Radoslav Pavlov ● Peter Stanchev

Editors

Digital Presentation and Preservation of Cultural and Scientific Heritage

International Conference

Veliko Tarnovo, Bulgaria
18 - 21 September, 2013

Proceedings

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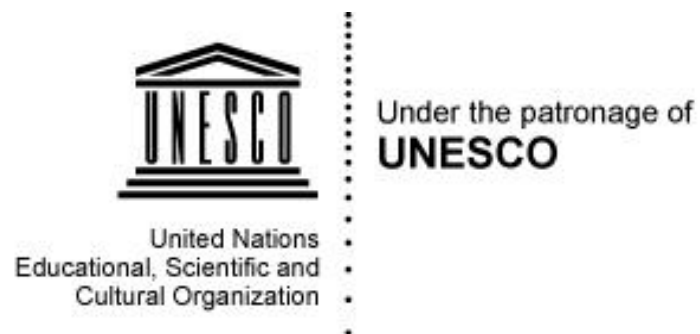**UNESCO**

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Volume III

Proceedings of the Third International Conference *Digital Presentation and Preservation of Cultural and Scientific Heritage – DiPP2013*, Veliko Tarnovo, Bulgaria, September 18–21, 2013 (Volume III)

Radoslav Pavlov, Peter Stanchev (Eds)

Desislava Paneva-Marinova
Copy Editor

Lubomil Draganov
Cover Design

Preface

The main aim of the 3rd International Conference *Digital Presentation and Preservation of Cultural and Scientific Heritage (DiPP2013)* is to bring together as many interested institutions as possible working on the digitisation, recording, documenting, archiving, presenting, protecting and managing cultural and scientific heritage, so that they can share their advanced thoughts, know-how and experience. Public and specialised libraries, museums, galleries, archives, community centres, research institutions and universities are expected to share and acquire knowledge, skills, and expertise from the event.

Five types of papers are presented—invited papers, full papers, short papers, project papers and demos. The first three types discuss current scientific results, trends and achievements in the field of digital preservation and presentation of cultural and scientific heritage. The project papers present developments in progress, part of them experimental, and made by memory institutions during their institutional projects.

- *Full papers*

The paper by J. Geske and P. Stanchev presents goals, intricacies, and nuances of some of initiatives and techniques such as: US Ignite, Software Defined Networking, OpenFlow, Global Environment for Network Innovation, WiMAX and Internet 2, and shows some of the possibilities of next-generation high-speed networking and their applications into education and culture heritage.

J. Rakosnik and R. Pavlov's paper aims to survey the goals and achievements of the European Digital Mathematics Library project as well as an outlook for sustainable development.

N. Ikonomov, B. Simeonov, J. Parvanova and V. Alexiev's paper focuses on the contribution of Ontotext to the Europeana Creative project which aims to facilitate reuse of cultural heritage metadata and content by the creative industries. Ontotext's Europeana Data Mode Endpoint is presented, based on the OWLIM semantic repository and SPARQL query language.

The paper by G. Kaposi, T. Szkaliczki, Z. L. Márkus, D. Luchev, M. Goynov and D. Paneva-Marinova presents an application of QR code marking of digital iconographical collections for their outdoor mobile access and exploring through the GUIDE@HAND audio tourist guide.

The paper by H. Kadi and J.-P. Perrin introduces an approach dealing with data extraction based on architectural knowledge and Laser statement informing measurements, the whole leading to 3D reconstruction. The Khmer objects experimented with are exposed at Guimet museum in Paris.

L. Huynh and P. Stanchev propose in their paper a new way of utilising social networks. By implementing what is called a Virtual Celebrator Machine, it is possible to enable everyone who has connection with this machine in term of social networking to share their cultural experience and views on various social events locally or globally.

E. Zaharieva-Stoyanova and S. Bozov's paper presents the application of a CAD system for digital representation of traditional hand-made knitting. As a software application the system is developed by using the C# programming language and .NET platform.

The paper by K. Rangochev, M. Goinov, M. Dimitrova and I. Hristova-Shomova discusses some statistical results of the use of the e-Encyclopaedia Slavica Sanctorum: the activities of the editors, users, and guests, the types of searches, the most often viewed objects, etc. The software used for content and access analysis is BI tool QlikView.

O. Siruk and I. Derzhanski's paper relates about the authors' ongoing work on the creation of a corpus of Bulgarian and Ukrainian parallel texts. The authors discuss the relevance of parallel text corpora to the preservation of cultural heritage and various problems associated with the construction of the corpus, in particular the occasional 'nonparallelism' of original and translated texts.

