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ARCHIVES AND THE DIGITAL AGE IN THE CZECH REPUBLIC

ABSTRACT

Digitisation in the Czech Republic took on in the late twentieth and, more significant-ly, in the early twenty-first centuries, not only in the field of archives but of libraries too. A major role in this respect was played by regular conferences dedicated to the science of information and held annually at the National Archive. While the libraries focused, predominantly, on digitisation of precious manuscripts and old prints, and were supported in this by a grant programme subsidised by the Ministry of Culture Czech Republic (Manuscriptorium), the archives have focused mainly on digitisation of parish registers, which was done in various ways. Digitisation of other archival documents followed and these are now being made accessible o scholars through various web portals, including international ones. An important role in digitisation of documental material was played by the international organisation ICARus and its Monasterium programme. Besides digitisation it deals with archiving of electron-ic documents (digital-born), although the establishment of the National Digital Ar-chive was accompanied by various problems. The training of suitable specialists to serve the digital age in the Czech Republic is no easy matter either, although even universities focus on it.

Key words: archiv science, digitisation, State Information Policy of the Czech Republic, libraries, rare documents, National Digital Library, National Archive, state regional ar-chives, National Digital Archive, teaching of archivists

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ARCHIVI ED ERA DIGITALE NELLA REPUBBLICA CECA

ABSTRACT

La digitalizzazione nella Repubblica Ceca ha preso piede alla fine del ventesimo secolo, e più significativamente nei primi anni del ventunesimo secolo, non solo nel campo degli archivi, ma anche delle biblioteche. Un ruolo importante in questo senso è stato svolto dalle conferenze periodiche dedicate alla scienza dell'informazione, tenute annualmente presso l'Archivio Nazionale. Mentre le biblioteche si concentravano, prevalentemente, sulla digitalizzazione di preziosi manoscritti e vecchie stampe, e sono state sostenute in questo da un programma di sovvenzioni sovvenzionate dal Ministero della Cultura della Repubblica Ceca (Manuscriptorium), gli archivi si sono concentrati principalmente sulla digitalizzazione dei registri parrocchiali, che è stata fatta in vari modi. E' seguita la digitalizzazione di altri documenti d'archivio, e questi sono ora resi accessibili agli studiosi attraverso vari portali web, compresi quelli internazionali. Un ruolo importante nella digitalizzazione del materiale documentale è stato svolto dall'organizzazione internazionale ICARus e dal suo programma Monasterium. Oltre alla digitalizzazione, si tratta dell'archiviazione di documenti elettronici (nativi digitali), anche se l'istituzione dell'Archivio Digitale Nazionale è stata accompagnata da vari problemi. La formazione di specialisti idonei per servire l'era digitale nella Repubblica Ceca non è facile, anche se anche le università si concentrano su di essa.

Parole chiave: *archiv science, digitalizzazione, State Information Policy of the Czech Republic, biblioteche, documenti rari, Biblioteca digitale nazionale, Archivio nazionale, archivi regionali statali, Archivio digitale nazionale, insegnamento degli archivisti*

ARHIVI IN DIGITALNA DOBA V REPUBLIKI ČEŠKI

IZVLEČEK

Digitalizacija na Češkem se je začela že v poznem dvajsetem, predvsem pa na začetku enaindvajsetega stoletja, vendar ne samo na področju arhivov, ampak tudi knjižnic. Pri tem so bile pomembne redne konference o informacijski znanosti, ki so jih vsako leto organizirali v nacionalnem arhivu. Medtem ko so se knjižnice osredotočale predvsem na digitizacijo dragocenih rokopisov in starih grafik, kar je bilo podprto s programom nepovratnih sredstev, ki ga je subvencioniralo Ministrstvo za kulturo Češke republike (Manuscriptorium), so se arhivi osredotočili predvsem na digitalizacijo župnijskih registrov, kar je bilo izvedeno na različne načine. Sledila je digitalizacija drugih arhivskih dokumentov, ki so zdaj dostopni ali dostopni učenjakom prek različnih spletnih portalov, tudi mednarodnih. Pomembno vlogo pri digitalizaciji dokumentarnega gradiva je imela mednarodna organizacija ICARus in njen program Monasterium. Poleg digitalizacije se ukvarja z arhiviranjem elektronskih dokumentov (rojenih v digitalni obliki), čeprav je ustanovitev Nacionalnega digitalnega arhiva spremljala različna težava. Tudi usposabljanje ustreznih strokovnjakov za digitalno dobo na Češkem ni lahka zadeva, čeprav se na to osredotočajo celo univerze.

