

# Republic of Croatia Ministry of Science and Technology

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### **SVIBOR**

web application for collecting reports about the progress of scientific research projects

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#### Introduction

- The Ministry of Science and Technology (MZT) funds programs contracted with public institutes and scientific research projects contracted with higher education institutions and other legal entities. MZT monitors results annually.
- Principal researchers and heads of topics were required to submit a final report for the period 1996-2000 to MZT.
- ► There were 1201 projects and topics.
- > SVIBOR the system for collecting reports on progress of scientific research projects was introduced in order to secure easier collecting and processing of reports as well as their uniformity.



## **Development**

- The system for collecting reports has been developed since mid 90s by MZT (Directorate for Information Technology) and mikroProm. It included several stages:
  - distribution of Clipper program on floppy-disks
  - making the Clipper program available on the web server of MZT
  - Word forms
  - web SVIBOR (html forms + cgi)
  - Svibor2k (ASP)



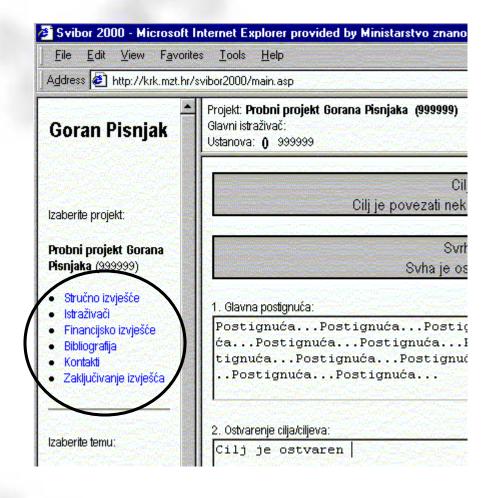
#### **Access Authorization**

- Each principal researcher received a written request to fill out a final report along with data on his/her user name, initial password and a series of TANs to be used for authorization related to conclusion of the report.
- User name and password are used for identification with the system and entry into the protected information space. Subsequently a researcher may access a final report form for his/her project/topic.
- Initially some data were filled out using the existing database of scientific research projects/topics, based on proposals for projects/topics.
- It was made possible to update data and enter data that had not been entered at the time submitting proposals for projects/topics.



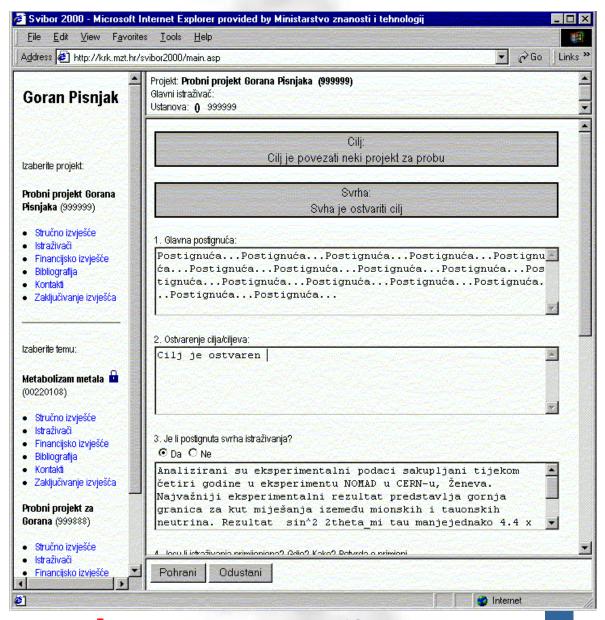
#### **Contents**

- A final report on progress of scientific research project/topic includes as follows:
  - report on progress of project/topic
  - research team
  - financial report
  - scholarly bibliography
  - contacts
  - concluding a report



## **Progress Report**

- Project/topic includes several items-questions with unlimited space for explanation, in some cases it is possible to answer by choosing YES/NO.
- First two boxes GOALS and PURPOSE are filled out according to the information in the project/topic and cannot be modified.
- A SAVE button saves all data entered in this part of the report. It is possible to cancel saving this data by a CANCEL button.

