

Lecture Notes in Geoinformation and Cartography

Series Editors: William Cartwright, Georg Gartner, Liqiu Meng,
Michael P. Peterson

Markus Jobst
Editor

Preservation in Digital Cartography

Archiving Aspects

 Springer

Editor

Dr. techn. Markus Jobst
Austrian Federal Office for
Metrology and Surveying
Informationmanagement 11/INSPIRE
Schiffamtsgasse 1-3
A-1020 Vienna
Austria
markus@jobstmedia.at

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Preface

This book “Preservation in Digital Cartography: Archiving Aspects” should give an overview on how to preserve digital cartographic applications and geospatial data in a sustainable way. The intention of this book is to shape the opinion of affected parties and to bring together various disciplines. Therefore adjacent chapters will generally deal with information technologies, Service-Oriented Architectures, cybercartography, reproduction and historic cartography, which all together can be subsumed in prospective cartographic heritage. The survival of this digital cartographic heritage will base on long-term preservation strategies that make use of extensive dissemination on the one hand and sustainable digital archiving methods on the other. This includes a massive development of paradigm that expands from “store-and-save” to “keep-it-online”. The paradigm “store-and-save” is mainly used for analogue masters that consist of storage media, like vellum, and their visible content. Avoiding the storage media from degeneration in climate-controlled areas will help to keep the content accessible. In the digital domain the high interdependency of storage media, format, device and applications leads to the paradigm “keep-it-online” which for example describes the migration to new storage devices. In fact this expansion of paradigm means that the digital domain calls for ongoing actions in order to preserve cartography for a long term.

The topics within this book span from a prospective cartographic heritage’s complexity, aspects of geospatial preservation, problems in keeping digital cartography online to pragmatic considerations for a prospective cartographic heritage. The contributions of this book will describe and help to identify main foci of preservation in digital cartography supported by state-of-the-art practices and experience reports.

The first section focuses on complexity of a prospective digital cartographic heritage. Especially the field of cybercartography, which uses interactive, dynamic, multisensory formats with employing multimedia and multimodal interfaces, and new developments of cartographic communication, especially neo-cartography with its massive use of Geo- and Map Services in Service Oriented Architectures (SOA), lead to unsolved archiving topics, which necessitate new methods, structures and technologies.

The second section deals with sustainability in terms of geospatial preservation. Sustainability concerns various aspects in cartographic heritage, where the change of media carrier from analogue to digital, the accessibility of content in terms of various formats, codings and (hard- and software) requirements have to be addressed. Additionally this section may show up main difficulties in long-term accessibility of digital media and possible methods to ensure long-term accessibility of digital cartography. Standardization initiatives, like the data preservation working group of the Open Geospatial Consortium (OGC), are one keyfactor for the sustainable preservation of geospatial data. Sustainability by means of accessibility focuses on needs, formats and relationships for enabling long-term data collections on the one hand and data mining (finding the right content) on the other hand.

The third section lists experience reports on keeping digital cartography online, which is an important part of preservation in digital cartography. Only the knowledge and consciousness of digital cartographic heritage allow for designing appropriate preservation strategies and making expenses on their implementations in order to assure this heritage for future times. These selected examples will give an introduction to the viewpoint of a digital library and cartographic archive. The section will be concluded with a chapter on user-friendly access to geospatial data collections, which highlights the importance of WYSIWYG interfaces.

The fourth section discusses pragmatic considerations, which span from reproduction quality to legal issues in Service-Oriented Architectures. The chapter on digital reproduction compares advantages of direct digitalization versus hybrid methods in terms of long-term preservation. The Arcanum project highlights difficulties due to administration change and their influence on cartographic heritage applications. At least the development of distributed digital map libraries leads to an intellectual property rights approach that should be considered in future distributed applications.

Finally the editor likes to appreciate the support of following institutions, which gave their benefit to realize this book:

- The Research Group Cartography at the Vienna University of Technology and the Hasso Plattner Institute at the University of Potsdam encouraged the editor in his interest on preserving digital cartography with several discussion- and working opportunities although this was not their specific research area.
- The Institute of Cartography at the Technical University of Dresden granted access to personal knowledge resources, material and

reproduction camera for comparing studies in the field of reproduction quality.

- The Commission on “Digital Technologies in Cartographic Heritage” of the International Cartographic Association (ICA) provided an adequate discussion- and presentation forum for acquired experiences, ongoing ideas and developments in digital cartographic heritage. As one result of these discussions several members contributed their experiences in this book.

