Between the Book and the Exhibition. Creating Archaeological Presentations Based on Database Information

Øyvind Eide[1], Jon Holmen[1], Anne Birgitte Høy-Petersen[2]

[1]The Museum Project, University of Oslo, Norway
{oyvind.eide, jon.holmen}@muspro.uio.no
[2]Norwegian University of Science and Technology, Museum of Natural History and Archaeology, Norway
gitte.hoy@vm.ntnu.no

Abstract. This paper presents a simple system for generation of web pages, with some notes on how this system can be expanded to a full-scale production system. The paper will also describe how this system is used to make a web system of about 230 years of archaeological work at the farms of Egge and Hegge in central Norway.

1. Introduction

The Museum Project is a co-operation project between the four universities in Norway with the aim of developing common database systems for the management of collections for all the Norwegian university museums. As Norway does not have a national museum for archaeology, the university museums play a central role in the management of sites and artifacts in Norway. The Museum Project aims at better integration between several Norwegian archaeological archives, including the Sites and Monuments Register, the catalogues of the artifact collections, the so-called topographical archives, and image collections.

1.1 Traditional Archaeological Publications

Archaeological publications have always been based on sources like those mentioned. The information is typically extracted from the sources and included in what is presented to an audience, in print or as a digital resource such as a web exhibition.

As long as publications are in print only, this is the best connection we can get between the publication and the sources. If a reader wants to examine the sources further, she uses the reference information provided to find more information in other publications or goes to the museum in which more information and original objects are found.

As time goes by, these publications get more and more outdated as collections move, objects are re-classified, and new objects are added to the collections. Eventually, in some cases, a new edition of the publication is made. In other cases, it just becomes a historical document. Many of these are interesting and pleasing, and some of great value for a long time, but they do not include new information.

1.2 Digital Publication

As the publication of archaeological work goes on-line, the methods used are pretty much the same as in the print culture. People tend to extract the relevant information from the databases they use and create digital publications with the data included (the "cut and paste" method). As time goes by, the same will happen as with printed publications: They grow old.

In some cases, the files of an on-line publication are edited now and then to keep the publication up-dated. But as we see on the web of today: This is not the typical situation.

One main problem with this publication model is the lack of connection between the publications and the databases. In the print age, written references was the best we could do. Today, more is possible and will be expected.

This is not a new observation. Several projects have seen this and taken action. In archaeology, this includes the Silchester Town Life Project (Clarke 2003) and the work concerning Çatalhöyük and Opovo done by Ruth Tringham and others (Tringham 2004). But the projects taking up the new approach tend to be oriented toward databases representing information about a single site. Often they are based on an on-going or just finished (i.e. finished within the last decade) excavation where there exists much born digital material. Eventually, older material might be digitized, as in the Silchester town project, where they included material from an earlier excavation of the same site.

1.3 The Egge and Hegge Web Site

As part of the Museum Project's work related to the EU funded ARENA project, we have made a system for linking in principle any combination of archive documents to any combination of collection object records and any combination of images to any combination of sites in the SMR. This opens the possibility for creating dynamic web-publications based on any theme an archaeologist can think of as long as it is documented in the main national Norwegian databases, as illustrated in figure 1.

