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**Groupware for Distributed Content Production**

**KOM2002**

## Evaluation Plan

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<b>Abstract (for dissemination)</b>	This report aims to give a general plan for the procedure which will be followed for a complete and ongoing evaluation. After indentifying the goals of this evaluation, it gives some ideas and recommendations on how to gather the data and also collect and analyze the information provided in order to achieve these goals.

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## 2. Executive summary

This report, which is part of the seventh work package, aims to give a general plan for the evaluation (ongoing) which is meant to start after the site becomes public and to end with the termination of the project. Its main objective is to identify the goals of this evaluation, determine the data which will provide us with the information needed to achieve these goals and select a type of methodology to help collect and analyze this information.

A complete evaluation requires acting in two directions: evaluation of the groupware used in order to develop the site and evaluation of the quality and value of the web site developed.

The methodology will include questionnaires to be passed to the groupware users, to control users selected to test the website and to the real users of the web4health site. It will also use the help of an external reviewer who will apply the Discern instrument to the site, as well as the usage statistics given from the site itself and the various search engines.

Evaluation will also be performed to the different linguistic versions of the site. This evaluation will probably use the same means as the evaluation in English language. It is recommended that the partners translate the questionnaires to their native languages and try to create some groups of control users.

Thus we are aiming to a final evaluation report which will combine all the knowledge gained within KOM2002 in a comprehensive overview which can also be base for future review as well as for exploitation.

### 3. Introduction – Background

It is a common knowledge that the use of Internet has grown wide within the last years, especially in the European countries and the so-called western world. People of all ages and especially young children and adolescents appear to be searching for health information through the Internet daily.

Quite prevalent in this query are problems of mental health. It has been reported, for example, that more Internet users search the Web for information on depression than any other health condition. Furthermore a search in the “google” (www.google.com), one of the most popular search engines, has shown that the term depression yields 5.160.000 different pages, far more than other common conditions such as heart disease (2.910.000 pages), cholesterol (2.370.000 pages), headache (1.780.000) or influenza (870.000 pages). This is not surprising given the high level of disability associated with depression in the community and the fact that the Web provides a convenient and anonymous means of obtaining information about mental health problems, which is very important considering the stigma mental illness carries in our society.

Given this information, in KOM2002 project we aimed to develop a website providing high quality information on various mental health problems. In particular, we aimed to produce information with the following characteristics:

- It should be accurate and evidence-based.
- It should be easily accessible from citizens across Europe and in particular in several languages.
- It should be easily searchable and relevant.
- It should give the user the opportunity to interact with specialists at his or her own language.

We have now reached a point, where our site has been created and gone public, filled with many information on mental health subjects for those interested. So now an evaluation is demanded.

Evaluation is a systematic investigation, a process (not a single act, but an ongoing procedure) which will help us estimate the usefulness of the project. Information will be gathered to determine what is working and why, and whether the project is meeting its goals and objectives according to the proposed time plan. This information mainly aims in constantly developing and improving the site. Evaluation in our case is important not only to the developers of this site but also and above all to the public which is in need of our services. Patients tend to seek for current and well-provided information and our aim is to fulfill these expectations.

Furthermore this project gave the opportunity to people from different countries and with different degrees of familiarity to the use of computers to work together on a specific groupware. Given that most of the partners were medical experts, with no previous knowledge of the groupware, an evaluation of the groupware and its usefulness will help us determine whether this or a similar software could be used in similar projects.

This report, which is part of the seventh work package, aims to give a general plan for the evaluation (ongoing) which is meant to start after the site becomes public and to end with the termination of the project. Its main objective is to identify the goals of this evaluation, determine the data which will provide us with the information needed to achieve these goals and select a type of methodology to help collect and analyze this information.

## 4. Evaluation of quality

Evaluating the project results requires acting in two different directions: First, to evaluate the usefulness and convenience of the groupware used in order to develop the site and second, to evaluate the quality and value of the web site developed.

### 4.1 EVALUATION OF THE GROUPWARE

The purpose of this evaluation is to combine all the knowledge gained within the project in a base which might be further researched and exploited. A final judgment of the usefulness of the software created and used for the purposes of this site will help future projects with similar characteristics and requirements.

