

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.

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- 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

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