To demonstrate this, we have created a web-page for the farms Egge and Hegge in middle Norway, found at http://www.muspro.uio.no/arena/kartpek. At this page, a map can be used to navigate to various sites in the area, where information from the various sources can be found. Examples
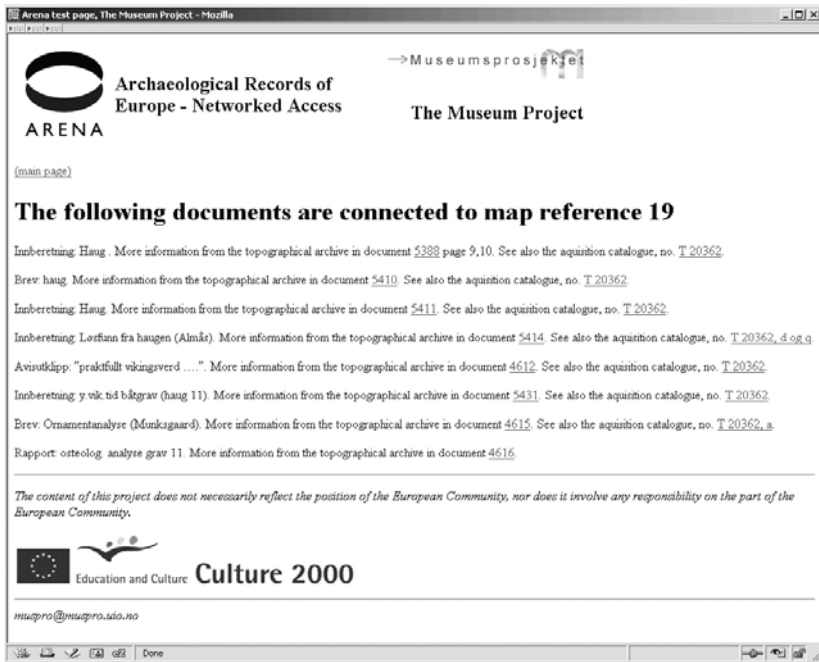
Fig. 1. Publication with material included based on linking to various databases [eide_caa2004_fig1.eps].

are the note on site number 3 stating "No documents – plundered mound", the description for site number 19 of artifact records from the museum catalogue with images of some of the artifacts and various reports and letters, and site number 14, described by excerpts from 19th century books and a drawing from the mid 1770s. An example of a site number list is included as figure 2.
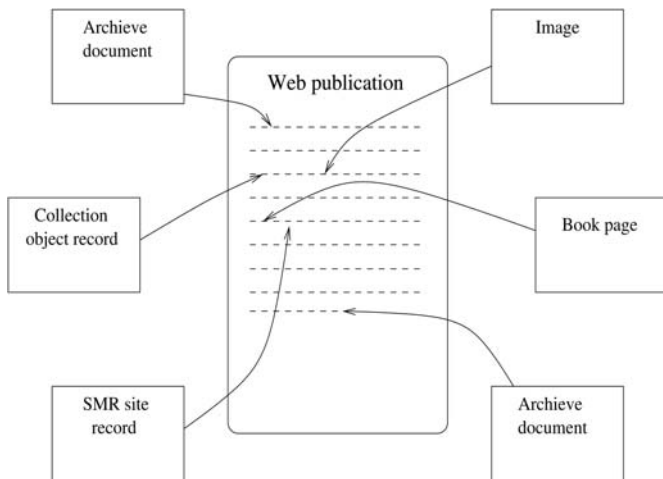

Fig. 2. List of documents fetched from databases connected to a site number [eide_caa2004_fig2.jpg].

2. Discussion

Although we see great potential in this line of work, is also creates new problems we have to address.

Should the publication system open up for statements such as "all items in the collection meeting these criteria"? This creates vital resources where the number of objects in the

publication will change over time. But do archaeologists want to connect their name and professional honor to resources including an unknown number of objects they have not examined and selected themselves? In our system, the IDs of objects are entered, while using searches is equally possible. But even with explicit ID references, the same kind of problem exists because objects might be re-classified. The important point here is that choices have to be made, as there is a trade-off between author control and how updated the publications are.

Even if such a system is good for reading, what about students and researchers who want to refer to the publication – how do they know what they refer to? This problem is also solvable, e.g. using a system being able to keep track of different versions of the same document, but this demands more advanced maintenance work on web systems containing such publications.

Should the connections between the web and the databases be live, making changes in the database reflected to the web publication immediately? Or should the publication be linked via a "run when you want an update" system? We have selected the latter, partly for practical reasons, but also because this makes it possible to create versions of the publication. Such versions could also be equipped with a versioning system making it possible to see all differences between two selected versions.

