

The Western Han Dynasty Museum: from the 3D data collection to the 3D spatial analysis

Paola Di Giuseppantonio Di FRANCO, Fabrizio GALEAZZI

University of California Merced, USA

fgaleazzi@ucmerced.edu

Thanks to an agreement between the “Xian Jaotong University of Technology” and the “University of California Merced”, in 2008 the idea of a Western Han dynasty virtual museum was conceived. In two years it has been possible to collect a huge amount of 3D data using different laser scanner techniques.

A qualitative method was chosen to select representative monuments and artifacts of the Dynasty, which have been acquired at the highest possible level of detail. The data archive will be useful for the preservation of *tangible heritage* at risk; but communication models are needed to be made for revealing the *intangible heritage*. Intangible heritage includes cultural aspects and ideas that can be perceived beyond paintings, monuments and artifacts.

Thanks to the creation of cyber maps it is possible to investigate the cultural background of Western Han mural tombs paintings, through the spatial-relations analysis of the scenes. This communicative model is useful to understand symbolic meanings and the mind map which produced them. Thus, through cyber maps it is possible to analyze the spatial relations of every single element of the tomb (architectonical structures, paintings, grave goods...) and to highlight their symbolic meanings.

All societies used to map concepts to preserve their memory of things and ideas. They mapped all the cultural information that could be spatially conceived. Through the cyber map we can uncover the socio-cultural memory process, and reveal this information.