



Samfunnsforskning AS

TECHNICAL NOTE 97.02

Database Definition and Concept

Prepared by/Préparé par	Tore Hauan
Reference/Référence	Silje Aase Wolff
Issue/Edition	1
Revision/Révision	
Date of issue/Date d'édition	30. September 2010

Database Definition and Concept TECHNICAL NOTE 97.02 – I1

APPROVAL

Title <i>Titre</i>	Database Definition and concept	Issue <i>Édition</i>	1	Revision <i>Révision</i>	
-----------------------	---------------------------------	-------------------------	---	-----------------------------	--

Authors <i>Auteurs</i>	Tore Hauan <i>Tore Hauan</i> Gjert Aanes <i>Gjert Aanes</i>	Date <i>Date</i>	30 September 2010
---------------------------	--	---------------------	-------------------

Approved by <i>Approuvé par</i>	Silje A. Wolff <i>Silje AW</i>	Date <i>Date</i>	30 September 2010
------------------------------------	--------------------------------	---------------------	-------------------

CHANGE LOG

Issue/ <i>Édition</i>	Revision/ <i>Révision</i>	Status/ <i>Statut</i>	Date/ <i>Date</i>

Distribution List

Name/ <i>Nom</i>	Company/ <i>Société</i>	Quantity/ <i>Quantité</i>

MELiSSA



Database Definition and Concept TECHNICAL NOTE
97.02 – I1

Table of Contents

1. INTRODUCTION.....	4
2. DATABASE DEFINITION.....	4
3. USERS.....	5
4. ENTRIES.....	5
5. INTERFACE.....	6
5.1. LOGIN SCREEN	6
5.2. MAIN WINDOW	7

1. Introduction

This technical note outlines the fulfilment of Work Package 104 of the LiRHiPliSMe project. It will describe the development of a database used to structure and maintain the documents and articles development and gathered for the MELiSSA project at CIRiS. The database will be a tool for storing, retrieving and sharing documents both within the CIRiS working group and with external partners.

2. Database definition

2.1. Software

The database will use Oracle’s MySQL Database version 5.1 as a foundation, and its interface will be a public web server with encryption (https).

Figure 1 shows the details for implementing the database, showing tables and relations.

The web server will be Apache Tomcat version 6, using JAVA Server Pages (JSP) for data processing and presentation. The operating system for the server will be Ubuntu Linux, currently version 10.4. Login with username and encrypted password will be required. It is not foreseen to use a firewall to restrict access based on IP addresses.

