

BULGARIAN LIBRARIES AS A PART OF LIBRARY INFORMATION SYSTEM NETWORK COBISS.NET

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Abstract

Library information systems represent a very important infrastructure for the modern knowledge-based information society. They are essential for the modern education system and research as well as for cultural, technological and economic development. Libraries have to keep pace with knowledge and culture, and they must provide conditions required for dialogue and cooperation, which represent the most important basis for development. Libraries can do this more effectively if they are linked in a uniform library information system.

COBISS (Co-operative Online Bibliographic System and Services) represents an organisational model of joining libraries into a library information system with shared cataloguing, the COBIB shared bibliographic/catalogue database and local databases of participating libraries, the COLIB database on libraries, the CONOR authority database, and a number of other functions. COBISS has been providing e-services supported by modern information and communication technology to libraries and library users since the 1980s.

We would like to present the usability of the COBISS system in Bulgarian libraries and its benefits it brings to Bulgarian libraries for being a part of the library information systems network COBISS.net.

Keywords: *libraries, library network, information access, EU digital agenda, information systems, national library*

1. INTRODUCTION

Library information systems represent a very important infrastructure for the modern knowledge-based information society. They are essential for the modern education system and research as well as for cultural, technological and economic development. Libraries have to keep pace with knowledge and culture, and they must provide conditions required for dialogue and cooperation, which represent the most important basis for development. Libraries can do this more effectively if they are linked in a uniform library information system. The COBISS system is a part of the national library information system, which is one of the foundations for school and research systems as well as cultural, technological, and economic development.

Since the implementation of the COBISS system in the National Library of Bulgaria in 2010, the long-term objective of the Library and of the National COBISS Centre in particular is to include new academic, special or public libraries to the COBISS.BG system and consequently to the COBISS.net network. Although only 2 libraries in Bulgaria (National Library and the Library of National Centre for Information and Documentation) are a part of the COBISS.net family and are using COBISS software for the automation of their operations so far, the National COBISS Centre permanently organizes presentations of the COBISS software for many public, university and community libraries. Unfortunately, the efforts of the National COBISS Centre to achieve its goal for including new libraries were not successful, mostly due to lack of expected financial resources.



Fig. 1. National COBISS Centre in Bulgaria

2. MATERIALS AND METHODS

A number of various resources of user feedback and information gathered from websites were used. Quantitative and qualitative analyses were performed concerning the quality of bibliographic records, comments from users of the mobile app and web services, user requests and commendations as well as their satisfaction with the provision of reference help. Additionally, the analysis regarding the compliance of the COBISS system services with the latest guidelines of the EU directives was also performed.

3. ABOUT THE COBISS SYSTEM

COBISS represents an organisational model of joining libraries into a library information system with shared cataloguing, the COBIB shared bibliographic/catalogue database and local databases of participating libraries, the COLIB database on libraries, the CONOR authority database, and with a number of other functions. (COBISS Platform, 2021)

Functioning of the system is preconditioned by the following professional outlines and technological assumptions:

- standardised and shared cataloguing of library materials as well as a uniform management of catalogues and bibliographies,
- adequately skilled cataloguers,
- linking of libraries via computer and communications network.

Each national library information system built on the COBISS platform is co-created by the national COBISS centre and the libraries as members of the system.

