Digital Communications of Ukraine Archival Institutions

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Abstract. The article analyzes the transformations that affected the archival sphere in the conditions of formation and development of a digital society. Archives are those institutions of social memory that not only preserve various sources on the history of countries, nations, communities, but also pass from generation to generation the information treasure, which is knowledge, evidence, and proof. In the conditions of the digital leap, storage formats, material carriers and, accordingly, information transmission channels are being improved. However, the functions of archival institutions remain unchanged, one of which is to be a reliable source of information, which is especially relevant for an open society, where different approaches and points of view on certain events, facts, and phenomena reign. Therefore, it is the digital communications of archival institutions that are of particular importance given the possibility of rapid dissemination of relevant information and exchange of views. Digital technologies primarily include a diversified network of channels and methods of data transmission, which are part of the tools. The publication examines precisely those digital communication tools that correspond to the field of activity, resource base and mission of archival institutions. It has been established that digital communication is quite actively being introduced by archival institutions of Ukraine to exchange information on the Internet, attract the public to information products and provide related services. In particular, the article analyzes the use by archival institutions of such tools as blogs, social networks, search engines, websites, tags, which are aimed at the development of customer-oriented and image technologies. Particular attention is paid to the organization of full-text online access to documentary information, project activities and partnerships, which are an important tool for implementing a digitization policy to realize a digital communications strategy.

Keywords: Digital Society, Archival System of Ukraine, Digital Communications, Communication Tools, Digital Communication Strategies.

1   Introduction

The term "digital communications" is relatively new. It began to be actively used in the early 2000s and was associated with digital media. With the development of the digital environment came the term "digital ecosystem," which has a fairly broad interpretation. In particular, the "digital ecosystem" refers to the digital environment in which the legislative regulation of digital communications, the management policies and practices and their application operates not only in the traditional telecommunications system, but also in the sphere of economics and social life. Thus, digital communications should primarily be understood as communication strategies in the digital ecosystem, which involve the use of both digital media (devices, tools, systems) and digital communication tools that are associated with social networks, blogs, portals, and websites through which information is exchanged. Today we can talk about the functioning of the digital society in developed countries, which is characterized by the use of digital communications in marketing technologies, in the management of various sectors of the economy and society, consumer market development, public relations. Ukraine is no exception. At the same time, the country's digitalization process was rather slow, gaining momentum after 2014. The impetus for rapid changes was the approval by the Cabinet of Ministers of Ukraine of the "Concept for the Development of the Digital Economy and Society of Ukraine for 2018-2020 and the Adoption of an Action Plan for its Implementation" (January 17, 2018) [23].

In January 2019, the EU launched the program "EU4Digital: Supporting the Digital Economy and Society in the Eastern Partnership" to expand the EU-Ukraine Digital Single Market, which officially entered into force with a budget of € 11 million on 22 May 2019 [10]. In order to implement the digital state strategy, the Ministry of Digital Transformation was established in September 2019. The Ministry is responsible for solving a set of tasks related to "the implementation of state policy in the field of digitalization, digital economy, digital innovation, e-government and e-democracy, information society development" [21].

Social memory institutions (archives, libraries, museums) also began to implement digital communication strategies. Unlike libraries that actively created electronic information resources and provided remote online access to consumers of information products, archival institutions rather slowly joined the digital online environment. It can be explained by the fact that archives, preserving a huge array of documents of socio-cultural and historical significance, did not have the necessary technological and material support. In the early 2000s, after the enactment of a number of regulations, the first website of the State Archives Committee (now the State Archival Service of Ukraine) appeared. A full-fledged electronic archive created by the Central State Archive of Public Associations was opened only in 2019, almost 18 years later. Monitoring studies, based on the expert assessment methodology for the preservation of digital historical and cultural heritage by archival institutions of Ukraine, conducted by a group of scientists from the National Aviation University (Kyiv, Ukraine) during 2013-2016 within the international project InterPARES Trust, revealed the absence of electronic archives and databases in the archival field as of 2016 [41]. With a certain degree of conventionality, it was possible to call the electronic re-

sources of the State Archives of the Odesa Region an electronic archive, given the significant amount of electronic documents posted online. However, access to most of them was limited, since a significant array of documents was saved in djvu format, the installation of which was not posted on the site, which complicated the work, and sometimes made it impossible due to lack of necessary technological capabilities for consumers [41]. Archival institutions provided online access to the list and description of funds and the consolidated catalog of metric books. Access to documents was partially satisfied by electronic exhibitions. The turning point in the digitalization policy was 2018-2019, when the digital communications strategy became decisive for the country's sustainable development.