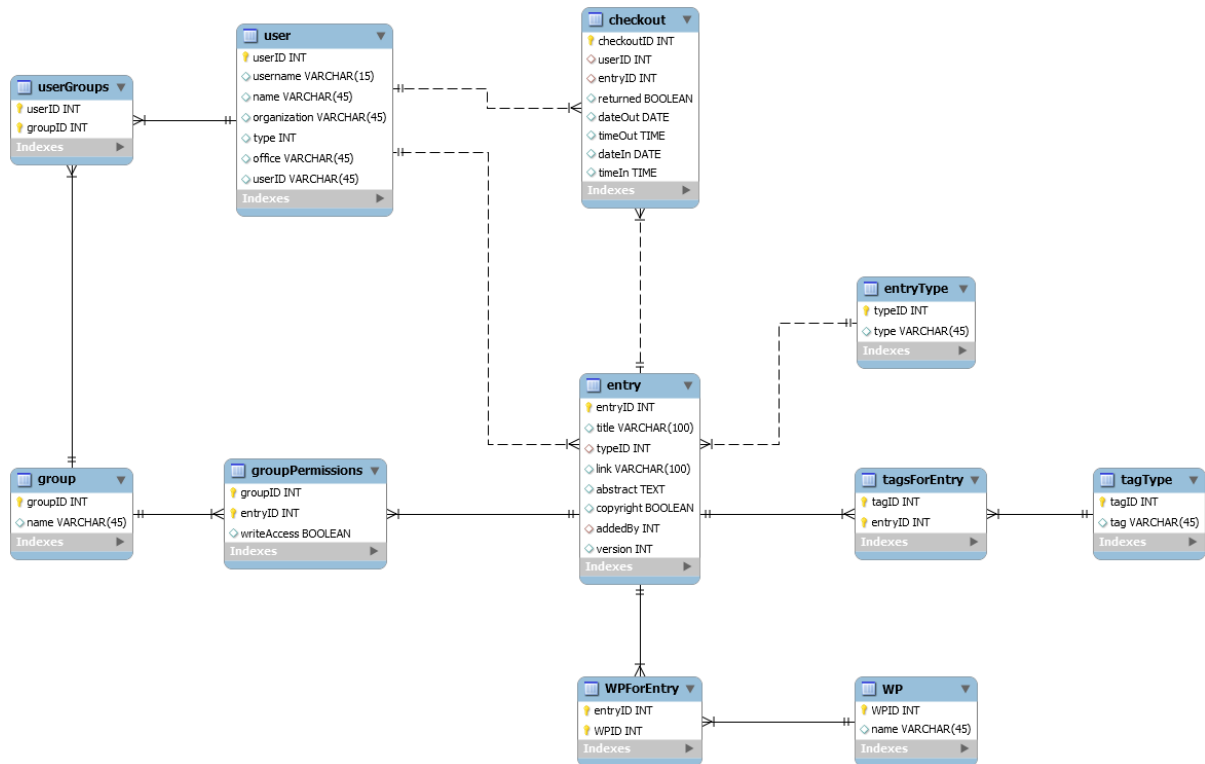


Figure 1: UML Diagram showing the tables and relations of the MySQL Database

Hardware

Server requirements: The database at CIRiS will have 15-20 users so there is no large demand on the hardware. As a start any commercial desktop computer will provide enough processing power and storage. The current test setup resides on a Virtual Machine running on a powerful laptop.

Network requirements: The network at CIRiS is part of the local University LAN which is connected to the Norwegian internet backbone, giving ideal bandwidth for effective document sharing also out-of-house.

3. Users

As mentioned in the previous section the users log in with their unique username and password. This gives the possibility to organize different users into groups which may have different access and privileges to the database. Some users may only be given access to view documents, others to edit existing and add new documents to the database. A group of administrators will have all rights related to administering the entire database. It is the intention that all users have access to creating new user groups to apply to their entries.

4. Entries

The documents uploaded to the database will be stored and referred to in entries. Entries can be of different types, e.g. web addresses (URLs) or files. They will have several tags, created and applied by users, making it possible to search for specific topics. “Work Package” is one example of such a tag, and “2-D clinostat” another. Adding an abstract or description of the entry as well as a link to the actual document is foreseen.

A library function will also be implemented. This will ensure that multiple user will not be able to work on the same document. One user checks out the document he/she will edit and after performing the revision the document is returned. The document will then get an updated version number and be made available for checking out by another user.

5. Interface

This section presents some screenshots of the layout of the web interface connecting the end user to the database.

5.1. Login screen

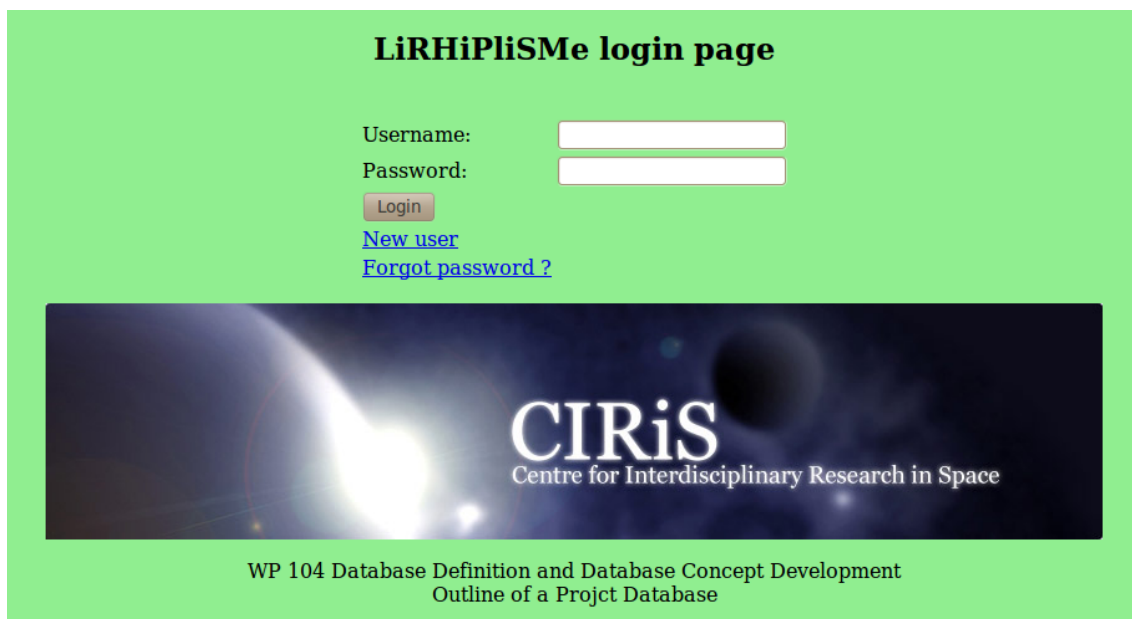


Figure 2: Welcome and login page

Figure 2 shows the welcome page to the LiRHiPliSMe database. As indicated in section 3 the users log in with a unique username and password, giving them specific access and privileges.

