Principles of connecting distributed databases in archeology.

The ArheoNET Application

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Archeological research proves to be increasingly difficult and more complex without the support of the interdisciplinary knowledge. Archeological research has always been closely connected to sciences like mathematics, chemistry, geography and biology. The surge of a new set of archeological management concepts and terms world-wide makes the efficient management of a large volume of data become a pressing need also for the Romanian archeology.

The application developed and described in this paper brings innovative solutions in the field of geospatial technology and distributed databases through the creation of an application called ArheoNET. This application allows the storage of data collected from multiple private or public databases with known local structures or ones that could be accessed via the internet.

From a conceptual standpoint the application has the following basic components:

- The ArheoNET software application

- Two categories of databases: internal (stores local data) and external (manages data from private and public sources, as a result of numerous archeological research)

- The web interface that allows all users to access data in a simple way, through the use of an internet browser

- The interface for connecting to external databases

- The public data, resulted from internet searches, that can be collected based on links defined through the database server networks

The solution provided through the ArheoNET application allows the connection of different types of databases through an internet connection as well as the collection, visualization and identification of information placed on servers that are in different locations. The ability of an application to connect to multiple internal and external databases is a critical condition for collaboration in the archeology field. In spite of the current disputes, discussions and controversy regarding the standardization of archeological information this application allows the collaboration between national and international research institutions as well as the establishment of partnerships between archeologists from various geographical locations and research fields. These researchers can use the current application to find common ground for their work and their individual research can be used by all and accepted in spite of the various methods used.

The data, which can be found in various locations, as well as the respective connections to the databases found in the internet cloud and accessed through computer networks, can be retrieved through different methods based on the location and access type needed.

The application described in this research paper was designed as a platform for connecting to various types of databases: internal, private external and public external (internet).

This application represents a possible standardization model for operations procedures of an archeological information system. The closer the structure of such system is to a standard imposed by the archeological and computer science fields the more likely it is for it to communicate with other similar systems.