



Testbed – A brief recap

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Goal of the Testbed

- ❑ Understand which tools serve best digital preservation needs
- ❑ Enable informed decisions on the applicability of tools in various settings



Objective - No value judgement

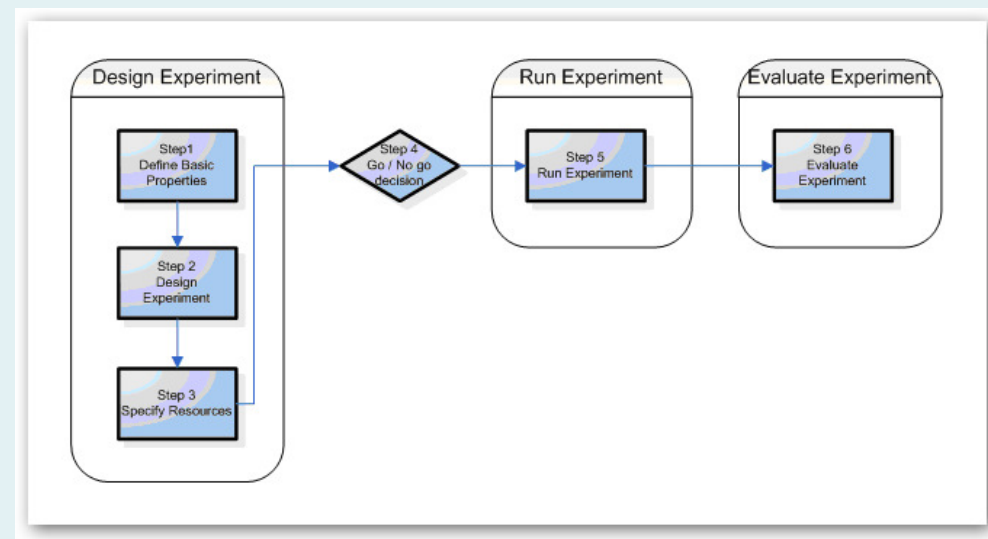
- ❑ The performance of the tool is captured -"objectively"
 - Same settings for all experiments
 - Same workflow
 - Annotated data (Corpora)

- ❑ Usability of outcome is attached to specific needs
 - Is it ok to keep the text but lose the layout?
 - You can use your neighbour's results

