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# **Planets Testbed User Guide for Experimenters**

Using Testbed version 0.8

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## Document Control

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## 1 Introduction

This document is a guide to the Planets Testbed version 0.8 for Experimenters. This is the first version of the Testbed to be made available to users beyond the Planets consortium and although it is still technically a 'beta' release the software is stable, feature-rich and fully usable by both Planets members and others who have an interest in testing preservation tools and strategies within a controlled environment.

The user guide gives an overview of the main features of the Testbed, it presents a complete walkthrough of a sample experiment and highlights some of areas where Testbed development will be heading in later releases.

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## 2 System Requirements

The Planets Testbed is a web-based application and it should be possible to access it using any of the mainstream web browsers such as Firefox, Internet Explorer (version 7 or higher is recommended) or Safari. Your browser must have Javascript and cookies enabled in order to successfully log into the Testbed. Most browsers generally have Javascript and cookies enabled by default.

There are no other hardware or software requirements, although the speed of your internet connection will have an impact on the responsiveness of the Testbed. It is not recommended that you try to use the Testbed if using a dial-up modem, for example. Your screen resolution will also affect the usability of the Testbed. It is recommended that a resolution of at least 1024x768 is used when viewing the Testbed.

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## 3 Requesting a User Account

In order to access the Testbed you will need a user account. There are two types of user account, and you may sign up for either type:

1. An **Experimenter** account: This account will let you run your own experiments and upload your own data as well as enabling you to view other user's experiments and all other Testbed information.
2. A **Reader** account: This account will let you view other user's experiments and all other Testbed information, but you will not be able to run your own experiments or upload your own data.

In order to request a new user account please email the Testbed Helpdesk: [helpdesktb@planets-project.eu](mailto:helpdesktb@planets-project.eu) and specify which type of user account you would like. The helpdesk is staffed during office hours and your enquiry should be dealt with within one working day.

**Note:** If you wish to change your account type at a later date simply email your request to the helpdesk and the necessary changes will be made as soon as possible.

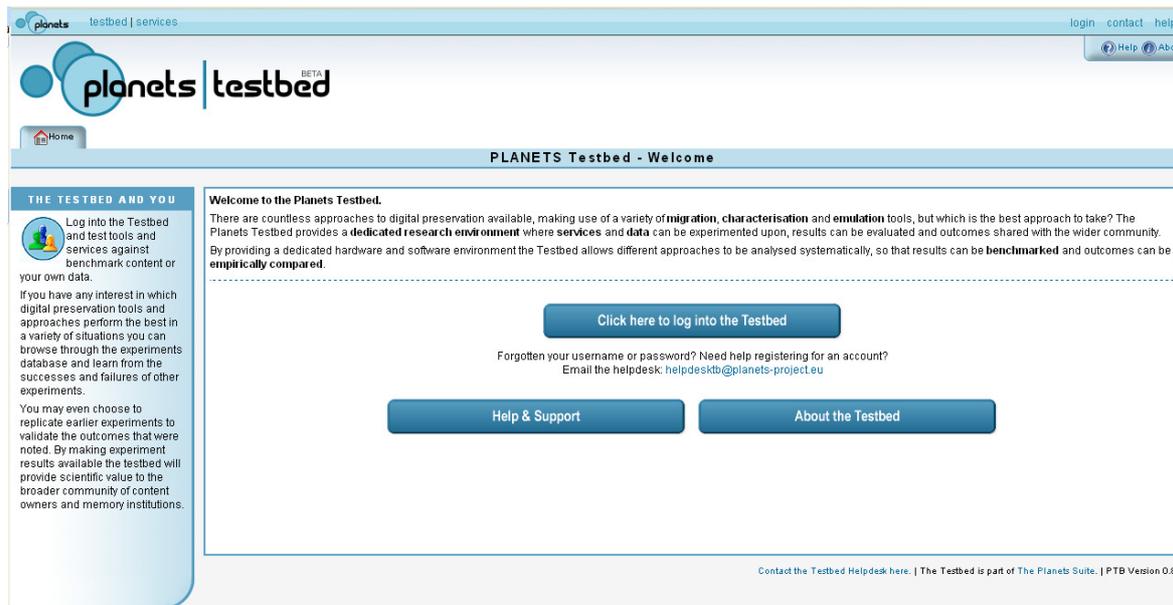
The documentation contained in this user guide covers all of the features available to the **Experimenter** user type. The facilities that are available to **Reader** users are a subset of the Experimenter features; therefore reader users may also consult the appropriate sections of this guide.

## 4 Loading the Testbed

Once you have received your Testbed user account details open your web browser and go to the following web page:

<http://testbed.planets-project.eu/testbed/>

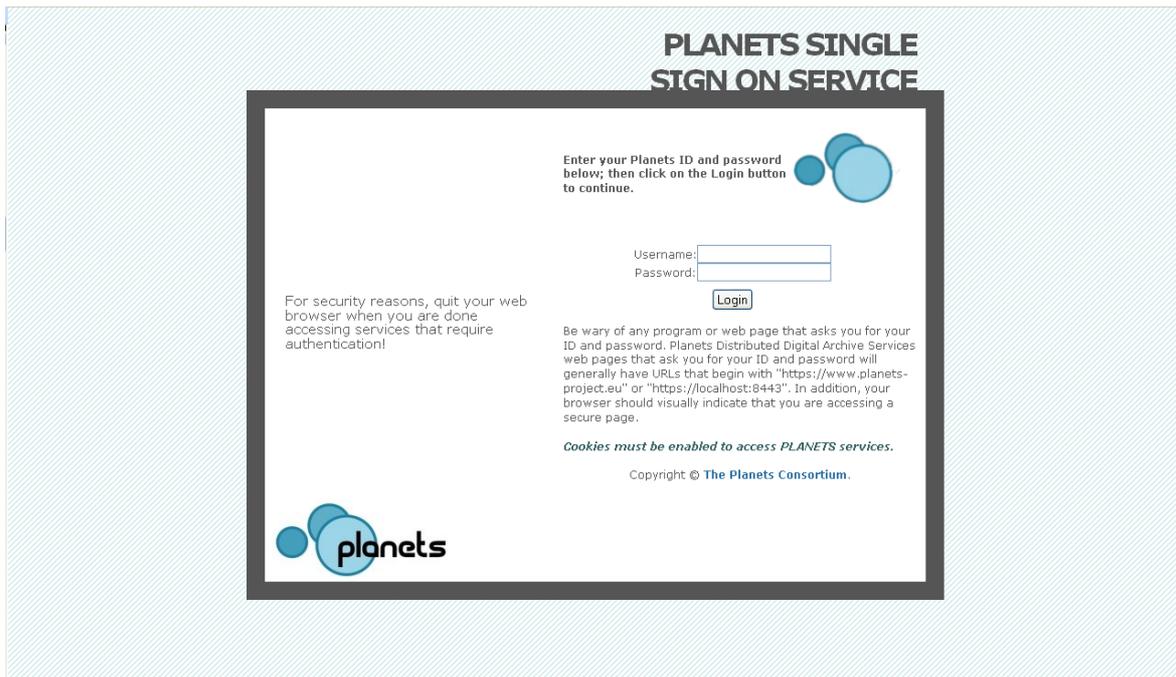
This should load a page similar to the following screenshot:



Screenshot 1: Testbed Welcome page

## 5 Logging in

To log into the Testbed click on the button labelled '**Click here to log into the Testbed**' on the welcome page. The following page should load:



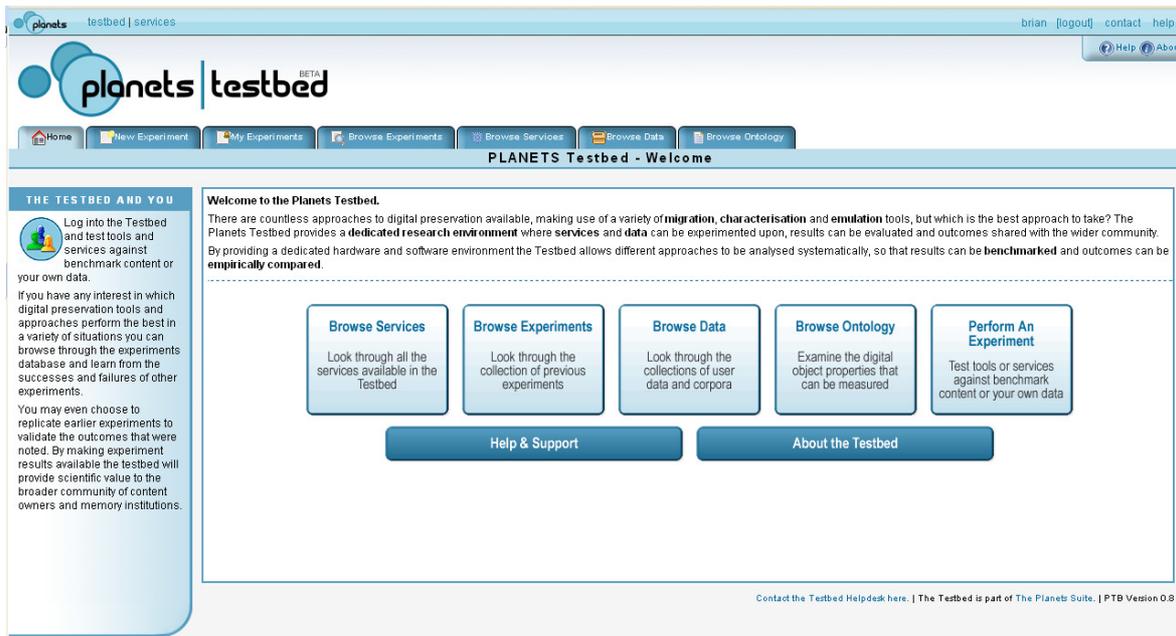
**Screenshot 2: Testbed Log-in page**

Enter your Testbed username and password into the appropriate boxes and click on the ‘**Login**’ button to continue.

**Note:** Both the username and password fields are case sensitive.

## 6 The Experimenter Welcome Page

If you have successfully logged in as an experimenter you will be presented with the following welcome page:



**Screenshot 3: Experimenter welcome page**

The tabs across the top of the main section of the page can be found on every page within the Testbed and they enable you to access all of the main features of the Testbed. Each of these tabs will be explained in the following sections.

The large buttons in the main section of the page also provide access to the main features of the Testbed, and additionally provide some extra information about each option.

## 7 The Experiment Wizard

The six step experiment process can either be accessed for a new experiment or by reloading a previously saved experiment. This section will walk through the six stages for a new experiment.

### 7.1 Stage 1: Define Basic Properties

In order to begin a new experiment click on the 'New Experiment' tab and Stage 1 of the experiment process will load. This stage allows you to supply the basic properties for your experiment, such as the experiment name, information about the purpose and focus of your experiment, contact information and references, as screenshot 4 demonstrates (note that the screenshot only shows part of the form):

The screenshot shows the 'PLANETS Testbed - New Experiment - 1. Define Basic Properties' interface. On the left, there is a navigation pane titled 'EXPERIMENT PROGRESS' with six steps: 1. Define Basic Properties (selected), 2. Design Experiment, 3. Specify Outcomes, 4. Experiment Approval, 5. Run Experiment, and 6. Evaluate Experiment. The main content area is titled '1. Define Basic Properties' and contains a 'Save' button and a 'Save experiment & continue to Stage 2' button. Below the buttons, there is a text box with instructions: 'Create a new experiment using the form below. Once you have saved the required information your experiment will be added to your My Experiments page. You can return to this page to update the information at any point until you submit your experiment for approval so if you don't have all the details to hand at the moment don't worry. However, filling in as much information as you can before experiment execution is recommended as this will make your experiment more useful in the long-run.'

The form is divided into several sections:

- General Information:** Includes fields for 'Experiment Name', 'Summary', and 'Participants' (with the value 'brian').
- Contact Information:** Includes fields for 'Contact Name' (Brian Aitken), 'Contact Email' (b.aitken@hathil.arts.gla.ac.uk), 'Contact Tel', and 'Contact Address'.
- References:** Includes fields for 'External Reference ID', 'Experiment References' (with an 'Add' button), and 'Literature References' (with fields for Description, URI, Title, and Author).
- Further Information:** A section at the bottom of the form.

Screenshot 4: Stage 1 of the experiment process

**Hint:** To find out more information about the various input boxes move your mouse over the '?' icon beside a box.

**Note:** Any fields marked with a red asterisk (\*) are mandatory.

### 7.1.1 General Information

In this section you can supply a **Name** and a **Summary** for your experiment and you can specify the experimenters who are working with you on this experiment, if necessary. In order to add more experimenters to the **'Participants'** box enter a comma after your username then start typing the username of the required experimenter. All the matching usernames will be displayed in a list and you can click on one to add the experimenter, as demonstrated in the following screenshot. Add as many experimenters as required by repeating this process.

**General Information**

**Experiment Name:** User Manual Walkthrough Experiment

**Summary:** This experiment has been created in order to gather the necessary screenshots for the Testbed user manual.

**Participants:** brian, anj

**Contact Information**

**Contact Name:** andy

**Contact Email:** b.aitken@hatii.arts.gla.ac.uk

**Screenshot 5: Selecting multiple experiment participants**

### 7.1.2 Contact Information

The fields in this section allow you to specify the contact details for your experiment. The information defaults to the contact information for the logged in user but you may replace this with other details if required, such as an organisational email address. Contact information will be visible to other Testbed users.