Ključne besede: *arhivska znanost, digitalizacija, državna informacijska politika Češke, knjižnice, redki dokumenti, nacionalna digitalna knjižnica, nacionalni arhiv, državni regionalni arhiv, nacionalni digitalni arhiv, poučevanje arhivistov*

ARCHIVY A DIGITÁLNÍ VEK V ČESKÉ REPUBLICE

ABSTRAKT

Digitalizace v České republice se začala rozvíjet od konce 20. století a zejména od za-čátku 21. století, a to nejen v oblasti archivnictví, ale i knihovnictví. Významnou roli v této oblasti sehrály pravidelné konference věnované problematice informačních věd, které se každoročně konaly v Národním archivu. Zatímco knihovny se zaměřily zejména na digitalizaci vzácných rukopisů a starých tisků a za tímto účelem vznikl i dotační program podporovaný ministerstvem kultury (Manuscriptorium), archivy se soustředily v prvé řadě na digitalizaci matrik, která byla prováděna různými způ-soby. Postupně následovala i digitalizace dalších archivních dokumentů, které jsou zpřístupňovány badatelům prostřednictvím různých webových portálů, včetně me-zinárodních. Významnou roli při digitalizaci listinného materiálu uloženého v čes-kých archivech sehrála mezinárodní organizace ICARus a její program Monasterium. Kromě digitalizace se řeší také archivace elektronických dokumentů (digital-born), přestože zřízení Národního digitálního archivu doprovázely různé problémy. Snad-ným úkolem v rámci „digitálního věku" v České republice není ani příprava vhodných specialistů, přestože se na ni zaměřují i vysoké školy.

1 INTRODUCTION

Same as in other countries, the Czech Republic saw the beginnings of digitisation at the very end of the second millennium and fully developed with the advent of the third millennium. First steps associated not just with the very application of this technology but also with related theoretical and practical issues were taken in the area of librarianship, namely concerning the transfer of rare and often difficult to access analogue documents into digital form which allowed for their easier access and, in some cases, the much needed protection. The first digitisation projects appeared in the Czech Republic in the 1990s in large central libraries (digitisation being too expensive for smaller institutions) and first they focused on precious, rare and endangered manuscripts. Non-standardised metadata standards were used for the description of documents.

2 STATE INFORMATION POLICY – THE PUBLIC INFORMATION NETWORK OF LIBRARIES

The increase in quality and quantity of digitisation was made possible by the technological development after 2000. The decisive factor for its wide application was the approval of the National Information Policy of the Czech Republic (the Czech Republic government resolution no. 525 of May 31, 1999), related to the policy of the European Union under the slogan "information society for all". On the basis of this (the Czech Republic government resolution no. 352 of April 10, 2000, on the concept of the national information policy in education), the programme of the "Public Information Service of Libraries (VISK)" was approved. Its main goal was to innovate the public information service of libraries on the basis of information technologies, besides other goals it was to focus on "keeping and making accessible the national cultural heritage concentrated in library collections". This meant to ensure, through digitisation, "protection and wide accessibility of rare library documents and other collections threatened with disintegration and representing a major part of the national cultural legacy" and – in relation to it – to "build and put into operation a digital library and an archive, which will ensure storing and access to rare library documents to both specialised user groups and the general public". The VISK programme was thus to include participation of the UNESCO programme "The Memory of the World" and the European Commission project "Europeana". In regard to individual goals, the VISK programme was divided into nine interconnected sub-programmes, of which the tasks quoted above were fulfilled by VISK4 (Digital Library and Archive for Information Services of Libraries), VISK6 (National Programme of Digital Access to Rare Documents – "Memoriae Mundi Series Bohemica") and VISK7 (National Programme for Micro-filming and Digital Access to Documents in Risk of Acid Paper Degradation – "Kramerius") (*Cubr; Melichar – Hutař*).

