Towards a Safeguarding Concept of the Intangible Cultural Heritage in Slavonia, Baranya and Syrmia – Aspects of Digitization, Processing, Conservation and Dissemination of Sound, Image and Shape

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SUMMARY

This paper is aimed at defining the concept of intangible cultural heritage in the context of safeguarding of speeches, customs, historical and traditional cultural assets of Slavonia, Baranya and Syrmia. Intangible Cultural Heritage of the Republic of Croatia is endangered and it is becoming extinct due to the influence of a number of factors. Since the formulation of the 1999 Act on the Protection and Preservation of Cultural Goods, intangible cultural heritage has been under special protection as goods of interest to the Republic of Croatia and 85 items have been listed as intangible cultural heritage in the Register of Cultural Goods of the Republic of Croatia so far. Intangible cultural heritage is the subject of scientific research, as well as a part of the tourist offer (knitting fishing nets, reconstruction of customs), and some craft activities (pottery, lace making, apiculture). However, the issues related to the sustainable development

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of intangible cultural heritage are numerous, the most important being the disorganized and insufficient documentation of intangible assets and dispersion of the collected documentation. This paper sets out to highlight the ways modern technology and scientific research can cooperate in the processing of intangible cultural assets, which seems to be the best and safest option for permanent preservation of intangible cultural heritage in its broadest sense. The preservation of intangible cultural heritage is regarded in this paper at four basic levels: the collection (digitization of data), the processing of data to the level of information, proper storage of data and information processed and the dissemination to final users. The vital step towards the realization of the goals is to gather all accessible data using modern technical tools and techniques. In the era of cloud computing and distributed data storage, it is necessary to provide sufficient data redundancy for permanent preservation, especially if such valuable information is in question. As an ultimate goal, it is necessary to disseminate the collected and preserved assets in a user-oriented manner, depending on the available and desired level of animation and technical knowledge of users.

Keywords: Intangible cultural heritage, preservation model, digitization, dissemination

Introduction

The Republic of Croatia is in possession of extraordinarily rich, diverse and long-preserved intangible heritage. Its preservation has been largely supported by the foundation of numerous tradition preservation associations, particularly on the local level, and by research and documenting of the knowledge and skills and passing them on to new generations. An important issue concerning the intangible heritage are factors that lead to its endangerment and disappearance. Tourism development, as well as the development of economy and technology, influence the way of living and production in both positive and negative way, the latter being the disappearance or commercialization of certain knowledge, skills and traditions.

Since 1999, based on the changes and amendments to the Act on Protection and Preservation of Cultural Heritage, intangible cultural heritage has been considered an asset of special interest to the Republic of Croatia and particularly protected as such. Since then, there have been 85 intangible cultural heritage assets registered in the Register of Cultural Assets in the Republic of Croatia, as well as 8 intangible heritage assets protected as a form of prevention. Some 200 intangible heritage assets are proposed to be listed in the register of Cultural Heritage in Croatia and become legally protected assets.

The Register's data basis is the main resource of data about the legally protected intangible heritage. A number of documents related to the intangible heritage is available with the holders – local community and various local and state institutions (such as museums, institutes, faculties). Holders, local community, local government, experts and scientists in local and state institutions submit proposals to the listing of intangible heritage in the Register. The final decision on the listing is made by the Ministry of Culture on the basis of the opinion of a special expert Commission for the Intangible Cultural Heritage.

Preservation of intangible heritage is before all ensured by its holders and local community through realization of various projects and activities and cooperation with experts and scientists. International cooperation is achieved through some regional projects, which partly deal with issues of the intangible heritage preservation; however, there are no long-term plans of international cooperation related to the preservation of intangible heritage in different countries (i.e. in border area countries).

Intangible heritage has been a part of tourist offer for some time now. In the last few years this phenomena has increased, especially the offer of the following: *klapa* singing, Istrian two-part singing, *lindjo* dance, Rovinj *bitinadas,* Rovinj *batana* sailing, sailing in *gajeta falkuša*, fishing nets knitting and various festivals, manifestations and sacral and secular events during which phenomena of intangible heritage of particular area are presented, such as the reconstruction of traditional customs, traditional food preparation, workshops for tourists for acquiring traditional skills, etc.

