Next Generation Maritime Public Communications

EFFECTIVE COMMUNICATIONS WITH THE MARITIME PUBLIC

The United States Coast Guard (USCG) regularly communicates with the maritime public to facilitate their statutory missions. The missions involve communicating with maritime vessels, finding mariners in distress, and monitoring and tracking maritime traffic entering the U.S. and at ports, and providing guidance in busy waterways.

The USCG requires effective and efficient systems to provide these capabilities. As many Maritime Public Communications (MPC) systems approach end of life, USCG needs the Department of Homeland Security (DHS) Science and Technology Directorate (S&T) to develop next generation MPC capabilities, as well as a new software-defined radio communications standard and a corresponding architectural framework.

IDENTIFYING NEXT GENERATION TELECOMMUNICATIONS TECHNOLOGY

As USCG looks to implement a new centralized management framework that can serve as the foundation upon which technologies can be integrated, they are also seeking to update the telecommunication capabilities with the most advanced technologies on the market and currently in development to improve these critical capability needs: availability, geographic coverage, communications bandwidth, interoperability, direction-finding, cybersecurity, failure points, accessibility, and maintainability.

REVITALIZING COMMUNICATIONS FRAMEWORK

S&T's Next Generation MPC project will modernize the MPC infrastructure by exploring the latest telecommunications technology, performing research and development on emergent technology, implementing a modular open system architecture, and developing hardware for interoperability between systems.

IMPROVING EFFICIENCIES AND SAVING LIVES

MPC systems are critical for communicating with mariners, managing maritime traffic including port entry, and detecting the location of victims for Search and Rescue (SAR) operations. Modernizing the MPC architecture will advance telecommunications by increasing geographic coverage, optimizing software to manage radio communications, refining direction-finding capabilities, and improving maritime traffic monitoring and guidance. These capabilities are vital for the USCG missions for law enforcement and SAR operations, ensure maritime safety and security, and provide Aids to Navigation (ATON program).
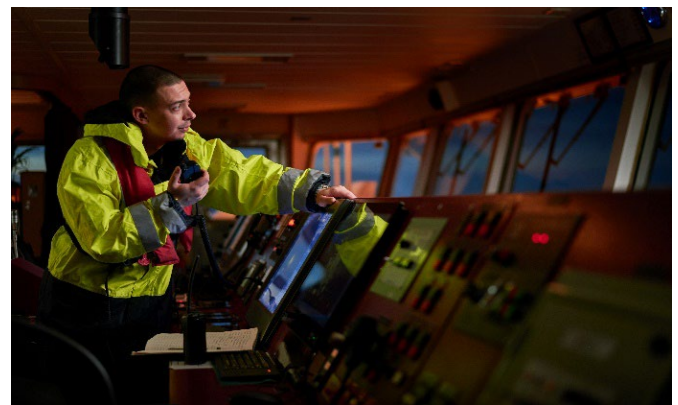
ACCOMPLISHMENTS

- Conducted a Tech Scouting Report to identify emergent telecommunications technologies

MILESTONES

- Develop new software-defined radio communications standard
- Implement MPC modular open system architecture
- Develop hardware for MPC interoperability

PERFORMERS AND PARTNERS

- MITRE Corporation, McLean, VA
- USCG Office of Command, Control, Communication and Computers (C4) & Sensor Capabilities (CG-761)
- Office of Requirements & Analysis (CG-771)