2.1 Digitisation of Rare Documents in Libraries

While VISK7 made it possible to carry out digitisation namely of old periodicals and younger printed publications (made accessible by the "Kramerius" digital library since 2003), VISK6 is focused on digitisation of rare manuscripts and old prints (until 1800), or even very rare newer documents that are located in the Czech Republic, regardless of where they originated from or where they were made. The risk of decomposition and requirements for their wider use were the basic criteria of selection. The allocation of funds for digitisation is requested by institutions which house the given documents. The applicants are obliged to ensure the creation of digital archive data, which will respect and use the basic principles, standards and recommendations. The proposals of the applicants are assessed by a commission at the Ministry of Culture, consisting of experts from various institutions who can also recommend further important documents to be digitised.

The "Memoriae Mundi Series Bohemica" (MMSB) programme, as a programme of digital access and protection of cultural heritage contained in documents located in the territory of the Czech Republic, in which the rare documents were made accessible, was launched by the National Library of the Czech Republic in partnership with AiP Beroun s.r.o. as early as 1995. Since its inception it subscribed to the UNESCO "Memory of the World" programme, which the National Library of the Czech Republic joined in 1992 and for which it processed a number of pilot projects. In MMSB, "Manuscriptorium" (www.manuscriptorium.eu) was launched in 2004 as a freely available digital library of historical documents (making accessible manuscripts, incunable, old prints and historical maps), accessible in Czech and English. "Manuscriptorium" is a sub-aggregator of the Europeana project for the area of historical collections, in which 43 Czech and over 40 foreign institutions participate. Since 2007 "Manuscriptorium" is a part of the European ENRICH (European Networking Resources and Information concerning Cultural Heritage) project, which covers nearly 85% of all digitised historical documents stored in European national libraries. Digitisation of seventeenth and eighteenth century prints is done in partnership with Google (*Hejnová*). International metadata standards are used to sign the documents (*Knoll – Psohlavec; Knoll 1998, 1999; Psohlavec 1999, 2000, 2005; Uhlíř*).

2.2 National Digital Library

From 2011 to 2015 the project of the National Digital Library of the Czech Republic was implemented and, as a part of it, operation started in 2012 at digitising sites at the National Library Prague and Moravian Library in Brno, where a huge number of pages of "common" printed documents is being gradually digitised. Another project has been running since 2015, in which the two libraries mentioned above were joined by the Library of the Academy of Sciences Czech Republic and National Technical Library (*Lhoták*). At the same time, a special software for libraries is being developed that will fulfil the basic functions of long-term archiving.

3. "ARCHIVES, MUSEUMS AND LIBRARIES IN THE DIGITAL WORLD" CONFERENCE

The above mentioned national information policy initially quite neglected the area of other memory institutions, i.e. archives, museums and galleries, as well as the area of heritage protection. One of the goals, therefore, was to ensure support for these institutions and partnership among them in the interest of achieving the common goal — to protect cultural heritage and to make it accessible to all citizens. The initiative emerged from librarians who (namely the Association of Librarians and Information Professionals of the Czech Republic) gave birth to the conference designed for professionals of other memory institutions; the first of these, entitled "Archives, Museums and Libraries in the Digital World" was held on December 6, 2000, in Prague — and since then it has been held annually (the 21st edition is to be organised in 2020). While the first conferences saw mainly papers providing general information on cooperation, technical issues and first experiences, gradually more special issues emerged and various projects were presented. Besides libraries also museums, archives and heritage institutions were gradually represented. Most of the papers are available, at least in the form of PowerPoint presentations, on the Internet.[2]

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2   See https://www.skipcr.cz/akce-a-projekty/akce-skip/archivy-knihovny-muzea-v-digitalnim-svete/20.-konference-archivy-knihovny-muzea-v-digitalnim-svete-2019 (papers from 2010–2018); https://www.skipcr.cz/akce-a-projekty/akce-skip/archivy-knihovny-muzea-v-digitalnim-svete/11-archivy (papers from 2000–2009).

