документов из фондов Национальной библиотеки Беларуси, изданных в XIV–XVIII веках и по территориальному, языковому, авторскому или содержательному признакам относящихся к Беларуси. Ресурс доступен с портала Национальной библиотеки Беларуси, а также с сайтов всех областных библиотек.

Виртуальные выставки, экскурсии, викторины, игры, туристические маршруты и еще целый ряд различных видов информационной продукции представлен на сайтах библиотек нашей страны.

Таким образом, на сегодняшний день в Республике Беларусь создана и успешно функционирует библиотечная инфраструктура для информационного обеспечения всех видов деятельности человека: учебной, научной, управленческой, производственной, досуговой.

## Сирота Лилия Богдановна

## Оцифровка редких документов как приоритетное направление сохранения библиотечных фондов (из опыта научной библиотеки Львовского национального университета имени Ивана Франко)

Статья посвящена расширению знаний о процессе цифровизации в научной библиотеке Львовского национального университета имени Ивана Франко. Этот процесс направлен на улучшение доступа к документам (рукописные книги, инкунабулы, палеотипы, карты, открытки и др.) и хранение редких оригиналов, которые находятся в опасности и повреждены.

Ключевые слова: оцифровка; редкие коллекции; технология; научная библиотека Львовского национального университета имени Ивана Франко.

## Liliia B. Syrota

## Digitization of Rare Documents as a Priority Direction for the Preservation of Library Funds (from the Experience of the Scientific Library of the Ivan Franko National University of Lviv)

The paper is expanding knowledge about the digitalization process in the Scientific Library of the Ivan Franko National University of Lviv. This process is to improve access to documents (handwritten books, incunabula, palaeotypes, maps, postcards, etc.), and storage the rare originals that are in danger and damages.

*Keywords:* digitization; rare colections; technology; Scientific Library of the Ivan Franko National University of Lviv.

*Introduction*. In recent decades, the introduction of modern information technologies in various areas of society is very successful. Digitization of valuable documents is one of the priorities of the institutions of Ukraine and the world. The work of libraries is no exception. Today information about the results of digitizing rare books is very important for sciencifists and librarians.

Problems of digitizing an old documents are analysed in many researchers, among which dominate is I. V. Lobuzin [9; 10]. A process of digitalization in Lviv in its various aspects: from the characteristics of individual types proects to the forms of implementation are studied by few scientists I. V. Lobuzin [9], V. Kmet [5; 6] and others. A series of conference materials was published, which reveals the experience of digitization at the libraries of Ukraine [2; 13] and others. There are also a few papers devoted on digital projects in which the Scientific Library of

Ivan Franko National University of Lviv participated. It is an articles about the project «Acta Diurna» [4, p. 297-302; 4], «Libraria» [7; 10, p. 72-73].

The purpose of the article is to analyze the current trends in digitalization of the rare books as the basis for the innovations in library activity, indicating the role cooperation, new technology and management in effective realization this process.

Analysis of the digitalization results. The process of digitalization in the Scientific Library of the Ivan Franko National University of Lviv is constructed according to the aims of activity, to the specifics of the funds and profile of users. The choice of books for digitization is due to their role for the country, region, local community, of their condition and quality of storage, uniqueness, educational and scientific values, copyright and legal status.

Lviv library for the first time carried out the digitization of ancient book and periodical funds at the beginning of the XXI century. At first this process was slow, because there was no own high productivity scaners for a documents.

At present Scientific Library makes digital copies of the Ukrainian Cyrillic manuscripts from the 14th–16th centuries, incunabulas of the second half of the 15th century, palaeotypeses, and old printed books of the 16th–19th centuries, periodicals 1776–1945.

Before starting the digitization project, the bibliographic descriptions of the documents compiled and entered into the database. These descriptions were supplemente with control numbers of dokuments in Division of manuscripts and print collections of the Lviv library and / or by an inventory numbers, which allowed unambiguous identification of documents. Digital objects created as the result of digitalization described at basis data taken from their analog sources, supplemented with metadata appropriate for digital objects.

Many data are identical to the original object and its digital representation (author, editor, title, place, years), so they inherited by the digital object from the description of the analog object. There are also data that stores important information about the original (for example, physical description elements such as dimensions of the maps, number of pages, illustrations). Data also provided that applies only to a digital object (for example, color depth).

The data relating to the content of the object presented in the form of subject words: for books – their types (handwritten books, incunabula, old books, rare books), for periodicals – thematic groups (for example, the interwar press of Bukovina, the interwar press of Galicia, Ukrainian press during the revolution, etc.), for maps – their titles.

