CYCLADES IST - 2000 - 25456
An Open Collaborative Virtual Archive Environment

Questionnaire Report D6.1.1

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Abstract: This report presents the results of the user evaluation conducted to measure the acceptance and usability of the specific functionalities provided by the CYCLADES system. To gain insight into the users' perception of the system a web based questionnaire was developed and analysed.

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Preface

The objective of work package 6 was to present the CYCLADES system on a large scale to test users from outside the institutions involved in the system development. This document reports the results of this user evaluation phase.

According to the Technical Annex the tasks were: Task 6.1 Experimentation in ERCIM; and Task 6.2 Experimentation in the DELOS NoE Research Community. Despite several efforts to gain feedback from users from within these communities (cf. section 'Realisation'), we did not succeed in getting enough response for a thorough evaluation. So, we decided to promote the CYCLADES system as widely as possible without restricting the evaluation to the two user groups ERCIM and DELOS NoE.

Consequently, we evaluated the feedback we received en bloc. For this reason, we also incorporated the findings of the overall user evaluation into one integrated deliverable D6.1.1 (this document) instead of two deliverables D6.1.1 and D6.2.1 as it was announced.

On a whole – based on the user feedback reported and analysed in the following document – we found that the system usage and the questions that arise from this usage are not specific to any particular scientific community. Due to the flexibility in establishing new communities inside CYCLADES autonomously and the ability of every user to integrate new archives, any scientific community can use the system in a similar way.

1. User Evaluation: Preparations

The CYCLADES system integrates several top notch technologies and functionalities that might not be intuitively clear to a first time user approaching the system. The complexity of the system requires guiding the user into the system without overwhelming her with the complete set of functions and implicated concepts that establish the strength of CYCLADES.

We prepared the 'Quick start to CYCLADES' to give a fast introduction into the system to the interested user. This quick start explains the very first steps necessary to use the CYCLADES system, explains the most important functions and shows some very elementary actions to the user. With this aid she gets an idea of the concepts behind CYCLADES and how the user interface is structured. This quick start is implemented as web pages that are linked in a nonlinear way. It lets the user choose, whether she wants to follow the quick start step by step or if she wants to skip one part and choose another subject from a table of content. The parts contained in the quick start cover:

- Communities and Folder Handling
- Searching Archives
- Collections
- Advanced Search Features
- Community Management
- Recommendations

A user who reads the quick start gets to know all main functions of the system within a time span of about 30 minutes. Thereafter the user can easily take her first autonomous steps in the system and explore the further going functions that are available. The quick start is accessible from the main navigation bar in the CYCLADES user interface, so the user can always easily consult it if she needs to.

We created a special community called 'New Users'. The purpose of this community is to provide a place to inexperienced users where they can experiment with the system. This community is introduced to the users in the quick start as a place where they can play around without the fear of damaging some 'real data' or bothering other users. New users have access to this community immediately when they create an account and enter the system for the first time.

For the gathering of information about the users' opinion on the CYCLADES system it seemed most adequate to establish a web based questionnaire where the users could express their appraisals. Those appraisals together with log file data about the users' actions are the fundamentals on which we constitute the statements in this report.

2. Data Gathering

To evaluate the users' satisfaction with the usage of the CYCLADES system, we have chosen to take two different data sources into account. Firstly we created a web based questionnaire and secondly we recorded the actions that users performed during the use of the system. All active users have been asked to fill in the questionnaire. Their statements give us very direct information about how the user perceives the system and how she judges the particular functions.

2.1   Log file analysis

The CYCLADES user interface consists of several different components which are provided by the different partners involved in the system development. Thus there exists no central component where all user interaction could be registered. Every involved institution recorded the relevant user actions that occurred in their specific part of the system. The relevant data about the usage of the user interface components during the time of the user evaluation phase were collected and integrated into this report. The

user actions were registered on a very basic level. E.g. it was possible to track how many actions a specific user has performed during her whole system exploration. Every single action within the CYCLADES system was logged as well as every search activity together with how many results have been produced.
The data were evaluated to give an impression about the use of the particular functions and the frequency of their use.

2.2   Design of the Questionnaire

Several tasks were determined on which we wanted to receive information. We defined a structure for the questionnaire and suggested questions to be included in the questionnaire. All institutions participated in formulating questions concerning their own functions.

The questionnaire started with some general questions about the use of CYCLADES. The user indicated how she heard about CYCLADES and how much time she spent using the system. Furthermore she specified the browser and operating system used to access the system.
The following pages of the questionnaire were concerned with the CYCLADES system itself. The distinction closely followed the structure of the quick start, which the users were recommended to use as a guideline to the system use. The system's functionalities were divided into the same six main areas as in the quick start. Each of those is covered by an own section in the survey. Those are: Communities and Folder Handling; Searching Archives; Collections; Advanced Search Features; Community Management; Recommendations.
Each functions' section started with the question if this functions had been used or not. If the function had been used, the users gave a self assessment how good they could handle this function ('How do you consider yourself as a user of the CYCLADES xy function?"). In this way every user valuated only those functions she has used, and still all functions were represented in the questionnaire. Also the reasons for not using certain functions are explained by the users. These reasons will be especially interesting since the user requirements have been surveyed prior to the development and have been regarded in the development process.
The questionnaire continues with three to six specific questions about the according section. These specific questions were realised using 1-to-4 Likert scales[1]. Each question was implemented in a four point scale with only the first and the last benchmark explicitly named. Each user marked the one benchmark that expressed her opinion best. The scales constitute a continuum that provides us with relevant information about the users' impressions of the CYCLADES system. Since the data are ordinal scaled, it is not permissible to perform further statistical calculation with them. In spite of that we chose the method of Likert scales since it is best apt to collect subjective data.
After those specific questions the users gave an overall grade about how satisfied she was with the functionality and implementation of the according function. The grade could be chosen on a scale from one to six; one being the best rating and six is the worst rating selectable. This system is based on the grades used in the German educational system. Free text fields are offered in case the user liked to explain why she chose a certain grade. Suggestions for the improvement of the functions could be made in another free text field.
The function 'Recommendations" is an exception from the structure described above: this function has different demands on the user. When creating a new folder or community the user can choose if she wants to get recommendations and which kind of recommendations (records, other users, collections and communities). But this choice is made only once per folder, afterwards the recommendations themselves are created by the CYCLADES system. The user decides if and how she uses them. But in the actual process of creating the recommendations she is passive and has no further influence on it. Therefore the questionnaires' section about the recommendations follows a different structure.

After assessing all the functions the user is asked to give an overall Assessment. She rates the usefulness and usability of all functions and of the CYCLADES system as a whole. Concluding the questionnaire we surveyed some demographic characteristics to get some information about the user group that provided us with the data.

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[1] See: Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology, 140* (June).

With the first online-version of the questionnaire a pre-test was conducted to gain information about the suitability of this questionnaire, its clearness and comprehensibility. A number of users filled in the questionnaire (online) and while doing this wrote down (on paper) everything they noticed that could be improved. The comments were concerned with the layout of the questionnaire, unclear terms and phrases up to ideas to facilitate the navigation. Considering these remarks the questionnaire was redesigned and released for the public.

From a technical point of view the online questionnaire was implemented as web pages that used php scripts to fill the values entered by the user in a mySQL database. For the data acquisition SQL queries were performed to extract the specific information needed. This proceeding gave us the flexibility to extract all statistical information that was necessary.

3. Realisation

Several actions have been undertaken to spread the information that the CYCLADES prototype was available for public use and exploration. At the same time we announced the evaluation and the questionnaire and asked for user feedback. The following list shows the most important activities:

Announcements in Mailing lists and newsgroups:
- OAI community: oai-general@oaisrv.nsdl.cornell.edu
- ISTI-CNR: bacheca@isti.cnr.it
- ECDL02 participants: ecdl2002@iei.pi.cnr.it
- DBWORLD: owner-dbworld@cs.wisc.edu
- DELOS Network of Excellence: delos@iei.pi.cnr.it

Publications in Journals:
- ERCIM News No. 53 April 2003 in 'Joint ERCIM Actions'

Demos / Talks on conferences:
- Talk about Cyclades in Trier, AG Arve, IuK 2001, Trier, 14.3.2001
- Paper 'Heterogeneity in Open Archives Metadata', ECDL 2001 Workshop On Experimental OAI Based Digital Libraries
- Paper 'An RDF Model for Multi-Level Hypertext in Digital Libraries', Informatik 2002 (GI-Jahrestagung)
- Presentation of Cyclades (including a demo) at the SINN03 conference in Oldenburg, September 2003
- Demo at Johannes Kepler University of Linz, June 12 2003.
- Demo at Rheinisch-Westfaelische Technische Hochschule Aachen, June 17 2003.

In-house presentations to interested parties:
- Hochschulbibliothekszentrum NRW (HBZ), Cologne, Germany (http://www.hbz-nrw.de)

Online announcements on the web page of FIT, on the CYCLADES website at ERCIM and on the website of CNR presented the publicly accessible CYCLADES prototype.

The data collection took place from May 5th to July 5th 2003. During this time the questionnaire was online available, during the same time span all relevant user activities were recorded and made available via log files.

To recompense the persons who spent their time exploring CYCLADES and answering the questionnaire we arranged a lottery. Respondents who wanted to participate specified their E-Mail address. The first price (a digital camera) will be given away soon. The other participants will receive a consolation prize.

4. Results

4.1 Statistical Data of the Use

During the nine week period of user evaluation 238 new users created an account and logged into the CYCLADES system.
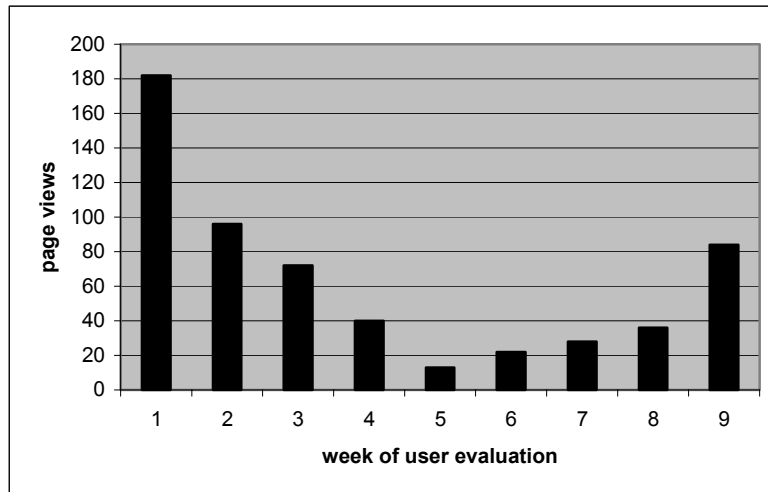

Fig. 1: Frequency of access to the quick start

Fig. 1 shows the access to the CYCLADES quick start counting page views per week on the entrance page. This is a good indicator to evaluate the amount of new users approaching the system in the time of the user evaluation. The figure shows a strong peak in the first week after the user evaluation started. This most probably results from the public announcements that were made at the start of the user acquisition phase.

