

## The Experience of Managing Documents on New Media in Belarus: Modern Challenges to Archives

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### *ABSTRACT*

In the article the author pays attention to the terminological aspect of the problem taken into consideration. What is “managing documents (records management)”? What is “new media”? And, at last, what is “managing documents on new media”? Answering these questions gives the possibility to reveal the most important problems that archives faced to in the last years. The special attention the author gives to the problems of electronic records, especially from the archival point of view. The author underlines that nowadays, in the condition of wide implementation of new information technologies in creating and operating documents, the records management becomes very important field for archivists activities. They must decide many technical, organizational, financial and, of course, professional problems. The last ones are the case of special interest.

Esperienze di gestione di documenti nei nuovi media in Bielorussia: le moderne sfide per gli archivi

### *SINTESI*

Nell'articolo l'autore presta attenzione all'aspetto terminologico del problema preso in considerazione. Che cos'è “gestione dei documenti (gestione dei record)”? Che cos'è “nuovi media”? E, finalmente, cos'è “gestione dei documenti nei nuovi media”? Rispondere a queste domande dà la possibilità di svelare i problemi più importanti che gli archivi debbano fronteggiare negli ultimi anni. L'autore presta particolare attenzione ai problemi dei documenti elettronici, soprattutto dal punto di vista archivistico. L'autore pone l'accento che oggi, nella condizione di attuazione di nuove tecnologie dell'informazione nella creazione e gestione documentale, la gestione dei documenti diventa un campo molto importante per le attività degli archivisti. Devono decidere su molte tecniche, problemi organizzativi, finanziari e, naturalmente, professionali. Questi ultimi sono casi di particolare interesse.

Izkušnje z upravljanjem dokumentov na novih nosilcih v Belorusiji: moderni izzivi arhivov

### *IZVLEČEK*

Avtor se v prispevku osredotoča na terminološko plat obravnavanega problema. Kaj pomeni ‘upravljanje z dokumenti’ (pisarniško poslovanje)? Kaj so ‘novi nosilci’? In končno, kaj pomeni ‘upravljanje z dokumenti na novih nosilcih’? Odgovori na ta vprašanja omogočajo razkritje najpomembnejših problemov s katerimi se arhivi soočajo zadnja leta. Avtor polaga posebno pozornost elektronskim dokumentom, zlasti z arhivskega stališča. V procesu splošnega uvajanja novih informacijskih tehnologij za ustvarjanje in upravljanje z dokumenti zavzema upravljanje z dokumenti pomembno področje dejavnosti arhivista, poudarja avtor. Arhivisti morajo odločati o mnogih tehničnih, organizacijskih, finančnih in seveda strokovnih problemih, ki pa so za arhiviste še posebej zanimivi.

Вопыт кіравання дакументамі на новых носьбітах у Беларусі: сучасныя выклікі архівам

### *РЭЗЮМЭ*

У артыкуле аўтар звяртае ўвагу на тэрміналагічны аспект разглядаемай праблемы. Што такое “кіраванне дакументамі”? Што такое “новыя носьбіты”? І, нарэшце, што такое “кіраванне дакументамі на новых носьбітах”? Адказы на гэтыя пытанні даюць магчымасць раскрыць найбольш важныя праблемы, з якімі архівы сутыкнуліся ў апошнія гады. Асабліваю ўвагу аўтар надае разгляду праблемы электронных дакументаў,

у першую чаргу з архіўнага пункту гледжання. У артыкуле падкрэсліваецца, што сёння ва ўмовах шырокага ўкаранення новых інфармацыйных тэхналогій стварэння і работы з дакументамі, кіраванне дакументамі становіцца вельмі важна сферай дзейнасці архівістаў. Яны павінны вырашаць шэраг тэхнічных, арганізацыйных, фінансавых і, безумоўна, прафесійных праблем. Апошнія з іх з'яўляюцца прадметам асаблівай цікавасці.

## 1. INTRODUCTION

Onrush of technologies in the sphere of creation of documents and organization of the work with them constantly puts before archives new problems in the field of preservation of both the records and the information containing in them. It is not of principal importance for the author of the document, what technologies and what media are used. The main thing for him is the time of drawing up a record, speed of its delivery to the addressee, convenience of further work with it. The only thing in this situation the author of the document may think of are possibilities for the one to whom it is intended (addressee) to get and process the information containing in the document (including technical capabilities), and also a validity (relevance) of the document. The authors of the document, as a rule, do not reflect on how to preserve the document over a long period with the purpose of retrospective use of the information containing in it.

However, just this problem is the basic one for archivists, the subject of their professional work. If for traditional hard-copy (paper) documents archivists have long since developed the principles and methods of its solution, then for the documents on new media archivists are still at the stage of research. Nevertheless, we can already state for sure that for the solution of the problem of long-term preservation of such documents the archivists should participate actively in the process of records management since the stage of their creation, instead of the moment when the document is subject to transfer to archive after its operative functions are performed and its practical value is lost.

