



## **CNST Awards Wireless Project to Northrop Grumman Newport News**

On July 30, 2004, the Center for Naval Shipbuilding Technology awarded a \$434,000 contract to a Northrop Grumman Newport News-led team, including Northrop Grumman Ingalls Operations and RLW, Inc., to use new and existing technologies to develop wireless systems for monitoring mobile shipyard diesel engines (e.g., cranes, trains, transports and tugs).

Automated Diagnostic and Prognostic (ADP) systems can be used as a means to reduce preventive maintenance and to predict when corrective maintenance on plant equipment will be required. This involves robust current-condition diagnostics and future-condition prognostics capabilities, both of which are rapidly emerging in the market. Industry suppliers are already providing ADP-capable equipment, such as sensors embedded in electric motors, motor operated valves, air conditioning plants and diesel generators.

This project seeks to minimize potential equipment failures, lengthen the time between servicing, reduce the life-cycle cost of equipment and reduce overall maintenance costs. To achieve these objectives, the project team has determined that monitoring must take place at the system level, as well as the individual component (e.g., motor, valve, etc.) level, since overall reliability is affected by both system and component failures. Upon project completion in September 2005, the information gathered on current and predicted equipment health will be used to streamline maintenance processes and reduce labor hours expended in maintaining the equipment.

### **About CNST**

CNST is a Navy ManTech Center of Excellence, chartered by the Office of Naval Research (ONR) to identify, develop and deploy, in U.S. shipyards, advanced manufacturing technologies that will reduce the cost and time to build and repair Navy ships. For additional information on this and other CNST projects, please visit [www.cnst.us](http://www.cnst.us).