Number of actions	Number of users
<10	109
10 to 19	43
20 to 29	21
30 to 39	13
40 to 49	8
50 to 59	10
60 to 99	19
> 100	12

Table 1: Number of actions per user

The log files provided us with detailed information about the actions that users performed on the user interface. Inside the collaborative work service (CWS) user interface every user action was logged. Table 1 gives us an overview about how many actions the users performed during the investigated time. The notable amount of 109 users performed less than ten actions. Probably those users took only a quick look into the system and did not invest enough time to get to know the full potential of CYCLADES.

Table 2 shows selected actions that users performed on the CWS user interface during the time of the user evaluation. The action registered by far most frequently is the 'Get' action. This counts every requested display operation in CYCLADES, from the navigation in the folder structure to reading activities. The next frequently performed action is the 'Search' action inside the CWS user interface. This function is accessible in the CWS main menu and allows the user to search for content or users within the CYCLADES system

and also offers the use of a search engine. This function is not able to search the archives which are handled by the access service (AS). Assumedly the large number of users performing the search wanted to search for records but mistook the CYCLADES search for the Search & Browse function.

Number of actions	Action name
4349	Get
431	Search
243	Show information about item
87	Associate collection to folder
68	Create private folder
64	Join community
54	Copy item
50	Change preferences of item
38	Create community
33	Create project folder
23	Delete item
19	Cut item
19	Paste item
16	Create community folder
9	Mail to community managers

Table 2: Frequency of actions performed by users

The table further shows the use frequency of other relevant functions in the CWS user interface. The relatively small number of 'Join Community' actions results in the fact, that every newly registered user is a member of the 'New Users' community by default. In the quick start the users were asked to get accustomed to the system by restricting their actions inside this community until they feel familiar with the system.

On the Search & Browse user interface 450 unfiltered search actions were registered during the user evaluation period. There was an average of 8.16 results the users achieved with this search method. The filtered search was performed 24 times with an average result of 8.2 results per search. Results of a search action were 94 times saved to a folder and eleven search queries were saved to a folder.

The users of the CYCLADES system created 31 new collection within the evaluation period.

4.2   Results of the Questionnaire

During the evaluation period 112 of the 238 registered users started to fill in the questionnaire, but only 35 questionnaires were completed and included in the analysis. We assume that a reason for the low number of completed questionnaires was the complexity of the CYCLADES system. The high number of registrations shows that interest in a system like CYCLADES exists, but it takes some time to get acquainted with all the functions. Therefore not only half of the users proceeded to the questionnaire and only a few completed the whole questionnaire. Even though unused function could be skipped at least basic experience with the system was mandatory to reasonably answer the questions.

Due to the small sample we refrained from further statistical analysis like correlations since the small sample would not allow meaningful and significant statements. With a bigger sample there would be some interrelations worth verifying. It would e.g. be interesting to explore the correlation between the respondents' field of work and her statement how useful certain CYCLADES functions are for her work. It might further be revealing to investigate the relation between the respondents' self-assessment in handling a certain function and their overall appraisal of the according function.

4.2.1 The Sample

Those respondents who completed the questionnaire were asked for some demographical information on their person for the user statistics. Apparently some of the users who completed the questionnaire and filled in all the questions wanted to keep their privacy, they left a number of the demographic items blank. Since for the CYCLADES project the assessment of the system is most important and the system specific questions were answered properly by these persons we nevertheless included their answers in the analysis.

Twenty male and eight female users participated in the survey, seven respondents did not disclose their gender. Fig. 2 shows the distribution of the respondent's age. Only two of them were elder then 34, one 55 and one 60 years old. The average age is 29 years.
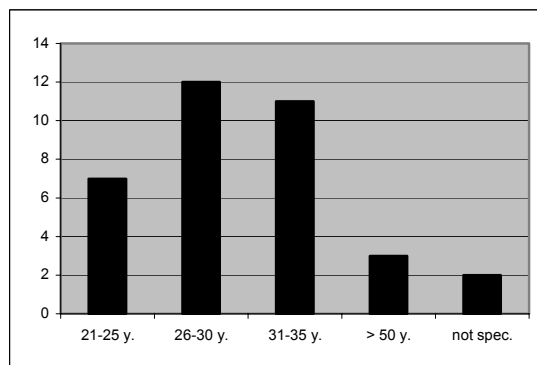

Fig. 2: Age of respondents

Although the CYCLADES system and the quick start were accessed from countries all over the world the questionnaire was answered mainly from german residents. Two greek and each one French, brasilian and irisch respondent specified their residence; the remaining seven did not.

Most of the respondents worked in research or were still in education, only one person worked in the industry. As their discipline 24 of the 35 respondents stated computer science, each one person was in physics, business administration, librarianship and medical science/ pharmacy. Again seven users did not specify their discipline As operating system most respondents (30) used a version of MS Windows. Four persons used UNIX/ Linux and one did not provide us with this information. The browser the respondents used was in most cases the Internet Explorer (version 5.0 or higher). Five persons used Netscape Navigator (Version 6 or higher), five respondents used new versions of Mozilla and three used Opera.

Most respondents heard about the CYCLADES system through friends or collegues (11) or in their university (17). There was also some response to the article in the ERCIM News and DELOS newsletter. It can be assumed that the number of respondents raised by these media is higher than obvious but since ERCIM News and DELOS Newsletter were not predetermined answer options presumably some of those persons might have chosen one of the given check boxes.

4.2.2 System Use and Expertise

The respondents spent different amounts of time on the system. In the questionnaire they estimated two dates: the absolute time they spent exploring the system and the time span from their first to their last log in. Since the test period lasted nine weeks and the users had unlimited access to the system they were free to schedule their time just like in 'real life'. Fig. 3 shows that a lot of users dealt with the system for approximately one hour before they engaged in the survey. Although 80 percent of the respondents tested the system five hours or less there were also users who spent more than 45 hours on the system. The longest time expended before answering the questionnaire was 50 hours. The average time spent on exploring the system was 7,1 hours.
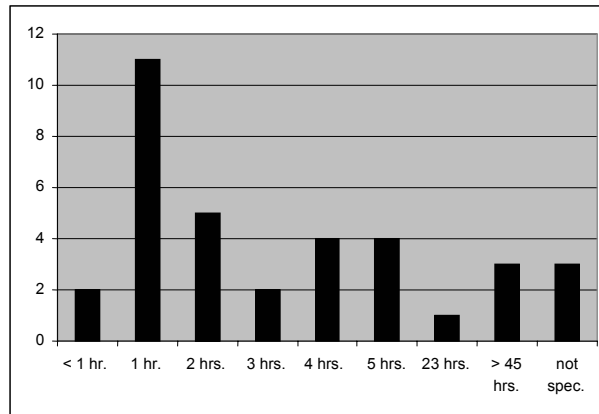
Fig. 3: Absolute time spent exploring CYCLADES

Some respondents did all their testing within one day, but a decent number logged in repeatedly. They explored the system on two up to 30 days, on an average of 4,8 days. The notable amount of 13 persons however did not provide us with the information about the span in which their testing took place.

Each functions' section starts with the question if this functions had been used or not. Those who used it gave a self assessment how good they could handle this system. Every respondent categorised herself as beginner, intermediate, advanced or expert in handling the accordant function. Fig. 4 shows the distribution. The respondents who had not been using this function of course did not categorise themselves, they are included in fig. 4 as 'function not used'. Since the function 'Recommendations' differed from the other function (see 2.2), they are not accounted for in the following figures.
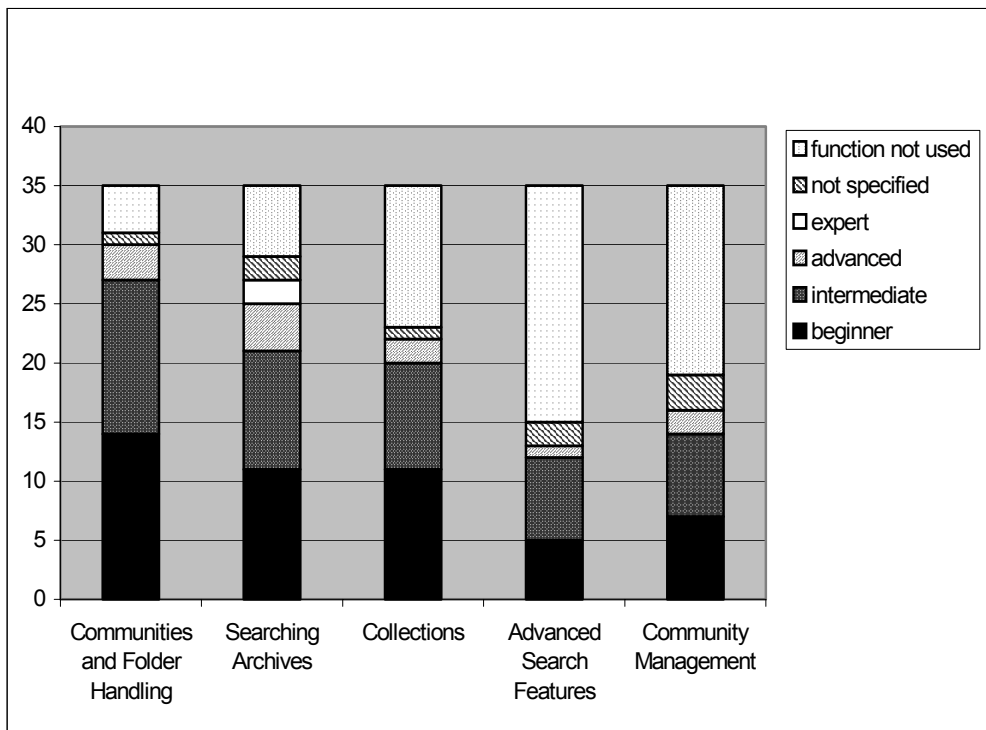

