Geophysical Research Abstracts
Vol. 16, EGU2014-15573-1, 2014
EGU General Assembly 2014

An interactive, multi-touch videowall for scientific data exploration

Jon Blower (1), Guy Griffiths (1), Maarten van Meersbergen (2), Scott Lusher (2), and Jon Styles (3)

(1) Reading e-Science Centre, Department of Meteorology, University of Reading, United Kingdom, (2) Netherlands e-Science Center, Amsterdam, The Netherlands, (3) Assimila Ltd, Reading Enterprise Centre, University of Reading, Reading, United Kingdom

The use of videowalls for scientific data exploration is rising as hardware becomes cheaper and the availability of software and multimedia content grows. Most videowalls are used primarily for outreach and communication purposes, but there is increasing interest in using large display screens to support exploratory visualization as an integral part of scientific research.

In this PICO presentation we will present a brief overview of a new videowall system at the University of Reading, which is designed specifically to support interactive, exploratory visualization activities in climate science and Earth Observation. The videowall consists of eight 42-inch full-HD screens (in 4x2 formation), giving a total resolution of about 16 megapixels. The display is managed by a videowall controller, which can direct video to the screen from up to four external laptops, a purpose-built graphics workstation, or any combination thereof. A multi-touch overlay provides the capability for the user to interact directly with the data.

There are many ways to use the videowall, and a key technical challenge is to make the most of the touch capabilities - touch has the potential to greatly reduce the learning curve in interactive data exploration, but most software is not yet designed for this purpose. In the PICO we will present an overview of some ways in which the wall can be employed in science, seeking feedback and discussion from the community.

The system was inspired by an existing and highly-successful system (known as the "Collaboratorium") at the Netherlands e-Science Center (NLeSC). We will demonstrate how we have adapted NLeSC's visualization software to our system for touch-enabled multi-screen climate data exploration.