Conclusion

Our approach brings together the traditions of book publications and museum exhibitions while keeping the connections to the national databases. It made it possible to create the web site for the ARENA project quicker than we could have done by hand-made HTML, and the site is easier expandable than a hand-made site would have been. In further expansion into a production system, it is necessary to make a user interface so that the process of entering the information needed to create a web site is easier. This will make it possible to make high quality web systems which is easy to update and can automatically or semi-automatically reflect changes in the underlying databases.

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Uroi Hill (Magura Uroiului)
The Beginning of an Interdisciplinary Research

Angelica Balos, Adriana Ardeu, Roxana Stancescu and Cristina Mitar

Dacian and Roman Civilisation Museum, Deva, Romania
angelicabalos@yahoo.it

Abstract. Uroi Hill has a volcanic origin. In the year 2001, a prehistoric fortified settlement was found at the foot of the hill. Another fortification is known to lie on the table-land on top of the hill, but this settlement hadn't been researrched, before that time. In July of 1999 W. S. Hanson (University of Glasgow) and I. A. Oltean took some aerial photographs of the settlement from the top of the hill and studied them in order to get some more information.

The systematic research began in the year 2003, and it started with a topographical survey and the set-out of GPS axes with the helps of a total station. This primary research was made on the lowest terrace of the settlement. The next step was the archeological research. Its aim was to check the fortification system and to establish where the prehistoric settlement was placed. In order to get an exact relation between diferent types of pottery, the researches used a P.C. program for statistics.

1. Introduction

Uroi Hill (Fig. 1), lying at the confluence of the Mures and Strei Rivers, both valleys being very good ways of communication since ancient times, rises above the surrrounding plain, facilitating an excellent viev to the east, west and south. The stone, the hill, is made up of is andesite, known as Uroi type, a special mixture with augite.

Fig. 1. From the top of the Hill we have a very good view on thet two valleys, towards east, west and south.

The using of this stone is has been known since Roman Period, and is was used for funerar monuments, as well as for the building of the sites from neighborhouring sites, like: Micia, Ulpia Traiana Sarmisegetusa (Tudor 1968: 123, 127). The roman road, that comes from Calan-Aque, along the Strei River, being surprised archaeological at Simeria (Hansen and Oltean 2000) was made by this kind of stone.

2. History of Research

There is some informations in some arheological writing from the first half of the 20thcentury, about the way this place was used in ancient times. (Fig. 2). For example I. Martian,

Fig. 2. The hill's platcau was closed by a fortified settlement, possible a prestoric one, which has not been researched.

(Martian 1921: 21) talked about the existence of a fortified settlement assigned to Dacian period.

In 50's, O. Floca brought up the Uroi Hill question, and his conclusion was that there was no fortification on top of the hill, but only at the, foot of it, this one being a medieval one (Floca 1957: 112).

Professor I. Andritoiu, from Alba Iulia University mentioned the existence of some Bronze Age artifacts, but their belongin to the upper plateau of the Uroi Hill is uncertain (Andritoiu 1992: 126).

Within living memory, Uroi Hill was used by the military forces. During the Second World War a gun battery was located on the top of the hill, taking advantage of its strategic position overlooking Deva and with excellent views along the Mures and Strei Valley. Military Trenches are still visible on the lower slopes of the hill below the quarry face of the east side (Hansen and Oltean 2000).

The area we disscus about has never been research by archaeological excavation.

3. Aerial Perspectives

The year of 2000 brought this place into scolars attention again, but this time in a different way and with other technical possbilities.

Professor W.S. Hansen, from University of Glasgow and I. A. Olteanu have developed some research work on the Uroi Hill,as a part of a project consisting in the aerial perspectives in SW-central Romania.

In 1998, W.S. Hansen took some aerial photographs of the plateau and of its base, too. The same place were photographed again in the summer of 1999,for more details.

The conclusions of this investigation were published in the year 2000 and they showed, once again, the existence of a fortified settlement being assumed to belong to the First part of the Iron Age,links being establishing with other settlements like Teleac and Subcetate.

4. Systematical Research

The year of 2001 represented a step forward in getting to know the area better, when excavation work started on terrace I (which is situated at the base of Uroi Hill).