Today, archival institutions are actively involved in the implementation of digital communications policy. In April 2019, the Ukrainian State Archive introduced into the archival institutions of Ukraine the rules and norms of methodological recommendations "The Digital Fund for the Use of Documents of the National Archival Fund: Creation, Storage and Access" developed by the State Archival Service of Ukraine and the Ukrainian Research Institute of Archival Affairs and Record Keeping. The document focused on compliance with organizational and technological processes, technical parameters and procedures for keeping records of digitized documents [4]. The emergence of the regulatory framework has accelerated the activities of archives in the creation of digital collections. Thus, the new realities have necessitated the generalization of best practices of digital communications in the system of archival institutions of Ukraine.

1.1　Research Goals

The issues and the subject of the study determined its purpose. It consists in identifying new trends that are characteristic of the digital communication environment of archival institutions of Ukraine.

1.2　Related Research

The topic of digital communications of archival institutions is a complex scientific problem, which includes several aspects related to the theory of social communications, digital communication strategies and the archival sphere itself. Separately, each of these areas is quite fully represented in the scientific literature. At the same time, there are very few studies that would accumulate these aspects in one scientific context [14, 17, 39]. It should be noted that the various problems of social communications (especially in the library field) are quite widely represented in the specialized literature. The analysis included those scientific works that are relevant to the subject of research. Of the recent comprehensive studies, a collective monograph by scientists of the Vernadsky National Library of Ukraine "Information and Communication Activities of Scientific Libraries in the Development of a Knowledge Society" can be noted. It covered theoretical issues related to the creation of information and communication library space; integration processes of libraries and research institutions that contribute to the formation of a knowledge society. The monograph also examined the

resource bases and services of scientific library institutions and demonstrated the activities of libraries in creating and organizing access to electronic resources and their popularization using marketing methods [5]. The work of T. Kolesnikova is devoted to the issue of digital services of libraries of higher education institutions [15]. In the works of V. Stepanov the possibilities and problems inherent in the development of digital communications in the library sphere, their functions and ways of survival are analyzed. Particular attention was paid to the study of a set of problems related to the strategy and tactics of libraries in the digital age [35, 36]. The issues of digital communications in the library sphere are considered in the work of N. Strelets, that highlighted the foreign experience of libraries, emphasizing that the development of this area abroad is facilitated by "developed standards, metadata schemes and open source software for long-term storage of network information" [37]. V. Strungar considered the activity of libraries on the development of communication strategies of libraries and consumers through social media. The author used a static approach, which allowed to determine the importance of creating not only centralized pages in social media, but also dispersed ones, which will contribute to the creation of a library micro-network in one account [38].

In comparison with the scientific literature devoted to electronic communications of libraries, there are still very few scientific works that address the issues of digital communications and digital archives. The problems of creating digital archives in social memory institutions attracted the attention of two international conferences "Historical and Cultural Heritage: Preservation, Access, Use", which took place in 2015 [12] and 2017 [13] and two international Ukrainian-Lithuanian scientific seminars "Digital Space and Archives" (Kyiv, 2016) and "Digital Transformations and Social Memory Institutions" (Kyiv, 2019), conducted at the Department of History and Documentation of the National Aviation University.

L. Filipova's publication is devoted to theoretical problems in determining the difference between the concepts of "digital archive" and "electronic archive". In particular, the author stressed that the concept of "electronic archive" is broader than the concept of "digital archive". The electronic archive, according to L. Filipova, contains documents that are stored in digital format, as well as electronic documents created with the help of computer equipment and information and communication technologies [42]. A number of works highlight the experience of different countries in creating integrated digital resources by a partnership of archives, libraries and museums. In particular, the dissertation work of O. Rybachko reveals the generalization of international experience in creating integrated digital resources of documentary heritage of social memory institutions [31]. S. Zvorsky's publication emphasizes overcoming bureaucratic approaches in the management of archives and libraries to facilitate cooperation between them for integrating documentary heritage into the world information space [11].

