 - The default interface displays the latest posts added to the archive sorted by date of addition. The same should be available for the latest blog posts of a blog or for any subset of the archive's content.	2	4
RF9 - The archive stores and displays accordingly all the blog and blog post-specific metadata received from the spider, as well as the ones it extracts after post-processing the content.	2	4
SF14 - Capture necessary metadata from crawled content	2	4
DR7 -The spider captures date stamp	1	1 (unable to view spider as administrator)

G. Appendix G – CS2 Re-tests

Feature	Evaluation	Score in BF6
RF31 - The archive offers a complete blog submission interface to submit, modify and delete blogs/posts.	Blog submission appears to be working. Text prompt "Select a document type" is not most appropriate; suggest revising to "select action" and explain more what "refereed" means	4
RF25 - The archive displays the tags of a blog and/or blog post	tags appear to be harvested and displayed properly	4
RF33 - The archive displays only the very basic information for each record.	The archive displays a portion of the information stored. Full access to the record is displayed upon visiting the page of the record itself	4
RF34 - The archive displays and suggests similar content to the user.	The link for "similar posts" is provided. However the search results are empty, presumably due to the search term (recid:xxx)	2
RF35 - The archive displays other blogs that have also been viewed by people that have viewed the current blog.	Link is provided under the "usage statistics" tab. Suggest promoting it in the default tab.	3
RF83 - The archive offers a complete range of search options to the user	Search options provided are adequate. Some options are rather counter-intuitive (e.g. Report number, Collaboration, Journal). Unless explained properly, recommend removing them	3
RF23 - The archive stores the blog post comments	Comments are being archived	4
RF32 - When a user is removed from the archive, their personal data should disappear as well.	Option for removing/deleting the account is not prominent	2
RF37 - The user can navigate through the archive, displaying blogs per topic or category.	Navigating following the "Topics" taxonomy (found on the top of the screen) is not working. Navigating by following tags is working. Blog categorisation is not working	2

H. Appendix H – CS3 Re-tests

CS3 Features	Score in BF3	Score in BF5	Score in BF6
RF31 - The archive offers a complete blog submission interface to submit, modify and delete blogs/posts.	3	All options available at BF5 http://screencast.com/t/UZlBPlcMp	All options available at BF6, http://screencast.com/t/H2RwGhtpT5
RF2 - 'Your History' box as part of the user dashboard.	4		
RF43 - For each record the archive stores the search keywords used to find them	N/A	N/A	As of 06.08.2013, the WP4 task plan shows that apache logs. + Every time I see a record coming from the /search page parse the referrer and extract the search terms. Save those terms in the db (SOME WORK AROUND NEEDED). Requested some screenshots with the search terms stored in the corresponding database. See mantis issue 154
RF51 - The archive is able to search within external sources, to provide users with additional sources of information.	4		
RF59 - Export data using XML (METS, MARC, DC, etc.)	3	All the export options listed worked correctly. See closed issue 107 on 29.07.2013	3
RF62 – Export as PDF, JPEG	1	It does not seem to be an option of exporting in PDF or Jpeg http://screencast.com/t/ZFv2KbbtdYFs	This feature options are not available at BF6 recorded at issue 106 + SRDC working on this feature as of 06.08.2013
RF40 - The archive validates the content received from the	4		