Finally, I would like to thank my family for their support, understanding and patience during the last months whenever I had to work on this book on weekends and holidays. To Beatrix and Paula...

“My heritage has been my grounding, and it has brought me peace.”

Maureen O'Hara

“Heritage is our legacy from the past, what we live with today, and what we pass on to future generations. Our cultural and natural heritage are both irreplaceable sources of life and inspiration.”

World Heritage Definition of UNESCO

September 2010,
Markus Jobst

About the Contributors

Renate Becker is CEO of GIS-Service GmbH she founded in 1999. The company focuses on services for environmental agencies and mining companies by providing expertise in the fields of data preparation, management and analysis, particular for hydrological and mining applications.

Miguel Ángel Bernabé-Poveda has a BSc. in Land Surveying, a MSc. in Fine Arts and a PhD. in Education. He is currently Professor in Cartography (Technical University of Madrid), and Head of the MERCATOR Research Group.

Uwe M. Borghoff holds Diploma and Doctoral degrees in Computer Science from the Technische Universität München, Munich, Germany. In 1993, he was awarded the postdoctoral university lecturing qualification (Habilitation) in Computer Science. He worked at the Technische Universität München for seven years as research scientist before joining the Xerox Research Centre Europe (formerly Rank Xerox Research Centre) at the Grenoble Laboratory, France, in 1994. At Xerox, he was Senior Scientist, project leader, and group leader of the coordination technology area. In 1998, he joined the Faculty of the Universität der Bundeswehr München, Munich, Germany, where he is a full professor of Computer Science at the Institute for Software Technology.

Jens Bove was born 1969 in Minden, Germany. From 1991 to 1996 he studied Art History, German Literature und Media Sciences in Marburg. Since 1993 he is working for the German Documentation Center of Art History - Bildarchiv Foto Marburg, finished his PhD in 2001 on the work of Conceptual Pop Artist Richard Hamilton. 2002 to 2003 Managing Director of Foto Marburg. Since 2003 he is the Head of the Deutsche Fotothek in the Saxon State Library.

Manfred F. Buchroithner (born in 1950) is Full Professor of Cartography at and Director of the Institute for Cartography (IfC) of the Dresden University of Technology (TUD). He holds degrees in both Geology & Paleontology (Graz, Austria) and Cartography and Remote Sensing (ITC, NL)

and obtained his PhD in 1977. Out of his more than 300 articles more than 65 have been published in reviewed journals. He has written three books and edited three volumes on remote sensing. His major research interests cover true-3D geodata visualisation and high-mountain cartography.

William Cartwright is President of the International Cartographic Association and a Federal Councillor of the Mapping Sciences Institute, Australia. He is Professor of Cartography and Geographical Visualization in the School of Mathematical and Geospatial Sciences at RMIT University, Australia. He holds a Doctor of Philosophy from the University of Melbourne and a Doctor of Education from RMIT University. He has six other university qualifications - in the fields of cartography, applied science, education, media studies, information and communication technology and graphic design. He joined the University after spending a number of years in both the government and private sectors of the mapping industry. His major research interest is the application of integrated media to cartography and the exploration of different metaphorical approaches to the depiction of geographical information.

Pilar Chias is professor at the Technical School of Architecture and Geodesy of the University of Alcalá (Spain). After a long tradition on implementing GIS about the Cultural Heritage in a wide sense, her particular interest has focused on the historical cartography as a main source for researches on the historical evolution of the Spanish territories and landscapes. Author of many books and academic journal articles as *Los caminos y la construcción del territorio en Zamora. Catálogo de puentes* (2004), Eduardo Torroja. *Obras y Proyectos* (2005), 'Las vías de comunicación en la cartografía histórica de la Cuenca del Duero: construcción del territorio y paisaje', *Ingeniería Civil*, no. 149 (2008).

Efrén Díaz-Díaz has an LLB from the University of Navarre, and is currently a lawyer at the law firm 'Mas y Calvet' (Madrid), a member of the Working Group of the Spatial Data Infrastructure of Spain. He is interested in the legal aspects of the new technologies applied to urban and rural properties, Land Registry and Cadastre.

Robert Dixon-Gough commenced his professional career as a cartographer working with a multi-disciplinary group evaluating future water management policies in England and Wales. He has been a lecturer and re-

searcher at the University of East London (formerly North East London Polytechnic and the Polytechnic of East London) since 1974 and during this period has published extensively on issues relating to cartography, remote sensing, and land management. Over the past two decades he has co-operated with a number of research institutes and universities across Europe and is also an active member of the European Faculty of Land Use and Development. He was the founder of the International Land Management Series (Ashgate Publishing Ltd.) and his current research is centred on the processes, actors and actions related to the evolution of cultural landscapes.