The scientists proposes the creation of a single online platform and a relevant site for the exchange of international experience between archives and museums and for the preservation of historical and cultural heritage [6]. A number of works are devoted to practical experience in creating and digitizing archival documents. So, one of the first publications, which dealt with the implementation of the Irmos project to create

an open digital archive on the basis of the Ukrainian Catholic University in partnership with Ukrainian and foreign institutions was the work of V. Bondarenko [2]. The author described step by step each of the stages of creating a digital archive from goal setting, information structure design, planning and description of documents, cataloging to the use of documents and problems of the digital archive [2]. The advantages of such an archive were the creation of a database that contained materials of manuscripts and old printed books, notes, musical works, illustrations, the possibility of better storage of archives, their use and organization of quick access to documents from anywhere in the world. Applied research to summarize the experience of archival institutions on the state of preservation and access to digital historical and cultural heritage in the archival space of Ukraine includes a collective monograph by I. Tiurmenko, M. Rohozha, L. Bozhuk, which became one of the first monitoring scientific researches in this area [41]. T. Yemelianova covered a number of issues related to the activities of the Central State Film and Photo Archive of Ukraine named after G.S. Pshenychnyi on the implementation of scientific, methodological and technical solutions for creating digital copies of documents, forming a user base, substantiating the principles of selecting audio-visual documents for digitization and introducing new approaches to completing collections with digital documents [8, 9]. T. Klymenko highlighted the experience of creating an electronic registration and accounting database, digitizing archival documents and modernizing the processes of record keeping and archiving in the State Archives of the Cherkasy Region [16]. Thus, the analysis of publications showed that scientists mainly focus on the study of experience, problems and the formation of digital collections. At the same time, the issues of digital communications, as a complex scientific problem, are still little studied in the scientific literature.

1.3   Methodology of research

The research methodology is based on the information and communication approach, which was applied to the study of digital communication tools, digital information projects and social partnership. The method of monitoring the websites of archival institutions of Ukraine allowed to identify the mechanisms of digital communications. The methods of analysis and synthesis helped to identify and determine the general trends of digital communication tools in the archival system of Ukraine, aimed at organizing collections of documents and providing online access to them. The comparative method made it possible to find out the changes in the digital infrastructure of archival institutions. The generalization method helped to identify the best practices in the field of digital communications of archival institutions.

2   Communication tools of archival institutions

In the context of digital transformations, archives as social and communication institutions undergo qualitative transformations. In the context of the development of a digital society and the formation of a single information space, the process of transi-

tion of archival institutions to new technologies is intensifying, which in turn leads to a change in the system of social and communication functions of archives.

The understanding of the archive as a subject of information processes is undergoing transformation. Performing its main function - mediation between the creators and consumers of retrospective document information, archives in the context of virtualization of communications shift the emphasis on the presentation and dissemination of digital retrospective information to "satisfy the information needs of society and the state, realize the rights and legitimate interests of each person" [18]. The introduction of innovative information communications radically changes the paradigm of presentation of archival information, policies and practices of managing available resources. The globalization of information processes has contributed to the development by the international community of common technological principles for the creation and exchange of information resources, the formation of integrated resources on the Internet and the organization of free remote access to socially significant information. This, according to scientists, contributes to avoiding a narrow understanding of digital copying as insurance and "creates its own special world of digital reality of the historical past and the development of culture and spiritual communication." In it, the institutions of social memory "turn into the main actors in the formation of a new virtual integrated culture, combining the various forms and contents of objects" of historical and cultural heritage [31].

Digitalization in the archival sphere is becoming increasingly customer-oriented [21]. The digital information communication system ensures the functioning of the virtual information space of the archival institutions of Ukraine, taking into account international standards for the processing and storage of retrospective information, which represents the national cultural heritage, integration with other digital resource bases. Thus, the digital information communication system "radically modernizes the conditions in the field of search, processing and storage of data. The virtual information space of archival institutions now includes the following virtual representations: sites, blogs, archive pages in social networks" [1], archival video channels, online presentations, virtual tours, etc. The use of modern digital marketing tools in the system of modern digital communications increases the importance of the information potential of archives, its representation in the network society [7]. The use of modern marketing technologies in the archival field is focused on understanding the process of forming consumer demands in obtaining information. The number of innovations and new products determine the active use of digital communication mechanisms in the activities of archival institutions.

