

Space and Naval Warfare Systems Center

The Navy's SPAWAR employs Clarity AP/LCD displays for shipboard applications

Clarity AP/LCD display technology enables high quality digital imagery on an extremely robust technology platform.

The Navy's Space and Naval Warfare (SPAWAR) Systems Center in Charleston, South Carolina, designs, builds, tests, installs and supports the sophisticated front-line command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) systems. SPAWAR had been investigating large, rear-projection digital displays for applications in on-board operations rooms.

After evaluating a wide range of display technologies, the organization selected Clarity digital displays based on Advanced Performance Liquid Crystal Display (AP/LCD™) technology and a VECTOR™ Image Processor from Electrosonic Systems. Both products met its stringent criteria for a flexible, high quality display system that supports fast decision making and collaborative data sharing on board a variety of ships, from carriers to destroyers.

Clarity displays enhance data sharing environment

A modern fighting ship relies on electronic information from more than a hundred image sources. While the images are generally viewed on individual monitors, a large-scale display is frequently required for groups to view several sources simultaneously and quickly change the combination of images.

The combination of the Clarity AP/LCD displays and the VECTOR processor provides an excellent platform for information sharing and data monitoring in a command environment. VECTOR handles multiple image sources and frequencies, while interfacing with the Clarity systems to display digital content at the highest resolution and image quality possible. It ensures that all electronic content – such as images from cameras, high-resolution graphics, on-board visual systems, and rasterized radar images – can be displayed and easily transitioned with the highest level of accuracy.



clarity[®]
visual systems

Display systems and their mechanical designs meet all expectations

The unique requirements of an on-board ship environment means SPAWAR needs systems that are modular, easy to maintain, and can pass through narrow ship access-ways without needing to be dismantled. Both the Clarity Wildcat and Lion digital displays being employed in the shipboard operations centers are well suited to these stringent requirements. The systems are lightweight, modular, and are front and/or rear serviceable. In addition, the advanced image quality and range of resolution – from SVGA to UXGA – seen in these displays offer SPAWAR applications unique image quality on an extremely robust technology platform.

The on-board applications use configurations of 40" Wildcat S and 67" Lion SX and UX digital displays driven by the Electrosonic VECTOR processor when used in arrays. The installations have been completed on multiple ships, and several more ships are expected to install similar systems.



The solution

The state-of-the-art shipboard display systems consist of:

- *Arrays of Lion (WN-6720-SX) 67" or Wildcat (WN-4030-S) 40" digital displays with Advanced Performance Liquid Crystal Display (AP/LCD™) technology*
- *Electrosonic VECTOR™ Image Processor with COMMANDER™ control software*

The project team for SPAWAR installations includes:

- *Clarity Visual Systems*
- *SPAWAR Systems Center*
- *Electrosonic Systems*
- *The Whitlock Group*

The AP/LCD technology used in the Clarity Wildcat and Lion displays delivers excellent brightness and image quality from nearly every vantage point. The displays work very well in operation center environments, where lighting is controlled and the viewing angle is maximized to take best advantage of all adjacent angles.

"Both the 40" Wildcat and 67" Lion display systems are well suited to such environments," said Ed Kiyoi, director of product marketing for Clarity. "These are devices that deliver the highest image quality in large format displays available in the industry today, while at the same time offering extremely high reliability and footprints that readily accommodate tight shipboard spaces."

Electrosonic processing allows mixing multiple graphics and video sources without compromising video motion quality

When in arrays of more than one display, an image processor is used to interface with the displays and manage the different image frequencies and windowing display. The VECTOR Image Processor uses specially developed COMMANDER™ software to auto-detect all sources and display them with easy transition regardless of signal. The COMMANDER software is an extended version of the Electrosonic PRESENTER™ software and has built-in password security to prevent unauthorized adjustment of scenes.



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

Copyright © 2001 Clarity Visual Systems, Inc. All rights reserved. This document may not be copied in any form without written 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
<http://www.clarityvisual.com>

