Specifics of electronic documentary editions of foreign archives

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Abstract. The active use of digital and network technologies by archival institutions for the effective implementation of one of the key activities of the archive, namely, the popularization and use of documentary heritage by society in the digital space determines the relevance of the problem. Information technology has assumed the role of the keeper of archives, the information carrier of archive documents and their publication. They change archival theories and ensure the transformation of the public memory and cultural heritage of the country. Documentary edition in the electronic environment of foreign archival business has different approaches and practices. The models of archived information differ in digital form. The purpose of the article is to assess the trends in the popularization of documentary heritage on the web archive of foreign countries. The research strategy will contribute to the analysis of concepts and problems in the scientific research of foreign authors, the definition of types and features of the creation of electronic editions and methods of describing metadata. The research materials include foreign regulatory and methodological documents; websites of a number of foreign archives: The National Archives of Great Britain, the Federal Archives of Germany, the National Archives and Records Administration of the USA (NARA), and the French National Archives. The research results will be both recommendations to archival institutions of the Republic of Kazakhstan on the positive experience of popularization of documentary heritage and the creation of software products.

Keywords: electronic edition; electronic archaeography; document exhibitions; video reviews; virtual tours.

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Introduction

The cultural function of archives at the present stage and their provision of services in the digital space is a natural process and implemented through projects aimed at promoting information in society about archives and archival documents.

The study of the practical experience of foreign countries makes it possible to expand the types of the publications of archival materials for their effective use and creation of backups due to fading of the originals fade and web archiving of existing databases. The main types of electronic documentary editions include exhibitions of documents (including in digital form), documentary editions (traditional and digital), excursions (real and virtual). One of the largest projects in the EU is Europeana, which contains more than 50 million digital recordings from the collections of thousands of cultural institutions across Europe.

Furthermore, it is currently impossible to deny the long-term importance of digital information from archival institutions, which is embodied on websites in various formats. Current technologies are tools that create digital electronic editions of archival documents that to be preserved for a long time and be convenient in use. Electronic editions require a lot of effort in technological matters, as information technology is developing at a fairly rapid pace. Furthermore, as Lavoie emphasizes: "this process is intertwined with services that support the digital information environment, namely the economic, legal and social context" (Lavoie & Dempsey, 2004).

This study considers the features of practical experience in the presentation of documentary archival publications of a number of foreign countries on the basis of archaeographic perspective. Novelty of the research consists in the examination of the best practices and recommendations for the introduction of innovative forms of documentary publication in the electronic field in the archival sector of the Republic of Kazakhstan. The purpose is to suggest the best foreign practices in the publication of archival documents in the electronic environment. The following tasks are defined to solve this goal: interpretation of scientific research in the field of electronic archaeography; analysis of foreign normative and methodological base on digitization of similar documents; assessment of the specifics of web archive and various types of electronic documentary publication.

Methodology, methods and materials

The interdisciplinary method was applied in the research, thus the use of tools of archaeography, archival science and computer science made it possible to analyze the features of websites of foreign archives on the problem of documentary publications. Along with that, comparative and typological methods revealing the features of electronic documentary publications on foreign websites were used. Systematic approach, that allows revealing the specifics of publishing archival materials of archival institutions from different countries. Functional method discloses the possibilities to determine the specifics of the processes of creation and accessibility of electronic documentary publications. The comparative method reveals the specifics of web archives of a number of countries: technologies; forms of publication

Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ. **№3(148)/ 2024** **113**
Тарихи ғылымдар. Философия. Дінтану сериясы
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in the electronic environment. Using interdisciplinary research method is dictated by the very specificity of electronic publication of archival institutions, in particular, computer science methods were used to analyze the technological functions and integration capabilities.

The following algorithm was chosen for the analysis: interpretation of the foreign regulatory and methodological framework for digitizing analog documents; assessment of the specifics of the web archive and electronic documentary editions.

Discussion

Based on the study of foreign historiography in the field of electronic archaeography, we have identified the current directions in this field: influence of information technology on archival theory changes, reliability and evaluation criterion of digital archival documents and technological obsolescence of information systems, a range of problems related to the preservation of digital materials in the long term and their types. Scientific statement in this aspect will allow us to evaluate the directions of development of electronic archaeography in the foreign discourse.

The authors acknowledge that the active use of information technology is changing the archival theory in the first place. Thomassen notes that archival theory, unlike other scientific disciplines: "because of its goals, objects and methodology, is associated with the process of informatization" (Thomassen, 2001). They raise an important aspect of the theory of archival science Menne-Haritz, Angelika, that is the assessment and principle of the origin of digital records and "consider the metadata of information technology to be composing, should be unchanged and their potential usefulness for interpretation should be taken into account" (Menne-Haritz, Angelika, 2001). Dolla states that archivists need to formulate other evaluation criteria and implement them into the design of computer systems (Dollar, 1992). In general, as G.N. Lanskoy emphasizes: "many provisions, approaches and methods of archival science retain fundamental importance and remain unchanged in the transforming information technology conditions" (Lanskoy, 2021: 23)

The concept of digital edition is being discussed by scientists. There are different understandings of this concept among scholars. Digital editions are not only a simple conversion of an archival document into a digital format. The digital facsimile duplicates the original source, which is used to preserve the original. Therefore, this edition cannot carry new information. Digital publishing of texts allows to create a new understanding of the source material. Franzini Greta, Terras Melissa, Mahoney Simon in the "Catalog of scholarly digital editions" define the indicators of digital edition and "the criterion is the understanding of digital text projects":

