planets

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Abstract

This assessment report gives an evaluation of the usage by external users of the central Testbed software. This evaluation is based on a survey set out to 109 people that requested testing access to the Testbed. Of these people nine filled out the survey, two were not completed. This evaluation also refers to the Planets Testbed Review published by Chris Prom on the Practical E-Records website. This report gives recommendations on the future deployment and use of the Testbed software.

Keyword list: Testbed, Evaluation, Experiments, External Usage

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0.1	KB-NL	21/05/2010	Initial draft version
0.2	KB-NL	27/05/2010	Corrected comments by reviewers

References

Ref.	Document	Date	Version	Details
[1]	Project Proposal			
[2]	Annex I- Description of	01-07-2007	1.1	http://www.planets-project.eu/private/planets-

	Work			ftp/docs/contract/PLANETS_033789_DoW_final_draft_v1_1.pdf
[3]	Testbed Use Cases v1.1	19-12-2006	1.1	http://www.planets-project.eu/private/planets-ftp/TB/M1toM18/use_cases/Testbed%20Use%20Cases%20v1.1.pdf
[4]	Testbed Non-functional Requirements	14-12-2006	0.9	http://www.planets-project.eu/private/planets-ftp/TB/M1toM18/NFR/NFR_v0_9.doc
[5]	Testbed Software Requirements	20-02-2007	1.21	http://www.planets-project.eu/private/planets-ftp/TB/M1toM18/SRS/Testbed_software-requirements_v1_21.pdf
[6]	Testbed Design Document	13-04-2007	1.1	http://www.planets-project.eu/private/planets-ftp/TB/M1toM18/ADD/Testbed_design_document_v1.1_al_20070413_final.pdf
[7]	Test-bed Workflow, Checklists and Templates	15-12-2006	0.3	http://www.planets-project.eu/private/pages/wiki/images/d/d3/TB3-D1-D3-v0.3.pdf
[8]	Practical experiences of the Dutch Digital Preservation Testbed	2004		http://www.digitaleduurzaamheid.nl/bibliotheek/docs/Article_in_VINE_2004.pdf
[9]	Prom, Chris, Planets Testbed Review, in: Practical E-Records Blog	May 7, 2010		http://e-records.chrisprom.com/?p=1183

Executive summary

To be of use as a tool for the digital preservation domain it is necessary that more well-documented experiments will be conducted. To conduct such experiments the Planets project created its Testbed. It is a defined as "*a controlled environment for experimentation in digital preservation. It allows for systematic and empirical analysis of existing preservation tools on various digital object types (e.g. text, image, audio, video) and with predefined and well described content (corpora).*"[1]

After development and internal testing, the Testbed was opened up to external partners. The Testbed external usage was conducted gradually. Originally external usage testing was scheduled to begin with the release of Planets Testbed version 0.9 in May 2009. As the developed software was – at that time - in a stage where development issues still had to be addressed and solved, it was decided not to let external users test the software unguided. Therefore it was decided to open up only for a selected group of instutitions and offering them support and guidance from Testbed involved institutions (Peer2Peer testing).

To do this test five of the organisations participating in the Testbed invited individuals form related organisations that were active in the preservation domain for a supported peer to peer test. Eventually this 'Peer2Peer' test has been conducted with four external users[2] (both usability and functionality testing) in June 2009.

This and previous internal tests provided valuable feedback for further development but also showed that the Testbed was not ready to be released entirely to the public in September 2009 as planned. Fall and winter 2009 and 2010 were used to do a major software revision.

The first public beta version (v1.1) was released in February 2010. Its public opening was officially announced at the Planets Outreach event in London (mid-February). The general acceptance on Testbed is very positive. The beta release has certainly met its goals as a proof of concept that testing migrations, emulations and evaluations is possible.

Between February 15th till April 30th 109 external users applied for an account. During the period the Testbed was available to the public, those external users were given an account to access and browse or test the application.
Logfiles show that during the period the application was externally opened 42 different users logged into the Testbed. 28 users logged in only once, twelve users logged in two or three times, one user four times and one user eight times. These 42 users set up a total of 70 experiments. Most of these experiments were not completed.

To examine the users´ satisfaction with the Testbed software a survey has been designed and made available for responding to in the first half of May, 2010. All users that requested a Testbed account have been asked to share their experiences with us through this Survey.
Nine users filled out the survey, two of them did not finish it. One user (Chris Prom [9]) published his review on the Web. His review contains paragraphs on Browsing Services, Browsing Experiments and Conducting Experiments. His findings are included in the sections where relevant.

More than 40 tools are wrapped in the Testbed as services. The number of tools that can be tested has to be extended. Text migration is seen as one of the most important additions wished for. Running and evaluating experiments could be further developed. Documentation is still in need of updating. The application is still in need of improvements to change it into a production platform that can be used generally in the Digital Preservation domain.

The final version 1.2 within the PLANETS framework has been released in April 2010. To be of use as a tool for the digital preservation domain it is necessary that more well-documented experiments will be conducted. Besides being responsible for the preservation of the Software Suite it is recommended to the Open Planets Foundation (OPF) to promote the usage of the Testbed as

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[1] Testbed Key messages, December 2008

[2] German National Library (DNB), Justitiële Infromatiedienst (JustID – NL), DANS (Data Archiving & Networked Services - NL) and Rhenish-Westphalian Business Archives, Cologne (Stiftung Rheinisch-Westfälisches Wirtschaftsarchiv zu Köln)

much as possible, so a growing repository of experiments will become available to the preservation community for studying or repeating experiments.

