*Wojciech Woźniak**

FROM RECORDS MANAGEMENT AT THE PUBLIC SECTOR AGENCIES TO ARCHIVAL MANAGEMENT - MODEL OF ACQUISITION OF ELECTRONIC RECORDS IN POLAND

Abstract:

The concept of an electronic record has been introduced into the Polish legal system in 2005. At the same time, to the definition of archival materials the concept of documentation in electronic form has been added. A year later, detailed regulations on how to deal with electronic records of public entities were established. Finally, at the beginning of 2011, special legislation enabling the daily work with electronic records in public administration offices was enacted. According to these regulations, the entity manager decides whether his office works using electronic records management system (ERMS) or whether it remains with the traditional (paper) records management. Electronic records representing archival materials are transferred to the state archives after 10 years from their creation. Until then, they are stored in the archives of the creator. Electronic records are transferred in an orderly manner in the specified directory structure. Metadata of records and metadata of files (groups) to which the records belong are transferred to the archives along with the records. Electronic records are gathered in the central computer system - Archives of Electronic Records (AER). AER is hosted on the servers of National Digital Archives (NDA) which is called the technical archives. Regional archives are responsible for the correctness of records gathered.

Key words:

electronic record, ERMS, Electronic Records Management System, archives, metadata, acquisition process

Izvleček:

Od upravljanja z dokumenti v javnem sektorju
do upravljanja z arhivskim gradivom – model prevzema elektronskih zapisov na Poljskem

Koncept elektronskih zapisov je bil v poljski pravni sistem vključen leta 2005. Istočasno je bil definiciji arhivskega gradiva dodan koncept dokumentacije v elektronski obliki. Leto kasneje so bila predstavljena natančna pravila za delo z elektronskimi zapisi javnih ustanov. V začetku leta 2011 pa je bila končno potrjena posebna zakonodaja, ki omogoča dnevno delo z elektronskimi zapisi v javni upravi. Glede na ta določila se direktor ustanove odloči, ali bo njegova ustanova uporabljala sistem za upravljanje z elektronskimi dokumenti (ERMS) ali pa bo ostala pri tradicionalnem papirnem poslovanju. Arhivska vrednost zapisov je določena v trenutku, ko je zapisu dodeljen znak v klasifikacijskem načrtu. Elektronski zapisi arhivske vrednosti so predani v državni arhiv po desetih letih od nastanka. Do takrat ostajajo v arhivu ustvarjalca. Elektronski zapisi so predani urejeni v določeni strukturi. Metapodatki zapisov in metapodatki map (skupin), ki jim zapisi pripadajo, so v arhiv predani skupaj z zapisi. Elektronski zapisi se nahajajo v osrednjem računalniškem sistemu – arhivu elektronskih zapisov, ki je na strežniku Narodnega digitalnega arhiva in se imenuje tehnični arhiv. Regionalni arhivi so odgovorni za pravilnost zbranih zapisov.

Ključne besede:

elektronski zapisi, sistem za upravljanje z elektronskimi zapisi, arhiv, metapodatki, prevzem

---

* *Wojciech Woźniak, PhD, deputy director of the National Digital Archives, Ul. Hankiewicza 1, 02-103 Warszawa, Poland.*

DEFINITION OF THE ELECTRONIC RECORD

The concept of an electronic record has been introduced into the Polish legal system in 2005 under the provisions of the Act on the Computerization of Public Service (Dziennik Ustaw, 2005). An electronic record has been defined as constituting a separate entity, the semantic set of data arranged in a specific internal structure, stored on electronic media data.

It is worth to take a closer look at individual elements of the definition that can give us a better understanding what the electronic record is. The concept of "separate semantic entity" is the key to treat the record as a whole. Since there is no legal definition of this category, it should be defined every time in the context of specific data set. Of course when some set of data is supposed to be treated as an electronic record, it should be somehow protected against changes, i.e., by electronic signature. However, electronic signature is not a necessary part of an electronic record in a wide meaning (Janowski, 2009).