## 2. TERMINOLOGICAL ASPECTS OF THE PROBLEM

First of all, it is necessary to define the meaning of the concepts mentioned in the name of this article, and to establish what we understand as «new media», «records management» and, at last, «managing of records on new media».

1. For many years paper was a traditional and the most widespread material medium of the documentary information. Since the late 18<sup>th</sup> century with the development of ways of documenting, new forms of documents have appeared, for creation of which other material base was used. The mid-to-late 20<sup>th</sup> century is already characterized by fairly greater variety of forms of documents and materials used for recording of information: punched cards, punched tapes, microfiche, microcards, cinefilm, magnetic tape, etc. A special term, «machine-readable documents», was introduced for the generalized designation of these documents (the documents, for creation and reproduction of the information of which special technical means are required) [1]. The general feature for all these documents irrespective of their material base is the analogue way of recording information.

However, in the second half of the 20<sup>th</sup> century there appeared a fundamentally different way of documenting, digital method, based on recording of information using a binary code. Application of this method has originated a new category of documents, electronic documents, which have been in widespread use in the 21<sup>st</sup> century. Today the documents on new media mean the documents created in the electronic (digital) form, though hard copy (paper) documents, microfilms, magnetic tapes, cinefilms and other material media continue to be created and exist in parallel. Moreover, the media of the documentary information presented electronically can be rather diverse (diskettes, magneto-optic disks, flash cards, etc.).

2. The term «records management» has been widely used for quite a long time by experts in the field of documentation. However, there are different approaches to definition of the essence of this term.

The first approach suggests extension of the concept «records management» only on the documentation, which is in record-keeping circulation and in operative storage in the organization (before

transfer to archive). In particular, such interpretation of this term is given in the majority of the international standards on records management [2]. It should be noted that in the State Standard of the Republic of Belarus СТБ П 2059-2010 «Records Management and Archives Management. Terms and Definitions» definition of the term «records management» is presented in this meaning [3].

The second approach offers extension of the concept «records management» on the documentation of the organization as a whole, also including the one, which is in record-keeping and in operative storage, and that one, which is stored in archive and is used or can be used for scientific and reference purposes [2].

Certainly, the second approach is the most important for archivists. The sphere of their interests includes, first of all, the issues of records management in the archive, including such aspects as acquisition of the documents to archive, their stock-taking, preservation, development of the system of finding aids, access to archival documents and their use. The archivists also are interested here in the establishment of requirements to documents at the stage of their creation, the operative circulation and storage. It is connected with the fact that the degree of acquisition of documents to the archive, their preservation, integrity, authenticity and an opportunity of use over a long period will also depend on how well regulated are the issues of creation of documents and the organization of work with them before transfer to archive. Such extensive interpretation of the concept «records management» acquires a special relevance concerning electronic documents, which will be dealt with further on.

In the present article the term «records management» is basically used in the first, narrower meaning, and in the second, wider meaning in a context of the theory and practice of archives management.

3. If the documents on new media mean electronic documents (the documents created in the electronic, digital form), and records management means establishment of requirements to creation of documents, their circulation, storage and use, then the essence of the concept «management of records on new media» can be defined as establishment of requirements to creation of electronic documents, organization of work with them in record-keeping and archive, storage of electronic documents and their use.

At the same time it should be taken into account that the sphere of electronic documents is quite extensive. In a broad sense electronic documents are not only the documents created in the process of management (administrative documents). The special method of recording information using a binary code allows to refer to electronic documents also cine-photo-phonodocuments (audiovisual documents) created with use of digital hardware, the organization of work with which is traditionally regulated by special rules and for storage of which special archives are provided. Information resources (databases and databanks) could also be referred to electronic documents category, as well as electronic copies of documents on paper or other traditional base, created with use of scanning equipment with view of preservation of paper originals during use and provision of more convenient access to archival documents, including Internet. Technical documentation has more often been created on digital media recently.

In view of this circumstance, in this article we shall interpret electronic records management as management of born-digital records in administrative activity of organizations. Management of other electronic records has essential features and requires a separate consideration.

### 3. LEGAL REGULATION OF RECORDS MANAGEMENT PROCESSES IN BELARUS

Records management in the Republic of Belarus is regulated at the state level and governed by normative legal acts. In this regard the current legislation in corresponding sphere extends on documents on both traditional (paper), and new (electronic) media and covers records management processes on all stages of document life, including the archival one.

