



## **From digitization of local newspapers to the portal of hometown cultural heritage - a *step by step* digitization strategy available to small communities**

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### **Abstract:**

*The article aims at presenting how a public library managed digitization projects with limited financial and staff resources, and its success in promotion and accessibility of small community cultural heritage, with partnership and initiatives in digitization projects.*

*In a few years the Public Library in Koprivnica, Croatia ([www.knjiznica-koprivnica.hr](http://www.knjiznica-koprivnica.hr)) has moved from the first digitization project of local newspapers in 2008 (available at: <http://library.foi.hr/glas/>) and 2009 (available at: <http://dkt.arhivpro.hr>) to the local repository portal Koprivnica hometown cultural heritage in 2011 (available at: <http://kkb.arhivx.net>). Two more digitization projects were realized in the meantime – digitization of literary works of Croatian and local writer Fran Galovic in 2009 (available at: <http://frangalovic.com/>) and digitization of hometown posts-cards in 2011 (available at: <http://library.foi.hr/razglednice/index.php?page=main&id=20>).*

*All mentioned digitization projects have been the result of initiatives of the local public library, as well as its coordination role in local partnership with museum, archive and local newspaper publisher. A very important part of this local partnership has been a local company for scanning and digitization, which has been testing new technology in these hometown cultural heritage digitization projects, developing itself as the leader in digitization of cultural heritage on the national level.*

*The main contribution of these mentioned digitization projects has been raising awareness on their importance in promoting local heritage and local identity in prevailing process of globalization. Additionally, the newest information and communication technology were used in order to improve access to information of library, museum and archive collections.*

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## Introduction

Although the Public Library of Koprivnica is not one of the largest in Croatia, it nevertheless is still well known for its innovative projects and programs, fostering and promoting reading and literacy among its users. The Public Library of Koprivnica serves the town population of Koprivnica, a medium-sized Croatian town (population 32,000) and Koprivnica-Krizevci County (population 122,000). It is situated in the northwestern, industrially most developed part of the country. The Library has 22 employees in total (14 of them are professional staff). The organizational structure includes departments and services for children, adults, a science department, reading-room, mobile library, purchase and processing, county development service and administrative/technical department. It has about 8,700 registered members per year (services users 2-3 times more), nearly 140,000 books, 105 subscriptions to periodicals, 6,000 non-book materials and 124,000 visits per year.

The Library acts as a local community cultural and information centre that supports education, lifelong learning and creative leisure-time activities under the slogans: “*Literacy for all*” and “*Libraries open to everybody*”. Promotion of using new technology and supporting digital literacy in local community has been one of the Library’s priorities in the last two decades.

In 2007, the Library started with a systematic project approach to digitize the hometown printed cultural heritage, after the Ministry of Culture initiated the National Digitization Program of Archival, Library and Museum Holdings (available at: <http://daz.hr/bastina>). This replaced ad hoc, random initiatives in digitization of heritage in Croatia. The project aimed at ensuring a national strategy in culture at specific levels: use of information technologies and promotion of local communities' tourism and education, but above all, promote cultural institutions as valuable assets in local communities. The main goal was to create a relevant and recognizable content coming out of archives, libraries and museums and longevity of these contents. An additional agenda was to promote the comprehensive value of digitization, as *digitization of cultural heritage*, the backbone of this project was a lot wider and more comprehensive than mere practice in many cultural institutions of that time – for them, digitization (in Koprivnica, too) was primarily a technical procedure.

This was the framework in which the Public Library «Fran Galovic» Koprivnica has been developing projects of local cultural heritage, applying and receiving the local and national funding to start the project.

## Complete digitization of local and cultural heritage in the 2007–2011 period

### *Local weekly newspaper “Glas Podravine” 1950-2007 (2008)*

Digitization of the Koprivnica town newspapers was the pioneering collection in Croatia; the first local project in digitization of cultural heritage realized within the National Digitization Program of Archival, Library and Museum Holdings in 2008. The object was a local newspaper, published since 1950 and the wide public interest (local readers and expatriates abroad) governed the decision. The paper has been a source of information on local community life for the past 58 years, primarily in education, science, professional, and informational needs. Namely, users expressed interest through library surveys in the newspapers’ print collection for school assignments, projects and university theses, history essays, genealogy and other research, and also for simple recollection of past and contemporary life of the local community. However, just like other periodicals, it is difficult to browse, as understaffed small libraries have little resources to provide analytical processing of such materials. Being the library's protected collections, such periodicals are not loaned

outside the library premises, thus, having a limited access for users. These were the reasons why the Library chose to apply the newest technology potentials to enable the public with wide accessibility to newspaper heritage collections.

For this purpose only, the «Glas Podravine» publishers assigned the publishing rights to the Library for this public, non-commercial use.