### 7.1.3 References

Three types of references may be added to this section of the form if required. The **'External Reference ID'** field may be completed if you wish to assign an ID to your experiment that will be used beyond the Testbed environment.

The **'Experiment References'** field enables you to select one or more existing Testbed experiments that have directly or indirectly influenced your current experiment. If you enter some characters into this box any experiments that contain these characters in their titles or summaries will be listed. Click on an experiment title to select it then click on the **'Add'** link to attach the experiment. Repeat this as many times as required.

**References**

**External Reference ID:**

**Experiment References:**

- TNA Test Jan 09 (5)

usabilij + Add

**Literature Reference**

usability testing #11  
usability testing #12  
usability testing #13  
Test using Safari in OSX

**Description:**  
**URI:**  
**Title:**  
**Author:**

[Add another literature reference.](#)

**Screenshot 6: Adding multiple experiment references**

If you wish to remove a selected experiment click on the trashcan icon beside the listed experiment.

The final type of reference that can be specified is the **Literature Reference**. You may add any number of literature references and these can point to either online or printed materials. Add more literature references by clicking on the 'Add another literature reference' link. Literature references may be used to reference background information, further reading, externally documented research questions etc.

#### 7.1.4 Further Information

The boxes in this section allow you to supply additional information about the purpose, focus and scope of your experiment and a further box enables you to supply any further considerations that you may wish to note.

#### 7.1.5 Required Information

Stage 1 of the experiment process contains a lot of boxes for entering or selecting information, but you don't need to fill them all in straight away. The only fields that are required are the **Experiment Name** and **Summary**, and the **Contact Name** and **Email**. You may return to Stage 1 to edit or augment the information at any point until you submit your experiment for approval.

#### 7.1.6 Saving and Continuing

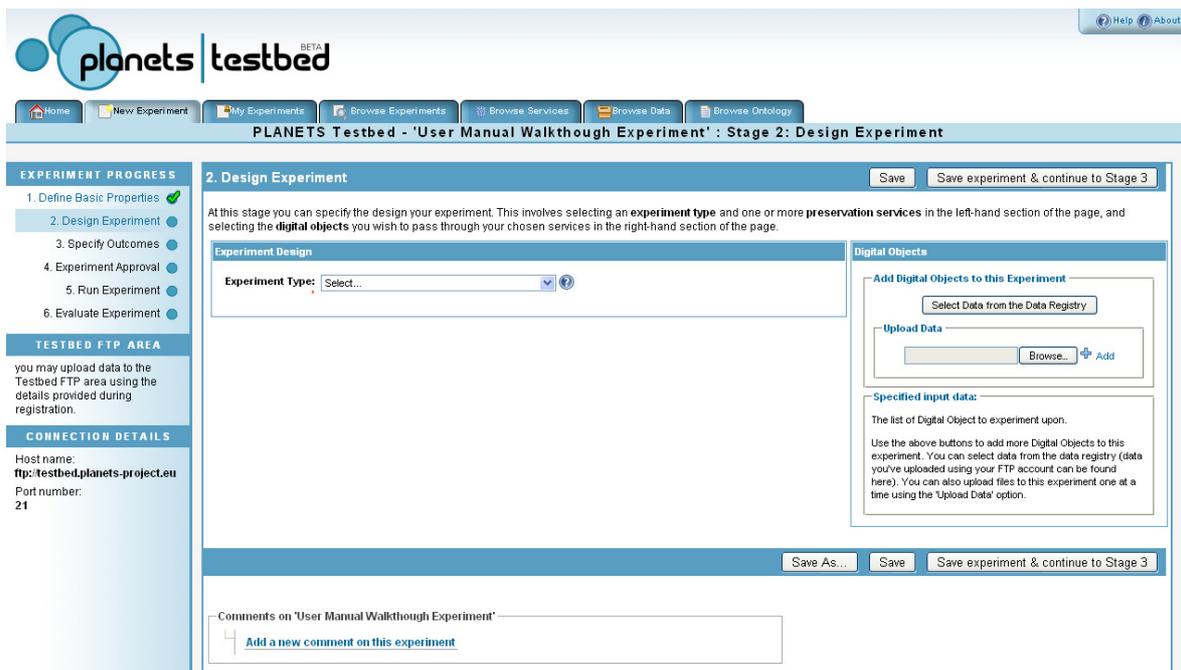
At the foot of stage 1 there are buttons allowing you to 'save' or 'save and continue'. Clicking on 'save' stores your experiment information and reloads stage 1, allowing you to make further changes. Clicking on 'save and continue' saves your experiment information and loads the next stage in the experiment process.

Once your experiment has been saved you may load it again whenever you log into the Testbed. All your experiments are listed in the '**My Experiments**' page, which is explained in Section 8 below.

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## 7.2 Stage 2: Design Experiment

The second stage of the experiment process is where you can specify the design of your experiment. This consists of selecting the **type of experiment** you wish to execute, choosing one or more **preservation services** that will be tested and selecting any number of **digital objects** that will be passed through the selected services. Upon reaching Stage 2 the following page will load:



Screenshot 7: Stage 2 of the experiment process

### 7.2.1 Experiment Types

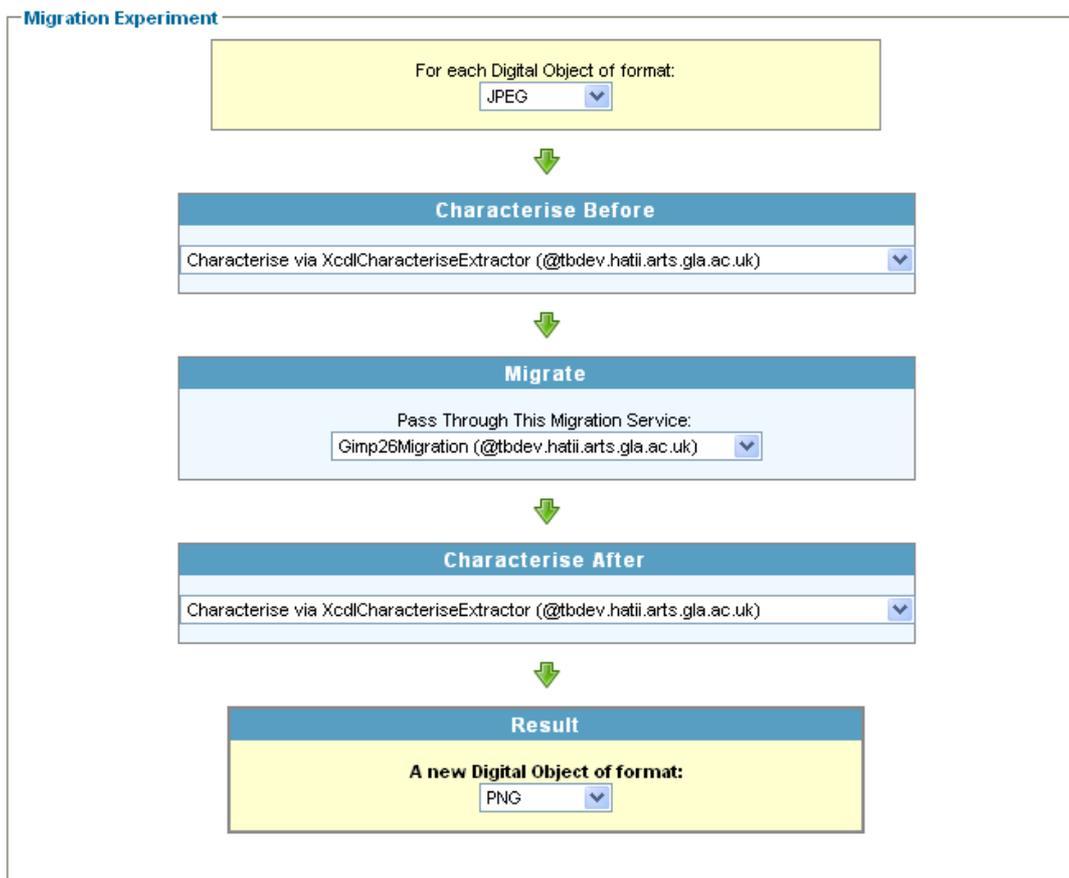
Two experiment types are currently available in the Planets Testbed:

1. **Identify:** With this experiment type one or more digital objects can be passed through an identification service such as DROID or JHOVE. Upon execution the selected identification service will attempt to identify each digital object, for example the DROID service will assign a Pronom ID to each digital object it is able to identify.
2. **Migrate:** With this experiment type one or more digital objects can be passed through a migration service which will attempt to transform the digital object into a new format that you may specify. In addition to this you may optionally run a characterisation service on the input and output files to compare the results.

### 7.2.2 Selecting Services

Once an experiment type has been selected you will be able to tailor your experiment design by means of a series of lists of options. Depending on the experiment type you may be able to specify input and output formats for digital objects and select the services you would like test. More detailed information about the services can be found in the **Browse Services** tab (see Section 10 below).

The following screenshot shows the design of a migration experiment that will migrate files from JPEG to PNG using the Gimp graphics package and using the XCDL Extractor to characterise the input and output files:

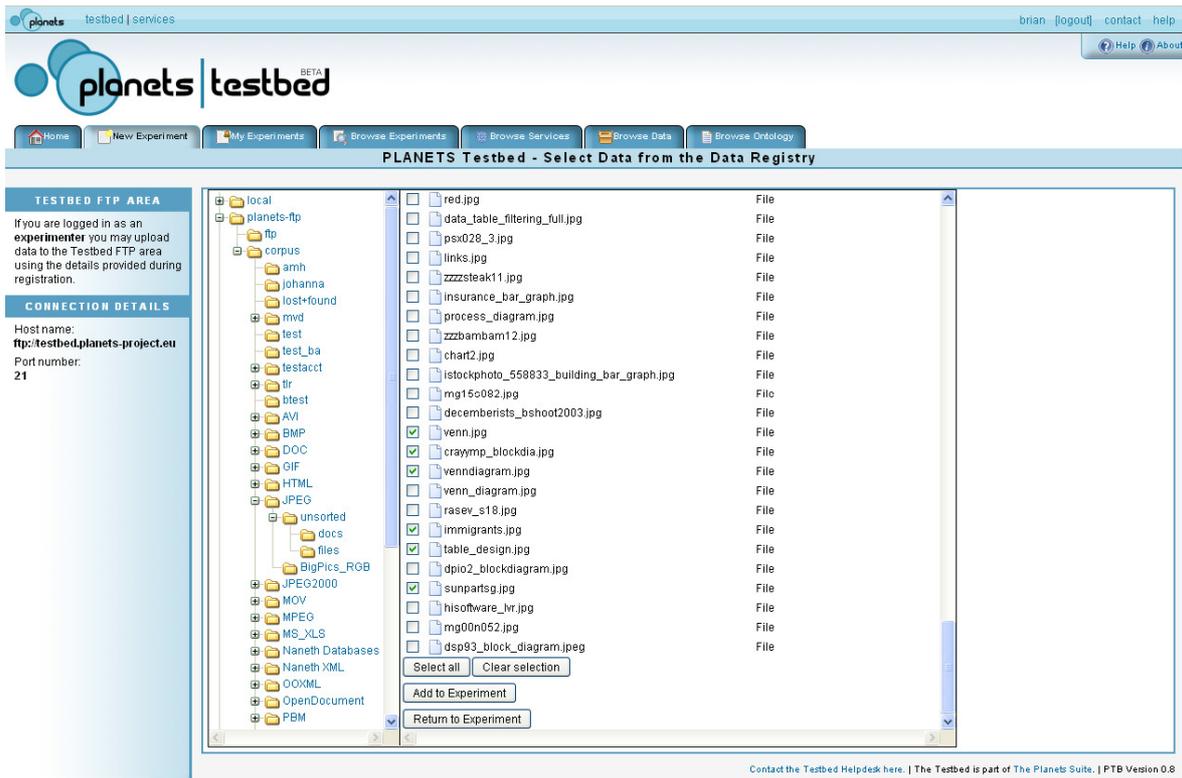


**Screenshot 8: Example design for a migration experiment**

### 7.2.3 Selecting Digital Objects

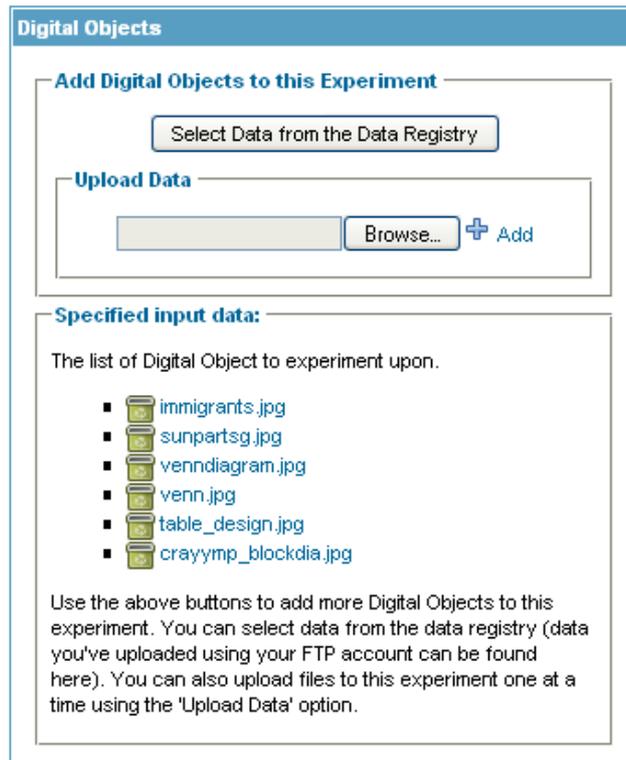
In order to test the services that are selected you need to select the digital objects that will be passed through them. You can either find digital objects in the **Data Registry** or you can upload files directly to Stage 2 of the experiment process one at a time. To upload files directly, simply click on the **'Browse'** button, find the required file on your computer, select it and then click on the **'Add'** button to upload it.

