

'BEYOND HD'

University of Essex – HPN Media Laboratory & ApolloWalls

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The University of Essex Photonics Networks Group and the Digital Communications KTN officially opened their new High Performance Networked Media Laboratory (HPNML) on the 12th November 2009. During the event a video showcase and workshop was also held on the issues associated with optimised network delivery and distribution of Ultra High Definition (UHD), 3D and other emerging media formats (beyond HD).

Technological developments in the fields of video capture, rendering and presentation, together with advances in storage, and digital processing have revolutionised the way we create, process, and consume media. As a result, a growing number of applications in several industry sectors such as entertainment, communications, education, medicine and security utilise ultra high quality media-rich content to enhance the human experience and improve productivity.

Streaming of these emerging media formats over IP "best effort" networks is not possible without a substantial deterioration of the quality of service. There is thus a demand for network solutions which will effectively support processing, dynamic transport, distribution, adaptation, delivery and interaction. The workshop content considered future distributed media applications, and demonstrated research on enabling network approaches and technologies. A range of UHD and 3D content was also shown in the new high performance networked media lab.

The HPN Media Laboratory at the University of Essex comprises advanced media acquisition and presentation facilities designed and built by HoloVis International Ltd. in partnership with the University.

HoloVis installed their latest 4K *ApolloWall* rear-projection solution delivering fully immersive 3D 4K video content on a 5m-wide screen using the latest JVC 10Megapixel 4K Projectors and Infitec passive stereo filtering. Powered by the latest Delta 4K stereo Media Servers (from HoloVis's partners 7th Sense) the turn-key system gives the University the very latest ultra-high resolution digital-cinema 3D visualisation system.

The second ApolloWall solution installed by HoloVis within the facility is Europe's first seamless 8K mono rear-projection wall using 4 tiled JVC 10Megapixel projectors setup on a HoloVis OptiRig with a blended, overlapped and seamlessly colour-matched setup.

The ApolloWalls are combined with a high performance experimental network which aims to design, develop and implement services specifically created for high quality, large-scale digital media, including support for extremely high volume media streams.

By using advanced concepts, architecture, and technology, this Laboratory is providing an open test-bed for future digital media service innovation, as well as for other data-intensive applications with advanced visualisation requirements. Major milestones are indicated in part by large scale demonstrations at national and international forums.