The term "internal structure of the record" refers to two elements: the physical structure and the logical structure. Both are defined in the Regulation of the Prime Ministers of September 26, 2005, on the organizational and technical conditions of transferring the electronic records to the public entities (Dziennik Ustaw, 2006). Physical structure is the result of processing, including encoding and encryption, the information contained in an electronic record on the level of data bits in the system, which is the defined as data format. In other words, the structure of the physical form consists of the bits that through the use of appropriate software are read as a record in the prescribed form: text, image, sound or video. Physical structure of the record is known as a data format that allows the computer system to recognize what kind of software should be used to open the file. The three-letter abbreviation after the dot in the file name is the designation of file format, for example: .doc for text documents produced by MS Word, or .odt for text documents produced by the Write application by OpenOffice.org or LibreOffice. The logical structure is a way of arranging information in an electronic record as defined by specifying the elements and features of information in this record and the links between them. In other words, in the case of a text document it is a layout of the elements of this document: pagination, paragraphs, headers, etc., in the case of the website it is a layout of its elements, layout pages, graphics, and text.

The electronic data media is a material or device used for recording, storing and reading data in the digital form. So any type of storage media such as Compact Discs, DVD-discs or flash memory, hard drives (in personal computers, and also disk arrays), or magnetic tape comprising the tape libraries.

At the same time, to the definition of archival materials the concept of documentation in electronic form has been added. Until 2005 it was not clear enough if the records in digital form can be treated as archival materials. Some creators of the records tend to treat devices themselves (for example compact discs) as archival materials. The distinction between a digital record and an electronic media data was not clear. In 2005 the Polish Archival Act (Dziennik Ustaw, 2010) made changes in the definition of archival materials. Since then archival material is defined as all kinds of records in every form, also in digital form, which have a meaning as a source of historical information about the activity of the Polish state, its agencies, about relationships with other countries, about social, economic and political activity.

DETAILED REGULATIONS

In 2006 detailed regulations on how to deal with electronic records in public entities were established:

1. Regulation of the Minister of Internal Affairs and Administration on the specific procedures for electronic records (Dziennik Ustaw, 2006)

2. Regulation of the Minister of Internal Affairs and Administration on the necessary elements of the structure of electronic records (Dziennik Ustaw, 2006)

3. Regulation of the Minister of Internal Affairs and Administration on the technical requirements of formats of recording and electronic media data on which archival materials transferred to state archives were recorded (Dziennik Ustaw, 2006)

These three regulations contain a set of conditions of electronic records management in the public sector in Poland.

Finally, at the beginning of the 2011, a special legislation enabling the daily work with electronic records in public administration offices was enacted. It was a regulation of the Minister of Internal Affairs and Administration on the management of records, a file plan and instructions on the organization of the archives of the institution (Dziennik Ustaw, 2011). According to these regulations, the entity manager decides whether his office works using electronic records management system (ERMS) or whether it remains with the traditional (paper) records management. Choosing ERMS does not mean that traditional records would disappear. ERMS must cope both with the electronic record and with the paper one. Due to the legal regulations there is no way to replace the paper document with its electronic copy (for example with the scan of it). That means that citizens can deliver to the public offices paper documents and those documents will be kept even if their electronic copy will be prepared and will be managed in the office as well. On the other hand, citizens still may demand to obtain paper documents from public offices. Furthermore, some specific legal regulations refer to the particular kinds of records and establish specific conditions for their processing. Although the institution has chosen the ERMS, it still has to manage paper records also. In fact, in this situation, complete files of a particular case will be only in ERMS as electronic records. Only parts of the case, like, for example, paper letters from citizens, will be in traditional (paper) form. Current polish law does not allow destroying original paper records even when the proper electronic copy exists in the ERMS as part of the case file.

ELECTRONIC RECORDS MANAGEMENT SYSTEM (ERMS)

Where a public body decides to work with electronic records it must meet a number of requirements, at the head of the necessity of implementation of ERMS to manage electronic records. ERMS is an application which enables capturing, creating, storing, sending, describing and keeping until transfer to the state archives. The necessity to apply ERMS was formulated explicitly in § 6 of the Regulation of the Minister of Internal Affairs and Administration on the specific procedures for electronic records (Dziennik Ustaw, 2006). Public institution is obliged to ensure that three basic procedures have been introduced. The entity must prepare a specific procedure of keeping electronic data in at least 10 years period. This procedure

should be reviewed regularly to keep its adequacy to the actual state of technology. Every year a review of a sample of records kept in the ERMS should be made to detect possible errors and to check if kept records are still readable. There should be a plan of transferring records to new storage media (migration of data). This plan should be connected with annual reviews of records.

