TRANSFORMATION OF DIGITAL LEGAL DEPOSIT IN TERMS OF LEGISLATION AND PUBLIC ACCESS

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The age of digitization is marked by a huge quantity and variety of electronic content distributed on the Internet. Building national collections of deposited electronic publications is a challenge related to the preservation of the global cultural heritage. The purpose of the article is to examine the ongoing transformation of the digital legal deposit with a focus on the legislative and public access regulation. The geographical scope of the research covers the countries from the European Union in the time span of the last two decades. Three stages of digital legal deposit implementation are identified: legislative regulation, technological infrastructure and practical procedures. The article presents the adaptation of deposit laws to the new media environment marked by fast growing online publishing. The study identifies the features of controlled e-reading as the main access tool in the deposit institutions and classifies them into two types: restriction related and usability related. The major challenges to a further digital legal deposit development are specified as legislative, technological, financial, and social. Examples of public access regulation in several European national libraries are observed with emphasis on the most advanced practices. Based on the main findings, the article formulates the forecast for less restrictions and better cooperation within the European Union concerning the regulation of public access to digital deposit collections.

KEYWORDS: digital legal deposit, electronic publications, e-reading, deposit institutions, public access.
INTRODUCTION

The legal deposit of printed works has a history of more than five centuries. The technological innovations in the second half of the 20th century created the need for preservation of a new type of audiovisual products such as movies, TV programs, and musical works in the national libraries and other deposit institutions. Later on, electronic newspapers, magazines and books became a fast growing market phenomenon. The magnitude of communication on the Internet and the expansion of social networks to daily life – both private and corporate, made real the “global village” forecasted by Marshall McLuhan. Online electronic publications have hugely increased in variety and quantity and thus their preservation became an issue of global importance. The adaptation of legal deposit practices to the new communication environment has become a challenge on global scale.

These highly dynamic processes happen at a pace exceeding their scientific interpretation. The purpose of the article is to examine the transformation of the digital legal deposit in terms of legislation and public access regulation. Several tasks have been set to serve this purpose. The tasks related to empiric data were as follows:

- present the most important international prescriptive documents related to the regulation of digital legal deposit;
- study the update of the national legal deposit legislations in the EU countries;
- collect representative data about the advanced practices in digital legal deposit implementation;
- compare the public access regulation among various national deposit institutions within the European Union.

The theoretical tasks required an analytical approach to the digital legal deposit practices:

- determine the stages of implementation of digital legal deposit;
- analyze the structure of digital legal deposit process;
- identify the features of e-reading as the only relevant tool for public access to the deposited electronic publications;
- formulate forecast related to public access regulation in national deposit institutions.

The study focuses on the legal deposit of electronic publications from electronic communication networks. The main area of scientific interest is the public access to the deposited electronic publications and e-reading as a tool to...
use them. Thus the previous stages of legal deposit process – collection, classification and preservation – are only touched upon. The digitization of the printed works from the libraries’ collection is also out of the research scope.

In terms of geographical coverage, the research refers to the countries from the European Union only. Digital legal deposit has not been fully implemented in all EU member-states yet. Therefore only the advanced practices have been presented. The time span is the period of the two last decades as the first regulated activities for collecting and preserving online electronic publications started in the last years of the past century.

The data related to digital legal deposit implementation and access regulation was collected from various sources: directives and other relevant documents of European Union institutions; official publications of international organizations related to the subject; national legal deposit laws of several EU countries; regulatory instructions and rules of national libraries.

The theoretical layer of the study is built on publications concerning media digitization, research on e-reading, observations on digital legal deposit practices in several countries and the comparison of public access practices in selected European national libraries.

Comparative analysis was the main method applied in the study process. It serves the purpose of identifying the best practices in granting public access to the deposited digital works. Both achievements and challenges are presented using the descriptive approach, which prevails over the theoretical interpretations. This is understandable bearing in mind that the purpose of the study is rooted in a concrete practical activity – namely, public access to deposited electronic publications.

IMPLEMENTATION OF DIGITAL LEGAL DEPOSIT

Public access to deposited electronic works is not an isolated matter – be it in terms of regulation, or in terms of practical procedure. It could be examined and explained only as part of the whole digital deposit process, which has a relatively short implementation history.