Based on a study of the websites of 9 central state archives, 24 state archives of regions and annual reports on the results of the activities of the State Archival Service, the diverse aspects of digital communication strategies were examined and the best practices in the activities of archival institutions of Ukraine were identified.

2.1 Digital projects of archival institutions in the creation of information space

The project activity, which is based on social partnership, covers several areas of the digital communications strategy. It is the joint projects of the institutes of social memory that are the basis for large-scale events in the interests of both the direct participants and organizers of the project, and the general public [40].

Partnership projects increase the social significance of archives, which "perform vital functions not only of preserving the documentary memory of the state and society, replenishing information resources, but also providing social services" [19].

An important role belongs to archival projects in the formation of digital information space. Thus, cooperation with the Ukrainian Cultural Foundation became the basis for the implementation of the project "History of the Mykolayiv region of the 1960s and 1970s in film and photo documents. Digitization of visual documents in the State Archives of the Mykolaiv region", presented by the State Archives of the Mykolaiv Region in July 2019 with the aim of preserving and introducing into the scientific circulation modern objects of pictorial history as a component of the cultural heritage of Ukraine [34]. An example of the development of an international partnership in the direction of digitization of archival documents is the project "Alma Mater Leopoliensis: Activities of the Lviv Humanities of 1661–1946," implemented by the State Archives of the Lviv Region [33].

Research, digital reproduction and use of archival documents related to the Holocaust and the pre-war and post-war history of Jewish communities in Ukraine are carried out by the state archives of Vinnytsia, Lviv and Khmelnytsky regions in cooperation with the Holocaust Memorial Museum (USA).

Implementation of the projects "Very Important CASE" by the Central State Archive-Museum of Literature and Art [3], "Alive Archive", "BLITZ Archive" and "Cetera Archive" by the Central State Historical Archives of Ukraine in Kyiv contributed to bringing the activities of archival institutions closer to the needs of society, familiarizing the public with the most famous figures who played an exceptional role in the development of state-building and cultural-artistic processes in Ukraine and the most valuable archival documents covering their lives and work [25, 26, 28].

The popularization of the documentary heritage of archives, the comprehension of the achievements and lessons of history became the leitmotif of the project "The Ukrainian Revolution: Archival Chronicles", dedicated to the 100th anniversary of the Ukrainian Revolution (1917-1921), launched in 2017 by the Central State Archive of the Supreme Authorities of Ukraine. A significant part of the project was the monthly presentation of collections of documents from the funds of the archive "The Calendar of the Revolution" (450 documents were presented during 2019) [29].

Formation of an objective vision of the historical past for a better understanding of the present, honoring the memory of the victims, commemorating the huge contribution of the Ukrainian people in the fight against Nazism became the main idea of the Internet project of the Central State Film and Photo Archive of Ukraine named after G.S. Pshenychnyi dedicated to the 70th anniversary of the Victory over Nazism in Europe and the end of World War II "If We Remember We Win: 1939-1945" [27]

and the exhibition project of the State Archives of the Lviv Region "The Torn Roots" (carried out in cooperation with the National Museum of History of Ukraine in the Second World War to produce 45 digital scanned copies related to the forced resettlement of the population of the village of Liskuvate in 1951) [30].

A special place belongs to projects that promote the development of regional partnerships for the preservation of historical and cultural heritage. The joint organization by state authorities, museums, educational and public institutions of local history activities and the popularization of archival information resources on the history of regions contribute to the formation of historical memory, national and cultural identity. Such projects include, in particular: the historical-documentary and public project "Ostarbeiters of the Kyiv Region: Difficult Letters" (2019), organized by the State Archive of the Kyiv Region and dedicated to the Day of Remembrance and Reconciliation [32]; "Interactive Lviv", "City Media Archive" [33] organized by the State Archive of the Lviv Region in cooperation with the Center for Urban History of Central and Eastern Europe and the Harald Binder Private Foundation, during the implementation of which 19 storage units and130 film documents were digitized.

To achieve the goals declared in the projects, archival institutions use various forms of information activities: videoconferencing, online exhibitions on the websites of archival institutions and presenting them on social networks (Facebook, Twitter, YouTube), virtual tours, information messages in electronic media and regular columns on TV -and radio channels with the presentation of digitized documents, blogs, tags, etc. These forms of activity are used both within projects and independently.

