

# The CYCLADES Graphical User Interface

## Addendum to D4.2.1

---

*Date: July 18, 2003*

*Name of Responsible: Gudrun Fischer*

*University of Duisburg-Essen  
Institute of Informatics and Interactive Systems, Faculty 5  
47048 Duisburg  
Germany*

*E-Mail: Gudrun.Fischer@uni-duisburg.de*

### **Contributors**

CNR-ISTI:	Umberto Straccia, Leonardo Candela
University of Duisburg-Essen:	Gudrun Fischer
FORTH:	Nick Papadopoulos
FhG-FIT:	Tom Gross, Thomas Kreifelts, Wido Wirsam, Silvio Caizzi

**Abstract:** This is a short addendum to D4.2.1, describing the updated graphical user interface of the CYCLADES system.

# Contents

<b>1</b>	<b>Introduction</b>	<b>4</b>
<b>2</b>	<b>Mediator Service</b>	<b>5</b>
2.1	Registration and login . . . . .	5
2.2	GUI integration and the services Menu . . . . .	5
2.3	User management . . . . .	5
<b>3</b>	<b>Collaborative Work Service</b>	<b>7</b>
3.1	The folder listing . . . . .	7
3.2	The instant access navigation buttons . . . . .	8
3.3	The menu bar . . . . .	9
3.4	The communities listing . . . . .	10
3.5	The collections and services listing . . . . .	10
3.6	The recommendations folder . . . . .	10
3.7	The multi-action buttons . . . . .	11
3.8	The action menus . . . . .	11
3.9	Context sensitive help . . . . .	12
<b>4</b>	<b>Search and Browse Service</b>	<b>15</b>
4.1	The collection list . . . . .	16
4.2	Conditions . . . . .	16
4.3	Attribute values dialogue . . . . .	16
4.4	Main menu . . . . .	16
4.5	Collection selection . . . . .	17
4.6	Schema selection . . . . .	18
4.7	Query selection . . . . .	18
4.8	Result list . . . . .	18
<b>5</b>	<b>Access Service</b>	<b>20</b>
5.1	The archive list . . . . .	20
5.2	The archive information dialogue . . . . .	20
<b>6</b>	<b>Collection Service</b>	<b>22</b>

<i>The CYCLADES Graphical User Interface(Addendum to D4.2.1)</i>	3
6.1 The menu bar . . . . .	23
6.2 The action menus . . . . .	23
6.3 The collections hierarchy area . . . . .	24
6.4 The collection data area . . . . .	24
<b>7 Other Services</b>	<b>25</b>
7.1 Filtering and Recommendation Service . . . . .	25
7.2 Rating Management Service . . . . .	25

# Chapter 1

## Introduction

This document describes the graphical user interface of the CYCLADES system. The individual components of the user interface have been presented in D4.2.1, the System Testing Report. Since the delivery of that report, some details have changed in some parts of the user interface. Therefore, the CYCLADES consortium has compiled this unofficial addendum to D4.2.1 in order to provide an up-to-date description of the user interface at the end of the project.

The structure follows roughly the path a user could take through the system. First, she will see the CYCLADES login page provided by the Mediator Service. After logging in, she will be presented with a page composed of two parts: a services menu bar provided by the Mediator Service, and a view of her own home folder provided by the Collaborative Work Service. The user interfaces of the other services, if available, can be accessed via the services menu. Those user interfaces are presented each in its own window.

Since the delivery of D4.2.1, details have changed in the graphical user interfaces of the following services:

- Collaborative Work Service, chapter 3
- Search and Browse Service, chapter 4
- Access Service, chapter 5

# Chapter 2

## Mediator Service

The Mediator Service (MS) integrates and enables the various services of CYCLADES to communicate with each other. It stores information about the services and the registered users in CYCLADES. The MS is responsible for services' "registration" to the system. All services in CYCLADES refer to the MS in order to get information about other services.

The MS partly handles the registration of the users in CYCLADES and fully handles the login of the users to the system, via the graphical user interface. Also the MS, in interaction with the Collaborative Work Service, is involved in the cases of user's invitation.

Thus, the MS supports:

- Inter-System Communication,
- User Registration and Login,
- Service Registration.

### 2.1 Registration and login

Of these tasks, only the first two are relevant to the graphical user interface. The MS provides the initial CYCLADES page where the user can register or login into CYCLADES.

### 2.2 GUI integration and the services Menu

After successful login, the user is presented with an interface where both her home folder (CWS GUI, chapter 3) and a button menu for accessing other CYCLADES services are shown. The user can either navigate through her folders or choose to activate a service. If she chooses to activate another service, then she is presented with that service's user interface.

### 2.3 User management

Among the buttons that the user is presented with, in the services menu in MS GUI, there is a button for administration purposes. If the user chooses to press that button then a form asking for administration password will be shown. There the user in order to continue must fill in the administrator's password or, in the case that she has been granted with the administration privilege, she must fill in her name and her password. In the MS administration area someone can see all the registered users in CYCLADES and can apply various actions on them.

The actions an administrator can apply onto the users (for the moment) are:

- remove a user
- delete a user
- check whether a user has administrator's privileges or not
- set the administrator privilege to a user
- un-set the administrator privilege to a user

(Of course the set of actions can be extended.)

## Chapter 3

# Collaborative Work Service

The Collaborative Work Service (CWS) stores the private, community and project folders of the registered Cyclades users along with their contents which may be other folders, metadata records, queries and discussion forums. Project folders may contain also other material. The service supports

- folder and contents management,
- collaboration between users by way of folder sharing in communities and projects, discussion forums and mutual awareness,
- recommendations management.

The graphical user interface of the CWS presents the folders to which a registered user of the CYCLADES system has access and allows for navigation among these folders and for adding, moving, deleting, reading or editing artifacts within those folders. The user interface shows the contents of one folder at a time in a folder listing. The functionality may be invoked by using menus and buttons that are part of a folder listing.

