USE OF VIRTUAL REALITY TECHNIQUES IN INTERACTIVE 3D DOCUMENTATION OF PHARAONIC TOMBS

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Abstract

The ancient Egyptian treasures in general and the pharaohs’ tombs in particular suffers from pollution and urban worsening, which cause a serious deterioration in the engraved ornaments and colors on those treasures walls. The tomb ornaments are affected more severely than temple walls, on account of temples have better ventilation that removes water vapor and carbon dioxide resulting from visitors breathing. The ornaments that saturated excessively by water vapor eventually suffer deterioration and falling apart. Therefore, the digital technology provides an alternative to minimize the physical existence of the visitors inside the tombs, by using interactive 3D models allow the tourist to navigate the tomb by Virtual Reality techniques. The virtual reality models with cutting edge audio and video projectors allow the user to navigate the tomb with no place or time constraints in a conditioned comfortable environment.

If a visit to this tomb is needed after all that will be a fast one and will not affect the tomb severely. The paper present a case study supervised by the researcher, that study is a generation of a complete virtual reality model of Pashedu tomb, one of the best tombs in the West Bank of the Nile in LUXOR. The paper suggests a complete technique of the model make starting by shooting the required pictures, generating the 3D model, the programming process, and finally a scientific and historical narration with proper background music.

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