– an edition of the material under consideration: S–Scholarly (the edition should be critical); D–Digital (retro-digitized printed edition is not a scholarly digital edition, but it can turn into a scholarly digital edition due to new content or functionality);

– an electronic edition (should present its material (usually in the form of a transcribed/edited text), and the catalog, index, descriptive database are not considered as editions;

a scholarly edition – complete/prototype (SDE (Scholarly Digital Edition) is a publication of the material under consideration (Franzini, Terras, Mahoney, 2016: 162). We follow the Sale

114   **№3(148)/ 2024**   *Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ.*
Тарихи ғылымдар. Философия. Дінтану сериясы
ISSN: 2616-7255. eISSN: 2663-2489

model; a scholarly digital edition is a critical digital edition understood as an analytical and accurate contextual study offering hypotheses and a new understanding of the source text under study. The catalog raises questions about the nature of digital editions and the relationship of digital editions with source texts (Sale, 2016: 39).

Regardless of the type of electronic editions of archival institutions, they all have advantages over paper documents, namely, to provide and manage, exchange volumes of data, multi-media, which allows to structure hypertexts, include audiovisual materials, active interaction with users, accountability. Considerable attention is paid to the reference apparatus of electronic edition, as it meets scholarly needs and "without radically reducing or completely hiding its critical nature" (Buzzoni, 2016: 52). The researcher pays special attention to the scholarly type of edition, which allows presenting in hypertext all the evidence necessary for the reader to understand both "intertextual and intratextual connections" (Buzzoni, 2016: 52).

Lavoie & Dempsey defines the prerequisites for interaction in a digital environment as interoperability, involving the exchange of digital content without additional technical devices and its management involving combination to meet the needs of users; transactionality is a required mechanism determining interaction in the information environment and the management of intellectual property rights and confidentiality, as well as ensuring the integrity and authenticity of content and services; preservation ensuring the long-term future of digital resources and ensuring the preservation of scientific and cultural data both in their historical continuity and in media diversity (Lavoie & Dempsey, 2001: 1).

With regard to the concepts of web archive, website, web archiving, web page, Internet archive, there are a number of important explanations of its meaningful content in the research discourse. Web archiving began in the mid-90s of the twentieth century in foreign practice. Its main task is to preserve the content. The concept of web archiving appeared in Taiwan for the first time. "The main reason is to provide both short-term and long-term access to web pages. Now there is a set of tools and services that allow to save important aspects of our online memory" (Adoghe et al., 2013: 597, 599).

Emmanuel Di Pretoro, Friedel Geeraert note: "Web archiving is defined by the International Internet Preservation Consortium (IIPC) as a process of collecting parts of the World Wide Web", saving collections in archival format and then providing archives for access and use. Adhere to the point of view of this author, who defines the term in the next way "Web archiving is the process of collecting valuable content from the World Wide Web" in an archival format, providing an opportunity for independent information management and preservation for the general public, historians, researchers and future generations. Websites are captured and archived for long-term access through web archiving in order to support preservation of web content. The Internet Archive archives websites by topic. In addition to its own search and browsing tools, the Internet Archive uses the Wayback Machine interface, which allows users... In the context of archiving, metadata as an important issue, "metadata practices vary greatly depending on the various web archiving initiatives". The British Library, for example, works with different levels of administrative and descriptive metadata description. Not all metadata elements are generated for each selected website, but possible elements include rights and licensing data, scan schedule, title, topic, keywords, short summary and attribution to a special collection.

Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ. **№3(148)/ 2024** **115**
Тарихи ғылымдар. Философия. Дінтану сериясы
ISSN: 2616-7255. eISSN: 2663-2489

On the other hand, the Swiss National Library encodes the following elements of descriptive metadata: URL, name, organization, producer (name, place, canton, country, contact person for granting rights), language, Dewey classification, keywords" (Emmanuel et al., 2019: 66).

The web archiving process has the following mechanism:
– a scanner creates a list of all hyperlinks contained in the scanned web pages;
– direct access to the server. In this case, a copy of the information on the server is obtained without using the HTTP protocol;
– transactions, which is essentially a screenshot taken by a user accessing and interacting with content on a particular website. (Emmanuel Di Pretoro, Friedel Geeraert 2019: 64-65).

The International Internet Preservation Consortium (IIPC) in 2003 greatly facilitated international cooperation in the development of open-source standards and tools for the creation of web archives. Existing web archives use the following selection criteria to determine what to save: a domain (for example, .gov or .edu), topic or event, type and genre of media. Many European countries archive the Internet in their country's domain. Web archives should preserve the authenticity and integrity of archived web content. The requirements for authenticity and integrity vary depending on the purpose of the collection. The context of archival records includes the origin and the original order in the traditional theory of archive management. The origin includes information about the source of the records, such as the producers of the records, the transactions that result in the records, and the supply chain. The concept of original order for web resources may be combined with the concept of structure defined in the traditional theory of archive management. Jinfang Niu notes: "Modern web archives mainly use three approaches to the organization and storage of archived web content: local file systems, web archives and non-network archives" (Jinfang Niu).