The background of digital legal deposit goes back to the 80ies of the last century when the need for legislative changes became an issue of international importance. UNESCO published two Guidelines for legal deposit legislation within an interval of 20 years (in 1981 and in 2000) in order to direct and accelerate the changes in the local deposit laws concerning the new type of products. The Guidelines from 2000 focused on electronic publications and classified them
into two categories – stored on a physical carrier, such as CD-ROM and DVDs, and those distributed through electronic communication networks. The Conference of the Directors of the National Libraries in 1994 assigned a working group chaired by the director of the British Library to elaborate a study on the legal deposit of electronic publications. Two years later the working group presented a report alerting the need of legislation changes, which could include electronic publications within the scope of legal deposit.

An act of notable international significance was the UNESCO Charter on the Preservation of Digital Heritage of October 2003. It recognized all types of electronic publications as part of the world cultural heritage. Another official document of high importance was the European Commission Recommendation of 27 October 2011 on the digitization and online accessibility of cultural material and digital preservation. It urged the member-states to “make the necessary arrangements for the deposit of material created in digital format in order to guarantee its long-term preservation, and improve the efficiency of existing deposit arrangements for the material created in digital format.” The project NETLIB (Networked European Deposit Library) was realized in the period of 1998–2000 with two main goals: a) to identify the technological tools for long-term preservation and usability of the electronic publications, and b) to test a model for future establishment of a networked European digital deposit library.

In parallel with the publication of electronically born works, a comprehensive digitization of the printed works in libraries has become a routine process in modern European libraries. However, deposited electronic publications have been treated differently from the rest of the digital libraries’ collections. Deposited works – regardless of their format and the way of being read – have got a special category status related to the main purpose of legal deposit – the long-term preservation of the cultural heritage.

Three stages of digital legal deposit implementation could be identified: legislative regulation, technological infrastructure, and practical procedure.

The first stage comprises legislative changes needed to enlarge the scope of digital deposit over all types of electronic publications. The legislative acts have also addressed issues such as copyright on electronic publications and the balance between the interests of the publishers and the obligations of deposit institutions. Most of the legislation changes have been initiated in the first decade of the 21st century, but in some countries the process of elaborating the current legislative acts started even earlier. Denmark was the first country that regulated by law the collection of electronic publications from the Internet. It was in 1997 that the new legal deposit law extended its scope over all Danish publications regardless of the medium they were produced on. The latest Act on Legal Deposit of Published Material, which entered into force on 1 July 2005, added “the material published in electronic communication networks” to the deposit product scope. Since then the entire domain “dk” has become subject to legal deposit. Two institutions were granted the status of national libraries, entitled to collect the deposited copies: the Royal Library in Copenhagen and the State and University Library in Århus.

In 1997, Estonia also introduced a new legal deposit law which covered online electronic publications. An amendment to the law from 2006 regulates the automated collection of websites and other content from the Internet. The recently updated Legal Deposit Copy Act entered into force on 1 January 2017. It guarantees equal treatment of printed and electronic publications as cultural heritage. The subject of deposit is “a web publication made publicly accessible through a technical device or process, which [...] has been made publicly accessible.” The deposit institution is the National Library of Estonia (Eesti Rahvusraamatukogu).

The Regulations of the Austrian National Library from 2002 recognized its status as deposit institution. The Austrian Media Act specifies legal deposit procedures. The primary duty of the National Library (Österreichische Nationalbibliothek) is “collecting and archiving all works appearing or published in Austria, including electronic media.”

The Law on the National Library of Germany (Deutsche Nationalbibliothek) from June 2006 confirms its status of deposit institution, which has been attributed the responsibility – among other duties – collect, catalogue, index and archive electronic publications. Legal deposit regulation in Germany became a law in October, 2008.
In France, legal deposit coverage was extended to online publications by the Law from August 2006 regarding the authors’ rights and related rights in the Information society11. This law was incorporated as a supplement to the French Heritage Law. The collection, preservation and access to the deposited electronic publications are entrusted to the National Library of France (Bibliothèque nationale de France).