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1   Role of the document

In the Testbed External Usage report the experience with the practicability and suitability of the tools, services and preservation strategies in organisational environments are being assessed. This report will provide feedback for the Open Planets Foundation (OPF).

During the various stages of Testbed development regular slots have been set up for bug finding, testing the overall usability and the experimentation process.

With the release of version 0.9 of the software in May 2009 of the software a first testing round with external users was planned. As the developed software was still more or less in an Alpha state and many issues still had to be addressed and solved, it was decided not to let external users test the software unguided. To do this test five of the organisations participating in the Testbed invited individuals from related organisations that were active in the preservation domain for a supported peer to peer test.

Eventually this 'Peer2Peer' test has been conducted with four external users (both usability and functionality testing) in June 2009. This and previous internal tests provided valuable feedback for further development but also showed that the Testbed was not ready to be released to the public in September 2009 as was planned. Fall and winter 2009 and 2010 were used to do a major software revision.

The first public beta version was released in February 2010. For testing, studying and experimenting user accounts were made available for the central instance. From February 15th till April 30th 109 users applied for an account.

The final version 1.2 within the PLANETS framework has been released in April 2010.

During the several PLANETS outreach events in 2009 and 2010 the Testbed has been demonstrated to the event participants and hands-on sessions have been conducted. Unfortunately the event participants evaluated the learning sessions but not the tool as such.

A survey has been designed and made available for responding to in the first half of May, 2010. All users that requested a Testbed account have been asked to share their experiences with us through this Survey. In total nine users filled out the survey and one user published his findings in a review on the web [9].

2   Document overview

2.1   Purpose

This Testbed External Usage Report evaluates the usage of the PLANETS Testbed by people outside the project to get an impression on the reception of the tool by the public.

In chapter 2 the purpose and scope of the document are described and the context of the deliverable within the Planets context is explained. Chapter 3 gives an overall description of the Testbed and describes the methodology that was used for the assessment. In chapter 4 the usage of the Testbed is analysed using a questionnaire conducted amongst the users of the Testbed. In chapter 5 conclusions are drawn and some recommendations are made.

2.2   Scope of TB/4

This report is an external deliverable D7 of the Testbed sub-project, work package TB/4: Management and Execution of experiments. The overall objectives of the TB/4 work package encompasses dissemination and outreach activities and provide testing tools and services:.

Work package Objectives

- Enable organizations from the Planets user community to perform general and mass experiments
- Enable memory institutions to test tools and services as a basis for considerations in their preservation planning

Objectives for m37-m48

- Carry out the outreach plan
- Analyse organizational barriers and specific requirements of external organizations
- Gather and compile feedback of external users
- Organize and coordinate Testbed presence at Planets outreach events
- Organize involvement/ notification of external partners in Testbed
- Draft and provide information material for external users

The activities include
- planning of involvement of external institutions
- the compilation and dissemination of information on the Testbed
- drafting and compiling a training program for the Testbed
- tracking community relevant events and publishing articles and papers in cooperation with other Planets work packages.

2.3   Scope of this document

This report evaluates whether, so far, the Testbed meets the expectations of the public active in the preservation domain and therefore its goals as set out in the 'Project Proposal' [1] and the 'Description of Work' [2]. It does so by analysing the external usage of the Testbed. This report will not evaluate technical and design matters, although when evaluating the use of the Testbed, some findings may be the result of technical or design principals.

2.4   Context

This document is based on previous work which was done in the TB/2 and TB/3 work-packages as described in the following documents:

- Testbed Use Cases v1.1 [3]
- Testbed Non-functional Requirements v0.9 [4]
- Testbed Software Requirements v1.21 [5]
- Testbed Design Document v1.1 [6]
- Testbed Workflow, Checklists and Templates v0.3 [7]

The experiences and comments from external users will be input for the Open Planets Foundation. They will provide the OPF with information on how well the Testbed performs and what users still wish for. This will provide valuable input for future actions to enhance the Testbed.

2.5   Definition of terms

This subsection provides the definitions of all terms, acronyms, and abbreviations required to properly interpret the Testbed External Usage report.

Acronym	Definition
PP	Preservation Planning
PA	Preservation Action
PC	Preservation Characterisation
IF	Interoperability Framework
TB	Testbed
DT	Dissemination and Take-up
D	Deliverable

3 Overall description of the Testbed software

3.1 Purpose of the Testbed Software

There is a significant lack of reliable comparative information about the effectiveness of different strategies for preservation, and of the usefulness of tools that are available for supporting digital asset characterisation and preservation actions.

To bridge this gap, Planets has create a framework within which the execution of preservation plans can be tested both before and after implementation, and where tools can be evaluated against a set of transparent, consistent criteria. This framework provides an infrastructure for the empirical evaluation of different preservation plans and for testing and evaluating preservation action and characterisation services. There will be a controlled central research infrastructure, while at the same time providing the opportunity to deploy local Testbed instances.

The Testbed External Usage Report evaluates whether the Testbed has met the expectations of others in the Digital Preservation domain.

3.2 Methodology

3.2.1 Overview of Testbed Software infrastructure

Below a short overview is given of the Testbed Software infrastructure. For more information, see [9].

The first version of the Planets Testbed was released for internal use by the Planets partners in March 2008. After evaluation, review and further development, the Testbed was expected to be released externally in spring 2009. Finally the Testbed was publicly released in February 2010, due to a major revision in the fall of 2009 to incorporate a number of bug fixes and comments made by in and external users during the spring 2009 testing period. The central instance of the Testbed was hosted by HATII at the University of Glasgow. This central version collects experiment results for use by experts in Digital Preservation domain.. A local instance of the Testbed software will be made available as part of the Planets Preservation Suite from the Sourceforge repository.

