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A 3D model for detecting and communicating the archaeological risk

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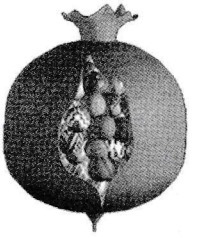

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A 3D model for Detecting and Communicating the archaeological risk

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Abstract

3D technologies have become a very effective way of exploring and interacting with a wide range of different environments. In a Virtual Reality system, the visualized model should increase the provided informative level by means of datasets of information to be integrated in real time navigation, in order to make the final user able to interact with the Virtual Environment and increase his knowledge about the landscape being explored. With this aim, a 3D predictive model for the Pisa coastal plain has been created. This area is nowadays affected by a strong building work programme which compromises of the preservation of a potentially wide and still unexplored archaeological heritage. In order to monitor and detect the areas where a higher probability level of finding new sites is expected, a predictive model has been conceived, starting from GIS collected data, and subsequently implemented in a Virtual Reality system.

What we finally obtained is a 3D immersive, navigable landscape representing the Pisa coastal plain, in which is is possible to look at the distribution of the known sites and have an immediate, intuitive perception of the areas, which might have a significant archaeological interest.

The user can navigate in and interact with the environment, finding out different kinds of information related to the archaeological record, and most of all, realizing which are the most suitable areas likely to contain archaeological finds. One of the key point in this research is due to the use of an innovative web3D technology, enabling the final user to get a wider and better visualization of complex three-dimensional models, which become very handy even for advanced off-line applications.

Moreover, another important aim to be reached by such a research is to create a communicative tool for making a broader range of people get interested in cultural contents.