Keynote Speaker

Inside Information - From Martian Meteorites to Mummies

Anders Ynnerman
Department of Science and Technology, Linköping University

Abstract

In the last decades imaging modalities have advanced beyond recognition and data of rapidly increasing size and quality can be captured with high speed. This talk will show how data visualization can be used to provide public visitor venues, such as museums, science centers and zoos with unique interactive learning experiences. By combining data visualization techniques with technologies such as interactive multi-touch tables and intuitive user interfaces, visitors can conduct guided browsing of large volumetric image data. The visitors then themselves become the explorers of the normally invisible interior of unique artifacts and subjects. The talk will take its starting point in the current state-of-the-art in CT and MRI scanning technology. It will then discuss the latest high-quality interactive volume rendering and multi-resolution techniques for large scale data and how they are tailored for use in public spaces. Examples will then be shown of how the inside workings of the human body, exotic animals, natural history subjects, such as the martian meteorite, or even mummies can be explored interactively. The recent mummy installation at the British Museum will be shown and discussed from both a curator and visitor perspective and results from a 3 month trial period in the galleries will be presented.

Bio

Professor Anders Ynnerman received a Ph.D. in physics from Gothenburg University. During the early 90s he was at Oxford University, UK, and Vanderbilt University, USA. From 1997 to 2002 he directed the Swedish National Supercomputer Centre and from 2002 to 2006 he directed the Swedish National Infrastructure for Computing (SNIC). Since 1999 he has held a chair in scientific visualization at Linköping University and is the director of the Norrköping Visualization Center - C.

Ynnerman is a member of the Swedish Royal Academy of Engineering Sciences and a board member of the Foundation for Strategic Research. In 2007 Ynnerman was awarded the Akzo Nobel Science award and the Golden Mouse award for Swedish IT-person of the year. In 2009 he received the Athena Award for best medical clinical research in Sweden and in 2010 he received the Swedish Knowledge Award for dissemination of scientific knowledge to the public. In 2011 he received the IVA gold medal from the King of Sweden. He is currently chair of the Eurographics Association and an associate editor of IEEE TVCG.

For more information, please visit http://scivis.itn.liu.se/members/anders-ynnerman.