The basic legal act in this sphere is Law of the Republic of Belarus dated November 25, 2011 *On Archives Management and Records Management in the Republic of Belarus*, which replaced Law of the Republic of Belarus effective since 1994 *On National Archival Fond and Archives in the Republic of Belarus*. The new name of the archival law, in which the term «records management» is included, is intended to emphasize the link of archives management with record-keeping. Archivists of Belarus

understand that the quality and full acquisition of archival fonds in future will depend on how successfully they can establish requirements to creation of documents in the activity of organizations, to their accounting and operative storage. It is not incidental that in the new archival law the competence in the sphere of state regulation of archives management and records management is assigned to the state archival service (the agency of State administration in the sphere of archives management and records management is the Ministry of Justice of the Republic of Belarus, which comprises the Department on Archives and Records Management).

The action of the archival law extends on all kinds of documents irrespective of a kind of data medium, among them on electronic documents. In particular, the law stipulates that documents in electronic form and information resources shall be included in the National Archival Fond of the Republic of Belarus, and the terms of temporary storage (that is before transfer for permanent storage in the state archive) of the documents in electronic form should not exceed three years [44, Art. 9, 19].

Legal bases of use of electronic documents, the basic requirements imposed on it, and also legal bases of use of electronic documents are provided for in the special Law of the Republic of Belarus dated December 28, 2009 *On Electronic Document and Electronic Digital Signature*. On condition of observance of the established requirements this law equates the electronic document certified by means of the electronic digital signature, to the paper document signed by the autograph signature of the authorized person [5, Art. 16, 17, 22]. Attention should be paid to the fact that state regulation in the sphere of circulation of electronic documents and electronic digital signature alongside with the President, the Government, National Bank is also effected by bodies and institutions of the state archival service of the Republic of Belarus [5, Art. 7, 12].

Except for the mentioned laws concerning records management the whole set of normative legal acts, standards and methodological documents has been developed. All of them are elaborated by the state archival service and approved by its authorized body or by the Government on its representation [6]. Among the specified legal acts regulating the issues of records management, we should name the *Instruction on Records Management in the State Bodies, Other Organizations*, in which there is a separate chapter devoted to work with documents in electronic form [7].

Issues of records management in archives are also regulated by legislative acts. Among them we should name *Rules of Work of the State Archives of the Republic of Belarus* (2005) [8], *Rules of Work of Archives of the State Bodies and Other Organizations* (2012) [9], *Rules of Work with Scientific and Technical Documentation in Institutions, Organizations and at Enterprises of the Republic of Belarus* (2003) [10], *Rules of Work with Scientific and Technical Documentation in the State Archives of the Republic of Belarus* (2007) [11], *Rules of Work with Audiovisual Documents in the State Archives of the Republic of Belarus* (2007) [12], etc.

Despite the considerable amount of normative developments concerning records management, it should be noted that the requirements to management of documents in electronic form are insufficiently dealt with there. For example, though *Instruction on Records Management in the State Bodies, Other Organizations* contains a separate chapter «Features of work with documents in electronic form», it formulates only framework requirements demanding more detailed study and a concrete definition [7, Chapter 18]. The issues of acquisition by archives of electronic documents, organization of their archival storage and use are not sufficiently covered in normative legal acts. Only the *Rules of Work with Audiovisual Documents in the State Archives* [12] contain certain provisions on archival work with documents in electronic form.

This feature of normative regulation of management of electronic documents and organization of its archival storage is caused by a considerable amount of serious problems demanding solution at a scientific and methodological level, which will be dealt with onwards. Therefore in the absence of a comprehensive normative legal act the dominating approach to regulation of management of electronic documents is a development of methodological recommendations.

One more feature of records management system in Belarus is that the competence of the state archival service exclusively include the issues of creation, organization of work with, stock-taking and operative storage of the administrative documentation. Management of scientific and technical and partly audiovisual documentation irrespective of the kind of the medium is regulated by technical

normative legal acts (technical regulations, standards, technical codes, specifications). With regard to this documentation, the state archival service joins in operation and management only at the stage of selection and transfer of the documents representing scientific and historical value, to storage in archives.

We have also to note that in situation of existence of several normative legal acts regulating various issues of records management in Belarus until recently there has not been any uniform legal act establishing basic requirements to management of all documents created in the activity of a concrete organization (irrespective of the kind of data medium and category of the document). Only in March 2012 the first state standard on records management was approved, with effect since July 1<sup>st</sup>, 2012 [13]. The standard covers management of all documents of an organization irrespective of its medium from the moment of their creation or reception till transfer to storage in archive. This standard was adopted to comply with similar international ISO standard [2] and contained general provisions, that all the documents in the organization should be managed, their integrity, preservation, availability within the established period of time should be provided. Therefore in the nearest future BelNIIDAD plans to develop and submit for approval in the established order state standard STB ISO 30300 «Information and Documentation. System of Records Management» on the basis of a similar international standard [14]. In this standard the records management system is considered as part of the integrated management system of the organization alongside with such systems as quality management, protection of information, innovations, knowledge, etc. Adoption of this standard and its implementation in the organizations of the country will allow providing better participation of archivists in the solution of issues of records management not only at the stage of current activity of the organizations, but also at the stage of its selection for archival storage, in organization of such storage according to the established rules.