4. DIGITISATION IN ARCHIVES

The digitisation in archives was directly preceded by electronic records of archival materials. Gradually, digitisation started, the main reasons for this step being the protection of the physical condition of the archival material, faster access, possibility to print copy without handling the original and protection against theft.

The problem was the non-existence of clear methodic rules for the description of the archival material, therefore it was decided to draft new rules, compliant to the international standards (approved by the International Archival Board). These are 1. ISAD(G)) – General International Standard Archival Description of 1999; 2. ISAAR (CPF) – International Standard Archival Authority Record for Corporate Bodies, Persons and Families of 1995. It was on this basis that, gradually, new "Basic Rules for Processing of Archival Material" were drafted and these now replace the older ones which were in effect from 1958.

As late as the beginning of the third millennium, however, it was not a matter of course that archives in the Czech Republic (and libraries) had their websites. First, a database of archive collections, the so-called PEvA, initially non-public, now accessible on the Internet (https://aplikace.mvcr.cz/archivni-fondy-cr/default.aspx), was founded, then, gradually, digitised archival tools appeared (and new ones were developed based on the methodical guide of 2006); subsequently archival material was being digitised. Same as in the case of libraries, the attention was focused first on rare documents, second on frequently used documents such as parish records and other sources used for genealogical research, the goal being to protect the archival material and to alleviate the burden of researchers' agenda.

4.1 The State Regional Archive TReboN – DigiArchiv

It was the State Regional Archive (SOA) in Třeboň, which became the pioneer of digitisation in the Czech Republic. Its Digital Archive (DigiArchiv, http://digi.ceskearchivy.cz) now includes a significant volume of digitised archival material and archival tools from the archives in South Bohemia (*Kaiseršat – Hankovec 2010, 2011, Kaiseršat 2014, Hankovec 2017*). Digitisation in SOA Třeboň was started by the members of The Church of Jesus Christ of Latter-day Saints (Mormons) and the staff of the Genealogical Society of Utah (Family Search) on the basis of an agreement signed on February 20, 2007. First the parish records, until 2012, were digitised. The result of the project was that over seven thousand of parish record books from 1587 to 1949 were made accessible to readers; this is followed by digitisation of documents related to parish records (*Cukr*). The access to digitised materials, including the preparation of metadata, was done by SOA Třeboň on their own— namely thanks to fact that they have a professional whose programming and IT skills vastly exceed the common standard of administrators in IT archives. The result is a highly sophisticated and yet transparent and logical information system, which functions on the principles of intuitive navigation and meets a number of current standards, it allows not only for displaying the digital copies of archival materials but also offers applications providing the general public with a comfortable user experience and information services (*Kaiseršat 2017*). Later, from 2012 to 2014, more frequented sources were digitised – registers of serfs and registers of inhabitans (sheets from the census), while namely in the case of the latter the digitisation significantly contributed to its preservation. In 2015, land registers and urbaria started to be digitised and made accessible, since 2016 the Land-Registry of Joseph II and Stable Land-Registry have been digitised. Besides that, from 2011 to 2015, over six thousand large format maps and plans or technical drawings were digitised in partnership with the Geodetical Research Institute in Zdiby near Prague. At the same time, SOA Třeboň started working on its own internal digitisation focused namely on commu-

nity, school and society records and also collections of postcards and photographs, city views or rare individual items (manuscripts, documents, office records); since 2010 the archive has been digitising the rare archival collection "Historica Třeboň", declared in 2000 the national heritage monument as it contains important archival materials for the periods of the Middle Ages and the early Modern Age (*Hadač, pp. 5–10*). The vast geographic database (Geographic Register), developed by the archivists of SOA Třeboň and covering places outside South Bohemia and the Czech Republic (including misspelled names), proves to be an important tool to process and make accessible digitised archival material; the register is linked to nearly every record in the database and constitutes a backbone of all digitised material. The whole DigiArchiv works on the basis of cooperation between an archivist and IT specialist (and user) and makes accessible to researchers in a very efficient way increasing volume of archival material, thus helping to raise awareness about the existence, importance and necessity of archives. Digitisation in SOA Třeboň is under way and focuses on more archival material, although it is a demanding task on finances, organisation and human resources. The main goal, nevertheless, remains not just its development, but long term sustainability on an appropriate level (*Kaiseršat 2017; Plávek 2017*).