Alberto Fernández-Wytenbach has a BSc. in Land Surveying, and is currently finishing a MSc. in Geodesy & Cartography (Technical University of Madrid). He is interested in new technologies applied to Cartographic Heritage and Digital Libraries.

Georg Gartner is a Professor for Cartography and Geo-Mediatechniques at the Research Group of Cartography at the Vienna University of Technology. He holds graduate qualifications in geography and cartography from the University of Vienna and the Vienna University of Technology. He serves as a vice-president of the International Cartographic Association ICA and as a member of the Executive Board of the Austrian Geographic Society.

Rudolf Haller is head of Geoinformation and ICT of the Swiss National Park. He has received his Masters in Geography from the University of Zurich. His main interests are in the application of GI technologies in nature protection and conservation. Recently he has been involved in several international projects on location based services and virtual globe implementations on protected areas as well as international habitat studies.

Józef Hernik graduated from the University of Agriculture in Krakow and the Jagiellonian University. He is a lecturer and researcher at the University of Agriculture in Kraków and carries on the research on land management and cultural landscape. He was the coordinator of a number of projects on cultural landscape. He initiated and edited a series of monographs on cultural landscape.

Lorenz Hurni is professor and head of the Institute of Cartography of ETH Zurich. Under his lead, the multimedia “Atlas of Switzerland” as well as a new interactive version of the “Swiss World Atlas”, the official Swiss school atlas, are being developed. The emphasis of his research lies in cartographic data models and tools for the production of printed and multimedia maps. Another focus of research covers interactive, multidimensional multimedia map representations. The new possibilities are being explored in international, interdisciplinary projects and being imparted to a broad audience in lectures and courses for students and practitioners.

Stephan Imfeld is a senior researcher at the GIScience Centre at the Department of Geography at the University of Zurich and at the Angiology Department at the University Hospital in Basel. He has received a PhD in Natural Sciences from the University of Zurich and a MD at the University of Basel, Switzerland. He is currently responsible for research and development for the GIS of the Swiss National Park. His main interests are in methodological aspects of GIS applications in biological sciences and in applied medical research.

Helen Jenny is a scientific collaborator at the Institute of Cartography of ETH Zurich, Switzerland. She received a MS in Physical Geography and GIS from the University of Stuttgart, Germany.

Bernhard Jenny is a scientific collaborator at the Institute of Cartography of ETH Zurich. He received a MS in Geomatics from EPFL Lausanne, Switzerland.

Markus Jobst is technically coordinating the INSPIRE directive at the Austrian Federal Office for Metrology and Surveying and providing lectures on cartographic interfaces and geospatial data infrastructures at the Vienna University of Technology in Vienna and Hasso Plattner Institute in Potsdam. He finished his PhD in 2008 with the focus on semiotics in 3D maps at the Vienna University of Technology. After being a research assistant at the Institute of Geoinformation and Cartography at the Vienna University of Technology from 2003 to 2007, he worked on geospatial Service-Oriented Architectures as post-doc research fellow at the Hasso Plattner Institute at the University of Potsdam. Throughout the years Markus Jobst acquired substantiated knowledge in digital photography and cross-media production processes. His main foci in scientific work are the

communication of spatial related data as well as cartographic heritage especially within spatial data infrastructures (SDI's) and digital cartographic presentation methods.

Wolf G. Koch (born 1943, Diploma in Cartography 1969, Doctorate 1974, Habilitation 1989), since 1990 head of course of studies „Cartography“, 1992-2008 Professor for theoretical cartography and map design at the Dresden University of Technology, Germany, since then emeritus. 1992-1994 and 2000-2003 director of the Institute for Cartography, 1993-2005 leader of the commission “Cartographic Terminology” of the German Society for Cartography; co-editor of the dictionary “Lexikon der Kartographie und Geomatik” (2001/2002). Adviser for map design with the National Atlas of Germany (1998 – 2006). International activities: Corresponding member of ICA-Commission “Theoretical Cartography” and “Maps and Graphics for Blind and Visually Impaired People”. Fields of interest: Theoretical cartography, map design, tactile cartography, history of cartography.

Nico Krebs holds a Diploma degree in Computer Science from the Universität der Bundeswehr München since 2004. After his studies, he worked as trainer for computer systems, and returned to the Universität der Bundeswehr, where he is now in the position of a research assistant. His field of research is the long-term archiving, with a strong focus on emulation techniques.

