

# Computing Archaeology for Understanding the Past

## CAA 2000

Computer Applications and Quantitative Methods  
in Archaeology

Proceedings of the 28<sup>th</sup> Conference, Ljubljana, April 2000

Edited by

Zoran Stančič  
Tatjana Veljanovski

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# Contents

Preface .....	vii
<b>1. Documentation and Recording of Sites and Field Survey Data .....</b>	<b>1</b>
A New Technique for Recording Archaeological Excavations: Research Progress Report	
Geoffrey John Avern .....	3
Integrated Use of DGPS and the Total Station for the Survey of Archaeological Sites: The Case of Colle Breccioso	
Francesca Colosi, Roberto Gabrielli and Dario Rose .....	9
Computerised Techniques for Field Data Acquisition	
Enrico Reali and Tommaso Zoppi .....	13
Understanding and Using Archaeological Topographic Surveys - The "Error Conspiracy"	
Henry Chapman .....	19
3D Visual Information and GIS Technologies for Documentation of Paintings in the M Sepulcher in the Vatican Necropolis	
Maurizio Forte, Stefano Tilia, Angela Bizzarro and Alessandro Tilia .....	25
<b>2. Artefact Analyses and Classification .....</b>	<b>33</b>
Past, Present, and Future of Quantitative Methods in United States Archaeology	
George L. Cowgill .....	35
Artefact Analysis	
François Djindjian .....	41
Grouping Ceramic Compositional Data: An S-Plus Implementation	
Christian C. Beardah and Mike J. Baxter .....	53
Why the Application of a Gaussian Curve and Seriation Programs can be Detrimental	
Andrej Pleterski .....	61
Quantities, Possibilities and Probabilities: Some Experiences from the Research of the Roman Age in Slovenia	
Iva Miki Curk .....	63
Image Quantification as Archaeological Description	
Juan A. Barceló, Jordi Pijoan and Oriol Vicente .....	69
The SHAPE Lab: New Technology and Software for Archaeologists	
Frederic F. Leymarie, David B. Cooper, Martha Sharp Joukowsky, Benjamin B. Kimia, David H. Laidlaw, David Mumford and Eileen L. Vote .....	79
An Experimental Method for the Analysis of Attributes of Flint Artefacts Using Image Processing	
Sorin Hermon, Marco Petrone and Luigi Calori .....	91
<b>3. National and Regional SMR .....</b>	<b>99</b>
Transforming Diversity into Uniformity – Experiments with Meta-structures for Database Recording	
Torsten Madsen .....	101
Archaeological Applications of Fuzzy Databases	
Franco Niccolucci, Andrea D'Andrea and Marco Crescioli .....	107
A Metastructure for Thesauri in Archaeology	
Martin Doerr and Demetrios Kalomoirakis .....	117
SMR in New Clothes: The Danish National Record of Sites and Monuments on the Verge of a New Era	
Lars Bagge Nielsen, Henrik Jarl Hansen and Claus Dam .....	127
National Registries of Sites and Monuments in Norway – Developing GIS-based Databases	
Evy Berg .....	133
A GIS Driven Regional Database of Archaeological Resources for Research and CRM in Casco Bay, Maine	
Matthew Bampton and Rosemary Mosher .....	139
Using a Relational Database Management System for the Recording of Ancient Settlements and Sites in the Vrachneika Territory in Western Greece	
Vangelis G. Tsakirakis .....	143