The Swedish Legal Deposit Act from 1993 covered the delivery of electronic publications on a physical carrier like CD-ROM, DVD, audio cassettes. The law was supplemented by the Legal Deposit Act for Electronic Materials in 2012, which extended the publishers’ obligations to deposit electronic documents based on two major criteria – their public accessibility and their distribution through electronic networks. The National Library (Sveriges nationalbibliotek) has the responsibility to build digital deposit collections12. The harvesting of websites from the national domain started as back as in 1997 with two to three campaigns per year. The collection of newspaper websites started in 2002 and was carried out on a daily basis13. Currently, the National Library has fully implemented the harvesting of electronic publications from the Internet.

In Finland, digital deposit is regulated by the Act on Collecting and Preserving the Cultural Material from 2007. The deposit institution is the National Library (Kansallis Kirjasto). Electronic publications could be delivered to the Legal Deposit Office through an online form, via dedicated connection to FTP server, or in a data storage carrier. If the automatic collection fails, the publisher has to submit digital publications.\(^{14}\)

The legal deposit in Spain is assigned to the National Library (Biblioteca Nacional de España), which created a web archive in 2009 for preserving and assuring future access of the material published online. In July 2015 the Council of Ministers passed the Royal Decree implementing Law 23/2011, which states that the websites and online publications are considered as subject to legal deposit.\(^{15}\)

The deposit of online electronic publications in the United Kingdom is regulated by the Legal Deposit Libraries (Non-Print Works) Regulations 2013. It is based on the Legal Deposit Libraries Act 2003 and determines the procedures for requesting and harvesting the publications on the web. The institution entitled to build and maintain digital deposit collections in the United Kingdom, is the British Library.\(^{16}\)

In the Netherlands, no special legal deposit law exists. However, the deposit is based on the agreement from 1983 between the Royal Library (Koninklijke Bibliotheek) and selected publishing organizations. The Royal Library established the Dutch Repository of Electronic Publications in 1993, which was further transformed to e-Depot in 2002. The Royal Library has the status of national deposit institution. The agreement between the Dutch Publishers’ Association and the Royal Library from April 1999 regulates the deposit of electronic publications on a voluntary basis. The arrangement refers to both offline and online publications.\(^{17}\)

In some countries legal deposit regulation has been updated, but the collection of online electronic publications has not been implemented accordingly. Such is the case of Bulgaria, where a new article, amending the Legal Deposit Law in 2009, extended the deposit coverage to “the works in digital format published in electronic communication networks”. The legislative change remained on paper only, because no collection of electronic material from the Internet has been initiated and no respective procedure has been established.\(^{18}\) Another example of incomplete digital legal deposit implementation is Italy, where the deposit law has been changed and even digital infrastructure has been built, but the realization of the large-scale project has been interrupted because of severe budget cuts.\(^{19}\) On the other hand, the local deposit laws in Czech Repub-
lic and Portugal do not cover online electronic publications, but nevertheless these countries have started selective collection of websites identified by the national domain. Technological infrastructure is the second stage of digital deposit implementation, which comprises all software and hardware solutions, equipment and electronic platforms for the realization of digital legal deposit. In this respect no common approach has been applied so far. Individual solutions depend on the local traditions in legal deposit, the technological stage of development and the different standpoints taken by deposit institutions towards the publishers of off-line and online works. The investment level required for implementing and maintaining digital repositories still seems to be unaffordable for some countries within the European Union.

Coordination of public access and e-reading procedures is done at the national level. A good example is the Digital Content Storage System (DCSS) developed by the British Library, which is the shared infrastructure supporting the six interlinked deposit libraries in the United Kingdom20.

Technological cooperation exists at the international level, too. The experience exchange between the national libraries has allowed the use of the same software in several countries. Typical examples for coordinated approach are NetarchiveSuite, Heritrix, and Wayback Machine, which are internationally applied software solutions for automatic website collection and archive management21.

21 TOTOMANOVA, Antoaneta; STEFANOVA, Radoslava. Mrejovite resursi…, p. 7–27.
The third stage of digital deposit implementation is the practical procedure. It comprises all prescriptions, rules, guidelines and principles which ensure the realization of the whole process of delivery, classification and reservation of deposited electronic publications, as well as the way they are accessed by the users. These procedures usually regulate the relations between the deposit institution and all potential partners – individual and corporate publishers, distributors, and readers.

