What's Up Elsewhere

Virtual Archaeology

The Ename Center for Public Archaeology and Heritage Presentation is an international study and research center in Oudenaarde, Belgium. A non-profit organisation, it is dedicated to developing techniques of heritage presentation, education and public outreach.

The Ename Center grew out of the experience gained by the Ename 974 Project, a programme of archaeological excavation, architectural restoration and historical research at an important medieval site. A key challenge in interpreting archaeology is to make complex and poorly preserved remains comprehensible to the general public. However impressive or picturesque they may be, archaeological remains are rarely recognisable as specific structures (like a house or church), and can therefore fail to capture the fascination of visitors.

Ename contains a labyrinth of the partially preserved remains of the foundations of a medieval Benedictine abbey. Our solution was to offer visitors a picture of ancient life at the site through Virtual Reality. A prototype system, called TimeScope 1, opened in September 1997. This superimposes a 3-D model of the abbey over a real-time video of the exposed foundations, allowing visitors to see the church as it appeared in its original state. An accompanying multimedia presentation offers additional interpretation about the site and the people who lived there.

A second installation opened in 1999, interpreting the nearby Saint Laurentius Church, which is closed to the public. TimeScope 2 permits visitors to monitor the progress of the excavations and restoration work. An accompanying multimedia presentation highlights the historical importance of the church and explains the rationale and stages of the restoration project. The VR reconstructions, multimedia presentation and excavations are also accessible on the Internet.

The latest development opened in September 2002. TimeScope 3 allows visitors to create their own personalised explorations of the restored church through clickable 360° virtual panoramas. A large database of historical and archaeological information has been embedded in "hot spots" in these panoramas, allowing the visitor to discover more about the archaeological features and historical subjects of greatest personal interest.

Conducting the Vienna Philharmonic

Vienna is the world's capital of classical music, and its House of Music Vienna museum offers some of the most exciting new media interpretation in Europe. The Virtual Conductor is one of their most popular innovations, allowing visitors to conduct the Vienna Philharmonic playing a range of popular melodies. This is how it works:

Visitors stand in front of a large video projection of the orchestra in the Musikverein theatre. They pick up the baton, choose a piece and start conducting. The orchestra follows their movements precisely - the larger the gestures, the louder the orchestra plays. If visitors conduct towards certain instruments, they play louder than the rest. And the players follow tempo too - the faster the conducting, the faster they play.

The specially modified baton sends infrared signals to a receiver below the screen that relays the baton position to a computer. Here, a special gesture-recognition algorithm calculates the tempo, size and direction of the conducting gestures. A second computer then uses this data to control the playback of the digitised orchestra. To raise instrument voices, audio channels are processed in parallel and mixed down in real time.

The system uses Apple computers, and more than 20 gigabytes (or 500 hours) of audio and video material were recorded at the highest digital studio quality. The result is the world's first fully conductable, realistic "personal orchestra".

The museum also provides a range of other intriguing high tech interpretation, including the Instrumentarium, where visitors discover larger-than-life instruments, the Polyphonium, which contains a collection of the sounds from around the world, the Futuresphere, which explores the future of music, the mysterious Brain Opera, developed by the Massachusetts Institute of Technology, and the Mind Forest, which visitors play through voice, movement and touch to create a unique set of music, tones and moods.

Phew! The only way to really understand all this stuff is to visit the museum. For information please contact Katharina Springer on (+) 431 516 4840, pr@hdm.at, www.hdm.at

"The only way to discover the limits of the possible is to go beyond them into the impossible"
Arthur C. Clarke, writer and futurologist, (1917-)