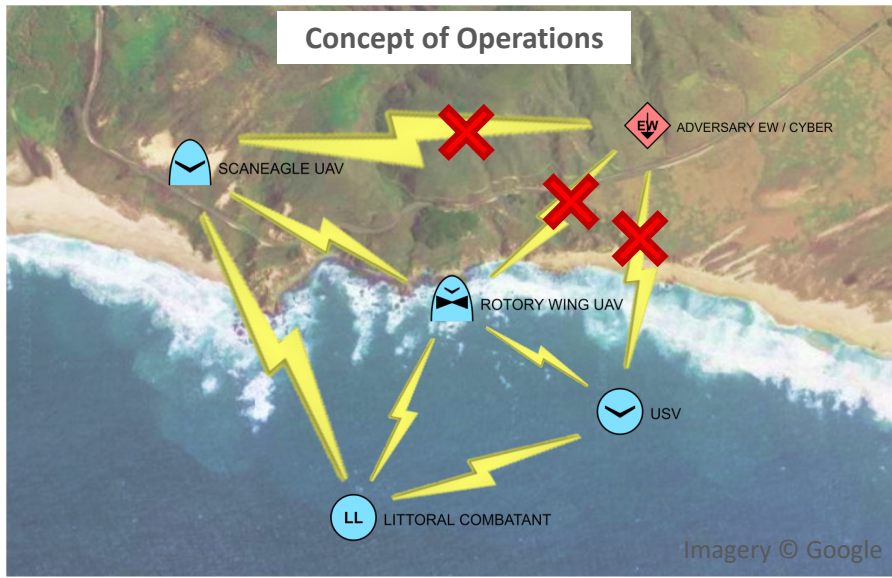


# UxS Manned/Unmanned Secure Teaming Platform Evaluation in Contested Littoral Environments



## 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:
- Long standing partnerships with and NIWC Pacific will provide a technology transition
- Naval Special Warfare will provide testing support