2.2   Changing the paradigm of presentation of archival information resources

In the context of digital transformations, Ukrainian archivists are increasingly aware of the importance of bringing archives closer to the needs of society and the benefits of digitalization. Over the last ten years, there has been a tendency to change the policy of management of archival information resources: from declassification and preservation of the documents of the National Archival Fund (NAF), to bringing the activities of archives and institutions of the insurance fund documentation to the information needs of civil society.

The development of digital information space in Ukraine was facilitated by the harmonization of normative legal acts and scientific and methodological works in the field of archival institutions with international standards, which became the basis for digitizing descriptions and providing access to them via the Internet. If at the beginning of 2016 only about 6.4% of descriptions were digitized [20], then from 2017–2018 there is a tendency to increase the digital content of the NAF information resources, which is intensifying in 2019.

Thus, in 2017, 42 905 storage units were digitized, which was 61% more than in 2016 and 300% more than in 2015. In addition, 15 611 descriptions were digitized in 2017, which is twice as many as in 2016 and 22 times more than in 2015 [24]. At the beginning of 2020, 83 052 units of storage and accounting of NAF documents were digitized [19].

The digitization of NAF documents has become a priority for archival institutions of Ukraine in organizing access to archival information. Actually, the advantages of digitalization are precisely in optimizing the operation of all archive processes, expanding the list of archive services, improving the quality of customer service for retrospective information.

The best practices of archival institutions in the formation of digital information space are presented in Table 1.

Table 1. Best practices of digital communications of archival institutions

Characteristic of practices	Archive name
Digital archive	Central Archives of Public Organizations of Ukraine
E-Archive	State Archives of Kyiv Region
Digitization of NAF documents	Central State Archive of Public Organizations of Ukraine, Central State Historical Archives of Ukraine in Lviv, Central State CinePhotoPhono Archives of Ukraine, Central State Scientific and Technical Archives of Ukraine, state archives of Vinnytsia, Volyn, Kyiv, Luhansk, Khmelnytsky regions
Digitization of descriptions of NAF documents	State archives of Volyn, Kirovohrad, Mykolaiv, Rivne regions
Cooperation with electronic media	Central State Archives of Supreme Authorities of Ukraine, Central Archives of Public Organizations of Ukraine, Central State Historical Archives of Ukraine in Kyiv, Central State Archives Museum of Literature and Art of Ukraine, Central State Archives of Foreign Archival Ucrainica, state archives of Volyn, Vinnytsia, Donetsk, Zakarpattia, Luhansk, Lviv, Odesa, Poltava, Rivne, Sumy, Ternopil, Chernihiv regions
Organization and presentation of online exhibitions	Central State Archives of Supreme Authorities of Ukraine, state archives of Kirovohrad, Luhansk, Lviv, Mykolaiv regions
Project activity	Central State Archives of Supreme Authorities of Ukraine, Central State Archives Museum of Literature and Art of Ukraine, Central State Historical Archives in Kyiv, State Archive of Kyiv Region, State Archives of Lviv Region, State Archive of Odesa Region
Presentation of the rubric "Document of the Day" on the official website of an archive	State Archives of Kyiv Region

Characteristic of practices	Archive name
Representation in social networks	Central State Archives Museum of Literature and Art of Ukraine, Central State Archives of Supreme Authorities of Ukraine, Central Archives of Public Organizations of Ukraine, Central State Historical Archives of Ukraine in Kyiv, Central State Electronic Archives of Ukraine, Central State Archives of Foreign Archival Ucrainica, state archives of Kirovohrad, Luhansk, Lviv, Odesa, Rivne, Ternopil, Kyiv, Kharkiv regions
Blogging	Central State Electronic Archives of Ukraine, Vinnytsia Regional Archive
Tags	Central State Electronic Archives of Ukraine, State Archives of Kharkiv Region

3 Conclusions

Thus, the analysis of the obtained results showed that archival institutions of Ukraine are actively implementing and developing, especially in recent years (2018-2019), digital communication technologies aimed at optimizing the communication functions of archives, organizing collections of documents and providing online access to them. This, in turn, changes the system of social and communication functions of archives and contributes to the growth of their social significance in society. The most common digital communication tools currently used by Ukraine's archival institutions are: blogs, social networks, search engines, sites, tags, which are aimed at the development of customer-oriented and image technologies.

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