During the development of the Testbed Software, there were two main demands that needed to be satisfied. The software needed to be platform independent to enable everyone to use the software, regardless of the operating system they use and to enable the testing of tools that run natively on an operating system different from the one the experimenter uses. Also, the Testbed software needed to be a part of Planets infrastructure.

The Interoperability Framework sub-project has been tasked with providing many of the registries and components which would be required by many of the various Planets applications, including Testbed. This approach enabled the Testbed developers to focus primarily on the components that were unique to the Testbed. The Planets infrastructure provides user accounts, security management systems and administration pages for the Testbed Software.

Through access to the Planets infrastructure, experimenters also have access to corpora of data to experiment on. Each corpus contains individual "difficult" objects for the worst-case analysis of a given tool, and large sets of objects of a given type, or very large files, for average-case analysis. This avoids duplication of effort for experimenters who would otherwise have to find and upload their own data.

The steps involved in registering and configuring a service to test with are handled by the Testbed administrator. This enables users to access and use the available services without requiring any knowledge of service configuration.

The availability of the corpora of digital objects is also a necessary basis for the certification of third-party tools, an additional feature that the Planets Testbed might be made available offer when future releases by the Open Planets Foundation. The Testbed not only makes existing, well-known digital preservation tools available, but also presents a unique opportunity to software developers, enabling them to certify their tools against a collection of digital objects, following a strict experiment process, and benefiting from previous experiment results collected in the Testbed database.

3.2.2   Overview Experiment Workflow

To execute an experiment within the Testbed a defined procedure has to be followed. This procedure is based on the NANETH Testbed [8]. The basic procedure for a main experiment is displayed in figure 1. (next page)

Start

1. Define Basic Experiment Properties

Basic Experiment Properties Definition

Responsibility

Experimenter

2. Design Experiment

Experiment Design

Experimenter

3. Define Evaluation Criteria

Evaluation Checklist

Experimenter

4. Go / No go

Declaration of Go / No go

Testbed Administrator

Go

5. Run Experiment

Run Info

System

No go

6. Evaluate Experiment

Experiment Evaluation

Experimenter

Stop

Consider Results

Testbed, Tool and Experiment Recommendations
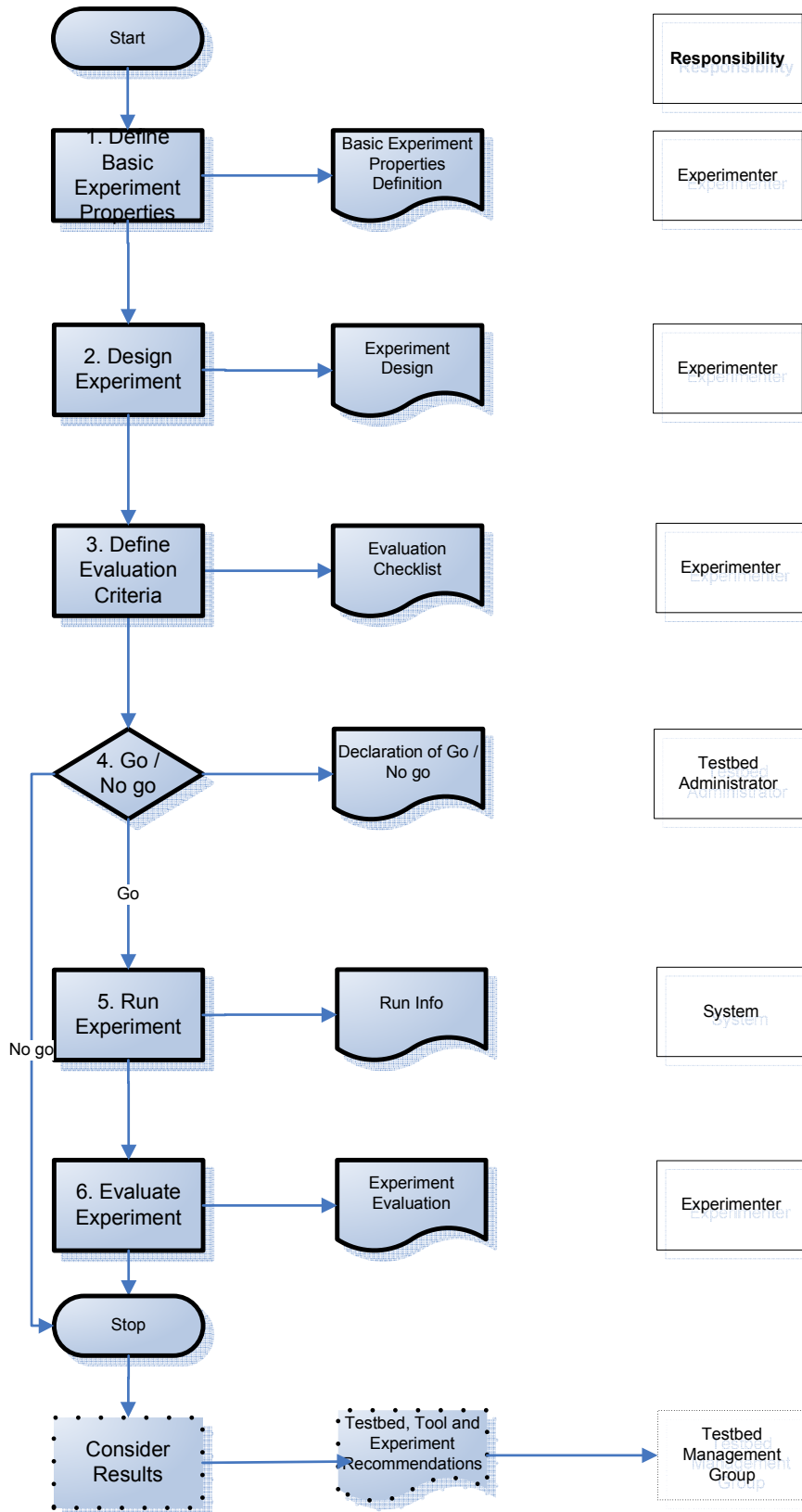
Testbed Management Group

Figure 1: overview workflow experiment. For more details see 'TB/3 -D1v1 (Workflow and Checklist) and D3v1 (Templates)' [7]

Each step has to be fulfilled to successfully execute an experiment.