#### a. Methodology:

In order to collect the views of all partners for the usefulness of the groupware in a representative way, we plan to develop a simple questionnaire which will be circulated via e-mail. This questionnaire aims mostly in collecting opinions of all partners involved in the project (at least of those who did use the groupware) regarding the following aspects of the software:

- Convenience and usefulness: One of the most important aspects to check is the easiness with which each partner used the groupware, considering that in this project, as well as in similar projects, most of the content providers are not IT experts.
- Technical problems: We will try to collect data on any problem which might have appeared during the whole period of using the groupware. Also the duration of the problem, who solved it finally and how serious it was for the progress of the work done at the moment.
- Possible changes and remarks which could offer a possible improvement to this or any similar software, together with a final appreciation of the software and its importance for the progress of the project.

## 4.2 EVALUATION OF THE WEB CONTENT

To evaluate the content of the website, which is considered as one of the most important parts of the final evaluation we are planning the following three stages:

### a. Internal evaluation :

We thought that it would be valuable to apply the method of evaluation that we used in the Deliverable D 1.1 (Existing Content Evaluation) when we evaluated the sites of the various partners of the project. This evaluation will use both descriptive data and more detailed data based on the Discern Instrument.

#### **Descriptive evaluation:**

We are planning to include the following domains in our descriptive evaluation of the site:

- Source of the site: We want the site to display clearly the organization's name and logo, as well as the authors of the information provided.
- Purpose of the site: The mission statement of the site must be clear to the users, so that they understand how to best utilize the information.
- Personnel involved in the development of the content: Who participates in this project and what is their professional status in mental health.
- Currency of the site: The user must know how recent and reliable is the information given.
- Logical organisation and presentation of the site: We tried to create the site as simple as possible, but of course this must be confirmed by the site's users.
- Presence of internal search engine.
- Interactivity of the site: The user must have the opportunity to obtain information from experts or someone responsible to answer any further questions.
- Disclosure of funding of the site: The web4health site must clearly state that it is based on an EU-funded research project with the aim of creating a site which will answer to questions about psychology and life-style.

Most of these criteria have been selected by the well-known document developed by the Health Information Technology Institute of Mitretek Systems, a non profit organization (<http://www.mitretek.org/hiti/showcase/documents/criteria.html>) and were also used for the descriptive evaluation of the partner's already existing sites. (Deliverable D1.1).

#### **Detailed evaluation:**

We are planning a detailed evaluation based on the Discern instrument. The Discern project was funded by the British library and the NHS Research and Development program and aimed to develop an easy to use instrument that can be used by consumers to rate the quality of health related information published in a written form or through the internet. This instrument has been used to rate the quality of information of various sites with health material in general and mental health material in particular. It was also used for the detailed evaluation of the Greek site during the evaluation of the existing content (Deliverable D1.1).

The Discern instrument will be given to an external reviewer with the request that he visits the home page of our site, makes a specific question on the search engine and reviews the information given. The full instrument is given in Appendix I.

## **b. Evaluation with the help of control users:**

Another method to test the groupware along with the website is to test the site on control users while they are being observed and their moves are being noted down. Afterwards the observer can question them on their moves, write down any possible problems or omissions of the groupware or the site and ask them to comment on their degree of satisfaction. This method is of course better because it allows an "interview" of the user in multiple domains, but is also more time consuming and thus difficult both for the user as for the observer.

## **c. Evaluation with the help of real users (ongoing evaluation):**

As is understandable an evaluation based only in the opinions of control users is not adequate to estimate whether the site has achieved its original goal of providing medical information to those who really need it. For this purpose we aim to collect data from the real users.

We have thus planned to use a questionnaire made of simple questions, which will be relevant to the following criteria (most of them stated in the Introduction Part):

1. Purpose of the site clearly understood by the users, in order for them to best utilize the information.
2. Logical organization and presentation of the site.
3. Interactivity of the site, with enough feedback so that the users will be able to investigate furthermore their questions.
4. Simplicity of content, so that it can be clearly understood of all people, despite educational level.
5. Adequacy of given information, at least in the experimental level of "not true" questions.
6. Objectivity and currency of given information, at least to the point the control users (here students) are able to judge this.