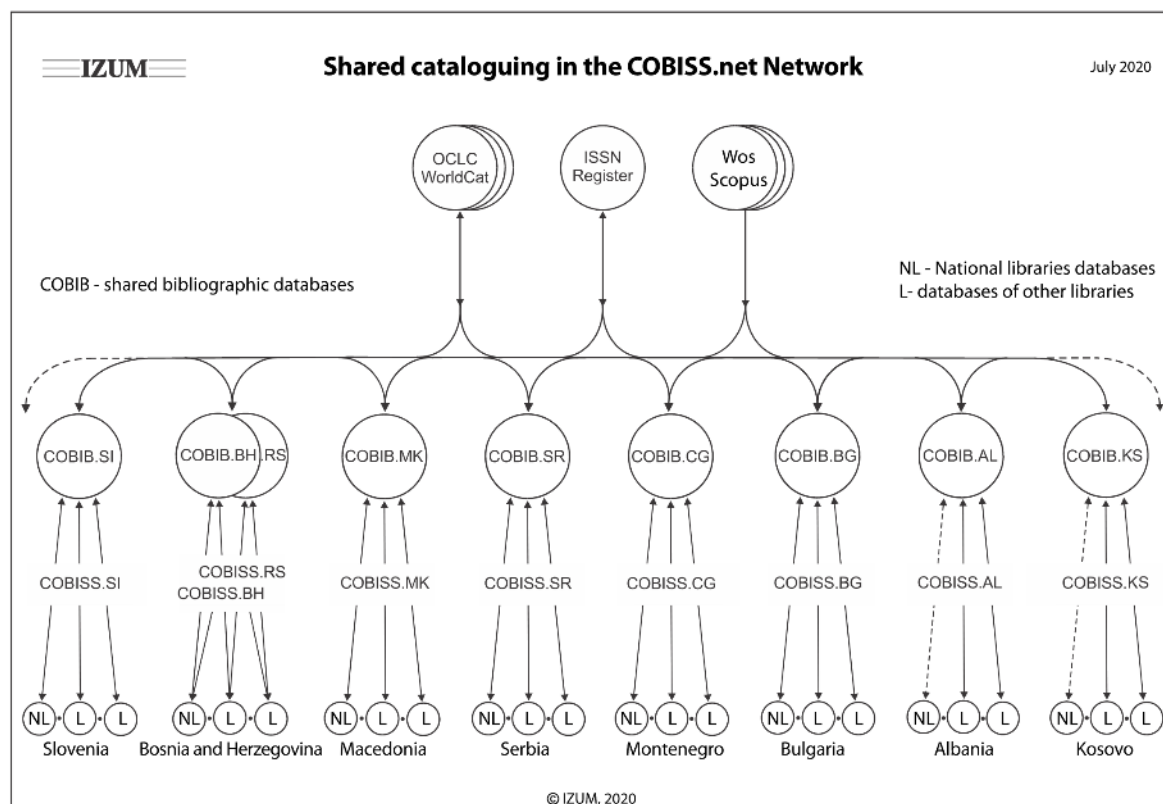


Fig. 2. Scheme of autonomous library information systems on the COBISS platform with shared cataloguing in the COBISS.net network

The **National COBISS Centre (NCC)** is a library information service that carries out the following tasks:

- planning and co-ordinating activities related to linking of libraries in the COBISS system;
- providing computer capacity for the operation of the system and the central services;
- providing COBISS software and manuals for shared cataloguing; local library functions and other services;
- managing the COBIB shared bibliographic database;
- organising training and professional help to libraries and other users of COBISS software and services;
- verification of suitability of library staff qualification for shared cataloguing purposes;
- professional help to libraries with the conversion and transferring of data from other systems.

In Bulgaria, the tasks of the National COBISS Centre are carried out by the National Library.

Since the implementation of the COBISS system in Bulgaria, the training activities for librarians have been quite successful. Based on the efforts of the National COBISS Centre to verify the suitability of library staff qualification for the purposes of shared cataloguing more than 80 librarians (75 from the NBKM and 5 from the Library of NACID) were trained so far. Two courses from the regular COBISS training programme (*Use of COBISS3/Cataloguing – Beginners* course and *Use of COBISS3/Cataloguing – Advanced* course) were held in 2019 and attended by 24 librarians, 10 of which obtained privileges for shared cataloguing.



Fig. 3. Conducting the *Use of COBISS3/Cataloguing – Advanced course*

Within the library information system based on the COBISS platform, the **participating libraries** may have a status of:

- the national member, which is assigned to the national library that actively participates in the shared cataloguing and performs special tasks (cataloguing national publishing output, provision of training for librarians, proficiency verification of record creators (cataloguers), cataloguing quality control, etc.);
- a full member, which is assigned to any library that participates in shared cataloguing and may contribute their records into the shared bibliographic database if the cataloguers have appropriate permits/privileges for shared cataloguing. Without the appropriate permits, cataloguers are not allowed to contribute records into the shared database; they can only download records from the shared database to their local databases.