#### 4. MANAGEMENT OF ELECTRONIC DOCUMENTS AS ONE OF THE MOST TOPICAL PROBLEMS OF ARCHIVES

The issues of records management in the organizations and participation of archivists in this process have got a special urgency in the recent years. It is connected with active introduction in work practice of new information technologies, appearance of new material data media and, as result, emergence of the electronic document, which, as well as any other document, is an object of professional activity of archivists, a subject of their professional interest.

The practice of introduction of information technologies at the turn of the century has shown that to solve issues of records management in the organizations is impossible, if one ignores the archival component. Computer equipment and its software allow easy and quick solving of the issues of creation of documents, their delivery to the addressee, organization of operative (short-term) storage and use. At the same time organizations have faced a problem of preservation of electronic documents over a long period.

This problem has been the core of discussion at the 16<sup>th</sup> Congress of the International Congress of Archives in Kuala Lumpur (Malaysia). In particular, Jan Wilson, the head of archival service of Canada at that time, in his report «Record-keeping Regime in the Government of Canada» noted that the absence of precise rules of creation, processing and storage of documents in state bodies of this country had resulted in the fact that the most important administrative functions performed by management bodies, ceased to be reflected in official documents. Paradoxical as it may seem, this situation was the consequence of a wide and often unreasonable introduction of computer equipment in the practice of management and documenting in the 1990s. The illusion of a computer to be able to solve all problems of document circulation and to give economic benefit, has led to the reduction of professional staff operating the documentation, to refusal of the long-standing rules and traditions of the organization of work with documents. Refusal in some cases from the paper document and unsolved problems of creation, organization in record-keeping and long-term storage of documents in electronic form have resulted in the situation when government agencies could not confirm by documents and legally prove their actions, which control and auditing services of the country have at once paid attention to. In this situation the alarm was raised by archivists, since a considerable part of the documents representing scientific and historical value appeared to have been lost. On the other hand, in the ministries and departments of Canada there was a substantial growth of the amount of paper docu-

ments, because the reduction of professional staff operating the documentation has not allowed competent and timely regulating the processes of records creation, and the employees of the state bodies, having completely trusted in a computer, have lost skills of competent work with documents [15, pp. 5 – 14].

Thus, the necessity of development of precise rules of records management at all stages of their life, and also active participation of archivists in this work is doubtless.

In spite of the fact that Law *On Electronic Document and Electronic Digital Signature*, which equates the electronic document to a paper one, is effective in Belarus, and a number of other statutory acts, standards and methodological documents regulating the issues of management of electronic documents are developed, the main task of provision of long-term preservation and subsequent legitimate use of this category of documents in archive remains in many respects unresolved for archivists.

In turn, in the solution of this problem a lot of technical, organizational, financial and professional problems appear.

1. Technical (technological) problems. The following components can be selected in this group of problems:

definition of the formats of electronic documents acceptable for all participants in information exchange and suitable for provision of long-term preservation of documents;

compatibility and continuity of software, with which electronic documents are created in the organizations participating in information exchange;

specificity and fast obsolescence of material media of documentary information, which require special devices for its reading, which in turn can lead to transformation of archives into “museums” of special equipment.

Suffice it to note, that such media as floppy disks and diskettes widely used in the 1990s, have already fallen out of practical use. The ways of recording the information (magnetic, optical, etc.) are continuously varying. The statutory acts developed in Belarus during that period in relation to the work with electronic documents have been focused just on these types of media, so in May 2012 they were cancelled as inadequate [16].

2. Organizational and financial problems. The following components can be selected in this group of problems:

equipment of archives with special hardware necessary for both creation of electronic documents and organization of their long-term storage (computers, scanners, powerful servers, etc.);

acquisition of archives with specially trained staff skilled in information technologies, computer hardware, and bases of programming.

It is common knowledge that special equipment necessary for archives in their work with electronic documents is rather expensive, and the experts in the field of information technologies (system administrators, programmers) represent the category of highly paid workers worldwide. In the conditions of fairly modest financing of archives (this situation is characteristic of archives in the majority of the world countries) financial problems to a substantial degree place archivists in dependence on external circumstances.

3. Professional archival problems. Unlike the problems of the first two groups, which are long since known to the majority of experts and do not require special comments, professional problems of archivists represent the greatest interest. Therefore we shall consider them in more detail.

