

# Verizon Communications

Operations center relies on Clarity displays to monitor global telecommunications network

*“From a distance of up to 60 feet, the Clarity displays clearly represent our network topology and provide an impressive resolution visible to all of our network technicians.”*

**Mike Calderwood**  
Field Operations Manager  
Verizon Communications

Verizon and its subsidiary companies are the largest providers of wireline and wireless communications in the United States, with 135 million access line equivalents and more than 31 million wireless customers. The company invests more than \$11 billion annually in its national wireline telecommunications network, which is one of the most advanced in the world and features an industry-leading 8.3 million miles of fiber-optic facilities.



As one of the world's leading providers of communications services, Verizon Communications depends on a trouble-free network monitoring system. But, the company's plan to double its size and combine the domestic and international networks meant the Network Operations Center (NOC) in Arlington, Va., needed a significant renovation to support the aggressive growth.

## **Lion delivers high performance and a better working environment**

With the opening of its upgraded Network Operations Center (NOC), the company introduced a new level of service for domestic and international long distance callers. The state-of-the-art center now relies on the latest Advanced Performance Liquid Crystal Display (AP/LCD™) technology from Clarity to monitor, troubleshoot and maintain its expanding global telecommunications network.

Lynn Hyde, vice president of operations for system integrator Hoppmann Communications, explained that although the facility has been in operation for only five years, changing technology and company growth meant the facility was due for an upgrade. Previously, the staff used eight, front-projection, portable poly-silicon LCD projectors, a technology that does not stand up to the 24x7 operations.

**clarity**  
visual systems

"We wanted to get away from front screen to adopt rear-projection technology because it was very dark in the room and we wanted an environment more conducive to higher ambient light," said Mike Calderwood, field operations manager for Verizon. "By eliminating the traditional console approach and creating customized workstations, we not only got away from the dark tunnel look, the room can accommodate more people," he added.

### Dual digital walls support rapid decision-making

The rectangular NOC is a long narrow room, roughly 5,000 square feet, with workstations for 34 staff in three shifts around the clock. The integration team accomplished the incredible remodeling task in twelve weeks with engineers and technicians working side-by-side to finish the aggressive construction schedule.

The sixteen Clarity Lion displays with SXGA resolution are configured in two separate 4 by 2 walls each controlled by separate Jupiter image processors. Each wall is connected to servers in the data center where all of the network elements report to the display networks.



Both Clarity walls are viewable together and are divided by a set of world clocks and four television screens with cable and satellite feeds from CNN and The Weather Channel. The displays can accept input from the Ethernet LAN and have VCR and DVD capability.

The walls display text and graphics representing network elements, network topology, and alarm systems that indicate if there are outages, capacity problems, cut lines, power problems, equipment failures, switching to a back-up service, and other critical issues. When an alarm sounds, a quick diagnosis is followed by an immediate response that may include dispatching field personnel literally all across the globe.

#### The solution

The Verizon digital walls incorporate:

- Sixteen 67" Lion SX (WN-6720-SX) digital displays using Advanced Performance Liquid Crystal Display (AP/LCD™) technology
- Jupiter multi-image processors

Project team:

- Hoppman Communications
- Clarity Visual Systems

#### Lion performance provides clear advantages

"From a distance of up to 60 feet, the Clarity displays clearly represent our network topology and provide an impressive resolution visible to all of our network technicians," said Calderwood. "Although the displays normally operate on four bulbs, the screens are bright enough with only two bulbs operating even with the lights turned up in the room. We keep the other two bulbs in reserve as immediate spares."



Clarity Visual Systems is a registered trademark of Clarity Visual Systems, Inc. AP/LCD, the AP/LCD logo and Big Picture are trademarks of Clarity Visual Systems, Inc. All other trade and service marks are the property of their holder.

Copyright © 2003 Clarity Visual Systems, Inc. All rights reserved. This document may not be copied in any form without permission from Clarity Visual Systems, Inc. Information in this document is subject to change without notice.

**Clarity Visual Systems, Incorporated**  
9025 S.W. Hillman Court, Suite 3122  
Wilsonville, Oregon, 97070, USA  
Phone: 503-570-0700  
Fax: 503-682-9441  
www.clarityvisual.com