The Library collaborated with the local museum in efforts to create a so-called “ideal copy” of the digital newspaper in terms of design. The National and University Library in Zagreb also helped. Koprivnica public librarians finally announced the project in the local media, asking citizens for help in collecting the remaining editions. The outcome was a multi-level partnership with local culture and heritage institutions, local public, and media – all contributing to “a common sense of joint ownership over the final digitization”. A local firm for scanning and digitization was a very important part of the partnership, which tested new technology in this project.

The result was an electronic copy of the local weekly «Glas Podravine», an integrated digitized paper with browsing and search options by various criteria from the database. It is comprised of 58 annual volumes, 2,643 editions and 40,784 pages. The database provides an easy, transparent search with requested information displaying without delays.

Unlike previous digitization projects in Croatian libraries before 2007, this project – for the very first time in Croatia – enabled users to view and search by keywords with other search criteria.

Search options include keywords, years, volumes and issues in two methods – browsing and viewing images in different sizes (zoom, enhancement) and full text with Optical Character Recognition (OCR) – a tool for optical recognition of characters. Since the OCR view is not fully accurate and errors in OCR-read text are possible, a recommendation was given to use scanned samples for an accurate reading.

### ***Digitized Koprivnica newspapers 1950-2008 (2009)***

The project *Digitized Koprivnica newspapers 1950-2008* (<http://dkt.arhivpro.hr>) has been a continuation of the local weekly *Glas Podravine* pilot project. The reasoning behind this project was the information needs of users to fast, accessible data on the local community heritage. A digital search in the Koprivnica newspapers' database provides access to more than 50.000 newspaper pages from nine dailies and weeklies that were published in Koprivnica from 1950 to 2008, giving a rich picture of the social, cultural, political life, and circumstances of the local community since the Second World War.

The biggest advancement from the first digitization project of the “Fran Galovic” Public Library was an application of the ultimate technology: *Microsoft Silverlight* high-resolution view of scanned data. It provided a high-speed transfer of large data (scanned newspapers), a quality view, fast and accurate search, and user-friendly browsing with an image interface. As a pioneering project in Croatia (the first ever), the users could automatically mark the searched keyword from the image, not just in the OCR-text, as before.

An important, indispensable part of the project was to obtain publishing rights through contacts with the newspapers' publishers. The biggest challenge was contacting long-gone publishers, those that went bankrupt and those without known legal successors. The problem of an unintentional copyright breach was resolved by the Guidelines on digitized material. The Library announced a public call to interested parties to report irregularities or misuse of rights for corrections, since the *Digitized Koprivnica Newspapers* web portal follows the principles of open source to knowledge and information.

The entire database is a Croatian cultural heritage, free and open to the public. However, the Public Library has protected its rights as the portal owner.

### ***The writer Fran Galovic Online (2009)***

*Fran Galovic Online* was the third digitization project by the “Fran Galovic” Public Library of Koprivnica (<http://frangalovic.com>). The graphic and web designs were made in collaboration with the local partner companies that the Library worked with before, not only in digitization but in other library projects. The digitized project presents Fran Galovic<sup>1</sup>, the poet and the best known native writer, whose name the Public Library has borne since 1991. Even today, the poetry of Fran Galovic draws an audience. The local needs in education and science, the efforts to promote his life and work, and to make it available to the widest audience – all of these factors encouraged the Public Library to digitize this highly valuable part of its own heritage collection. Now the Library enables a virtual search and browsing through the collected works and all the books authored by F. Galovic. On one hand, this digitization spared the original books and the web search gives an instant access to over 2,000 digitized pages of Galovic poetry, plays, short stories, essays and literary criticism. To bring the author closer to his public, the librarians offer his detailed biography, a bibliography and photographs of the author from the Library's own local history collection.

### ***Collection of digitized Koprivnica postcards (2011)***

A digitized collection of local postcards with native motifs, available at: <http://library.foi.hr/razglednice/index.php?page=main&id=20>, is comprised of two separate collections: 288 postcards from the Fran Galovic Public Library history collection, printed in the period from 1899 all the way to 2006; and another collection of 184 postcards from a private collector Zlatko Ivkovic, covering the period from 1898 to 1977. The postcards follow the town of Koprivnica and its vicinity, its growth and change from late 19th, across 20th and beginning of the 21st century, showing main town squares, houses of the prominent citizens, a music pavilion in the park, local buildings like a hospital, schools, churches, industry and crafts, etc.

### ***Koprivnica hometown cultural heritage repository (2011)***

The repository portal «Digitized cultural heritage of Koprivnica» (available at: <http://kkb.arhivx.net/>) was realized at the end of 2011. The portal offers the unique, central place for all previous local projects in digitization, but also enables a systematic, structured way of aggregation of all future digitizations of miscellaneous heritage. The goal is promotion, wide access and easy search of data, protection of the original works, and highlighting the heritage as unique values for the local community, by using cutting-edge technology. A central web portal, digital repository was achieved through a partnership of the local library, archive and the town museum. Collaboration with institutions and individuals of Koprivnica and its vicinity (e.g. art historians, tourist office, history, art, folklore societies, etc.) is expected to be developed in the future.