spider.			
RF41 - The archive detects and eliminates spam content.	N/A	N/A at BF5	It has been deployed and issue 155 requests guidance and material to assess its deployment is working as expected (06.08.2013)
RF87 - The archive transforms the SIPS received from the spider to AIPS	2	In discussion with WP4 as part of the preservation testing theme. Other materials and assessments have been requested for this feature as part of the preservation workflow from D3.1	In discussion with WP4 as part of the preservation testing theme. Other materials and assessments have been requested for this feature as part of the preservation workflow from D3.1
RF88 - The archive stores the content of the AIPS in two different databases for preservation purposes	2	In discussion with WP4 as part of the preservation testing theme. Other materials and assessments have been requested for this feature as part of the preservation workflow from D3.2	In discussion with WP4 as part of the preservation testing theme. Other materials and assessments have been requested for this feature as part of the preservation workflow from D3.2
RF46 - The user can create personal collections of their favorite blogs	4		
RF3 - “Share” option in "Your History" box	N/A	4	
RF44 - The archive enables pingback-trackback services	N/A	Not score available http://mantis.cyberwatcher.com:8080/view.php?id=116	Have asked Stella for final score at BF5 to check the need to reproduce at BF6 - Feature is not working 100% from the testers point of view (no score given yet) so further assessments needed within BF6
RF45 - The archive is able to inter-operate with federated search engine dbwiz (SRU Server)	N/A	N/A	3

RF48 - The archive provides the option to translate its content on demand	N/A	4	
RF57 - The archive provides a ranking method based on the user rating of content	2 (CS4) See Mantis issue 121	N/A - Deployed by SRDC in BF6 and tested within CS4	
RF52 - Users can tag archived records with personal tags	N/A	N/A	http://screencast.com/t/vzxhQXUMxG
RF36 - The archive identify and stores the topic of blogs and blog posts to let users navigate through the archive by topic (ALSO IN CS4)	N/A	N/A - Deployed by CERN within BF6	http://screencast.com/t/zaq6AGtShK7
RF78 - The archive displays content after filtering it with user preferences	N/A	Tested by CS5 within BF5	
RF85 - The archive provides support for OpenURL	N/A	4	
[RF50 – The archive offers the option to disseminate newly archived content in external social platforms]	N/A	Not going to be developed - N/A	Not going to be developed - N/A
[RF42 - The archive extracts bibliographic metadata from content embedded in blogs]	N/A	Not going to be developed - N/A	Not going to be developed - N/A
[RF49 - The archive distinguishes institutional/corporate blogs]	N/A	Not going to be developed - N/A	Not going to be developed - N/A

I. Appendix I – CS4 Re-tests

Feature	Score in BF3	Score in BF5	Score in BF6
RF54 - The archive keeps all the different versions of the content in case it is edited or updated	2	N/A	
RF55 - The archive provides advanced APIs for use by developers to interact with the archive's content	N/A	N/A	4
RF56 - The archive stores and displays blog posts' text as well as their comments	3	N/A	3
RF14 - Descriptive statistics are offered by record (old: RF14 - Descriptive statistics are offered for the archive's full content)	3	N/A	
RF57 - The archive provides a ranking method based on the user rating of content RF58 - A user can rank archive content based on specific users' content rating (user they trust)	2		
RF56 - The archive provides a journal view of the new blog posts (RF57)	N/A (feature not deployed)	N/A (feature not deployed)	
RF67 - The archive fetches and stores embedded content	3	3	
RF60 - The archive can export all its content, DB entries and file system for a migration	N/A	5	
RF59 - Export data using XML (METS, MARC)	2(Vangelis), 3(Stella)	N/A	3
RF53 - The archive displays content license information and respects it	N/A	4	

RF61 - The archive ranks blogs based on their views and downloads	N/A [UI does not support searching with ranking methods yet. BibRank module is not working in BF5 since the fix to rank with ""average score"" with Python2.6 has not been installed yet and it prevents running the whole module.]	N/A [Moreover, the page view history is not stored in database properly yet which is another reason that this feature does not work properly.]	[On 12/08/2013 The issue has not been resolved yet. Some problems are fixed (bibrank module works now).]
RF36 - The archive identify and stores the topic of blogs and blog posts to let users navigate through the archive by topic	N/A	N/A (feature not deployed)	
RF63 - The archive keeps snapshots of all the different designs of a blog	4		
RF21 - The archive offers the option to login using SSO / LDAP, RF64 - The archive offers the option to login using external (universal) credentials	N/A	N/A Needs testing in BF6	