To add files from the Data Registry click on the **'Select Data from the Data Registry'** button. This will load the data browser, from which you can access your **File Upload Area** (see Section 11.2 below), the **Planets Corpora** (see section 11.1 below) and other data sources. Once you have navigated to the files you wish to add click on the checkboxes beside each appropriate file then click on the **'Add to Experiment'** button to attach these files to you current experiment:



**Screenshot 9: Selecting digital objects from the Data Registry**

Once the 'Add to Experiment' button is clicked, Stage 2 of the experiment process will reload with the selected files attached, as the following screenshot demonstrates:



**Screenshot 10: Digital objects attached to the experiment**

From the list of selected files you may click on a filename to open or save a file or click on the trashcan icon to remove the file from your experiment. Note that this doesn't delete the file from the Testbed, it simply removes the association to your experiment.

### 7.2.4 Saving and Continuing

Once you have selected an experiment type, chosen the required services and attached one or more digital objects you may then save your experiment and continue to the next stage in the experiment process. You may also choose to save your experiment as a new experiment if, for example, you wish to use the information you've previously entered as the basis of a slightly different experiment. In order to do this click on the 'Save As...' button.

## 7.3 Stage 3: Specify Outcomes

Stage three of the experiment process is where you can specify the intended outcomes of your experiment. The Testbed focuses on *properties* as the means of measuring and evaluating the effectiveness of preservation services and strategies. Two types of properties can be measured in the Testbed:

1. **Service Properties:** These are properties related to the services that are executed during your experiment. They include the time it takes to execute the service and whether the service ran successfully. Such properties are automatically measured in the Testbed.
2. **Digital Object Properties:** These are the properties related to individual files that are experimented upon. In the current version of the Testbed these properties generally relate to the technical characteristics of digital objects (for example the colour depth of an image or the page dimensions of a word processing document). The Testbed provides facilities to automatically measure a variety of digital object properties, although this is dependant on the choice of service and digital objects. If automatic measurement isn't possible it is still possible to manually measure the properties.

Upon reaching Stage 3 of the experiment process you will be presented with a page similar to the following screenshot:

The screenshot shows the PLANETS Testbed interface at Stage 3: Specify Outcomes. The main content area displays a table of 'Automatically Measurable Experiment Properties' with columns for Experiment Stage, Measure, Type, Name, and Unit. The table lists various properties such as whitePointY, whitePointX, signature, Service succeeded, Service execution time, rowsPerStrip, rgbPalette, resolutionY, resolutionX, and resolutionUnit. A 'Manually Measurable Experiment Properties' section is visible at the bottom.

Experiment Stage	Measure	Type	Name	Unit
Characterise Before Migration	<input checked="" type="checkbox"/>	Digital Object	whitePointY	
Migrate	<input checked="" type="checkbox"/>	Digital Object	whitePointX	
Characterise After Migration	<input checked="" type="checkbox"/>	Digital Object	signature	
Stage: Characterise Before Migration	<input checked="" type="checkbox"/>	Service	Service succeeded	
Characterise before migration.	<input checked="" type="checkbox"/>	Service	Service execution time	seconds
	<input checked="" type="checkbox"/>	Digital Object	rowsPerStrip	
	<input checked="" type="checkbox"/>	Digital Object	rgbPalette	
	<input checked="" type="checkbox"/>	Digital Object	resolutionY	
	<input checked="" type="checkbox"/>	Digital Object	resolutionX	
	<input checked="" type="checkbox"/>	Digital Object	resolutionUnit	

Screenshot 11: Stage 3 of the experiment process

### 7.3.1 Automatically measured properties

The top portion of the page displays the properties that can be automatically measured by your selected services. In the above screenshot three **'Experiment Stages'** are displayed towards the left of the main page. These represent the three services that were chosen as part of the experiment workflow, as shown in screenshot 8 above. As part of the definition of the migration workflow in Stage 2, services were selected to:

- Characterise the input files before migration
- Migrate the input files to a selected output file format
- Characterise the output files after migration

Note that if you choose a different experiment configuration, or decide not to perform a characterisation before or after migration a different selection of options will be presented.

At each of the chosen stages a variety of properties can be automatically measured and for the selected stage these properties are displayed in the right-hand section of the page. In the above screenshot the displayed properties are those that will be automatically measured for each input file at the 'characterise before migration' stage.

It should be noted that the number of automatically measurable properties will vary depending on the service that is chosen and the types of digital objects that are selected. The above screenshot shows the properties that can be automatically measured when using the XCDL Extractor service for image files. This service allows a wide variety of properties to be automatically measured, and these are split over three pages in the above screenshot.

The 'type' and 'name' of each automatically measured property is listed, and a help icon provides further information if you move your mouse cursor over it. The unit of measurement is also displayed for some properties; further units will be added in a subsequent Testbed release.

### 7.3.2 Manually measured properties

It is not possible to automatically measure every digital object property at this stage, but it is possible to augment the automatically measured properties with any number of manually measurable properties. These properties are represented in an ontology of digital object properties (see Section 12 below for more information about this ontology).

In order to add manually measured properties to your experiment scroll to the bottom of the Stage 3 page and click on the **'open digital object property selector'** link. After a few moments the ontology of properties should load as follows:

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

**all available Planets properties:**

apply settings: full-text filtering and different tree views

filter properties:  collapse expand

tree-context menu (slow!):  select tree view: standard

- ▼ specificationPropertyNames
  - ▶ BMP\_Properties (3)
  - ▶ DOCX\_Properties (2)
  - ▶ GIF\_Properties (20)
  - ▶ JPEG2000\_Properties
  - ▶ JPEG\_Properties
  - ▶ MPEG1\_Properties
  - ▶ MPEG2\_Properties
  - ▶ MPEG4\_Properties
  - ▶ MsWord97\_Properties
  - ▶ OpenDocument\_Properties
  - ▶ a\_Properties
  - ▶ PDF1.3\_Properties (203)
  - ▶ PNG\_Properties (35)
  - ▶ SVG\_Properties
  - ▶ Tiff\_Properties (66)

selected property information panel

**selected node:** smoothness  
**uri:** http://www.semanticweb.org/ontologies/2008/7/XCLOntology1.5.owl#smoothness  
**parent-type:** PDF1.3\_Properties  
**data-type:** string  
**addressed layer:** Digital Object  
**comment:** (PDF 1.3) The precision with which color gradients are to be rendered on the output device (see Section 6.5.2, "Smoothness Tolerance"). The value of this parameter gives the maximum error tolerance, expressed as a fraction of the range of each color component; smaller numbers give smoother color transitions at the expense of more computation and memory use. Initial value: installation-dependent. [ct. Pdf 1.3]

clipboard

clear

add to experiment

**Screenshot 12: Opening the digital object property selector**

As with the Browse Ontology tab (see section 12 below), you can search the properties by entering characters into the **'filter properties'** box, or you can browse the contents by clicking on the arrow beside a node in the ontology. Clicking on a property will display information about it in the **'selected property information panel'**.

Once you find a property you wish to measure you can either double-click on it or drag and drop it into the **clipboard**, as the following screenshot demonstrates:

clipboard
clear

remove	selected property ▼	measure in experiment stage
<span style="color: red;">✘</span>	Width_Gif	Characterise Before Migration: <input type="button" value="true"/> <input type="button" value="false"/> Migrate: <input type="button" value="true"/> <input type="button" value="false"/> Characterise After Migration: <input type="button" value="true"/> <input type="button" value="false"/>
<span style="color: red;">✘</span>	Height_Gif	Characterise Before Migration: <input type="button" value="true"/> <input type="button" value="false"/> Migrate: <input type="button" value="true"/> <input type="button" value="false"/> Characterise After Migration: <input type="button" value="true"/> <input type="button" value="false"/>
<span style="color: red;">✘</span>	Backgroundcolour_Gif	Characterise Before Migration: <input type="button" value="true"/> <input type="button" value="false"/> Migrate: <input type="button" value="true"/> <input type="button" value="false"/> Characterise After Migration: <input type="button" value="true"/> <input type="button" value="false"/>

**Screenshot 13: Manual Properties clipboard**

Note that at this point the properties are not yet added to your experiment, they are merely held in the clipboard. In order to add the properties to the experiment you must specify at which stage of the experiment workflow each property should be measured, a process that can be completed by clicking on the appropriate **'true'** or **'false'** button.

As the three properties selected above represent technical characteristics of input and output files these will be added to the characterisation stages before and after migration by clicking on the 'true' button for these stages. Once configured the properties can then be added to your experiment by clicking on the **'add to experiment'** button. The properties will then appear in the manually measurable properties section of Stage 3 and can be viewed in the same manner as the automatically measured properties, as the following screenshot demonstrates:

**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	<input checked="" type="checkbox"/>	Digital Object	Width_Gif	
Migrate	<input checked="" type="checkbox"/>	Digital Object	Height_Gif	
Characterise After Migration	<input checked="" type="checkbox"/>	Digital Object	Backgroundcolour_Gif	

Stage: Characterise Before Migration  
Characterise before migration.

---

**open digital object property selector**

**all available Planets properties:**

apply settings: full-text filtering and different tree views

filter properties:

tree-context menu (slow!):  select tree view: standard

- specificationPropertyNames
  - BMP\_Properties (3)
  - DOCK\_Properties (2)
  - GIF\_Properties (20)
    - JPEG2000\_Properties
    - JPEG\_Properties
    - MPEG1\_Properties
    - MPEG2\_Properties
    - MPEG4\_Properties
    - MSWord97\_Properties
    - OpenDocument\_Properties
    - a\_Properties
  - PDF1.3\_Properties (203)
  - PNG\_Properties (35)
    - SVG\_Properties
    - Tiff\_Properties (66)

**selected property information panel**

**selected node:** Backgroundcolour\_Gif  
**uri:** http://www.semanticweb.org/ontologies/2008/7/XCLOntology1.5.owl#Backgroundcolour\_Gif  
**parent-type:** GIF\_Properties  
**data-type:** uint32Rational  
**addressed layer:** Digital Object  
**comment:**

**clipboard**

remove	selected property	measure in experiment stage
<input type="button" value="x"/>	Width_Gif	Characterise Before Migration: <input type="button" value="true"/> <input type="button" value="false"/> Migrate: <input type="button" value="true"/> <input type="button" value="false"/> Characterise After Migration: <input type="button" value="true"/> <input type="button" value="false"/>
<input type="button" value="x"/>	Height_Gif	Characterise Before Migration: <input type="button" value="true"/> <input type="button" value="false"/> Migrate: <input type="button" value="true"/> <input type="button" value="false"/> Characterise After Migration: <input type="button" value="true"/> <input type="button" value="false"/>
<input type="button" value="x"/>	Backgroundcolour_Gif	Characterise Before Migration: <input type="button" value="true"/> <input type="button" value="false"/> Migrate: <input type="button" value="true"/> <input type="button" value="false"/> Characterise After Migration: <input type="button" value="true"/> <input type="button" value="false"/>

**Screenshot 14: Manual measurements added to experiment**

If you wish to remove a measurement for a particular stage in your experiment workflow, click on the relevant checkbox in the **'Measure'** column. To reinstate a removed measurement click on the 'add to experiment' button again.

### 7.3.3 Continuing to the next stage

Once you are satisfied with the information you have added to your experiment you may submit your experiment for approval. Note that once you click on the **'Save and submit for approval'** button you will no longer be able to edit any of the information you have recorded in the first three stages of the experiment process, so you should ensure all the details you wish to record (for example in Stage 1) have been completed.

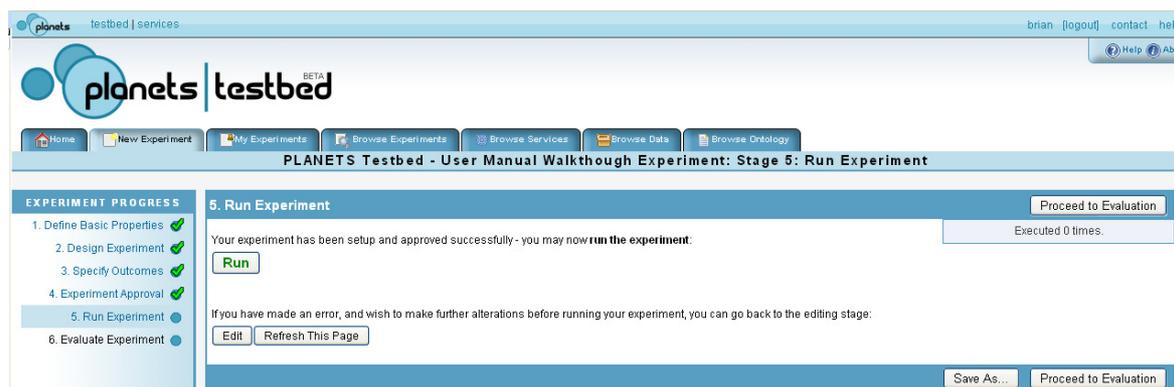
## 7.4 Stage 4: Experiment Approval

When you submit your experiment for approval the Testbed will check whether your experiment can be executed immediately or whether it will need to be approved and scheduled by the Testbed administrator. In most cases your experiment will be automatically approved and available for immediate execution. Manual approval by the administrator will generally only be required if your experiment involves a large number of digital objects or if an intensive experiment is already executing.