- In stages 1, 2 and 3 the experiment is designed: definition of experiments and evaluation checklists. This is done by the Experimenter, possibly with help from User Support. The tools to be tested will typically come from PA, PC and PP.

- After these three stages a go / no go decision is made by the Testbed Administrator. This decision is based on the estimated system requirements and the availability of the required storage capacity and processor time.

- In case of a No Go decision, the experimenter is informed and the experiment ends here (though it can be edited and re-submitted). In case of a Go decision, the administrator may schedule the experiment, according to the estimated use of resources, and the next steps are carried out.

- In stages 5 and 6 the experiment is run and evaluated. This is be the responsibility of the Experimenter. Here ends the experiment.

After this, the results can be considered by Readers (and other Experimenters), who can comment on the experiments. The results from the experiments will – at regular times or continuously - feed into information on the services, and can then be used by decision support tools for compiling a preservation plan (not part of the experiment process). Based on the Testbed results, recommendations for refinements and enhancements for future experiments can be made, to propose further experiments, and also to provide input into the evaluation of the Testbed.

The products of each step in the workflow are captured in forms and made available for analysis, reuse or further development. These output products are the sources of information that are used in future iterations of this assessment report.

3.2.3   Forms

When working through the steps of the experiment workflow the experimenter has to fill out several forms to provide all necessary information to decide on the feasibility of the experiment, to control the reproducibility of the experiment and to provide all information needed for the interpretation of the results. The fields for each form are described in 'TB/3-D1v2 (Workflow and Checklist) and D3v1 (Templates)' [7].

The 'Basic Experiment Properties Definition' that is the output of step 1 'Define Basic Experiment Properties' will for example address the following topics:

General information	
Name of the experiment	
Experiment ID	Unique name
Summary	Summary of the experiment.
Contact	Info on person/ institution to contact on this experiment
Purpose	Purpose of experiment
References	
Division of roles	Specify who is involved in this experiment, e.g. who acts as the Scientific Validator for this experiment.
Scope of experiment	Definition of the area to be explored.
Experimental data	
Tool type	What kind of tool is to be tested? e.g. a characterisation tool, tool for objects, tool for environments, tool for workflow, etc.
Object Type	What kind of test objects are used?
Experiment Approach	Short description of the steps of the experiment, e.g. "We will use characterisation tool A on 10 objects Y, then migrate objects using tool B, then use characterisation tool A on transformed records and compare characterisations".
Considerations	Summary of the factors that determined or influenced the Basic Properties Definition(e.g. definition of the scope).

A field such as Object Type will be used to evaluate the usage of the Testbed for different types of objects such as images, text documents, sound etc. All output documents such as definitions, designs, specifications and results that are the result of the different steps in the workflow above, will be stored in the Testbed data registry when the central instance of the Testbed software is used. The 'Software Requirements' document of the Testbed [5] states that it should be possible to 'View Testbed Usage Statistics'. It is possible to automatically generate Testbed usage information from the central Testbed instance.

3.2.4   Websurvey

The application used by the external users comprise versions 1.1, 1.1.5 and 1.2 of the central instance of the Testbed located at http://testbed.planets-project.eu/testbed/.

Up till version 0.5 the local instance was used for testing, but the local instance of the Testbed software does not automatically generate Testbed usage information. Because of this it was decided to use a centrally available version of the software. The software will however be made available for downloading from the Sourceforge website so organisations can install a local instance of the platform in the future.

The questionnaire, found in Appendix A, contained questions dealing with the current and future use of the Testbed Software. This questionnaire was sent out to all 109 applicants for a user account to access the central instance of the platform.

4   Testbed usage

From version 1.1 the Testbed application contained a large range of services which could be tested: for characterisation, migration, and evaluation. It is possible to (re)view experiments by others. Users can set up, conduct and evaluate experiments using digital objects made available through the corpus or by uploading their own objects. Browsing through the services can be done in various ways.

During the period the Testbed was available to the public, 109 external users were given an account to access and browse or test the application. The largest influx of new account requests followed immediately after one of the PLANETS Outreach events had taken place.

Logfiles show that during the period the application was available to the public in total 42 different users logged into the Testbed. 28 users logged in only once, twelve users logged in two or three times, one user four times and one user eight times.

These 42 users set up a total of 70 experiments. Most of these experiments were not completed.

Nine users filled out the survey, two of them did not finish it. One user (Chris Prom [9]) published his review on the Web. His review contains paragraphs on Browsing Services, Browsing Experiments and Conducting Experiments. His findings will be included in the sections where relevant.

4.1   Results from the survey

The survey contains six sections with a total of 39 questions:

1. **Introduction** with two questions on what organisations the respondents represent and how they had learned about the existence of the PLANETS Testbed
2. **Look & Feel** with questions on general layout and usability
3. **General** with questions on future use of the software within the respondent's organisation
4. **Browsing Content** with questions navigation, the transparency and intelligibility of the content
5. **Performing Experiments** with questions on setting up and conducting experiments
6. **Final Comments** with open questions for respondents to give comments they could not submit elsewhere in the survey

Although nine respondents is a relatively significant subset (21.4%) of the 42 external users actually accessing the Testbed application and is an even relatively fair number compared to all 109 applicants (8.25%), it is not sufficient to justify making generalised quantitative statements on how well the Testbed is received within the Digital Preservation community.

