

Products Used:

- Intergraph TD-R® workstations, consoles, and displays

Key Benefits:

- Competitively priced hardware solutions that reduce labor and equipment costs
- Increased productivity
- Ability to withstand the harshest of environments

Profile:

Name – U.S. Navy

Web site – www.navy.mil

The U.S. Navy developed their Smart Ship concept to explore the possibility of saving money aboard Navy vessels by reducing manpower while maintaining safety and enhancing mission readiness.

Size – The United States Navy currently has 377,600 active duty and 148,586 ready reserve personnel.

Rugged Hardware for Harsh Environments

Navy Smart Ship Program Requires Improved Technology Systems

The U.S. Navy initiated its Smart Ship concept in the mid-1990s with the goals of improving shipboard quality of life, increasing sailor retention, and reducing workload and ship life-cycle costs. Through innovative concepts, modern but low-cost technology systems, and reengineered processes, the Navy is seeking to produce a “smart fleet” for the 21st century. To make its ships “smart,” the Navy replaces obsolete ship systems with modern commercial off-the-shelf (COTS) systems that integrate various applications, workflows, and communications.

The Project Objectives:

- Replace obsolete ship systems with modern COTS systems that integrate applications, workflows, and communications
- Reduce workload and ship life-cycle costs

The Solution:

COTS-based solutions from Intergraph support the Navy in transforming its Smart Ship vision into a reality. Intergraph provides its TD-R® product line of multi-purpose workstations, consoles, and displays to Navy engineering organizations such as the Naval Ship Systems Engineering Station (NAVSSSES) for installation on aircraft carriers, cruisers, destroyers, mine warfare vessels, and other ship types. Part of the Naval Surface Warfare Carderock Division (NSWCCD), NAVSSSES is the Navy's in-service engineering agent for all hull, mechanical, and electrical ship systems, as well as a provider of testing and evaluation for these systems.

Many applications associated with the Smart Ship vision, such as integrated bridge system, damage control, navigation, and machinery control software, run on Intergraph hardware. For example, the USS John C. Stennis (CVN-74) aircraft carrier uses Intergraph's Large-Screen TD-R, Rack-Mount, and NEMA Workstations to support Integrated Condition Assessment System (ICAS), automated condition-based maintenance recording and management for the ship's main propulsion and auxiliary equipment, and Advanced Damage Control System (ADCS) applications. The USS Lassen (DDG-82) destroyer also uses Intergraph's rugged hardware for its ICAS.

Intergraph designs, manufactures, and integrates rugged COTS-based workstations and specialized software/hardware systems to operate in the often-harsh conditions aboard Navy ships or in other military and industrial applications. The hardware and systems meet specific needs, such as National Electronic Manufacturer Association (NEMA) standards or MIL-S-901D Class A near explosives survivability requirements, and feature space-saving designs for maximum viewing in cramped spaces. Rugged chassis and bodies, reinforced mounts, and polymer shocks absorb the jars, knocks, and rigors of a field environment, while an outer enclosure protects from the elements. The hardware supports multiple remote computing platforms – such as Intel®- and AMD™-based computers – and



operating systems such as UNIX®, Linux®, Solaris™, and Microsoft® Windows NT® or Windows® 2000.

Using COTS-based products in designing TD-R systems enables Intergraph to provide the Navy competitively priced solutions that reduce labor and equipment costs and increase productivity. More than 600 Intergraph TD-R workstations, consoles, or enclosed monitors are currently installed on more than 90 Navy vessels.

The COTS Advantage

“Intergraph provides us state-of-the-art COTS computer systems ruggedized to meet Navy requirements and backed by the cost-effective life-cycle support of a Just-In-Time Spares (JITS) system,” said Dave Dragun, group manager for the Enabling Technologies Group at NAVSSES.

U.S. Navy

The mission of the U.S. Navy is to maintain, train, and equip combat-ready Naval forces capable of winning wars, deterring aggression, and maintaining freedom of the seas.

Intergraph Security, Government & Infrastructure

Intergraph Security, Government & Infrastructure (SG&I), headquartered in Huntsville, Alabama, serves a broad range of clients, including local, regional, and national governments; businesses, both public and private; and security and public safety organizations. Intergraph SG&I focuses on providing software and services to enable our clients to make the right decisions at the right time using the right information.

For more information, visit our Web site at www.intergraph.com/sgi/.

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