Viasat Maritime Broadband Solutions for Agile Government Vessels

INTRODUCTION

Viasat partnered with the M80 Stiletto, an agile vessel that is utilized by the Secretary of Defense for Research & Engineering, Rapid Reaction Technology Office (RRTO) to quickly demonstrate and potentially implement maritime innovations. The M80 Stiletto has been the go-to platform for industry partners to test and field experimental capabilities and innovations, evaluate performance during high-speed at-sea maneuvers, test deployment and operational concepts, and integrate warfighter tactics and logistical models in a simulated maritime operation environment.

THE CHALLENGE

Expeditionary warfare vessels and fast boats, similar to the M80 Stiletto, travel wherever the mission takes them. These crafts are outlined with cutting-edge, bandwidth-hungry mission systems that require high-capacity networks to operate. Today, naval and expeditionary forces are challenged with mirroring the connectivity they receive on shore out at sea, to meet the needs of both mission and MWR

applications. Viasat utilized the M80 Stiletto to demonstrate significantly expanded bandwidth to accommodate new and advanced mission systems.

THE INTEGRATED SOLUTION

Viasat outfitted the M80 Stiletto with Viasat's maritime broadband SATCOM solution, comprised of a 1-meter Ka-band antenna (Viasat Sailor 900v) and below-deck communications kit, to enable high-speed broadband beyond-line-of-sight (BLOS) connectivity and secure access to the tactical cloud. While at sea, Viasat was able to demonstrate burst rates up to 100/5Mbps (FL/RL), with average speeds of 40/3Mbps. These industry-leading forward link (satellite to ship) and return link (ship to satellite) rates, enabled by Viasat, significantly increased the M80 Stiletto's ability to communicate with other vessels, relay information back to shore in real-time, and receive enhanced situational awareness. In addition, Viasat was able to reduce the risk of operational cybersecurity exposure through its secure networks, encryption and advanced cyber tools, and secure mobile devices.

COMPANY
Naval Surface Warfare Center – Carderock's Combat Craft Division

Assistant Secretary of Defense for Research & Engineering, Rapid Reaction Technology Office (RRTO)

INDUSTRY
Government

VIASAT SERVICES
Maritime Broadband Solution
Cybersecurity Services

Viasat.

Upon the successful completion of the research partnership, Viasat delivered a reliable and secure broadband experience, enhancing the capability for the M80 Stiletto, while supporting experiments and testing industry partner's integrated hardware, software, and/or services.

Finally, by providing assured, resilient communications to both passengers and crew on the M80 Stiletto, Viasat was able to showcase the art of the possible when it comes to providing high-capacity SATCOM at sea.

Viasat and M80 Stiletto conducted a series of demonstrations and exercises showcasing the following capabilities:

› Multi-domain battlespace awareness with a Common Operating Picture (COP)
› Enhanced situational awareness and safety by streaming radar and camera feeds from ship to shore
› Integration of widely-used tactical systems, including Link 16 and Battlefield Cyber Operations (BCO)
› Trusted operations, information sharing, and actionable intelligence in Disconnected, Intermittent, and Limited (DIL) Bandwidth environments
› Distributed Network Services with trusted sensor and cyber threat mitigation
› Enables logistical resupply operations and data analytics with cognitive decisions aids and enroute updates
› Secure connectivity, tactical cloud services, and remote technical support

THE VIASAT DIFFERENCE

› Delivered 20 times more bandwidth to the M80 Stiletto during the military demonstration events, a capability that can be provided to other platforms across C4I mission and MWR applications
› Allowed vessels to operate over both commercial and military satellites
› Empowered cloud access and data distribution through resilient, high-capacity paths between afloat and ashore clouds
› Deployed cyber sensing and defense systems throughout the architecture

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While ship captains understand the need for sailors to stay connected, they have operational security concerns around cyber-security and exposing their ship's location.

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