MEDIOLANVM  European Fieldwork Server
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Abstract
The new MEDIOLANVM Web site is the progress of the EARP project (European Archaeological Research Projects) and it is the response to the goals set by each partner of this project: to offer the most advanced possible technology and to continually keep the quality of services and products in line with the trends of a market that is increasingly more demanding and more highly qualified.
MEDIOLANVM is an archaeological field work mediation service and offers three services: advertising field work opportunities, searching the database for field work opportunities and applying for them, and a general electronic notice board.
Foreword

MEDIOLANVM is a Website within the European project: ARCHEOonet: Archaeology Towards the Third Millennium that was created by the Università degli Studi di Milano, Dipartimento di Scienze dell’Antichità and CILEA at the beginning of 1997.

From that time onwards, the MEDIOLANVM project has been revised and extended repeatedly, becoming increasingly complete from the standpoint of the information it contains, more stable for navigation and research, and offering a performance increasingly in line with market standards.

The first release of the project was showed in the CAA1 Conference in Birmingham called EARP (European Archaeological Research Projects), in 1997, and as a consequence of this event a large number of students contacted the site to have the possibility to do an excavation experience in Italy or in Europe.

After that the web site was an object of a first review, ended in September 1998, that increased performances and functionality in order to render the navigation faster and more efficient and to offer an easier information management that makes up the database.

In 1999 the site was included in the ArchTerra project (INCO-COPERNICUS Project 977054 ArchTerra. Proposal for the Structure of National ArchWeb Sites) and so it is in a new amplification and restructuralization stage.

In particular the following changes were be executed:

1. Name change. It was chosen a name to make the site archaeological content clearer to the users as soon as they visit the home page.
2. Complete restyling of the whole site, with changing of layout, colours
3. A help file was prepared to make more simple compiling the forms either for students and researchers.
4. Introduction of complete new web pages designed for directors of projects, who are searching students or collaborators for their research.
5. Automating underlying database operations
6. Improving navigation
7. Joint with other Archterra sites
8. Providing an electronic bulletin board
9. for everyone, who is searching information or wants to submit archaeological news.
10. Adding other languages, in addition to Italian and English.

The MEDIOLANVM project originated in Europe and it is expected that it will become possible to use it in all European Union languages. At present English or Italian may be used for navigation.

We asked all our European Partners to translate into their own languages the describing part of each page.

Although the new site comes from MEDIOLANVM, it contains a lot of new elements, that make more pleasant and simple its use to give the European students the choice of joining a field-work and to make
easier the co-operation between different Universities and different European countries. The Department of Archaeology of the University of Milan in collaboration with Martijn Van Leusen of the University of Groningen edited the new layout and the renovated structure of the site, while CILEA modified the software for the database. The new MEDIOLANVM site is the response to the goals set by each partner of this project: to offer the most advanced possible technology and to continually keep the quality of services and products in line with the trends of a market that is increasingly more demanding and more highly qualified.

The goals of the MEDIOLANVM project

One of the major tasks of the Archeonet project is to help the students and the researchers to take part in the archaeological research projects leaded in the different European countries. MEDIOLANVM takes starting-point from the necessity to put students as well as researchers, which wish to take part in excavations, directly in contact with the European Universities and Institutions promoting fieldwork and surveys. There are three chief goals of the MEDIOLANVM project, which we aim to achieve through the Website:

1. To facilitate the participation of students and researchers in archaeological research projects in various European countries. MEDIOLANVM originated from the need to put people interested directly in contact with European universities or other institutions who are conducting archaeological excavations or exploratory campaigns.
2. To enable those in charge of an archaeological excavation or exploratory campaign to announce their project and insert it directly onto the Website, so as to offer students and researchers opportunities for jobs or to gain cultural and scientific experience by taking part in archaeological excavations or exploratory campaigns.
3. To place at the disposal of academics and site directors a special type of electronic bulletin board that facilitates communications among these persons and on which to post proposals, research, suggestions and exchange cultural and scientific information. In an initial phase, the use of the bulletin board is recommended for academics and site directors, but there is no reason why in future it should not be extended to anyone who may be interested.