The principal documents defining the rules for creating descriptions: Laws of Ukraine «On information» (1992), «On Copyright and Related Rights» (1993), «On Libraries and Librarianship» (1995), «On Distribution of Copies of Audiovisual Works, Phonograms, Videograms, Computer Software, Databases» (2003), DSTU 2228-93 «Information processing systems. Preparation and processing of data. Terms and definitions», DSTU 3396.0-96 «Information security. Technical protection of information. Substantive provisions», DSTU 3396 1-96 «Information security. Technical protection of information. The order of actions», DSTU 7.1: 2006 «System of standards for information, librarianship and publishing. Bibliographic record, bibliographic description. General requirements and rules of compilation», DSTU 7448:2013 «Information and documentation. Library and information activities. Terms and definitions» etc.

At the stage of receipt of the electronic document, the library saves it in PDF format. Taking into account the development of information technologies, Lviv Library is also using the XML format for these purposes.

In order to ensure the receipt of a qualitative digital copy of the document, before it is digitized sometimes special operations are carried out, namely, the sanitary-hygienic treatment of the original, the stabilization of the material basis, and, if necessary, the restoration. Upon completion of the digitization process, the material basis of the document passes the

stabilization period necessary to maintain a uniform moisture content in books, newspapers or magazines. The Library offered for the search more than 20 parameters: by author, title, year and place of publication, quantitative characteristics, the title of the series, ISBN, ISSN, UDC, subject-area, variants of a title (main and parallel titles, subtitle, title page, header, previous title, abbreviated and extended title), subject-area, country, notes, summary.

Types of work, technique and additional responsibilities of library staff at work:

- 1. management: project coordinator, project assistant, methodologist;
- 2. basic preparation of documents: curator of the collection, restorer;
- 3. support digitizing process: guard, alarm system, air dehumidifier, air humidifier, computers, scanners, instructors;
  - 4. digitization process: cataloguer, workers who scans (5-10 persons), digital editor.

The group digitizes rare documents using scanners «Book 2 net» (from April 2018) and «Zeutschel OS 12002» (from July 2018). This team of staff is responsible for preparing a digital image, editing and publishing it on a digital platform.

Scanned images have converte in JPG format. Electronic versions of documents made in PDF and FlippBook formats too. Access to the archive is available only from the computer network of Ivan Franko National University of Lviv.

In 2015, the library workers digitized the 46 various year sets of copies of foreign periodicals [14] for the information and library project «Acta Diurna» [1]. This project qualitatively differs by the form presentation of text (read out) versions of articles along with the images of the originals. The scientific library cooperated with the company PressPoint, which expanded power of servers for saving of the digital copies periodicals of the XIX - first half of twentieth century (in particular, newspaper «Dilo») [14]. In addition, in the year of 2015, three manuscripts from the 17th–18th centuries have digitized. (1,552 sheets) and three editions of the first half of the 20th century. (761 sheets) [14]. In 2017, few documents were digitized – only 29 units from the collection of manuscripts [11]. The process of digitizing the periodicals and the books had successfully continued in 2018. Handwritten newspapers and magazines of the first half of the twentieth century also began to digitize in this year. Last year, 1029 copies of manuscripts, 41 incunabula, 255 palaeotypes, 7 book old-prints, 30 editions of the 19th-20th centuries, 288 editions from the collection of war print production had digitized. Total 99982 scans from 45 thousand pages have made [15].

The military printed texts, which was issued during the First World War, were fully digitized in Lviv library. Staff began also on the digitization of Ukrainian and Polish periodicals of the XVIII century – the first half of the twentieth century.

The scanning is happening continuously, and today the electronic database consisrs with more than 70 thousand images. Thanks to the scan technique it became possible to print a high quality album-catalog of documents from the collection of military publications of the World War I, as well as a collection of leaflets illustrating covers of the rare library sights.

The scientific library is the initiator of the digitization projects «Lviv 100 years ago» [12] and «Libraria» [8], «Acta Diurna» [1]. Digitized documents in Scientific Library are also the basis of the electronic archive of the Ukrainian liberation movement [3]. For example, the digital library «Libraria» includes 312 titles, 35,724 issues, and 234,881 pages of the Ukrainian periodicals out of the stock of the Scientific Library of Lviv Ivan Franko National University and the State Scientific Archival Library [7, p. 183]. The Scientific Library of the University implemented the projects of digitizing together with company «Archival Information Systems» (Kyiv).

Conclusion. At the present day, the formation of digital resources is necessary and complicated task. The head and staff of the Sciencific library of the Ivan Franko Nacional University of Lviv have successfully work towards creating satisfactory conditions for

digitalization and reliable storage of large volumes of digital information, reliable access to it, its integration into the Ukrainian and world cultural environment.