Fig. 4: Self assessment of system expertise

If a function had not been used, the users specified their reasons for not using this function and then proceeded to the next section. Fig. 5 shows the reasons mentioned for each function. The number of answers is not always concordant with the number of persons who did not use the function (see fig. 4 upper part of bar), because each person could give more than one reason. Some however did not specify their reasons. The users had the choice to select an answer ('I didn't know how to use them', 'I had no time', 'It was not important for me') and to specify further reasons.
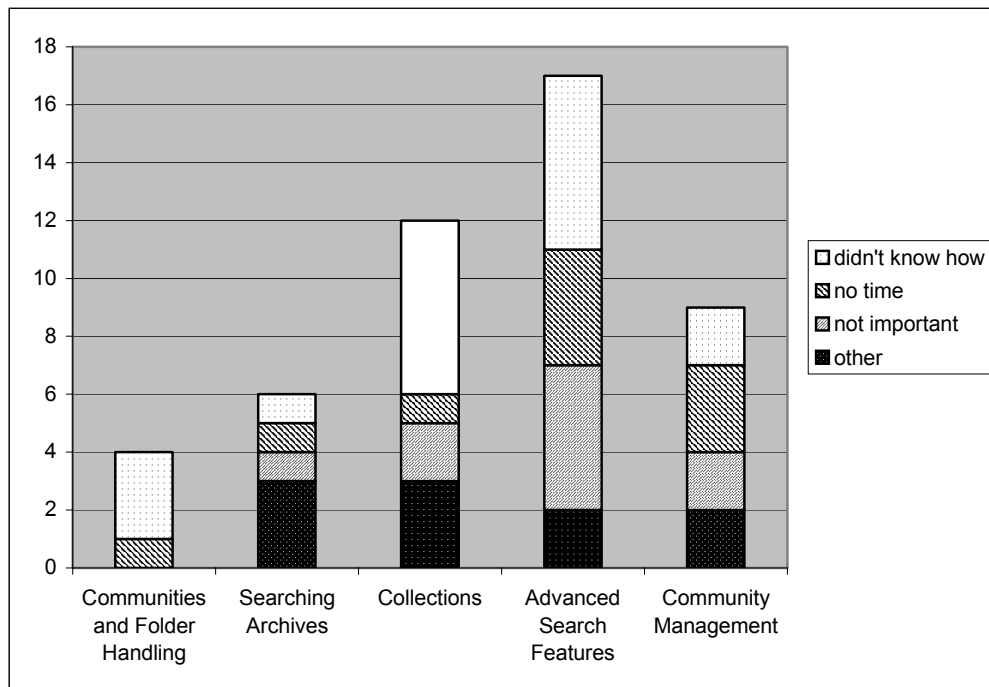

Fig. 5: Reasons for not using the function

The results show that only a few users did not even use the communities and folder functions, the basic functions. Without these basic steps none of the other functions can be used. All other functions could be used independently without influencing the use of another function. For all functionalities at least one user claimed not to know how to use it. The high number is especially notable for the collections and the advanced search features (six persons each). Also the lack of time is used as an argument against all functions. A notable amount of persons considered the advanced search features as not important for themselves (five persons). The free text explanations contained reasons like the user couldn't find the function, the usage caused trouble with their computer or they did not know about the certain function until the question came up.

In the following the results for each section are separately discussed. Each chapter starts with the specific questions about the certain function and ends with an overall appraisal of this function expressed by a grade from one to six. Concluding the users' assessment of the whole CYCLADES system considering the usefulness and usability of all the function is presented.

4.2.3 Communities and Folder Handling

The first section of the questionnaire was concerned with the 'Communities and Folder Handling'. Section 4.2.2 shows that most respondents (31) used this function; only four respondents didn't.

The first specific questions referred to the possibility to create and join different types of folders. We aimed at finding out if the distinction into community, project and private folders was an appropriate and sufficient solution. The users rated this on a 1-to-4 Likert scale with the end points 'too detailed' and 'not

accurate enough'. The users could also state that they do not need different folder types. Most respondents chose two or three (Mode = 2). Since both end points were marked by wishes for improvement we conclude that the users are satisfied with the distinction into the three different folder types. No user claimed not to need a distinction into different folder types.

1 = too detailed	2	3	4 = Not accurate enough
1	18	12	0
Not used = 4, blank = 0			

Table 3: Folder distinction

The next question was concerned with the usability of the interaction dialogue for the creation of new folders. The Likert scale ranged from 'self-explaining' to 'too complicated'.
Though a decent number of users assessed the interaction dialogue as self-explaining, still four users found it too complicated. The mode is three.

1 = self-explaining	2	3	4 = too complicated
7	9	11	4
Not used = 4, blank = 0			

Table 4: Interaction dialogue for the creation of new folders

The users further judged the navigation in the hierarchical folder structure on a scale from 'straightforward' to 'challenging'. The ratings are widespread using the whole available scale. The mode is 2. Obviously it is not easy to develop a navigation dialogue that satisfies every user. It seems that almost as many persons get along very well with the navigation as find it challenging. But if we compare the two first, 'straightforward' benchmarks '1' and '2' with the two 'challenging' sections '3' and '4', we see that 18 users chose the one and two while only twelve users decided for the three and four. The good ratings preponderate the challenging appraisals.

1 = straightforward	2	3	4 = challenging
5	13	8	4
Not used = 4, blank = 1			

Table 5: Navigation in the hierarchical folder structure

Finally the respondents expressed their concluding appraisal of the communities and folder handling with an overall grade. The best grade 1 and the two worst grades 5 and 6 were each given once. Most users chose the medial grades 2, 3 and 4. The arithmetical mean is 3,16, the median is three.

1	2	3	4	5	6	Blank	Not used
1	8	10	10	1	1	0	4
M = 3,16							

Table 6: Overall grade for Communities and Folder Handling

Some users explicated their choice in the free text field. A few explanations include technical problems while using the communities and folder functions on the user's computer. All other explications refer to the

complexity of the system; the concept was described as difficult to understand, the communities and folders as not easy to use. Further the lack of support is mentioned.

4.2.4 Searching Archives

The search and browse function had been explored by 29 respondents, six respondents did not use it.
The first questions in the searching archives section were concerned with the formulation of queries. First we wanted to know how much effort it was for the users to understand the query formulation and how comfortable the formulation was for them. The users gave two ratings for this, the first appraised the arrangement of the query formulation window from 'clearly arranged' to 'hard to overlook', the second the actual use of the query formulation mask from 'self explaining' to 'complicated'. The results are indicated in the tables below. The mode is in both cases two.

1 = clearly arranged	2	3	4 = hard to overlook
6	11	8	3
Not used = 6, blank = 1			

Table 7: Query formulation window

1 = self explaining	2	3	4 = complicated
3	11	7	5
Not used = 6, blank = 3			

Table 8: Query formulation mask

We were further interested in the users opinion concerning the predetermined possibilities to formulate a query. The users disclosed if it was easy to understand what was covered by certain terms offered for the query formulation ('easy understandable' to 'hard to understand'). In a second rating they further specified if these given options were sufficient for their purposes ('sufficient' to 'not enough'). The mode is again 2 in both cases. Apparently the users understood the given options quite well and were satisfied with the predetermined possibilities given.

1 = easy understandable	2	3	4 = hard to understand
5	15	6	3
Not used = 6, blank = 0			

Table 9: Options to specify a query

1 = sufficient	2	3	4 = not enough
11	12	3	2
Not used = 6, blank = 1			

Table 10: Options to specify a query

Next the users provided us with information about their satisfaction with the results of the queries. Again they gave two ratings, the first referring to the presentation of the results (the results were presented 'clearly arranged' to 'badly arranged'), the second to the quality of results (the results were 'excellent' to 'poor').

1 = clearly arranged	2	3	4 = badly arranged
2	14	7	3
Not used = 6, blank = 3			

Table 10 : Presentation of results

1 = excellent	2	3	4 = poor
2	11	5	5
Not used = 6, blank = 6			

Table 12: Quality of results

The presentation of the results is fairly clear. Sixteen of 26 respondents chose the benchmarks '1' and '2'. The assessment of the quality of the results is more unequally distributed over the four ranges. Like before the mode is 2 for both questions.

The navigation within the various dialogues needed for searching archives was not perfectly clear (Tab. 13). On a scale from 'clear' to challenging' the majority of the users picked the intermediate benchmarks '2' and '3'; the mode is three. Only two users considered the navigation clear, three users perceived the navigation as difficult.

1 = clear	2	3	4 = challenging
2	11	12	3
Not used = 6, blank = 1			

Table 11: Navigation within dialogues

Considering all the experiences made with the search in archives the users gave their overall grade for this function. The results are described in the following table. The arithmetical mean is 3,61, the median 3,5.

1	2	3	4	5	6	Blank	Not used
0	7	7	7	4	3	1	6
M = 3,61							

Table 12: Overall grade for Searching Archives

Almost all explanations why a certain grade was chosen can be assigned to one of two groups of reasons. The first group refers to the unsatisfying results of the search; the other group refers to the poor design of the search interface. They described it as unclear and not self-explaining, beyond no context help is offered. Only one remark is concerned with the impossibility to save the results to other than the current folders. Two users expressed discontent about the presentation of the results as XML.

4.2.5   Collections

Twenty-three respondents explored the collections function. Twelve did not use the collections, most of them because they did not know how (see 4.2.2).
The 23 remaining respondents disclosed their opinion about the handling of the collections function. They expressed their opinion on a scale from 'easy' to 'difficult'. Most users chose the benchmarks '2' and '3'. Almost as many users chose the mark 'easy' as chose 'difficult'. As in other cases before the opinions are widespread and inordinate distributed over the whole range of the scale.

1 = easy	2	3	4 = difficult
3	8	8	4
Not used = 12, blank = 0			

Table 13: Using collections

The next item assessed the comprehensibility of the purpose of the collections function. The scale on which the users stated their understanding ranged from 'immediately clear' to 'hard to understand'. The distribution of answers is very similar to the distribution in the previous question (mode = 3).

1 = immediately clear	2	3	4 = hard to understand
3	7	8	5
Not used = 12, blank = 0			

Table 14: Purpose of collections

We were further interested in more specific details of how the respondents used the collections. To gain some insights we asked the users if they used collections in query formulation. Only eight respondents used collections for the further specification of their queries. The remaining respondents did not use the collections for queries (11) or did not provide us with information about this (4).