Electronic records management systems must:

- ensure the integrity of the content and metadata of the records; changes can be made only within the specific procedures,

- protect against changes to records of resolved cases,

- allow the removal of records from the system only:

  - in the framework of destroying non-archival records,

  - when data was recorded incorrectly or by a mistake,

  - when the record endangers the system,

  - when removing the records is necessary due to other law obligations.

- provide a permanent and effective access to the records and allow their search,

- allow to view the metadata set for each record,

- identify the users and document the changes made by them in the records and metadata,

- provide control over individual user access to records and metadata,

- allow reading the content of records created in the ERMS without distortions,

- retain the records and metadata in a specific structure according to law regulations,

- provide restoration of the proceed and settlement of cases,

- support activities related to classifying and grouping of records in the case files,

- support and document the process of destroying non-archival records (automatic extraction, preparation of lists of records to be destroyed),

- support activities related to the transfer of archival materials to the state archives (export, and saving records in the appropriate structure),

- serve as an archives of the institution.

METADATA

Metadata is information describing the records, whatever their form, necessary for their identification, understanding, management and use. In the regulation on the necessary elements of the structure of electronic records metadata is defined as a set of structured information, logically related to the describing electronic record to facilitate its search, control, understanding and long-term storage and management (Dziennik Ustaw 2006). Each electronic record which appears in the ERMS must have a set of seven metadata assigned:

- ID - unique identification of the record in ERMS,

- Creator - the name of the entity (corporate body or a person) responsible for creating the content of the record,

- Title - the title given to the record and shortly describing the content,

- Date - the date of the events associated with the life cycle of the record (for example: creation, changing, sending etc.),

- Format - specify the format of digital data (file format),

- Access - availability of the record,

- Type - specify the type of record: text, image, etc (according to the DCMI data set).

If in the process of record creation and management other values of metadata have been identified or added, they also become mandatory and must be joined to the description of the record:

- Relation – specify the relationship with another record, such as a version or annex,

- Recipient - the entity (corporate body or person) to which the record is addressed,

- Grouping - belonging to the group of records (case files),

- Qualification – the archival category of the record, which specifies the retention period of the record,

- Language - the language of the record,

- Description - a summary or table of contents,

- Permissions - an indication of the entity authorized to dispose of the record.

Metadata must be saved for every record and for each group of records (case file). Method of recording metadata is strictly definite: it is to be an XML file with a specific structure describing an xml schema in the appendix to the regulation on the necessary elements of the structure of electronic records (Dziennik Ustaw, 2006).

APPRAISAL SYSTEM

The archival value of the records is determined at the moment of its attachment to a particular class indicated in the file plan. Some records may be subject to expert opinion carried out by state archives staff. Non-archival records may be destroyed after obtaining the state archives consent. Both electronic and paper records are classified according to the same criteria and retention period depends on the classification scheme.

ACQUISITION PROCESS

Electronic records representing archival materials are transferred to the state archives after 10 years from their creation (as opposed to a maximum of 25 years in the case of analogue records). Until then, they are stored in the archives of the creator. Electronic records are transferred in an orderly manner in the specified

directory structure. Metadata of records and metadata of case files (groups) to which the records belong are transferred to the archives along with the records. Records are transferred to the state archives in formats in which they were recently held by the creator.

Archival materials in electronic form must be submitted to the archives in a specific structure called the package archives. This is the uncompressed file (e.g., .tar archives) composed of three folders:

1. records - including electronic records transmitted,

2. metadata - containing the metadata of the records,

3. case files - containing the metadata of case files (or other groups) with which records are aggregated.

The records consisting of an individual file (one file = one record) are stored directly in the folder "records." If the record consists of several files (2, 3 or more files = one record) they are stored in a subfolder of folder "records." So there must be a separate subfolder for each multi-files record. Metadata for each record are stored in a folder "metadata" in the form of xml files. The name of the xml file with metadata is the same as the name of the file (or folder for multi-files records) of the record with the extension .xml. For example: when the name of the file consists the record is "record01.odt" then the name of the .xml file should be: "record01.odt.xml". The folder "case files" contains metadata of records groups (case files) also as xml files.

An archival package can also be used as a way to transfer records between public entities, or between state archives storing the archival materials and external entities for example courts and other administrative authority.