4.2 Monasterium

Documents, not only from the State Regional Archive in Třeboň but other archives in the Czech Republic, including the National Archive, are accessible through the Monasterium archive (www.monasterium.net), a virtual archive, which today contains over 660,000 mediaeval and early modern documents of over 180 institutions in fifteen European countries (Austria, Germany, Switzerland, Italy, Spain, Czech Republic, Slovakia, Poland, Hungary, Slovenia, Croatia, Serbia, Macedonia, Romania, Estonia). It was established and is operated by the international organisation ICARUS (*Křečková 2007, 2010; Křečková – Pazderová;* Černušák).

4.3 The State Regional Archive Pilsen inpartnership with Bavaria – Porta fontium

Another example of significant international partnership, connecting two countries, is the archive web portal Porta fontium (http://www.portafontium.eu/), developed by State Regional Archive in Pilsen (which, same as SOA Třeboň, developed their proprietary software) in partnership with the General Directorium of Bavarian Archives. At its very inception there was the project named "Bavarian-Czech Network of Digital Historical Sources" (2010-2012), followed upon by "Czech-Bavarian Archival Guide" (2013–2015), the purpose of which was to map the terrain of archival materials on both sides of the Czech-Bavarian border. Soon digitisation of selected archival material from West-Bohemian and some Bavarian state archives started, namely parish records (which Pilsen started to digitise even before and made them accessible, from 2010, through Acta Publica web application in partnership with Moravian Land Archive), but also land registers and urbaria, chronicles, photographs, documents, census logs, periodicals, police conscription records for the city of Pilsen from years 1918-1941 or list of guests in West-Bohemia spas. Digitised materials have been accessible on the portal since November 2012 and they are still used by the researchers. The original project has expanded and taken the form of a database, which was made accessible in May 2015 and is to bring detailed information on archival collections in all state archives of the Czech Republic (not just in Western Bohemia) which include the so-called Bavariana, and collections in the state archives of Bavaria which include the so-called Bohemica. At the same time archival collections, formerly divided and located in various archives on both sides of the border, are to be virtually interconnected, such as documents from the Waldsassen monastery stored in the state archive in Amberg and in the State District Archive in Cheb (*Augustin – Halla 2017*).

4.4 National Archive, State and Other Archives

Digitisation of archival materials in individual types of archives in the Czech Republic takes on different forms and offers varying volumes of archival material. The National Archive uses the information system VadeMeCum (https://vademecum.nacr.cz/vade-mecum/), developed by Czech company Bach Systems s. r. o. The system contains basic information on archival collections stored in the National Archive, offers the possibility to search archival means (analogue and electronic) on the basis of indices, inventory records and signatures. In some cases it provides direct access to digitised archival materials through Digital Research Room (https://www.nacr.cz/verejnost/badatelna/digitalni-badatelna). In this case the scope of digitised material is smaller than in SOA Třeboň and the National Archive allows mainly for study of conscriptions of the Prague police headquarters in 1850–1918 (http://digi.nacr.cz/prihlasky2/).

The same application, i.e. VadeMeCum for archives, allowing to browse published digitised material and search for information in archival collections, has been in use since 2007 by the State Regional Archive in Litoměřice and its subsidiaries in North Bohemia (http://vademecum.soalitomerice.cz/vademecum/; *Vladyková*), as well as the Land Archive in Opava, whose digital archive was put into operation in 2012 and makes accessible selected digitised archival materials from North Moravia and Silesia (http://www.archives.cz/web/digitalni_archiv/).