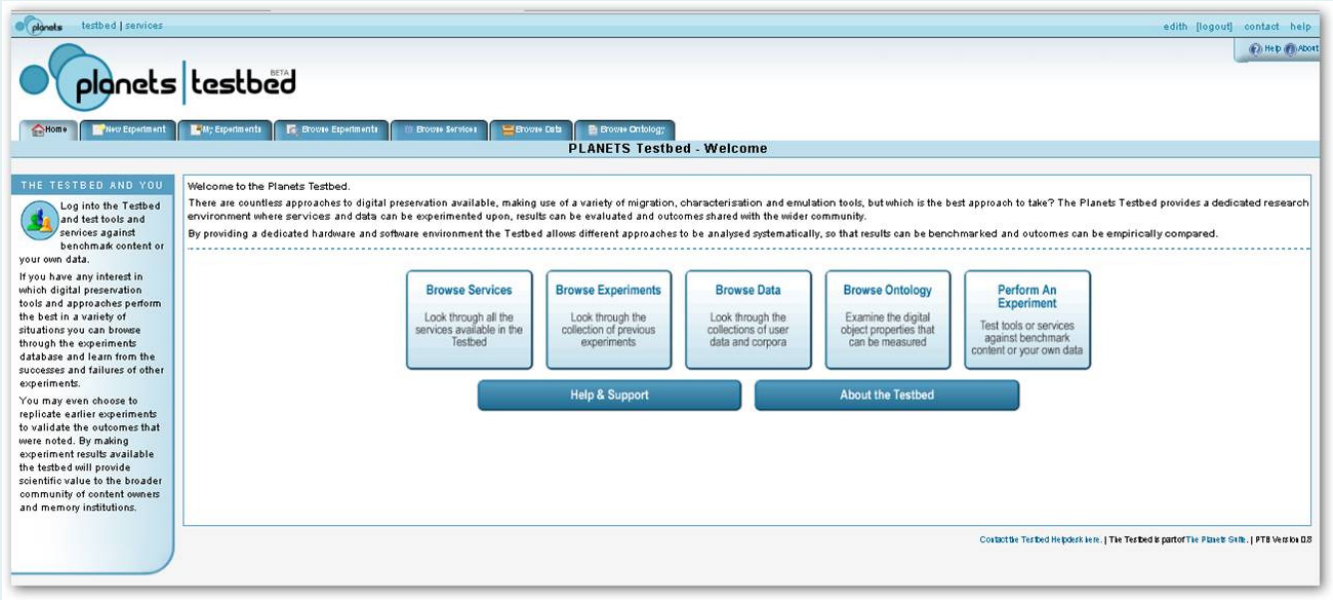


Testbed components - Workflow

- Every experiment follows a fixed experimentation workflow that consists of six steps:



Testbed Welcome page



The screenshot displays the Planets Testbed Welcome page. At the top, the Planets logo and 'testbed BETA' are visible. A navigation bar includes links for Home, New Experiment, My Experiments, Browse Experiments, Browse Services, Browse Data, and Browse Ontology. The main heading is 'PLANETS Testbed - Welcome'. On the left, a sidebar titled 'THE TESTBED AND YOU' provides information about logging in, benchmarking content, and replicating experiments. The main content area features a welcome message and five interactive buttons: 'Browse Services', 'Browse Experiments', 'Browse Data', 'Browse Ontology', and 'Perform An Experiment'. Below these are 'Help & Support' and 'About the Testbed' buttons. The footer includes the European Union flag, the Planets logo, and contact information.

planets testbed services

edit | logout | contact | help

PLANETS Testbed - Welcome

THE TESTBED AND YOU

Log into the Testbed and test tools and services against benchmark content or your own data.

If you have any interest in which digital preservation tools and approaches perform the best in a variety of situations you can browse through the experiments database and learn from the successes and failures of other experiments.

You may even choose to replicate earlier experiments to validate the outcomes that were noted. By making experiment results available the testbed will provide scientific value to the broader community of content owners and memory institutions.

Welcome to the Planets Testbed.

There are countless approaches to digital preservation available, making use of a variety of migration, characterisation and emulation tools, but which is the best approach to take? The Planets Testbed provides a dedicated research environment where services and data can be experimented upon, results can be evaluated and outcomes shared with the wider community.

By providing a dedicated hardware and software environment the Testbed allows different approaches to be analysed systematically, so that results can be benchmarked and outcomes can be empirically compared.

Browse Services
Look through all the services available in the Testbed

Browse Experiments
Look through the collection of previous experiments

Browse Data
Look through the collections of user data and corpora

Browse Ontology
Examine the digital object properties that can be measured

Perform An Experiment
Test tools or services against benchmark content or your own data

Help & Support **About the Testbed**

Contact the Testbed Helpdesk here | The Testbed is part of the Planets Grid | PTS Version 0.05

European Union flag

planets

Testbed Welcome page



Testbed Welcome page



Step 1 – Define basic properties

The screenshot shows the 'planets testbed' web interface for creating a new experiment. The page is titled 'PLANETS Testbed - New Experiment - 1. Define Basic Properties'. On the left, an 'EXPERIMENT PROGRESS' sidebar lists six steps: 1. Define Basic Properties (active), 2. Design Experiment, 3. Specify Outcomes, 4. Experiment Approval, 5. Run Experiment, and 6. Evaluate Experiment. The main form area contains several sections: 'General Information' with fields for 'Experiment Name' and 'Summary' (both with a 'Test Titled' placeholder); 'Participant' with an 'Email' field; 'Contact Information' with fields for 'Contact Name', 'Contact Email', 'Contact Tel', and 'Contact Address'; 'References' with an 'External Reference ID' field and a list of 'Experiment References' (currently empty); 'Literature References' with a table for 'Description', 'URL', 'Title', and 'Author' (currently empty); and 'Further Information' with fields for 'Purpose', 'Focus', 'Experiment Scope', and 'Considerations'. At the bottom, there is a 'Comments on Test Titled' section with a text area and a 'Add a new comment on this experiment' button. Navigation buttons at the top right include 'Save', 'Save experiment & continue to Stage 2', 'edit', 'print', 'contact', and 'help'. A footer at the bottom right reads: 'Copyright: Testbed is part of the Planets project. | The Testbed is part of the Planets project. | Planets version 0.1'.