Those respondents who did not use the collections to specify their queries disclosed their reasons for this. Each person could give as many reasons as she wished.

Reason	No. of users
Wanted to search as broad as possible	3
Couldn't guess content of coll. from description	7
Other reasons	3
Σ	13

Table 15: Reasons for not using collections in query formulation

Two users further specified their 'other reasons': one was convinced she did not need collections at all, the other user explained her intuitive interpretation of collections and according to that she did not need them either.

The eight persons who actually used collections in their query formulation answered some additional questions. These were concerned with the influence of the use of the collections on their query and with the distinction into different collection types. First the eight users considered the influence of the use of collections in query formulation on the search time. If the collections use sped up the time needed for completing a query was rated on a scale ranging from 'very much' to 'not at all'. Three users thought the collections sped up the search very much, four chose the weaker agreement '2' and one the '3' (mode = 2).

1 = very much	2	3	4 = not at all
3	4	1	0

Table 16: Use of collections sped up a query

The next item was the improvement of search results through the use of collections in query formulation. The users answered if the quality of search results had improved, again using a scale from 'very much' to 'not at all'. The mode is two, six persons picked this benchmark. Only one person chose the '1', one person the benchmark '3'.

1 = very much	2	3	4 = not at all
1	6	1	0

Table 17: Use of collections improved the quality of results

The last question addressing only these eight users aimed at finding out if the distinction of three different types of collections satisfied the users. The users had personal collections, folder collections and system collections at their disposal. In the rating they stated if this distinction was sufficient for them or should be

more accurate. Five of the eight users were satisfied with the existent distinction, they chose the benchmark '1'. The '2' and '3' were chosen by one resp. two users (mode = 1).

1 = sufficient	2	3	4 = not accurate enough
5	1	2	0

Table 18: Categorization of collections

Following these specific questions the overall grade for the collections function was given. All respondents who had used this function (stated in the first question) were asked to participate again in this task. These were 23 persons. Two did not give a grade. Of the remaining 21 most chose the grade four (mode = 4; median = 4). The arithmetical mean is with 3,67 slightly better.

1	2	3	4	5	6	Blank	Not used
0	6	2	7	5	1	2	12
M = 3,67							

Table 19: Overall grade for Collections

Two users commented their choice in the free text field. One gave no grade at all, she claimed the usage had to be improved. The other chose the grade 5, she annotated the support ought to be improved.

4.2.6   Advanced Search Features

The section on advanced search features was mainly concerned with the personalisation of queries. Twenty did not explore the advanced search features at all. Of the remaining 15 respondents only eight used these features to personalise the query. The rest of the respondents was invited to specify their reasons for not personalizing their queries. More than one answer could be given by each person.

Reason	No. of users
It didn't seem useful to me	1
I like to keep complete control over my queries	2
I didn't know how to use this feature	0
Other reasons	2
Σ	5

Table 20: Reasons for not personalizing queries

Both users who selected 'other reasons' provided us with a closer explanation of their reasons. One user did not know where the feature was located. The other user constantly received error messages when trying to use the features and the system crashed down.

The eight respondents who personalized their query using the advanced search features answered two questions regarding the results of a personalised query. First the users expressed how satisfied they were with the results of the personalised query; they pointed this up on a scale from 'very satisfied' to 'not satisfied at all'. The respondents used the range from '1' to '3'; five respondents however were not too satisfied with the results (they selected the '3'), only one users was 'very satisfied'.

1 = very satisfied	2	3	4 = not at all
1	2	5	0

Table 21: Satisfaction with results

Compared to the non-personalised query the quality of results seemed not to differ too much. Assessing the difference on a scale from 'much better' to 'worse' all users selected intermediate benchmarks. The mode is two, suggesting that the personalised queries produce slightly better results than the non-personalised.

1 = much better	2	3	4 = worse
0	5	3	0

Table 22: Personalized queries

Concluding the section of advanced search features again an overall grade was given in which all the 15 respondents participated who stated to have used these features. The users' assessments was relatively even distributed over the whole scale sparing out only the best grade 1. The mode is five, median and arithmetical mean are both four. Referring to those statistical measures it must be considered that only 14 persons are accounted for in the analysis.

1	2	3	4	5	6	Blank	Not used
0	3	2	3	4	2	1	20
M = 4,0							

Table 23: Overall grade for Advanced Search Features

Explanations in the free text field were entered by two users. One was not sure how to distinguish the basic search and the advanced search features. The second user pointed out which parts of the search function she especially liked.

4.2.7 Community Management

The community management function had been explored by 19 users; 16 respondents did not use it. The first question addressing the 19 users assessed if they considered it reasonable for their own purposes to have open and closed communities. Sixteen users agreed that the distinction was reasonable, two did not. One user did not specify her opinion.

The next item referred to the invitation of new users. It turned out that hardly any user ever tried to invite a new user. Of the 19 eligible users eleven stated they haven't tried to. The seven who tried attested the invitation process an intermediate difficulty. They rated the invitation of new users on a scale ranging from 'intuitively clear' to 'difficult'. With one exception (who chose '1') all users chose the benchmarks '2' or '3'.

1 = intuitively clear	2	3	4 = difficult
1	3	3	0
Not used = 16, not tried = 11, blank = 1			

Table 24: Invitation of new members to a community

The copying of records to another folder is a function more users accomplished. Sixteen users rated the difficulty of the copying process on a scale from 'intuitively clear' to ' difficult'. Only two users considered the invitation difficult, for four users the handling was intuitively clear. Of the remaining ten users each five chose the benchmarks '2' and '3'.

1 = intuitively clear	2	3	4 = difficult
4	5	5	2
Not used = 16, blank = 3			

Table 25:Copying records

Next we wanted to know what the users think of the principle of self-organisation used in the CYCLADES System. The questions differs from the other function specific questions since the users were not asked to give a rating on a 1-to-4 Likert scale. Instead we offered them two answer options and the possibility the specify further assessments. None of the users made use of this possibility; all selected one of the predetermined options.

Option	No. of users
I like this feature	12
Prefer moderation by system administrator	6
Other	0
Not specified	1
Σ	19

Table 26: Attitude to self-organisation of CYCLADES

One respondent used the free text field (supposed for the entry of other reasons) to give a longer explanation why she liked the self organisation but also expressed some considerations that this principle might be misused.

The following table shows the overall grade given for the community management function. Except the worst grade 6 the spectrum of available grades had been used. The majority of the respondents seems to be content with the community management functions. The arithmetical mean is 2,71; mode and median are three.

1	2	3	4	5	6	Blank	Not used
3	4	6	3	1	0	2	16
M = 2,71							

Table 27: Overall grade for Community Management

Only one respondent used the free text field to explain the choice. It was an users who gave the grade 1 and who affirmed her good opinion about the community management functions.

4.2.8   Recommendations

The recommendation were the least used of all functions. Only five respondents requested recommendations. One reason for this low number is certainly that recommendations can only be requested when creating a new folders or a new communities: not all users accomplished those actions. The majority of users explored existing folders and records, they never had the opportunity to request recommendations themselves. The reasons mentioned by the users for not using the recommendation function are shown in the table 30. Each user could select more than one reason.

Reason	No. of users
Never created a folder or community	7
Didn't want recommendations	6
Didn't know what recommendations are	4
Didn't know where to request recommendations	2
Other reasons	4
Σ	23

Table 28: Reasons for not requesting recommendations

The five respondents who requested recommendations answered a few further questions about the recommendations. We are aware of the fact that this is a very small sample. In spite of that we report the results here keeping in mind that they should only be carefully interpreted; for more general statements and a maintainable generalisation they ought to be validated with a larger sample. Nevertheless the results at hand show a tendency of the users' assessment.

First the users specified which kind of recommendations they requested out of the four available kinds: records, collections, communities and users. The number of chosen items to be recommended was arbitrarily. All users chose at least three different kinds of recommendations, one chose all five kinds.

Kind of recommendation	No. of users
Records	4
Collections	5
Communities	4
Users	3

Table 29: Kind of requested recommendations

Following the users rated the quality of the recommended items on a scale from 'closely related to my interest' to 'not at all useful for me'. Additional the respondents were offered two further answer options: 'I did not receive any recommendations' and 'I never looked into a recommendation folder'. The last option was added considering that the even when the users saw that the recommendation folder was created she not necessarily looked inside. Two users rated the recommendations well, the other three did not receive recommendations.

1 = closely related	2	3	4 = not at all useful
0	2	0	0
Didn't receive any = 3; never looked into folder = 0			

Table 30: Quality of recommended items

A possible explanation for this high number is the fact that the recommendations are only created by the system after a certain time. Users who created an own folder or community (and requested recommendations while doing so) were not immediately provided with recommendations. Since most respondents tested the system only for a couple of days it is likely that they haven't received any recommendations yet by the time they filled in the questionnaire.

The overall grade for the recommendation function was only specified by four users. We refrain from interpreting these results but report them here for the sake of completeness.

1	2	3	4	5	6	Blank	Not used
0	2	1	1	0	0	1	30
M = 2,75							

Table 31: Overall grade for Recommendations

One comment was made by a respondent: when she requested the recommendations she wasn't quite sure what to expect. Since she did not receive any recommendations she is now suspicious of this function.

4.2.9   Overall Assessment

After assessing every single function the users resume their impressions of the whole CYCLADES system and reconceived each function under the aspects of usefulness and usability.

For the conduction of this overall assessment of the system we chose a different distinction on the system. Before we referred to single smaller functionalities of which the functions comprise. In this section the functions are more generally approached, a distinction in as many different sections was considered not necessary. Therefore the sections 'Communities and Folder Handling' and 'Community Management' had been combined to the less specific 'Community Support'. The sections 'Searching Archives' and 'Advanced Search Features' were covered by 'Search Functions'. Besides one rating for the CYCLADES system as a whole was added.

