

Digital Cooperation in the Digital Era



Digital cooperation between cultural institutions has a crucial meaning in the digital era. The National Library, leader of the Competence Centre for Digitization, coordinates the process of digitalization of library materials for the whole country, provides information and supports all libraries in implementing technological changes, educates staff of cultural institutions, invents digital tools which improve the work of the librarians, and promotes digital resources. My article is an effort to describe briefly each of the activities of the National Library, which, in fact, can't be realised without close cooperation with the scientists, public and academic libraries as well as other Polish cultural institutions.

From the very start, the Polish National Library has performed the following functions: being main archive of national writing, domestic center for bibliographic reference information, scientific institution and important methodology center for the libraries in Poland. Cooperation with all types of libraries, cultural institutions and publishers is therefore a must for proper functioning of the National Library. Development of new technologies changed the tools used in everyday work, but the core idea of preserving national cultural heritage has remained unchanged.

Libraries cooperate in the field of cataloging, building complementary collections, interlibrary loan and document delivery services, in joint acquisition of library materials or integrated library system as well as providing services to the readers. In the digital era there is a lot of new possibilities and new fields for cooperation among cultural institutions. My article presents several projects of the National Library and shows new models of digital cooperation, characteristic for the digital era.

One of the projects based on a close cooperation between libraries is the *Academica* electronic interlibrary loan system¹. Its main idea is expanding of modern scientific facilities of small public libraries and enlarging book collections of academic libraries by the new ones, made available in a digital form. Thanks to the *Academica* digital interlibrary loan facility the users, including academic teachers, scientists and students gain access to the copies previously unattainable in their area of living, or professional activity.

The project was initiated and implemented under the auspices of The Foundation for Polish Science, whereas The Scientific and Academic Computer Network was the partner of the National Library providing support to technical realization of the enterprise². The works started back in 2010, and the library's on-line resources were made available in November, 2014. The objectives set by authors of the system included providing all readers in all Polish libraries with access to the constantly growing collection of academic publications. The National Library, being the project coordinator, took advantage of the fact of being a holder of obligatory copies of each Polish publication both in print and a digital form. The launch of the *Academica Digital Loans Service* was based on the collection so accumulated.

Each Polish library, even the smallest, can use online book lending service. The only condition is to sign up a declaration of participation and provide a computer with access to internet. The system was designed in such a way that libraries might use even older models of computers. System is periodically reviewed and security or compatibility updates automatically distributed to all locations. The authors of *Academica* took an allowance for the budget limits in most Polish libraries. For the ones unable to designate a single computer for this project, a special pendrive with software has been designed, by installing of which each computer can be turned into a system terminal for the time *Academica* is being used. It means that the reader using *Academica* system is denied access to text editors, e-mails and websites. The reason is the safety of the copyrighted resources available via electronic lending service. After the end of each session and upon removal of the installation key the computer resumes its standard function.

Users of the portal have access to over 1,5 million electronic documents, including 900 thousands electronic scientific publications under copyright through dedicated terminals located in scientific and public libraries throughout the country as well as to over 600 thousand publication from public domain and licensed. The creators of the electronic lending system want the access to be given those scientific publications circulated in low numbers and, in particular, those which are not commercially available. Therefore, in *Academica* we can mainly find publications from 1990 to 2012 such as: academic course-books, academic papers, selected scientific journals listed by The Ministry of Science and Higher Education covering all areas of science.

Due to legal restrictions and rules of interlibrary loans, in the *Academica* system only one user within the territory of Poland at a time is provided with access to the publication, similarly as in the case of traditional library loans. Therefore, a booking system was implemented in the *Academica* library so that readers can schedule their work at terminals in a selected library. Publications that belong to the public domain and to the open access category as well as those which were obtained under licenses are available without limits. What makes a difference from traditional inter-library lending service is the speed of the order realization. The found library material is displayed on the screen of a library terminal as soon as this title has been ordered.