**THE STRUCTURE OF DIGITAL DEPOSIT PROCESS**

The structure of the digital deposit comprises four consecutive elements: collection, classification, preservation and public access. They are linked in sequence and interdependence.

The way of collecting the publications represents the main difference between the traditional and the digital deposit. Electronic publications on a physical carrier, such as CD-ROM, DVD, USB flash-drive, are still delivered in the traditional way, which presumes the active role of the publisher. What really differs from the traditional process is the collection of electronic publications from the Internet, because it is the deposit institution which actively does it. The notion “deposit” obtains a new meaning, because most frequently the deposit institution realizes an automatic collection through crawling software, commonly known as “harvesting”.

Deposit institutions collect web publications by three methods. The first one is the automatic collection by crawling software. In this case the national domain is used as identification of national belonging of the targeted websites. In case of access restrictions the publisher is asked either to assure access or to deliver the content. The second method is applied when the publisher prefers to deliver his own content. An agreement between the deposit institution and the publisher is usually needed. When the publisher is involved the delivery is realized through an online submission platform provided and maintained by the deposit institution. Submission on a physical carrier is also possible. The third method is the selective archiving carried on by the librarians from the deposit institution. In such cases the collected websites are usually related to big social, political or sport events, significant social campaigns, large public initiatives, etc. Having in mind the permanent increase of online publishing, the deposited electronic works are representative rather than a comprehensive reflection of all available online content. For example, the French National Library tries to achieve a representative “mirror” of the online publications.
and accept the fact that the comprehensiveness of online publications is not achievable with for the time being\textsuperscript{22}.

The classification of deposit electronic publications is based on both local and international regulation. The way the metadata is collected and dealt with in the classification process is still a challenge, because it involves many publishers and a huge number of electronic works. Higher automatization is targeted, especially for dynamic online electronic publications.

The major challenge in the preservation of electronic publications is sustainability. The dynamic innovations in software, reading devices and physical carriers raise the question about the long-term usability of electronically born products. They may become unusable in the future when new reading devices and practices replace those of today. Here comes the conflict between the authors’ rights protection connected to various ways of restriction of access and the need to preserve the deposited products in a format accessible for the decades ahead. That is why in France, for example, the files with DRM protection or closed-source format are not accepted because the preservation system of the National Library may fail to deal with them. Technical access solutions may also not be applicable for strongly protected online publications. The regulation of the digital deposit usually allows the library to make copies of non-print works in different format for preservation purposes without breaking the integrity of the works. This is the case in the UK and the Netherlands\textsuperscript{23}. Some deposit institutions – in Germany and Austria, for instance, make two copies of deposit electronic publications – one for preservation purposes and one for readers’ use\textsuperscript{24}.

Public access is the only communicative element of the digital deposit and “chronologically” comes after the collection, classification, and preservation, which are internal responsibilities of deposit institutions. This element of the digital legal deposit has got two aspects: regulatory – related to the set of prescribed rules, and practical – related to e-reading tools and practice.


\textsuperscript{24} Networking for Digital Reservation, p. 109–118.
The main purpose of the legal deposit of electronic publications is their reservation as part of the cultural heritage of each nation and the whole world. However, one of the key responsibilities of the deposit institutions is to assure public access to the digital archives. The use of the deposited electronic publications is realized through regulated e-reading practices and depends on the access restriction rules of the national deposit institutions. No internationally valid rules regulate public access to local digital deposit collections, but examples of prescriptive documents with international scope could be cited.

The Digital Single Market strategy of the European Union targets not only long-term preservation of the cultural heritage of Europe. It also triggers the enlargement of online accessibility to the preserved digital content. This is the spirit of article 10 of the European Commission Recommendation of 27 October 2011 on the digitization and online accessibility of cultural material and digital preservation. The document recommends that “right holders deliver works to legal deposit libraries without technical protection measures” and that the regulation allows “the transfer of digital legal deposit works from one legal deposit library to other deposit libraries”.