First the users gave a statement how useful and reasonable the functions were for their own work. With this question all respondents were addressed since the usefulness can also be estimated without really using the function as long as one has the general idea what the function is about.
The users rated the usefulness of each function on an 1-to-4 scale ranging from 'very useful' to 'not at all useful'. Fig. 6 describes the results of the ratings.
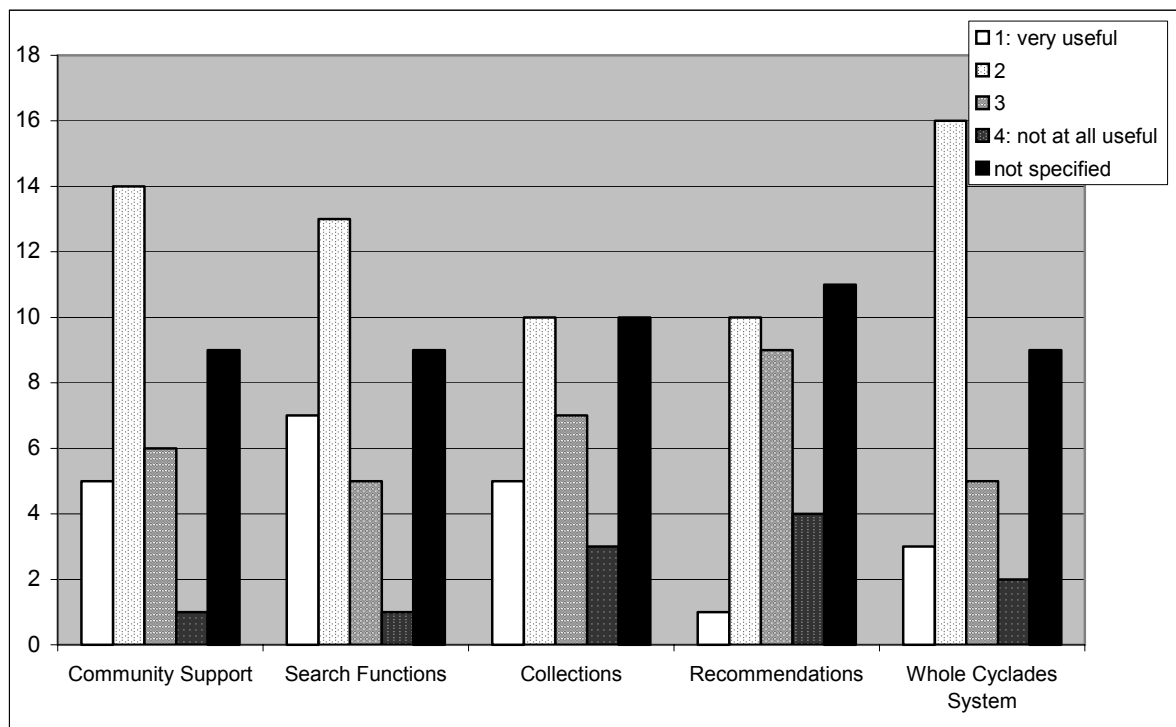

Fig. 6: CYCLADES overall usefulness

Of all respondents nine persons did not rate the usefulness of any function. The remaining users evaluated almost all functions completely. The first function, the community support, was appraised as a useful tool. The two best benchmarks '1' and '2' were chosen by 54 percent of all 35 users. Only 20 percent pointed out the community support was not useful for their work (benchmarks '3' and '4'). The others did not specify their appraisal. The search functions received the best rating of all functions. Twenty users chose the first two benchmarks, that is 57 percent. One third of them gave the best benchmark 'very useful'. The two other benchmarks are chosen six times altogether. Community support and search functions were each judged as 'not at all useful' by only one user. The collections function was assessed useful by 42 percent (benchmark '1' and '2'), not useful by 29 percent. The users approached the recommendation function a bit more cautious. More users than before (11 persons) refrained from disclosing their opinion. Only one users chose the grade '1', ten the grade '2'. These amount to slightly more than 30 percent of all users.
The whole CYCLADES system considering the combination of all functions received a good grade: only five persons selected the benchmark '3' and two users the '4'. Three users appreciated CYCLADES as very useful for their work, sixteen persons as useful ('2'). The mode for all functions including the CYCLADES system is two (strictly spoken except the recommendations where the largest group of persons did not answer at all and collections where as many person did not answer as chose the benchmark '2').

Next the users rated how good and easy to use the CYCLADES was. The usability was assessed on a scale ranging from 'self-explaining' to 'difficult' (see fig. 7). In this rating were only those respondents included who actually used the function. It would make no sense to give an appraisal of the usability without having explored the function and experienced the usability. For those persons who did not the additional answer option 'I did not use it' was available.
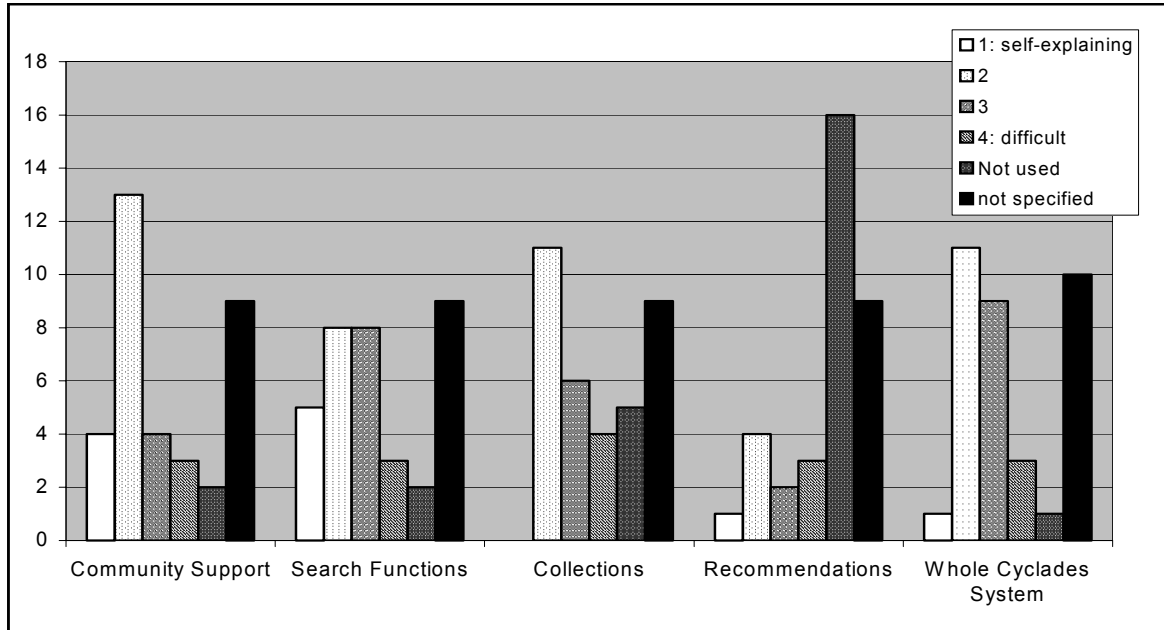

Fig. 7: CYCLADES overall usability

Like in the usefulness section nine persons did not rate the usability of any function. The remaining completed the ratings for all functions, only the whole CYCLADES system was assessed by one person less. Regarding the usability the Community support received the best rating of all functions. Seventeen users chose the benchmarks '1' or '2', seven persons perceived the community support as more difficult to use ('3' or '4'). Only two persons did not use this function. The usability of the search functions was judged intermediate. Most users chose the benchmarks '2' and '3'. Five perceived the search as self-explaining. The only function not even one user thought of as self-explaining was the collections function. No user chose the benchmark '1', but eleven the mark '2'. Five users found the collections difficult to understand, this is the highest number among all functions that chose this benchmark. The recommendations were hardly used. The few who appraised the function are distributed over the whole scale, from only one vote on '1' to four on '2'.

The usability of the whole CYCLADES system received a good to intermediate grate. One user chose the extreme '1'; three users '4'. The benchmark '2' is marked eleven, the '3' nine times.

As a more global statement the users expressed their overall impression of the CYCLADES interface. The majority again chose the intermediate benchmarks '2' and '3' (mode = 3). Only three resp. four users chose the boundary values. Nine persons did not provide us with these information.

1 = very good	2	3	4 = very bad
3	9	10	4
blank = 9			

Table 32: Overall impression of CYCLADES interface

Like all the other sections this section concludes with an overall grade for the whole CYCLADES system. Twenty-six users participated in this last rating. We calculated an arithmetical mean of 3,46, a mode of 4 and a median of 3,5.

1	2	3	4	5	6	Blank
1	6	6	8	3	2	9
M = 3,46						

Table 33: Overall grade for CYCLADES as a whole

This final grade was also explained by some respondents. These specifications contained several suggestions for improvement like the remark that the tool would be useful if the usability was enhanced. One user considered the system to complicated and was not satisfied with the search results. The numerous script errors were mentioned.

5. Conclusion

Overall the CYCLADES system received an intermediate appraisal. Apparently the system raised large groups of interested users, the response was amazing and the registered users display a variety of different backgrounds.
We already discussed reasons for the low response to the questionnaire above. We also discovered some possible reasons why the expectations of some users were apparently not met.
One reason is that the CYCLADES version tested is still a prototype. The performance of the system was not at any time of the test period impeccable. The functions are hosted at the different institutions involved. Some occasions occurred when due to technical challenges certain parts of the system were not working when people tried to use them. After such an experience these users most probably did not try too often to accomplish their exploration. Some of these impressions might have found their expression in the questionnaire.

Considering the information why some functions have not been used by some respondents (see 4.2.2) we infer that the introduction to the system might have been insufficient. Due to the high complexity of the CYCLADES system a help exceeding the quick start might have been indicated. The quick start was in fact often mentioned as a great help, but regarding the complex system and the variety of functions, it should be considered for future use if the conducting of trainings or other forms of introduction might be more appropriate.

Another point that can be noticed in this report is the fact that the ratings of the users on the 1-to-4 Likert scales are often widespread using the whole range of the scale. We assume that this is partly due to the fact that the respondents differ in their background and precognition in computer use. They have different experience with databases, virtual libraries and community platforms. Coherently their assessment of the CYCLADES system and functions also differs. Since the CYCLADES is thought to address all user groups it ought to be usable without trouble even by computer laities. Therefore we did not survey the computer related knowledge.

Appendix A: Questionnaire

CYCLADES Questionnaire

CYCLADES supports you in searching and managing e-print documents from a large number of digital libraries. The system provides you with a set of functions to share your results within virtual communities.

The CYCLADES system available is a prototype, which we are working on to improve the performance and usability of the system. This survey is conducted to help us improve and evaluate the system. Your feedback is crucial for us to do this well. To answer this questionnaire it is mandatory to be at least partly acquainted with the system and its functions. For your first exploration you may use the Quickstart that corresponds to the structure of the questionnaire.