On the other hand, given the complex nature of Digital Preservation it may be expected that the users are the better informed in the subject and capable of judging the tool properly. Their reactions and comments therefore are valuable to future developments concerning Testing tools for Digital Preservation Planning in general.

In Appendix A the aggregated results are given, so if appropriate they may be used in future surveys or reviews. Where respondents made further comments or remarks, these were stated below the corresponding question.

4.1.1   Introduction

As was to be expected the respondents to the survey knew of the release of the Planets Testbed application. Most of them had learned about its existence via a PLANETS outreach event or a colleague (eight out of nine). One respondent indicated a newsletter as information source.

Four respondents had an archival background. The categories library and university both scored both two respondents. One respondent came from 'a cultural foundation who manages archives, libraries and a museum network'.

4.1.2   Look & Feel

The general impression on the look and feel and the intuitivity of the navigation is positive. The overall impression scores good or better (five out of eight). The other three respondents scored average. No one scored bad or lower. Button texts were clear (seven out of eight). Context sensitive help and hints were likewise received well. Only one respondent found it difficult to find the documentation and the helpdesk address. Five users made use of the user guide.

4.1.3   General

This section contains questions on the future use in the respondents' organisations. On using the central instance of the Testbed in the future three respondents answered positively. In five cases this was not yet decided. Regarding installing a local instance the reaction was less promising. The answer was either no or not yet decided.

As to the number of people in organisations that are going to do future Testbed experiments, half mentioned one user, for the other half the answer was 'not applicable'. As to the effort in person months to be allocated to Testbed experiments in the future seven out of eight respondents scored 'not applicable'. One respondent stated in his comment that he was disappointed in the number of migration services offered in the current release.

On the question of persons already appointed to do experiments the responses over yes, no and not yet decided are spread more or less evenly. Of these people the majority will be an experimenter.

As said above no generalised quantative statements can be made on the survey results. But the way the questions in this section are answered is an indication that the future usage of the platform is not yet self evident. Future releases of the Testbed will continue to require promotional activity.

4.1.4   Browsing Content

This section shows a mixed outcome. While browsing through experiments it was not clear to everyone what the experiment results and analyses meant. The six step experiment process itself was well understood. The adequacy of services descriptions shows a mixed response. Not everyone understood this.

A large number of services is available, but the list is far from complete (Prom). Although it is possible to wrap new services, this process is found to be difficult. Browsing by file format on the other side was more adequate. 'Browsing Pathways' was found to be useful or very useful (seven out of eight), but the overview of all pathways is considered far less relevant (four out of seven responded 'not really useful')

The performance of the Testbed while browsing was generally found to be good.

Quite some specific remarks and comments were added to questions relating to specific problems respondents encountered that cannot really be generalised. They are included for reference in Appendix A. One group of comments relate to the incompleteness of many experiments. The reason for this is that most experiments conducted were internal to the project for testing purposes. In fact due to the whole software development process since the September 2009 decision to do a major revision of the application, it was not really possible to conduct many full blown experiments. As the releases from V 1.0 onward contain a different way of performing experiments, the experiments conducted before V1.0 could not be kept in the live application and therefore not accessed directly. The results of these previous experiments however are archived together with the older versions of the application.

4.1.5   Performing Experiments

Only six out of nine respondents conducted test experiments. The experiment process in itself was found to be relatively clear. However during execution the respondents had difficulties with various actions. Running and evaluating the experiments scored relatively high. Both migration and emulation experiments were conducted. But on a low scale: five respondents conducted between two and ten migration experiments. Only two did one emulation experiment. Image files were the most used type of objects in experiments.

4.1.6   Final Comments

At the end of his review Chris Prom gives a personal score for the Testbed application which we will cite here:

Prom's "Score" for a Small Archives:

- Installation/configuration/supported platforms: **18/20** web service available can also be installed locally but no instructions at this time.
- Functionality/Reliability: **18/20** a few usability problems with comparator and browsing services
- Usability: **9/10**–very good interface
- Scalability: **9/10**–runs very smoothly now, seems scalable if other services added
- Documentation: **8/10**–Integrated help is very useful; interface is mostly self-explanatory
- Interoperability/Metadata support: **8/10–**can export results to spreadsheet or xml
- Flexibility/Customizability: **4/10**–Looks difficult to add services
- License/Support/Sustainability/Community: **9/10**

Final Score: 83/100

An overall score of 83 on a scale of 100 is positive, but respondents find the many choices for services not very informative and would prefer normal-practice suggestions and predefined experiments. Recommendations as to what services to use would be much appreciated.

In general more migration tools were asked for as well as more process automatisation and mass testing. It was considered positive that the Testbed has a functioning support service.

4.2   Future use

4.2.1   Situation after Version 0.9

Testbed version 1.0 was released at the end of 2009. It was thus far enhanced both in performance, experiment workflow and stability that the release of version 1.1 in February could be made public as the first public beta version. Subsequent versions 1.1.5 and 1.2 have seen serious efforts in debugging.

Some services like i.e. SIARD were not included anymore, due to the lack of time remaining. A list of developments that the Testbed team would like to have implemented during the project if there had been time has been gathered. It is published on the Planets Wiki and will be handed over to OPF[3].