Step 1 – Define basic properties

- ☐ Gather information about user
- ☐ Describe purpose and focus of experiment
- ☐ Give reference to previous relevant experiments



Step 2 – Design experiment

The screenshot shows the PLANETS Testbed web interface for 'Test TIFF-PNG' at Stage 2: Design Experiment. The interface includes a top navigation bar with links for 'edit', 'logout', 'contact', and 'help'. Below this is a sub-header with 'PLANETS Testbed - Test TIFF-PNG : Stage 2: Design Experiment'. The main content area is divided into several sections:

- EXPERIMENT PROGRESS:** A vertical list of steps: 1. Define Basic Properties (checked), 2. Design Experiment (active), 3. Specify Outcomes, 4. Experiment Approval, 5. Run Experiment, and 6. Evaluate Experiment.
- TESTBED FTP AREA:** A section explaining that users can upload data to the Testbed FTP area using details provided during registration.
- CONNECTION DETAILS:** A section showing the host name 'ftp://testbed.planets-project.eu' and port number '21'.
- Experiment Design:** A section with a dropdown menu for 'Experiment Type' and a 'Select...' button.
- Digital Objects:** A section for adding digital objects to the experiment. It includes a 'Select Data from the Data Registry' button, an 'Upload Data' section with a 'Durchsuchen...' button and an 'Add' button, and a 'Specified input data:' section with instructions on how to use the buttons.

At the bottom of the main content area, there are three buttons: 'Save As...', 'Save', and 'Save experiment & continue to Stage 3'. Below this is a 'Comments on Test TIFF-PNG' section with a text input field and a link to 'Add a new comment on this experiment'.



Step 2 – Design experiment

- ❑ Choose experiment type:
 - Characterisation
 - Migration
 - Emulation
 - (Mass migration)
 - (Execute Preservation Plan)
- ❑ Select relevant services
- ❑ Choose/ upload data (-> from corpora / own material)



Step 3 – Specify outcomes

PLANETS Testbed - Test TIFF.PNG: Stage 3: Specify Outcomes

EXPERIMENT PROGRESS

- 1. Define Basic Properties ✓
- 2. Design Experiment ✓
- 3. Specify Outcomes
- 4. Experiment Approval
- 5. Run Experiment
- 6. Evaluate Experiment

3. Specify Outcomes

Automatically Measurable Experiment Properties

These are properties that the Testbed can automatically measure during your experiment.

Experiment Stage	Measure	Type	Name	Unit
Characterise Before Migration	<input checked="" type="checkbox"/>	Digital Object	The size of the Digital Object	bytes
Migrate	<input checked="" type="checkbox"/>	Service	The identification method	
Characterise After Migration	<input checked="" type="checkbox"/>	Digital Object	The format of the Digital Object	
Stage: Characterise Before Migration	<input checked="" type="checkbox"/>	Service	Service succeeded	
Characterise before migration	<input checked="" type="checkbox"/>	Service	Service execution time	seconds

Manually Measurable Experiment Properties

These are the selected properties that the Testbed cannot automatically measure during your experiment, and so must be measured manually instead.

How to add manually measured properties:

1. Click on 'open digital object property selector'
2. Browse the ontology of properties to find those you would like to manually measure
3. Copy each property to your clipboard by either double-clicking on it or drag and dropping it into the clipboard
4. For each property click on the 'true' button to select which stage of the workflow you'd like to measure the property (if your experiment only uses one service select 'true' for this)
5. Once you have added all required properties and specified where they are to be measured click the 'add to experiment' button.

Experiment Stage	Measure	Type	Name	Unit
Characterise Before Migration				
Migrate				
Characterise After Migration				
Stage: Characterise Before Migration				
Characterise before migration				

open digital object property selector

Save As... Save Save and submit for approval

Comments on 'Test TIFF.PNG'

Add a new comment on this experiment



Step 3 – Specify outcomes

- ❑ Specify which properties to measure
e.g. Migration -> Runtime
- ❑ Define properties to evaluate experiment