### 3.1 The folder listing

The CWS user interface presents the contents of a folder in a tabular representation with a header containing menus, navigation buttons and action shortcut buttons. As an example figure 3.1 shows a folder listing with an open File menu for creating new objects in the folder.

Several classes of artifacts can be created and shared in a folder: various kinds of folders (private, project, community), discussion forums containing notes, and annotations of artifacts which also consist of notes. In project folders, additional kinds of artifacts may be created and shared: documents and URLs. Records and queries are not created via user operations, but transferred from the Search and Browse Service; they may also be shared in folders.

Each artifact contained in a folder is represented by an entry in the folder listing. An entry consists of an information button, a checkbox (that a user has to “tick” to select the artifact for some multi-action), the name of the artifact, some icons, additional data and an action menu button.

Most prominent in each entry is the name of the artifact. Obviously, a user should choose names describing the content or purpose of each individual artifact. The URL to the original e-print document to which the respective meta-data record refers is automatically included in the artefact name. This allows the user to easily access the original e-print document without having the first

go into the source of the meta-data record (cf. 3.2). The icon immediately left of the artifact name denotes the artifact type.

The icon immediately left of the artifact name denotes the artifact type. To the right of the artifact name the CWS user interface displays:

- Zero, one or more of the following icons:
  - *shared icon* indicates that a folder is shared;
  - *lock icon* indicates that someone has set a lock for this artifact;
  - *note icon* indicates that a note has been added to the artifact;
  - *rate icon* indicates that the document has been rated by one or more folder members;
- the user name of its owner;
- date and time of the most recent modification;
- zero, one or more icons indicating that some of the following events have occurred:
  - *new icon* indicates a new artifact;
  - *change icon* indicates changes to the artifact;
  - *read icon* indicates that someone has read the artifact;
  - *modification icon* indicates recent modifications in a sub-artifact;
- a menu button showing the actions involving the artifact.

Note that different actions are possible for different types of artifacts. Depending on the individual access rights, the number and type of actions permitted may vary.

Most icons in an artifact entry are “clickable”, i. e. one gets more information on a community, a lock, a note, a rating etc. when one clicks on it.

## 3.2 The instant access navigation buttons

The upper right hand corner of the interface provides an icon bar showing buttons applicable to instantly access certain artifacts.

- *home folder icon* represents a user’s home folder.
- *communities icon* represents a the existing communities.
- *clipboard icon* represents a user’s clipboard, which serves as an intermediate store.
- *waste icon* represents a user’s waste, which helps to prevent unauthorized or unintentional deletion of artifacts: In the CWS, an artifact can be irrevocably destroyed only from the waste-basket of its owner.
- *address book icon* represents a user’s address book, to be used primarily to invite new members to the user’s folder.
- *search & browse icon* represents the access to the Search & Browse Service.

### 3.3 The menu bar

At the upper left hand corner of the interface there is a menu bar with five menus and action shortcut buttons for the most frequent actions.

New artifacts are added to the current folder by selecting one of the *File* menu options:

*File* → *New* plus a sub-option from the list *Discussion*, *Private Folder*, *Community Folder*, *Project Folder* in order to create an artifact of the specified type directly on the CWS server. For project folders, also documents, and URLs may be created. Examples are:

- Select *File* → *New* → *Private Folder* in order to create a private folder within the current private or home folder.
- Select *File* → *New* → *Community Folder* in order to create a community folder within the current community or home folder.
- Select *File* → *New* → *Project Folder* in order to create a project folder within the current project or home folder.
- Select *File* → *New* → *Document* to upload a file from the user's local computer system to the current project folder.

If the user wants to create a new private, community or project folder, the CWS user interface asks for *name*, *description*, *collections* to be associated to that folder; finally the user is asked to specify whether recommendations are requested for *records*, *users*, *collections*, or *communities*, (i. e. tick the appropriate box). For communities one has to also specify in the creation dialogue whether the community is open to be joined by external users.

When a new document is identified to be uploaded to the CWS server, the user is asked via an additional dialogue to specify the document's local URL, name, description, MIME type and encoding.

If the user wants to rate the new artifact, she may choose one of the following options: *no* (for no rating available), *very poor*, *poor*, *fair*, *good*, or *excellent*, by ticking the respective radio button.

The *Edit* menu is used to transfer existing artifacts to/from from the clipboard by the following procedure. Select the *Paste* option in the Edit menu to add artifacts that arrived at the Clipboard from somewhere in the user's folders as a result of the most recent *Copy* or *Cut* action to the current Folder.

Via the *Options* menu, the user may edit *Preferences*, personal user *Details*, user *Communication* specifics, or user *Default Events*.

To navigate among the particular entities one can also use the *GoTo* menu.

- Select *GoTo* → *Home* to get to the user's home folder.
- Select *GoTo* → *Communities* to get to the existing communities.
- Select *GoTo* → *Clipboard* to get to the user's clipboard.
- Select *GoTo* → *Waste* to get to the user's waste.
- Select *GoTo* → *Address Book* to get to the user's address book.
- Select *GoTo* → *Search & Browse* to get to the Search & Browse Service.
- Select *GoTo* → *User Info* to receive the specifics of the user information stored in the system.

System administrators may access the existing collections and services via the following options of the *GoTo* menu.

- Select *GoTo* → *Collections*
- Select *GoTo* → *Services*

### 3.4 The communities listing

The communities listing shows the existing communities in the style of a folder listing. The communities are represented by their root folders. Community objects in the communities listing allow the following functions via the action menus (cf. below):

- *Join Community* to join the community, if it is open to subscription,
- *Mail Community Mgrs* to send an electronic letter to the manager(s) of a particular community (e. g. to get invited to a community).

