Digital Discovery
Exploring New Frontiers in Human Heritage

Program and Abstracts

CAA2006: April 18-23, 2006 Fargo, ND - USA
Digital Discovery
Exploring New Frontiers in Human Heritage

Book of
Abstracts and Program

Computer Applications and Quantitative Methods in Archaeology
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Table of Contents

About Computer Applications and Quantitative Methods in Archaeology 6
  CAA Steering Committee, 2005-2006 6
CAA2006 Fargo 7
  CAA2006 Conference Theme 7
  CAA2006 Organizing Committee 7
  CAA2006 Scientific Committee 8
  CAA2006 Operations Assistants 8
  CAA2006 Contributors 8
  CAA2006 Sponsors and Exhibitors 9
The Fargo-Moorhead (FM) Metropolitan Area 13
  Fargo Map 13
  Conference Area Hotel Map 14
  Downtown Hotel Map 14
Electronic Cultural Atlas Initiative (ECAI) 15
Web3D Consortium 15
Tips and Guidelines 16
CAA2006 Fargo, Annual Conference and Meeting 18
  CAA2006 Registration 18
  Bursary Awards 18
  Help Desk 18
  Opening Reception 18
  Closing Dinner 19
  Post Conference Tour to Western North Dakota 19
  Other Post-Conference Activities 19
  Conference Badges 19
  CAA2006 Delegate Services 19
  Guidelines for Presenters and Chairs 20
  CAA2006 Conference Proceedings 20
CAA2006 Conference Program 20
  Map of Ramada 21
  Table of Sessions 22
List of Sessions and Events 26
Abstracts 27
  Symposia Abstracts 27
  3D Virtual Reality Projection Abstracts 30
  Roundtable Panel Abstracts 32
  Workshop Abstracts 35
  Paper and Poster Abstracts 38
  Late Paper Abstracts 111
  Author Index 112
Short Paper: *Semantic P2P Network for Virtual Reality Archaeological Resources*

**Keywords:** 3D models, semantic web services, P2P sharing networks, self-sustaining business model, virtual museums, digital libraries, heritage community

This paper presents an innovative concept of an Internet-based system that will enable various categories of users — both individuals and organizations — to share heritage resources in the form of 3D models of archeological artifacts accompanied by images, movies, catalogues, and archives. Semantic web services enable easy categorization and retrieval of available digital heritage resources. User-friendly, on-line tools simplify widespread citizen access. Based on a service-oriented infrastructure, the system will function similarly to the music and movies P2P sharing networks, but, unlike them, it will be based on a legal and self-sustaining business model. It will offer users a possibility to present their own archaeological and historical collections, scientific documentation of field research, etc., as well as to create thematic presentations: academic, popular, educational, etc.

The resources collected and maintained by the users in the form of digital libraries will be consequentially aggregated into virtual museums. The system enables dispersing the costs of data preparation and maintaining over the whole “heritage community” of its users. It broadens the scope of managers of digital collections far beyond the museums and other cultural institutions, allowing the citizens to build their own community digital libraries. Ideally, the community can grow almost without limit, as its new members bring both demand and supply.