COBISS has been providing e-services supported with modern information and communication technology to libraries and library users since the 1980s. This has resulted in an increased provision of e-services to library users in Cobiss.net countries and in the increase of their reach, considering and responding to the challenges of the modern society, such as diversity, integration, fairness and adaptability for various user groups and profiles. (COBISS Platform, 2021)

In 2020, Bulgarian libraries created 24,706 bibliographic records (of books and for the purposes of bibliographies) in the COBIB.BG shared bibliographic/catalogue database that now contains 1,092,177 records, which are a part of the 45-million records in COBISS.net. (Kazalci rasti, 2021)

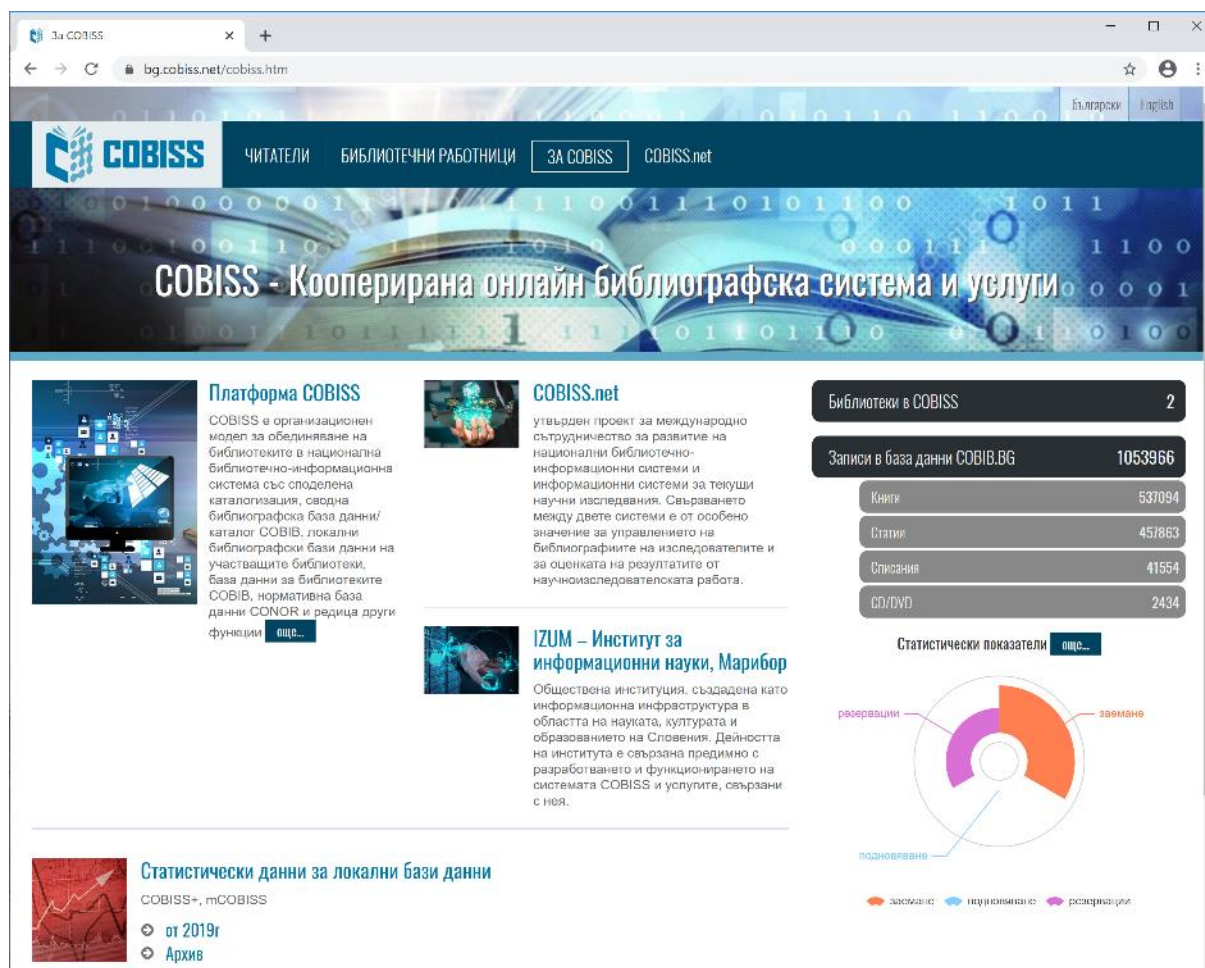


Fig. 4. Web site of COBISS in Bulgaria

These records on books, articles, journals, graphic material, CDs, films and other material types are available to public and searchable with the COBISS software. The COBISS end users are primarily library members, researchers, librarians and others. (Kazalci rasti, 2021) Thus, the range of users, for whom the software is intended, is very wide. The method of use also varies considerably. COBISS must fulfil the needs of different user profiles, from a primary school student, who is only renewing a loan for books they need for their school project, to a researcher, who is using logical operators in advanced search to find scientific articles. The software is intended for everyone, who is looking for relevant information or material available in libraries, and this also includes electronic material.