### 3.5 The collections and services listing

The collections and services listings are intended mainly for administrators and show the existing collections and services in the style of a folder listing.

The collections folder allows the function

- *Update Collections* to update the list of collections from the Collection Service

via the action menu (cf. below). The collection objects have no specific functions other than *Info*. The service objects in the services listing indicate the status of the service via the service icon and allow the functions

- *Ping* to test the availability of the service,
- *Process Queue* to process queued calls for this service (administrators only)

via the action menu. The services folder allows the function

- *Update Services* to update the list of services from the Mediator Service

also via its action menu.

### 3.6 The recommendations folder

Every folder may have up to one recommendations folder that contains the recommendations of records, collections, users or communities intended for this folder. The title of the recommendations folder is always *Recommendations*, it may not be moved. A recommendations folder may only contain recommended objects inserted by the system when received from the Filtering and Recommendation Service. Recommended objects allow the following functions via the action menu (cf. below):

- recommended records may be moved or copied to other folders,
- recommended collections may be associated to the containing folder,

- recommended users may be invited to the containing folder (managers only) or may be contacted by electronic mail,
- recommended communities may be joined if open for subscription or their managers may be contacted by electronic mail.

Recommendations may of course also be deleted. All these functions are invoked via the action menu of the respective entry.

### 3.7 The multi-action buttons

Preceding the list of artifacts, the CWS user interface provides a number of buttons for actions to be applied to several selected artifacts.

In general, an artifact is selected by marking the checkbox to the left of its name. The *Select all* and *Select none* buttons are shortcuts for selecting or de-selecting all artifacts within the current folder.

Hitting, e. g., the *copy* button invokes copying, and hitting the *cut* button triggers transfer of the selected artifacts to the user's clipboard; hitting the *delete* button invokes transfer of the selected artifacts to the waste. Certain buttons such as *send* and *rate* trigger actions that can be applied only to artifacts of specific types.

Note that artifacts transferred from a folder to the clipboard or to the waste are no longer visible to the members of the folder.

### 3.8 The action menus

At the right end of the entry containing the artifact name in the folder listing, the CWS user interface provides for every entry an action menu for operations to be applied only to that particular artifact. Here one gets all the actions that are applicable to the artifact, including generic ones like *Open*, *Catch up*, *History*, *Info*, or actions that depend on the nature of the artifact, e. g. *Rate*, *Attach note* for records or *Add Collections*, *Remove Collections* for CYCLADES folders.

Here in the single action menu the actions more specific to CWS are to be found that do not appear in the menu bar or the multi-actions:

- *Add Collections* to associate additional collections to a CYCLADES folder,
- *Remove Collections* to remove collections from the set of collections associated to a CYCLADES folder,
- *Edit Reco Prefs* to modify the preferences for the recommendations sought for,
- *Allow Subscription* to allow subscription to a community,
- *Deny Subscription* to refuse subscription to a community,
- *Update Folder Profile* to request an immediate update of the folder profile in the Filtering and Recommendation Service,
- *Join Community* to join the selected community,
- *Mail Community Mgrs* to send an electronic letter to the manager(s) of a particular community (e. g. to get permission to join a community).

The configuration of the Action menu depends on the type of artifact—for example, different actions are appropriate for a URL artifact, a folder or a document.

What actions are applicable to which artifacts? Access right management in the CWS is based on roles, whereby a role defines the set of artifacts and actions a user may apply for a specific task. As a consequence, the CWS will not display the single action menu entries for actions that a user may not perform on the specific artifact w. r. t. to the role assigned to the particular user. On the other hand, one may invite, for example, new community members assigning roles to them. Moreover, roles define access profiles which can be attached to any artifact in the CWS. A set of pre-defined roles serves as a starting point: *manager*, *owner* (originally the creator; also accountable for the disk space used), *member* and *restricted member* (read-only access). Role assignments are inherited along the folder hierarchy and can be modified at any time. In the pre-defined role definition, member management is reserved to managers.

### 3.9 Context sensitive help

The context sensitive help feature provides assistance to navigate the system. In a number of application environments one may click the *question mark* button to get an explanation of the action to be launched.



