Library information system NIBIS – ten years in the service of librarians

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ABSTRACT: This year, the library information system NIBIS celebrates its jubilee – ten years of active implementation in librarianship. For the automatisation processes that are being used in the Library, at a time when information technologies are advancing rapidly, a period of ten years is enough time for an objective assessment of the advantages and weaknesses of this system. This paper will briefly present the development of the library information system that is used in the Stevan Sremac Public Library.

KEYWORDS: NIBIS, jubilee, the development

In 2002, Stevan Sremac Public Library has decided to automate all its activities, taking into consideration the fact that, everywhere in the world, librarianship goes beyond the traditional boundaries. However, from concept to implementation, in the circumstances in which the Library at that time was, it was necessary to cross a long and thorny path. The Library did not have a good financial support, hardware equipment was insufficient for starting the process of automation, and the library staff was untrained for a new role that they were supposed to accept. Nevertheless, with a lot of hard work and enthusiasm, the plan of creating the new library information system NIBIS (library information system of Nis) that would be used for creating a bibliographic database, collection, selection, processing, storing, maintaining, searching, distributing, updating and circulation of data that have been entered, was thoroughly adopted in the Library.

In spring 2003, the first phase of automation of the library processes was implemented and presented to the public. The first phase implied formation of the database of the Library members, i.e. automatic registration of new members and updating their personal data. For this purpose, in the Library one computer was used, and that computer was both the workstation and the server computer. In that time, Local Area Network in the Library was not formed yet.

From the very beginning a graphical interface in NIBIS was such that it used descriptive tag names, not numeric, so the meaning of the names of all the tags matched the content of the given tags. In that way librarians, with minimal effort, even though they were trained to work in the library information system, carried out their job quickly and efficiently, in a different manner from what they were previously used to. Library information system NIBIS is optimized in such a way that it is completely irrelevant whether a computer has a Windows or Linux operating system installed on it. Except this, the optimization is performed in accordance with all web browsers, so the user that works in the system NIBIS does not need to perform any additional installations.

In the following years, with the purchasing of new computers, forming a local area network, supplying internet connection, further upgrading of the software, the other phases of system development were realized. Formation of bibliographic databases, which is one of the most challenging and the most extensive operations, started in 2006. In all segments, the electronic catalog was created with special care, because it had to fulfill the most important criterion – functionality. Since the electronic catalog represents the essence of the system and the path from the system users to the required information, it is very important that the data, entered into the system, should present complete and accurate information about each publication. It is made in accordance with the Library standard ISBD and with the instructions for entering data in UNIMARC format.

In order to accomplish the preparation for searching data entered in the electronic catalog, alongside with the creation of the electronic catalog, the next phase began – automated inventory. Automated inventory brought about one of the biggest changes in the library, because a decision was made that each publication, whose bibliographic description is entered into the database, got a new inventory number, so, using all the inventory procedures, the creation of the automated inventory which is periodically printed and stored in the paper form, was started.

The formation of the electronic database for the information about the state of the funds was one of the basic preconditions for the beginning of the next phase of library automation – Search. Search application was also generated in phases. Since the entire automation process was initially performed in an internal, local network, the first phase included the creation of the segment for searching library units by the library staff, within the local area network. At that time, users still used a card catalog. Over time, since there was an emphasis on modernization of library activities, the technical equipment of the Library was getting better, so, with the purchase of new computers, conditions for the implementation of the second phase have been met. The second phase involved the development of the segment for searching Library units by the users, within the local area network. With the creation of a new library website, one additional option was possible – connecting the web server (where the library website is located) with the data server (where the entire database is located), in order for all internet users to be able to search the database from any computer with an internet connection, which made up the third phase of the development of the segment for searching. Thus, since 2010, at any time of the day and outside of the Library, Library users have access to the database. They can be informed whether a publication is available in the fund, or how many units of that publication are free to rent. Within these services, an option for reservation of certain publications by the users was planned in NIBIS, so that the user could be sure that the publication will not be rented until he comes to the Library. Right after booking, in the next 24 hours, that publication would not be available to other users. The Library does not provide this service to its users, yet. The next phase included the software protection of the database, as well as a daily automatic copying of the entire database to another server computer, so the users can have access to the copy of the electronic catalog, via the website. The copy of the electronic catalog is located on the server computer that hosts the library website. The decision to access the copies, not the original data, dates from the time when, because of the unenviable financial situation, server computers of modest technical capabilities have been used in the Library, so there was often a delay in entering the data into the database by the library staff at the time of numerous visits by Internet users. In addition, internet users have full access to all data even when it is performing any type of work on the server computer which hosts the original data (system improvement, debugging and other situations that require expulsion of the server computer from the network).