Despite dealing with very different user profiles, all users expect the software to fulfil their needs or help them achieve a goal. This is where the role of designers and developers comes into play. Their task is to create a product that will guarantee the best user experience to the widest range of users and in the most uniform and efficient way. In order to achieve this, we are designing the COBISS software in accordance with:

1. The guidelines of the financier and the EU agenda
2. Technological and social development
3. User opinions and requests

IZUM has been contributing significantly to the fulfilment of strategic goals and programme priorities of UNESCO in the fields of library automation and the concept of information systems for monitoring research results in the region. This is why in 2011 UNESCO granted IZUM the status of a regional

category 2 centre for library information systems and current research information systems. In this role, IZUM takes care of:

- co-ordination of the development and operation of the shared bibliographic system and services;
- co-ordination of the development and application of standards for computer support to meet the requirements of the shared bibliographic system and services;
- software development and maintenance to meet the requirements of the shared bibliographic system and services;
- determination of the suitability of library staff for shared cataloguing purposes, in co-operation with the National Libraries of the countries participating in COBISS.net;
- planning and maintenance of the central computer and communications capacity to enable the functioning of the system;
- management of the offer of databases on electronic data carriers, with direct access by agreement with their producers;
- organisation of professional training and counselling in the fields covered by the shared bibliographic system;
- coordination of the information system for monitoring research activities in the different COBISS.net countries;
- participation in public programmes for the development of COBISS.net as a means for developing knowledge societies in the region;
- engineering for the development and maintenance of a computer and communications infrastructure in educational, research and cultural organisations;
- research, development and counselling in its field of work.

4. SHARED CATALOGUING AND RESPONSIBILITY FOR THE QUALITY OF BIBLIOGRAPHIC RECORDS

Shared cataloguing enables a rational division of labour and saves time and effort in the demanding procedure that is processing library material and maintaining catalogues. Once a bibliographic record is processed, it is available to all other participants in the system and the COBISS.net network through the COBIB shared bibliographic/catalogue database.

The databases store bibliographic records for different types of material (monographs, serials, integrating resources, articles and other component parts), for the purposes of managing personal bibliographies of authors and researchers, and also for performed works.

The shared cataloguing system is conceived in such a way that each bibliographic resource is catalogued only once; once catalogued, the record for this resource becomes available to all COBISS.net network members. Consequently, the quality of bibliographic records in the COBISS system is of utmost importance. Records represent the basis of the bibliographic/catalogue databases and, thus, of the COBISS system. The quality of bibliographic records has an impact on the services available to people searching for information and to library visitors. In addition to this, records represent the basis for personal bibliographies and bibliographies of research groups, and for the calculation of the lending remuneration. Exchange of records with foreign providers and databases such as WorldCat and UNESCO is also worth mentioning. Assuring the quality of bibliographic records is thus of vital importance for the quality level of the system as a whole.

One of the main goals of the National Library in Bulgaria is the creation of bibliographic information about the incoming library resources and its timely provision for use by the users. Therefore, the librarians (cataloguers) who create bibliographic records have a big responsibility and are well trained.

Cataloguers who wish to participate in the shared cataloguing process and create bibliographic records for the purposes of a shared database must pass the examination for the Shared Cataloguing permit.

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001 aп - нов запис ba - текстови материали, печатни cm - монография d0 - без йерархична връзка 7ca - кирилица - неопределена
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lba - латиница
1011 aspa - испански abul - български
102 aesp - Испания
105 fg - поезия
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Fig. 4. Example of a catalogued bibliographic record in the COBISS.BG system

Under the management of the COBISS Centre collaborators and with the help of experts from the National Library, more than **60** records in the field of Slavic, Greek and other foreign language **manuscripts** were created in the local database and are visible in the Union bibliographic catalogue of the National Library of Bulgaria.