Figure 3.1: CWS user interface

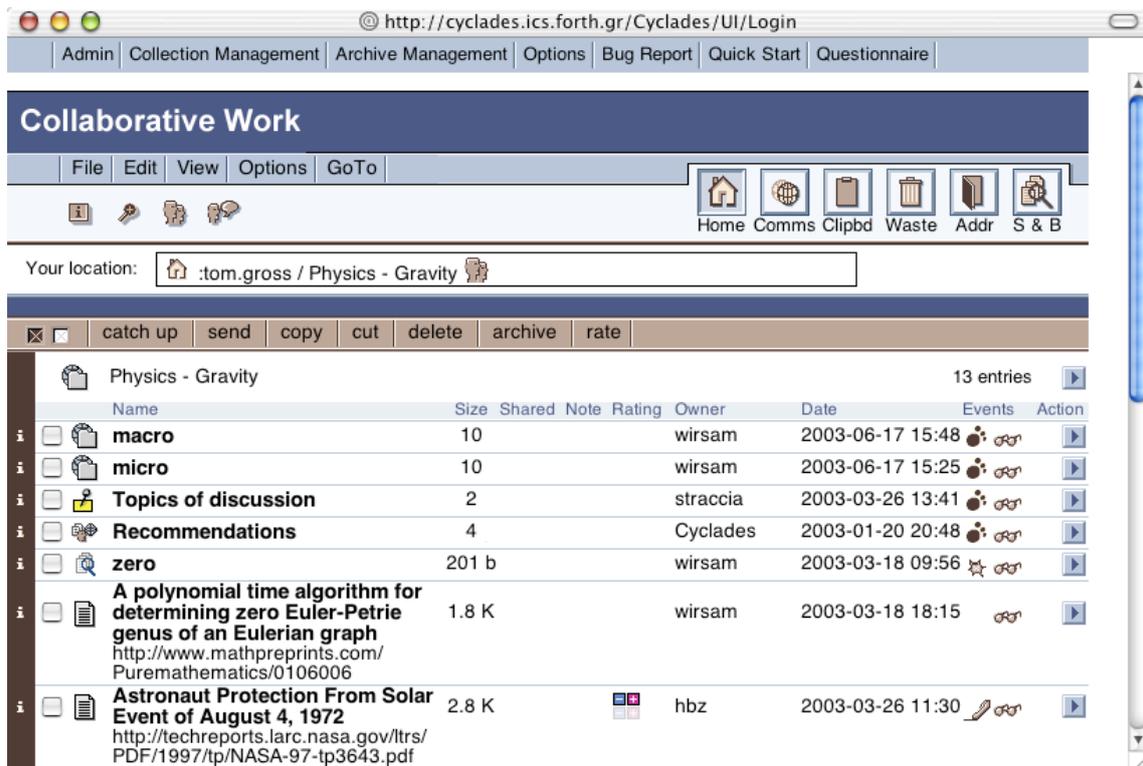


Figure 3.2: CWS user interface

# Chapter 4

## Search and Browse Service

The Search and Browse Service (SBS) provides the search and browse functionality of the CYCLADES system. The user can select a set of collections to search, choose between the schemas available for these collections, and formulate query conditions which may be mandatory (the condition must be fulfilled), optional (the condition may be fulfilled), or negative (the condition must not be fulfilled).

The first page that is shown when the Search and Browse GUI is called is the query formulation dialogue (figure 4.1).

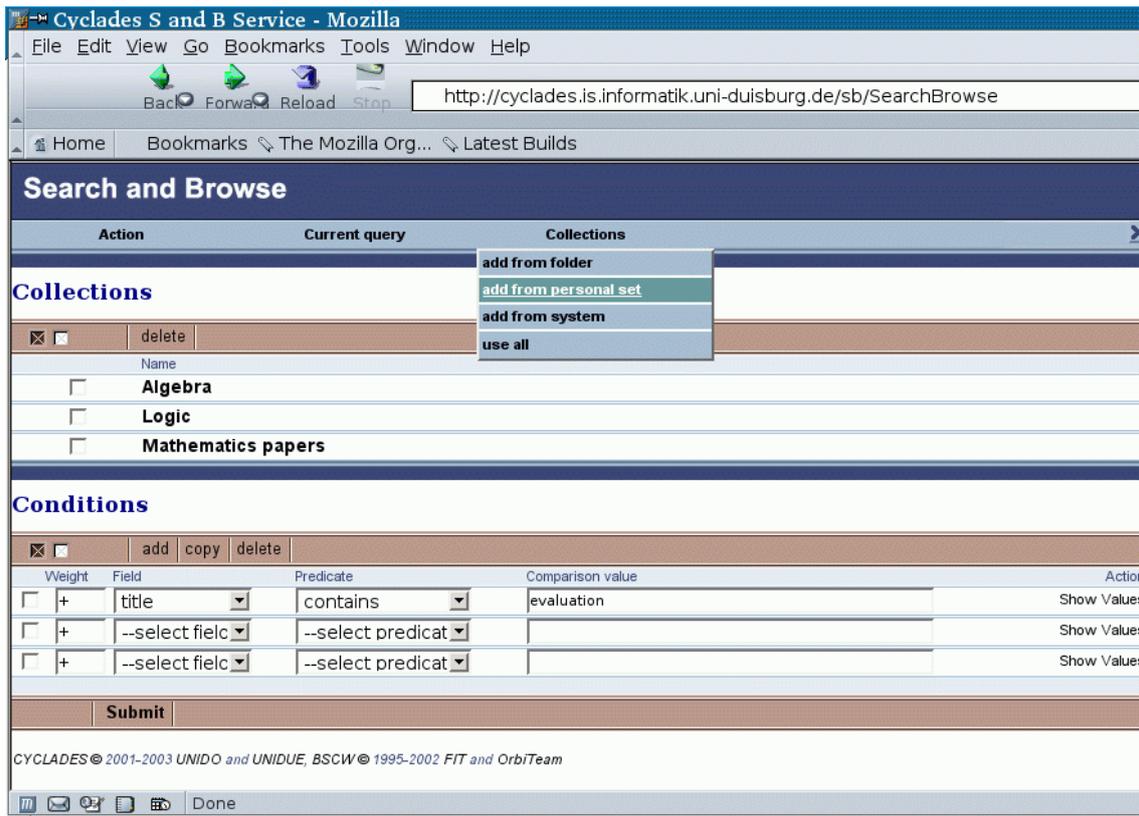


Figure 4.1: SB Query Formulation

A query consists of a (possibly empty) list of collections to be searched, and a list of conditions. This is reflected by the two list areas in the query formulation dialogue.

## 4.1 The collection list

This list in the upper part of the query formulation dialogue contains those collections that the user wants to be searched in the current query. If the list does not contain any specific collection, a hint is displayed that all collections in the system will be searched.

In the menu bar above the collection list, the user can select all collections, or none. Individual collections can be selected via the checkbox beside the collection name. The user can then delete the selected collections from the query by pressing the *Delete* button in this bar.

## 4.2 Conditions

The list of conditions is displayed in the lower part of the query formulation dialogue. Each condition consists of an optional weight (which can be "+", "-", or a positive number between 1 and 1000), an attribute (according to the current metadata schema), a predicate, and a comparison value.

The condition list always contains at least three conditions. Incomplete conditions, i.e. conditions where the field or predicate have not been selected, are ignored internally when the query is processed by the SBS.