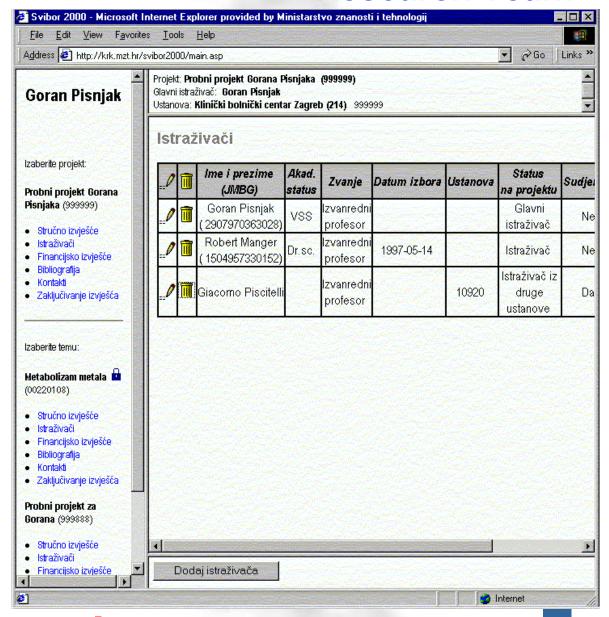




- All members of a research team were entered into a table in advance, according to the data of the Ministry. In some cases a research team does not include all researchers that have been engaged or are currently engaged at a project. Therefore it is possible to add a new member of the research team by the ADD button.
- It is possible to modify data on registered researchers using a PENCIL button next to a researcher's name.

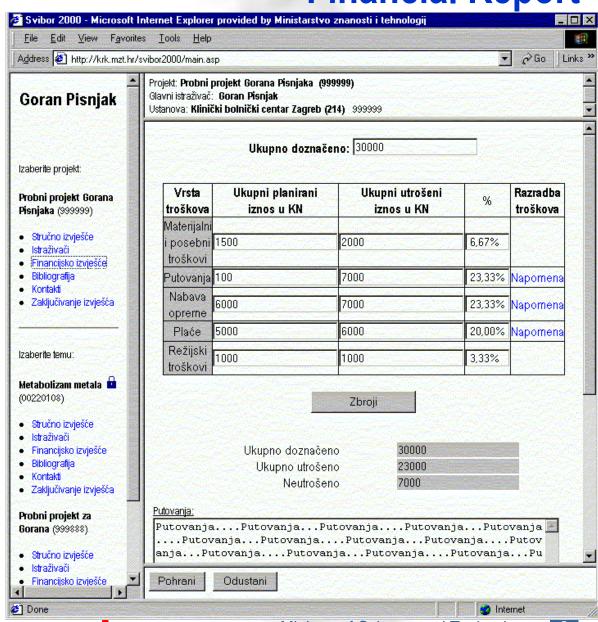
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#### **Research Team**



**Financial Report** 

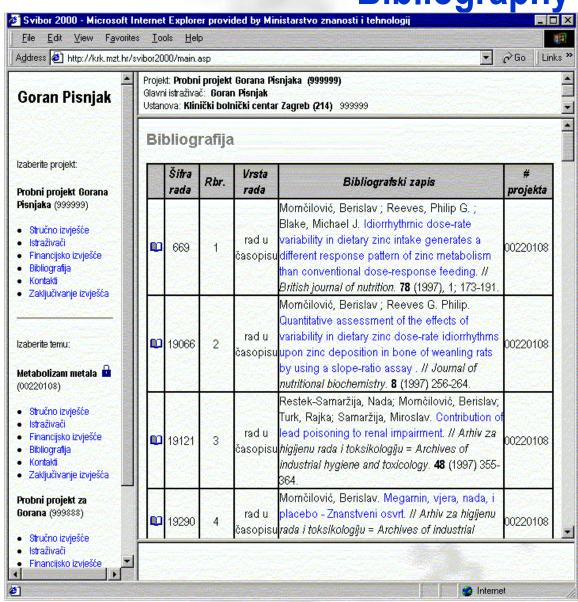
- In the financial report it is necessary to fill out a table of approved and used funds for a scientific research project or topic.
- Some types of expenses (travel, equipment, salaries) may be elaborated in a box explaining a specific use of the amount.
- Used funds and percentages must be added by the ADD button.