Implementation

The MEDIOLANVM project is based on a Website supported by a database that supplies and personalises the pages for navigation depending on the navigator’s choices and search. The decision to take advantage of access via Internet is motivated by the great expansion that the Web has had over recent years, the ever-increasing number of users, the simplicity and practicality of access to resources in Internet and the great potential that on a daily basis is being developed and transformed into ever more interesting and wide-ranging services, whose usefulness meets the needs of its continually expanding subscribers.

All the principal manufacturers of data management software have dedicated considerable resources and attention to the Internet universe, equipping their top-range products in the DBMS (database management systems) sector with modules (DataBlades) that permit management of information (databases) within the Internet environment. This commitment has immensely increased the potential of the Web: Internet applications are moving rapidly from a static to a dynamic modality. The novelty consists in the fact that, alongside the classic Web pages that are conceived, designed and created in static terms, there are pages whose information content is decided by the user, and which may thus be described as "dynamic". The information feeding this type of page lies in DBMS structures and between the two (page and database) a fruitful "collaboration" is set up.

The European Archaeological Research Projects is an application that constructs and manages Web pages of the dynamic type.
other words, the project is based on a database in which the necessary information is stored and which is consulted, managed and updated by procedures that are activated in the form of Web pages.

Database

The database consists of three principal files, linked to each other and to other supporting tables.

The main files are:
- Excavation and survey projects
- Participation in Excavation and survey projects
- Bulletin board

The supporting tables are:
- Legend for chronological period
- Legend for type of excavation
- Nations
- Regions
- Photographs of the excavation sites

How it works

a) Search for an archaeological excavation or survey project

The student or researcher who wants to apply to the person in charge of an excavation project to take part in the campaign can search within MEDIOLANVM for the project that responds most closely to his/her particular skills, the professional experience that he/she hopes to acquire, his/her archaeological tastes and logistic requirements.

There are two ways of carrying out the search for a site: by geographical search and by direct search.

The geographical search may be done on a sensitive map, selecting on the map of Europe the choice of nation, and on the map of the nation the choice of region within which to look for possible excavation projects.

The direct search may be done by setting some values in the proposed search fields (chronological period, type of excavation/exploration, specific site, organiser, teaching level, excavation period).

The system then opens a page with the excavation sites that meet the conditions stated in the search fields.

The search for excavation projects has been designed so that the user does not need to type anything but can make use of sensitive maps (for the geographic search) or selection lists (for the direct search). These lists are dynamically generated by the application, which extracts the data from the database tables, thus always offering adjusted and updated information; incorrect search queries are also ruled out.

b) Adhesion to an archaeological excavation or survey project

Having determined the excavation site in which the student or researcher is interested, MEDIOLANVM calls up the description of the site and the conditions offered or required for participation in the project.

There is also a link a form that may be used to communicate the desire to participate in the project to the person in charge. Thus the researcher sends an application to the person in charge of the excavation site, giving his/her personal data with a short CV indicating training and previous experience in the field of archaeology.

This information is stored in a specific table in the database and the system automatically sends an e-mail to the person in charge of the
excavation project informing him/her of the new application. From this moment onwards, relations between the person in charge of the site and the researcher will be through private channels (telephone, e-mail, mail, fax...).

c) Announcing a new archaeological excavation or survey project and adding it to the database

Any archaeological body, university other institution that is planning or has already begun an archaeological excavation or exploration project may "list" its project on the MEDIOLANVM site with the aim of publicising the project, so as to receive collaboration from students or researchers who are interested in participating.

The MEDIOLANVM site contains a special link through which this listing procedure may be activated. Via this link, the system pulls down a series of web pages through which to collect all the information needed to catalogue the new excavation site; the person in charge of the project must complete the procedure of filling these in.

The first page asks him/her to indicate, on the map of Europe, the nation where the excavation site is located.