The study contributes to the growing view in sciencific research about librarian skills and capabilities as important for co-creating value. Furthermore, the article outlines the content and process of digitalization. Future research can examine the level and extent of the influence of these mechanisms on the value co-creation process and could also determine other innovations that expand the sphere of co-creation.

- 1. *Acta* Diurna [Electronic resource]. Mode of access: http://nbuv.gov.ua/node/1329. Date of access: 11.06.2019.
- 2. *Adaptatsiia* zavdan i funktsii naukovoi biblioteky do vymoh rozvytku tsyfrovykh informatsiinykh resursiv : materialy Mizhnar. nauk. konf. (Kyiv, 8–11 zhovtnia 2013 r). Kyiv : NBUV, 2013. 415 s.
- 3. *Electronic* archive of the Ukrainian liberation movement [Electronic resource]. Mode of access: http://avr.org.ua/. Date of access: 11.06.2019.
- 4. *Fihel, O. M.* Orhanizatsiini aspekty napovnennia elektronnoho katalohu bibliotechnoinformatsiinoho resursu «Acta Diurna» / Fihel O. M. // Biblioteky VNZ Ukrainy u protsesi implementatsii Zakonu «Pro vyshchu osvitu» ta informatyzatsii suspilstva: materialy Vseukr. Nauk.-prakt. konf., Ivano-Frankivsk, 16-19 chervnia 2015 r. Ivano-Frankivsk: NTV IFNTUNH, 2015. S. 297-301.
  - 5. Kmet, V. Acta Diurna biblioteka majbutnioho? / V. Kmet // Kameniar. 2014. № 1. S. 8.
- 6. *Kmet, V.* Naukova biblioteka universytetu u perspektyvi 400-richchia / V. Kmet // Visnyk of the Lviv University. Series Bibliol. Libr. Stud. Inform. Techn. 2008. Vol. 3. S. 3-8.
- 7. *Kmet, V.* Retrospective periodicals in the formation of philosophy of national memory (based on the experience of the University library) / V. Kmet // Visnyk of the Lviv University. Series Bibliol. Libr. Stud. Inform. Techn. 2015. Vol. 10. S. 176-184.
- Libr. Stud. Inform. Techn. 2015. Vol. 10. S. 176-184. 8. *Libraria:* Ukrainian online periodicals archive [Electronic resource]. – Mode of access: https://libraria.ua/en/. – Date of access: 11.06.2019.
- 9. *Lobuzin, I.* Otsyfruvannia istoryko-kulturnoi spadshchyny: tekhnolohiia ta upravlinnia / I. Lobuzin // Reiestratsiia, zberihannia i obrobka danykh. 2012. Vol. 14(3). S. 104-114.
- 10. *Lobuzin, I. V.* Tekhnolohii intehratsii mizhnarodnykh ta natsionalnykh bibliotechnykh resursiv / I. V. Lobuzin // Bibliotekoznavstvo. Dokumentoznavstvo. Informolohiia. 2017. № 1. S. 66-78.
- 11. *Lozynskyi, M.* Informatsiini materialy do zvitu rektora Melnyka V. P. na Konferentsii trudovoho kolektyvu Lvivskoho natsionalnoho universytetu imeni Ivana Franka 17 travnia 2018 roku / M. Lozynskyi. Lviv: Vydavnychyi tsentr LNU imeni Ivana Franka. 2018. 189 s.
- 12. Lviv 100 rokiv tomu [Electronic resource]. Mode of access: https://city-adm.lviv.ua/portal/history-of-lviv/lviv-u-1914-1915-rokakh. Date of access: 11.06.2019.
- 13. 7-ma Mizhnarodna naukovo-praktychna konferentsiia «Naukova komunikatsiia v tsyfrovu epokhu» (m. Kyiv, 28–29 bereznia 2019 r.): prohrama konferentsii [Electronic resource]. Mode of access: http://ekmair.ukma.edu.ua/bitstream/handle/123456789/15383/Prohrama\_SCDA19.pdf?seque nce=1&isAllowed=y. Date of access: 11.06.2019.
- 14. *Zvit* pro robotu naukovoi biblioteky u 2015 rotsi [Electronic resource]. Mode of access: http://library.lnu.edu.ua/bibl/images/Metod/%D0%97%D0%B2%D1%96%D1%82\_20 15.pdf. Date of access: 11.06.2019.
- 15. Zvit viddilu rukopysnykh, starodrukovanykh ta ridkisnykh knyh im. F. P. Maksymenka za 2018 rik Lviv. 5 s. Rukopys.