Due to the different form and related aspects of long-term storage and retrieval of digital archival materials in the process of acquisition two archives are involved: state archives competent for the entity and the National Digital Archives, plays the role of technical archive. The whole process of acquisition and storage is supported by the electronic tool called Archive of Electronic Records (AER). AER is a web application hosted on the servers of NDA (available at: https://ade.ap.gov.pl/ndap/startSimpleSearch.do). It was designed for capturing, holding and sharing electronic records acquired from public agencies. The AER is a solution which allows cooperation between creators (public agencies) of digital materials and its holders (state archives). It offers four types of accounts:

- account for a public agency (creator of records):
  - validation of archive package,
  - transferring lists of transfer-receiving,
  - transferring archive package,
  - editing own metadata,
  - access to own archival materials.

- account for the state archives:

  - creating accounts for public agencies,

  - validation of lists of transfer-receiving (archival matters),

  - validation of archive package (archival matters),

  - editing own metadata,

  - granting access for public.

- account for NDA:

  - creating accounts for state archives,

  - validation of lists of transfer-receiving (technical matters),

  - validation of archive package (technical matters).

- account for Head Office of the State Archives:

  - supervision of all activities.

The AER system allows gathering of electronic records, sharing, and creating additional metadata. The system allows the institution which already sent the archival materials to the state archives to add metadata to submitted records. Similarly, the state archives can add its metadata to submitted records. In both cases, these new metadata are kept separately from the original metadata provided together with the records.

The transfer of archival material in electronic form to the state archives includes the following steps:

1. Institution which intends to transfer archival materials makes a request at the competent local state archives. Archives creates an account in the AER system which serves as a platform to submit a list of transfer-receiving and digital archival materials.

2. Using an account in the AER system the institution provides a list of transfer-receiving materials and information about the history of the creator. The list of transfer-receiving must be consistent with the model, located in the AER system. Its accuracy is controlled by employees of the regional archives and the technical correctness is controlled by the AER system itself.

3. The institution prepares an archive package. All records, their metadata and metadata of case files (or group) with which records were aggregated must be recorded in the appropriate structure of an archive package.

4. The institution generates a checksum packet of the archival package and sending it to the AER system.

5. The institution sends the archival package to the AER.

6. The AER undertakes a technical validation of the archival package (checksum compatibility, correctness of the structure) and its compatibility with previously sent list of transfer-receiving.

7. The competent state archives undertakes the validation of the archive package.

The validation should be finished in a year. After this period the archival package with all records and metadata is treating as capturing to the AER system. The public agency is obliged to keep all records and metadata throughout this period. After the state archives declares that the archive package is correct or the one year period exceeds, the creator is free to keep those records and metadata or to delete them.

Physically, archival materials in form of electronic records are stored on NDA servers. However, they are treated as a part of resources of competent state archives. Access to submitted records is possible via the Internet and, if there are no legal restrictions, they are accessible to the public.

The institution which wishes to transfer archival materials to the state archives may check if the archive package created by the ERMS is correct, before transferring is initiated. The AER system provides a tool called validator that can be downloaded on a local machine or used online to validate the archival package (available at: https://ade.ap.gov.pl/ndap-walidator/download.do). This tool was designed to provide a functionality to validate whether the used ERMS will meet the requirements of law. In the same way the correctness of the list of transfer-receiving also may be validated. Furthermore, the file plan from the institution can be transferred to the AER system. It can be used to automatically organize the records and facilitate their review.

NATIONAL DIGITAL ARCHIVES (NDA) AND REGIONAL ARCHIVES

Polish archival network consists of 30 regional archives and 3 central archives. Regional archives supervise the records management of public entities in the region. Traditional archival materials from these entities are then stored in the regional archives. Electronic records are gathered in the central computer system - Archive of Electronic Records (AER). AER is hosted on the servers of National Digital Archives (NDA) which is called the technical archive. Regional archives are responsible for the correctness of gathered records. The NDA is responsible for its safe, long-term storage. Three institutions are involved in the process of transferring the electronic records to the AER: the public entity (creator), the state archives and the NDA.

The next step in the development of an information system on archival resources in Poland will be creating the connection between a system with general information about the traditional materials with the system containing electronic records and their metadata. This connection will result in an information system which will allow sharing all metadata related to one creator in one place regardless of whether it has a traditional or digital form.