The repository is a long-term project with well-defined goals, activities, tasks and responsibilities. Currently, it holds three digital collections (a mouse-click away at [Zapisi iz prošlosti](#) ; [Glas Podravine](#) and [Zbirka razglednica](#)). So, beside digitized newspapers that hold Koprivnica history, users can embark on a time-travel voyage, browsing through digitized postcards and old photographs, to see what Koprivnica looked like, how the town changed throughout centuries, all the way back to Koprivnica fortification blueprints, held in the

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<sup>1</sup> Fran Galović was born in 1887, in the village of Peteranec, nearby Koprivnica; he died as a soldier in the First World War, on Macva front in today's Serbia. In his 11 years of writing, he was a prolific writer, leaving numerous volumes of different literary works; however, he published only 4 books. Only after his death, his collected works were published posthumously (edited by Julije Benesic); these works represent a reference point for all other publishing and re-issues of his works. Galovic works are colored and influenced by then art and literature of his era, fairly describing Croatian literature of Moderna.

virtual archives. However, this time it gives a cutting-edge technology novelty, a pioneering step forward in Croatia's digitization of its cultural heritage. The repository is in compliance with OAI-PMH protocol, meta-data model complies with Europeana ESE v 3.4 standards.

### **Key elements of digitization by the Public Library of Koprivnica**

Following the needs of library users as the basic criteria in what should be digitized as well as applying elementary digitization rules (*processing classic data with meta-data thus enabling search, browsing, and digitization as a technical procedure; Internet access; access rights management; long-term protection and security*), the Public Library of Koprivnica digitization model has several distinctive characteristics:

1. Unlike previous digitization projects in Croatia before 2007, *the first characteristic* of the Koprivnica projects is that digitized material is not only viewed but searched and browsed by keyword and other criteria.
2. *The second characteristic* is that the local community was aware of the project value and its native significance, not only through digitized material, but a wide network of collaboration and partnership at the local level (institutions and individuals), contributing to a feeling of joint proprietorship over the final product; the value of digitization is in preserving and safekeeping the native identity in an overwhelming globalization.
3. *The third characteristic* of the projects was high-level collaboration of heritage institutions (library, museum, archives). Collaboration in digitization proved to be necessary, not only at national levels, but on the local community level, too. Unlike the traditional concept where archives, museums and libraries are defined as institutions that collect, process, and preserve the cultural heritage artifacts “by safekeeping them for future generations”, the modern concept in cutting-edge technology provides wide availability and access to collections and data (protection and search-ability). Digital collections transcend physical boundaries and enable access to everyone regardless of actual physical residence; in the end, it is irrelevant to users where the actual originals are located or kept; it is vital to have collaboration with local authorities, societies, individuals, publishers, private entrepreneurs, businesses and tourist offices on municipal and county levels, public media etc.
4. *The fourth characteristic* of the projects is engaging professional companies, who specialize in digitization, with years of experience, that can provide software application solutions, cutting-edge technology, equipment, and knowledge. Since the Public Library of Koprivnica has no staff resources or potential in such specialized skills, professional knowledge and expertise in digitization, or even professional digital scanning equipment, we opted for *out-sourcing*. A very important part of the local partnership provided a local firm for scanning and digitization, testing a new technology in our digitization projects of cultural heritage; as a result, the company developed a leading position in digitization of cultural heritage on the national level.
5. *The fifth characteristic* is a systematic *information update, sensitization and education on digitization of cultural heritage*, primarily for librarians (professional training), and a wide range of interested parties, local and user communities, through promotional, educational and/or animation activities, explaining the advantages of cutting-edge technology, protection and promotion of local cultural heritage, the great value to local community and society at large. The goal is to awaken an interest in the mix of local history, cultural heritage and modern technologies, as well as promote local cultural

heritage in a wider, European and global context, through digitization cutting-edge technology.

## Conclusion

The needs of library users, especially in education, science or research, as well as in everyday life, were the original intentions and starting point of these digital projects. Additionally, the digitization and use of cutting-edge technology is a powerful tool in promoting cultural heritage as the most valuable part of Koprivnica identity. The Public Library of Koprivnica case study proved that limited financial and human resources, the lack of expensive technical equipment, specialized knowledge and skills were not, and should not, be the obstacle preventing us from digitization projects. Alternative options should include a wide network of collaborators, with well-defined targets, goals and methods, in line with the Library's own strategic guidelines. The goal is to achieve and enable wide access and easy browsing of searched data, protection of original material, and promotion of cultural heritage, as a great value and asset to local community, by the use of cutting-edge technology in overwhelming processes of globalization.

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