In such cases you will receive an email notification (delivered to the email address associated with your user account) when your experiment has been approved and you may continue to the execution phase of the experiment process.

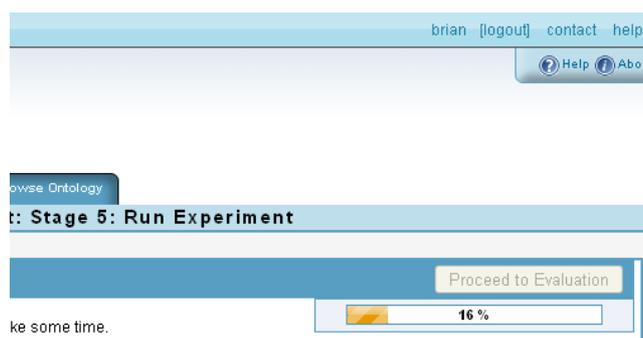
## 7.5 Stage 5: Experiment Execution

In Stage 5 of the experiment process the experiment workflow that you have created can be executed. In order to begin the execution process click on the big green 'Run' button as shown in the following screenshot:



Screenshot 15: Stage 5 of the experiment process

Once the 'Run' button is clicked your experiment workflow will be executed. At this point each of your selected input files will be passed through the services you have selected and any properties that can be automatically measured will be logged in the system. This process may take some time, depending on the services and the size and quantity of digital objects you selected. During execution a progress bar is displayed towards the right of the page to give you an idea of the amount of time remaining.



Screenshot 16: Experiment execution progress bar

After execution has completed the progress bar will be replaced with a box stating that the experiment has executed once. The main page should then display some information about the execution. If it doesn't, click on '**5. Run Experiment**' in the experiment progress section to reload the page. A page similar to the one below should load:

planets testbed | services brian [logout] contact help

planets testbed BETA

Home New Experiment My Experiments Browse Experiments Browse Services Browse Data Browse Ontology

PLANETS Testbed - User Manual Walkthrough Experiment: Stage 5: Run Experiment

**EXPERIMENT PROGRESS**

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

**5. Run Experiment** Proceed to Evaluation

Re-run this experiment to collect more data. Refresh This Page Executed 1 times.

**Explore Automatically Measured Experiment Results**

These are the results the Testbed has automatically measured and recorded for your experiment.

Overall Results Service Statistics Raw Execution Log Server Specification

Digital Object	Results
venndiagram.jpg	Run 1: venndiagram.jpg.png (124940 bytes)
venn.jpg	Run 1: venn.jpg.png (192831 bytes)
table_design.jpg	Run 1: table_design.jpg.png (84347 bytes)
sunpartsg.jpg	Run 1: sunpartsg.jpg.png (166277 bytes)
immigrants.jpg	Run 1: immigrants.jpg.png (164693 bytes)
crayymp_blockdia.jpg	Run 1: crayymp_blockdia.jpg.png (567746 bytes)

The experiment has been executed 1 times on 6 digital objects.

**Enter Manually Recorded Experiment Results**

Please fill in the properties you have selected to measure manually for this experiment.

Overview of Entered Data Data Input Wizard Compare Results

TODO enter a short description on how data is entered

Input Digital Objects Record	Property Information	Experiment Execution Measurements Runs	Status Information
record: 1: id: sunpartsg.jpg	Characterise Before Migration		You have currently entered data for the following records
record: 2: id: venn.jpg	name unit	4/28/09 10:58:21 AM	
record: 3: id: immigrants.jpg	Backgroundcolour_Gif	click to enter	
record: 4: id: table_design.jpg	Height_Gif	click to enter	
record: 5: id: ...	Width_Gif	click to enter	
	Backgroundcolour_Gif	click to enter	

**Screenshot 17: Results of Experiment Execution**

The results of the experiment execution contain all of the information that was generated and logged during the execution of the experiment. As with Stage 3, this page is split into sections for automatically and manually measured results.

### 7.5.1 Re-Running an Experiment

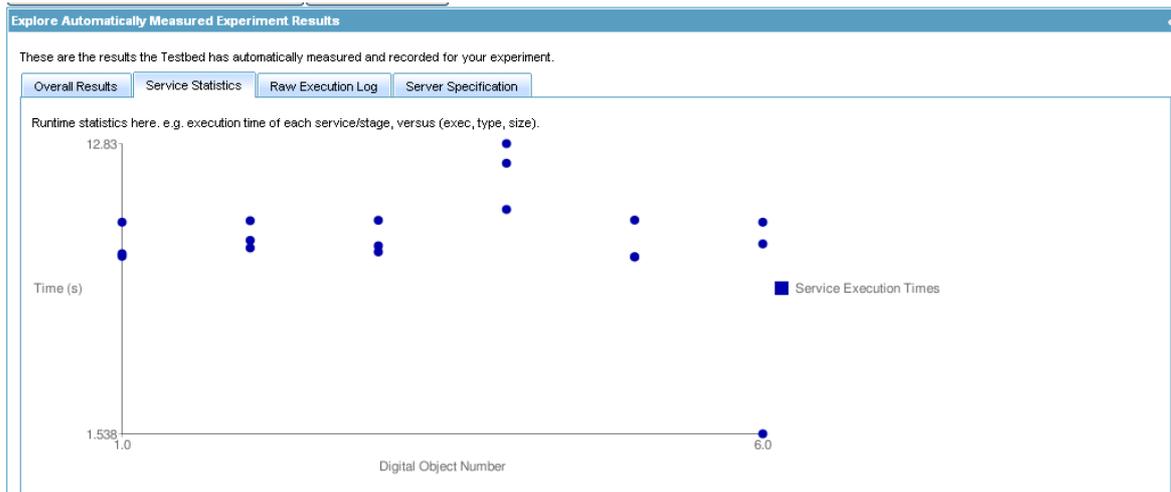
At the top of the Stage 5 page there is a button labelled '**Re-run this experiment to collect more data**'. Clicking on the button will execute your experiment workflow again, passing all the selected digital objects through the workflow and generating a new set of results.

Executing the experiment several times helps to give you a more accurate picture of service performance. It is recommended that you re-run your experiment multiple times in order to gather a significant amount of data about the performance of your selected services on your chosen digital objects. If you only execute your experiment one time it is possible that the outputted results may not accurately reflect the typical performance of each service.

### 7.5.2 Automatically measured results

The automatically measured results are displayed towards the top of the page. This information is split across four tabs. In Screenshot 17 above the **Overall Results** tab is displayed. This tab lists all the digital objects that were experimented on and the results of experimentation. In the case of a migration experiment the output files are displayed, whereas an identification experiment may display a Pronom ID (for example). You may open or save the input files and results by clicking on their names.

Clicking on the '**Service Statistics**' tab displays a graph of execution time for each service and digital object, as the screenshot below demonstrates:



**Screenshot 18: Service Statistics Tab**

The current experiment was executed on six digital objects, which are plotted along the x axis, with time plotted along the y axis. As the current experiment involved three services (characterisation before migration, migration and characterisation after migration) for each digital object there are three points on the graph.

If you click on the **Raw Execution Log** tab you may select to view the measurements that were gathered during each execution run. Each execution run (displaying the exact date and time of execution) is listed in the left-hand section of the main page. Click on a run to view the all of the measurements that were automatically logged for this run. Doing so will display a page similar to the following screenshot (note that this shows only part of the log):

These are the results the Testbed has automatically measured and recorded for your experiment.

Execution Date	Execution Success	Execution Results In Detail	
4/28/09 10:54:46 AM	true	data entry: 1 - file://opt/planets/server/planets-ftp/corpus/JPEG/unsorted/files/table_design.jpg Characterise Before Migration	
		Measurement	Value
		Service execution time	8.445 [seconds]
		Service succeeded	true
		imageWidth	32
		imageHeight	32
		planets.pcl/ccdl/property/id151/bitsPerSample	16
		planets.pcl/ccdl/property/id18/compression	zlibDeflateInflate
		imageType	greyscaleAlpha
		planets.pcl/ccdl/property/id39/filter	adaptive
		interlace	adam7
		planets.pcl/ccdl/property/id41/gamma	100000
		Migrate	
		Measurement	Value
		Service execution time	9.772 [seconds]
		Service succeeded	true
		Characterise After Migration	
		Measurement	Value
		Service execution time	8.547 [seconds]
		Service succeeded	true
		imageWidth	32
		imageHeight	32
		bitsPerSample	16
		compression	zlibDeflateInflate
		imageType	greyscaleAlpha
		filter	adaptive
		interlace	adam7
		gamma	100000

Screenshot 19: Raw Execution Log Tab

For every digital object that was experimented upon it is possible to view all the properties that were automatically measured during the execution of each service that was selected during the experiment design phase. Click on the filename to open or close the log for each file.

In addition to viewing the property measurements within the Testbed, you can choose to download the measurements as a CSV file, which you may then load in a spreadsheet program such as Excel for further analysis. Click on the **'Click here to download data from all runs, as a CSV format...'** link to download the complete set of measurements.

The final tab in the automatically measured results section displays information about the server on which the experiment was executed. For this release of the Testbed the information provided is fairly minimal, but later iterations will include run-time statistics of server load.

Explore Automatically Measured Experiment Results

These are the results the Testbed has automatically measured and recorded for your experiment.

Overall Results	Service Statistics	Raw Execution Log	Server Specification
The PLANETS Testbed is currently hosted on a Dell PE 2950 III server. <b>Operating System:</b> 64-bit Ubuntu 8.04.2 <b>Processor:</b> 2.5GHz Intel Quad Core Xeon E5420 <b>Memory:</b> 16GB (8x2GB Dual Rank DIMMs) 667MHz FBD <b>Hard disk:</b> 3 x 300GB			

Screenshot 20: Server Specification Tab

### 7.5.3 Manually measured results

Beneath the automatically measured results section is a further section where you may record the results for any manually measurable digital object properties that you selected during Stage 3 of the experiment process. In order to manually measure the properties you must first save the input and output files to your computer. You can do this by clicking on the filenames in the 'Overall Results' tab as shown in Screenshot 17 above.

In order to manually measure the properties you will have to open the files in a suitable program on your own computer in order to note the values. Once you have done this you may enter the values for each file through the manually measured results section, as shown in the following screenshot:

Input DigitalObjects Record	Property Information	Experiment Execution Measurements Runs	Status Information
record: 1: id: sunpartsg.jpg	Characterise Before Migration	name unit 4/28/09 10:58:21 AM	You have currently entered data for the following records
record: 2: id: venn.jpg	Backgroundcolour_Gif	Click to enter	
record: 3: id: immigrants.jpg	Height_Gif	257	
record: 4: id: table_design.jpg	Width_Gif	300	
record: 5: id: craymp_blockdia.jpg	Backgroundcolour_Gif		
record: 6: id: venndiagram.jpg	Height_Gif	257	
	Migrate	name unit 4/28/09 10:58:21 AM	
	Characterise After Migration	name unit 4/28/09 10:58:21 AM	
	Width_Gif	300	
	Backgroundcolour_Gif	Click to enter	
	Height_Gif	257	
	Width_Gif	300	
	Backgroundcolour_Gif	Click to enter	
	Height_Gif	257	

Screenshot 21: Manually measured properties

As the above screenshot demonstrates, the input files are listed down the left-hand side of the main page and clicking on one of these files displays the manually measured properties that you selected in Stage 3, with the properties displayed for each stage in the workflow you specified. To register the values simply click in the appropriate box and type in the value. Once entered the value is automatically stored in the Testbed information.

**Note:** The remaining two tabs and the 'Status information' panel within the manually recorded experiment results section are not operational in this version of the Testbed.

### 7.5.4 Proceeding to Stage 6

Once you have executed your experiment the required number of times and have supplied all the necessary manual measurements you may click on the '**Proceed to Evaluation**' button to enter the final stage of the experiment process.

**Note:** Once you have proceeded to Stage 6 you will no longer be able to re-run your experiment or supply further manual measurements. However, you can use the '**Save As...**' option to save your experiment as a new experiment, which will then enable you to edit the experiment details and re-execute the workflow.

## 7.6 Stage 6: Evaluate Experiment

The final stage in the experiment process allows you to evaluate your experiment. Whereas the previous stage enabled you to view and record the raw measurements of properties, Stage 6 gives you the option of specifying how important the measured properties are to your particular needs.

For migration experiments, evaluation focuses on how well the properties that were measured for the input files have been preserved in the output files. For identification experiments evaluation focuses on whether or not the identification service has been able to successfully identify the input files.

The experiment evaluation page is split into two parts: **property evaluation** and **overall experiment evaluation**. The evaluation of properties feeds into the overall experiment evaluation and should therefore be completed first.

### 7.6.1 Property Evaluation

The property evaluation section displays a list of all the files that were attached to your experiment at the design phase. For each of these files the properties that were chosen in Stage 3 and the results that were measured for each property during Stage 5 are displayed. If you executed your experiment more than one time the results for each run are displayed. For each property there is a column where you may provide an evaluation of the results of property measurement, as the screenshot below demonstrates:

PLANETS Testbed - User Manual Walkthrough Experiment: Stage 6: Evaluate Experiment

EXPERIMENT PROGRESS

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

6. Evaluate Experiment

refresh page Finalise Experiment

Property Evaluation

Browse the experiment's output over all executions and evaluate the outcomes of your experiment against the properties you specified during Stage 3 of the experiment and the data you recorded in step5. For this experiment type the Testbed evaluation process questions: **How well has the property information measured in the input object (determined in the pre-characterisation stage) been preserved within the migrated objects (characterised through the post-characterisation process)**

Please note: Currently the Testbed can only evaluate common properties in the stages pre- and post-characterisation. If no data for evaluation is presented you may have chosen different services for the pre- and post-characterisation process or did not provide data for the manually measured properties.