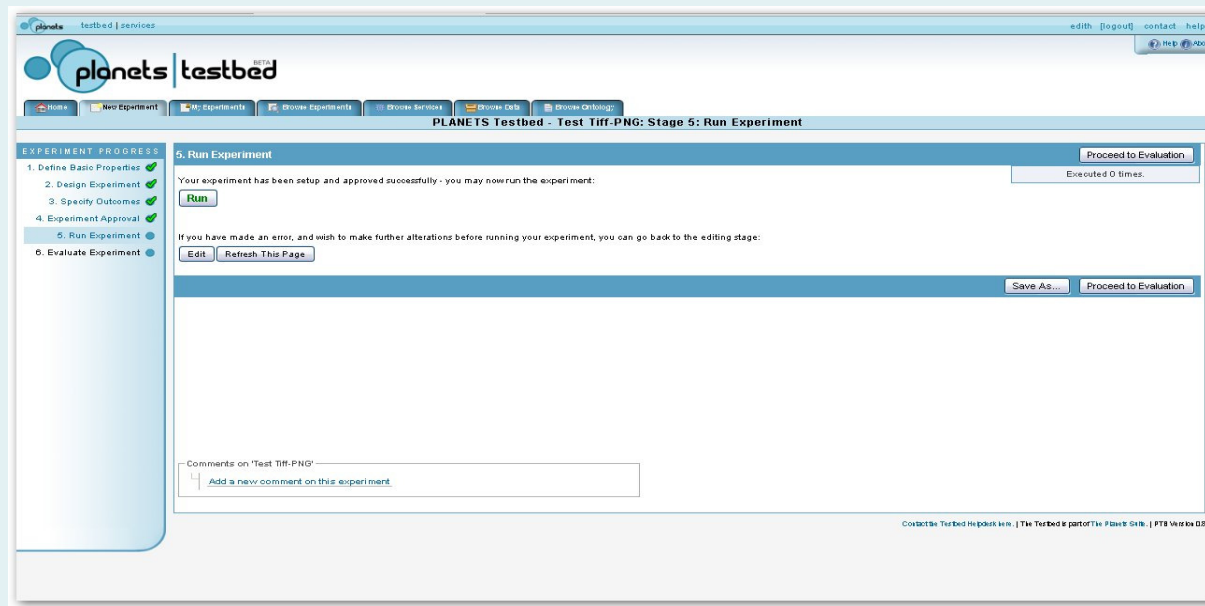
Step 4 – Experiment approval

AUTOMATICALLY EXECUTED

- ❑ Submit experiment for approval (Go/No-Go)
 - Modest resources: Automatically approved and executed
 - Significant resources: Administrator can prevent experiment to execute



Step 5 – Run experiment



Step 5 – Run experiment

- ❑ Start execution of experiment
 - Re-run experimenti if applicable
- ❑ Get results of experiment (Runtime etc.)



Step 6 - Evaluate

The screenshot displays the PLANETS Testbed web interface at the 'Evaluate Experiment' stage. The interface includes a navigation bar with links like 'Home', 'New Experiment', 'My Experiments', 'Browse Experiments', 'Browse Services', 'Browse Data', and 'Browse Outbody'. A sidebar on the left shows the 'EXPERIMENT PROGRESS' with steps 1 through 6, where step 6 is highlighted. The main content area is titled '6. Evaluate Experiment' and contains several sections:

- Property Evaluation:** A text block explaining the evaluation process and a table of results.
- Experiment Overall Evaluation:** A section for calculating an overall success indicator.
- Property Weights:** A section with sliders for 'Service execution time' and 'Service succeeded'.
- Experiment Overview:** A section providing a summary of the experiment's status.
- Experimental Report:** A section for writing a summary of the experiment.

Table 1: Input Digital Objects Record

record	1 id
g10n3p0d4.tif	

Table 2: Property Information

name	unit	Experiment Execution Measurements	Runs	Property Evaluation
Service execution time	seconds	Characterize Before Migration: 7.04	Characterize After Migration: 7.051	no evaluation
Service succeeded		Characterize Before Migration: false	Characterize After Migration: true	no evaluation

Table 3: Experiment Overall Evaluation

Property Weights	Experiment Overview	Experimental Report
overall weights Service execution time Service succeeded	experiment indicator The experiment's measured objectives have been evaluated with the overall score of -1 and took into account: 0 evaluated records. 2 still not evaluated records. Additional aggregators can be computed after the experiment has been finished.	Please provide a short written summary on this experiment. What went well/bad, which expectations were met, which experiment to follow-up. Title: Test summary Report: Testbed is great



Step 6 - Evaluate

- ❑ Get an experiment overview
- ❑ Explore results in detail
 - Automatically
 - Manually
- ❑ Evaluate experiment