Regarding the term "Internet Archive", it is considered to be the most "famous of the web archives". The Wayback Machine is an interface for accessing its records. A web archive is the collection, preservation and provision of information on the Internet. A web page is not a static document, but a composition of text and images with instructions on how to connect these various elements together. They will look different depending on the size of the screen used to view them (for example, a laptop or a mobile phone), and in fact may look different depending on the web browser used" (Yariv, 2023).

A website is a place on the Internet where you can easily post information. Understanding the differences between a website, a web page, and a web server is the key to effective navigation in the digital world. A web page is a separate document or page on a website. Websites can have multiple web pages linked by hyperlinks to create a single website.

A special aspect is the issue of metadata and their description. "Metadata is closely related to the concepts of integrity and authenticity of online information. ISO 15489-1 "Information and documentation – records" (Di Pretoro et al., 2019: 65). Technical metadata is created automatically during scanning. The concept of accessing the Belgian Web Archive is that users can access it 1) through the public access platform and 2) through descriptions in the EAD in SAM (Public Archives Management System) or through MARC records in Syracuse (Royal Archives Catalog). There are four types of metadata: administrative, descriptive, persistent, and technical. They may be embedded in digital images or stored separately. "The work on metadata

116 **№3(148)/ 2024** *Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ.*
Тарихи ғылымдар. Философия. Дінтану сериясы
ISSN: 2616-7255. eISSN: 2663-2489

in cultural heritage institutions is mainly focused on the problem of heterogeneity of metadata. Efforts have been made to develop and implement collection-specific metadata standards, such as MARC 21 (Library of Congress, 2010) and EAD (Library of Congress, 2002), for library and archival materials, respectively, which are designed to standardize metadata descriptions across institutions. It is designed for data communication format based on SGML/XML syntax in order to support the availability of archived data" (Zervanou et al., I2011: 44-45). A number of scientists propose to remodel metadata for documentary collections. The use of metadata to capture the interlinkages between archival materials and other objects may be carried out in various ways, although approaches to related data may be particularly useful in this regard, and they have aroused considerable interest in the field of cultural heritage in recent years. Individual representation of a variety of materials and presenting a single model in an archival collection become more difficult, especially for collections (Dobreski et al., 2019: 1).

Rapidly developing technologies open up new opportunities for "virtual communication with researchers and the public, online exhibitions should be reviewed and maintained to complement institutional and programmatic goals, especially if they are still relevant to the mission of the institution" (Hackbart-Dean et al., 2023:1).

Four pragmatic principles proposed by the following authors Elizabeth Russi Rock; Ruth Kitchin Tillman. They believe the archival community should follow when determining how to use related data. This approach involves interaction with communities (both inside and outside cultural heritage institutions) that already publish related data, taking into account the limitations of institutional resources. The meaning of archival records is revealed not only through their content, but also through their context, namely the archaeographic description. It provides information on the functional relationship between content creators and the records they create. The arrangement schemes preserve the semantic connections between the recordings. Processing notes and storage histories record the origin of the collection, including agents, locations and dates of transfer, evaluation and processing. The principle of electronic archaeography: "an iterative and realistic approach to creating and publishing related data to meet specific needs and use cases; adherence to ethical principles is as important for working with related data as compliance with content standards; the implementation of related data should be sustainable not only within the archival community as a whole, but also at the individual level institutions, whether committed to new workflows, systems, or infrastructure; related data focuses on use cases that benefit both the communities we serve and the communities we partner with" (Russi Rock et al., 2022: 182-183, 185-187).

Results

Since 2000, web archives have been created in Australia, the United Kingdom, Sweden, New Zealand, the United States and the Czech Republic. Currently, most European countries have web archives at the national level. Managing many other types of information resources, the web archive workflow includes evaluation and selection, acquisition, organization and

Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ. **№3(148)/ 2024** **117**
Тарихи ғылымдар. Философия. Дінтану сериясы
ISSN: 2616-7255. eISSN: 2663-2489

storage, description and access. The basic document in foreign countries is considered to be the UNESCO Charter on the Preservation of the Digital Heritage, adopted in 2003, where there are requirements for the preservation of digital heritage. To serve as a reference point and forum where Member States, intergovernmental and international non-governmental organizations, civil society and the private sector could come together to develop goals, policies and programmes that contribute to the preservation of the digital heritage. It notes: "Digital materials include texts, databases, still and moving images, sound and graphic materials, software and web pages presented in a wide and ever-increasing range of formats. The goal of preserving digital heritage is to ensure that it remains accessible to society. Accordingly, access to digital heritage materials, especially those related to public use, should be free from unreasonable restrictions. At the same time, classified and private information should be protected from any form of encroachment. The continuity of the digital heritage is an essential principle. It is necessary to take measures throughout the entire "life cycle" of digital information, starting from its creation and ending with access to it, in order to preserve the digital heritage. The long-term preservation of digital heritage begins with the development of reliable systems and technological processes through which it will be possible to obtain authentic and sustainable digital objects" (UNESCO Charter, 2023).