During the same year, some sonar research was done, and they traced down a part of a vallum. This vallum was closing the eastern part of the plateau.

Despite the weather conditions (winter times),the research went well. This research certified the existence of a settlement assigned to Early Iron Age.

There were found a number of pottery fragments, most of them blak and polished, having grooves as decoration. According to the shape and decoration of these fragments, the pottery is characteristic for the Gava- Holihrady horizon. Among these fragments,they found some zoomorphic figurines, made up of burnt clay. Those belong to the same horizon.

In the spring of 2003,they recovered a part of the pieces belonging to a bronze depot, on the terrace II;these were: recovered a part of the pieces of a bronze depot fragments of sickles, knives, fragments of a sword, bracelets and some fragments hard to establish (Fig. 3).

Fig. 3. In the spring of 2003, on the second terrace of the settlment situated at the base of the hill, was recovered a bronze depot.

The research work being continued, an older level that that of the first terrace was found. Here we are talking about a prehistoric dwelling, a Cotofeni one (late Eneolithic). Because of the insufficient knowledge concerning the Early Iron Age in Romania, and taking into consideration all the conclusions acquired a systematical research was started in 2003,having as an aim the pluridisciplinary investigation of the whole area surrounding the Uroi Hill. It began with a topographical survey, the set-out of the G.P.S. axes and the tracing of two sections. The first of these sections, M1, having an area of 111x3 m, was traced from east to west, and the second one, M2, 100x3 m from north to south. The idea was to section the vallum and search the area behind it.

There were found different parts of certain dwellings and domestic pits. Behind the vallum, they found some parts belonging to a dwelling assigned to the Bronze Age (Wietenberg culture). All the things belonging to it-structures, hearths, pottery, bronze fragments and fragments of animal bones-were scientifically recovered. According to the conclusion of the research, they all belong to the Early Iron Age. These dwellings were found under the vallum (from stratigraphic point of view).

5. Statistic Analysis

The recovering of pottery gave us the possibility of making a statistic analysis, which offered us a clearer image on a period that is not very well known in the Intracarpatic Transylvania (Fig. 4).

The statistics based on the pottery found in the two sections and in the pit. The results are the following: the pottery is divided into three categories: black polished pottery, made of a fine paste; brick- red pottery, made of a coarse paste; bicolor pottery (black on the outside and red on the inside).
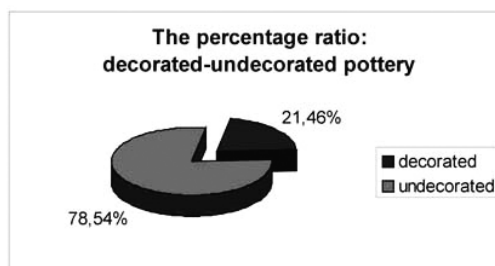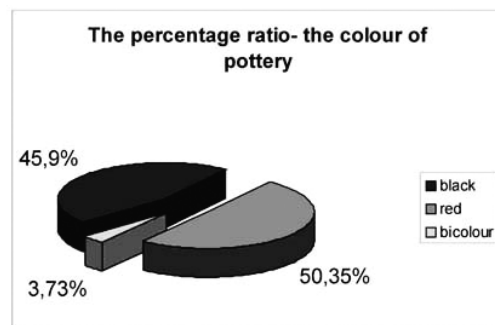

Fig. 4. The fragments of pottery gave as the possibility for realizing a statistic.

Conclusions

The numerical and percentage ratio resulted from the statistic analysis makes us draw the conclusion that the red pottery is predominate, but the black-polished pottery, having grooves as ornaments, is more valuable.

The decoration made on the black polished pottery consists of a vertical, horizontal and bending grooves. In the case of the red pottery, the decoration consists of incisions and cells.

The bicolored pottery is rare at the sites from Uroi Hill.

This settlement had been inhabitted in different periods of time, but the most important of them is the Early Iron Age, and the fortification of the settlement was developed after this period. In a future there is need of geological prospecting, geo-physical measures and topographical survey of the settlement and the fortification existing on the hill, the latter being probably connected to the settlement.

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