Besides, intangible heritage is a resource of economic activities in certain areas (such as honey and candle production, pottery, lacemaking, food preparation).

The problems of sustainable development of intangible cultural heritage are reflected in the following:

a) insufficient implementation and enforcement of laws on the protection and preservation of intangible heritage

b) insufficient number of experts dealing with intangible heritage

c) unorganized and insufficient documentation of intangible heritage and it being scattered among numerous subjects

d) low quality of planning and program development for possible implementation of intangible heritage issues in development projects

e) insufficient involvement of intangible heritage issues in formal and non-formal education

f)   inadequate knowledge and a low level of awareness of the local population about the values and importance of intangible heritage of their area

g)   motivation of young generations for learning about and continuing traditions in their area

h)   still inadequate involvement of intangible heritage assets in the tourist offer

i)   commercialization and inappropriate presentation of intangible heritage

Further advancement in the sustainable development of intangible heritage is possible through the encouragement and education of larger number of experts dealing with the issues of protection and preservation of intangible heritage. Also, continuous documentation keeping is important, due to the tendency to change and influence by social, economic, demographic and similar changes. It is also very important to organize and coordinate intangible heritage issues on local and institutional level, particularly by providing a unified insight into the documentation status of intangible heritage in the Republic of Croatia. It is necessary to develop a unique information system through the inventory and the Register of Cultural Heritage and to involve all holders in all the phases of the development of projects, programmes and plans for the use of the heritage. It is also necessary to include the issue of intangible heritage in various forms of formal and non-formal educations.

The awareness of local population on the values and importance of intangible heritage and their role in its preservation, continuance and economic use should be raised. Also, it is important to encourage better life quality and economy development in certain areas based on the preservation and continuance of the phenomena of intangible heritage. Stakeholders from different institutional levels and sectors (state and expert institutions, museums, organizations, holders, associations, local governments and local community) should be involved in the planning of intangible heritage use for the purposes of further preservation. One should also define measures for the prevention against negative effects which could cause excessive commercialization or disappearance of intangible heritage.

Intangible heritage issues should be a part of the projects dealing with culture, natural heritage and tourism. They should become a part of new business models (especially using the possibilities of electronic and web environment), which would ensure better visibility of intangible heritage and encourage younger generations to spread and preserve it, as they are the ones it depends on (http://www.min-kulture.hr/).

Ministry of Culture has developed the Strategy for the Preservation, Protection and Sustainable Development of Economic Use of Cultural Heritage in the period of 2011 through 2015. The Strategy clearly states the importance of documentation and storage of archaic speeches for the great fear of its extinction. The purpose of

this paper is to address the need of the digitization and the permanent storage of the language of archaic speeches in Slavonia, Barany and Syrmia. The Republic of Croatia is a country characterized by its language uniqueness. Croatian language has three varieties which are quite different from each other, as well as from the standard language. Croatian varieties are: Štokavian /ʃto'kavian/, Kajkavian /kai'kavian/ and Čakavian /tʃʌ'kavian/, named after the interrogative/relative pronouns *što*, *kaj,* and *ča* (what/which in English). Each variety consists of dialects, dialects consist of groups of speeches, and groups of speeches consist of local speeches (speeches of a village population). Dialectological research is based on the local speeches, i.e. speeches of a village population (Moguš 1977:2-3).

Slavonian dialect is one of the Croatian dialects of Štokavian variety. Speeches of Slavonian dialect are located in Slavonian Posavina, Slavonian Podravina, Croatian Podunavlje and some places outside Croatian border. Although Slavonian dialect has attracted a lot of research lately, there are many locations to be explored. The aim of this paper is to address the importance of recording and digital processing of contemporary local speeches of Slavonian dialect, especially speeches around Slavonski Brod, Vinkovci, Županja, Đakovo, Valpovo, Požega and speeches in the neighbouring countries (Serbia, Bosnia and Herzegovina, Hungary, Romania, Austria) where the Slavonian dialect is still spoken. These speeches have changed over the last one hundred years (since the description by Ivšić) under the influence of schools, media, and their natural development. It is believed that speeches of Slavonian dialect have mostly preserved their accentual system, whereas lexis and phonology have undergone a lot of changes. Speeches of Slavonian dialect would be audio recorded, so that the accuracy of data could be evaluated at every moment.