Input Digital Objects Record	Property Information	Experiment Execution Measurements Runs	Property Evaluation
record: 1: id: craymp_blockdia.jpg	name	4/28/09 10:58:21 AM	value
record: 2: id: venn.jpg	Backgroundcolour_Gif	Characterise Before Migration: white Characterise After Migration: white	Click here to edit 1
record: 3: id: immigrants.jpg	Height_Gif	Characterise Before Migration: 257 Characterise After Migration: 257	Click here to edit 1
record: 4: id: table_design.jpg	Width_Gif	Characterise Before Migration: 300 Characterise After Migration: 300	Click here to edit 1
record: 5: id: sunpartsg.jpg	Backgroundcolour_Gif	Characterise Before Migration: white Characterise After Migration: white	Click here to edit 1
record: 6: id: venndiagram.jpg	Height_Gif	Characterise Before Migration: 257 Characterise After Migration: 257	Click here to edit 1
	Service execution time	seconds Characterise Before Migration: 8.42 Characterise After Migration: 8.425	Click here to edit 2
	Service succeeded	Characterise Before Migration: true Characterise After Migration: true	Click here to edit 1
	imageWidth	Characterise Before Migration: **	Click here to edit 1

Screenshot 22: Stage 6 of the experiment process showing property evaluation

In the current version of the Testbed you must manually supply an evaluation value for each required property of every file. Click on a filename in the 'Input Digital Objects Record' section of the page to display its properties and supply an evaluation value.

### 7.6.2 The Evaluation Ratings

Four different evaluation values are available, ranging from '1 – very good' to '4 – very bad'. Evaluation of the experiment measurements is entirely subjective and is dependant on the requirements and priorities of you or your organisation. For example, given an input font size of 14 and an output font size of 16, one experimenter may evaluate this result to be 'very bad' whereas for an experimenter with different priorities this deviation of font size may be considered to be slight and therefore may be evaluated to 'good'.

### 7.6.3 Recording Evaluation Ratings

In order to log an evaluation rating for a property click on the relevant '**Click here to edit**' link in the 'Value' column, as shown in Screenshot 22 above. This will display a list of the evaluation options. Simply click on the required option to select it and the value will be stored. If your experiment involved more than one run then the evaluation value that you select should reflect the results from each run. For example, if you executed your experiment workflow five times and for four of those times the resolution was identical in the input and output files, but for the remaining execution the output value differed by 10 you must decide how this should be reflected in the overall evaluation of the property for the file.

Note that in the current version of the Testbed the rating icons, as displayed in the above screenshot, do not appear as soon as your selection is made, but will only appear when you return to view the properties for the file after viewing another file, or when the 'refresh page' button is selected.

### 7.6.4 Automated property evaluation

In the current release of the Testbed the automated assignment of property evaluation values is not possible, but in the next release it will be possible to assign evaluation values to ranges of property measurement results and then instigate the automatic application of the appropriate evaluation values to all input files.

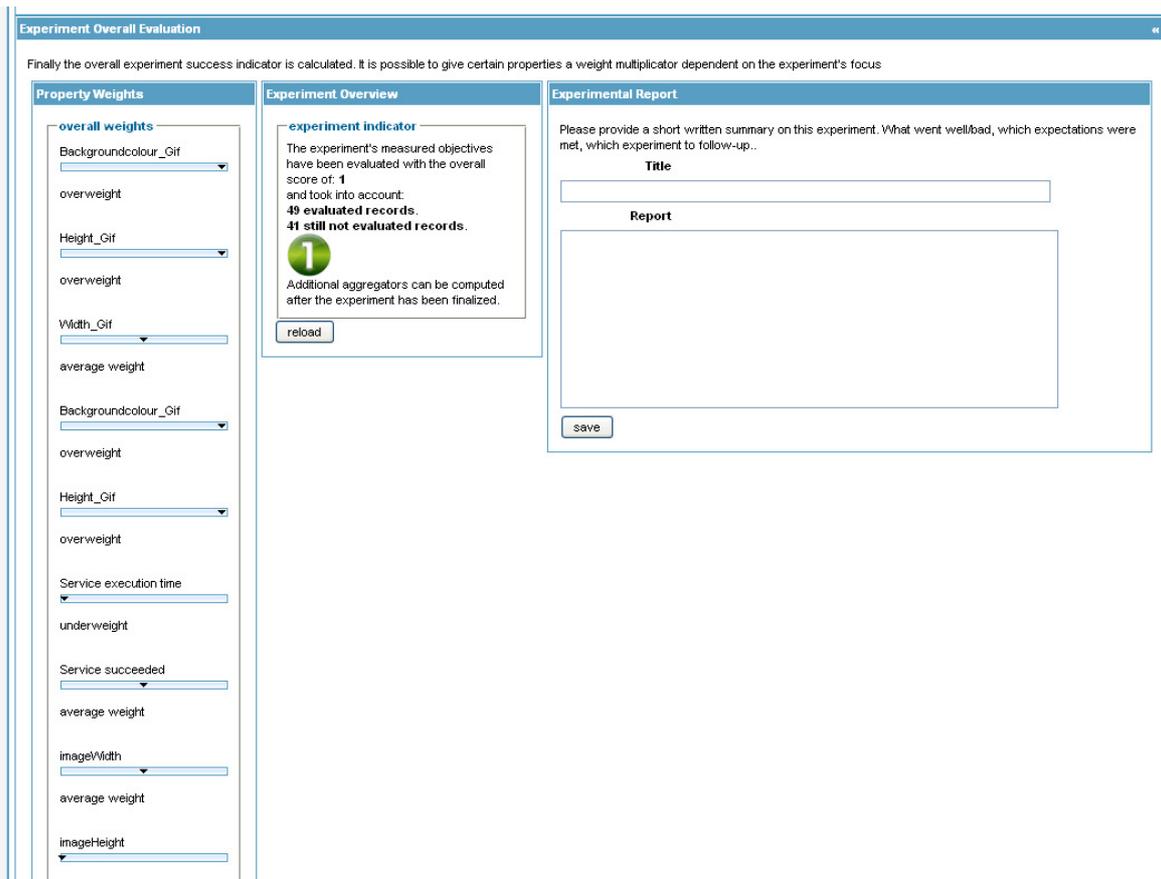
### 7.6.5 Experiment Overall Evaluation

The registration of evaluation values for your chosen properties as discussed above provides a detailed analysis of your experiment results, and these are then aggregated into an overall evaluation of your experiment. It is possible to treat all properties as of equal importance to your requirements, but in reality it is likely that certain properties will be more critical to your needs, as described in the following section.

### 7.6.6 The Weighting of Experiment Evaluation

For example, the execution time of the service may be deemed to be of little consequence to you so long as the digital object properties such as image dimensions and bit depth are accurately preserved. In such a situation you would probably wish the overall evaluation of your experiment to be weighted more towards the evaluation of the digital object properties.

This weighting of property evaluation is possible using a series of sliders, which are found in the left-hand section of the **Experiment Overall Evaluation** section, as shown in the following screenshot:



**Screenshot 23: Experiment Overall Evaluation**

Five different weighting levels are available, ranging from 'underweight' to 'overweight', which are numerically represented as 1-5. The default value for each property is 'average' weighting (i.e. 3). Note that for any properties whose weighting you have not yet altered the slider will default to the left. This does not mean the weighting is set to 'underweight'. Until you move the slider for a property its value will be set to 'average' and you may leave the slider untouched if you wish the weighting to remain at 'average'.

### 7.6.7 Experiment Evaluation Overview

The **experiment overview** can be found in the box next to the experiment weighting section, as shown in Screenshot 23 above. Within this section an overall evaluation rating for your experiment is given. This takes into account the evaluation values you have selected for each property for every file and is automatically updated whenever new evaluation records are added for properties or existing values are updated.

Not all properties need to be evaluated for your experiment to be given an overall score, but the more properties you evaluate the more reliable the overall score will be. Also displayed in this section is a summary of the number of properties you have and haven't evaluated. This is the total number of properties for every single digital object attached to your experiment.

### 7.6.8 How the overall experiment evaluation score is calculated

As with the evaluation of individual properties, the overall experiment evaluation score ranges from '**1 – very good**' to '**4 – very bad**'. As mentioned previously this score takes into consideration the weighting of properties in order to ensure those properties that are of the most importance to you are given the greatest significance.

Each property's overall evaluation value is calculated as the entered evaluation value multiplied by the selected weight for the property. In order to work out the overall evaluation score the overall evaluation value of all properties are added together and then divided by the sum of the weightings. This then gives a value between 1 and 5, which is converted as follows:

- Value between 1 and 2 = **1: Very Good**
- Value between 2 and 3 = **2: Good**
- Value between 3 and 4 = **3: Bad**
- Value between 4 and 5 = **4: Very Bad**

#### 7.6.9 An example overall score calculation

Two properties are to be evaluated, **image width** and **bits per sample**. The results for image width are given an evaluation value of *1: very good* while the results for bits per sample are given a value of *2: good*. **Bits per sample** is considered by the experimenter to be of utmost importance in the experiment so it is given a weighting of *overweight (5)*, whereas image width is considered to be of *average importance (3)*. The overall evaluation value for the properties is calculated as follows:

- **Image Width:** 1 (the evaluation value) x 3 (the weighting) = 3
- **Bits per sample:** 2 (the evaluation value) x 5 (the weighting) = 10

These overall values are then added together to give 13. The sum of the weightings is 8 (3 + 5). So the overall value is 13 divided by 8, which equals 1.625. This value is between 1 and 2, giving an overall experiment evaluation rating of **1: Very Good**.

#### 7.6.10 Experiment Report

In addition to properties based evaluation, it is also possible to supply a textual evaluation report. This can be entered into the Experimental Report section of the 'Experiment Overall Evaluation' part of Stage 6, as shown in Screenshot 23 above.

#### 7.6.11 Finalising the experiment

Once you have completed as much experiment evaluation as you require you may then finalise your experiment by clicking on the '**Finalise Experiment**' button that is located at the top and bottom of the Stage 6 page. Finalising your experiment makes it visible to other Testbed users. It also prevents further editing of the experiment and fixes it in the Testbed for future viewing. However, you may still use the '**Save as...**' option to save the experiment details as a new experiment in order to make changes and re-execute the experiment workflow.

---

## 7.7 Commenting on Experiments

At the bottom of every stage of the experiment process is a section where you may post comments about your experiment. Click on the '**Add new comment on this experiment**' link to submit your comment using a form similar to the one shown below:

**General Information**

**Experiment Name:** User Manual Walkthrough Experiment

**Summary:** This experiment has been created in order to gather the necessary screenshots for the Testbed user manual.

**Participants:** brian, an, andy

**Contact Name:** Brian Aitken

**Add a new comment on this experiment (at stage Experiment Evaluation)**

**Title \***  ?

**Comment \***  ?

**Screenshot 23: Submitting a comment**

Once submitted, your comment will appear on the experiment page for other users to see and reply to, as the following screenshot demonstrates:

**Comments on 'User Manual Walkthrough Experiment'**

 **This is a comment title**  
 This is a comment  
 brian (30-Apr-2009 10:32:23 - Experiment Evaluation) [Edit](#) [Reply](#)

[Expand All/Collapse All](#)

[Add a new comment on this experiment](#)

**Screenshot 24: Display of comments**

## 7.8 The experiment progress pane

On the left-hand side of every page in the experiment wizard is a section that displays the six stages of the experiment process. As you complete each stage this will be marked with a green tick and once you proceed to a subsequent stage you may navigate to any previously completed stage by clicking on it within the experiment progress pane:

**EXPERIMENT PROGRESS**

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

**Screenshot 25: Experiment progress pane**

## 8 My Experiments

You can access a list of all the experiments you have created by clicking on the 'My Experiments' tab. This page displays the details for each of your experiments in a table, as the following screenshot demonstrates:

PLANETS Testbed - My Experiments

Click on an experiment's name to open it. Click on a column heading to change the ordering of the table.  
You may also download an experiment as an XML file or request an experiment deletion.