In the menu bar above the list of conditions, the user can select all, or none, for further actions. Each condition can also be selected or deselected individually via the checkbox on the left. The *Delete* button in the menu bar causes all selected conditions to be removed from the query, the *Copy* button duplicates each selected condition. *Add* ignores selections and simply adds an empty condition to the query.

On the right hand side of each query condition, there is an action link *Show values*. This will pop up the *attribute values* dialogue described in the next section.

## 4.3 Attribute values dialogue

In this dialogue (figure 4.2), the user can browse terms occurring in the field (attribute) in the condition for which the dialogue was opened, if any has been selected already. The dialogue also contains a simple filtering functionality for browsing terms beginning with a certain string of characters. In this way, the user can determine, for example, all possible terms for the field "title", which start with "intel", and then copy a suitable term into the query formulation dialogue.

## 4.4 Main menu

The main menu bar at the top of the query formulation dialogue contains the following entries:

- *Action*
- *Current query*
- *Collections*

The *Action* menu contains actions that replace the current query without saving it:

- *New query* - Forget the current query and start with an empty one
- *Get new records for folder* - Forget the current query and get new records for the current folder instead

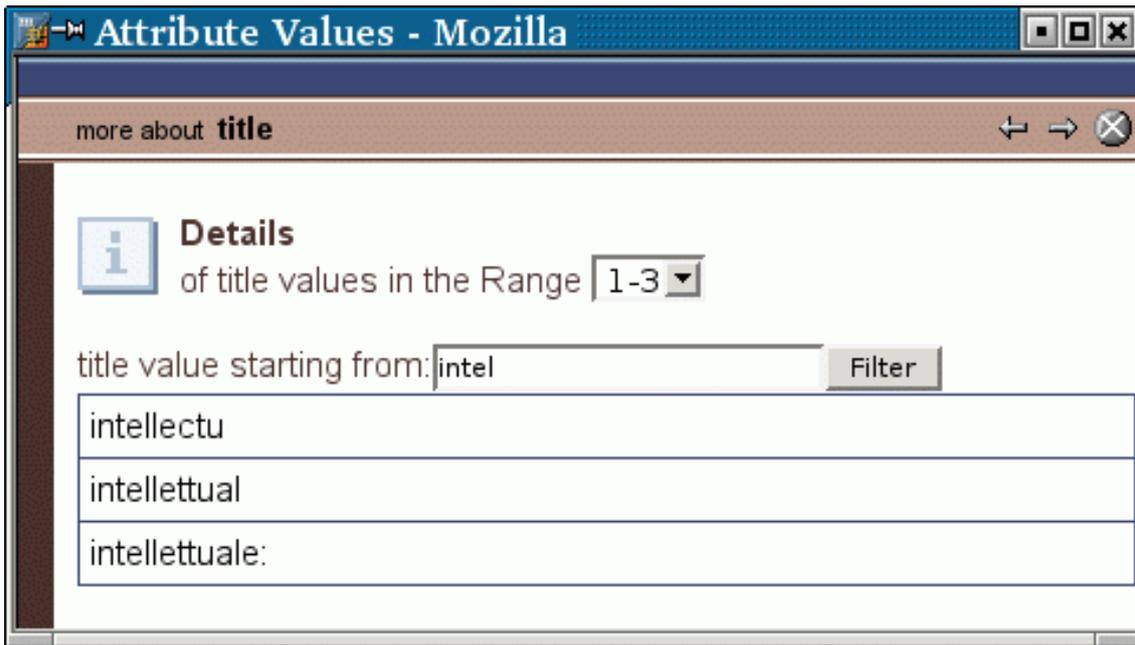


Figure 4.2: SB: Browsing attribute values

- *Select query from history* - Select another query from the session history
- *Select query from folder* - Select another query from the current folder

The *Current query* menu contains actions that refer to the current query:

- *Submit* - Submit the query as is
- *Submit personalized* - Submit the query and filter the results (calls the Filtering and Recommendation Service)
- *Save to folder* - Save the current query to the folder

The *Collections* menu contains actions to add collections to the current query:

- *Add from folder* - Add collections that are associated to the current folder
- *Add from personal set* - Add collections from the set of personal collections
- *Add from system* - Add collections from the set of all collections in the system
- *Use all* - Clear the list of collections in the current query, thus causing all collections in the system to be searched

## 4.5 Collection selection

Each of the first three actions in the *Collections* menu opens a dialogue with a list of collections. The user can select all, or none, of those collections via the multi-object menu above the list, or individual collections via the checkboxes beside each collection name, and then add the selected collections to the current query by pressing the *Add* button in the menu bar. This will take the user back to the query formulation dialogue, augmented by the additional collections.

## 4.6 Schema selection

This functionality is still missing from the current Search and Browse GUI. It will be implemented as a *schema selection* dialogue later, after the end of the current project.

## 4.7 Query selection

The *query selection* dialogue is shown when the user chooses to select a query either from the query history of the current session, or from the list of queries stored in the current folder. Each query is displayed with its name, if it has one, else with an automatically generated ID. By clicking on a query, the user returns to the query formulation dialogue, where the selected query is displayed.

## 4.8 Result list

A *result list* (figure 4.3) is shown whenever a query was submitted, or the user requested to look for new records for the current folder. It consists of a list of records, and a multi-object menu above the list. Each record is displayed wither with its title, or, if there is no title, with its record id. A click on a record opens a new window which displays the complete metadata record as it was harvested from its archive.

On the left-hand side of each record list entry, there is a checkbox for selecting the record. The user can also select all records, or none, via the multi-object menu. Selected records can be saved to the current folder by pressing the *Save* button in the multi-object menu.