Speeches of Slavonian dialect are the most archaic Štokavian speeches which constantly change. Therefore their description is very important for the Croatian dialectology (postponing the research might be fatal, since the dialects change and disappear). The archaicity of speeches of the Slavonian dialect help us reconstruct the development of Croatian Štokavian variety. Old-Štokavian speeches are very archaic and are becoming extinct therefore it is high time to research and describe them. In Slavonia, there are two speeches which are protected as intangible heritage of the Republic of Croatia: Sičanian (protected in 2008) and Old-Perkovian (protected in 2010). On their web pages, the Croatian Ministry of Culture have provided a description of the state of intangible cultural heritage in Croatia, with the old, archaic speeches being a significant part of it.

It is important to emphasise that Croatia is a relatively small country with the population of 4.5 million. There is a lot of language diversity and language wealth in

such a small country with such a small number of inhabitants. The usual notion is that every village has their own language variation, and the difference of the language varieties could be widely discussed because Croatian varieties are so different from each other, as if they were foreign languages compared to the Croatian standard. One of the tasks of the Croatian Ministry of Culture's programme is to protect unique Croatian speeches as an intangible cultural asset. In Štokavian area, i.e. in Slavonia as one of Croatian regions, the speeches of the villages Siče and Old Perkovci are protected (Kolenić, Berbić Kolar, Mance 2010)

The importance of the process of protection of certain Croatian speeches is best illustrated by the fact that these speeches are becoming extinct, although they are abundant with language uniqueness. The Ministry of Culture and the Croatian dialectologists are aware of these facts therefore certain Croatian speeches have been protected in the last couple of years. So far the following speeches have been protected: Bednjan speech, speech of Hum on the Sutla, speech of the village Vidonja, speech of the island of Susak, speech of the Posavinian village Siče, Istrian-Romanian speeches and Žminj speech.

A good example of protection and a comprehensive research is the Siče speech. It is the speech of Posavinian village Siče protected by the Decision of the Ministry of Culture according to the Act on the Protection and Preservation of Cultural Heritage, Article 12, Paragraph 1 ("Narodne novine", Vol 69/99,151/03 i 157/03) and the Ordinance on the Cultural Assets Register of the Republic of Croatia ("Narodne novine" Vol 37/01).

The Decision reads as follows: "It is hereby determined that the speech of Posavinian village Siče be given the status of intangible cultural heritage as determined by the Article 9, Paragraph 1, Indent 1 of the Act on the Protection and Preservation of Cultural Heritage. For the cultural heritage in the Point 1 of this Decision, the following system of protection measures is to be applied:

– promote the function and the importance of the heritage in the society, and the involvement of the heritage in the planning programmes

– ensure the heritage sustainability through education, identification, documentation, scientific research, preservation, protection, promotion, increase in value, possibility of passing it on to future generations through formal and informal education, and revitalization of the abandoned segments of the cultural goods

– raise awareness in the public and support the protection and preservation of the goods by the identification of globalization process and social change

218

to avoid the danger of disappearance, destruction and commercialization of the goods, and to encourage close relationship and tolerance among people

– encourage the drafting of local dictionary and grammar books

– implement the nurture of mother tongue in the primary and secondary school curricula" (Decision on the Protection of Speech of the Posavinian Village Siče, 2008).

The abovementioned tasks from the Decision on Protection have motivated the authors towards the systematic and comprehensive linguistic field research of this protected speech. It is important to emphasise that, in accord with the aspirations of the Ministry of Culture on protection and preservation of Croatian dialects, the Croatian Ministry of Science, Education and Sports has issued the document National Framework Curriculum. A part of that document is called Croatian language and its idioms. That part of the Curriculum is vital for the Croatian dialectology and Croatian dialectologists. Quite understandably, in Croatian schools the standard language is given the greatest attention, but this document provides basis for the importance of respect and nurture of regional idiom. It is stated that students should be encouraged to express themselves as creatively and as freely as possible in their mother tongue. This is very important and encouraging, since students who come to school at the age of 6 or 7 are better at expressing themselves in mother idiom than in standard language that they have not mastered well yet. One of the most important principles of the Croatian language teaching is the principle of regional belonging. This approach to organic idioms fully encompasses this principle.