R. Dutsova describes in her paper three software packages– the main components of a software system for processing and web-presentation of Bulgarian language resources—parallel corpora and bilingual dictionaries.

A. Camus, D. Paneva-Marinova and D. Luchev's paper raises some relevant questions about the Digital Humanities (DH), problematising digital tools as objects of knowledge for Social Sciences and Humanities (SSH) and new challenges to the joint work of SSH and Computer Sciences (CS), and proposes a model for SSH and CS collaboration for joint projects in cultural digitisation.

- *Short papers*

N. Spyratos, P. Stanchev, K. Ivanova and I. Mitov propose in their paper to reuse the rules produced by rule-based classifiers in their recognition models as query pattern definitions for searching image collections.

V. Georgiev and E. Mitreva paper describes a framework for building virtual collections of several digital objects and presenting them in an interactive 3D environment, rendered in a web browser.

The paper by G. Bogdanova, T. Todorov and N. Noev presents methods for creating digital resources of historical artifacts related to the Balkan war and pays special attention to the process of 3D scanning of objects.

E. Kovatcheva's paper deals with presentations of the Bulgarian Cultural and Historical Heritage in the Cyberspace on the basis of a study performed at the Information management course at the University of Library Studies and Information Technologies.

N. Borisov and A. Smolin describe in their paper the main phases and results of the virtual reconstruction of the best-preserved fortress of Russia's "Silver Ring"— Koporye, situated on the north-western tip of the Izhorskiy Plateau, near the Gulf of Finland.

N. Borisov, A. Smolin, D. Stolyarov and P. Shcherbakov's paper focuses on teamwork by National Research University of Information Technologies, Mechanics and Optics, and the Aleksandrinsky Theatre in preparation and in development of several

interactive theatre project solutions implemented for the opening of the Alexandrinsky Theatre's New Stage.

The paper by A. Krandeva describes the use of the system created for Digital off-air radio events archive EventsBNR in the Bulgarian National Radio, which provides efficient application of modern information technologies in radio archiving.

- *Project papers*

G. Gkoumas and F. Lazarinis' paper focuses on reviewing two open-source software tools—CollectionSpace and the Open Video Digital Library Toolkit—and discusses how they could be used for organising digital replicas of cultural objects.

S. Georgiou and F. Lazarinis' paper describes a practical approach for digitising city landmarks based on free and limited Web resources.

The paper by V. Fol and O. Konstantinov focuses on the overall shape and structure of a future multimedia application, whose specificity is determined by the topic—the Odrysian kingdom, and pays special attention to the presentation of preserved artifacts, associated with the reign of specific rulers.

The paper by G. Vragov, M. Karadecheva, P. Georgiev and R. Ovcharova presents the project outcomes for digital presentation of historical artefacts from the region of Plovdiv related to the Balkan War.

A. Lessenska and S. Aneva's paper presents a standardised scheme for describing the whole Slavonic Manuscript Collection kept at the Plovdiv Public Library.

The paper by T. Boneva and S. Yorgova describes a project of 3D reconstruction and digital visualisation of the South of the Royal Palace in Great Preslav.

V. Atanasova and G. Bogdanova's paper describes the study of collections of valuable documents related to the image of India in Bulgaria and the development of digital repositories of selected samples, constructed using modern information technologies.

The goal of V. Koleva's paper is the interactive visualisation of the building of the University of Economics—Varna, using a 3D modelling.

A review of free applications of smartphones working under the Android operating system is made in the paper by T. Stefanov and M. Stefanova.

The paper by L. Pavlova and L. Draganov presents the digital reconstruction of the carving of the iconostasis of the Assumption church in the town of Bansko in its original form, a research project of the Department of Mathematical Linguistics of the Institute of Mathematics and Informatics, Bulgarian Academy of Sciences.

- *Workshops and demos*

During the conference a national information day and a workshop *Open access to scientific information*, a workshop *Veliko Tarnovo—European capital of culture 2019* and a workshop *E-Books and e-Lending in Libraries—Challenges and Opportunities* are organised. Short reviews are included.

Stoikov's demo presents the Shield UI Charting library, a flexible HTML5 data visualisation component, giving web developers the power for embedding rich graphics in their web projects with minimum effort.

Sterev's demo reviews the basic text mining technologies by using RapidMining.

Veliko Tarnovo, 18 September 2013   Radoslav Pavlov   Peter Stanchev

<div align="center">Editors</div>