3.1. Definition of special criteria of evaluation of electronic documents for their selection for archival storage.

At present general criteria of examination of the value of any documentation, and also special criteria of evaluation of audiovisual and scientific and technical documentation, developed by the Soviet school of archival science, are applied in Belarus. No special criteria have been developed for electronic documents.

In this situation archivists face the question, whether it is necessary to develop special criteria of evaluation of electronic documents? If such criteria are not necessary, how could general criteria of evaluation of documents be applied to electronic documents, whether specificity of existence of the document in electronic form should be somehow considered?

For example, one group of criteria of external features of the document stands out among the general criteria of evaluation of documents, including the criterion considering features of a material base of the document [8, p. 119]. Concerning non-electronic documents, application of this criterion does not raise any doubts: alongside with paper documents the archivist will surely leave for storage the documents created on parchment, papyrus, other material base irrespective of the value of information containing there. However, is it necessary to keep in archive, for representativeness purposes, various types of media of electronic documents (diskettes, disks, flash cards, etc.)? Or the priority should be given by the archivist to preservation only of information of the electronic document, while the type of the media should not have any value from the archival point of view?

No definite answer has yet been given to this question, however working experience of the Belarusian archivists with regard to electronic documents shows that the priority should be given to preservation of the documentary information, and types of media are not to be taken into consideration. Such an approach logically follows from, among others, the provisions of Law *On Electronic Document and Electronic Digital Signature*, according to which all identical copies of the electronic document are originals and have an identical validity. Thus, the electronic document unlike the traditional document is not referred to the certain type of the material medium [5, Art. 19].

The problem of development of special examination criteria of an electronic document value is also complicated by the fact, already mentioned above, that not only administrative, but also audiovisual, scientific and technical and other documentation is created in electronic form. If it is necessary to develop special criteria of evaluation of electronic documents, how they will correspond to the special evaluation criteria applied in the value examination of the above mentioned documents? For example, the specific criteria describing external features of audiovisual documents, also include the way of recording and reproduction of the information [12, p. 75]. In this connection the above questions arise again, this time in the context of evaluation of the audiovisual documentation created in electronic form.

3.2. Development of a technique (procedure) of selection and transfer of electronic documents to storage in archive.

The basic algorithm of actions on transfer of paper documents to storage in archive is developed in enough detail and has only been improving in the recent years. Schematically it can be expressed as follows: files with the documents having scientific and historical value, are put in one pile, and files with the documents of practical value, already lost, in another pile. After that the documents having value are processed, described and transferred to archive as per the established requirements, where they are duly considered and used for various purposes (research, reference, etc.) in archive. Documents and files of no practical value are accordingly destroyed in due order [9].

To what extent could this algorithm be applied to the method of selection and transfer of electronic documents to archive? Till now experts of the Archive of Electronic Documents acting within the framework of the Belarusian Research Centre of Electronic Documentation (BelNITsED) with the state archive status, have adhered to the following approach. The draft of methodological recommendations developed by them, on transfer of documents in electronic form to storage in archive suggests the filing of electronic documents in electronic files (folders) with observance of the same requirements of filing and description of files established for paper documents. Transfer of electronic files to archive and their storage is carried out on removable media. In doing so, considering unreliability of media from the point of long-term preservation, the information on removable media is being rerecorded with certain periodicity.

However, is it always possible to sort out electronic documents on virtual files, and to tear out these electronic files from a soft hardware environment, in which they have been generated? Recently the experts have often been expressing the opinion that the electronic documentation should be accepted to archival storage in full sets, including those electronic documents, the paper versions of

which would not get to archive owing to a little value of the information containing in it. Such approach acquires a special urgency concerning primary documents in the structure of databases [17, pp. 229 – 263]. Not incidentally one of the priority problems of the BelNITsED Archive of Electronic Documents is, among others, reception of databases and databanks for permanent archival storage. In such approach there also appear a lot of problems of technical, organizational and financial nature (expensive powerful servers, finances and personnel for their maintenance are required, it is necessary to accept and support in working order the software, in which the database was created, should be transferred to archive and maintained in proper working order etc.), as well as of professional nature (complexity of description of a huge array of documentary information, development of finding aid to it, etc.).

It is obvious that this professional problem of archives should be solved in combination with the solution of the problem of creation and organization of operative storage of documents in record-keeping, and archivists themselves should actively join in the processes of electronic documents management before they are transferred to storage in archive.

3.3. Development of a technique of management of e-mail messages and its transfer to storage in archive.

According to Law of the Republic of Belarus *On Electronic Document and Electronic Digital Signature* the document in electronic form shall only be recognised an electronic document if it contains the attributes enabling one to establish its integrity and authenticity. The Law refers only electronic digital signature (EDS) to such attributes [5, Art. 1, 17].