Experiment Name	Type	# Inputs	Runs	Start Date	Execution Date	Current Stage	Download	Request Delete
User Manual Walkthrough Experiment	Migrate	6	1	Apr 28, 2009	4/29/09 1:33:00 PM	Experiment Evaluation		
IE7 test	Migrate	4	1	Apr 21, 2009	4/21/09 3:18:41 PM	Experiment Finalized		
Test using Safari in OSX	Migrate	2	2	Apr 21, 2009	4/21/09 2:01:46 PM	Experiment Finalized		
TB Beta Test #3	Migrate	3	1	Apr 17, 2009	4/17/09 3:06:39 PM	Experiment Finalized		
TB Beta Test #2	Identify	1	1	Apr 17, 2009	4/17/09 11:51:31 AM	Experiment Evaluation		
TB Beta Test #1	Identify	1	1	Apr 17, 2009	4/17/09 10:43:51 AM	Experiment Execution		
extrador test #2	Migrate	4	1	Apr 8, 2009	4/8/09 2:49:43 PM	Experiment Evaluation		
usability testing #13		0	0	Apr 8, 2009		Experiment Setup		
usability testing #12	Identify	142	2	Apr 8, 2009	4/8/09 4:14:40 PM	Experiment Evaluation		
usability testing #11	Identify	1	2	Apr 8, 2009	4/8/09 1:44:01 PM	Experiment Finalized		
Central Instance Test	Migrate	1	2	Mar 17, 2009	3/17/09 2:26:52 PM	Experiment Evaluation		
Migration Test	Migrate	1	1	Jan 21, 2009	1/21/09 10:52:45 AM	Experiment Finalized		
Jan 11 2209 Test	Identify	1	3	Jan 11, 2009	1/11/09 3:17:10 PM	Experiment Evaluation		
24th December Test	Identify	1	0	Dec 24, 2008		Experiment Setup		
Testing version 0.7 #2	Identify	1	3	Dec 15, 2008	12/15/08 5:31:03 PM	Experiment Evaluation		
Testing version 0.7	Identify	1	1	Dec 15, 2008	12/15/08 5:03:46 PM	Experiment Evaluation		
droid test october	simple characterisation	1	0	Oct 8, 2008	10/8/08 9:02:24 AM	Experiment Evaluation		
Tuesday Test: Migrate DOC to ODF	simple migration	1	0	Jul 15, 2008	7/15/08 3:19:20 PM	Experiment Finalized		
Tuesday Test #2	simple migration	1	0	Jul 15, 2008	7/15/08 9:04:50 AM	Experiment Finalized		
Monday Test	simple migration	1	0	Jul 14, 2008	7/14/08 3:13:03 PM	Experiment Finalized		

Screenshot 26: 'My Experiments'

By clicking on a column heading you can order your experiments by that column, for example if you wish to order your experiments by execution date. If you wish to view an experiment simply click on the experiment name to jump into the experiment wizard.

From the 'My Experiments' page you may also **download an experiment** by clicking on the green 'download' icon. Doing so will save onto your computer the experiment information (apart from the input and output files) as an XML file.

### 8.1 The 'Right click' menu

If you click the right-hand mouse button when hovering over an experiment name a menu will appear that lists the actions you may perform on your experiments, namely editing the experiment, saving the experiment as a new experiment and exporting the experiment.

### 8.2 Requesting an experiment deletion

From the 'My Experiments' page you can select to delete an experiment from the Testbed. If you click on the trashcan icon beside a listed experiment a 'mail' icon will appear next to the trashcan, as the following screenshot demonstrates:

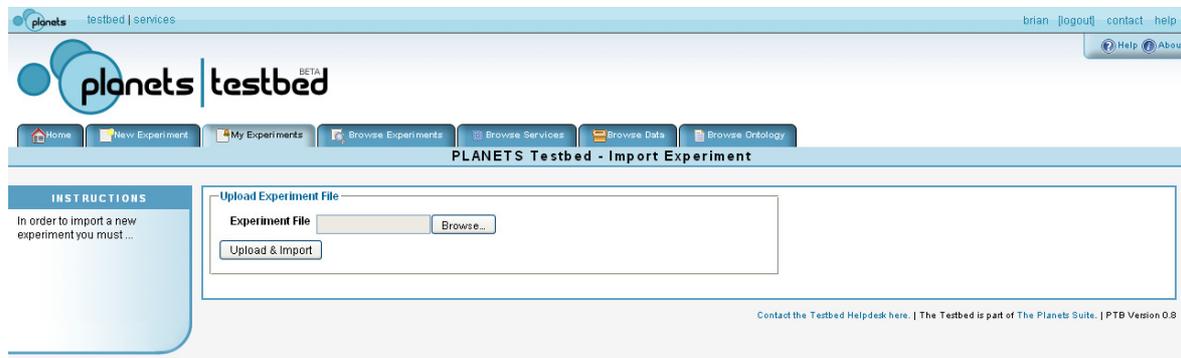


Screenshot 27: Request Deletion

Clicking on the mail icon will send a deletion request to the Testbed administrator. You will then be sent an email notification when your experiment has been deleted.

### 8.3 Importing an experiment

From the 'My Experiments' page you can import an experiment that has previously been downloaded as an XML file. Attach a valid experiment XML file to the import form, as show in the screenshot below, and then click on the '**Upload & Import**' button. If the file is well formed a new experiment will be created based on the information contained within.



Screenshot 28: Experiment Import

## 9 Browse Experiments

The Browse Experiments page works in a similar manner to the 'My Experiments' list but includes the experiments belonging to all Testbed experimenters. As with the 'My Experiments' page it is possible to change the order of the table by the column headings and to click on an experiment name to view its details. You can also right click on an experiment name to select from a list of options that include saving and exporting the selected experiment.

planetstestbed | services brian [logout] contact help

**planetstestbed** BETA

Home New Experiment My Experiments Browse Experiments Browse Services Browse Data Browse Ontology

**PLANETS Testbed - Browse Experiments**

**SEARCH**  
You can search the titles and summaries of all the experiments using this form.  
  
Search Clear

**LISTING OPTIONS**  
No. experiments per page:  
20 Set

**STATISTICS**  
There are currently 251 experiments in the Testbed.

Click on an experiment's name to open it. Click on a column heading to change the ordering of the table.  
If you see a notepad icon (📄) beside the experiment name click on this to jump into the experiment edit pages.

Experiment Name	Type	# Inputs	Start Date	Execution Date	Current Stage	Experimenter Name
pdfbox test pdf to html	Migrate	1	Apr 29, 2009	Apr 29, 2009	Experiment Finalized	tue.hejlskov.larsen
svg to tiff with characterisation	Migrate	2	Apr 29, 2009	Apr 29, 2009	Experiment Finalized	teok
functionalitytest	Migrate	1	Apr 28, 2009	Apr 28, 2009	Experiment Finalized	jpuhl
Digital art Characterisation	Migrate	1	Apr 28, 2009	Apr 28, 2009	Experiment Execution	teok
Migrate 01 tiff->png	Migrate	3	Apr 28, 2009		Experiment Execution	umeyer
Image migration gif to tiff with characterisation	Migrate	2	Apr 28, 2009	Apr 28, 2009	Experiment Finalized	jpuhl
April 2009 test 11	Migrate	1	Apr 28, 2009	Apr 28, 2009	Experiment Finalized	bart
Doc to PDF with AbiWorld	Migrate	2	Apr 28, 2009	Apr 28, 2009	Experiment Finalized	jpuhl
Jpeg to Tiff Migration	Migrate	3	Apr 28, 2009	Apr 28, 2009	Experiment Finalized	jpuhl
April 2009 test 10	Identify	1	Apr 28, 2009	Apr 28, 2009	Experiment Finalized	bart
tt	Migrate	1	Apr 28, 2009		Experiment Setup	sschlarb
April 2009 test 9	Identify	1	Apr 28, 2009	Apr 28, 2009	Experiment Finalized	bart
April 2009 test 8	Identify	1	Apr 28, 2009	Apr 28, 2009	Experiment Finalized	bart
April 2009 test 7	Migrate	1	Apr 28, 2009	Apr 28, 2009	Experiment Finalized	bart
April 2009 test 6	Migrate	3	Apr 28, 2009	Apr 28, 2009	Experiment Finalized	bart
April 2009 test 5	Migrate	3	Apr 28, 2009	Apr 28, 2009	Experiment Finalized	bart
April 2009 test 4	Migrate	3	Apr 28, 2009	Apr 28, 2009	Experiment Finalized	bart
April 2009 test 3 (copy)	Identify	2	Apr 28, 2009	Apr 28, 2009	Experiment Finalized	bart
April 2009 test 3	Identify	2	Apr 28, 2009	Apr 28, 2009	Experiment Execution	bart
User Manual Walkthrough Experiment	Migrate	6	Apr 28, 2009	Apr 28, 2009	Experiment Evaluation	brian

**Screenshot 29: Browse Experiments**

If you click on an experiment name to open a listed experiment the experiment report page will load. This page displays all the experiment information from each of the six stages on one single page, allowing you to easily scroll through the available information such as input and output files, selected services and properties and evaluation reports. Beside the listed experiments that you personally created you will also see a notepad icon. Clicking on this will load the full experiment wizard.

## 10 Browse Services

Clicking on the Browse Services tab will display the three different ways in which the services contained within the Testbed can be browsed, as the following screenshot demonstrates:

planetstestbed | services brian [logout] contact help

**planetstestbed** BETA

Home New Experiment My Experiments Browse Experiments Browse Services Browse Data Browse Ontology

**PLANETS Testbed - Browse Services**

**OPTIONS**

- Browse Services
- Browse Pathways
- List All Pathways

You can also browse the IF Service Registry directly.

**Browse Services**

Browse the services and their histories of invocation

**Browse Pathways**

Browse pathways by input format, output format and service

**List All Pathways**

Sortable list of all available pathways

The Testbed will allow you to browse the services and their histories of invocation on the Testbed. You can also browse the IF Service Registry directly.

Contact the Testbed Helpdesk here. | The Testbed is part of The Planets Suite. | PTB Version 0.8

**Screenshot 30: Browse Services**

## 10.1 Service Browser

In order to display a list of all the services that are available in the Testbed click on the 'Browse Services' button. This will load a page that displays some details about every service that is available for testing within the Testbed, as the following screenshot demonstrates:

The following services are currently available for experimentation in the Testbed. Click on a service name to find out more about it.

Name	Type	# Experiments	Description
New Zealand Metadata Extractor Service	Characterise	0	Metadata extraction service based on the Metadata Extraction Tool of the National Library of New Zealand (patched 3.4GA) <a href="#">↗</a>
XcdlCharacteriseExtractor	Characterise	0	Another Wrapper for the Extractor tool developed at the UZK. This Wrapper uses the Extractor to read all relevant properties from an input file. The Extractor output (xcdl) is parsed and returned as a List of Properties to enable the comparison of results delivered by different Characterisation tools. <b>IMPORTANT NOTE:</b> To receive the .xcdl file, please use the XcdlMigrate service.
SanselanIdentify	Identify	0	A DigitalObject Identification Service based on the Sanselan library <a href="#">↗</a>
JavaimageIdentify	Identify	0	A DigitalObject Identification Service based on the Java SE built-in ImageIO library.
ImageMagickIdentify	Identify	1	A DigitalObject Identification Service based on ImageMagick. It returns a list of PRONOM IDs, matching for the identified file format! Please note: the first URI in the result list is a PLANETS format URI (e.g. "planets:fmt/text/tiff") denoting the file format returned by ImageMagick for the file under consideration. The following URIs are the matching PRONOM IDs.
DROID Identification Service	Identify	4	Identification service based on Droid (DROID 3.0, Signature File 13) <a href="#">↗</a>
JHOVE Identification Service	Identify	13	Identification service using JHOVE (1.1) <a href="#">↗</a>
OpenJpegMigration	Migrate	0	This is a simple wrapper of the OpenJPEG library. It offers access to the tools j2k_to_image for JP2 to TIF and image_to_j2k for TIF to JP2 conversion. The OpenJPEG library is an open-source JPEG 2000 codec, written in C language. It has been developed in order to promote the use of JPEG 2000, the new still-image compression standard from the Joint Photographic Experts Group (JPEG).
J2000 Migration Service	Migrate	0	A JPEG 2000 viewer service. Uses the J2000 reference implementation. See <a href="http://j2000.epti.ch/">http://j2000.epti.ch/</a> for copyright information. 
Jasper19Migration	Migrate	0	Simple service for Jasper Transcoder Version 1.900.1 for JPG to JP2 (JPEG2000) and, vice versa, JP2 to JPG conversion. Jasper is a file format converter specialized in JPEG-2000 encoding. Copyright (c) 1999-2000 Image Power, Inc. and the University of British Columbia. All rights reserved. For more information about this software, please visit the following web sites: <a href="http://www.ece.ubc.ca/~mdadams/jasper/">http://www.ece.ubc.ca/~mdadams/jasper/</a> <a href="http://www.jpeg.org/software">http://www.jpeg.org/software</a>
AvidemuxMigration	Migrate	0	This service offers MPEG to AVI migration using a small subset of the comprehensive functionality of the open-source program Avidemux. Avidemux is available with a GUI (Graphical user interface) and a CLI (Command line interface) version for video editing and conversion. It offers numerous configuration parameters and filters for compressing video files. A huge set of parameters allows reducing the file size while keeping - if the parameters are combined thoroughly - video and audio quality close to the original video file. The service allows you to select codecs for the audio and/or the video track of the video file and some further options, like e.g. frames per second (fps) of the video track. Please contact the service developer if you believe that specific parameters should be considered. The service requires the package avidemux-qt (openSUSE/Debian based Linux distribution). Only if this package is installed, the command line program <code>./usr/bin/avidemux2_cli</code> is available. On most Linux distributions, the symbolic link <code>'avidemux'</code> points to the GUI version, like the Qt-GUI version <code>./usr/bin/avidemux2_qt4</code> for KDE-Linux-Desktops.
SanselanMigrate	Migrate	0	A wrapper for the migrations supported by the pure Java Sanselan image library (v0.94) <a href="#">↗</a>
JTidy	Migrate	1	This is a wrapper for the JTidy Java API. JTidy converts older or not compliant HTML files to XHTML compliant files. Could be used as HTML pretty printer as well. JTidy can be configured by passing a config file. In this case the config file has to be passed using the Parameter <code>-i</code> , reading the

Screenshot 31: Service Browser

You can change the ordering of the information by clicking on a column heading. For example if you wish to see which service has been experimented upon the most you can click on the '# Experiments' column. To find out more information click on a service name, which will load the service information page. For example, the screenshot below shows the information page for the DROID service (note that only part of the page is displayed):

planets testbed | services brian [logout] contact help

**planets testbed** BETA Help About

Home New Experiment My Experiments Browse Experiments Browse Services Browse Data Browse Ontology

**PLANETS Testbed - Inspecting Service DROID Identification Service**

**OPTIONS**

- Browse Services
- Browse Pathways
- List All Pathways

You can also browse the IF Service Registry directly.