There are standards and technologies used to manage digital archives: ISO 14721:2012 (Open Archive Information System or OAIS). It is a fundamental digital storage standard that provides a reference model or a high-level structure that defines participants in digital storage, their roles and responsibilities, as well as the types of information that should be exchanged during storage, reception and distribution from the digital repository (ISO 14721:2012); ISO 19905 (PDF/A) standard establishes the methodology for using the portable document format (PDF) (ISO 19905); ISO 15489 (records management) (ISO 15489). The Digital Archives Handbook: A Guide to Creation, Management and Preservation provides information on working with digital archives (Edited by Aaron D. Purcell. Lanham, Md.: Rowman and Littlefield). The standards for the content of American archivists are ISAD(G), ISAAR-CPF, ISDIAH, ISDF and DACS. The EAD/EAC-CPF encoding standards provide one encoding method. They perform a special function: they encode an indexed find or an authority archival record. The DACS standard is based on the principle of "Archival description reflects professional ethics and values" (Russi Rock et al., 2022: 185).

In foreign practice, there are a number of international interdisciplinary projects on preservation of electronic archival documents. One of them, InterPARES2, headed by L. Duranty, deals with the long-term preservation of authentic electronic documents. This project analyses numerous metadata initiatives and creates a tool to identify the strengths and weaknesses of existing metadata schemes in relation to issues of reliability, accuracy and authenticity. It is correctly noted by this author that there should be: "two complementary principes, one for document creators and the other for custodians". The pioneer of digital history is Roy Rosenzweig, who, in the context of historical informatics, proposes innovative forms of historic preservation.

The National Archives of Great Britain (NAV) has developed a variety of programs and strategies for Digital policy (Digital strategy) in the first decade of the 20th century. Their goal is

118　**№3(148)/ 2024**　*Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ.*
Тарихи ғылымдар. Философия. Дінтану сериясы
ISSN: 2616-7255. eISSN: 2663-2489

to preserve and access the "digital heritage". Eirini Goudarouli, Anna Sexton, John Sheridan note: "The National Archive is the official archive of the British government, the leader of the archival sector in England and an institution of cultural heritage" (Goudarouli et al., 2018: 3). The web archive has collections (both physical and digitized or born digital) for research and experts. The authors note that National Archives of Great Britain is a "first-generation digital archive that digitally models a long-established set of archival practices developed for physical records" (Goudarouli et al., 2018: 4). Currently, the National Archives of Great Britain is transforming to a digital archive of the "second generation". Therefore, new technologies such as Snapchat, Google Docs, neural networks, blockchains, hashing algorithms, cryptography and clouds are used, and they have changed the nature of archives, improving the ways of creating, recording, extracting, encoding, curating and storing information. The use of artificial intelligence is becoming more widespread and diverse. Distributed ledger technologies (DLT) such as blockchain are used as a tool to maintain trust in digital records over time. DLT uses cryptographic methods and a distributed storage model to create verifiable proof that an archived object has not been tampered with by creating multiple publicly available instances. This means that if a digital file has been modified in any way, it becomes impossible to hide the fact that it is now different from when it was registered in the distributed registry. The developers focus on ensuring the sustainability of the digital archive by creating a system to ensure the verifiability and transparency of the digital archive with DLT at the center. Special attention is paid to the traceability of functions used to manipulate original digital objects. The basic principle is that each function used to manipulate a digital file is registered in a distributed registry, and only verifiable functions can be used. Thus, a presentation copy of a digital object may be traced back to its original version using a set of all the functions used to create or manage it throughout its lifetime. This technology may change the sustainability of digital archives, as well as allow archives to jointly manage records and, by exchanging them, guarantee their integrity. Moving digital services to the cloud gives researchers access to websites, government department videos, and social media activity" (Goudarouli et al., 2018: 4-5, 10).

The National Archives of Great Britain equally has various digital spaces in which digital records are created or stored, such as websites, online catalogs or other digital infrastructures of archives, cultural institutions and corporations. You can find the following on the website of the National Archives of Great Britain with the use of keywords: exhibitions; online collections; web archive; publications; image library; podcasts and videos. The research may be chosen in the section "Internet collection" by the research topic. In addition, you may review the required data after registration on website Find my past. For example: British Army Casualty Lists 1939-1945 (British Army Casualty Lists 1939 – 1945) [Fig. 1]. These are the digitized series of records WO 417 of the National Archives [Fig. 2].

Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ.   **№3(148)/ 2024**   **119**
Тарихи ғылымдар. Философия. Дінтану сериясы
ISSN: 2616-7255. eISSN: 2663-2489

Figure 1. British Army Casualty Lists 1939 – 1945
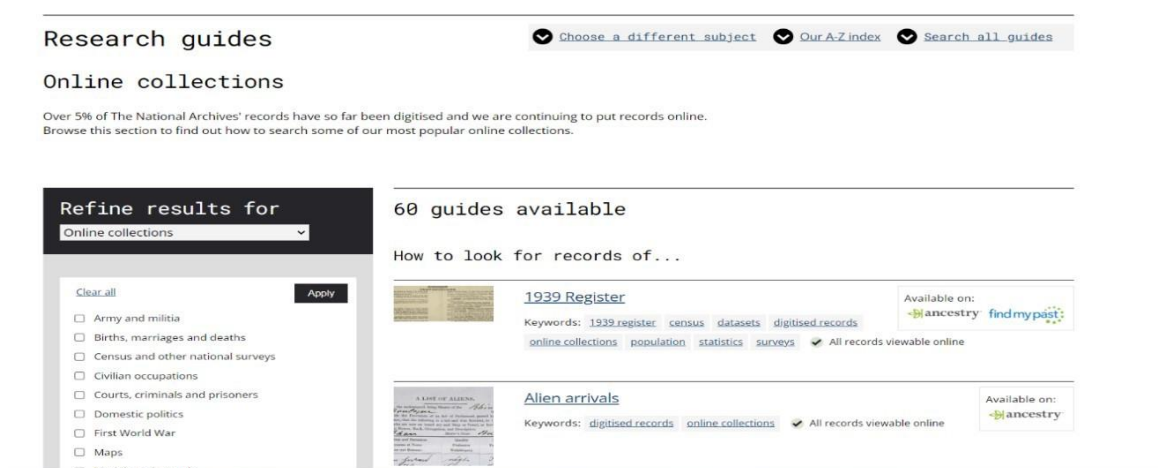Note: Information is taken from the National Archives of UK website