In this connection the Belarusian archivists have a problem of the status of documents in electronic form, not certified by EDS. Whether these documents shall be the object of professional work of archivists, whether they should be transferred to storage in archive, how should the authenticity of the information in such documents be confirmed after its transfer to archive?

This problem acquires a special priority with regard to such specific category of documents in electronic form as e-mail messages. As BelNIIDAD research has shown, the information containing in the messages communicated via e-mail, are in some cases of a significant source study potential, representing doubtless interest for historians in future, and hence for archivists. Moreover, e-mail messages can be certified by EDS or other digital signatures (not protected) or not certified in any way.

The methodological recommendations prepared by BelNIIDAD on this problem allow solving in general the issues of management of e-mail messages in the organizations before their transfer to archive [18], while the issues of selection of e-mail messages and its transfer to archive are so far unresolved.

The attention should be paid here to such aspect of this problem as selection and transfer to archival storage of personal provenance e-mail documents. Before e-mail appearance paper and usual mail were used for distant personal contact, due to which we today can gather the information, not reflected in official documents, on private life and professional work of outstanding people (scientists, writers, artists, politicians, etc.) from the correspondence preserved. The state archives of Belarus have always collected and continue to collect the personal provenance hard copy documents, with account of the restrictions established by the national legislation in this sphere (contractual nature of relations of private persons and archives, restrictions on access to and use of the personal provenance documents by the third parties, etc.). However, today e-mail supersedes usual correspondence, so archivists face the problem of reception of electronic correspondence of private persons for archival storage and its preservation for future generations. The Belarusian archives have not yet started the development of this problem, there are no criteria, technique and technology of selection and transfer of such documents to archive, their description, stock-taking and storage.

The delicacy of the situation is in the fact that not only personal mail boxes, but also official e-mail addresses are often used for personal correspondence. Though the methodological recommendations prepared by BelNIIDAD do not recommend the use of official mail boxes for personal correspondence, this happens pretty often in practice. For example, in resolving professional issues of interaction within the activity framework of the International Institute for Archival Science (IIAS) its

members actively use official e-mail addresses also for informal personal contacts: they discuss personal problems, congratulate each other on holidays, invite each other to make informal visits, etc. Does this segment of electronic correspondence represent any interest from the point of study in the future of the history of development of archival science, IAS in particular? It seems, yes, at least, its certain part. And even if methodological and technical issues of transfer of official e-mail communications created in organisations, to archival storage are solved, there is one more uneasy question: where is a boundary between the official and the personal in electronic correspondence with the use of office mail boxes, should such documents be considered as personal documentation, to be treated as per corresponding rules?

This problem still does not seem to have been fully recognized by archivists. It may happen that eventually this important amount of documentary information will be lost and the future generations will have to be mostly guided in their studies in archives by official documentation.

3.4. Provision of authenticity and integrity of electronic documents, establishment of legal grounds of the use of electronic documents in archive.

Legal acts of the Republic of Belarus in the sphere of records management demand that all official documents have been properly issued and certified. In relation to electronic documents as it was specified above, the main certifying attribute is the electronic digital signature. The legislation of other countries in this issue is milder and in some cases permits the use of a simple electronic signature.

Law *On Electronic Document and Electronic Digital Signature* stipulates the transfer of the electronic document to storage in archive together with EDS as its integral part. However, EDS guarantees and protects the document from faking only for a limited period of time. How could the integrity and authenticity of such document be confirmed in archive in the long term? How may the authenticity and integrity of the document certified by a simple digital signature or absolutely not certified in any way, be provided?

Two variants of resolving this problem are deemed possible: refusal from EDS as a unique certifying attribute of the document after its transfer to archive or granting the right to archive to use its own EDS (archive's EDS) for periodic rerecording and certifying of the electronic documents stored in it.

The first variant suggests the use of a certifying sheet for provision of integrity and authenticity of the electronic document. Use of hashing function allows calculating the control sum of the electronic document fixed in this sheet, so that it is possible to find out, whether non-authorized changes and amendments were made to the document. The opportunity of use of such technology is set in State Standard of the Republic of Belarus 1221-2000 [19]. However, the certifying sheet is issued on paper and includes considerable amount of information, and its creation and registration requires a lot of time. As a result, instead of one document the archive should store two: one (the authentic electronic document) in electronic form, the other (a certifying sheet) on paper. The situation is paradoxical in a way that it not only complicates the work of the archivist, but many advantages of storage of documents in electronic form, such as compactness of archive, efficiency of search and use of documents etc. are also lost.

Not incidentally the Archive of Electronic Documents, operating within the framework of Bel-NITsED since 1998, stores a very insignificant amount of documents in electronic form, mainly voluminous (databases, copies of sites, etc.), authenticity and integrity of the information of which is confirmed by a certifying sheet. This solution is not acceptable for confirmation of integrity and authenticity of administrative documents, a more simple and effective mechanism should be found.

