

Crossing between Reality and Virtuality -- On Virtual Touring of Dunhuang Art

Abstract

With the rapid advance of new technologies, human will soon be able to cross the boundary between the reality and virtuality easily. In this talk, I shall introduce an interactive multimedia system, called iM-cave, for virtually touring the famous Dunhuang Grotto, also known as "Mogao Caves" or "Caves of the Thousand Buddhas", which is a treasure of Chinese Buddhist culture and art, recorded in historical sources existing over 1,700 years. In the iM-cave system, we have developed a tangible figurine for exploring every corner of the caves in an intuitive way. Also, we have designed two methods for interactively browsing 2D restoration of mural paintings and 3D restoration of damaged statues. Currently, we are working on deploying the iM-cave system to Dunhuang visitor center so that the tourists can appreciate the beauty of Dunhuang art without entering the caves physically -- which may help to preserve the fragile historical cultural heritage.