Figure 2. Digitized series of records WO 417 of the National Archives
Note: Information is taken from the National Archives of UK website.

The lists contain records indicating the names of officers, medical personnel and other persons who were reported as having died in battle, died as a result of illness or fighting, or missing or captured. These records were regularly updated and supplemented by the Ministry of Defence of the country. In this Online collection, personal records reflect the transcription in the same way as in the original images and documents. The "Web Archive" section includes information on videos, tweets, images and websites that date from 1996 to the present.

The section "Publications" has information with various methodological recommendations and rules (section "Publications"). Guidance on the Legal Deposit Libraries (Non-Print Works) Regulations 2013 has arrangements for description of the digital content, publishing documents. Its purpose is to ensure the preservation of non-printed materials for the transmission of information to the next generation. Section 7 of the rules describes metadata information regarding an electronic edition: author; title; physical properties (file type and size); ISBN number.

The section "Podcasts and Videos" is of interest. Podcast means a type of audio and video content where one or more people discuss a certain topic. The podcast has its own audience,

120　**№3(148)/ 2024**　*Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ.*
Тарихи ғылымдар. Философия. Дінтану сериясы
ISSN: 2616-7255. eISSN: 2663-2489

format, and specific topics. The search is performed by parameters: month, author and keyword. The video is automatically viewed on the YOU TUBE channel. (Podcasts and videos) [Fig. 3].
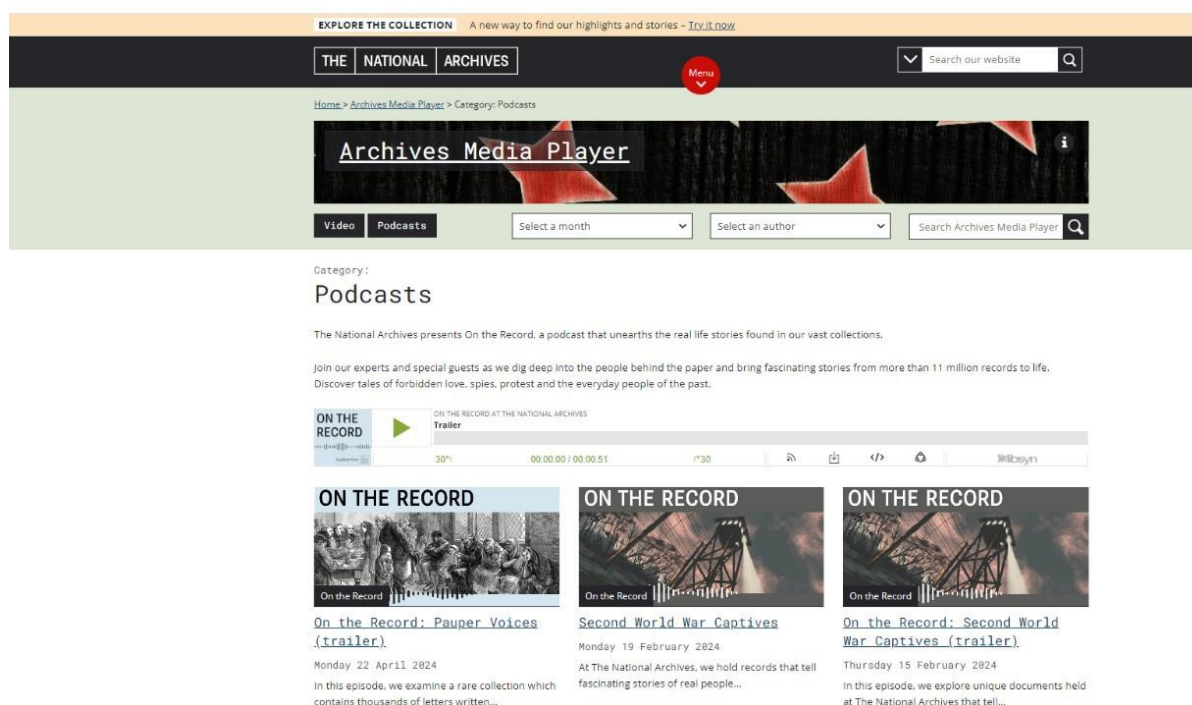

Figure 3. Website section "Podcast and Video"
Note: Information is taken from the National Archives of UK website.

The National Archives of Great Britain has various programs and development strategies. Currently, the archive is actively using new modern technologies in its work, thereby improving access to documents online. The strategic plan "Archives for Everyone" for 2023-2027 defines innovative ways to preserve, collect records and transfer them to the next generation (Strategic Plan).

