

[2006-05-17]

Portuguese SIQuant uses EON for the Serra da Estrela Natural Park Virtual Reality System



IRVINE, Calif. May 17, 2006 – EON Reality Inc., a leader in interactive VR software and display systems, is pleased to announce that SIQuant, a company of information systems and geographic information, uses EON when they developed the Sistema de Realidade Virtual da Serra da Estrela – SRV-SE (Serra da Estrela Virtual Reality System) for Seia Municipality to be part of the Interpretation Center (CISE) of this important natural area. The SRV-SE is a multimedia system that permits navigation along the Serra da Estrela mountain range, exploring and visualizing 3D contents, taking the user into a virtual visit in real time to this important natural and historic place of Portugal.

SRV-SE will be available at CISE installations in multimedia kiosks. CISE is a very important instrument for the execution of the Seia Municipality's environmental policy, whose main activities are the interpretation of Serra da Estrela Natural Park, the support to investigation and the promotion of sustainable Nature Tourism.



SRV-SE is an important example of the usage of geographical information and virtual reality technologies in the development of modern tourist applications. Virtual Reality is a technology capable of bypass several limitations that characterize other information means by deluding the senses through a group of sensations like vision, hearing and movement, carrying the person inside a virtual "world, space".

To get a better understanding of the application please view:

- a **movie** (25 MB) with a overview of the Serra da Estrela Virtual Reality System
- Linhares Castle one of the 22 simulations of the **Serra da Estrela application** created in EON (12 MB). Linhares is an ancient small town that has preserved its traditional architecture over the centuries. The Castle dates back to the foundation of Portugal and was built during the 12th century. Today, Linhares is the most important Portuguese paraglide hot spot.

Virtual Reality can offer, especially to tourist data characterized by its spatial dispersion, an enrichment and interactivity essential on allowing the user to have a virtual experience, whose aim is not to substitute the journey itself. This way it can be used like a marketing tool for promoting less know places or as a backup tool for educational activities. This virtual reality system implied the modeling of sceneries, buildings and other 3D information and the development of a computer application that managed its visualization.

The 3D models were generated from geographical information acquired to develop a Geographical Information System (GIS). Most models are the result of three-dimensional

meshes generated from the altimetry information and their optimization for real time rendering. Over these meshes it was overlaid satellite or ortho imagery. However, in models consisting mainly of built heritage, detailed 3D modeling was made using, among other things, a collection of high resolution photography followed by on site measuring and consultation of project elements (when available).

SRV-SE consists of three main components: the Virtual Visit (SRV-SE/RV); the Three Dimensional Film (SRV-SE/Filme) and the Geographic Information (SRV-SE/SIG).



The Virtual Visit consists in the navigation and visualization of the 3D contents. There are many models available, each associated to a different geographic reality: Portugal > Estrela Mountains > Spots of Interest (>360° Panoramas). The visit can start at a chosen place (model), being possible to navigate between places.

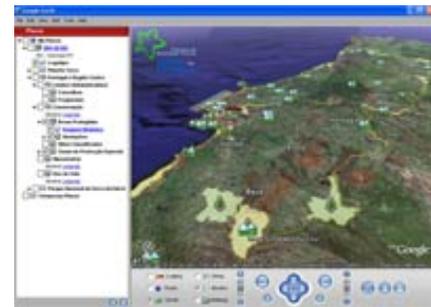


In the Virtual Visit the user can fly freely over the models of Serra da Estrela mountain range and Portugal; visit several Spots of Interest; follow predefined routes; pick a transportation mean (biplane, paraglider, hot air balloon and blimp) or read information about the fauna, flora, historical and local traditions. The navigation can be made in either a more traditional way (using touch screen and keyboard with trackball) or in a more immersive way using stereoscopic glasses with a head tracking device and a 3D wireless wand. The system also provides ambient sound.



The Three Dimensional Film (SRV-SE/Filme) is an aerial journey over the 3D models of the Serra da Estrela mountain range and the Spots of Interest of the Virtual Visit, accompanied with location and background music.