Vienna Archaeological GIS (VAGIS): A Short Outline of a New System for the Stadtarchäologie Wien Wolfgang Börner .....	149
NARS - Nabunken Aerial Photograph Retrieval System – A Way to the GIS Susumu Morimoto .....	153
<b>4. Intra Site Spatial Analyses .....</b>	<b>157</b>
Formalizing Fact and Fiction in Four Dimensions: A Relational Description of Temporal Structures in Settlements Mads Kähler Holst .....	159
Introspective Sitedscaping with GIS Dora Constantinidis .....	165
A GIS Solution for Excavations: Experience of the Siena University LIAAM Vittorio Fronza, Alessandra Nardini, Federico Salzotti and Marco Valenti .....	173
Data Integration and Intra Site Spatial Analysis of the Castellaro del Vhò Manio Pessina .....	179
<b>5. Archaeological Regional Spatial Analyses and Predictive Modelling .....</b>	<b>185</b>
Ancient Roads and Fields in Northwestern Gaul – A GIS-Based Analysis Frank Vermeulen, Marc Antrop, Beatrijs Hageman and Torsten Wiedemann .....	187
An “Integrated Space” Approach for the Interpretation of a Medieval Stronghold in Middle Pomerania, Poland Rafał Zapłata and André P. Tschan .....	197
Interpreting Field Survey Results in the Light of Historic Relief Change: The Fogliano Beach Ridges (South Lazio, Italy) Hendrik Feiken and Martijn van Leusen .....	205
Understanding the Neolithic Landscape of the Carnac Region: A GIS Approach Corinne Roughley .....	211
The Hidden Reserve: Predictive Modelling of Buried Archaeological Sites in the Tricastin-Valdaine Region (Middle Rhone Valley, France) Philip Verhagen and Jean-François Berger .....	219
Archaeological Predictive Modelling for Highway Construction Planning Zoran Stančić, Tatjana Veljanovski, Krištof Oštir and Tomaž Podobnikar .....	233
<b>6. Future Trends in Spatial Analyses .....</b>	<b>239</b>
The Aksum Project (Ethiopia): GIS, Remote Sensing Applications and Virtual Reality Maurizio Forte, Kathryn A. Bard, Rodolfo Fattovich, Monica Focillo, Andrea Manzo and Cinzia Perlingeri .....	241
Archaeological Data Spaces: Spatial Aggregation and Large-Scale Knowledge Environments Cornelius Steckner .....	253
Setting Demographic Limits: The North American Case Dean R. Snow .....	259
Counting the Uncountable: A Quantitative Approach to the Religious Differences between the Roman Towns of Emona and Poetovio Bernarda Županek and Dimitrij Mlekuž .....	263
Design and Performance of the Varatioscope John W.M. Peterson .....	269
Complexity in Action: “The Emergence of Agro-pastoral Societies” Alexandra Águeda de Figueiredo Leite Velho and Gonçalo Cardoso Leite Velho .....	273
Setting up a “Human Calibrated” Anisotropic Cost Surface for Archaeological Landscape Investigation Michele De Silva and Giovanna Pizziolo .....	279
<b>7. Presentation of Archaeological Data .....</b>	<b>287</b>
A Digital Future for our Excavated Past Tony Austin, Damian Robinson and Keith Westcott .....	289
Virtual 3D Reconstruction of the Kiafar Site, North Caucasus, Russia Mikhail Zhukovsky .....	297



Indexing and Retrieving Archaeological Resources on the Internet - A prototype Multilingual Thesaurus Application  
Martijn van Leusen ..... 303

ARCHAVE: A Virtual Environment for Archaeological Research  
Eileen L. Vote, Daniel Acevedo, David Laidlaw and Martha Sharp Joukowsky ..... 313

Web Access to an Archaeological GIS  
Andrea D’Andrea, Franco Niccolucci and Marco Crescioli ..... 317

ArchTerra: Extending the European Archaeology Web over Bulgaria, Romania and Poland  
Martijn van Leusen and Andrzej Prinke ..... 323

8. Public Access to Archaeological Heritage ..... 327

Using Virtual Reality to Improve Public Access to Heritage Databases over the Internet  
Mike J. Pringle ..... 329

“Observing the Game”: What can Access Statistics Really Tell Us?  
William Kilbride and Judith Winters ..... 339

Publishing on the Internet: The Internet as an Academic Information Source  
Henriette Günther Soerensen and Kaj Fredsgaard Rasmussen ..... 347

Questions Raised by Electronic Publication in Archaeology  
Jo Clarke ..... 351

In Patrimonium: A Data Model for Museum and Cultural Heritage Information  
Fernando Cabral and Mário Brito ..... 357

Can Schoolchildren Digitise Their History?  
Helene Simoni and Kostas Papagiannopoulos ..... 363

# ArchTerra: Extending the European Archaeology Web over Bulgaria, Romania and Poland

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## Abstract

*From the beginning of 1999 until the end of 2000, the ArchTerra<sup>1</sup> project (an International co-operation project under the EU Copernicus programme) has been active in the creation of an Internet infrastructure and content for Central European archaeology. This paper provides a brief overview of its goals and current results.*

*Keywords: European archaeology, Internet*

## 1. Introduction

The networking and internationalisation of existing academic resources in archaeology, of the historical and cultural heritage, as well as of the research efforts of the academic community, using computer information and communication technologies is a recent trend with a rapidly growing impact on archaeological research, management and education. The reason for this is twofold: on the one hand, *the international character of the archaeological material itself*, and, on the other, *the ability of these technologies to overcome the difficulties of sharing these resources across the national borders*. One additional reason (although this development is still in its infancy) is the ability of these technologies to facilitate group collaboration.