Slavonian dialect is one of the dialects of Croatian luguage, Štokavian dialect. The people call it Šokački /'ʃokatʃki/, because it is spoken by Šokci /ʃoktsi/, a Croatian national community. Slavonian dialect is located in the greatest parts of the area of Slavonian Posavina, Slavonian Podravina, Croatian part of Baranya and Podunavlje. It is spoken in some places outside Croatia in Bosnia and Herzegovina, Hungary and Serbia. It is the dialect spoken by Croatians only.

The features of Slavonian dialect are:

1. Preservation of the specific ancient accent, so called twisted, Croatian acute accent, noted ˜: *pomãžu, sačũva*.

2. Non-ijekavian reflection of ancient Croatian *jat*. According to the jat reflection, Slavonian dialect speeches are divided into:

a. ikavian speeches, in the west and east Slavonian Posavina from Nova Gradiška to Kobaš, and around Vrbanja (*dite – diteta)*

b. ikavian-jekavian speeches, in the mid region of Slavonian Posavina to Bebrina and Banovci west from Slavonski Brod to Gunja and Rajevo Selo (*dite – djeteta*)

c. ekavian speeches, in Slavonian Podravina from Vukosavljevica west of Virovitica to Aljmaš and Erdut (*dete – deteta*)

d. ikavian-ekavian in Baranya Podunavlje (*dite – deteta*)

e. speeches with the original *jat*. Originally ancient Croatian *jat* is pronounced like closed /e/, which moves towards /i/ in pronunciation. This pronunciation is specific for the places in Našice area.

3. Šćakavism /ˈʃtʃʌkʌvizm/. Speeches of Slavonian dialect are Šćakavian, because they pronounce ancient sound groups *stj /stj/ and *skj /skj/ as šć / ʃtʃ/: *šćucat, gušćer, prišć, šćedit, kršćen, šćipat.*

4. Non-existance of sound /h/. Speeches of the Slavonian dialect do not pronounce the sound /h/ as most of the other Štokavian speeches do. Šokci say *lad, ladovina, gra, rana, rast (=hrast)*. Sound /h/ may be replaced by /v/ or /j/, especially in order to avoid opening their mouth in yawning position (*suvo, snaja*).

5. Losing of the final –i in the infinitive of verbs. Šokci usually say: *dijat, šćipat, divanit, ubost, dojt.*

6. Hypocoristics of male gender that end in –a are specific. It is known that in the Slavonian dialect there is the short sound with a falling pitch on the first syllable: Mata, Mija, Andra, Iva, Joza, Tuna.

7. Comparatives are different from the standard. The standard Croatian –i is replaced by –ji in Slavonian dialect: *nižji, gorji, višji, bržji.*

8. In commands, there is the use of the word *neka* + infinitive instead of the word *nemoj*: *neka to dirat*. With the imperative the word *ajde* is often used: *ajde idi.*

9. Past participle adjectives are often used with –t: *poradito, naselito, posadito*

10. Typical hyphenated compounds such as *bab-Jela* in which the first part is not declined, and the second part of the word is: *bab-Jela, bab-Jele; baćMata, bać-Mate; strin-Eva, strin-Eve.*

11. In the lexis, traces of Turkisms and Germanisms are still visible, but there are also Croatian words which are considered archaic or have a different meaning than they do in the standard Croatian language (Berbić Kolar-Kolenić 2009:258-259)