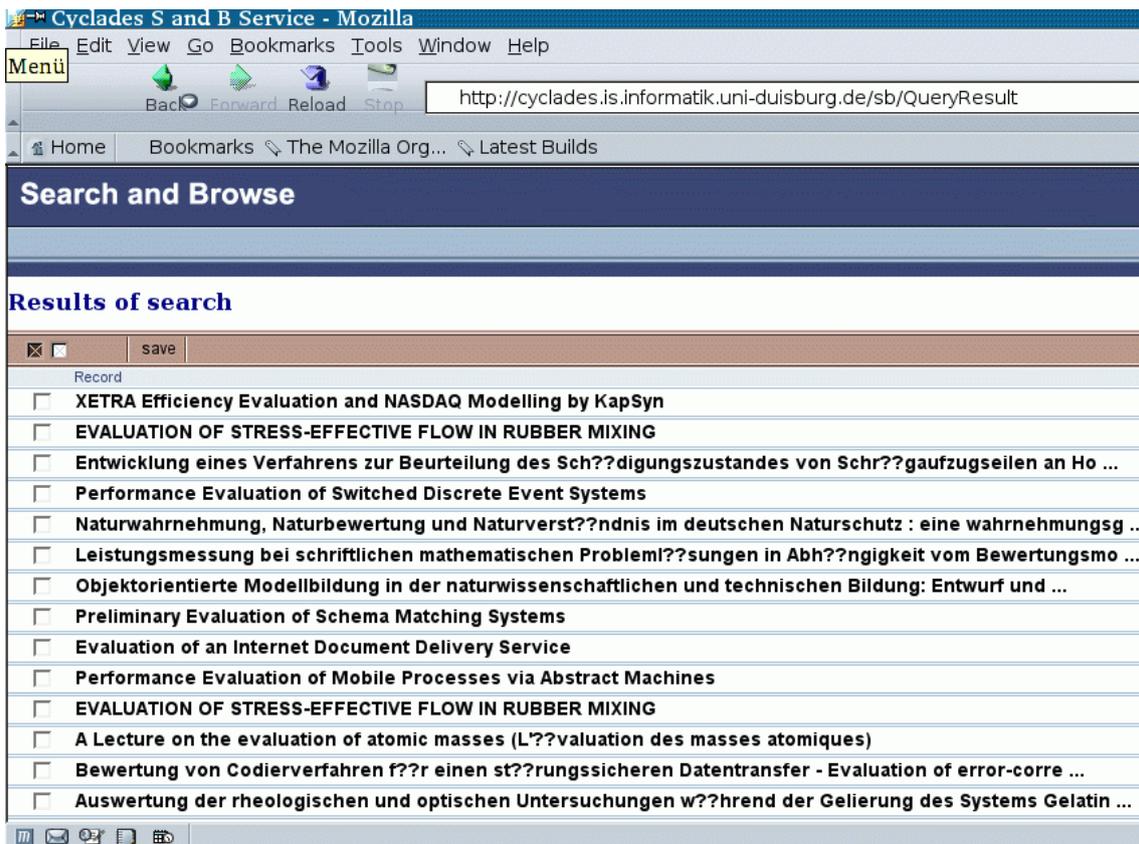


Figure 4.3: SB Result List

# Chapter 5

## Access Service

The Access Service (AS) harvests and indexes metadata records from open archives and makes them available for other CYCLADES services. For this purpose, it provides

- metadata harvesting and indexing
- persistent storage of metadata records
- management of archive information

For the third of these tasks, the AS provides a graphical user interface. After being called, it presents in a new window a (possibly empty) list of archive objects owned by the user (figure 5.1).

### 5.1 The archive list

Each archive object can be selected for multi-object actions. At the moment, the only possible multi-object action is deletion, however, more actions may be added in the future. Multi-object actions are available as buttons above the list of archives.

A click on an archive name, or on the *Edit* link at the right hand side of each entry in the archives list, will take the user to the archive information dialogue described in the next section.

The *Archive* menu contains only one option, i. e. *Register new*, for registering a new archive. After choosing this option, the user is presented first with an input form for the new archive's URL, and then with the archive information dialogue.

### 5.2 The archive information dialogue

In this dialogue, the registration information about a single archive is presented, and the user can edit some parts of it.

At the top, some basic, non-editable information is shown:

- The URL of the archive
- The repository ID of the archive, according to its *Identify* record
- The repository name of the archive, according to its *Identify* record
- The e-mail address of the archive administrator, according to its *Identify* record