The variant of using archive's own EDS also raises questions. Such way of confirmation of authenticity and integrity of the electronic document is stipulated neither by acts of legislation, nor standards. In this case the problem is beyond professional and technical aspects of activity of archives and is a matter of trust to archivists. The solution of this problem is in many respects connected with the role and place of archives in a society, the social status and prestige of archival trade, which is a subject of separate discussion.

### 3.5. Definition of electronic documents storage variants.

The world scientific archival community has not yet defined precisely, which of the two possible ways of the state storage of the electronic documentation is the optimal one: in one specialized state archive or in different state archives with creation in them of specialized divisions on reception, storage and use of electronic documents [20].

From theoretical point of view the last variant appear more preferable, since it allows observing one of such classical principles of archival science as indivisibility of funds. However, in Belarus in conditions when electronic documents of long storage still make an insignificant part of the total amount of the documentation formed, and the state archives are not fully provided with the necessary equipment, trained staff and time-tested methodical materials in the field of reception, storage, stock-taking and use of electronic documents, the first variant is more acceptable.

Certainly, the problems stated above are not exhaustive. Largely in connection with such unresolved problems the archival service of Belarus so far recommends to create documents of permanent and long storage in hard copy.

## 5. CONCLUSION

Thus, the analysis of a current state of the problem shows that for the solution of their primary task the archivists should join actively in the process of records management since the stage of its creation, instead of the moment, when after fulfilment of operative functions and loss of practical value, the document is subject to transfer to the hands of archivists. Archivists should foresee those difficulties, which they might face while receiving documents to storage in archive, and establish in this regard the requirements to documents since the stage of their creation and further during the whole life of documents. The quality of acquisition of archives and opportunities of future use of documents stored in them depends on how well the archivists will be able to implement the requirements to records management.

At present the most acute issues facing the archivists are the problems of management of documents on electronic media and organization of its archival storage. It is obvious that the work with documents on any medium has its own specific features, however, the work of archives with all documents should certainly be based on the uniform principles developed by the theory and practice of documentation and archival science.

## SOURCES, LITERATURE

1. A Glossary of Archival and Records Terminology.

*Electronic resource:* [http://www.archivists.org/glossary/term\\_details.asp?DefinitionKey=393](http://www.archivists.org/glossary/term_details.asp?DefinitionKey=393) (last visit on 29<sup>th</sup> June 2012).

2. Information and Documentation – Records Management, Part 1: General: ISO 15489-1:2001 – First edition 15.09.2001. – Geneva: the International Organization for Standardization, 2001. – 19 p.

3. Предварительный государственный стандарт Республики Беларусь СТБ П 2059-2010 «Делопроизводство и архивное дело. Термины и определения». – Минск: Госстандарт, 2010. – 20 с.

4. Закон Республики Беларусь «Об архивном деле и делопроизводстве в Республике Беларусь».

*Electronic resource:* <http://pravo.by/main.aspx?guid=4061&p0=2011&p1=136> (last visit on 29<sup>th</sup> June 2012).

5. Закон Республики Беларусь «Об электронном документе и электронной цифровой подписи».

*Electronic resource:* <http://pravo.by/main.aspx?guid=4061&p0=2010&p1=15> (last visit on 29<sup>th</sup> June 2012).

6. Нормативная база архивного дела и делопроизводства в Республике Беларусь.

*Electronic resource:* <http://archives.gov.by/index.php?id=8> (last visit on 29<sup>th</sup> June 2012).

7. Инструкция по делопроизводству в государственных органах, иных организациях (утверждена постановлением Министерства юстиции Республики Беларусь от 19 января 2009 г. № 4). Минск, 2012.

*Electronic resource:* <http://pravo.by/main.aspx?guid=4061&p0=2009&p1=42> (last visit on 29<sup>th</sup> June 2012).

8. Правила работы государственных архивов Республики Беларусь (утверждены постановлением Комитета по архивам и делопроизводству при Совете Министров Республики Беларусь от 25 ноября 2005 г. № 7). Минск, 2006.

*Electronic resource:* [http://www.pravo.by/pdf/2006-22/2006-22\(022-083\).pdf](http://www.pravo.by/pdf/2006-22/2006-22(022-083).pdf) (last visit on 29<sup>th</sup> June 2012).

9. Правила работы архивов государственных органов и организаций (утверждены постановлением Министерства юстиции Республики Беларусь от 24 мая 2012 г. № 143).

10. Правила работы с научно-технической документацией в учреждениях, организациях и на предприятиях Республики Беларусь (утверждены постановлением Комитета по архивам и делопроизводству при Совете Министров Республики Беларусь от 6 ноября 2003 г. № 38). Минск, 2004, 92 с.