The Geographic Information (SRV-SE/SIG) is available for consulting on an interface developed over Google Earth, a straight-forward tool to use that allows the user to select which themes to view and make the most common spatial consulting operations. This way it is possible to visualize part of the cartographic patrimony of CISE together with some generic geographic information, relative to the Planet and Portugal.



For this project SIQuant coordinated a multidisciplinary team, being responsible for the production of the Geographical Information System and giving support to the development of the virtual reality application. SIQuant was partner with DIGraSys, a research group from INESC-ID, responsible for programming the navigation and visualization application, with Caixa d'Imagens, responsible for creating 20 detailed interactive 3D models (both landscape and historical sites), a 4 minutes stereoscopic film, and the production of 3 multimedia kiosks to host the application and the VR hardware and with IST/DECivil responsible for the development of the Google Earth geographical information consulting application.

SRV-SE was developed with EON Reality's virtual reality technology products (Software and Hardware) and Google Earth, being substantially extensible onwards.



SIQuant is a company of information systems and geographic information. With its roots in the university environment, SIQuant integrates the experience and competences for an excellent technical approach from its two research groups. From ICIST incorporates the knowledge in techniques of geographic information acquisition and geographic modelation. From INESC-ID it takes the competence in modelation and development of complex information systems. Being a company of recent creation, its experience relies mainly on the activity developed before by its partners and technical crew in its respective groups of development in the last 10 years.

Distributed Interactive Graphic Systems (DIGraSys) is a research group, member of the Cooperative Virtual Environment Laboratory (CVLab) at **INESC-ID**. The mission of DIGraSys is to discover and implement new or improved rendering algorithms and techniques for better usable virtual and augmented environments. The main research



areas include Synthetic Environments for Simulation and Entertainment, Real Time rendering for complex environments, Virtual and Augmented Reality and Parallel Graphics for Large-Scale Displays.



Caixa D' Imagens is a design and computer graphics company based in Lisbon, Portugal. Operating since 1993, Caixa D' Imagens is recognized for its professional services in the following areas: Industrial design (Multimedia Kiosks, with over 300 units produced); 3D animation and motion graphics (AEC market promotion / Broadcast) and 2D Graphic design / Web design (logos, brochures, websites). During these years we had the opportunity to work for several important Portuguese companies: banks (CGD, BI, BNC), insurance companies (Império, AXA), television (RTP), naval industry (Lisnave) and several architectural and engineering firms (Tomas Taveira, Lisboa 98, MC Arq., Contemporanea, etc), just to name a few. In 2005, Caixa D' Imagens started using EON Reality solutions and had a key role in the 3D content production of "Serra da Estrela Virtual Reality System".

The aim of **Instituto Superior Técnico (IST)** - Technical University of Lisbon – is to provide a thorough basic training in different fields of engineering, science and technology, allied with continuous and systematized learning. **Civil Engineering Department** (DECIVIL), has a research unit called Instituto de Engenharia de Estruturas, Território e Construção (ICIST) responsible for areas such as architecture, territory or geographical information and design support systems.



EON Reality, Inc. is the world's leading interactive visual content management software provider. EON's technology solutions have helped companies increase sales, communicate product functionality more effectively and decrease the cost of service, training and technical support. EON's products have a high level of interactivity, simulation realism, rendering quality and integrated data exchange capability optimized for high performance on today's standard PCs and Internet. EON's powerful software solutions are helping provide academia and corporate entities an environment of interactivity and visualization that allows the learner in either environment to be actively engaged in the learning experience. Many large corporations, universities and colleges are using EON's software and integrated system solutions, such as: Office Depot, Suzuki, Siemens, John Deere, Atlas Copco, Toyota, Tetra Pak, Boeing, Bombardier, Intel, Peterbilt, Lexus, Canon, Hon, Samsung, Shimano, Audi, Nokia, ZGDV, Cornell University, Ferris State University, College of Marin, Shanghai University, Texas Tech University, University of Montreal, University of California-Irvine, Virginia Tech, Purdue University. For further information about EON Reality, Inc., please visit <http://www.eonreality.com/> or contact us via e-mail at marketing@EONreality.com or call 949 460 2000.