On the other hand, deposit libraries and publishers have defended more restrictive regulation of e-reading practices in the digital archives. Such position was clearly expressed by two large professional organizations – the Conference of European National Libraries and the Federation of European Publishers – in their Statement on the Implementation of (Statutory and Voluntary) Deposit Schemes for Non-Print Publications from 2012. The statement reflects the common practice of controlled e-reading, such as limited access in the premises of the deposit libraries, designated off-line computers and ban on concurrent reading. Digital deposited content in the United Kingdom is listed in the deposit libraries’ catalogues but cannot be distantly accessed. They could be read or viewed only on designated computer terminals in the premises of the six deposit libraries. One document only could be read at a time. Digital coping is not allowed and printed copy could be taken of a limited part of the document. The publishers have the right to impose embargo on their own electronic publications for a period of maximum of three years. The work could be used at the integrity level as it has been deposited. The library neither deconstructs nor aggregates the content. For example, if an electronic newspaper is deposited in separate articles, it is read by the users in the library in that way. If an
e-book is a single composition the library will not deconstruct it in chapters just to enable more people to use it at the same time.

In the Netherlands, only authorized users may have access to the deposited content – library staff and readers. The deposited publications could be accessed by links which work only in the National Library’s reading rooms. The publishers have guaranteed access to their own publications. The level of access to the content stored in the e-depot depends on the individual agreements with the publishers. Regarding downloading the publisher’s permission is decisive. The publisher could decide to allow equal terms for depository and any other use.

In France, access to deposited print and electronic publications is restricted to research areas only. The users could only be authorized people. The National Library of France offers 350 dedicated computers for consulting the web archives in its two branches located in Paris and Avignon. Access regulation in Germany is slightly different. Two copies of the deposited electronic publications could be read at the same time. Similarly to France, the two branches of the National Library – in Frankfurt and Leipzig, offer access to the deposited electronic publications. The publishers have the right and the responsibility to set access criteria in the metadata of the deposited publications.

Access regime regarding the deposited electronic works in Denmark is very restrictive because it is regulated according to the local Act on Processing Personal Data, based on the Directive on Personal Data of the European Commission from 1995. Access is only permitted to researchers with PhD degree or doctoral students. The deposited content could be accessed in the premises of the two national libraries. Online access is possible only for the Internet material, broadcasts and movies, and exclusively for research purposes.

In Finland, deposited electronic publications are available only on dedicated computer terminals at the National Library and other legal deposit libraries, the Library of the Parliament, and the National Audiovisual Institute. E-reading of the deposited electronic works in the National Library is realized on 10 designated workstations.

In Estonia, similarly to the United Kingdom, the publisher could impose an embargo on the use on its own electronic deposited publication. Otherwise, the National Library of Estonia provides less restrictive access. Readers are allowed to make one electronic or printed copy of the deposited electronic publications. Differently from most e-reading practices in other deposit institutions, remote access to deposited works is permitted. Instructions on how to distantly read e-books is published on the National Library website. Following the latest deposit regulations, the publishers have to provide each print publication along with its digital files\textsuperscript{28}. Thus, e-reading could be a tool to access deposited printed works if the reader preferred to use it electronically.

Croatia has also introduced an easy access to the deposited electronic publications, stored on the Croatian Web archive within the National and University Library in Zagreb (Nacionalna i sveuilišna knjižnica u Zagrebu). Access is free and e-reading could be also done remotely online.

In Austria, public access regulation depends on the publisher’s choice. The publisher has to select one of three access options: freely on the Internet, multiple access within the network of the Austrian National Library and individual access within the network of the Austrian National Library. The third option is the standard one according to the local Legal Deposit Law. The publisher could also block public access to its publications for a year. Unless the publisher had explicitly authorized remote access, the deposit electronic publication could be read in the premises of the deposit libraries only. Electronic copies of the deposited material are not permitted, but print-outs are allowed.