Except from these domains the questionnaire will also ask about the personal views of the users about the usefulness of searching for medical information on the internet, their criteria of evaluating the quality of the information and a personal appreciation of the web4health site. All these supplementary questions were considered necessary for estimating the needs and sensitivities of the users and thus proceed in a better analysis of their answers regarding the website.

The plan for this questionnaire is to be put in a page of our site, either as link appearing on the first page or as a page appearing just after the use of a service like "Ask the expert" or after the answer by FAQs to the user's question.

In order to minimize non-response the questionnaire will be completely anonymous. A brief introduction will explain the purposes of the questionnaire and the importance of the evaluation with a request for participating in this process. A copy of a plan of this questionnaire is attached in the Appendix II. The questions concerning the content were based on the Discern Instrument.

### **4.3 EVALUATION OF THE SITE IN OTHER LANGUAGES**

According to the project's objectives the web4health site will not appear only in the English language, but also in the native language of each partner (German, Italian, Dutch, Swedish, Greek). This way it will be easier for more people to seek our services and profit from our site in their own language.

Taken as granted that most of the partners had already developed a site in their own language before the start of the project, it is normal and probably recommended that most of them will use the material already written in these independent sites. This will certainly create some differences inside the web4health site between different versions according to the language used (differences which will also occur after translating English FAQs to the partners' languages). Therefore we think that a separate evaluation of the different versions will be required. The methodology will be the same as for the English site, and for this reason we will ask the partners to translate the questionnaire into their own language. Furthermore each partner will be asked to perform if possible a control user trial either with the help of the questionnaire of the Appendix Part II, or with any other method they find it more convenient. This trial with control users would be most useful if applied also to all non-English web4health sites.

## **5. Evaluation of the usage**

### **5.1 Methodology**

Through an external tool we can have the usage statistics of the site, that is how many users visit the site, from how many different computers, how often each one has visited the site, and from which different countries they are. This data can be collected every two or three months and compared to the previously collected data and in this way we can come to some important conclusions about the usability and popularity of the web4health site.

Furthermore we can also use the ratings provided to us from the various internet search engines about the popularity of the site, the position given in their list and how it varies with different search words. This data can also be collected every few months and be compared and analyzed. This way we will be able to see if the site has achieved its goal of attracting patients and people in need of its services.

## 6. Timeplan and Recommendations

- a. At this part of the KOM2002 project we have to start an evaluation procedure.
- b. This evaluation will be based on questionnaires to be passed to the groupware users, to control users selected to test the website and to the real users of the web4health site. It will also use the help of an external reviewer who will apply the Discern instrument to the site, as well as the usage statistics given from the site itself and the various search engines.
- c. Evaluation will also be performed to the different linguistic versions of the site. This evaluation will probably use the same means as the evaluation in English language. It is recommended that the partners translate the questionnaires to their native languages and try to create some groups of control users.
- d. Some parts of the evaluation have already started. We are aiming to pass the questionnaire to the groupware users by 1<sup>st</sup> September 2003 and have the results by the next Deliverable D7.2 (First Evaluation Report). This is also the plan for the evaluation from the external reviewer. As for the rest of the procedure it will depend on each partner's ability to have some reliable results before the First Evaluation Report which will be on October 2003. This also applies for the questionnaire to be used inside the website. As for the usage loggings and statistics, we collect these every two or three months, compare and analyze them. This way we can have a complete and trustworthy evaluation by the end of the project.

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## APPENDIX

### PART I :

#### **The discern Instrument ([www.discern.org.uk](http://www.discern.org.uk) )**

All questions are rated on a five point scale from 1 indicating low quality to 5 indicating high quality

#### **SECTION 1. Is the publication reliable?**

1. Are the aims clear?
2. Does it achieve its aims?
3. Is it relevant?
4. Is it clear what sources of information were used to compile the publication (other than the author or producer)?
5. Is it clear when the information used or reported in the publication was produced?
6. Is it balanced and unbiased?
7. Does it provide details of additional sources of support and information?
8. Does it refer to areas of uncertainty?