The website of the Federal Archives of Germany (Bundesarchiv) (German website) has digital collections under the headings: e-books, electronic articles and electronic journals, online dissertations, digital music recordings, websites, access to the web archive of international and event collections, digitized collections. The Federal Archives of Germany offers digital access to the funds using the invenio application, which has an up-to-date overview of the funds of the Federal Archives. You should register in invenio (application) for access to more information online. You should register in invenio application for access to more information online. This system allows to provide online access to documents, but with the permission of the archive. The site has certain requirements for access to documents. Each archive has its own limits on the number of files used: from 5 in Freiburg to 10 files. The approach to documents is individual, there are restrictions on one or another type of document and the chronological period. Archival materials can be viewed digitally and pre-ordered.

The French National Archives (French website) has sections: publications, virtual exhibitions, articles, news, history pages. The section "Pages of History" has 1,754 documents on various

Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ.   **№3(148)/ 2024**   **121**
Тарихи ғылымдар. Философия. Дінтану сериясы
ISSN: 2616-7255. eISSN: 2663-2489

topics of the country's development. The information may be sorted: by keyword, by date, by type of the document edition. The data is presented in the form of a brief preface about the topic, there are additional links to study the topic (History pages) [Fig. 4].

Figure 4. Website section "History Pages"
Note: Information is taken from the French National Archives website.

Section "Archive publications" has 1,961 documents. This section allows to sort by keyword, document type, publisher, and dates. You may view information about the location of each document related to the topic of the publication in the upper right corner.

In France, information about the IIIF (International Image Interoperability Framework) is interesting – special features aimed at an international image compatibility framework that are distributed on the Internet for the preservation of cultural heritage documents. The IIIF covers a set of open-source technologies and standards, and also designates the international community that develops this topic. This community includes archives, libraries, museums, and universities. On the part of archival documents, the use of IIIF is to develop and distribute digital collections hosted on the Internet. This application contributes to the active development of virtual exhibitions, the creation of a collection of documents and cooperation with other archival institutions. The image is accompanied by a set of metadata about the structure of the document. IIIF relies on several APIs, (application programming interface), which allows individual software to interact with each other. The use of this interface in archives made it possible to provide interactive access to images without loss or distortion of its quality (International Image Interoperability Framework).

The website of the US National Archives and Records Administration (NARA) https://www.archives.gov / has sections: e-books, publications, virtual exhibitions, archival records, databases (NARA).

Section on e-books, exhibition guides, which are available for viewing with brief information (Section on e-books, exhibition guides) [Fig. 5].
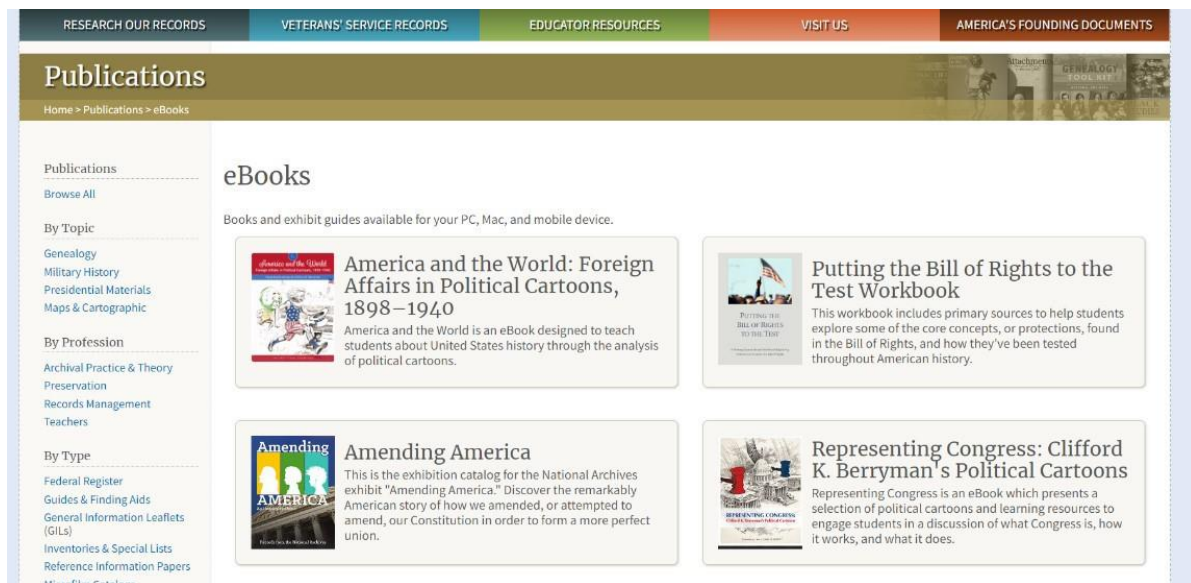
122 **№3(148)/ 2024** *Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ.*
Тарихи ғылымдар. Философия. Дінтану сериясы
ISSN: 2616-7255. eISSN: 2663-2489

Figure 5. Website section "E-books and exhibition guides"
Note: Information is taken from the US National Archives and Records Administration website.

The "Publications" section contains a complete list, which is presented in PDF format with the ability to download, as well as information from the archive guide useful for researchers. The site contains inventories, a catalog of exhibits, a catalog of microfilms, reference and information documents, and guidebooks. Scientific-technological documentation is available in the "publications" section and are available in hard copy and on microfiche (NARA, "Publications" section). It is possible to view the guides on the website by making an application and registering. The reference and information products on the site include the following information: title, date of publication, number of pages, description of the volume, additional information, size, etc. (NARA Guides).

