3DTV The True Vision

Stereoscopic Video Streaming System

A streaming system for stereoscopic videos has been implemented jointly by Koc University and Middle East Technical University in cooperation with Tampere University of Technology and Momentum Digital Media Technologies. The system uses open source libraries and applications for streaming stereoscopic video content. Stereoscopic video is encoded by stereoscopic H.264 encoder (METU-MMRG Encoder) in order to reduce the bandwidth with backward compatibility. The display module of the client handles various displays such as two-view or multi-view autostereoscopic displays, as well as polarized glass and shutter glass systems.

Technical Details of the System

Server and client system in implemented in Linux OS. Client is based on VLC player with FFMPEG H.264 decoder with slight modifications (METU-MMRG decoder). Streaming is initiated by using SDP packet through reliable TCP/IP. Video packets for each channel are transmitted through RTSP/UDP packets through different port numbers. Synchronization of the video channels is managed using RTP timestamps, added by the server. Streamer server is UNICAST.

FogScreen™

The breakthrough: A thin curtain of "dry" fog that serves as a floating, translucent projection screen, showing images that literally float in the air. Developed by an innovative Finnish company FogScreen Inc., FogScreen™ machines employ a patented technology to create a smooth foggy airflow from pure tap water and ultrasonic waves - no chemicals needed.

In mechanical terms, FogScreen™ works very much like any ordinary projection screen. It works with still pictures, moving images and lasers. While any image projected onto FogScreen™ is spectacular in normal daylight, the darker the room, the more opaque the image. With two projectors, different images can be shown on both sides of the screen.

The beauty of FogScreen™ is that anything you can see on a computer screen can now float in the air. At some shows, for example, designers create "doors" to displays that don't have to be opened - you simply walk through them. That's why FogScreen™ is fast becoming a new tool for architects, restaurant designers, TV producers, set designers, video artists, exhibition designers, theme park architects and event planners. The demo is available at the FogScreen™ stand in IST Event 2006.

3D Media Center developed by HHI with video content provided by Momentum
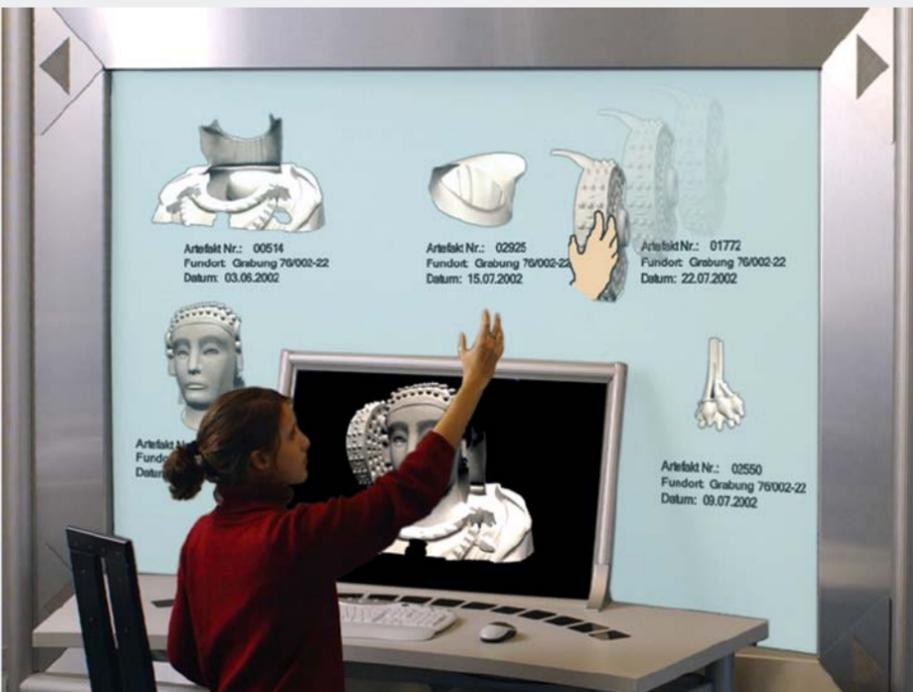
The 3D Media Center supports novel stereoscopic applications in the Internet and telecommunication sector. The feasibility of user-friendly 3D video telephony, 3DTV and attractive online shopping originates outstanding impressions. The user does not need special aids (e.g. stereo glasses). He interacts by simple gestures pointing at objects in a virtual space. That kind of user interaction in combination with depth representation ensures a totally new dimension of fascination.

www.3dtv-research.org