Internet facilities are increasingly being used by professional archaeologists in the European Union for a variety of purposes; a review of the situation in 1995 has been published by Champion and colleagues (1996). Since then an informal but truly European virtual research network in the field of archaeology has grown up, which maintains its own virtual space of shared resources, discussion forums, international organisations, and electronic journals. The network was first established in late 1994, emulating its North American counterpart *ArchNet* which was co-ordinated at the University of Connecticut. The current state of European trends toward virtual research collaboration can be listed on the basis of the information technologies used:

- The Archaeological Resource Guide for Europe (ARGE, maintained at the University of Groningen) is the WWW "Virtual Library" for European Archaeology, providing one-stop access to over 1,500 sources of information.<sup>2</sup> It connects to other European servers acting as national hosts of the European Archaeology Web (known as ArchWebs), and allows the sharing of any type of resource over the Internet: public domain software, public presentations of information materials of common interest, educational and

research materials in Archaeology, notice boards for public announcements, etc.

- Professional archaeologists, including the European Association of Archaeologists, have their own international mailing lists, which allow networking of researchers on a personal basis.<sup>3</sup> Many of these are currently hosted by the UK-based mail server *mailbase* at Newcastle (UK).<sup>4</sup> One specific list dedicated to the build-up of Europe-wide information services for archaeologists, is supervised by one of us (Van Leusen) at the University of Groningen.<sup>5</sup>
- International availability of research results is promoted by the publication of several electronic journals over the Internet, such as *Internet Archaeology* (based at York, UK), and the *Archaeological Research Repository* (at the University of Sheffield, UK).<sup>6</sup> These are based on maintenance of dynamic access to databases and files over the WWW.
- Public and professional access to archaeological objects and databases is promoted through virtual museums of archaeology, such as *the Virtual Magna Graecia* and *Virtual Pompeii* museums,<sup>7</sup> and by libraries such as the *AmberWeb* pages (Milano).<sup>8</sup> These employ contemporary technologies for 3D modelling, multimedia and interactive programming (HTML, CGI, VRML, and Java).

The informal nature of these networking activities has meant that their efficiency and effectiveness depend on, and are limited to, the services which happen to be made available by external sources. Unless more concerted efforts can be developed, activity remains limited to the relatively few archaeologists who can spare the time and have the interest. Crucial elements of a transnational archaeological information infrastructure, such as multilingual search engines and managed discussion lists, thus cannot be realised, and inequalities between countries are emphasised rather than removed. In addition, ignorance of the possibilities (potential or existing) of the WWW is still pervasive among many professionals, and this is compounded by the virtual absence of basic network ac-



cess for archaeologists from Central Europe.<sup>9</sup> Although the Central European countries have an important place in the historical and cultural development of Europe, they therefore do not currently have a substantial participation in the exchange of information and expertise regarding European archaeology.

To help redress these failings, the ArchTerra project (an international co-operation project under the EU "Copernicus" programme), was formulated and successfully submitted for EU funding in 1998.<sup>10</sup>

## 2. Aims of the ArchTerra project

The ArchTerra project aims were to help redress the current imbalances in access to European networking facilities for these academics, and to provide the impetus for an active expansion of archaeological communication and information services both within Central Europe and between the EU and Central Europe through the Internet. Its objectives were:

- To establish the technical infrastructure and software tools needed to allow all researchers in the field of Archaeology to join a Europe-wide Archaeology Web, in the form of national WWW hosts of the ArchWeb network in the three participating countries of Central Europe (Bulgaria, Romania, and Poland).<sup>11</sup> These gateways are located at the major research organizations responsible for archiving, maintenance and supply of information in these countries. The project's aim was to make direct access to these facilities a reality for all researchers employed by the participating organisations;
- To provide practical demonstration of the trans-national nature and urgency of archaeological research and management, and the benefits and efficiencies of Internet use, to professional and general users alike. End users were to be able to access both the presently available on-line electronic resources and a core set of demonstration resources from Central European archaeology (including web pages, museum databases, live presentations and virtual exhibitions), and the creation of the latter was a core objective of the project.<sup>12</sup> In addition, a unified generic information system for Internet access to relational databases was to be developed jointly by programmers and museum workers.<sup>13</sup>
- To strengthen existing scientific relations between the EU and the countries of Central Europe and to foster long-term joint initiatives for collaboration, demonstrating the richness and fragility of the European archaeological heritage by bringing together partners and collections from across Europe. To this end, specific hurdles to international collaboration (dealing with different alphabets, creating multilanguage and multicultural thesauri of terms, compiling international heritage legislation) were to be explored.<sup>14</sup>