Besides these activities, NIBIS has the following options: automated borrowing and returning of publications, automatic generation of „Bulletin of newly acquired books" in .pdf format, writing off damaged and no-topical library materials, data exchanging with other systems, printing catalog cards, administration of supporting jobs

(scheduling of library staff, determining the rights and privileges of the employees for library operations that can be performed in the system, etc.)., about forty various queries related to the statistical analysis, revision of the library fund and others.

At this moment, even though NIBIS uses a MySQL database and applications based on the Java programming language, NIBIS is not performing data exchange with other systems, although the technical possibilities for this activity exist. NIBIS took over a huge amount of bibliographic descriptions from the database of the City Library in Novi Sad, which uses the library information system BISIS, and that was a proof of full applicability of data exchange with other systems that have been developed on the same platform. Whether or not shared cataloging system between NIBIS and other library information systems is accomplished, is a matter of policy, not a matter of technical ability.

Since 2012 NIBIS supports another significant area – digitization of library materials. Still in its manner, with a very simple graphical interface and descriptive tag names, it successfully began the presentation of digital copies. Software upgrade has been done in library information systems NIBIS. The special application, that allows the presentation of digitized library materials to internet users, was created. Publications, which should be digitized, primarily must be processed in NIBIS. Then, newly created software segment enables easy connection of a digital copy, stored on a separate server computer, with the catalog description which is previously entered into the system. Completed digital copies are searchable to the internet users from the same place on the web page and by the same criteria which are used for searching the database. This is because the digital copies, which are located on a separate server computer, are software related with the catalog description in the bibliographic database, so the search is simplified to the maximum. This kind of solution has brought joy not only to librarians who can easily do the job of digitizing library materials, but also to users who are supplied with the required publications quickly, from one place and without additional skills.

Since 2002, Stevan Sremac Public Library has automated all of its work over NIBIS. At the beginning the work was carried out with great patience, considering the fact that this is the Library in which the software is tested. The software has been suffering from its "childhood illnesses", the elimination of defects, software errors, a wide variety of problems had to be done. The imperfections were encountered randomly, during the work, but the errors were eliminated as quickly as possible. Over time, the system became more sophisticated, it had a considerable number of upgrades, so, today, it represents a modern library information system that enables the automation of all library activities in a simple way for library staff and users of the system.

Naturally, like all the other systems, NIBIS has its shortcomings. There are some features that are not frequently used, and which need to be improved. The authors of the software, in collaboration with librarians, are working to correct such parts in a timely manner, in order for all the segments of the system to function properly.

Stevan Sremac Public Library is the first institution that has automated its library jobs via NIBIS. However, for carrying out the library business this system is used by: The Library of the Hilandar Monastery, Library of the Museum of Nikola Tesla, Museum of Genocide Victims, Institute for Nature Protection of Serbia, Library of the Faculty of Information Technology, Natural History Museum in Belgrade, Library of the National Museum in Cacak, Faculty of Teacher Education Vranje, Mechanical School ZIS Niš, Faculty of Management – Zajecar, Primary school "Ratko Vukicevic" – Nis, Belgrade Pedagogical Museum, the Museum of Science and Technology, Belgrade, Museum of African Art, Belgrade.

Library information system NIBIS is being developed by the Innovation Center of Information Technology at the Faculty of Mechanical Engineering, Nis.