**In The Testbed**

Experiments

DROID Identification Service has been used in 4 experiments.

Name	Type	User	Inputs	Runs
April 2009 test 9	Identify	bart	1	1
Test run button	Identify	matt	1	1
usability testing #11	Identify	brian	1	2
usability testing #12	Identify	brian	142	2

Versions

Name	Host	Version	Active?	Used?
DROID Identification Service	tbdev.hatli.arts.gla.ac.uk		true	true

**Service Description**

**DROID**



**DROID**  
Digital Record Object Identification

**Identification Service**

**Description**  
Identification service based on Droid (DROID 3.0, Signature File 13).

**Further Information**  
For further information about this service, you can follow this link.

**Type**  
Identify

**Endpoint**  
[@tbdev.hatli.arts.gla.ac.uk](#)

**Active**  
true

**Used**  
true

**Author**  
Carl Wilson, Fabian Steeg

**Class name**  
eu.planets\_project.ifr.core.services.identification.droid.impl.Droid

**Instructions**

**Service Provider**  
The Planets Consortium.

**Tool**

- Identifier:
- Name:
- Version:
- Description:
- Homepage:

**Version**

**Identifier**

**Screenshot 32: Service Information**

The service information page contains detailed information about the service plus a list of all of the experiments that have made use of the service. If different versions of the service have been made available within the Testbed then information about each version will also be published on this page.

## 10.2 Pathway Browser

In addition to the service browser, it is possible to navigate through the available migration services using the pathway browser. Click on the **'Browse Pathways'** button from the main browse services page to open the pathway browser. The pathway browser allows you to select a migration service, an input format or an output format in order to see which options are available for your selection.

Select an input format, migration service or output format to see what pathway options are available within the Testbed. For example, click on an input format to find out which services accept it, or click on a service to find out what formats it is capable of handling.  
**Hint:** Once you've selected an option you can deselect it by clicking on it again.

Input Format	Migration Service	Output Format
<input type="checkbox"/> BMP	<input type="checkbox"/> JTIty <a href="#">@tbdev.hatli.arts.gla.ac.uk</a>	<input type="checkbox"/> AVI
<input type="checkbox"/> DOC	<input type="checkbox"/> AvidemuxMigration <a href="#">@tbdev.hatli.arts.gla.ac.uk</a>	<input type="checkbox"/> BMP
<input type="checkbox"/> EPS	<input type="checkbox"/> Gimp26Migration <a href="#">@tbdev.hatli.arts.gla.ac.uk</a>	<input type="checkbox"/> DOC
<input type="checkbox"/> GIF	<input type="checkbox"/> OpenJpegMigration <a href="#">@tbdev.hatli.arts.gla.ac.uk</a>	<input type="checkbox"/> EPS
<input type="checkbox"/> HTML	<input type="checkbox"/> SanselanMigrate <a href="#">@tbdev.hatli.arts.gla.ac.uk</a>	<input type="checkbox"/> Extensible Hypertext Markup Language 1.0
<input type="checkbox"/> Hypertext Markup Language <a href="#">↗</a>	<input type="checkbox"/> JJ2000 Migration Service <a href="#">@tbdev.hatli.arts.gla.ac.uk</a>	<input type="checkbox"/> GIF
<input type="checkbox"/> Hypertext Markup Language 2.0 <a href="#">↗</a>	<input type="checkbox"/> Jasper19Migration <a href="#">@tbdev.hatli.arts.gla.ac.uk</a>	<input type="checkbox"/> HTML
<input type="checkbox"/> Hypertext Markup Language 3.2 <a href="#">↗</a>	<input type="checkbox"/> AbiWordMigration <a href="#">@tbdev.hatli.arts.gla.ac.uk</a>	<input type="checkbox"/> Hypertext Markup Language 4.0 <a href="#">↗</a>
<input type="checkbox"/> Hypertext Markup Language 4.0 <a href="#">↗</a>	<input type="checkbox"/> PdftBoxMigration <a href="#">@tbdev.hatli.arts.gla.ac.uk</a>	<input type="checkbox"/> JP2
<input type="checkbox"/> Hypertext Markup Language 4.01 <a href="#">↗</a>	<input type="checkbox"/> ImageMagickMigrate <a href="#">@tbdev.hatli.arts.gla.ac.uk</a>	<input type="checkbox"/> JPEG
<input type="checkbox"/> JP2	<input type="checkbox"/> XenaOOMigration <a href="#">@tbdev.hatli.arts.gla.ac.uk</a>	<input type="checkbox"/> JPG
<input type="checkbox"/> JPEG	<input type="checkbox"/> Javalmage10Migrate <a href="#">@tbdev.hatli.arts.gla.ac.uk</a>	<input type="checkbox"/> PBM
<input type="checkbox"/> JPG	<input type="checkbox"/> InkscapeMigration <a href="#">@tbdev.hatli.arts.gla.ac.uk</a>	<input type="checkbox"/> PCX
<input type="checkbox"/> MPEG		<input type="checkbox"/> PDF
<input type="checkbox"/> ODF		<input type="checkbox"/> PGM
<input type="checkbox"/> ODG		<input type="checkbox"/> PHG

**Screenshot 33: Pathway Browser with no options selected**

If you select an input format, migration service or output format within the pathway browser the listed items will automatically reload to show you which options are available for your selection. For example, if you select DOC as an input format the browser will only display the migration services that can handle DOC files as an input format. The output format column will also be restricted to only those formats that the migration services can convert DOC files into, as the following screenshot demonstrates:

Input Format	Migration Service	Output Format
<input checked="" type="checkbox"/> DOC	<input type="checkbox"/> AbiWordMigration <a href="#">@tbdev.hatli.arts.gla.ac.uk</a>	<input type="checkbox"/> HTML
	<input type="checkbox"/> XenaOOMigration <a href="#">@tbdev.hatli.arts.gla.ac.uk</a>	<input type="checkbox"/> PDF
		<input type="checkbox"/> Portable Document Format - Archival 1 <a href="#">↗</a>
		<input type="checkbox"/> Portable Document Format 1.4 <a href="#">↗</a>
		<input type="checkbox"/> RTF
		<input type="checkbox"/> TXT

**Screenshot 34: Pathway Browser with DOC selected as input format**

### 10.3 List all pathways

In addition to the pathway browser you can also browse the complete list of available migration pathways by clicking on the third button on the browse services page. This lists every single combination of input format, migration service and output format that is possible use as the basis for a migration experiment for the services currently available within the Testbed. The list is presented in a page comparable to the following screenshot:

planets testbed | services brian [logout] contact help

**planets testbed** BETA

Home New Experiment My Experiments Browse Experiments **Browse Services** Browse Data Browse Ontology

**PLANETS Testbed - Browse Services**

**OPTIONS**

- o Browse Services
- o Browse Pathways
- o List All Pathways

You can also browse the IF Service Registry directly.

All of the migration pathways that are currently available in the Testbed are listed below. Click on a column name to change the order.

Input Format ▾	Service Name ▾	Output Format ▾
EMP (planets:fmt:ext:fbmp)	Gimp25Migration @tbdev.hatli.arts.gla.ac.uk	GF (planets:fmt:ext:gif)
EMP (planets:fmt:ext:fbmp)	Gimp25Migration @tbdev.hatli.arts.gla.ac.uk	EPS (planets:fmt:ext:eps)
EMP (planets:fmt:ext:fbmp)	Gimp25Migration @tbdev.hatli.arts.gla.ac.uk	JPEG (planets:fmt:ext:jpeg)
EMP (planets:fmt:ext:fbmp)	Gimp25Migration @tbdev.hatli.arts.gla.ac.uk	PNG (planets:fmt:ext:png)
EMP (planets:fmt:ext:fbmp)	Gimp25Migration @tbdev.hatli.arts.gla.ac.uk	PS (planets:fmt:ext:ps)
EMP (planets:fmt:ext:fbmp)	Gimp25Migration @tbdev.hatli.arts.gla.ac.uk	TIF (planets:fmt:ext:tiff)
EMP (planets:fmt:ext:fbmp)	SanselanMigrate @tbdev.hatli.arts.gla.ac.uk	PNG (planets:fmt:ext:png)
EMP (planets:fmt:ext:fbmp)	SanselanMigrate @tbdev.hatli.arts.gla.ac.uk	GF (planets:fmt:ext:gif)
EMP (planets:fmt:ext:fbmp)	SanselanMigrate @tbdev.hatli.arts.gla.ac.uk	TIF (planets:fmt:ext:tiff)
EMP (planets:fmt:ext:fbmp)	SanselanMigrate @tbdev.hatli.arts.gla.ac.uk	PBM (planets:fmt:ext:pbm)
EMP (planets:fmt:ext:fbmp)	SanselanMigrate @tbdev.hatli.arts.gla.ac.uk	PGM (planets:fmt:ext:pgm)
EMP (planets:fmt:ext:fbmp)	SanselanMigrate @tbdev.hatli.arts.gla.ac.uk	PPM (planets:fmt:ext:ppm)
EMP (planets:fmt:ext:fbmp)	SanselanMigrate @tbdev.hatli.arts.gla.ac.uk	PNM (planets:fmt:ext:pnm)
EMP (planets:fmt:ext:fbmp)	SanselanMigrate @tbdev.hatli.arts.gla.ac.uk	TGA (planets:fmt:ext:tga)
EMP (planets:fmt:ext:fbmp)	ImageMagicMigrate @tbdev.hatli.arts.gla.ac.uk	TIF (planets:fmt:ext:tiff)
EMP (planets:fmt:ext:fbmp)	ImageMagicMigrate @tbdev.hatli.arts.gla.ac.uk	PNG (planets:fmt:ext:png)
EMP (planets:fmt:ext:fbmp)	ImageMagicMigrate @tbdev.hatli.arts.gla.ac.uk	JPEG (planets:fmt:ext:jpeg)
EMP (planets:fmt:ext:fbmp)	ImageMagicMigrate @tbdev.hatli.arts.gla.ac.uk	JP2 (planets:fmt:ext:jp2)
EMP (planets:fmt:ext:fbmp)	ImageMagicMigrate @tbdev.hatli.arts.gla.ac.uk	GF (planets:fmt:ext:gif)
EMP (planets:fmt:ext:fbmp)	ImageMagicMigrate @tbdev.hatli.arts.gla.ac.uk	PDF (planets:fmt:ext:pdf)
EMP (planets:fmt:ext:fbmp)	ImageMagicMigrate @tbdev.hatli.arts.gla.ac.uk	PCX (planets:fmt:ext:pcx)
EMP (planets:fmt:ext:fbmp)	ImageMagicMigrate @tbdev.hatli.arts.gla.ac.uk	TGA (planets:fmt:ext:tga)
EMP (planets:fmt:ext:fbmp)	ImageMagicMigrate @tbdev.hatli.arts.gla.ac.uk	BMP (planets:fmt:ext:bmp)
EMP (planets:fmt:ext:fbmp)	JavaimageOMigrate @tbdev.hatli.arts.gla.ac.uk	JPEG (planets:fmt:ext:jpeg)
EMP (planets:fmt:ext:fbmp)	JavaimageOMigrate @tbdev.hatli.arts.gla.ac.uk	WBMP (planets:fmt:ext:wbmp)

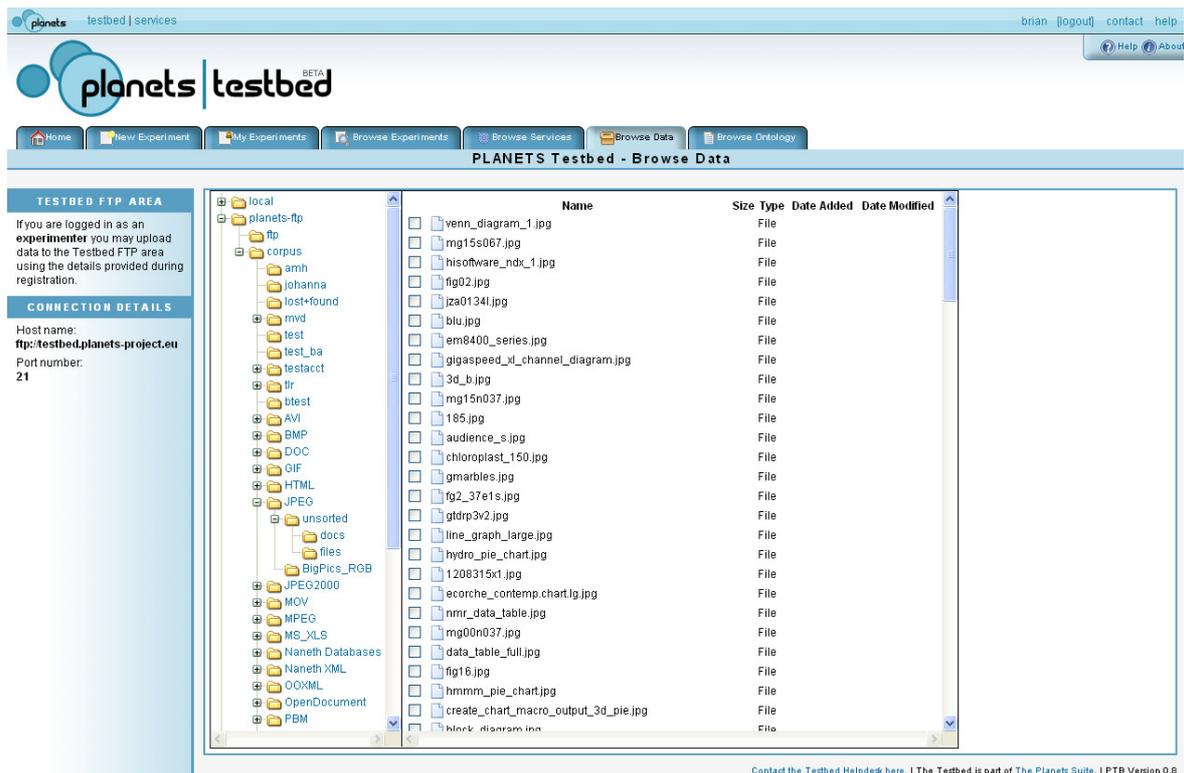
**Screenshot 35: List all pathways**

## 11 Browse Data

By clicking on the **'Browse Data'** tab you can view all of the data that is contained in the Testbed. This page provides a single interface for browsing a variety of data sources, including:

