

GIS FOR ARCHAEOLOGICAL DATA MANAGEMENT: THE CASE OF SANTA FILITICA, SORSO (SS), SARDINIA

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ABSTRACT

The present contribution has as object the realized informative system for the record data of digging of the archaeological yard of Santa Filitica, locality of roman system, in common of Sorso (the Province of Sassari). It is realized for the Soprintendenza of Sassari and Nuoro that has decided to experience methodologies and techniques put into effect them for the record data, valid is for those relati you to the passages campaigns of digging is for the future.

1. METHODOLOGY AND OBJECTS

In this work we focus on the GIS that was created to manage excavation data from the archaeological yard of Santa Filitica, a Roman structure near Sorso (SS), Sardinia, Italy. The GIS was created for the Sassari and Nuoro Superintendence in order to allow even archeologists and art operators of limited computational abilities to adopt computerized procedures that optimize data collection and The informative system in short allows the

elaboration and the use of the data from the place of the collection of same to the press the second forms standard to you, that is in compliance with form to you rendered available from the ICCD (Institute Centers them of the Catalogue and the Documentation); but the viceversa concurs also: from cartacea card ICCD to the informatizzato and relazionato data to the cartographic and graphical bases. The realisation process of this work can be easily described with a diagram:

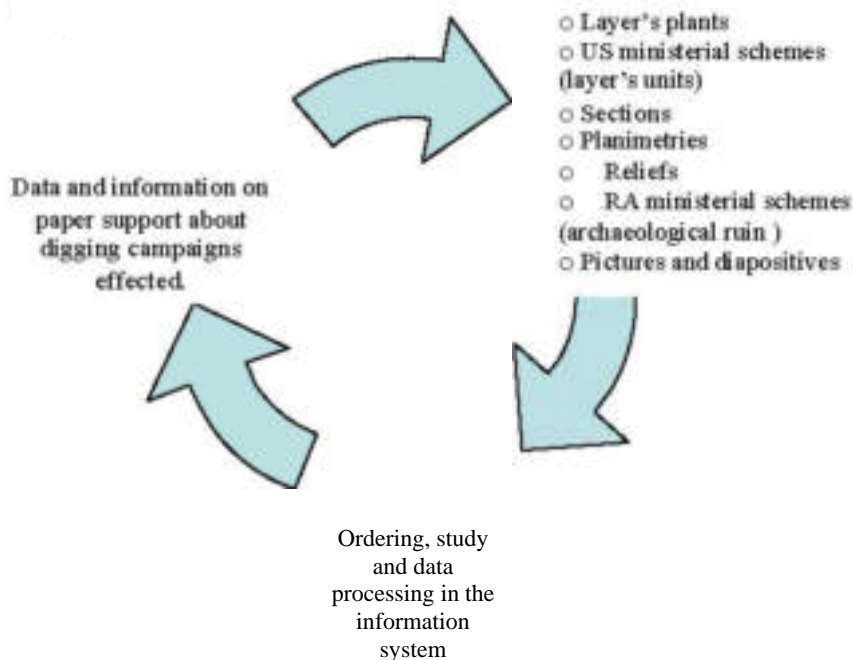


Figure 1. Processing Diagram



Figure 2. Archaeological digging of Santa Filitica: Municipality of Sorso (SS). Scale 1:10.000

The system allows data processing and fruition from yard to print, according to ICCD (Document and Catalogue Central Institute) standards, and vice versa from paper to (carto)graphically related and computerized data. It consists of two linked modules: an input, visualization, and spatio-graphical inquiry module; and an alphanumeric only data management module (i.e. relational database), that is capable to generate automatic reports according to input data.

The alphanumeric data eligible to be saved into the database are those of the strati-graphical unit (US) cards (i.e. the minimal

territorial study unit in archeology), which are linked to (icono)graphical and geographical data.



Figure 3. Detail of the Archaeological data.



Figure 4. Relational database screen for the digging data management.

The system has the following advantages over the traditional the traditional techniques of data management:

1. inputting data through guided but flexible procedures (i.e. forms), and managing textual and cartographical information at the same



Figure 5. US data insertion window.

time reduce gross mistakes (for instance in the identification of US cards relations), a solution which consists in the choice to use a data processing system and is wholly rationalized by the method chosen;