We will of course handle your answers confidentially, they will not be used for any other purpose than those stated above. Among all participants we will have a lottery of interesting prizes. Only if you want to participate in this lottery please enter your E-Mail address below.

For further questions or remarks feel free to contact us: cyclades-gmd@fit.fraunhofer.de

We appreciate your help very much and would like to thank you for your effort!

Start Questionnaire

How did you learn about the CYCLADES system?

☐ Colleagues, friends

☐ Link on a library site I use

☐ Search engine

☐ Other, please specify [   ]

How much time did you approximately spend exploring the system?

Absolute time spent [   ] (in hrs)

Time span from first to last log in [   ] (in days)

Which browser do you use?

○ Internet Explorer   Version [   ]

○ Netscape   Version [   ]

○ Mozilla   Version [   ]

○ Opera   Version [   ]

○ Other, please specify [   ]

Which operating system do you use?

○ Microsoft Windows   Version [   ]

○ Mac OS   Version [   ]

○ UNIX / Linux   Version [   ]

○ Other, please specify [   ]

1. Communities and Folder Handling

Did you use the CYCLADES Community and Folder Handling functions?

Yes ☐ ☐ No

If you chose No:

Please specify your reasons for not using these functions

☐ I didn't know how to use them

☐ I had no time

☐ It was not important for me

☐ Other, please specify

_____

Please continue with section 2.

If you chose Yes:

How do you consider yourself as a user of the CYCLADES Communities and Folder Handling functions?

☐ beginner ☐ intermediate ☐ advanced ☐ expert

The folder distinction into community, project and private folders is

too detailled ☐ ☐ ☐ ☐ not accurate enough.

☐ I don't need different types of folders.

The interaction dialogue for the creation of new folders of the different types is

Self-explaining ☐ ☐ ☐ ☐ too complicated.

The navigation in the hierarchial folder structure is

straightforward ☐ ☐ ☐ ☐ challenging.

How satisfied are you with the functionality and implementation of the CYCLADES Community and Folder Handling functions?

Please give your overall grade (1 best, 6 worst).

1   2   3   4   5   6
☐   ☐   ☐   ☐   ☐   ☐

If you like, please explain why you chose this grade

_____

Do you have any suggestions for the improvement of the Communities and Folder Handling functions?

2. Searching Archives

Did you use the CYCLADES Search functions?

Yes ☐   ☐ No

If you chose No:

Please specify your reasons for not using the search functions.

☐ I didn't know how to use them

☐ I had no time

☐ It was not important for me

☐ Other, please specify

Please continue with section 3.

If you chose Yes:

How do you consider yourself as a user of the CYCLADES Search functions?

☐ beginner   ☐ intermediate   ☐ advanced   ☐ expert

The window for the query formulation is

clearly arranged ☐   ☐   ☐   ☐ hard to overlook.

self-explaining ☐   ☐   ☐   ☐ complicated.

The available options to specify query conditions are

easy understandable ☐   ☐   ☐   ☐ hard to understand.

sufficient ☐   ☐   ☐   ☐ not enough.
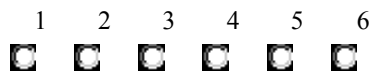
The results of a query were

presented clearly arranged ☐   ☐   ☐   ☐ badly arranged.

of an excellent quality ☐   ☐   ☐   ☐ of a poor quality.

The navigation within the various dialogs is

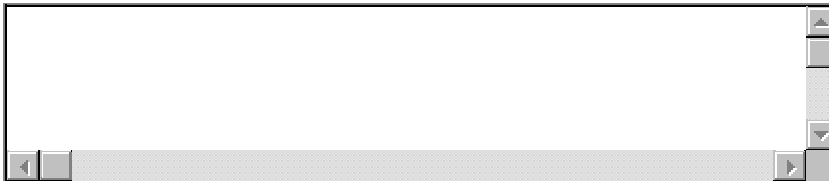clear ☐   ☐   ☐   ☐ challenging.

How satisfied are you with the functionality and implementation of the CYCLADES Search functions?

Please give your overall grade (1 best, 6 worst).

```
    1     2     3     4     5     6
    ☐     ☐     ☐     ☐     ☐     ☐
```

If you like, please explain why you chose this grade

```
┌──────────────────────────────────────────────────┐
│                                                    │
└──────────────────────────────────────────────────┘
```

Do you have any suggestions for the improvement of the Search functions?

```
┌──────────────────────────────────────────────────┐
│                                                    │
│                                                    │
│                                                    │
│                                                    │
└──────────────────────────────────────────────────┘
```

3. Collections

Did you use the CYCLADES Collection functions?

Yes ☐ ☐ No

If you chose No:

Please specify your reasons for not using the Collection functions

☐ I didn't know how to use them

☐ I had no time

☐ It was not important for me

☐ Other, please specify

Please continue with section 4.

If you chose Yes:

How do you consider yourself as a user of the CYCLADES Collection functions?

☐ beginner   ☐ intermediate   ☐ advanced   ☐ expert

Using the Collection functions is

easy ☐ ☐ ☐ ☐ difficult.

The purpose of the Collection functions was

Immediately clear ☐ ☐ ☐ ☐ hard to understand.

Did you use collections in query formulation?

Yes ☐ ☐ No, because

☐ I wanted to search as broadly based as possible.

☐ I couldn't guess the content of the collections from their description.

☐ Other, please specify

Please continue with the overall grade of collections below!

If you did use collections in query formulation:

The use of collections sped up the time needed for completing a query

very much ☐ ☐ ☐ ☐ not at all.

The use of collections improved the quality of search results

very much ☐ ☐ ☐ ☐ not at all.

The categories of personal collections, folder collections and system collections are

Sufficient ▢   ▢   ▢   ▢   not accurate enough.

How satisfied are you with the functionality and implementation of the CYCLADES Collection functions?

Please give your overall grade (1 best, 6 worst).

1	2	3	4	5	6
▢	▢	▢	▢	▢	▢

If you like, please explain why you chose this grade

> [ ]

Do you have any suggestions for the improvement of the Collection functions?

> [ ]

4. Advanced Search Features

Did you use the CYCLADES Advanced Search Features?

Yes ☐   ☐ No

If you chose No:

Please specify your reasons for not using the Advanced Search Features

☐ I didn't know how to use it

☐ I had no time

☐ It was not important for me

☐ Other, please specify

[   ]

Please continue with section 5.

If you chose Yes:

How do you consider yourself as a user of the CYCLADES Advanced Search Features?

☐ beginner   ☐ intermediate   ☐ advanced   ☐ expert

Did you use the feature to personalize your query?

Yes ☐   ☐ No, because

☐ It didn't seem useful to me

☐ I like to keep complete control over my queries

☐ I didn't know how to use the feature

☐ Other, please specify

[   ]

Please continue with the overall grade of Advanced Search Features below!

If you did personalize your query:

How satisfied were you with the results?

very satisfied ☐   ☐   ☐   ☐   not satisfied at all

Compared to the not-personalized query, the results were

much better ☐   ☐   ☐   ☐   worse

How satisfied are you with the functionality and implementation of the CYCLADES Advanced Search Features?

Please give your overall grade (1 best, 6 worst).

1   2   3   4   5   6

☐ ☐ ☐ ☐ ☐ ☐

If you like, please explain why you chose this grade

Do you have any suggestions for the improvement of the Advanced Search Features?

5. Community Management

Did you use the CYCLADES Community Management functions?

Yes ☐ ☐ No

If you chose No:

Please specify your reasons for not using the Community Management functions

☐ I didn't know how to use it

☐ I had no time

☐ It was not important for me

☐ Other, please specify

[ ]

Please continue with section 6.

If you chose Yes:

How do you consider yourself as a user of the CYCLADES Community Management functions?

☐ beginner ☐ intermediate ☐ advanced ☐ expert

Is it reasonable for you to have open and closed Communities?

Yes ☐ ☐ No

As a community manager, you may invite new users. The invitation of new users to a community is

Intuitively clear ☐ ☐ ☐ ☐ difficult.

☐ I haven't tried to invite new users.

Copying records to another folder is for me

Intuitively clear ☐ ☐ ☐ ☐ difficult.

What do you think about CYCLADES communities being self-organized?

☐ I like this feature

☐ I would prefer communities to be moderated by a system administrator.

☐ Other, please specify

[ ]

How satisfied are you with the functionality and implementation of the CYCLADES Community Management functions?

Please give your overall grade (1 best, 6 worst).

1	2	3	4	5	6
☐	☐	☐	☐	☐	☐

If you like, please explain why you chose this grade

Do you have any suggestions for the improvement of the Community Management?

6. Recommendations

Did you request recommendations when creating a folder or community?

☐ Yes ☐ No

If you chose No:

Please specify your reasons for not using the Recommendations functions

☐ I never created a folder or community

☐ I didn't want any recommendations

☐ I didn't know what recommendations are

☐ I didn't know where to request recommendations

☐ Other, please specify

[   ]

Please continue with the overall grade for Recommendations below

If you chose Yes:

Which kind of recommendations did you request?

☐ records

☐ collections

☐ communities

☐ users

The recommended items were

closely related to my interests ☐ ☐ ☐ ☐ not at all useful for me.

☐ I did not receive any recommendations.

☐ I never looked into a recommendations folder.

How satisfied are you with the functionality and implementation of the CYCLADES Recommendations functions?

Please give your overall grade (1 best, 6 worst).

1 2 3 4 5 6
☐ ☐ ☐ ☐ ☐ ☐

If you like, please explain why you chose this grade

[   ]

Do you have any suggestions for the improvement of the Recommendations functions?

7. Overall Assessment

This section deals with CYCLADES as a whole. When 'Community Support' is mentioned this refers to sections 1 and 5 of this questionnaire, 'Search Functions' refers to sections 2 and 4.

Please state, how useful and reasonable the following functions are for your

work:

	very useful			not at all useful
Community Support	☐	☐	☐	☐
Search Functions	☐	☐	☐	☐
Collections	☐	☐	☐	☐
Recommendations	☐	☐	☐	☐
CYCLADES as a whole	☐	☐	☐	☐

The usability of the following functions is

	self-explaining			difficult	I did not use it.
Community Support	☐	☐	☐	☐	☐
Search Functions	☐	☐	☐	☐	☐
Collections	☐	☐	☐	☐	☐
Recommendations	☐	☐	☐	☐	☐
CYCLADES as a whole	☐	☐	☐	☐	☐

What is your overall impression of the CYCLADES interface?

