

THE VALUE OF PERFORMANCE.

NORTHROP GRUMMAN



Harbour and Coastal Security

Automated collection, analysis and dissemination of information for layered, multi-agency, maritime security and safety operations

The Harbour and Coastal Security (HCS) software product from Northrop Grumman supports layered, multi-agency, maritime security and safety operations. HCS integrates off-the-shelf computers, communications, and sensors with sensor processing and MDA databases. The result is a flexible, standards-based, service oriented architecture that supports the automated collection, analysis and dissemination of essential information for:

- Coastal Surveillance and Security
- Port and Harbour Security
- Vessel Traffic Management
- Critical Infrastructure Protection
- Anti-Terrorist Force Protection
- Interdiction and Response

Powerful mission applications

The foundation for HCS is the Northrop Grumman Interoperable C4I Services (ICS) software product. This commercial version of the HCS software is the basis of the DoD's Global Command and Control System (GCCS) family of systems. ICS' extensible architecture enables third-party applications to be built upon core services, such as track management, data communications, situation displays and decision aids.

HCS builds upon ICS to provide:

- Integrated video, radar and Automated Identification System (AIS) surveillance
- Multi-source, multi-sensor correlation
- Vessel, aircraft, people
- Transit and route management
- Zone management
- Alarms and alerts
- Rule-based anomaly detection
- Secure and unsecure AIS data communications

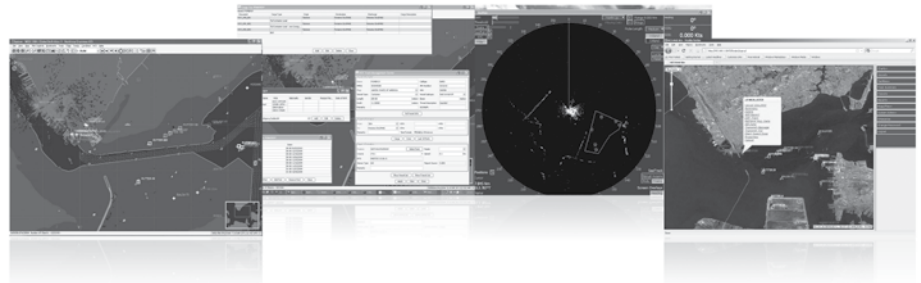
HCS-based systems can employ organic non-organic sensors. For continuous surveillance, HCS uses a network of interlinked organic sensors, including AIS, medium- and longrange optical and infrared cameras, medium range harbor and approach radars, long-range high performance coastal radars and voice communications.

HCS receives non-organic sensor data via HCS web services and other standard interfaces to sources that include commercial and military radar, Long Range Identification and Tracking (LRIT), satellite-based AIS, external AIS networks, over-the-horizon message feeds and tactical data links such as Link-11 and Link-16.

Common operational picture for MDA

HCS databases contain extensive information about vessels, aircraft, movements and routes, cargo, people (owners, operators, agents, crew, and passengers), zones, weather, aids-to- navigation and Search and Rescue (SAR) patterns. Comprised of tracks tethered to a set of MDA data, the COP identifies vessels, their intended movements and associated people and cargos.

HCS is easily adapted and scaled for shore-based, offshore or shipboard use. HCS can serve as a standalone system or in a system-of-systems architecture, providing layered support across multiple missions and agencies.



Rule-based processing allows users to tailor the operational picture and analytical tools to meet mission needs

Organic sensors integrated with non-organic sensor data provides all weather situational awareness supporting inshore and off shore operations



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Northrop Grumman reserves the right to amend the specifications in the light of continuing development
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