#### **SECTION 2. How good is the quality of information on treatment choices?**

9. Does it describe how each treatment works?
10. Does it describe the benefits of each treatment?
11. Does it describe the risks of each treatment?
12. Does it describe what would happen if no treatment is used?
13. Does it describe how the treatment choices affect overall quality of life?
14. Is it clear that there may be more than one possible treatment choice?
15. Does it provide support for shared decision-making?

#### **SECTION 3. Overall Rating of the Publication**

16. Based on the answers to all of the above questions, rate the overall quality of the publication as a source of information about treatment choices

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**PART II:**

**QUESTIONNAIRE TO BE APPLIED TO REAL USERS:**

**What did you search information about?**

**Was the content of the site useful to you? Please rate on a scale from 1 to 5:**

- 1 (not at all useful)*
- 2*
- 3*
- 4*
- 5 (very useful)*

**Please rate the information you obtained on a scale from 1 (very badly written-not understandable) to 5 (very well written-totally understandable):**

- 1*
- 2*
- 3*
- 4*
- 5*

**On a scale from 1 to 5 please rate to which point the site made clear what sources of information were used to compile the content:**

- 1 (*no sources of evidence for the information are mentioned*)
- 2
- 3
- 4
- 5 (*the sources of evidence are very clear*)

**On a scale from 1 to 5 please rate whether it was clear when the information was produced:**

- 1 (*no, no dates existed on any text or answer or source of information*)
- 2
- 3
- 4
- 5 (*yes, there were dates on every text of information I was given from the site*)

**Please rate to what point you thought the information was balanced and unbiased?**

- 1 (*the information is completely unbalanced or biased*)
- 2
- 3
- 4
- 5 (*the information is completely balanced and unbiased*)

**Please rate to what point you thought the information covered your questions in depth:**

- 1 (*no, I was left with many questions unanswered*)
- 2
- 3
- 4
- 5 (*yes, it had all the necessary details*)

**Did you think the site was satisfactory to the links provided for additional information?**

- 1 (*no, it provided no links at all/all links were unuseful*)
- 2
- 3
- 4
- 5 (*yes, it provided many useful links*)

**Were the aims of the site clear to you? Please rate on a scale from 0 to 5:**

- 1 (*no, the site does not include any indication of its aims*)
- 2
- 3
- 4
- 5 (*yes, the site has clear aims*)

**Do you think the site achieves its aims? Please rate on a scale from 1 to 5:**

- 1 (none of the information you were expecting from the aims has been provided)*
- 2
- 3
- 4
- 5 (all the information expected from the description of the aims has been provided)*

**Who do you think has the ownership of this site?**

**Please rate how easy/difficult to navigate the site was (navigation=finding your way in the web site) on a scale from 1 (very difficult) to 5 (very easy):**

- 1
- 2
- 3
- 4
- 5

**Please rate the mechanism of feedback (interactivity) of this site:**

- 1 (not at all satisfactory-very difficult to ask questions and obtain extra information)*
- 2
- 3
- 4
- 5 (very satisfactory-very easy to ask questions and obtain extra information)*

**Based on the answers to all of the above questions, rate the overall quality of the site as a source of information about mental health:**

- 1 (very bad)*
- 2*
- 3*
- 4*
- 5 (very good)*

**What is more important for you when seeking a medical information on the internet? (you can click more than one options)**

- Quick information*
- Anonymity*
- Ability to find information from various sources*
- Currency of the information*
- Objectivity*
- Understandability*
- Detailed information*
- Ability to ask an expert*

**How old are you?**

- Less than 16*
- 16-20*
- 21-25*
- 26-30*
- 31-40*
- More than 41*

**Which country do you come from?**

**Are you currently employed?**

- Yes, full time.*
- Yes, part time.*
- No, I am unemployed.*
- No, I am on pension.*
- No, I am disabled to work.*
- I am economically inactive (student, housewife).*

**How often do you visit web4health?**

- Only once*
- It is the second time*
- Few times*
- Quite often*
- Almost daily*