Very good ☐　☐　☐　☐　very bad.

How satisfied are you with the CYCLADES system altogether?

Please give as a concluding appraisal a grade from one to six (one best, six the worst).

1	2	3	4	5	6
☐	☐	☐	☐	☐	☐

If you like, explain why you chose this grade

```

```

Do you have any comments or suggestions for the improvement of the

CYCLADES system?

```

```

8. Demographic Characteristics

Please specify the country you live in:

[select EU country... ▼]

Other, please specify [   ]

Age: [   ]

Gende ⊙ female ⊙ male
r:

Please state your field of work:

☐ Industry, Business

☐ Industrial Research

☐ Research in an university or a comparable research institute

☐ student/ in education

☐ Other, please specify
[   ]

Please state your discipline:

[choose one... ▼]

Other, please specify [   ]

If you like, give us a closer indication of your occupation resp. the correct term
[   ]

Which Internet based systems do you use to find the information you need?

☐ Search Engines

☐ Digital Archives

☐ Newsgroups

☐ Service providers

☐ Other, please specify
[   ]

I do already use the following digital libraries:

(please specify all libraries you use)

If you want to participate in the lottery, please enter your E-Mail address:

It will be stored seperately from your answers and only used in case you win one of the prizes.

Thanks a lot for your help!

Appendix B: Questionnaire user values

How did you learn about the CYCLADES system?

11	Colleagues, friends
0	Link on a library site I use
1	Search engine
22	Other, please specify

Others (similar entries are listed once):
newsletter
ARCHIVE-COMM-L@LIST.NIH.GOV
Article in ERCIM News
from HCI class
From my teacher
Through the DELOS Network of Excellence, in which I participate

How much time did you approximately spend exploring the system?

Absolute time spent 7,08 Ø (in hrs)

not answered: 2

Time span from first to last log in 4,83 Ø (in days)

not answered: 10

Which browser do you use?

Internet Explorer	21	Versions	5, 6
Netscape	5	Versions	6, 7
Mozilla	5	Versions	1.2.1, 1.2b, 1.3
Opera	3	Versions	7.11
Other	0	Versions	

not answered: 1

Which operating system do you use?

Microsoft Windows	30	Versions	98, NT, 2000, XP
Mac OS	0	Versions	
UNIX / Linux	4	Versions	
Other	0	Versions	

not answered: 1

1. Communities and Folder Handling

Did you use the CYCLADES Community and Folder Handling functions?

Yes 31   4 No

If you chose No:
Please specify your reasons for not using these functions

3   I didn't know how to use them
1   I had no time
0   It was not important for me
0   Other, please specify

If you chose Yes:
How do you consider yourself as a user of the CYCLADES Communities and Folder Handling functions?

beginner	intermediate	advanced	expert
14	13	3	0

not answered: 5

The folder distinction into community, project and private folders is

too detailed 1   18   12   0   not accurate enough.

not answered: 4   0 I don't need different types of folders.

The interaction dialogue for the creation of new folders of the different types is

Self-explaining 7   9   11   4   too complicated

not answered: 4

The navigation in the hierarchical folder structure is

straightforward 5   13   8   4   challenging

not answered: 5

How satisfied are you with the functionality and implementation of the CYCLADES Community and Folder Handling functions?

Please give your overall grade (1 best, 6 worst).

	1	2	3	4	5	6
not answered: 4	1	8	10	10	1	1

If you like, please explain why you chose this grade:
(grade; comment)

0; I did not start using it yet - let me log in first!!!
3; The idea is pretty good but there are too many bugs to report. Also, lack some basic functions
2; Difficult to understand the concept
2; as a BSCW user, i could use it relatively easy - intuitively
4; the functions are ok but still too complicated. i have to use time and brain in order to know how does this thing work.
3; because directory and folder access is quite inefficient. no direct navigation. one may return to home

directory and go through the aimed path.
3; Good hierarchial folder and community but not easy to use
4; Many problems on my PC. Error messages.
3; its not so good
4; it is easy and efficient use
4; easy and efficient to use
1; I think it has more functionality than BSCW
4; Lack of support (i.e. textual information) during the procedure

Do you have any suggestions for the improvement of the Communities and Folder Handling functions?

Clicking on an open community (while browsing /Cyclades/Communities) should offer more information / options than just showing the "info-page" (e.g. joining the community), otherwise it's a bit confusing compared to other GUI / interaction standards (e.g. clicking an object does open it, not revealing the "info-page", which is more often located in context menues etc.).
A preview of the contents within the community would be nice, otherwise everybody has to join a community to 'preview' it, leaving it afterwards if it offered not what its title / description 'promised'.

For folders there could be a navigation schema on one side of the window to easily navigate through the folders.
I kept trying to think it's similar to my email folder paradigm, email discussion paradigm, etc. and still cannot be sure what exactly the concept of folder here means... More comments follows.
make it more simple and easy to use!
should be obvious and self explaining
the general function of communities as currently implemented isn't very intuitive and requires some introduction before first use (quick start).
There are should be navigation area of folder so we can easily copy one file to another folder

2. Searching Archives

Did you use the CYCLADES Search functions?

Yes 29   6 No

If you chose No:
Please specify your reasons for not using the search functions.

1 I didn't know how to use them
1 I had no time
1 It was not important for me
3 Other, please specify

Others (similar entries are listed once):
The truth is somewhere among these...
This is my first time

Please continue with section 3.

If you chose Yes:
How do you consider yourself as a user of the CYCLADES Search functions?

beginner	intermediate	advanced	expert
11	10	4	2

not answered: 8

The window for the query formulation is

clearly arranged 6 11 8 3 hard to overlook.
not answered: 7

self-explaining 3 11 7 5 complicated.
not answered: 9

The available options to specify query conditions are

easy understandable 5 15 6 3 hard to understand.
not answered: 6

sufficient 11 12 3 2 not enough.
not answered: 7

The results of a query were

presented clearly arranged 2 14 7 3 badly arranged.
not answered: 9

of an excellent quality 2 11 5 5 of a poor quality.
not answered: 12

The navigation within the various dialogs is

clear 2 11 12 3 challenging.
not answered: 7

How satisfied are you with the functionality and implementation of the CYCLADES Search functions?

Please give your overall grade (1 best, 6 worst).

	1	2	3	4	5	6
not answered:	7	0	7	7	7	4	3

If you like, please explain why you chose this grade
(grade; comment)

6; Searching interface I find very difficult and poorly designed overall
0; i tried, but i didn't get any return results - (was using alta vista, advanced, search on singapore)
4; Although there are detailed options for search and a clever mechanism the result of queries are presented in XML format and the query results can be only saved to current directory.
5; the interface is not self explaining, no kontext help
2; Search functionality is OK. I'm not satisfied with the result outcome.
3; it was not clear enough
4; The result is in XML and for internet searching it doesn't display good result

Do you have any suggestions for the improvement of the Search functions?

A more detailed help would be nice, even the pages from the quick-start are not linked from the query-page.
Explanations / examples of the "fields"-options would be nice for beginners.
advanced, beginner search, examples
Improve the speed!!! It's too slow!
remove script errors; give some short hints on how to work with the search function;maybe is would be a good idea to offer different interface masks for different levels of experience (most people won't know how to use the current mathematical operations).
should be obvious and self explaining
The result fot S&B should not in XML maybe in a better displaying
The search feature shows labels such as Field, Predicate, contains, comparison value, Submit... these are all system terms and should not be phrased on the end-user interface. The 'Predicate' has things like >=, <=... these should not be on most search interface and in some cases do not apply. The trend and concensus in search interface is to have as simple as a single text box and the SYSTEM should figure out how to use the terms entered to find best - I get the impression that the interface designer of the system is asking too much to the users.
When I select one of the retrieved document, it shows XML formatted document - is this the way intended?
Whole throughout the interaction (especially search feature) I had no clue on what will happen when I click something - sometimes a part of the screen changes, sometimes a floating menu shows up just beside the button, sometimes a new window pops up... whatever the reason, this I regard as a poor design. Interface should be predictable and in your interface I have a great difficulty in all different behaviour of widgits. Is it java Applet? Are you using Frames in HTML with Javascript? If a web-based system is not a plain page-to-page hyperlinked straightforward interface (e.g. Amazon.com), at least you should be careful on this aspect and make it predictable. All different ways of behaviour of different elements are very disconcerting to me, here are more examples:

top of the screen, the 'Admin', 'Collection Management'... : opens up a new small window. On Mouseover, there's underline showing.
a little below, the menu bar (File, Edit...): on clicking, menu shows up (which is similar to Windows conventional application - fine).
Your Location line: it's a text box but it's clickable - when click, I want I can type in something inside, but instead a window pops up.
If I click on one entry in the folder, the top bar stays but below it refreshes. There is close button on top right side of this - can I close the frame?

The search results are good. Most of the functionalities are useful but the GUI could be more user-frindly
To save the query results into a destination directory/folder, a "browse" option is needed that works parallel to save functionality.
Query results could be better presented (XML file is not good)
when a search engine is selected, perhaps the page can be set to "auto refresh" instead of forcing the user to click "change search engine"

3. Collections

Did you use the CYCLADES Collection functions?

Yes 23   11 No

not answered: 1

If you chose No:
Please specify your reasons for not using the Collection functions

6 I didn't know how to use them

1 I had no time

2 It was not important for me

3 Other, please specify

> *Others (similar entries are listed once):*
> I am looking for it now, but I don't know where the Collection function is - I am in the folder view now.
> It don't work well on my PC. Could not save the Collections, i choosed.
> This is my first time. I will come back later to answer. I think that you can improve the questionnaire by asking rught from the outset whether the person has already used your system and if not ask him/her not to continue before using it.

Please continue with section 4.

If you chose Yes:
How do you consider yourself as a user of the CYCLADES Collection functions?

beginner	intermediate	advanced	expert
12	11	9	2

not answered: 1

Using the Collection functions is

easy 3   8   8   4 difficult.

not answered: 12

The purpose of the Collection functions was

Immediately clear 3   7   8   5 hard to understand.

not answered: 12

Did you use collections in query formulation?

