Using of the Modern Information Technologies in Libraries: Problems and Solutions

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Annotations. The article is devoted to the analysis of important changes that are taking place in the field of creating and using of automation tools for information and library technologies and information resource management. Some practical solutions are shown on the example of the "MegaPro" Integrated Library System.

Keywords: Information Resources, Library, Information Technology, Automation, Automated Integrated Library System (ALIS), Electronic Library, Electronic Library System (ELS).

For a long time, the needs of most libraries did not go beyond the "classical" automation of technological processes. Moreover, some libraries are still at the initial stages of automation, and some libraries sincerely believe that they do not need anything more from automation.

Meanwhile, life dictates new requirements both for internal library technologies and management processes, and for library services provided to users (readers).

First of all, there are processes of complicating the traditional functionality of libraries, increasing the burden on employees. In particular, this is due to the emergence of new requirements, standards, administrative and accounting documents, as well as ongoing processes of "optimization" of libraries, which often mean a reduction in the number of employees while maintaining or increasing the volume of work performed.

The processes of library reform also include their consolidation and/or division, changes in the functionality and geographical location of departments and services. Accordingly, a new level of scalability, mobility, and remote work capabilities are needed.

Among the new tasks is also the effective management of electronic information resources, ensuring access to them and their protection. In the development of this topic – the construction of electronic libraries and electronic library systems (if we are talking about universities).

The requirements for library information services from users have increased qualitatively. The new users of libraries are the generation that grew up in the era of the Internet, smartphones and social networks.

For the younger generation, the library does not start from its threshold and not from the reading room. For young people, the library is, first of all, its website and the opportunities for finding resources implemented there. And if such a user sees a search engine in the "spirit" of the 1990s or early 2000s on the library's Internet page, or if convenient operation on his smartphone is not provided, he will simply close this page and never return there again. He has alternative ways of obtaining information, and only in the best case he can turn to the website of another library.

The effective solution of most of these (and many other) new tasks within the framework of the evolutionary development of mass library systems of previous generations is no longer possible.

It is necessary to switch to a new generation of library systems based on modern architectural solutions, development tools and with qualitatively new capabilities.

New generation systems should provide:
- Transformation of the concept of "Workplace" (AWP) into the concept of "Entry point";
- Expansion of functionality for automation, resource management, access to them and their protection;
- Implementation of integration solutions with other information systems;

-Transformation of the concept of "Workplace" into the concept of "Entry point" is to provide access to the functions and services of the library system from anywhere on the Internet.

This means a transition from a two-tier information system architecture, when library system components are installed and configured on the user's computer, and data is partially

stored, to a three-tier architecture, when all system components and its resources are located on the server, and a standard web browser (a "thin" client) becomes a tool for the user's work.

The results of the transition to such an architecture are:
- Easy scalability and extensibility, no "binding" to a specific user computer;
- High reliability, accident resistance;
- Achieving a high level of security;
- Low requirements for performance and technical
characteristics of user devices;
- New system administration and maintenance capabilities.

The transition to a multi-link architecture also opens up a completely new possibility of using the library system - as a "cloud" service provided via the Internet.

At the same time, the presence of "cloud" capabilities does not reduce the value of the functional qualities of these systems. In our opinion, a new generation system should not only provide traditional functionality implemented in library systems of previous generations, but also powerful functionality for managing electronic resources (ER) and protecting them.

In addition, a modern efficient environment should be provided for users to work with electronic catalogs and authorized access to electronic information resources.

But the growth of functionality generates an increase in the complexity of the system and its cost, increases the risk of reducing its reliability. Also, some functionalities that are important for one part of the libraries may not be required by other libraries. How to resolve these contradictions?

The way out of this situation is to ensure broad integration of the library system with other information systems, both external and at the organizational level.

At the same time, if integration solutions can be "connected" to the library system or "disconnected" from it as necessary and reasonable, then it is possible to achieve the optimal configuration of the system based on the needs of a particular library and its financial capabilities.

For the convenience of entering search queries in various languages, a virtual keyboard is used that supports more than 50 languages. The search results are displayed on the screen as a list of descriptions with "covers", an indication of the search term, the ability to obtain brief and detailed information about the publication, as well as controls.

Search options are also implemented without entering search queries - these are transitions to the so-called "clickable" link fields, which can be the author, keywords or other elements configured by the library itself. There are also transitions to related fields (for

DB in RUSMARC).

Since today a large number of users of information systems use smartphones and tablet PCs to work with them, we have created a special mobile version of the Digital Library module, adapted to the screen sizes of mobile devices.

In order to provide users of a "single window" with access to the library's own resources and external sources of information content, AIBS "MegaPro" implements various mechanisms for integral search and access to resources.

In addition, AIBS implements mechanisms for interaction with the most important federal, regional and industry information systems. Examples of practical solutions implemented in MegaPro AILS show that new generation AILS is not a "repetition of the past" implemented on other platforms and principles. A new generation AILS is a significant step forward, an opportunity for libraries to solve new problems and respond to current challenges, provide users with new information services, and increase the efficiency and convenience of their daily work.

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