*Electronic resource:* [http://www.pravo.by/pdf/2004-3/2004-3\(070-111\).pdf](http://www.pravo.by/pdf/2004-3/2004-3(070-111).pdf) (last visit on 29<sup>th</sup> June 2012).

11. Правила работы с научно-технической документацией в государственных архивах Республики Беларусь (утверждены постановлением Министерства юстиции Республики Беларусь от 14 марта 2007 г. № 14). Минск, 2007, 76 с.

*Electronic resource:* [http://www.pravo.by/pdf/2007-106/2007-106\(012-041\).pdf](http://www.pravo.by/pdf/2007-106/2007-106(012-041).pdf) (last visit on 29<sup>th</sup> June 2012).

12. Правила работы государственных архивов Республики Беларусь с кино-фото-фоно- и видеодокументами (утверждены постановлением Министерства юстиции Республики Беларусь от 09.04.2007 № 27).

*Electronic resource:* [http://pravo.by/pdf/2007-110/2007-110\(046-136\).pdf](http://pravo.by/pdf/2007-110/2007-110(046-136).pdf) (last visit on 29<sup>th</sup> June 2012).

13. Предварительный государственный стандарт Республики Беларусь СТБ П ISO 15489-1-2001/2012 «Информация и документация. Управление документами. Часть 1. Общие требования».

*Electronic resource:* <http://tnpa.by/KartochkaDoc.php?UrlRN=278520&UrlIDGLOBAL=376315> (last visit on 29<sup>th</sup> June 2012).

14. ISO 30300:2011 Information and documentation -- Management systems for records -- Fundamentals and vocabulary – First edition 09.11.2011. – Geneva: the International Organization for Standardization, 2011. – 17 p.

*Electronic resource:* [http://www.iso.org/iso/home/store/catalogue\\_tc/catalogue\\_detail.htm?csnumber=53732](http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=53732) (last visit on 29<sup>th</sup> June 2012).

15. XVI конгресс Международного совета архивов // Архіви і справоводства. 2008. № 5.

16. Примерная инструкция по работе с машиночитаемыми документами в организациях, на предприятиях и в ведомственных архивах Республики Беларусь (утверждены 26 июня 1996 г.). – Мн.: БелНИИДАД, 1996 – 74 с.; Правила учета и передачи электронных (машиночитаемых) документов на государственное хранение (утверждены приказом Председателя Государственного комитета по архивам и делопроизводству Республики Беларусь от 03.04.1997 № 8). – Мн.: БелНИИДАД, 1997. – 44 с.

17. Тихонов В.И. «Уничтожить нельзя хранить»? Методологические аспекты и практические аспекты экспертизы ценности электронных документов // Информационные технологии и электронные документы в контексте архивного хранения (статьи разных лет). – М.: Издательство главного архивного управления города Москвы, 2009.

18. Методические рекомендации по использованию электронной почты в деятельности организаций Республики Беларусь (утверждены приказом директора Департамента по архивам и делопроизводству Министерства юстиции Республики Беларусь от 20.01.2010 № 3). – Минск: БелНИИДАД, 2010. – 72 с.

19. Государственный стандарт Республики Беларусь 1221-2000 «Документы электронные. Правила выполнения, обращения и хранения».

20. С.А.Кузнецов. Проблемы организации архивного хранения электронных документов. // Делопроизводство. 2011. – № 3. – С. 58 – 63; Сяо Цюхуэй. Управление электронными документами в Китае: состояние и перспективы // Отечественные архивы. – 2010. – № 6. – С. 59 – 64.

*SUMMARY*

The article is devoted to the problems of managing documents on new media before their transfer to archive and after that. Nowadays the term “documents on new media” mostly mean “the documents created in the electronic (digital) form”, though paper documents, microfilms, magnetic tapes and other material media continue to be created and exist in parallel. In this article the electronic records management is interpreted as management of born-digital records in administrative activity of organizations, because management of other electronic records has essential features and requires a separate consideration. On the basis of Belarusian legislation and practical experience of Belarusian archivists technical, organizational, financial and professional problems of electronic records management are taken into consideration. The special attention is given to professional archival problems: definition of special criteria of evaluation of electronic documents for their selection for archival storage; development of a technique (procedure) of selection and transfer of electronic documents to storage in archive; development of a technique of management of e-mail messages and its transfer to storage in archive; provision of authenticity and integrity of electronic documents, establishment of legal grounds of the use of electronic documents in archive; definition of electronic documents storage variants. In conclusion the author underlines that nowadays, in the condition of wide implementation of new information technologies in creating and operating documents, the records management becomes very important field for archivists activities.

Original scientific article

Submitting date: 02.07.2012

Acceptance date: 10.07.2012