5. ACCESS TO INFORMATION IN LIBRARIES

Libraries are treasure troves of knowledge holding millions of items. Searching for library material has been computer-aided for several decades, and development in this field in recent years has been especially rapid. New technologies are emerging, new options are presenting themselves, and – most of all – the habits and demands of users, searchers of information, are changing. The experience of many internet users today is shaped by internet giants and social media. That is why the usability of software, which enables access to information in library catalogues and other databases, is a vital factor in guaranteeing a user experience that the users of modern internet solutions are expecting.

At the end of 2017, the modern COBISS+ application replaced COBISS/OPAC, the online application that served its users more than two decades.

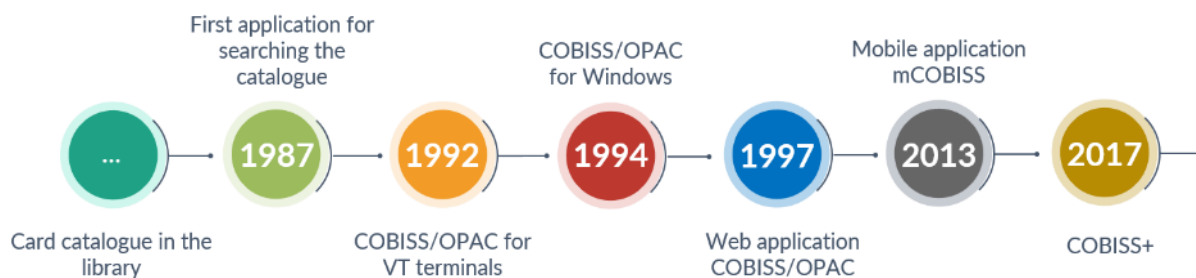


Fig. 6. Accessing information in libraries in the last 30 years.

Today, COBISS+ enables libraries and end users to access information in over 1383 libraries in Cobiss.net network. The COBISS+ software was developed from scratch, and along with all of the functionalities of its predecessor, it offers users a range of new features.

COBISS+ is a web application that enables libraries and end users to access:

- bibliographic/catalogue databases in the COBISS system (COBIB and local databases of libraries),
- other COBISS databases,
- certain specialised databases (of domestic or foreign database providers),
- databases on remote Z39.50 servers.

(COBISS Platform, 2021)

In Bulgaria, COBISS+ application replaced COBISS/OPAC in September 2019. In the National Library, there were 272,419 user searches executed in COBISS+, 344,459 records displayed, and 3,685 reservations made via the My Library services in the previous year.

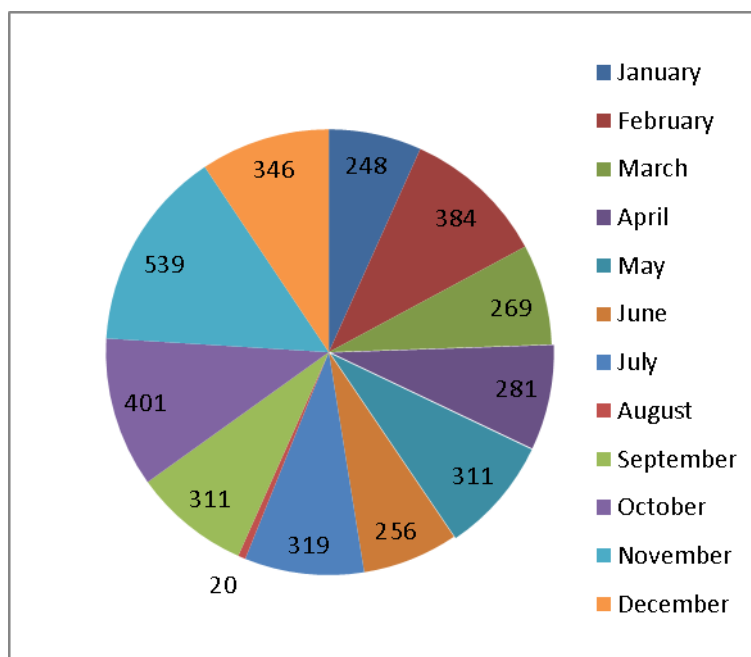


Fig. 7. Monthly statistics of online reservations in 2019

After the implementation of the COBISS/Loan software module and My Library application in 2017, the number of registered members in the National Library increased significantly, mostly because of the number of students and pupils who use the COBISS system.