The issues encountered during the Testbed software development process resulted in the relatively late delivery of stable software. This has had a serious effect on the external usage of the application during the process. More well documented and finished experiments are needed in the central instance of the Testbed to be of use in making preservation decisions.

4.2.2   Testbed after the Planets

The Testbed application will be part of the PLANETS Digital Preservation Suite that will be published as Open Source Software under the responsibility of the Open Planets Foundation. Any further developments in the suite will be dependent on future projects. The Testbed will be technically maintained – until further notice – by HATII.

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[3] http://www.planets-project.eu/private/pages/wiki/index.php/TB/2_Setup_and_Maintenance_of_the_Testbed

5   Conclusion and recommendations

From the release of Version 0.9 until the final release of version 1.2 the Testbed application has seen significant improvements in performance, stability, workflow efficiency and functionality.

On average the external users that responded are positive on the Testbed. The beta release has certainly met its goals as a proof of concept that testing migrations, emulations and evaluations is possible.

More than 40 tools are wrapped in the Testbed as services. Although hundreds of tests and experiments have been conducted the larger part of these has been for testing purposes during the various development stages. This resulted in a number of experiments not being completed or well documented. The same seems to be true for the experiments started by the external users. The number of tools that can be tested has to be extended. Text migration is seen as one of the most important additions wished for. Running and evaluating experiments could be further developed. Documentation is still in need of updating.

But the application is still in need of improvements to change it into a production platform that can be used generally in the Digital Preservation domain. To be of use as a tool for digital preservation domain it is necessary that more well documented experiments will be conducted.

Besides being responsible for the preservation of the Software Suite it is recommended to the OPF to promote the usage of the Testbed as much as possible, so a growing repository of experiments will become available to the preservation community for studying or repeating experiments.

Appendix A   PLANETS Testbed User Survey

1. How did you learn about the existence of the PLANETS Testbed?

			Response Percent	Response Count
answered question				**9**
skipped question				**0**
E-mail announcement			0.0%	0
PLANETS outreach event			44.4%	4
Webforum or weblog			0.0%	0
Newsletter			11.1%	1
Colleague			44.4%	4
Other			0.0%	0
Please specify your choice				2

Specification
1. ichim news
2. PLANETS conference, Copenhagen

2. What kind of organisation do you represent?

			Response Percent	Response Count
answered question				**9**
skipped question				**0**
Archive			44.4%	4
Governmental organisation			0.0%	0
Library			22.2%	2
Museum			0.0%	0
Research Institute			0.0%	0
University			22.2%	2
Other (please specify)	we represent a cultural foundation who manages archives, libraries and a museum network		11.1%	1

3. What is your overall impression of the Testbed Interface?

			Response Percent	Response Count
answered question				**8**
skipped question				**1**
Very good			12.5%	1
Good			50.0%	4
Average			37.5%	3
Bad			0.0%	0
Very bad			0.0%	0
Comment				1

Comment
Hi, the testbed services have recently been reduced so as to no longer include e.g. migration from word to pdf and pdf A as presented/documented and experimented on during our London workshop.
Integration with Plato preservation plans not transparent, e.g. I wanted to upload my Plato PP for

the requirements and could not figure out how to do this. ... Guidelines seem to be out of step with actual testbed version.

4. Do you find the navigation (button and menu texts) intuitive enough in general for understanding what to expect before clicking an option?

		Response Percent	Response Count
answered question			**8**
skipped question			**1**
Yes		87.5%	7
No		12.5%	1
Comment			1

Comment
Generally yes, but as the navigation is not explained, it is not always intuitive what download raw results mean (e.g. CVS or batch format)

5. Was the content of the page in general in accordance with the button or menu text after clicking an option?

		Response Percent	Response Count
answered question			**8**
skipped question			**1**
Yes		87.5%	7
No		12.5%	1
Comment			1

6. Are the explanations and hints in the various Testbed pages clear to you?

		Response Percent	Response Count
answered question			**7**
skipped question			**2**
Yes		100.0%	7
No		0.0%	0
Comment			1

7. How easy was it for you to find the documentation (application help texts) and where to send your questions?

		Response Percent	Response Count
answered question			**8**
skipped question			**1**
Very easy		12.5%	1
Easy		50.0%	4
Average		25.0%	2
Difficult		12.5%	1
Very difficult		0.0%	0
Didn't find it		0.0%	0
Comment			0

8. Did you use the user guide?

		Response Percent	Response Count
answered question			**8**
skipped question			**1**
Yes		62.5%	5
No		37.5%	3

If yes, what is your impression of its quality, the adequacy of the explanations? What information did you miss? 2

Comments
1. Briefly consulted the manual, but looked good.
2.Good explanation and figures/ screen shots but appears to be out of sink with test bed version (same problem with Plato).

9. Is your organisation planning to use the central instance of the Testbed?

		Response Percent	Response Count
answered question			**8**
skipped question			**1**
Yes		37.5%	3
No		0.0%	0
Not yet decided		62.5%	5
Comment			1

Comment
While I had been enthusiastic about Planets and the testbed a few months ago, it currently has quite a number of major problems... and does not offer basic migration services.

10. How much effort (in terms of person months, if possible) are you planning to allocate to Testbed experiments in the next year?