Differently from access to the printed deposited works, access to digital deposit content could be realized through e-reading only. Therefore, access regulation may be interpreted as e-reading regulation. Based on the practices in the observed national libraries the features of e-reading of the deposited electronic content could be identified. They are linked to the specific status of the deposited electronic content, which requires strict access regulations and thus sets the frames of e-reading practices in the deposit institution. Specific e-reading features could be classified into two types: restriction related and usability related. The first type of features is based on the limitations and preventive measures:

- restrictive e-reading regime, due to the cultural heritage status of electronic publications;
- e-reading location limited within the premises of deposit institutions;
- technological barriers for remote online access;
- e-reading allowed on dedicated off-line computers only;
- usage authorization required.
The second type of specific e-reading features relates to the way deposited works are used by the readers:

- e-reading is the only tool to consult the entire content of deposited electronic publications; print copies, if allowed, could cover part of the content;
- e-reading depends on the technological adaptation for sustainable long-term access; often separate copies are made for readers’ use only;
- one electronic publication only could be accessed at a time and thus no concurrent e-reading is permitted.

Given the differences in public access regulations, several questions still remain open for discussions. What is the optimal restriction level of public access to deposit electronic publications? Would a possibility for distant online access to deposited digital content contradict its special cultural heritage status? How can we differentiate access procedures to deposited electronic publications from the use of all the rest digital content in deposit libraries? This issue refers mainly to the technical tools for realizing such differentiation.

Conclusions

The concrete examples of several EU countries illustrate and confirm the three stages of legal digital deposit implementation – legislative regulation, technological infrastructure and practical procedures.

The changes in the national legal deposit regulations have been inspired by the perception of the electronic publications as part of the cultural heritage, which must be preserved and adapted for future access. Digital legal deposit is regulated by national juridical acts. However, in some countries the legislative changes have not been followed by practical actions for implementation of the digital deposit. No international regulation within the European Union concerning public access to the deposited electronic publications has been developed. The digital deposit has not been fully built in all EU member-states. The collection of online publications has become a key element of the whole digital deposit process, but the number of countries which have implemented it is still limited. The exchange of experience and knowhow will be crucial for the international extension of this process.

The technological infrastructure is the area where a certain level of cross-border cooperation has been achieved. Nevertheless, digital legal deposit is still a matter of local legislation and practice. If the existing technological platforms
were gradually synchronized, the implementation of the digital deposit in the remaining countries might be accelerated. Further update of the regulatory acts at European Union level would contribute to a more unified regulation of public access to national digital deposit collections.

The review of the national practical procedures proved that access regulation has set different restriction levels. The role of the publishers in the access given to the readers is also different. In regard to the online publications it varies from strong dependence on the publishers’ goodwill in Austria, the Netherlands and Germany to strong administrative power of the deposit institutions in Denmark and France.

The study has identified the specific features of e-reading of the deposit electronic content. Two types of specific e-reading features could be classified: restriction related and usability related.

Digital legal deposit is in a transformation process marked by fast growing online publishing and dynamic communication digitization. The challenges to the further development of the digital legal deposit are related to several aspects:

- legislative: related to the enlargement of the local deposit legislation to electronic online publications in terms of their collection, preservation, classification and public access.
- technological: related to the technological solutions for the whole digital legal deposit process. The major issue is how to ensure long-term usability of the deposit electronic content in the fast changing media environment.
- financial: related to the lack of financial resources of some of national deposit institutions for building and maintaining the whole digital legal deposit process – from automated collection to public access procedures.
- social: the collection and preservation of the online publication has not been perceived as a very high priority in all EU countries.

The European Union policies for wider access to the cultural heritage, the latest local legislation reforms and the trend for more open access in the Internet communication build the ground for forecasting how the digital deposit transformation would develop. The regulation of public access to the deposited digital content will most likely move to a more liberal regime including remote access, simultaneous reading and even download options. Further cooperation among the EU countries could be expected, especially in the technological area and knowhow exchange. The Digital Single Market strategy may lead to better synchronization of the legal deposit laws. The deposit institutions access regulation reflects the delicate balance between their preservation obligations, the
publishers’ business interests, the authors’ rights, and the need for public access to the deposited electronic content. Therefore, both access and e-reading regulation in the deposit institutions will strongly depend on the way this “conflict” is resolved within the complicated mix of responsibilities and interests.

Acknowledgements

This paper has been developed within the framework of the National Science Fund of Bulgaria research projects: D COST 01-10/04.08.2017 and D COST 01-11/04.08.2017.

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Santrauka


REIKŠMINIAI ŽODŽIAI: skaitmeninės talpyklos, skaitmeniniai leidiniai, el. skaitymas, institucinės talpyklos, atviroji prieiga.