5.2. Main window

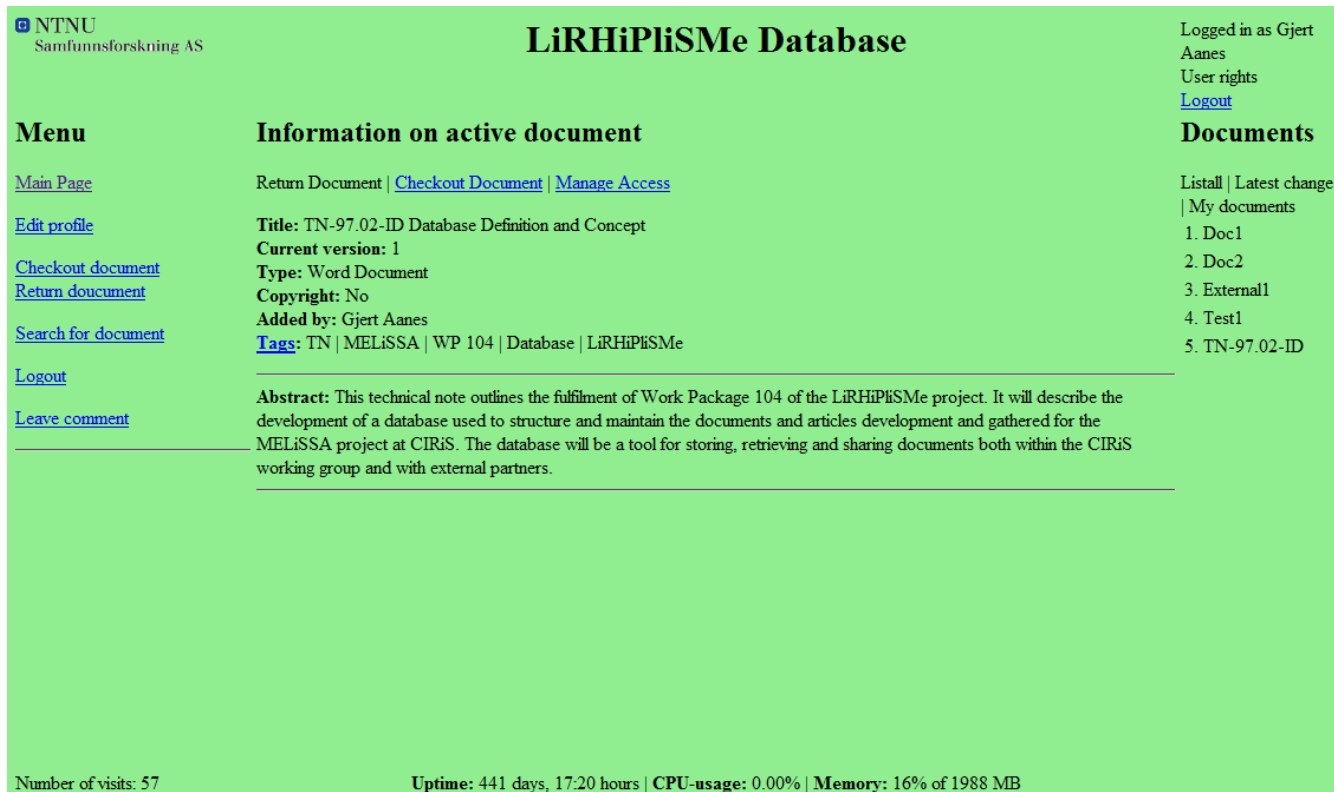


Figure 3: Main user interface

After logging in the user will be directed to the main interface, see Figure 3.

Information on active document

In the largest area in the centre the user will be presented information on a specific document of his/her selection. This information will consist of the document's title, type (e.g. document or URL), a copyright if any, which user added the document and current version. In addition to these attributes a short abstract describing the entry is also shown. From here the user will be able to read or check-out the document, add/remove access groups and add/remove tags.

Menu

On the left hand side a menu will be shown. Apart from an edit profile and logout functionality, the user can checkout or return a specific document similar to what people do in a library. The user can also select another document, whose properties will be shown in the information section in the centre of the screen. It will also be possible to leave a comment or send an email to system administrators to provide feedback.

Document list

Below the user details in the top right corner, a list of documents is displayed. The list can either display all documents, documents with latest changes or the user's personal list of documents.

Server information

On the bottom line, administrator relevant information about number of visits, uptime, CPU-load, and memory usage on the server is shown.