Review: Hemsley, J., Cappellini, V., and Stanke, G. (Eds). (2005).
Digital Applications for Cultural and Heritage Institutions. Ashgate**.**

Computing in the arts, humanities and heritage sectors is becoming more pervasive, and increasingly sophisticated technologies are being developed to capture, explore, and disseminate information regarding artefacts, historical knowledge, and cultural inheritance. Conferences and symposia are central to the complex industry which has built up around using computational techniques to facilitate novel research and increased public access to cultural heritage. These are essential for fostering cross-fertilisation of knowledge and expertise between "memory institutions" such as libraries, archives, museums, and archaeological and historic sites; academic disciplines such as history, archaeology, and art history; and practitioners in the computer industry. Often, proceedings of these conferences appear online, or selected papers are published in journals, but rarely is a snapshot of conference papers from across different years and disciplines brought together in a comprehensive publication to give a panorama of the diverse research explored across the "multiplicative relationship: culture x technology" (pg. 2).

The purpose of "Digital Applications for Cultural and Heritage Institutions" is to provide an overview of leading developments in culture and information and communications technologies presented internationally at the EVA conferences[1] between 2000 and 2003. Since 1990, over sixty conferences and symposia have been held by EVA – originally focussing on "Electronic Imaging and the Visual Arts" but now encompassing the application of technology in all aspects of culture, including

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[1] http://www.eva-conferences.com/

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cultural heritage and the performing and creative arts. The book is emphatically not a guide to the technology used in this arena – but an accessible cross section of research presented at a few of the conferences, which aims to provide an approachable introduction as to how information technology has been appropriated in this domain.

Split into seven major sections, the book refrains from delineating research into academic disciplines (such as "applications for computing in archaeology… history… linguistics" which is a common approach in publications regarding the application of technologies in the arts and humanities, such as in Schreibman *et al* (2004)). Instead, the papers presented are split into managerial themes: Strategic Developments, Co-operative Projects, Recreating and Preserving the Past, Digital Archiving, Design, Retrieval and Protection, Special Needs, and Interactive Realities and Future Possibilities. This allows synergies across projects in different disciplines which use a similar technological approach to become apparent, and demonstrates that the projects featured are not focussed on traditional academic humanities research, but in illuminating and investigating ways in which our understanding of culture and history may be increased.

The first section, Strategic Developments, features three papers indicating the strategic potential of work in the area, including the pan-European road-mapping project DigiCULT, which scoped European developments and perspectives. This is then juxtaposed with a project report from Canada, and then Russia, to demonstrate how computing in cultural heritage can both pull, and be pushed by, strategic decisions in this area. International co-operative projects, often featuring input from different languages and cultures, are detailed in the second section, including projects in archaeology and local history, which involve input from, in the first instance,

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academics, and the second, schoolchildren to contribute to cultural heritage projects. The third paper, involving 3D reconstruction of historic buildings, demonstrates that these technologies not only allow relevant applications to be developed, but also foster seamless communication between international teams (in this case, from Germany and Japan) via the Internet. The papers in the Recreating and Preserving the past section also involve virtual reality reconstruction: German reconstruction of Christian and Jewish architecture and history; Swiss work on modelling "mountainscapes"; the reconstruction of destroyed buildings in a Latvian open air museum; Israeli work on the Dead Sea Scrolls; and the creation of life-size 3D physical reconstructions of an Egyptian tomb to aid in preserving the original.

The Digital Archiving section features papers regarding long term preservation of digital images, the application of content management systems for a corporate archive in the automotive industry, and image-based documentation of cultural heritage. The fifth section: Design, Retrieval and Protection, presents papers on re-usable tools and methods for temporary museum exhibits; developments in image based systems for Art History teaching at university level; an online illustrated thesaurus to aid in monument identification; techniques to capture historic gardens and landscapes; and two papers regarding Copyright and Intellectual Property rights, which are becoming pressing issues in digital content management and exploitation. The Special Needs section features five papers on making web applications more accessible to users with disabilities, with particular focus on online cultural resources, providing guidelines for creation and evaluation of such resources to provide access to all users, and the international challenges this poses for the industry.

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The final sections deal with Interactive Realities and Future possibilities, with three papers demonstrating the success of interactive museum exhibitions, rooms, and how hand-held devices can aid visitors in interrogating museum exhibits. More advanced technologies feature in the final two papers: concerning the use of haptic devices to provide the sense of touch for users, and the population of virtual scenes with virtual actors for historical recreation and user interaction. The book's authors end with a discussion of future potential for the heritage industry, at a time of increasing technological advancement and uptake, and plummeting technological cost.

The fact that the book features thirty-two papers (with contributions from over sixty authors) in a three-hundred page volume necessitates that the contributions are brief: the shortest paper is a little over three pages long. The concise nature of the papers, and the accessible stance, means that those wishing to understand the technical underpinnings of the research will have to chase up further references: although a comprehensive list of abbreviations, glossary, and contact details for the authors are provided, many papers would have benefited from ensuring they supplied more detailed references and project information. That said, the broad sweep of the book's coverage, and the many papers featured, serves as a good guide to the range of research being undertaken in this area. It is also refreshing that so many papers are from countries which may be viewed as having fewer resources than the rich West: application of technology for culture and heritage is increasingly achievable for even those with tight budgets.

This volume also serves as a historical record, documenting developments which may be taken for granted as our understanding and application of computing increases. The comprehensive history of the use of computing in the arts, humanities, and

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cultural and heritage sectors has yet to be attempted (emerging attempts are being realistically limited to single domains, such as humanities computing, textual encoding, and scholarly editing (Vanhoutte forthcoming 2007)). Documentation such as this provides a reliable snapshot of the growth of computing in the field from 2000 to 2003, at a time of great advancement in Internet technologies, and increasing pervasive nature of computational infrastructures in memory and cultural institutions. (There is irony in the fact that a print publication will document this research far longer than a website ever could). However, it may have been useful for the editors to include with each paper the date of first presentation, and venue: we are told in the introduction that the papers have been "updated where possible" yet it is unclear which papers remain in their original state. Omission of this small detail means the conceptual framework regarding which papers were developed first is lost, and some papers now seem dated: perhaps the editors believe that all papers are as computationally relevant today as when they were presented. Likewise, an appendix detailing the venues and dates of the EVA conferences featured in this volume may have provided a useful record for those wishing to track down further research presented in this area.

The book would also have benefited from closer proofreading: some titles of chapters do not match page headings, the language can be clunky in places, and some papers lack conclusions. However, as an overview of significant research into computational developments in the cultural and heritage sectors, the publication provides an interesting and accessible guide to the wide application, and increasing importance, of digital technologies in this domain. It would be a useful exercise for the EVA conference series to continue publishing these volumes in the future: building up

evidence of the growing interest in using computational techniques to help us capture,

explore, and share our individual culture and heritage.

References

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