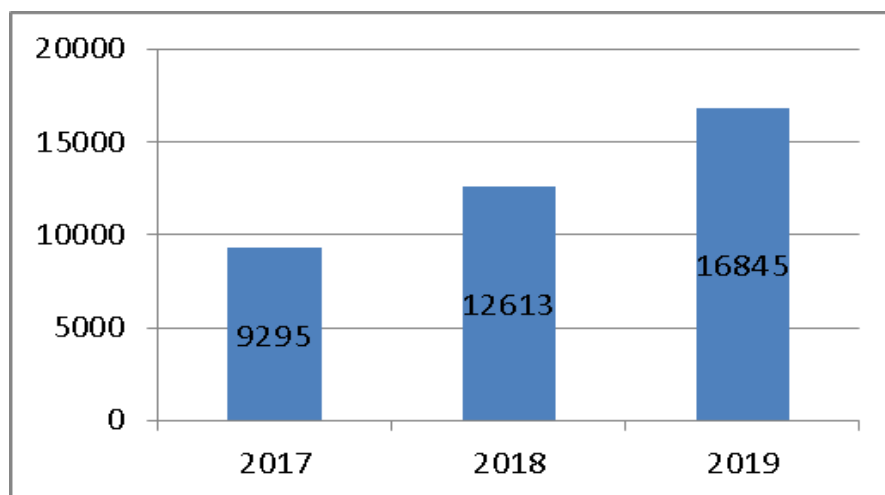


Fig. 8. Annual statistic of the number of registered members in the National Library

The new COBISS+ interface provides new features and functions to its users. It enables searching for and reserving material in the shared catalogue of Bulgarian libraries and catalogues of individual libraries as well as searching in the COBISS.net network. Based on the statistics, the most often used options of the new interface by the members of Bulgarian libraries are:

- the option for support personal interface settings and permanent storage with the My COBISS profile (e.g. saving used search queries and bibliographical records, etc.);
- login options with different login data (e.g. with the login data of your Google+ account);
- option for connecting the My Library services with the services of the My COBISS profile;
- option for searching in multiple libraries at the same time.