Technical aspect

As a reminder, it is important to emphasise that in the history of human species until the appearance of technical equipment, the only way of memorising and accessing the memorized information was human memory (Atkinson and Shiffirin 1976). According to the wider definition (UNESCO 2003), the intangible cultural heritage includes its transmission from one generation to the next and its recurrent creation in the society and social groups as the reaction to the environment, nature and inevitable history. It provides people with the means of identity and life continuity and promotes the respect of cultural diversity, resulting in the freedom of creativity and human future. Intangible Heritage Convention defines intangible cultural heritage as: language, practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. Sometimes it is called the "live cultural heritage" because it manifests itself in cultural and culture-related domains (UNESCO 2005, Passoa 2009) which inevitably appear due to the dynamicity and may manifest themselves in all or a part of eight cultural domains: oral tradition and expressions (including languages), cultural and natural heritage, performing arts and celebrations, visual arts and traditional crafts, books and newspapers, audio-visual and interactive media, design and creative services, intangible heritage (as transversal domain) and tourism, sports and recreation (as related domains). It is the task of current and future generations to safeguard it permanently using the media resources available in this initially digital era. As to ensure the safeguarding of the transversal domain i.e. intangible cultural heritage, it is necessary to provide the sufficient human and adequate material resources. Human resources provision implies carefully selected staff, highly educated in humanistic, social and technical domains, who would be adequately educated for engagement in the safeguarding of intangible heritage according to the segments of the proposed concept. The planned education would be implemented in synergy by the Faculty of Teacher Education in Osijek, University of J.J. Strossmayer in Osijek, Mechanical Engineering Faculty in Slavonski Brod (MEF), Croatian Academic and Research Network (CARNet) and, if necessary, specialized contract experts for the relevant and specific software and hardware solutions.
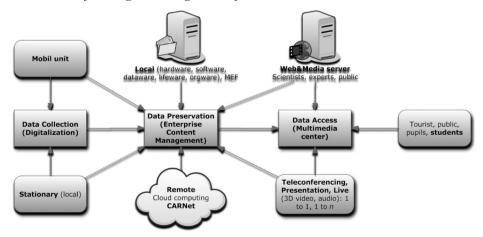
Today digitization is the key to the safeguarding of all intangible (and tangible) goods, therefore it is necessary to pay special attention to its collecting and preservation, as well as education and dissemination of research results to other researchers and the expert community, as well as to young generations of different age

and application groups: kindergartens, primary and secondary students, students of various profiles in higher education, the public, wider community, and last but not least, to the rising number of tourists who are expected to visit the discussed region of Slavonia, Baranya and Syrmia. This is indeed the meeting point of all transversal domains: intangible heritage, its collection and preservation, education, equipment and accompanying materials.

The basic concept of intangible heritage preservation of the cultural heritage of Slavonia, Baranya and Syrmia is represented in Figure 1. In the first phase, one should provide collectors and researchers with the mobile equipment for digitization (computers, audio, video, two-dimension (2D) and three-dimension (3D) equipment) and plan their education for working with this equipment. Digitization equipment consists of: audio and 2D/3D video data acquisition equipment, portable 2D scanner for the digitization of two-dimensional objects, portable 3D scanner for the digitization of three-dimensional objects, robust portable computer and portable equipment for light and scenery set up in field conditions. This acquisition equipment needs to be professionally constructed and have the sufficient energetic autonomy (additional independent solar-accumulator charging system) because it will be used in field conditions, which have been proven difficult many times due to inadequate sound direction, inadequate lighting, and unavailability of electric power, internet connection or other practical conditions for successful digitization.

Figure 1   Digitization safeguarding concept of the Intangible Cultural Heritage in Slavonia, Baranya and Syrmia

Slika 1.   Koncept očuvanja nematerijalne kulturne baštine Slavonije, Baranje i Srijema s gledišta digitalizacije

All the digitization equipment needs to be of the maximum High Density (HD) resolution to maintain the highest possible level of digitization and to preserve the objects to be processed (sound, picture, object) in the most original form possible. Also, mobile acquisition unit should come with an adapted vehicle with the space for keeping the equipment and the collected objects, and it requires an independent charging system, a mobile internet connection, and a wireless connection of fourth generation if available, such as Long Term Evolution (LTE) or better. Acquisition mobile equipment set should be redundancy based, which means that identical substitute equipment set should be available, in case the original equipment failed, in order to reduce time loss or potential data loss.

Stationary acquisition (digitization) system consists of the same basic elements as the mobile system, with some components of the stationary construction physically located in some adequate space within the performance part of this concept. Stationary component is necessary, because the digitization will most probably be done at the stationary location, not on the field, because it is assumed that the parties interested will want to donate or digitalize a part of the intangible heritage separately or on their own after reaching the location, keeping the valuable object or some other form of intangible heritage.