Section "Virtual exhibitions" has 43 online objects of various topics of the USA history. It provides an option for search for an exhibition by key words. The exhibitions have short headings indicating the location of the document, and it is also divided into several sections (Virtual exhibitions, NARA). The website provides brief information about the use of the image, regarding certain exhibitions.

The section "Preservation of archival records" is interesting for us, as it provides information on proper keeping and use of a certain types of documents and on technical capabilities. For each type of document, there is a user guide freely available to researchers on the site for each type of documents (Preservation of archival records).

Access to the database section (NARA database), it is possible to set search parameters by category, by research topic, and also use the advanced search function. The database is clear and easy to use. For example: by opening the topic "prisoners of war", a further click opens a brief information, then after studying it you can go directly to view the document itself, it is a very convenient function that does not require registration. Viewing information on digitized microfilms https://www.archives.gov/digitization/digitized-by-partners. They are represented

Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ. №3(148)/ 2024 **123**
Тарихи ғылымдар. Философия. Дінтану сериясы
ISSN: 2616-7255. eISSN: 2663-2489

by lists that are partially or completely digitized, but access to them is possible only when registering on the site, which is given in the form of a link [Fig. 6].

Figure 6. Website section "NARA Database"
Note: Information is taken from the US National Archives and Records Administration website.

In the USA, NARA plans to digitize all traditional funds and make them available to the public on the Internet "Make access happen" (more than 13 billion pages of documents, photographs, films and other records that are available only in research sites). The National Archives and Records Administration of the USA intends to provide "public access" to government information due to its experience in the field of digitization of documents. Flexible tools and accessible

124   **№3(148)/ 2024**   *Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ.*
Тарихи ғылымдар. Философия. Дінтану сериясы
ISSN: 2616-7255. eISSN: 2663-2489

resources are used for online access, which facilitate the search for information thanks to the NARA National Archives catalog. Archivist of the National Archives of the USA, notes that the creation of a digitization center will help provide and expand online access to 500 million pages of archival documents by September 2026 (National Archives Unveils New Mass Digitization center in College park, website https://www.archives.gov /, 2024).

Comparing the experience of these countries, we can say that archives in the era of digitalization want to make online access for a wide range of researchers, then apply the format of digitized images using various visualization methods (this is due to software updates and obsolescence, hosting accessibility, backup creation).

Conclusion

Popularization of documents - electronic editions prepared on the basis of archival documents, allows attracting the attention of scientists, researchers, and the general public to the problems of further expanding the source base and information resource of the state. The practice of placing electronic documentary editions of foreign archival institutions is important and is presented in various formats available exclusively on the Internet. These editions may be called flexible, interactive, and dynamic. Archival materials on websites can better identify the interlinkages between the texts of electronic editions and other texts related to this edition. Furthermore, they represent an unfinished research environment conducive to endless reading.

The types of electronic documentary editions, the features of their functioning, and the technological foundations have been identified as a result of the research on websites. Foreign websites of electronic documentary editions have a high optimization in terms of the interactivity process. They have different goals, but facilitate the study of archival material, which they reproduce taking into account the target audience. Therefore, it is important to have a unified information environment consisting of the information space of archives and archival institutions and their active interaction. The specifics of electronic documentary publications of foreign countries are related to international standards and information technologies.

There is a unified European Digital Space, where information from databases of archival institutions of several European countries is united. National legal acts influence the form of access to documents of regional archival institutions. Integration of the digital space of archival institutions has not developed to date. There is only integration of archival databases on certain topics. Archival institutions of the Republic of Kazakhstan solve these problems in different ways. Therefore, some recommendations of foreign experience on integration of digital space, introduction of new forms of electronic publications, which will contribute to improving the efficiency of the main direction of archival activity - the use of documentary heritage in digital space, were proposed.

The following recommendations may be given for Kazakhstan digital space in the archiving:
– the practical experience of the National Archives of Great Britain in archiving and transition of the digital archive of the "second generation" and the section "Podcasts and videos", which is an expert platform on various issues.
– the second generation of UK archives is represented by the Digital Strategy of the National Archives (2017–2019), (2023–2027) and focuses not only on informatization, but also on the

Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ. **№3(148)/ 2024** **125**
Тарихи ғылымдар. Философия. Дінтану сериясы
ISSN: 2616-7255. eISSN: 2663-2489

introduction of innovations to define the future direction of the archive. This area is able to preserve and provide access to a wide range of digital records that better reflect the work of the country's digital government. These are not just documents, they may include various contents from thematic discussions using web tools to videos, websites, various datasets and even the use and application of computer code (specialized document viewing formats, through the use of various applications and programs);

– the invenio application used in the Federal Archives of Germany provides access to view digitized publicly available documents according to the following criteria – chronology, name of the person, collection. Interarchive integration through the Federal Archives of the country for access to digitized collections of archival institutions of various levels, taking into account open and limited access after registration on the archive's website;

– IIIF (International Image Interoperability Framework) provides special features aimed at an international image compatibility framework that are distributed on the Internet for the preservation of cultural heritage documents;

– the use of blockchain technologies to ensure the ability to record and save exhibitions;

– the use a prototype search engine called Shine, which allows to use your own dataset. In addition to the search engine that finds web pages that match search queries, Shine also has a "trending" feature.