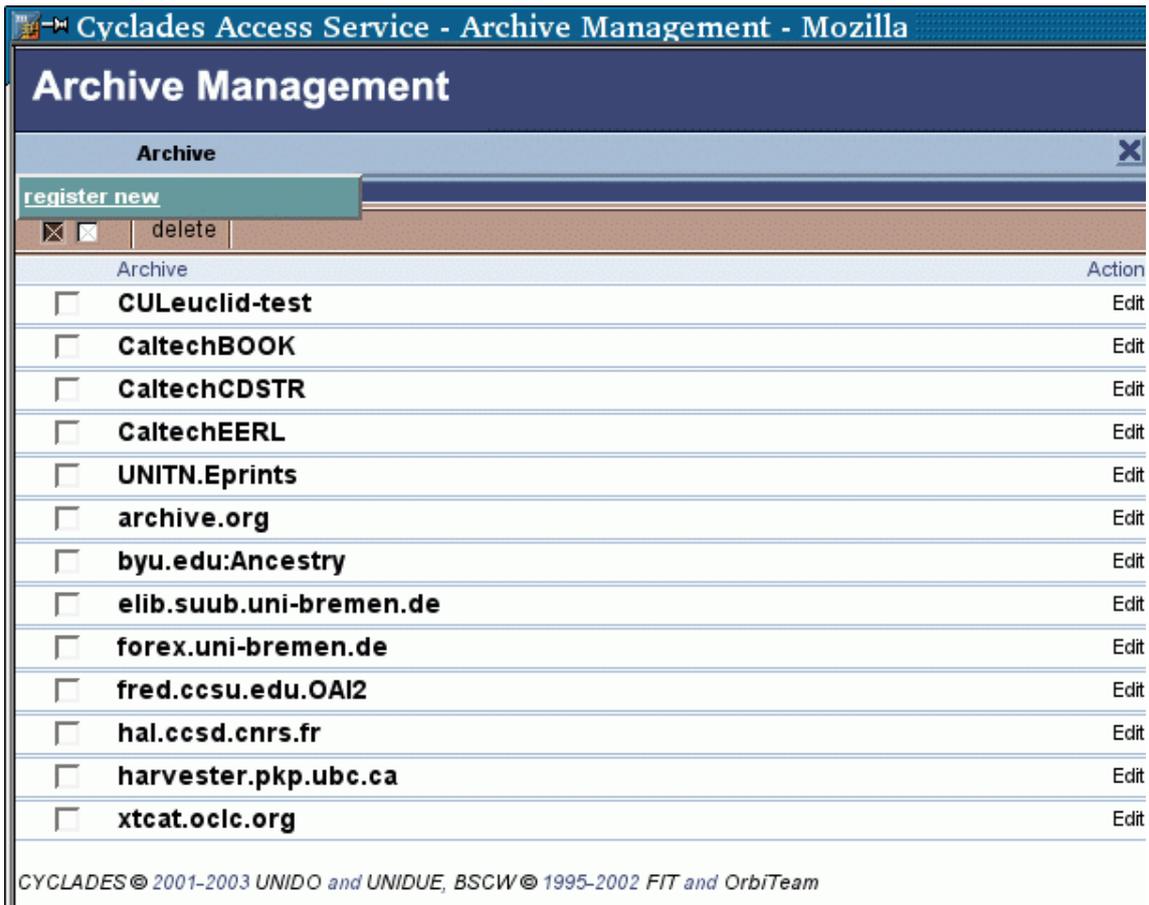


Figure 5.1: AS Graphical User Interface

In the next three lines, the user can specify mirror sites for the archive. This information is not used at the current stage of the CYCLADES system, being a prototype, but it will be used in the future to provide access to archives which are not very reliable or offline, but which are mirrored at other sites.

Finally, the user can also specify languages supported by the archive, and keywords describing the archive's content. This information is useful to describe the archive to other users who might want to use it in their collections.

Still missing from the current AS prototype GUI is the functionality to browse and select schemas and subschemas (parts of schemas) for harvesting and indexing, from the list of schemas that the archive supports. This will be included in a future version of the Access Service, after the end of the current project.

The *Save* button saves the edited information and takes the user back to her list of owned archives. The *Cancel* button takes her back without saving the changes.

# Chapter 6

## Collection Service

The Collection Service (CS) manages and stores collections, and it is responsible for the dissemination of information about them.

The collection principle is a mechanism for dynamically structuring the overall information space into meaningful (from some community's perspective) collections.

The graphical user interface of the CS is organized into two areas, the *menu area* and the *working area* as shown in figure 6.1. Menu area contains a *menu bar* (at the upper) and an *action menu*. Working area contains a *collection hierarchy area* and a *collection data area*.

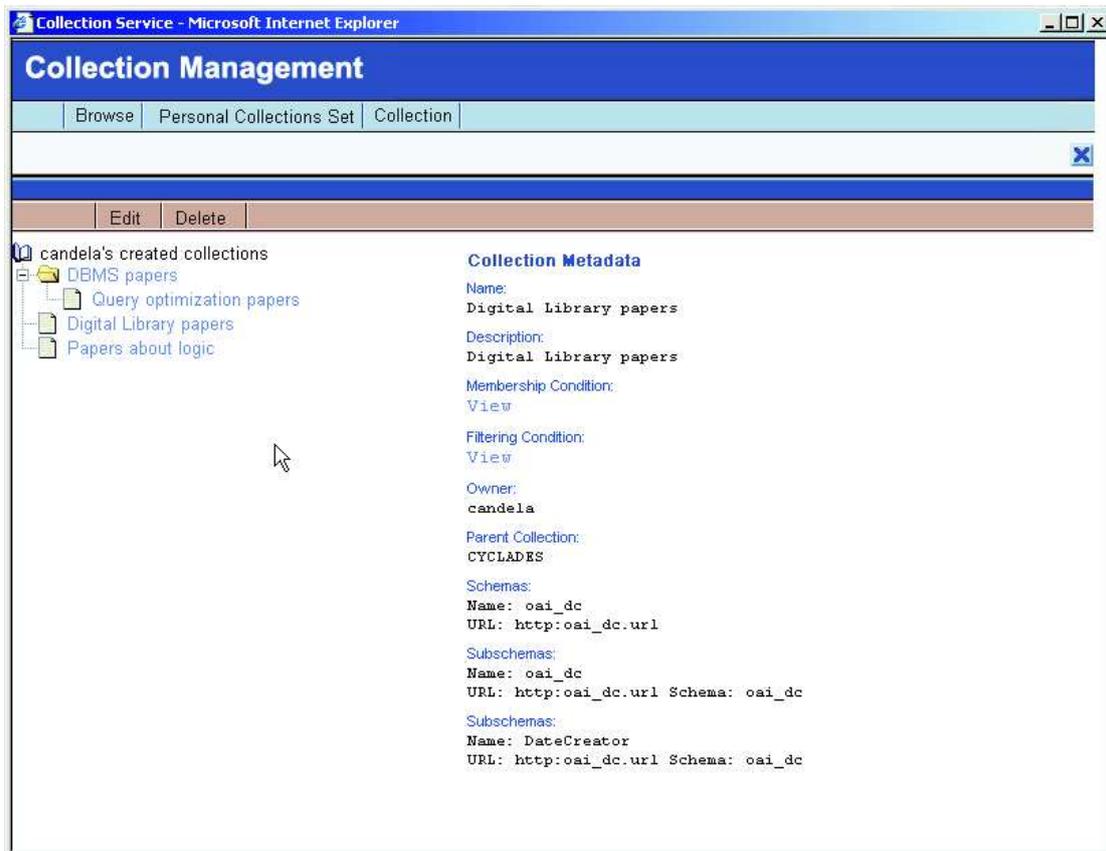


Figure 6.1: CS Graphical User Interface

## 6.1 The menu bar

At the upper of the interface (under the Collection Management title bar) there is a menu bar with three menus and/or action shortcut.