Access to the digital interlibrary loan system is free of any charge both for readers and libraries. *Academica* became widespread in a short time, providing readers in Poland with a faster and more convenient access to copyrighted materials. Marketing effort has been made to involve libraries from different regions of Poland, which results in shortening of the distance the user covers to get to the nearest terminal. After two years, over 250 libraries signed access agreement, thousands of users have

¹ www.academica.edu.pl

² <http://www.bn.org.pl/programy-i-uslugi/cyfrowa-biblioteka-publikacji-naukowych-academica> (Sept. 15, 2016)

registered and the numbers grow rapidly. The figures seem to give hard evidence for smooth, effective and so needed cooperation, which has been started between The National Library and the other libraries based in Poland.

The next example of an effective usage of new technologies in the process of cooperation with other institutions to create national cultural heritage is the Digital Repository, as well as POLONA, the digital library based on its resources.

In the year 2009 the Minister of Culture and National Heritage entrusted National Library of Poland leading the Competence Centre for digitization of library materials for the whole country³. The task of the Centre is to implement technological changes on digitization and storage of digital objects, coordinate the storage, educate staff of cultural institutions engaged in digitization in Poland and promote digital resources. The National Library has created large and modern digitization lab, with over 30 different types of scanning facilities⁴. The library developed system supporting digitization on a massive scale and launched in 2012 the Digital Repository System⁵ for management of digital library objects. The Digital Repository System supports digitization workflow as well as import of born digital documents, format conversion, metadata edition, safe storage and presentation in a modern, attractive form in digital libraries. At the same time the National Library built the infrastructure (trusted digital repository) that is an environment for functioning the system and includes modern server room provided with thief, flood and fire safety equipment, fail safe, efficient power and cooling facilities as well as contemporary, virtualized IT systems. The repository reached over 500 processor cores, 1 Petabyte of resilient online capacity and over 2 Petabyte of redundant archival storage that serves for acquisition and longtime digital preservation in two geographically distant locations.

The main goal of the Digital Repository System is to secure the preservation of digital resources of the National Library of Poland and other Polish cultural institutions as well as to establish communication between the stakeholders and to facilitate the development and implementation of a national cooperative digital preservation strategy. Other important mission is to advance standardization in the field of digital preservation and to develop a concept for training and education of librarians. Works on Digital Repository helped also in raising public awareness on digital preservation in cultural institutions and among the scientists and researchers. The electronic items, both digitized and born digital, are more fragile and susceptible to different factors that may jeopardize its safety and integrity. However, the digital objects can be copied without quality degradation and sent remotely, they still can be subject to loss, from random bit errors to entire disk crashes.

The National Library has defined internal rules of digitization standards as well as detailed principles for libraries placing their output of digitization in the repository. During last two years over 50 Polish libraries sent digitized materials from their own collection to the Digital Repository of the National Library of Poland. Access to these publications can be obtained by the reader via the POLONA Digital Library, or the *Academica* interlibrary loans system.

The POLONA Digital Library⁶ is directly linked up to the digital repository of the National Library. Thanks to it, the home page automatically displays the newly-scanned publications and the ones coming either from scientific libraries or public libraries. Access to copyrighted publications is possible only on the terminals designated for this specific purpose which are placed in the reading rooms of the National Library or by *Academica* system. The public domain works sent to the repository by other libraries are accessible together with the digital objects from the National Library collections in the POLONA digital library.

The Digital Repository is dedicated not only for digital objects created in libraries. In 2012 the National Library launched the pioneer in the country public self-service legal deposit system that allowed publishers to place born-digital publications directly to the Digital Repository System⁷. It was built with attention to secure preservation of e-books and e-journals present on the market. In May 2016 the Digital Repository System comprised over 1,92 million digital objects from the National Library, from other Polish libraries and e-books or e-journals sent by publishers as a legal deposit of electronic publications. Publishers send electronic publications prior to registration in the Digital Repository. Publications are delivered safely through encrypted links and after preparing metadata by catalogers they are placed in the repository and made available to the public. Access to content under copyright is possible only at terminals in the National Library and in the Polish libraries using the *Academica* system. But on the Internet the public interface of *Academica* presents full metadata of electronic publications. The user gets information on new titles of the publications available on the publishing market, however access to the full content is only possible on the premises of The National Library.