SOURCES AND LITERATURE

*   *J. Janowski (2009), Administracja elektroniczna, pp. 252-256. Lublin: Municipium SA.*

*   *Ustawa o narodowym zasobie archiwalnym i archiwach (the Archival Act), Dziennik Ustaw 2010, nr 123, poz. 698 with later changes.*

*   *Ustawa o informatyzacji podmiotów publicznych (the Act on the computerization of public service), Dziennik Ustaw 2005, nr 64, poz. 565 with later changes.*

*   *Rozporządzenie Ministra Spraw Wewnętrznych i Administracji w sprawie szczegółowego sposobu postępowania z dokumentami elektronicznymi, Dziennik Ustaw 2006, nr 206, poz. 1518.*

*   *Rozporządzenie Ministra Spraw Wewnętrznych i Administracji w sprawie niezbędnych elementów struktury dokumentów elektronicznych, Dziennik Ustaw 2006, nr 206, poz. 1517.*

*   *Rozporządzenie Ministra Spraw Wewnętrznych i Administracji w sprawie wymagań technicznych formatów zapisu i informatycznych nosników danych, na których utrwalono materiały archiwalne przekazywane do archiwów państwowych, Dziennik Ustaw 2006, nr 206, poz. 1519.*

*   *Rozporządzenie Ministra Spraw Wewnętrznych i Administracji w sprawie instrukcji kancelaryjnej, jednolitych rzeczowych wykazów akt oraz instrukcji w sprawie organizacji i zakresu działania archiwów zakładowych, Dziennik Ustaw 2011, nr 14, poz. 87.*

SUMMARY

OD UPRAVLJANJA Z DOKUMENTI V JAVNEM SEKTORJU DO UPRAVLJANJA Z ARHIVSKIM GRADIVOM – MODEL PREVZEMA ELEKTRONSKIH ZAPISOV NA POLJSKEM

Koncept elektronskih zapisov je bil v poljski pravni sistem vključen leta 2005. Istočasno je bil definiciji arhivskega gradiva dodan koncept dokumentacije v elektronski obliki. Leto kasneje so bila predstavljena natančna pravila za delo z elektronskimi zapisi javnih ustanov. V začetku leta 2011 pa je bila končno potrjena posebna zakonodaja, ki omogoča dnevno delo z elektronskimi zapisi v javni upravi. Glede na ta določila se direktor ustanove odloči, ali bo njegova ustanova uporabljala sistem za upravljanje z elektronskimi dokumenti (ERMS) ali pa bo ostala pri tradicionalnem papirnem poslovanju. Arhivska vrednost zapisov je določena v trenutku, ko je zapisu dodeljen znak v klasifikacijskem načrtu. Nekateri zapisi so lahko tudi predmet debate med zaposlenimi v arhivu. Dokumentarno gradivo je lahko, po odobritvi arhiva, uničeno. Tako elektronski kot papirni dokumenti so klasificirani glede na iste kriterije, klasifikacija pa določa tudi rok hrambe.

Elektronski zapisi arhivske vrednosti so predani v državni arhiv po desetih letih od nastanka. Do takrat ostajajo v arhivu ustvarjalca. Elektronski zapisi so predani urejeni v določeni strukturi. Metapodatki zapisov in metapodatki map (skupin), ki jim zapisi pripadajo, so v arhiv predani skupaj z zapisi.

Poljsko arhivsko mrežo sestavlja 30 regionalnih in trije osrednji arhivi. Pokrajinski arhivi nadzirajo upravljanje z dokumenti v javnih ustanovah v regiji. Tradicionalni, papirni dokumenti teh ustanov se hranijo v regionalnih arhivih. Elektronski dokumenti se hranijo v osrednjem računalniškem sistemu – arhivu elektronskih zapisov, ki se nahaja na strežniku Narodnega digitalnega arhiva (NDA) in se imenuje tehnični arhiv. Regionalni arhivi so odgovorni za pravilnost zbranih zapisov. NDA je odgovoren za njihovo varno, dolgoročno hrambo. V proces prevzema

elektronskih zapisov v arhiv so vključene tri institucije: javna ustanova (ustvarjalec), državni arhiv in NDA.

Arhiv elektronskih zapisov dovoljuje hrambo elektronskih zapisov, deljenje in ustvarjanje dodatnih metapodatkov. Je prototip, ki bo v prihodnosti še razširjen.