**Bibliography** 

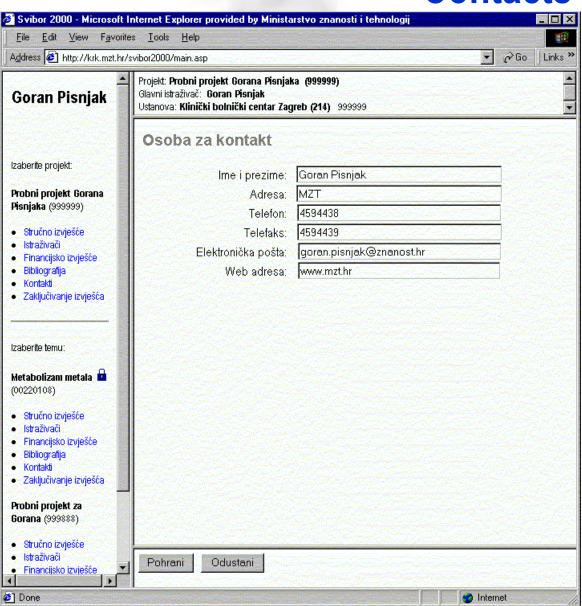
- This part of the report is used for assigning scholarly bibliography to the project.
- Bibliographies, i.e. scholarly articles are entered into the Croatian Database of Scholarly Bibliography (<a href="http://bib.irb.hr">http://bib.irb.hr</a>).





#### **Contacts**

- This part of the final report provides a possibility for entering data on how to establish a contact for further information about the project/topic.
- It is possible to enter data on a contact person (name), address, telephone/fax number, email or web site with further data about the project/topic.

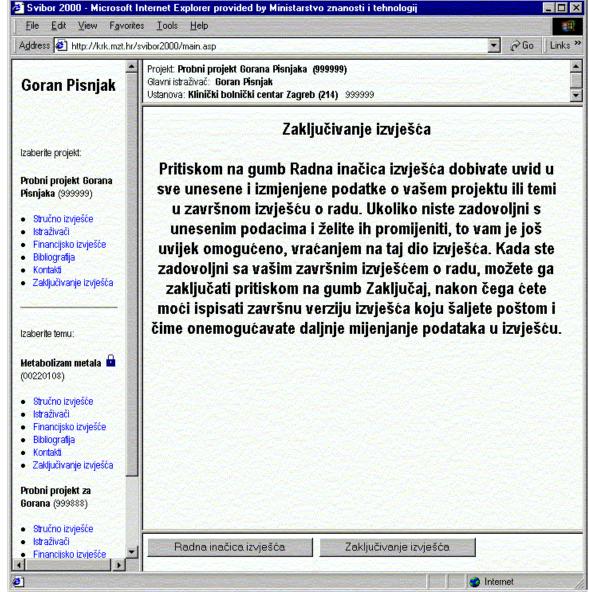




- This part of the report provides an insight into all data that have been entered or modified in the final report on the progress of a project/topic. It may be accessed using a button: TENTATIVE VERSION of the report.
- If a researcher is pleased with entered data the report must be concluded by pressing a LOCK button. At that point the program requests a TAN and gives a possibility of printing a final report that must be signed and mailed to MZT.
- Upon concluding a report, a blue lock appears next to the project title. It means that the report has been locked, that data cannot be modified and that data have been saved in the database.