## 3. Project impact

International collaboration in the study and preservation of our common archaeological heritage, the goal of the ArchTerra project, has not been operating very well across Europe and hardly at all between European Union and Central European Countries. This is partly due to lack of (technical and financial) means, but of



Figure 1: Project and INCO logos; caption to include project contract number 977054.

greater importance has been the lack of a focused drive to exploit modern information technology. In addition, even though it may be aware of the benefits IT could bring, archaeology as a profession does not have either the means or the technical know-how to bring this about on its own.

One important advantage of the relatively small size of the European archaeological research community is that it is possible for the proposed project to have a major impact on working practices. In effect, the project can diminish the current problems of lack of infrastructure and IT experience in Central Europe; the availability of a range of freeware WWW tools has already removed the problem of the lack of user friendliness in client systems.

The ArchTerra project activities may be grouped under the four headings of technical installation (hardware, software, networks), transfer of expertise (through workshops, visits, and discussion lists), creation of new content (data mining, software development, WWW publishing), and dissemination (conference papers, guides, web hosts). These activities already have allowed researchers to work more effectively from their own countries, contacting their national and international colleagues without cost or delay. In this, the project has closely followed the ideas and recommendations of the second CEC/EU Forum in Prague, thus in effect preparing the CEC for the *Global Information Society* in the field of Archaeology.<sup>15</sup>

The ArchTerra project has yet another valuable European dimension, in that it has opened for the rest of Europe some of the less well known achievements of the academic community in Central European Countries. Due to the present economic difficulties and the existing language barriers these have so far largely remained unknown outside specialist circles.

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## Notes

- <sup>1</sup> The ArchTerra project home page is located at <http://archterra.cilea.it>.
- <sup>2</sup> ARGE is located at <http://www.let.rug.nl/arge>.
- <sup>3</sup> The EAA is located at <http://www.e-a-a.org>.
- <sup>4</sup> Mailbase is located at <http://www.mailbase.ac.uk>.
- <sup>5</sup> The address of this list is <http://www.mailbase.ac.uk/lists/eahw/>.
- <sup>6</sup> At <http://intarch.ac.uk> and <http://www.shef.ac.uk>.
- <sup>7</sup> The Virtual Magna Graecia (URL: <http://www.abramo.it/archeol.htm>) and Virtual Pompeii (URL: <http://www.ion.sgi.com>) museums.
- <sup>8</sup> AmberWeb pages at URL <http://amberweb.cilea.it/>.
- <sup>9</sup> The number of different definitions of "Central Europe" is staggering and it would require too much space here to discuss them all in a politically correct manner; suffice it to say that it includes the countries of the former Eastern Bloc.
- <sup>10</sup> A project summary can be found by searching on "archterra" on the EU information server CORDIS at <http://www.cordis.lu>; the full text of the proposal can be found at URL: <http://www.cimec.ro/arheologie/archterra/inco7054eng.html>
- <sup>11</sup> Now active at the following addresses: <http://www.muzarp.poznan.pl/archweb> (Poland), <http://www.archweb.cimec.ro> (Romania) and <http://archweb.nbu.bg> (Bulgaria).
- <sup>12</sup> All these products can be found via the project home page (see note 1).
- <sup>13</sup> A full description of this system, developed according to CIDOC standards, was published by Vassilev et al. 1999 and can be found at URL: <http://www.cilea.it/~bollettino/69/datamodel.pdf>.
- <sup>14</sup> This exploration has led to the development, among other products, of a prototype multilingual thesaurus management system (Van Leusen this volume) and of a multilingual glossary. Full descriptions can be found via the project home page.
- <sup>15</sup> As laid down in the so-called Bangemann report, URL: <http://www.ispo.cec.be/infosoc/backg/bangeman.html>