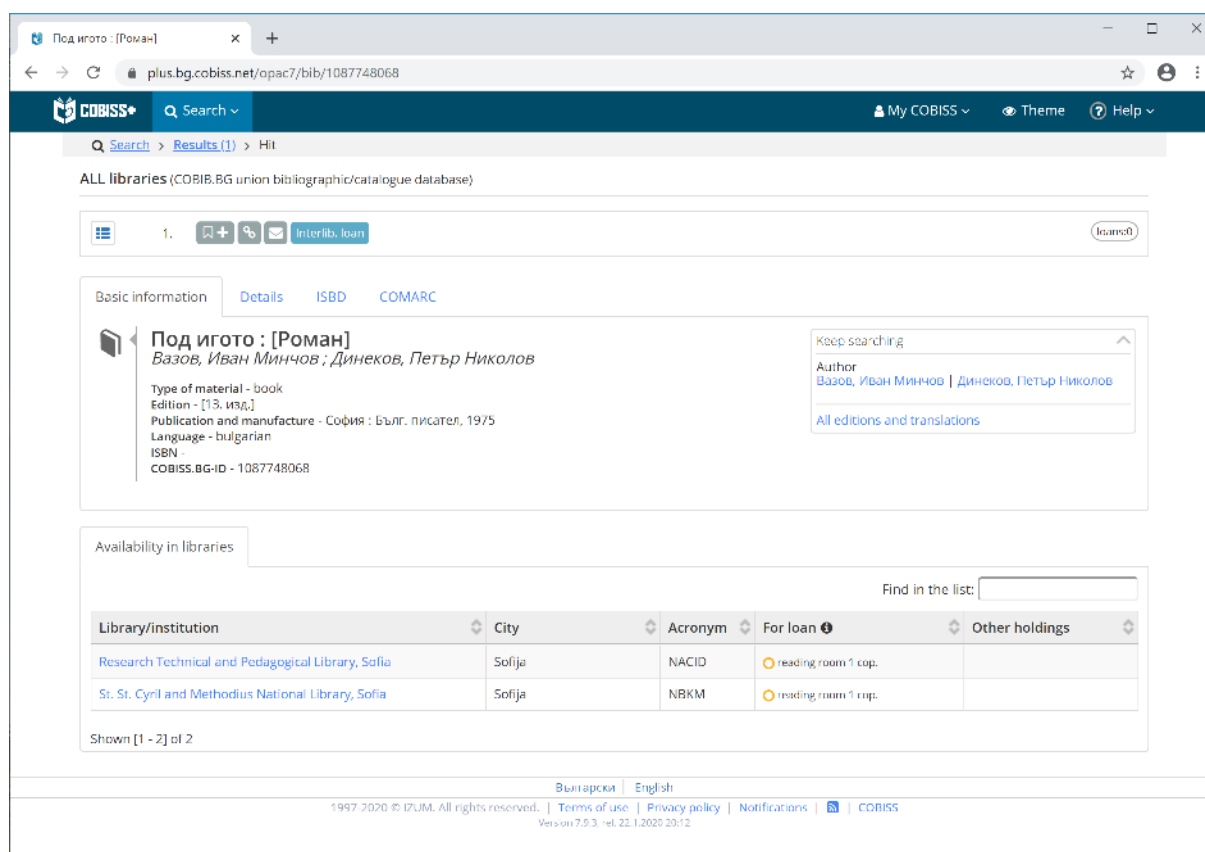


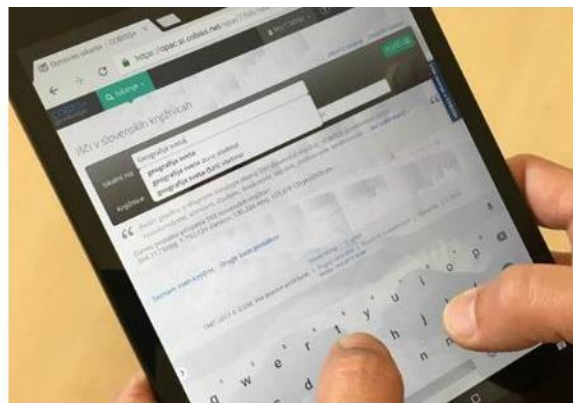
Fig. 9. Searching in multiple libraries at the same time in COBISS+

mCOBISS is the mobile version of COBISS+, which was developed in accordance with modern trends and based on modern technologies. It provides a faster and simpler access to a wide range of COBISS services, improves their availability, efficiency, impact and user experience, and by doing so considerably simplifies the access to the right information at the right time.

The mCOBISS app is an innovative solution that does not only fulfil the existing needs but also encourages and fulfils new needs and eliminates the present-day problems of the digital society. It also increases the range of e-services available to library users in Bulgaria and abroad, and expands their reach to the field of mobile devices.



In the past



Today

Fig. 10. Searching for library material

6. OTHER LOCAL APPLICATIONS

When dealing with the local applications, a great deal of attention has been given to the uniformity of data entry and the display of local data intended for end users. The uniformity has been provided to a great extent by the COMARC/H format for holdings data. Besides, prior to including an individual library in the system, the national COBISS centre and the respective library agree on how to enter local data. The data entry is adapted so as to render an end-user as friendly presentation as possible, and at the same time preserve the uniqueness of the work organisation in any of these libraries.

The **COBISS3/Acquisitions** software module consists of the following procedures for acquiring library materials (monographs) and managing financial resources in funds:

- pre-order selection;
- purchase comprising orders;
- claims for non-delivered items, received items and received invoices;
- orders, receipt and delivery of exchange, receipt and delivery of legal deposit copy, receipt of gift and entry of other types of library materials acquisition;
- maintenance of partner and fund data, and setting-up of counters;
- sending orders to suppliers by using the EDIFACT Standard;
- sending lists of legal deposit material in XML format and preparing lists after receipt.

The **COBISS3/Holdings** software module allows complete management of holdings data, including:

- downloading bibliographic records from the shared bibliographic database into a local database;
- updating a limited range of bibliographic data;
- updating local code lists;
- forming sets;
- assigning accession numbers and copying holdings data;
- setting up counters for accession numbers, running numbers and loan numbers, and the possibility of setting criteria for automatic selection of counters;
- printing labels by sending them directly to the printer or to the report queue during holdings data editing;
- transferring holdings data between bibliographic records;
- searching for and working with individual holdings data;
- displaying the list of libraries in which a certain bibliographic record is available;
- adding multimedia content.

The **COBISS3/Loan** software module enables the following:

- entering, searching for and modifying membership card data or numbers, deleting member details and batch deleting data on inactive library members;
- lending material outside the library or to the reading-room, returning, reserving material available and unavailable, reserving material for use in the reading room, renewing loans, changing due date;
- searching for library material, gaining insight into the library material status and making notes on library material;
- defining loan parameters;

- separately managing the loan record by departments, inter-departmental loan;
- electronic notification of members;
- routing of serials;
- overdue notices;
- financial management system.

