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UxS Manned/Unmanned Secure Teaming Platform Evaluation in Contested Littoral Environments

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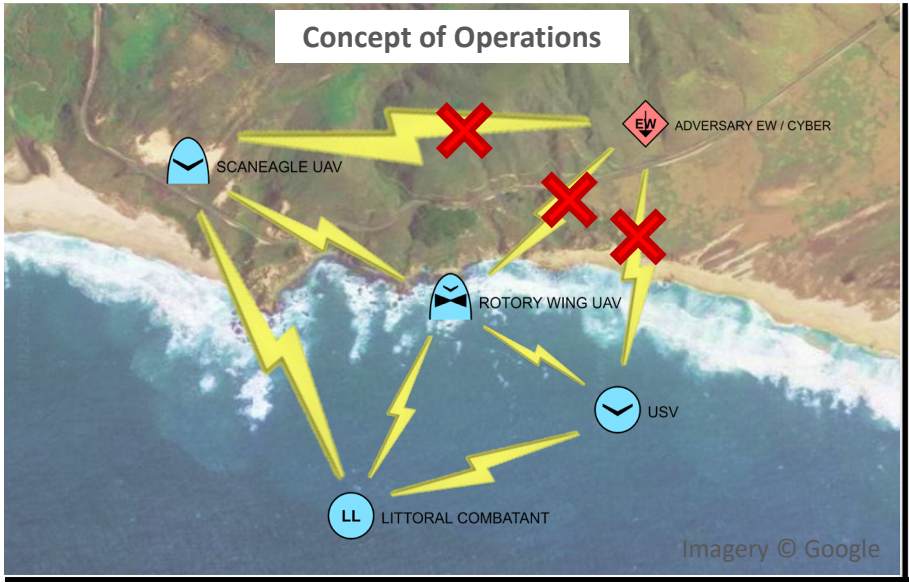

Problem Statement

- DoD and DoN need to better understand novel and emerging network security architectures and protocol suites that will:
  - **Facilitate adoption of IAS at speed and scale**
  - **Maintain flexible, secure tactical network architectures**
- Prototype development and proof-of-concept demonstration of Messaging Layer Security (MLS) will demonstrate applicability of this emerging technology in:
  - **Collaborative multi-UxV group data exchange**
  - **In contested littoral environments**
  - **With active adversary man-in-the-middle cyberattacks**

Impact

- Application of this emerging technology will further validate current research and accelerate development and adoption within DoD as well as private sector
- Technology can be applied across all operational domains: underwater, surface, and air, for secure yet flexible data exchange among multi-domain UxV teams
- Success measured by:
  - Successful field experimentation simulating multi-vehicle operations in contested littoral environments in presence of active man-in-the-middle attacks
  - Data collection to inform future requirements for IAS C2 network security architectures

Transition

- Collaboration with NATO partners will enhance interoperability and accelerate transition among allied forces:
  - Norwegian Defense Research Establishment (FFI)
  - German defense research institutions
- Results and recommendations will transition to operational components via long-standing relationship with NIWC
- Proposed capabilities do not exist onboard any UxV; successful demonstration will attract future research funding and investment from UxV program offices:
  - NIWC-PAC
  - NSW WARCOM N8, N9

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