The second page asks him/her to indicate, on the map of the nation selected, the region where the excavation project is located.

The next page asks for the name of the excavation site, the municipality and province in which it is situated.

The following page comprises the map of the region in question and asks the person responsible for the project to click on the exact position of the site within the region. The application acquires the co-ordinates of the site and stores them in the database. Thus the map of the relevant nation or region is automatically associated with the location of the excavation site, and the application handles this link completely.

This automatic mechanism is created though a Java applet that retrieves the file containing the image of the map of the region, retrieves the co-ordinates of the point or points where the excavation site is located, the number of sites, the colour-code for each site expressing the chronology and type of site (also indicated by a specific legend). The applet then makes up a map visualising the position of the site with all its characteristics.

The next page is a form requesting other information needed to specify and characterise the excavation project (site description, what the organisers offer students who participate, what they require in terms of skills and academic preparation and other information).

When the procedure has been completed, the system stores the data relating to the excavation project in a special table of the database and sends an e-mail to the manager of MEDIOLANVM informing him/her that there is a new project.

This is because the data given by the person in charge of the excavation site do not go directly on-line; they are first checked and confirmed by the MEDIOLANVM project administrator, to ensure consistent data and to protect the site.

d) Acceptance of a new archaeological excavation or survey project

This is done by the administrator of the MEDIOLANVM system, who receive an e-mail from the system notifying him/her that a new excavation project has been added to the database. The administrator verifies all the data of the new site and, if he/she finds it suitable for inclusion in MEDIOLANVM, gives the confirmation, after which MEDIOLANVM "navigators” can consult it.

The system also sends an e-mail to the person in charge of the excavation site informing him/her that it has been accepted by MEDIOLANVM. It provides an http address and an access code (user id plus password) with which the person in charge of the excavation project can manage information independently. This means that he/she can change or up-date the data on file for the excavation site, eliminate it if desired, or manage it in other ways.

In this connection, it should be remembered that an excavation project will normally remain in MEDIOLANVM for the entire period of the planned excavation. Three months after the end of that time, unless the person in charge of the site has communicated an extension of the dates or a new excavation period, the MEDIOLANVM system will automatically delete the site from its
database. This is to avoid sites being "forgotten" on-line by the persons in charge, where obsolete data could remain available for selection.

Among the duties of the MEDIOLANVM administrator is the complete management of information in all the tables of the MEDIOLANVM databases. In practice, the administrator has full access and full powers over all the information comprising the database and may at any time decide its fate.

e) The electronic bulletin-board
A characteristic function of the MEDIOLANVM site is the presence of a "free" space where academics, persons in charge of excavation projects and institutions in general can post and exchange information about their projects or more general subjects of interest to the archaeological community.

It is a "free" space in the sense that at present there is no filter on the information given (in future it may be decided to place a filter).

Everyone can read the messages and post their own (at present the service is recommended and destined for academics and those in charge of excavation projects, but there is no pre-selection of the material). The bulletin board operates rather like e-mail, with fewer functions but of more immediate use. The "subject" of the insertion is indicated, with the "text" of the message, the "sender" and it is also possible to "attach" a document in any format (Word, Excel, Power Point, images, sounds, film, zipped files, etc).

The messages stay on the board for 90 days, after which time MEDIOLANVM automatically deletes them.

Technical aspects of MEDIOLANVM

MEDIOLANVM is at present on a SUN Server Ultra-2 2x200MHz biprocessor computer with SUN Solaris 2.7 operating system, which provides good navigation speed within the pages of the site.

European Archaeological Research Projects may be easily and freely consulted by all Internet users at:

http://archeonet.cilea.it/archeosite

From the software standpoint, MEDIOLANVM has been completely redesigned using new Informix products such as: Informix Dynamic Server (IDS 9.14.UC7 version), Universal Data Option (9.14.UC7 version), Web Integration Option (3.32.UC6 version) and the Java language is now used; with this an applet has been created that can manage some of the functions described above with regard to the location of excavation sites on regional maps.