The **COBISS3/Reports** software module enables generating various reports, which can be printed or sent via e-mail. Reports are prepared on the basis of data from all COBISS3 software modules. Types of reports:

- reports from bibliographic and authority databases;
- reports from local application databases.

(COBISS Platform, 2021)

7. THE COMPLIANCE OF THE COBISS SYSTEM WITH NATIONAL AND EUROPEAN DIRECTIVES

Information and communication technologies are an important part of the EU's strategy for strengthening economic growth, promoting European digital potential and responding to the challenges of a modern, global world. The Digital Agenda is one of the seven leading incentives of the Europe 2020 strategy and it should provide a fast, sustainable and inclusive growth to the European Union in this decade.

COBISS is pursuing a global goal – to encourage the development and improve the offer of e-services in different areas of the information society. In doing so, it is directly contributing to the expansion of publicly accessible e-services, and actively shaping the concepts of technological development, organisation and business in the fields of culture, science and education, all of which contributes to the transition to a modern and efficient knowledge society.

Among the more notable topics of the renewed EU strategy for sustainable development, COBISS relates directly to social inclusion, demographic changes and migrations. It improves and facilitates the access to saved contents relevant to a comprehensive development of individuals and communities and also ensures non-discriminatory possibilities for using the most advanced e-services in the field of librarianship. By doing this, COBISS also contributes to recognizing and consequently making the best possible decisions in the present, which will have lasting effects in the digital future.

One of the specific goals is to improve digital literacy. The impact that COBISS has in this area is an obvious added value in the form of a virtual environment. Namely, in the case of the mCOBISS mobile app, users are using new and increasingly accessible devices, which enable them to use the new e-services of the national library system. The services are intended for all, not only for trained users of modern ICT services and devices. Because of their simplicity of use and attractiveness, COBISS can also be used by less-skilled users. Users' understanding and accepting the contents and services is of key importance because this e-service is a result of analysing users' wishes and needs as well as the result of adapting to the capabilities of new devices. mCOBISS includes functions that enable different forms of using remote services for the general public, regardless of the physical location of the user. On top of that, citizens with special needs (especially with motor disorders) have access to completely new possibilities of using library activities, which improves their quality of life and reduces their marginalization (a contribution to e-accessibility).

8. DISCUSSION AND CONCLUSION

The COBISS system promotes science, creativeness and innovations in the society and education. The direct impact COBISS has is evident in the transfer of knowledge by bringing libraries and their functions to the individual with the use of contemporary e-services and mobile apps, which brings the current "standard" functions in physical libraries directly to the user as a new added value. Solutions offered by the COBISS system are intended for a wide range of users, and with that they collectively follow the global goal – promoting development and a wide range of e-services in different areas of information society. The services of the COBISS system not only fulfil the existing goals, habits and needs of the users, but they also promote the use of new, innovative solutions, all the while ensuring a good user experience. COBISS is therefore expanding the multitude of publicly accessible e-services and co-creates new technological development trends in the fields of culture, science and education promoting the transition into a modern and effective knowledge society.

COBISS as a system aims to ensure the highest possible level of success, effectiveness and satisfaction felt by the researchers, librarians, general users and others when they achieve their goals by using one of the services. This also includes the majority of groups and individuals with special needs whose access to e-services or the internet is limited for various reasons. This improves the effectiveness and the impact of the COBISS services and provides an easier access to the information and also improves the transfer of knowledge. This is the correct path to high-quality services that include the user interface and the contents as a homogenous whole. Only a service suited to the need of its users can guarantee a user-friendly experience.

The COBISS system helps solve actual problems associated with updating library systems in member countries and provides conditions for the integration into the global library network, both with regards to accessing international bibliographic databases as well as adding their own bibliographic data to them. The intellectual legacy and current intellectual production of these countries call for a more active presence in global reviews. Part of this is also encouraging the building of the information infrastructure that enables a higher quality of research activity and the transparency of research potential and results in the region.

In conclusion, despite the lack of financial support, the National COBISS Centre of Bulgaria will continue its hard work on including new libraries to the COBISS.net network and hopes that its goals would be successfully achieved very soon via intergovernmental diplomacy.

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