		Response Percent	Response Count
answered question			**8**
skipped question			**1**
1		12.5%	1
2-6		0.0%	0
6-12		0.0%	0
12-24		0.0%	0
More		0.0%	0
N/A		87.5%	7
Comment			1

Comment
½

11. Is there a person or are there persons already appointed to do Testbed experiments in your institution?

		Response Percent	Response Count
answered question			**8**
skipped question			**1**
Yes		37.5%	3
No		37.5%	3
Not yet decided		25.0%	2

11. Is there a person or are there persons already appointed to do Testbed experiments in your institution?

Comment	0

12. Is your organisation planning to install a local instance of the Testbed?

answered question		**8**
skipped question		**1**
	Response Percent	**Response Count**
Yes	0.0%	0
No	37.5%	3
Not yet decided	62.5%	5
Comment		0

13. How many users in your organisation will be expected to use the Testbed locally?

answered question		**8**
skipped question		**1**
	Response Percent	**Response Count**
1	50.0%	4
2-5	0.0%	0
6-10	0.0%	0
11-20	0.0%	0
more	0.0%	0
N/A	50.0%	4

14. What roles will these users perform (as used within the Testbed application)?

answered question		**7**
skipped question		**2**
	Response Percent	**Response Count**
Reader	14.3%	1
Experimenter	71.4%	5
Admin	42.9%	3
General user	14.3%	1
Comment		0

15. When browsing through experiments, how well did you understand what was done, what the results and the analyses of the results was about?

answered question		**8**
skipped question		**1**
	Response Percent	**Response Count**
Very well	12.5%	1
Well	50.0%	4
Doubtful	37.5%	3
Badly	0.0%	0
Very badly	0.0%	0
Incomprehensible	0.0%	0
Please explain your experience in more detail		1

Comment
many experiments were basically aborted and sample files are very difficult to find in testbed in order to check on files and perhaps use them to verify experiments.

16. Is the six step experiment process clear enough?

| | **answered question** | **8** |
| | **skipped question** | **1** |

		Response Percent	Response Count
Very clear		37.5%	3
Clear		50.0%	4
A little clear		12.5%	1
Unclear		0.0%	0
Very unclear		0.0%	0
Please explain your experience in more detail			0

17. What is your opinion on the performance while browsing the Testbed?

| | **answered question** | **7** |
| | **skipped question** | **2** |

		Response Percent	Response Count
Very good		0.0%	0
Good		85.7%	6
Mediocre		0.0%	0
Bad		0.0%	0
Very Bad		14.3%	1
Please explain your experience in more detail			1

do not understand the question

18. When browsing through 'Services', did you find the service descriptions adequate?

| | **answered question** | **6** |
| | **skipped question** | **3** |

		Response Percent	Response Count
Very adequate		0.0%	0
Adequate		50.0%	3
Mediocre		16.7%	1
Insufficient		16.7%	1
Very insufficient		16.7%	1
Please explain your experience in more detail			4

Details
1. E.g. service parameters are not listed although the service provides a list of valid parameters and values (I know the ones I implemented does that). In short; The service description should show *all* the information returned by the describe() method of a migration service.
2.You need quite a level of technical expertise to understand the service descriptions (starts with simple terms such as 'characterize to wrapper etc). As suggested previously, a thesaurus/dictionary of terms might help. Otherwise, I have to admit, most archivists who are not digital professionals will chose randomly and not based on quality of service
3.Difficult to decipher what the services actually helped do and what the differences between similar services were, i.e. what is the advantage of service A over service B, when both are characterised as the same type?
4.There is still some work necessary to more meaningfully describe the services. In some cases I had to use the service first in order to understand what it does, which was more of a waste of time than an "experience".

19. When browsing through 'Service by format', was the explanation adequate?

		Response Percent	Response Count
answered question			**8**
skipped question			**1**
Very adequate		0.0%	0
Adequate		62.5%	5
Mediocre		25.0%	2
Insufficient		0.0%	0
Very insufficient		12.5%	1
Please explain your experience in more detail			3

Details
1. The list does not provide information about the output formats. E.g. the entry with "dia" as the input format, correctly suggests using the Dia migration service. However, the list entry also specifies the Dia migration service as the output format!
2.generally a bit better but it is unclear what output means as so few are listed and include e.g. services such as Im4JavaImageMagickMigrate
3.List should be alphabetical by extension, not by name. If I have an XLS file, I don't want to bother remembering that it's filed under M for Microsoft.

20. How useful do you find 'Browsing Pathways'?

		Response Percent	Response Count
answered question			**8**
skipped question			**1**
Very useful		37.5%	3
useful		50.0%	4
Not really useful		12.5%	1
Useless		0.0%	0
Very useless		0.0%	0
Please explain your experience in more detail			3

Details
1. Works completely as expected. File formats and versions seem to be correct.
2.It would be very useful but if you look at today's instance, most inputs have no pathways as no services connected to it.
3.Again: no way to decide which of several services to use; this implies PLANETS think they're equally good, but no way to ascertain if that is actually the case

21. How usefull is the overview of 'All Pathways' to you?

		Response Percent	Response Count
answered question			**7**
skipped question			**2**
Very useful		0.0%	0
Useful		42.9%	3
Not really useful		57.1%	4
Useless		0.0%	0
Very useless		0.0%	0
Please explain your experience in more detail			1

Detail
It is impossible to get an overview over the immense list and that will get worse in the future as new services get added.

