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[1] 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 two-fold: 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.[2] 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.[3] Many of these are currently hosted by the UK-based mail server *mailbase* at Newcastle (UK).[4] 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.[5]

- 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).[6] 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,[7] and by libraries such as the *AmberWeb* pages (Milano).[8] 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.[9] 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.[10]

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).[11] 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.[12] In addition, a unified generic information system for Internet access to relational databases was to be developed jointly by programmers and museum workers.[13]

- 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.[14]

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.[15]

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.

References

NEGRONI CATACCHIO, N., GUIDETTI, L., FERRARI, R. and Van LEUSEN, M., 2000. MEDIOLANVM. European Fieldwork server, CAA Conference, April 18-21, 2000, Ljubljana, Slovenia, Bollettino CILEA, vol. 73.

Van LEUSEN, M., CHAMPION, S., LIZEE, J., and PLUNKETT, T., 1996. Toward a European Archaeological Heritage Web. In Kamermans, H. and Fennema, K. (eds.), *Proceedings of the 23rd CAA conference, Leiden, 1995*, "Analecta Praehistorica Leidensia", vol. 28.

VASSILEV, V., STOEV, I., GAYDARSKA, B., ALEXANDROV, S., NEHRIZOV, G. and VAKLINOV, M., 1999. *Museum Information Systems: CIDOC data model implementation in the ArchTerra project*. Bollettino CILEA No.69, Settembre 1999, URL, http://www.cilea.it/~bollettino/69/datamodel.pdf.

Notes

1 The ArchTerra project home page is located at http://archterra.cilea.it.

2 ARGE is located at http://www.let.rug.nl/arge.

3 The EAA is located at http://www.e-a-a.org.

4 Mailbase is located at http://www.mailbase.ac.uk.

5 The address of this list is http://www.mailbase.ac.uk/lists/eahw/.

6 At http://intarch.ac.uk and http://www.shef.ac.uk.

7 The Virtual Magna Graecia (URL: http://www.abramo.it/archeol.htm) and Virtual Pompeii (URL: http://www.ion.sgi.com) museums.

8 AmberWeb pages at URL http://amberweb.cilea.it/.

9 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.

10 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

11 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).

12 All these products can be found via the project home page (see note 1).

13 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.

14 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.

15 As laid down in the so-called Bangemann report, URL: http://www.ispo.cec.be/infosoc/backg/bangeman.html