Via the *Browse* menu the user may choice the set of collections shown in the working area among own created collections and all CYCLADES collections.

Via the *Personal Collections Set* shortcut the user can browse/edit his “personal collection set”. Figure 6.2 shows the GUI that allows user to manage his personal collection set. This GUI has a working area little bit different from the previous, there are two collections hierarchy areas, one (the left) for the “actual” personal collections set and the other (the right) for all collections. Clicking on a collection in the left area the user can remove this from the actual personal collections set, clicking on a collection in the right area the user can add this from the actual personal collections set. Collection data area in the middle shows collection data (e.g. name, description) for the selected collection.

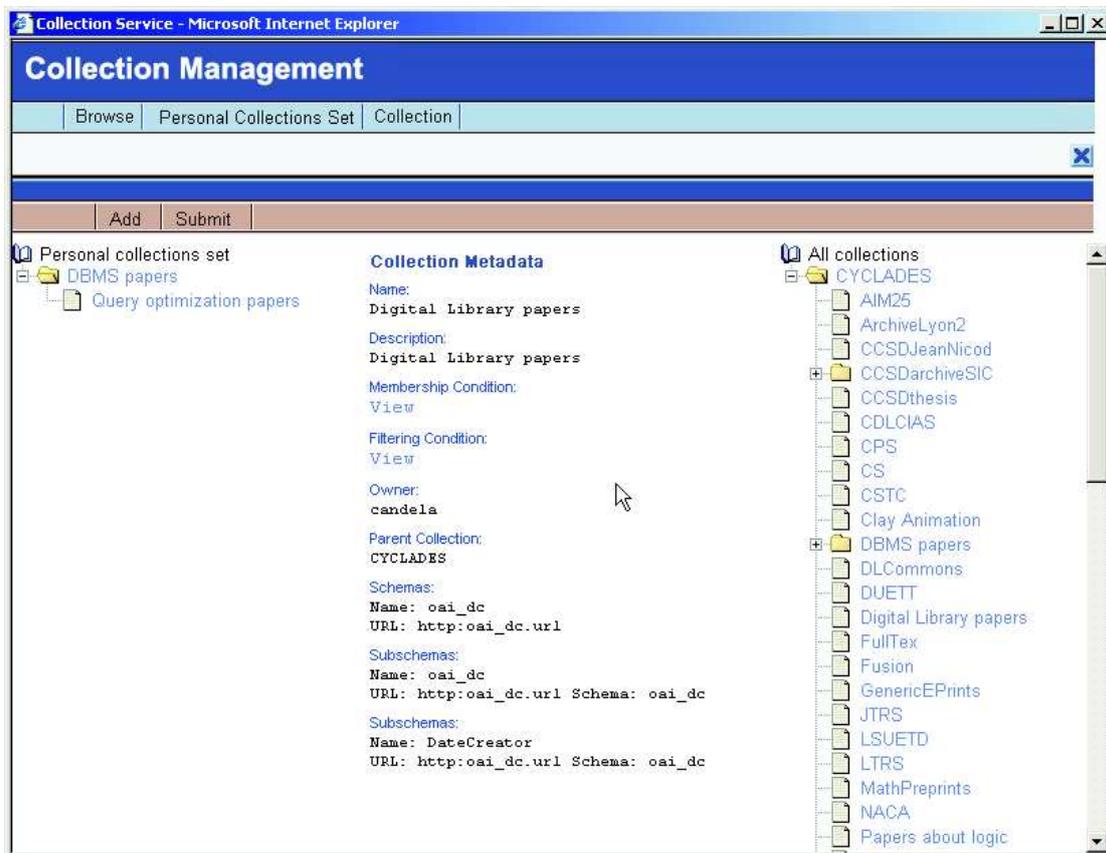


Figure 6.2: CS Graphical User Interface for select the Personal Collections Set

Via *Collection*→*New* the user can create a new collection.

## 6.2 The action menus

Under the menu bar the CS interface provide an action menu. The items of this menu are related to the collection shown in the collection data area.

If the collection data area shows a collection created by the user than the action menu contains

the item *Edit*, in order to edit this collection, and *Delete* in order to delete this collection.

### **6.3 The collections hierarchy area**

On the left of the working area there is the collections hierarchy area. In this area there is a navigable hierarchical view of the set of collections actually in use (own created collections or all collections).

Clicking on a collection allows a user to see collection data in the collection data area and, if the user has the rights, to manage them (via the action menu).

### **6.4 The collection data area**

On the right of the working area there is the collection data area. This area shows collection data (e.g. name, description) for the selected collection in the collections hierarchy area.

# Chapter 7

## Other Services

### 7.1 Filtering and Recommendation Service

The functionality of the Filtering and Recommendation Services (FRS) is accessed from the graphical user interfaces of the Collaborative Work Service (CWS, chapter 3) and the Search and Browse Service (SBS, chapter 4). The FRS does not have any graphical interface of its own.

### 7.2 Rating Management Service

The Rating Management Services (RMS) is a component of the Collaborative Work Services (CWS). Its functionality is accessed via the CWS user interface (chapter 3). The RMS does not have any graphical user interfaces of its own.