Archiving of websites is available through the Wayback Machine internet browser, which allows to view previously created ones.

Contribution of the Authors

Aigerim Amangeldyevna Sydykova – actualized the problem of research in introduction section; conducted a comparative analysis of electronic editions of websites of foreign archives, identifying the characteristics of each type; drew conclusions; determined the model of the research conclusion; identified the best foreign practices in the field of publication of archival materials.

Gulnaziya Tolgayevna Zhakupova – defined the strategic directions of research and its methodology, interpreted foreign scientific discourse on the problems of electronic documentary edition of archival documents, updated the problem under study in the abstract, systematized recommendations of foreign experience for Kazakhstan practice. Review of the article content for alignment with goals, objectives and integrity of the content.

Yerlan Yernazarovich Sailaubay – actualized and defined the novelty of the research issue for Kazakhstan archival sector in the relevant profile – presentation of archival documents to the society; defined the model of comparative analysis for the types of editions and integration on web sites and web archiving; and defined the recommendations in the research conclusion.

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126 **№3(148)/ 2024** *Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ.*
Тарихи ғылымдар. Философия. Дінтану сериясы
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Тарихи ғылымдар. Философия. Дінтану сериясы
ISSN: 2616-7255. eISSN: 2663-2489

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128 **№3(148)/ 2024** *Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ.*
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Шетел мұрағаттарының электрондық құжаттық басылымдарының ерекшеліктері

Аңдатпа. Мұрағат мекемелерінің цифрлық және желілік технологияларды белсенді пайдалануы мұрағат қызметінің негізгі бағыттарының бірін тиімді орындау үшін, атап айтқанда қоғамның цифрлық кеңістікте деректі мұраны танымал етуі және пайдалануы мәселенің өзектілігін айқындайды. Ақпараттық технологиялар мұрағат сақтаушысы, мұрағаттық құжаттардың ақпарат тасымалдаушысы және оларды жариялау рөлін алды. Олар мұрағаттық теорияларды өзгертеді және елдің қоғамдық жады мен мәдени мұрасының өзгеруін қамтамасыз етеді. Шетелдік мұрағат ісінің электрондық ортасында деректі басылымның әртүрлі тәсілдері мен тәжірибелері бар. Сандық түрдегі мұрағаттық ақпарат модельдері әртүрлі болып келеді. Мақаланың мақсаты – шет елдердің веб-мұрағатында құжаттық мұраны танымал ету тенденцияларын бағалау. Зерттеу стратегиясы шетелдік авторлардың ғылыми зерттеулеріндегі ұғымдар мен мәселелерді талдауға, электрондық басылымдарды құрудың түрлері мен ерекшеліктерін және метадеректерді сипаттау әдістемесін анықтауға ықпал етеді. Зерттеу

Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ. **№3(148)/ 2024** **129**
Тарихи ғылымдар. Философия. Дінтану сериясы
ISSN: 2616-7255. eISSN: 2663-2489

материалдары: шетелдік нормативтік-әдістемелік құжаттар; бірқатар шетелдік мұрағаттардың веб-сайттары: Ұлыбританияның Ұлттық мұрағаты (The National Archives), Германияның Федералды мұрағаты (Federal Archives), АҚШ-тың Ұлттық мұрағат және құжаттама басқармасы (NARA), Францияның Ұлттық мұрағаты (French National Archives). Зерттеу нәтижелері Қазақстан Республикасының мұрағат мекемелеріне құжаттамалық мұраны танымал етудің, сондай-ақ бағдарламалық өнімдерді құрудың оң тәжірибесінің ұсынымдары болады.

Түйін сөздер: электрондық басылым; электрондық археография; құжаттар көрмелері; бейне шолулар; виртуалды турлар.

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Специфика электронных документальных публикаций зарубежных архивов

Аннотация. Активное использование архивными учреждениями цифровых и сетевых технологий для эффективного выполнения одного из ключевых направлений деятельности архива, а именно популяризации и использования обществом документального наследия в цифровом пространстве определяет актуальность проблемы. Информационные технологии взяли на себя роль хранителя архивов, носителя информации акхивных документов и их публикации. Они изменяют архивные теории и обеспечивают трансформацию общественной памяти и культурного наследия страны. Документальная публикация в электронной среде зарубежном архивном деле имеет различные подходы и практики. Модели архивной информации в цифровом виде различны. Цель статьи оценить тенденции популяризации документального наследия на веб-архиве зарубежных стран. Стратегия исследования будет способствовать анализу понятий и проблем в научных исследованиях зарубежных авторов, определению типов и особенностей создания электронных публикаций и методики описания метаданных. Материалами исследования являются: зарубежные нормативно-методические документы; веб-сайты ряда зарубежных архивов: Национальный архив Великобритании (The National Archives), Федерального архива Германии (Federal Archives), Национального управления архивов и документации США (NARA), Национального архива Франции (French National Archives). Результаты исследования станут как рекомендации архивным учреждениям Республики Казахстан положительного опыта популяризации документального наследия так и создания программных продуктов.

Ключевые слова: электронная публикация; электронная археография; выставки документов; видео обзоры; виртуальные туры.

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130 **№3(148)/ 2024** *Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ.*
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134   **№3(148)/ 2024**   *Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ.*
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