A different web application, called eBadatelna (http://ebadatelna.soapraha.cz), is used by the State Regional Archive in Prague, and yet another way of publishing of digitised archival materials is used by the State Regional Archive in Zámrsk for the area of East Bohemia (https://vychodoceskearchivy.cz/e-badatelna/). The Moravian Land Archive in Brno digitises and publishes only parish records in Acta Publica (http://actapublica.eu/). The project was prepared since 2007 and was financed by joint funds of the Moravian Land Archive in Brno and the European Union, later it was further expanded.

In all state regional archives parish records were digitised as priority, mostly in partnership with the Genealogical Society of Utah, and the digitised materials were gradually made accessible online. Subsequently, or gradually, registers of serfs, land registers, urbaria, censuses, directories, graphic prints, city views, posters, seals and card indices were or are digitised. Besides partnership with the Genealogical Society, archives digitise materials by their own means, however, often dealing with issues of storage, description of digitised material and staff for digitisation, which requires IT specialists and archivists.

The digital publishing of pre-1850 city views stored in Czech archives is a specific project, following upon the former list organised by the section of archival administration and records management with Ministry of Interior Czech Republic. The portal was developed in partnership of the Archive of the City of Prague and Bach Systems s.r.o. (http://veduty.bach.cz/veduty/).

The Archive of the City of Prague has used, since 2003, the VadeMeCum by Bach Systems s.r.o. for archives, the first digitised archival materials were published in 2005, further digitisation was done, with the support of the Norwegian Funds, in 2007-2010. Today, historically most important, most valuable and physically most endangered archival materials of the collections stored in the Archive of the City of Prague, relevant for national and European history, are accessible in the digital form (http://katalog.ahmp.cz/pragapublica/).

Digitisation is carried out in the Czech Republic and other types of archives which build their own repositories. These include the Military Historical Archive (*Baláž – Kusko*), Archive of the Charles University (*Cajthaml – Vašková*), Archive of the Czech Television (*Wintrová – Sieber – Novák*), National Film Archive (*Lachman*), Archive of the City of Pilsen (*Maglić*), Archive of the Czech National Bank (*Kunert*) and others.

5. NATIONAL DIGITAL ARCHIVE

5.1 Preparation and Realization of the National Digital Archive

As early as 1990s, electronic (e-born) documents were produced in the Czech Republic, although archives could not at first accept them as archival materials and their paper version was required. This gradually changed thanks to the new Act on archives no. 499/2004 Coll.; at the same time, the government of the Czech Republic made a resolution (no. 11 of January 7, 2004) on long-term storing and publishing of documents in digital form. The relevantly focused project was executed in 2001 and 2002 jointly by Ministry of Interior, the then State Central Archive and the Electrotechnical Faculty Czech Technical University. Gradually, more steps followed to expand the e-government.

The first experience with acceptance of electronic archival materials in the Czech Republic was made by the National Archive, which received the oldest electronic archival material as early as in 1997 (these were letters by the professor of philosophy Erazim Kohák, i.e. private documents in a personal collection); in 2001 the first systematic survey of electronic documents in central offices under the authority of the National Archive was done. This was a major impulse for the necessary solution of this problem. From the beginning of the millennium, therefore, foundations were laid for the establishment of a state-level entity for long-term storing and publishing of documents in digital form, with experience having been obtained abroad, namely in Sweden and the Netherlands, later in Germany and other countries. Pursuant to the Act on archiving no. 499/2004 Coll. tasks related to storing and publishing of "new forms of information media, including documents in digital form", were assigned to the National Archive, which is, at the same time, to carry out the function of expert methodic and training centre (*Vojáček*).

The first realization team to solve the task of digital archiving was set up in late 2005, in 2008 the technological project to build the digital archive was finalized. This was the first major analysis of digital archiving in the Czech Republic. On its base, the digital archive of the National Archive was to be established as a central solution for the whole archival network in the Czech Republic – the so-called National Digital Archive, conceived as a central service to ensure long-term archiving of digital archival material, with emphasis put on digital documents related to e-government. The goal of the NDA was to ensure: 1. long-term storing of digital archival material by selected public archives (as a primary task), 2. archival portal and access to documents, 3. support in shredding process, 4. support in processing digital archival material and 5. safe storing of digital reproductions of traditional archival materials (*Vojáček*).