**Concluding a Report** 



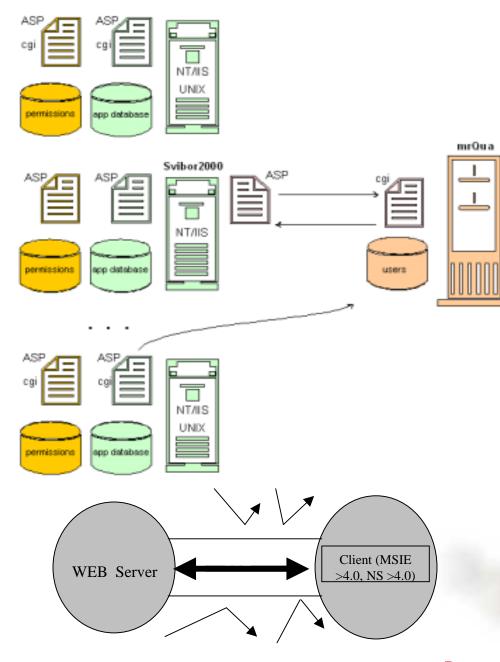
#### **Authentication**

The application forwards user to the authentication server mrQua that carries out authentication and saves on it a encrypted cookie. It is used by the application to identify the user.

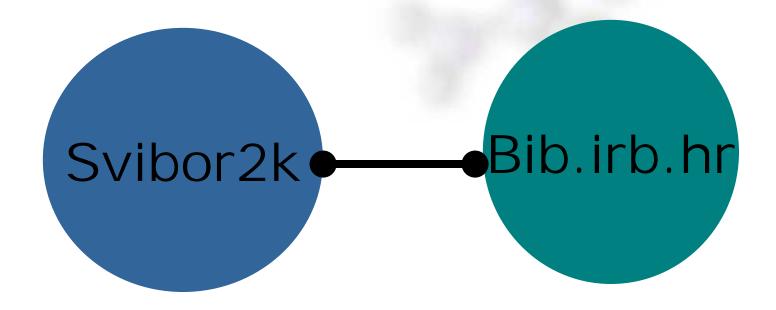
MrQua includes a list of all users of all applications, authorization for each user is stored locally at the respective application.

Entire logic of encrypted cookies corresponds with TANs.

This was the original idea that has been replaced by SSL encryption in a new version the application.



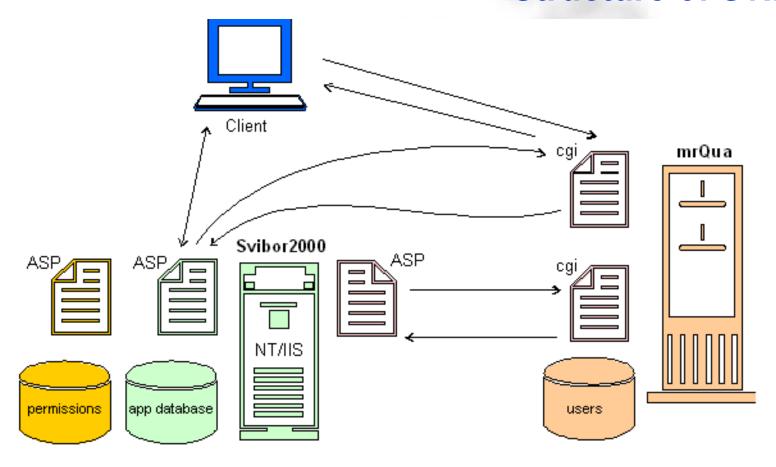
## Communication with Scholarly Bibliography Database



- Scholarly Bibliography Database at Rudjer Boskovic Institute (bib.irb.hr) returns requested bibliographyrelated data via web.
- SVIBOR synchronizes received data with the local database that stores necessary bibliography.



#### **Structure of Svibor2k**



The entire Svibor2k System is composed of one WEB (NT/IIS) Server, one SQL 7.0 server and authentication server mrQua which was foreseen for several various web applications



## Plans for new version of the application

- A concept of authentication server and TANs has been abandoned. The system relies on security of SSL encryption of http traffic.
- Communication with the Scholarly Bibliography Database has been improved.
- Minor errors in application have been detected and corrected.
- The application has been modified according to new needs.
- Guidelines for users have been supplemented using the help desk experience.



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