Besides, the module of stationary acquisition should, according to the concept, be equipped with a 3D colour printer for making of the previously digitized artefacts and adequate souvenirs, if it would show to be profitable. This would enhance possible tourist offer as the related domain.

Starting point of the suggested concept is a digital repository established by the use of Enterprise Content Management (ECM) software, which contains software for management and storage of digital/digitized goods, so called Digital Assets Management (DAM) software. ECM software is, according to Kulcua and Cakmak, 2012; AIIM (2014), a formalized way of organizing and storing documents and other content (in this case audio and video recordings, digitized 2D and 3D images of objects), and includes an overall strategy, methods, software and hardware tools used for capturing, management, storage, preservation and distribution of structured and unstructured information. Given the exceptional value of the stored digitized heritage it is necessary to build an extremely reliable backup storage system. The ECM and backup segment would in that case be based on two equal and complementary principles: the local storage on a reliable server-based repository and the cloud computing or fog computing as a paradigm that builds on cloud computing, whereby the specifications, installation, training and maintenance would be taken over by MEF with external partners (specialized private companies), and the

backup part (cloud and fog computing) would be performed by CARNet. Local equipment requires appropriate technical conditions (separate air-conditioned space, an uninterruptible power supply system, disk array, backup system, availability of a trained system administrator). Because the issue is quite specific, a part of the concept is the processing of the collected audio and video recordings using software tools to add annotations to audio and video resources. These annotations may occur within particular sentences, words, syllables or individual sounds, commentaries, translations or descriptions of any specific characteristics of the recorded languages or dialects in audio or video format. Since a specialized knowledge is necessary for such processing, it is necessary to manually enter annotations in the beginning, whereas a semi-automatic processing could later be defined, developed and implemented, as proposed in Mallik et al. (2011). Finally, in the area of the dissemination of research results, an exhibition space is needed for various exhibitions of the collected heritage, equipped with monitors and tablet PCs for the interested public (school population of different age groups, tourists). Tablet computers need to be equipped with a rear and front facing camera, since they will be used for application solution of augmented reality (AR) of the exhibition display, which is designed as an additional layer to the reality and whose basic purpose is to enrich the exhibition with some specific content, i.e. narration with AR visualization by image, video and 3D models. AR would be used in several segments: for the simulation of missing elements of the exhibition (e.g. positioning and display of different versions of folk costumes on a mannequins); for the narrative part of dialectological specifics of the Slavonian speech with reproductions of sound or video recordings activated by fiducial markers and/or interest point detection; and as a simulation of objects or elements that are inaccessible during exhibition due to the destruction, sensitivity, high value or seasonal unavailability. Then, there would be a media centre equipped with audio/visual presentation equipment and videoconferencing equipment, either one-to-one, or one-to-*n,* which would purposefully be located in the multi-purpose presentation and demonstration area for medium to larger groups of visitors. The exhibition line-up and accompanying digital presentations are to be designed in modular form: tailored to the target audience and the time available. Due to the internationalization of the topic, it is necessary to provide multilingual presentation of materials and possibly predict and prepare exhibitions for disadvantaged groups of potential users (blind and visually impaired, hearing impaired), which should also be planned and implemented for use on a publicly accessible web portal. To ensure technical requirements, it is necessary to have a separate and isolated space for the direction of exhibition and presentation space where the equipment would be placed and workspace ensured for a trained operator of com-

munication and presentation system. To provide access to the results and findings of the research for a large number of interested parties, it is necessary to ensure a reliable network infrastructure (inner design: copper wires, wireless networks - for sharing information with presentation equipment and access to the repository; outwards: Fiber-optic lines – for the digital repository, videoconferencing equipment and external access to the repository).

Some scientists, experts and the general public who might be interested, but not able to visit the exhibition, therefore it is necessary to establish the appropriate web server and a representative web portal. Web portal, according to the approved levels of access, must provide access to scientists and experts to the digital repository as if they were physically present on site. CARNet, as an umbrella national scientific and research institution with the wealth of experience in these and similar tasks, would ensure the quality of network infrastructure. All publicly accessible space for this purpose must be adapted and modified according to the highest possible standards for easier access for people with mobility problems.