- Data contained in your own Testbed upload area (located in planets-ftp/ftp)
- Data that have been uploaded by all other experimenters (located in planets-ftp/ftp)
- The Planets corpora of test files (located in planets-ftp/corpus)
- Other data sources that have been registered with the Testbed

The data browser uses an interface similar to file browsers such as Windows Explorer. You may browse through a tree of folders in the left-hand section of the page, and click on a folder to display the files and folders it contains in the main section of the page, as the following screenshot demonstrates:



Screenshot 36: Browse Data

## 11.1 The Testbed Corpora

Part of the work undertaken by the Testbed has been to gather a number of corpora of annotated digital objects that can be used for test purposes. These files are free for all experimenters to use within the Testbed, they cover a broad range of file types and they include a variety of edge-case files as well as more standard examples of file formats. The digital object properties for the corpora files have been documented, although it will not be possible to browse through these properties from the data browser in the current version of the Testbed.

If there are any files you think should be represented in the Testbed Corpora please contact the helpdesk ([helpdesktb@planets-project.eu](mailto:helpdesktb@planets-project.eu)) and share your suggestions.

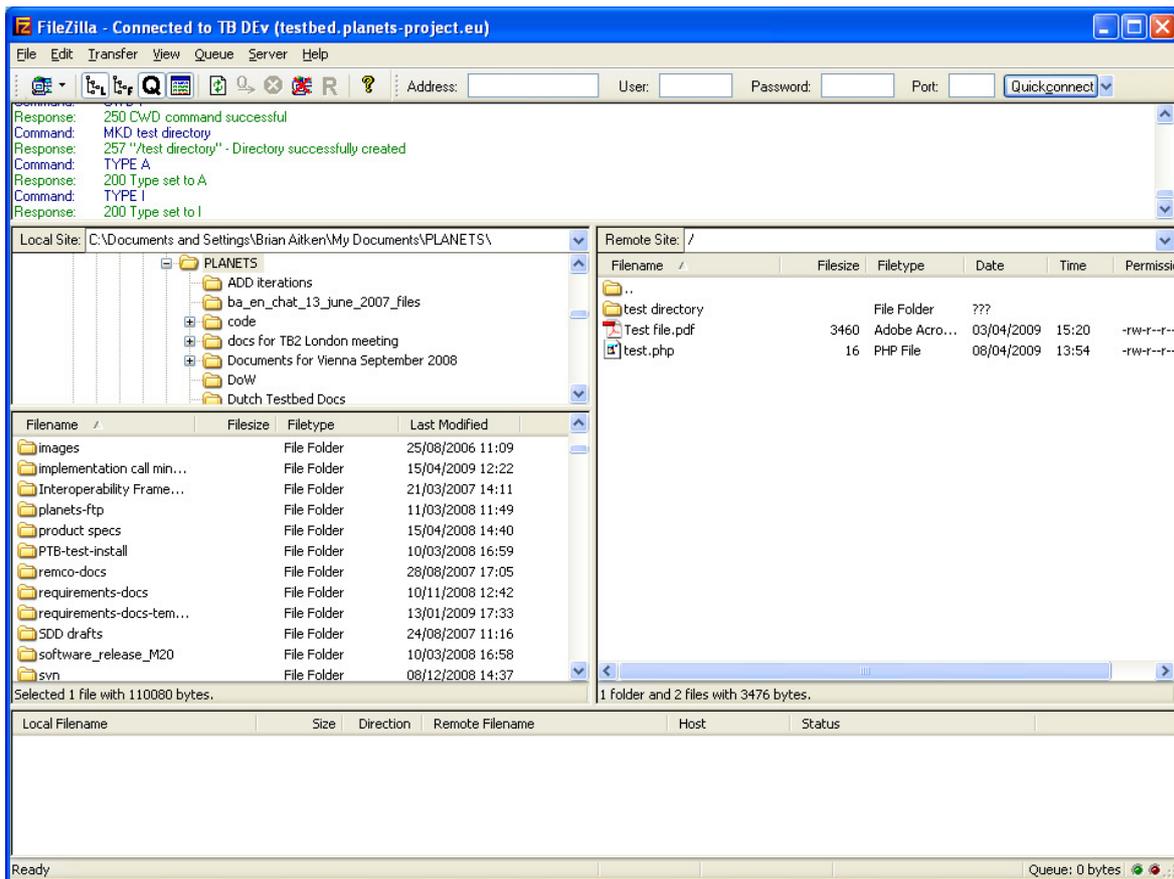
## 11.2 Uploading files to the Testbed using FTP

As a Testbed experimenter you may upload any number of files for experimentation. Files can be uploaded to the Testbed server using an FTP client such as Filezilla (<http://filezilla-project.org/>). When you receive your Testbed registration details you will also be given a username and a password for FTP file upload. If you have any questions regarding file upload please contact the Testbed Helpdesk at [helpdesktb@planets-project.eu](mailto:helpdesktb@planets-project.eu).

You can connect to the Testbed FTP area using the following details:

- **Host Name:** <ftp://testbed.planets-project.eu>
- **Port Number:** 21

Once connected using your FTP client you should be able view your file upload area as the following screenshot demonstrates:



**Screenshot 37: Using an FTP client to upload data to the Testbed**

You may create subdirectories within your Testbed file upload area and upload any number of files. Once uploaded, all files and directories are automatically viewable from the Browse Data tab within the Testbed. It should be noted that the files you upload will be viewable to all other Testbed users and you should ensure that there are no copyright or licensing restrictions on any of the files you upload.

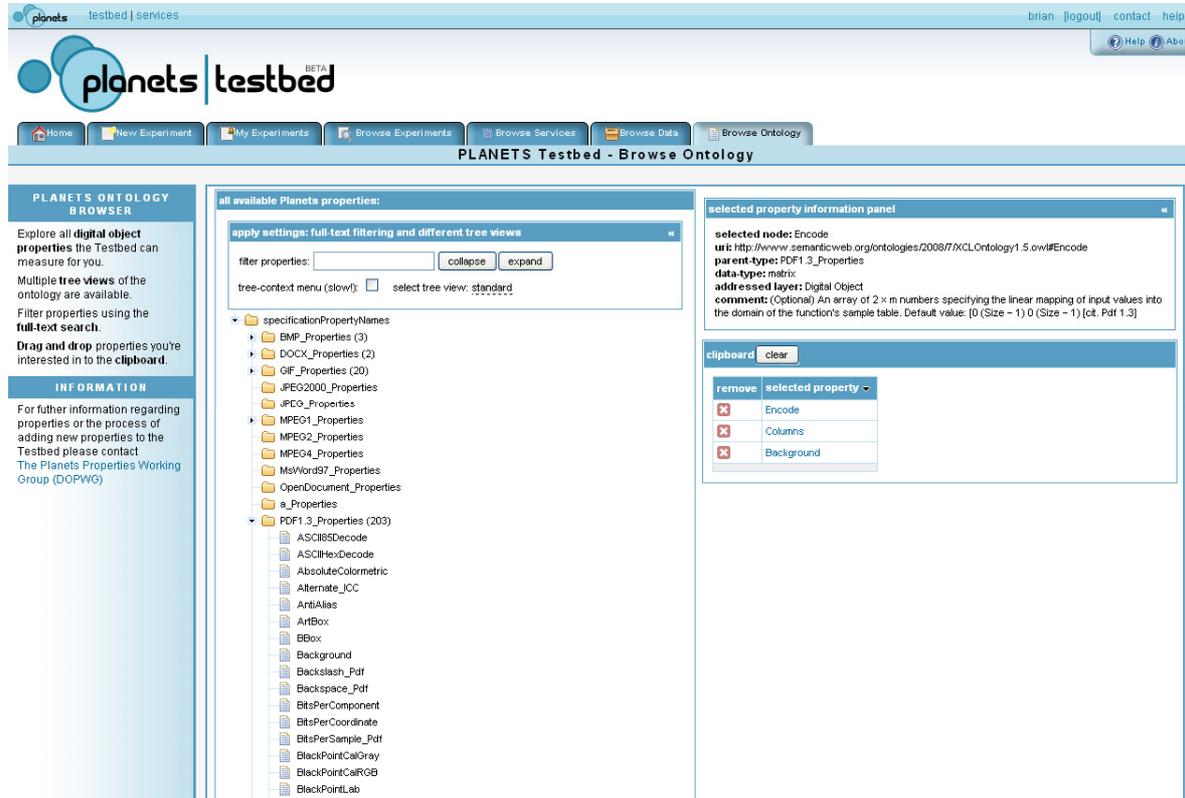
## 12 Browse Ontology

The Testbed contains an ontology of digital object properties. This ontology is used in Stage 3 of the experiment process to enable you to find, select and attach manually measured properties to your experiment. It is also possible to browse the ontology directly through the Testbed.

The ontology of digital object properties is represented in a tree structure, with each node in the tree representing a particular file format. You may open a node by clicking on the arrow beside it to view the properties contained within. The current version of the Testbed enables browsing by file type only, but the next version will also feature the Rothenberg classification scheme for digital object properties, which will group properties based on those which deal with the content, context, appearance, structure and behaviour of digital objects.

In addition to browsing the properties, you may also perform a search of the properties by simply entering characters into the **Filter Properties** box. This will immediately perform a search and will narrow the displayed items to only those that contain the entered characters. To return to the full view of properties simply remove the characters from the search box.

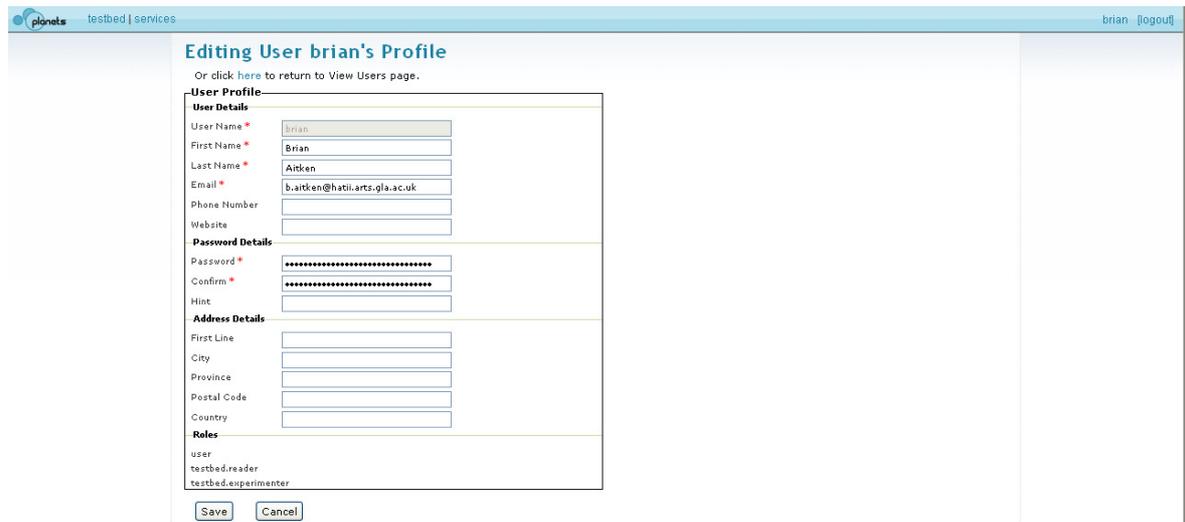
You may click on a property name to view further information about it, and you may double click or drag and drop a property to the clipboard to keep track of those properties you are particularly interested in, as the following screenshot demonstrates:



Screenshot 38: Browse Ontology

## 13 Editing User Details

If you wish to update any of your user details, click on your username, which is displayed towards the right of the Planets menu bar, which runs across the top of every Testbed page. This will load a page similar to the one below:



Screenshot 39: Edit user details

Once you have made the required changes click on the 'testbed' link towards the left of the Planets menu bar at the top of the page to return to the main Testbed interface.

**Note:** If you change your password this will not update the password that is used when uploading files via FTP. If you wish to change your FTP password please contact the Testbed Helpdesk at [helpdesktb@planets-project.eu](mailto:helpdesktb@planets-project.eu).