22. Did you perform any experiments?

answered question		**8**
skipped question		**1**

	Response Percent	Response Count
Yes, you will be directed to page 5 Performing Experiments	75.0%	6
No, you will be directed to page 6 Final Comments	25.0%	2

23. Were the steps of the experiment design proces clear?

answered question		**6**
skipped question		**3**

	Response Percent	Response Count
Very clear	33.3%	2
Clear	50.0%	3
Doubtful	16.7%	1
Difficult	0.0%	0
Incomprehensible	0.0%	0

24. Did you have any problems executing experiments with the Testbed application?

answered question		**5**
skipped question		**4**

	Response Percent	Response Count
With defining experiments	20.0%	1
With selecting tools	40.0%	2
With selecting data	20.0%	1
With selecting evaluation criteria	20.0%	1
With running the experiment	60.0%	3
With cancelling experiments	40.0%	2
With the feedback received	20.0%	1
With the evaluation of experiments	60.0%	3
With managing the data	0.0%	0
With uploading data	20.0%	1
Other (please specify)	20.0%	1

25. What type of experiments did you perform?

answered question		**6**
skipped question		**3**

	Response Percent	Response Count
Migration	100.0%	6
Emulation	50.0%	3
Execution of preservation plan	16.7%	1
Other (please specify)	0.0%	0

26. How many experiments did you perform?

answered question 6
skipped question 3

	1	2-10	11-20	21-50	more	N/A	Response Count
Migration	0.0% (0)	83.3% (5)	16.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	6
Emulation	66.7% (2)	0.0% (0)	0.0% (0)	33.3% (1)	0.0% (0)	0.0% (0)	3
Execution of preservation plan	0.0% (0)	100.0% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	1
Other	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	100.0% (1)	1

27. What type of objects did you use?

answered question 6
skipped question 3

	Response Percent	Response Count
Text	50.0%	3
Image	100.0%	6
Sound	16.7%	1
Video	16.7%	1
Other (please specify)	16.7%	1

28. What evaluation criteria were used for each experiment?

answered question 2
skipped question 7

	Response Percent	Response Count
Migration	100.0%	2
Emulation	100.0%	2
Execution of preservation plan	0.0%	0

29. How many experiments were fully documented by you?

answered question 6
skipped question 3

	1	2-10	11-20	21-50	more	N/A	Response Count
Migration	16.7% (1)	50.0% (3)	0.0% (0)	0.0% (0)	0.0% (0)	33.3% (2)	6
Emulation	0.0% (0)	0.0% (0)	50.0% (1)	0.0% (0)	0.0% (0)	50.0% (1)	2
Execution of preservation plan	0.0% (0)	100.0% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	1
Other	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0

30. How many objects were tested in a single experiment?

answered question		**6**
skipped question		**3**

	Response Percent	Response Count
1	16.7%	1
2-10	83.3%	5
11-20	0.0%	0
21-50	0.0%	0
51-100	0.0%	0
101-500	0.0%	0
When more than 500, please specify	0.0%	0

31. How many objects were tested by type of experiment? More choices possible.

answered question		**5**
skipped question		**4**

	1	2-10	11-20	21-50	51-100	101-500	more	N/A	Response Count
Migration	20.0% (1)	100.0% (5)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	5
Emulation	66.7% (2)	0.0% (0)	33.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	3
Execution of preservation plan	0.0% (0)	100.0% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	1
Other	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	100.0% (1)	1

32. How easy did you find the selection interface for selecting digital objects from the corpus?

answered question		**6**
skipped question		**3**

	Response Percent	Response Count
Very easy	16.7%	1
Easy	33.3%	2
Average	16.7%	1
Difficult	16.7%	1
Very difficult	16.7%	1
Please explain your experience in more detail		1

33. Did you upload your own files to experiment with?

answered question		**6**
skipped question		**3**

	Response Percent	Response Count
Text	50.0%	3
Image	100.0%	6
Video	16.7%	1
Sound	16.7%	1
None	0.0%	0
Other (please specify)	0.0%	0

34. Please indicate your opinion on the possibilities for analysing results.

answered question	**1**
skipped question	**8**

Response Count

1

none (were just getting familiar with the Testbed)

35. Please indicate your opinion on the possibilities for evaluating the experiment.

answered question	**1**
skipped question	**8**

Response Count

1

none (were just getting familiar with the Testbed)

36. Do you know of any preservation tools (developed either by your organisation or another party) which could be wrapped as services and deployed to the Testbed application?

answered question	**4**
skipped question	**5**

	Response Percent	Response Count
Yes	0.0%	0
No	100.0%	4
Please describe the tool(s)		0

37. If you (or your organisation) developed any preservation tools, are you willing to make them available in future releases of the Testbed?

answered question	**3**
skipped question	**6**

	Response Percent	Response Count
Yes	66.7%	2
No	33.3%	1
If Yes, please mention the tool(s) and information on how to contact you		0

38. Do you have any suggestions for the improvement of the Testbed application?

answered question	**4**
skipped question	**5**

Response Count

4

Suggestions
1. While waiting for the experiment to finish, the progress bar pretty quickly reached 100% and the screen kept flickering which led me to believe the application had crashed. It appeared too be "normal" behaviour. The Grate tool did not work.(Used Firefox 3.5 & Windows)
2. It is great that the testbed has a functioning support service. None of the other Planets suite tools   have.
My suggestions can be implied by my answers.
3. More migration services are necessary as well as more automation for en mass testing
4. I'd like to see more predefined experiments and normal-practice suggestions. In short, tell me what to do, don't expect me to figure it out on my own. The many many choices for services is not very informative to me, I'm just looking for some trustworthy authority to guide my hand.

Recommendations as regards to services would be appreciated - which handles what files better? I suppose it goes against the idea or philosophy of a testbed, where users are supposed to muck about with their own, specific files to find individually customed solutions. Nevertheless, I'm not interested in going through the whole documentation process, just to (say) compare a handful of tiffs. A page of easy, predefined and common experiments would be helpful.

39. Do you have any final remarks/comment you could not convey to us in the previous questions?	
answered question	**1**
skipped question	**8**
	Response Count
	1

Comment
It could be a great tool ... if it actually covered more than some image files. Most text migration tools used too many chain migration steps to not be a problem.