The project of the National Digital Archive was implemented from 2011 to 2014 but due to problems of process character (rivalry of the suppliers of software for the document management and electronic system of records management) it was not possible to complete the request for proposals, although two attempts were made. The National Archive, therefore, had to change its strategy and to opt for an emergency solution in order to be able to make the selection and to accept digital documents from governmental authorities, as it was legally obliged to do, pursuant to the amendment of the Act on archiving from 2009. The National Archive opted for its proprietary solution, the core of which was the Canadian Open Source Archivematica – as of November 1, 2014, it was possible to launch a pilot operation and as of January 1, 2016, normal operation of the digital archive; in 2015 the first shredding process in electronic records management and storing of digital archival materials was done (*Vojáček*).

Meanwhile, in 2012, the legislation on archiving was substantially changed and it brought about new obligations — namely a central portal for archives was to be created, which was to allow for collection and acceptance of digital documents, but also to gather and publish metadata from archives and archival materials, from government authorities and other sources. Due to financial constraints, however, these obligations could be ensured in the newly built national archival portal only partially. The portal was launched in 2017, at the same time the archivists were trained. In 2017 to 2019, then, the National Digital Archive II was implemented, for which financing was secured and within which new modules of digital archive were developed, other were changed and became more efficient. Concurrently, there was a project by the Ministry of Interior Czech Republic, the goal of which was to process newly the central record keeping of archival materials and archival tools and to use this project as a module of the archive portal (*Vojáček*).

5.2 Current Condition of Digital Archiving in the Czech Republic

At the moment, there is just a single National Digital Archive and national archival portal. State regional and other archives have their own digital storages and make digitised material accessible through their own web applications and portals. However, these are not archival portals as defined by the law.

Since 2016 there has been, with the National Archive, a methodic platform for electronic documents, which connects archivists from state regional and other archives and which has as its goal to deal with methodical and practical issues of digital archiving, using contacts with foreign colleagues. An intensive partnership with universities, research institutes of the Academy of Sciences and other memory institutions is important; partnership with the commercial sector, on the other hand, is difficult, but applied research could be used. Security issues, too, will have to be addressed (*Vojáček*).

6 PREPARATION OF SPECIALISTS

Current specialists focusing on digitising and electronic documents are mainly employees of the archives and information specialists who work together. The problem remains, however, how to train staff who will be skilled in both areas, since this faces the problems of requirements for accreditation of study programs, lack of qualified teachers and financial resources, but also the lack of suitable applicants for study of the two specialisations. An interesting opportunity is offered by the study programme Computer Support in Archiving, open at University of Hradec Králové in partnership with the State Regional Archive in Zámrsk and the State District Archive in Hradec Králové, which is, however, focused on practical aspect of digitising (*Grulich; Ryantová 2011, 2014a*). At the University of South Bohemia in České Budějovice there was, for many years, a double subject study of archiving — informatics, but it had just a single student who, moreover, went to work in a quite different field following her graduation (*Ryantová 2014b*).

7. SUMMARY

Digitising in the Czech Republic started to develop thanks to the state information policy first in libraries, later in other memory institutions, including archives. An important role was played by annual conferences called "Archives, Museums and Libraries in a Digital World," held annually since 2000. In archiving, digitisation of analogue archival materials developed first, mainly those that were most frequent-

ly used or were most endangered. Besides the National Archive and state archives, digitisation is being developed by other types of archives that have their own digital storages and make digitised materials accessible through their proprietary web applications and portals. A central solution to ensure long-term archiving of digital (e-born) archival materials, namely in relation to the e-government, is represented by the so-called National Digital Archive with National Archive, which is further developed in partnership with various institutions. In the future, though, security issues and training of specialised staff will have to be addressed.

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