Other form of cooperation between the National Library and publishing houses is the e-ISBN service⁸. It was put into operations in October 2014. It is used for electronic numbering and managing of ISBN reference numbers and related data. It is the first e-service of this type dedicated to publishers in Poland. Its purpose is to improve the ISBN numbering procedure. Even small publishing house, which do not hold their own data systems on a book, can use the application prepared by the National Library. Registered publishers, when using ONIX specification (ONline Information eXchange), give the item data, which will be marked by the ISBN reference number. In the expanded 'marketing description of the publication' the following information can be found: cover image, suggested price, table of contents, author's bio and reviews. Providing these data is up to the publisher, alike giving information on number of copies in circulation for a given book, e-book or CD. Signing the e-ISBN regulations the publisher agrees that the data on the publication will be publicized. Thanks to this, the service has become a reliable source of reference information, and being regularly updated, regarding novelties and announcements on new items to be published. Readers, librarians and booksellers can download free of charge the most updated database of Polish publications, generated

³ <http://www.bn.org.pl/programy-i-uslugi/centrum-kompetencji> (Sept. 15, 2016)

⁴ <http://www.bn.org.pl/programy-i-uslugi/centrum-kompetencji/digitalizacja> (Sept. 15, 2016)

⁵ <http://www.bn.org.pl/programy-i-uslugi/centrum-kompetencji/digitalizacja/repozytorium> (Sept. 15, 2016)

⁶ <https://polona.pl/>

⁷ <http://www.bn.org.pl/programy-i-uslugi/centrum-kompetencji/udostepnianie-zbiorow-cyfrowych/repozytorium-dokumentow-elektronicznych> (Sept. 15, 2016)

⁸ <https://e-isbn.pl/IsbnWeb/>

by the e-ISBN service. Since 2014 more than 7 000 publishers have been registered, and the number of publications described in the database exceeds 48 000. Inferring from so many daily registration entries, the number of registered publishers will be rising. We hope that the intuitive and easy handling of the service will convince even those who are strongest supporters of the traditional method of receiving ISBN numbers and they will be using this new facility from now on⁹.

Cooperation in a digital era does not know the notion of „geographical boundaries between states“, therefore we may not overlook the Polish National Library’s contribution into the *Europeana* project and related projects: *Europeana v. 2.0*, *Europeana Travel* and *Europeana Newspapers*. Thanks to them the National Library of Poland digitized and made accessible in the Europeana portal many thousands objects from its collections, among others full versions of digitized newspapers from years 1914 to 1920, maps, postcards and photos as well as tourist guides in different languages¹⁰.

The National Library of Poland organizes also trainings, conferences and workshops for librarians and archivists on digitization, digital collaboration and using digital resources. Some of them is dedicated for other groups of users. For instance, in January 2014 the National Library organized nationwide digital seminar on *#WielkaWojna* for history and language teachers¹¹. The participants had an opportunity to find out about the functionalities of the *Europeana* portal and Polish digital libraries. During the workshop Polish and foreign digital resources related to WWI have been presented.

Building cultural heritage in digital times goes beyond the boundaries of particular states. Cooperation between libraries on a regional level is more and more often becoming part of works which are being carried out on a domestic level. The works created in a given country become a common part of a continental, in our case – an European works being created for future generations. Perhaps, the digital versions of national monumental works in writing may in a few hundred years turn out to be the only trace of the past and the only heritage left by us. For this reason, it is worth cooperating locally, considering the context of a global range of this cooperation in the future.

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