Conclusion

This paper defines the concept of intangible cultural heritage of Slavonia, Baranya and Syrmia in the context of preserving speech, customs, history and traditional cultural values. Intangible cultural heritage has continuously been exposed to a number of adverse factors affecting its endangerment and disappearance. Intangible cultural heritage is not only the issue of scientific research, but it has become a part of the tourist offer and economic activities, which has enhanced its long-term potential. The reality of sustainable development of intangible cultural heritage in the present circumstances is uncertain, and the main problem seems to be the insufficient documentation of intangible assets, the dispersion of the collected documentation and unorganized and sporadic nurturing. This paper aims to point out the possibilities of the synergy of modern technology and scientific approach to the processing of intangible cultural goods, which seems to be an optimal possibility for the permanent preservation of intangible cultural heritage in the broadest sense, with a special emphasis on preserving speeches of Slavonic dialect. The preservation of intangible cultural heritage is hereby regarded at four levels: collection (digitizing data), data processing, a suitable data storage and processing of information, and dissemination of the final processed material to the interested users. The important step towards the realization of the goals is to collect all available data using modern tools and techniques. Competent processing of the collected data is a prerequisite for the success of this concept and requires a systematic and thorough

approach. We believe that cloud computing and distributed data storage will serve as an insurance of permanent preservation through sufficient database redundancy, especially when it comes to such valuable information. As the ultimate goal and purpose, it is necessary to disseminate the collected, processed and expertly preserved material in a user-oriented manner. Dissemination would be carried out through a number of channels and at multiple levels: as a combination of classic exhibition display and augmented reality (AR), through a web interface, remote access and video conferencing repository access.

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Koncept očuvanja nematerijalne kulturne baštine Slavonije, Baranje i Srijema – s gledišta digitalizacije, obrade, čuvanja i širenja zvuka, slike i oblika

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SAŽETAK

U radu se definira pojam nematerijalne kulturne baštine Slavonije, Baranje i Srijema u kontekstu očuvanja govora, običaja, povijesnih i tradicijskih kulturnih vrednota. Nematerijalna kulturna baština Republike Hrvatske izložena je nizu čimbenika koji utječu na njezino ugrožavanje i nestajanje. Od 1999. godine, na temelju izmjena i dopuna Zakona o zaštiti i očuvanju kulturnih dobara, nematerijalna kulturna dobra uživaju posebnu zaštitu kao dobra od interesa za Republiku Hrvatsku. Od te je godine, u Registar kulturnih dobara Republike Hrvatske, upisano 85 nematerijalnih kulturnih dobara. Nematerijalna kulturna baština nije samo predmet znanstvenih istraživanja, nego postaje i dijelom turističke ponude (pletenje ribarskih mreža, rekonstrukcije običaja), ali i gospodarskih aktivnosti (lončarstvo, čipkarstvo, medičarski obrt). Problemi održivoga razvoja nematerijalne kulturne baštine su mnogobrojni, a kao najveći vidimo neorganizirano i nedovoljno dokumentiranje nematerijalnih dobara te raspršenost prikupljene dokumentacije. Ovim radom želimo ukazati na mogućnosti povezivanja suvremenih tehnologija sa znanstvenim pristupom obrade nematerijalne kulturne građe koji su najbolja i najsigurnija mogućnost trajnoga očuvanja nematerijalnih kulturnih dobara u najširem smislu. Očuvanje nematerijalne kulturne baštine razmatra se na četiri razine: prikupljanja (digitalizacije podataka), obrade podatka, prikladnoga čuvanja podataka i obrađenih informacija te konačnoga širenja (diseminacije) obrađene građe prema zainteresiranim korisnicima. Odlučujući korak prema ostvarenju ciljeva je prikupljanje svih raspoloživih podataka uporabom modernih tehničkih alata i tehnika. U vremenu računalstva u oblacima i distribuiranoga čuvanja podataka, potrebno je osigurati dovoljnu zali-

host baza podataka, posebice ovako vrijednih informacija, radi trajnoga očuvanja. Kao krajnji cilj, potrebno je prikupljeno i očuvano širiti (diseminirati) na korisnički orijentiran način u ovisnosti o raspoloživoj i željenoj razini animacije te tehničke spremnosti korisnika.

Ključne riječi   Nematerijalna kulturna baština, model očuvanja, digitalizacija, diseminizacija