Yes 8   11 No, because

not answered: 16

3 I wanted to search as broadly based as possible.

7 I couldn't guess the content of the collections from their description.

3 Other, please specify

> dont needed this functionallity
> I could not figure out which collections would be useful for my queries

my intuitive interpreation of collections was that they were only virtual bindings of exisiting papers (which were obviously already part of the data base i was searching in)

Please continue with the overall grade of collections below!

If you did use collections in query formulation:

The use of collections sped up the time needed for completing a query

very much | 3 | 4 | 1 | 0 | not at all.

not answered: 18

The use of collections improved the quality of search results

very much | 1 | 6 | 1 | 0 | not at all.

not answered: 19

The categories of personal collections, folder collections and system collections are

Sufficient | 5 | 1 | 2 | 0 | not accurate enough.

not answered: 18

How satisfied are you with the functionality and implementation of the CYCLADES Collection functions?

Please give your overall grade (1 best, 6 worst).

	1	2	3	4	5	6
not answered: 14	0	6	2	7	5	1

If you like, please explain why you chose this grade
(grade; comment)

0; Improve the usage.
5; Again, lack of support

Do you have any suggestions for the improvement of the Collection functions?

make collections more consistent to use (e.g. show the tree of all available collections immediately, not after a few clicks).
More information about the collections when browsing them would be nice.
I could not figure out which 'sort order' was used when browsing the collections (it was not alphabetically, though...).

4. Advanced Search Features

Did you use the CYCLADES Advanced Search Features?

Yes `15`   `15` No

not answered: `5`

If you chose No:
Please specify your reasons for not using the Advanced Search Features

`6` I didn't know how to use it

`4` I had no time

`5` It was not important for me

`2` Other, please specify

Others (similar entries are listed once):
The basic search is not satisfied and so I do not want to try more
where is advanced search?

Please continue with section 5.

If you chose Yes:
How do you consider yourself as a user of the CYCLADES Advanced Search Features?

beginner	intermediate	advanced	expert
5	7	1	0

not answered: `22`

Did you use the feature to personalize your query?

Yes `8`   `4` No, because

not answered: `23`

`1` It didn't seem useful to me

`2` I like to keep complete control over my queries

`0` I didn't know how to use the feature

`2` Other, please specify

crashed with errors
I don't know where this feature is located.

Please continue with the overall grade of collections below!

If you did personalize your query:

How satisfied were you with the results?

very satisfied `1` `2` `5` `0` not satisfied at all

not answered: `24`

Compared to the not-personalized query, the results were

much better `0` `5` `3` `0` worse

not answered: `24`

How satisfied are you with the functionality and implementation of the CYCLADES Advanced Search Features?

Please give your overall grade (1 best, 6 worst).

not answered:	1	2	3	4	5	6
21	0	3	2	3	4	2

If you like, please explain why you chose this grade
(grade; comment)

5; I thought the search feature I used was advanced, but is there any separate advanced feature? The one with 'field' 'predicate', 'comparison value' label - is this advanced or basic?
2; I like- add search criteria & use of checkbox to specify which criteria to use for the query.

Do you have any suggestions for the improvement of the Advanced Search Features?

make it work. :)
not easy to understand
should be obvious and self explaining

5. Community Management

Did you use the CYCLADES Community Management functions?

Yes 19   9 No

not answered: 7

If you chose No:
Please specify your reasons for not using the Community Management functions

2   I didn't know how to use it

3   I had no time

2   It was not important for me

2   Other, please specify

Others (similar entries are listed once):
no access rights.

Please continue with section 6.

If you chose Yes:
How do you consider yourself as a user of the CYCLADES Community Management functions?

beginner	intermediate	advanced	expert
7	7	2	0

not answered: 19

Is it reasonable for you to have open and closed Communities?

Yes 16   2 No

not answered: 17

As a community manager, you may invite new users. The invitation of new users to a community

is

Intuitively clear 1   3   3   0 difficult.

not answered: 17   11 I haven't tried to invite new users.

Copying records to another folder is for me

Intuitively clear 4   5   5   2 difficult.

not answered: 19

What do you think about CYCLADES communities being self-organized?

11   I like this feature

6   I would prefer communities to be moderated by a system administrator.

1   Other, please specify

Others (similar entries are listed once):
i like it, : ideally, in the context of a scientific community, this feature is
perfect. BUT with undesirable elements (hackers, etc) out there, a lack of a
moderator can result in chaos.. i can start 10 folders, and share VERY BIG
information files..

not answered: 17

How satisfied are you with the functionality and implementation of the CYCLADES Community Management functions?

Please give your overall grade (1 best, 6 worst).

	1	2	3	4	5	6
not answered:	18	3	4	6	3	1	0

If you like, please explain why you chose this grade
(grade; comment)

1; quite well thought of

Do you have any suggestions for the improvement of the Community Management?

6. Recommendations

Did you request recommendations when creating a folder or community?

Yes 5   23 No

not answered: 7

If you chose No:
Please specify your reasons for not using the Recommendations functions

7 I never created a folder or community
6 I didn't want any recommendations
4 I didn't know what recommendations are
2 I didn't know where to request recommendations
4 Other, please specify

Others (similar entries are listed once):
I did not know about this feature.
no time

Please continue with the overall grade for Recommendations below

If you chose Yes:
Which kind of recommendations did you request?

4 records
5 collections
T 4 communities
3 users
h

e recommended items were

closely related to my interests 0 2 0 0 not at all useful for me.

not answered: 30   3 I did not receive any recommendations.

    I never looked into a recommendations folder.

How satisfied are you with the functionality and implementation of the CYCLADES Recommendations functions?

Please give your overall grade (1 best, 6 worst).

	1	2	3	4	5	6
not answered: 31	0	2	1	1	0	0

If you like, please explain why you chose this grade
(grade; comment)

4; for a beginner it isn't clear what to expect from this function. as i didn't receive any recommandations (i'm a beginner) i would be extra suspicious next time i used that function.
0; I didn't use so far, but good idea!

Do you have any suggestions for the improvement of the Recommendations functions?

disable the function until it makes sense (i.e. there is enough input information in the user's folder). offer it later on. give a short hint or example why the user should use it.

7. Overall Assessment

This section deals with CYCLADES as a whole. When 'Community Support' is mentioned this refers to sections 1 and 5 of this questionnaire, 'Search Functions' refers to sections 2 and 4.

Please state, how useful and reasonable the following functions are for your work:

	very useful			not at all useful
Community Support	5	14	6	1
not answered: 9				
Search Functions	7	13	5	1
not answered: 9				
Collections	5	10	7	3
not answered: 10				
Recommendations	1	10	9	4
not answered: 11				
CYCLADES as a whole	3	16	5	2
not answered: 9				

The usability of the following functions is

	self-explaining			difficult
Community Support	4	13	4	3
not answered: 9	2 I did not use it.			
Search Functions	5	8	8	3
not answered: 9	2 I did not use it.			
Collections	0	11	6	4
not answered: 9	5 I did not use it.			
Recommendations	1	4	2	3
not answered: 9	16 I did not use it.			
CYCLADES as a whole	1	11	9	3
not answered: 10	1 I did not use it.			

What is your overall impression of the CYCLADES interface?

Very good   3   9   10   4   very bad.

not answered: 9

How satisfied are you with the CYCLADES system altogether?

Please give as a concluding appraisal a grade from one to six (one best, six the worst).

	1	2	3	4	5	6
not answered: 9	1	6	6	8	3	2

If you like, explain why you chose this grade
(grade; comment)

6; Too complicated, no good search results, no use for such a system in my working field
5; i don't think it is a good idea to use bscw as a basis for cyclades. bscw is already a complex community system which was enhanced with even more complex funktions. this makes cyclades very hard to use for a beginners and still complicated for an expert.
3; It need many improvements, until it will be a complete system.
2; because some of functionality still doesn't satisfied and script error happened

4; Useful tool, but not usable

Do you have any comments or suggestions for the improvement of the CYCLADES system?

-improve the interface bacause its still like prototype
-avoid error
-especially for internet searching it absolutely doesnt display a desired results
I am not at all convinced that the system is designed for people. Most of my searching/browsing
experience was hampered by unpredictable targetting of action - you should consider more carefully
where the target should be and whether the application-like web page (while still having web page-like
elements) was the right choice. Sorry for such a negative comment, it is possible that I was overly critical
and maybe using it a few more times or longer would have lessoned my negative impression.
maybe it would be a good idea to design a new system around the core functions of cyclades
(communities, collections, searching).
Perhaps a better write up on the features of the system would help. also, perhaps, the integration of a "did
you know" tool tips or some context sensitive help for beginners would useful. scientific staff are
generally not known to have lots of patience, and context sensitive help would be more useful than
making the user read through lots of text on a help page. (apparently Microsoft did have some nice ideas
after all!)(of course, please allow the users to select if this feature can be switched off)
another issue - i am using a p3-500 with 128 meg of ram, on a DSL connection. the speed of the page was
rather slow. is it due to the server load, the traffic (unlikely, since i have the connection for myself), or the
java loading up on my system? perhaps some improvement in speed should be considered.
overall, its a very nice piece of work.
some of the functions are not understandable, and some don't work properly

8. Demographic Characteristics

Please specify the country you live in:

5 France
23 Germany
2 Greece
1 Ireland
1 Brazil

not answered: 8

Age: Ø 28,64
not answered: 9

Gender: female 8 20 male
not answered: 7

Please state your field of work:

1 Industry, Business
0 Industrial Research
10 Research in an university or a comparable research institute
20 student/ in education
0 Other

Please state your discipline:

1 Business Administration
24 Computer Science
1 Medical Science / Pharmacy
1 Physics
1 Librarianship

not answered: 8

If you like, give us a closer indication of your occupation resp. the correct term

HCI researcher in the field of digital video
Master Student in Software Systems Engineering
Post Grad Student
technical writer

Which Internet based systems do you use to find the information you need?

28 Search Engines
11 Digital Archives
15 Newsgroups
5 Service providers
2 Other, please specify

bbs

I do already use the following digital libraries:

(please specify all libraries you use)

ACM
ACM Digital Library, CitySeer
ACM Digital Library, University Library OPAC.
BSCW server
citeseer
Daffodil (including ACM, DBLP, Citeseer)
Spires (slac-lib.)
arXiv.org
www.digibib.net

If you want to participate in the lottery, please enter your E-Mail address:

It will be stored seperately from your answers and only used in case you win one of the prizes.

Thanks a lot for your help!