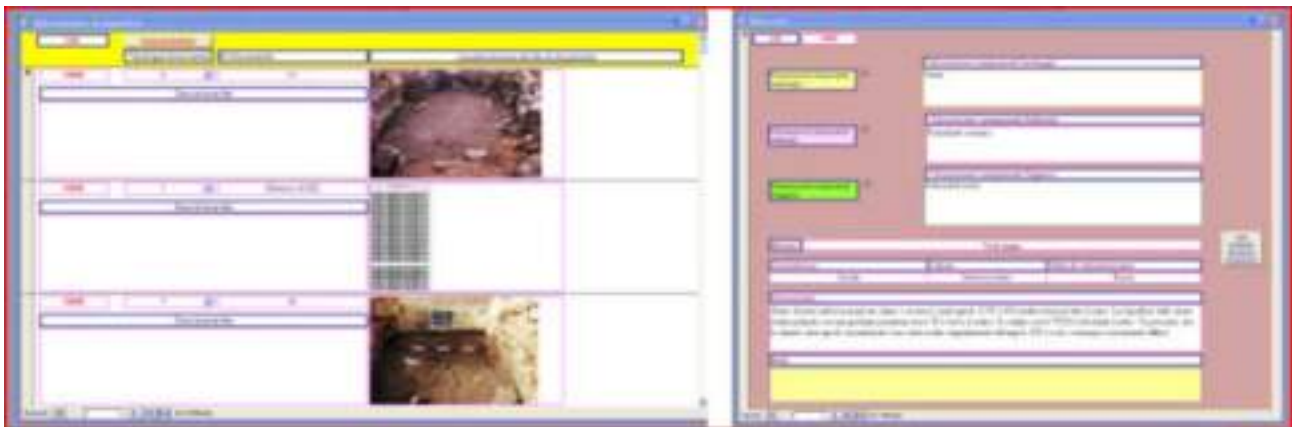


Figure 6. Window of visualization/insertion data for the US support iconographic documents

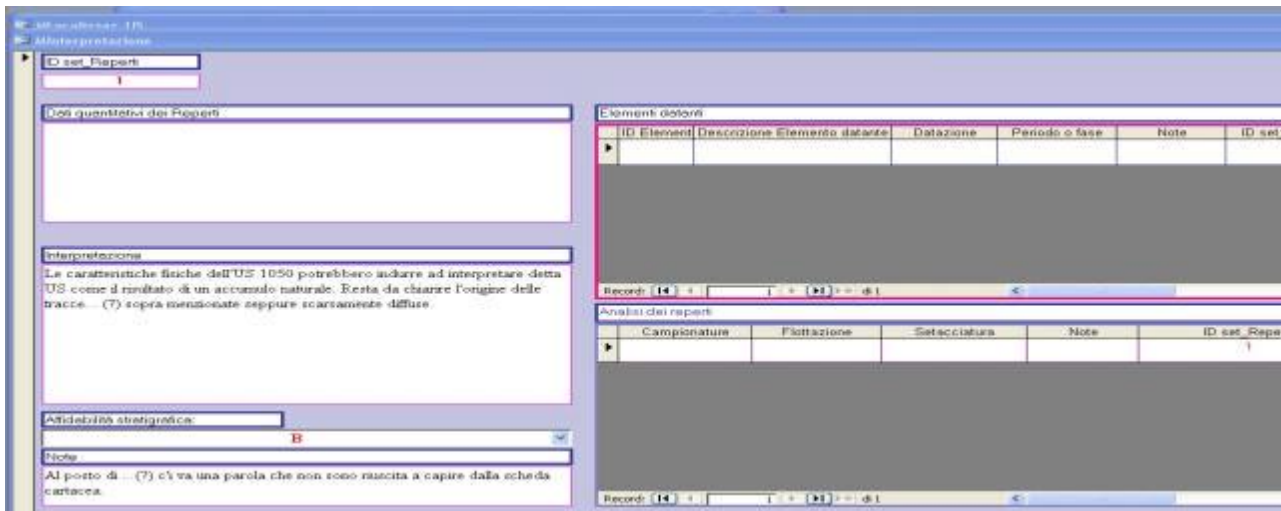


Figure 7. Relational database, data insertion window

2. both kinds of data from the database and the geo-referenced cartography are homogeneously saved on files, permitting exchange and export - thus a high fruition from a third party - and on paper copy, which can be obtained automatically from the report that follows ICCD standards and is easily remodulated should ICCD want to bring the expected content modifications to the US card.

3. the report, that faithfully reconstructs a typical US card in the ICCD format by selecting only useful fields from the database, has proven to be particularly effective, as it can both be saved in a digital format and printed.

2. THE PROTECTION OF THE SYSTEM

A last consideration goes made with respect to the management of the data: seen the flexibility of the system the necessity appears obvious to personalize the members of the same one, in function of the characteristics of the customer and at the same time protect and/or to qualify the various parts that of time in time are used.

The system therefore guarantees that the data do not come corrupts accidentally and/or eliminates to you and at the same time it allows to the safeguard of the inserted data and the monitoring of all the external contributions.

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