Tracey P. Lauriault is a Doctoral student at the GCRC and participates in activities and represents the Centre on topics related to the access to and preservation of geospatial data. She led the Cybercartographic Atlas of Antarctica Case Study and General Study 10 Archival Policies of Scientific Data Portals for the International Research on Permanent Authentic Records in Electronic Systems (InterPARES) 2.

Steve Morris is Head of Digital Library Initiatives at North Carolina State University Libraries where he leads development of new digital projects and services. Previously Steve led the GIS data services program at NCSU. From 2004 to 2010 Steve was principal investigator on a geospatial data digital preservation project funded through the Library of Congress National Digital Information Infrastructure and Preservation Program

(NDIIPP). He is currently Chair of the Data Preservation Working group within the Open Geospatial Consortium.

Andreas Neumann leads the GIS Competence Center of the City of Uster and is a former scientific collaborator of the Institute of Cartography of ETH Zurich. He received a MA in Geography from the University of Vienna, Austria.

Peter L. Pulsifer is a postdoctoral fellow with the Geomatics and Cartographic Research Centre, Department of Geography, Carleton University.. He has been an active member of what is now the SCAR Standing Committee on Antarctic Geographic Information and the Standing Committee on Antarctic Data Management At present, he is leading the data and knowledge management aspects of the International Polar Year Inuit Sea Ice Use and Occupancy Project (<http://gcrc.carleton.ca/isiuop/>) while actively developing a research program focused on geographic information management for polar environments.

Dalibor Radovan is the head of R&D sector at the Geodetic Institute of Slovenia. He also lectures cartography at the Faculty for Civil Engineering and Geodesy, Department of Geodesy. He holds B.Sc. and M.Sc. in geodesy from the University of Ljubljana, and Ph.D. in geoinformatics from the Technical University of Vienna. He is working in the fields of topography, cartography, geodesy and GPS, maritime hydrography, GIS, navigation and LBS.

Peter Sandner. Dr. phil. (University of Frankfurt, 2002). Archivist in the Central Archives of the federal state of Hesse (Hessisches Hauptstaatsarchiv) in Wiesbaden, Germany. Member of the working group 'Electronic systems in law and administration' (Elektronische Systeme in Justiz und Verwaltung – AG ESys) and of 'IT committee' (IT-Ausschuss) of the Conference of archival officials of the federation and the federal states of Germany (Konferenz der Archivreferentinnen und Archivreferenten des Bundes und der Länder – ARK).

Renata Šolar is the head of Map and Pictorial Collection of the National and University Library of Slovenia. She holds B.Ss. and M.Sc. in geography, and Ph.D. in information sciences. She works in the field of map librarianship.

Zdeněk Stachoň, member of research team of Laboratory on Geoinformatics and Cartography on Masaryk University, Brno. He focuses on topics of thematic cartography, history of cartography, semiotics and toponomastics.

D.R. Fraser Taylor, Director of the GCRC; Distinguished Research Professor of Geography and Environmental Studies and is a Fellow of the Royal Society of Canada. His main research interests in cartography lie in the application of geomatics to the understanding of socio-economic issues. He also has a strong interest in the theory and practice of cybercartography and cartographic education. He was a collaborator in the InterPARES 2 project and currently is a member of the International Cartographic Association Working Group on Open Data Access and Intellectual Property Rights and Chair of the International Steering Committee for Global Mapping. He is also a Board Member of the OGC Interoperability Institute.

Axel Thomas is a geographer with a focus on Geographical Information Systems/Science. He has held a position as professor of Geography at Gießen University and currently is Privatdozent (ass. prof.) at Mainz University, Germany. He works as senior R&D manager at GIS-Service GmbH, Wackernheim, Germany, specializing in application development for civil services and industry.

Georg Zimmermann, born in 1955, was first educated as a professional cartographic technician (1972 – 1975). He holds both a Diploma (1983) and a PhD (1986) in Cartography from the Dresden University of Technology, Germany. Since 1986 he has been Head of the Map Collection of the former Library of the Free State of Saxony, today Saxon State and University Library Dresden. He is founder and contact person of the Kartenforum Sachsen (Map Forum Saxony). Since 2009 he has been managing the research project “Innovative Access to Spatial Graphic Information: Exemplary Digitizing, Processing and Presentation of Historical maps and Vedutes for the Map Forum” funded by the German Research Council DFG.

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