SARA Networked Collaborative Visualization

At SC08 SARA is partner in a number of presentations to demonstrate collaborative visualization over High Speed Networks. A 2*2 High Resolution Tiled Panel (17 MPixel) is connected via a 10GbE infrastructure to SCinet. This setup is called an OptIPortal and is based on the OptIPuter concept.

SARA Visualization and Networking

The availability of national and international (dynamic and static) lightpaths for researchers allows for the geographical distribution of resources like supercomputers, render farms, high resolution (tiled) displays and storage. SARA is using TOPS (Technology for Optical Pixel Streaming), developed by SARA, and SAGE (Scalable Adaptive Graphics Environment), developed by EVL UIC in the OptIPuter project, to display various high volume and high resolution data sets on a 2*2 Tiled Display with 5120*3200 pixel resolution, at the booth of the Dutch Research Consortium.

Global Visualcasting demonstration, Bandwidth Challenge

Visualcasting is a technique for leveraging high performance networks and computing to enable collaborative visualization at extremely high resolution on OptIPortals. Visualcasting servers at StarLight and on the SC08 floor will receive and broadcast in real-time multiple high-resolution streams, generated by visualization clusters in San Diego, Chicago and Amsterdam, mixed with HD videoconferencing facilities

The High Performance Digital Media Network (HPDMnet)

HPDMnet is an experimental network research initiative that is designing, developing, and implementing the world's first international high performance service for high quality, large-scale digital media.
At the booth of the Dutch Research Consortium, SARA and the University of Amsterdam have HD camera and display configurations connected to the HPDMnet infrastructure. Data from various sources, including Amsterdam and the booth, will be multicast via the HPDMnet infrastructure, and sent to various locations, including the Dutch booth.

CineGrid 4K Media Streaming demonstration

CineGrid's mission is to build an interdisciplinary community that is focused on the research, development, and demonstration of networked collaborative tools to enable the production, use and exchange of very-high-quality digital media over photonic networks. SARA and the University of Amsterdam will demonstrate the transmission and display of very high resolution (4K resolution) digital media from Amsterdam to SC08, using the 10 GbE infrastructure from SARA, SURFnet, StarLight and various other collaborations in the USA.

SARA

SARA is the national Supercomputing and Networking Center in the Netherlands. Since 1985 SARA provides the Dutch National Supercomputing service. SARA delivers the operational management for the NREN SURFnet6 and many other research and educational networks in the Netherlands. NetherLight, SURFnet's GOLE (GLIF Open Lightpath Exchange) is located at and managed by SARA.
SARA is partner in the OptIPuter project, the HPDMnet community and is member of CineGrid

Support and Collaboration

University Of Amsterdam
Electronic Visualization Laboratory UIC
Calit2 and Pacific Interface
SURFnet
Canarie
NORTEL, I2CAT, KISTI, iCAIR, CRC and Inocyb
10 GbE switch provided by Arista and Consolidate IT