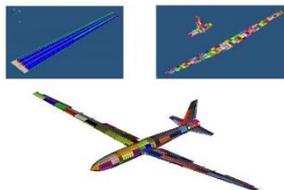


Technology in Action No. 4

NATO assesses benchmarks in Multidisciplinary Optimization and Design for Affordable Military Vehicles



Benchmarking is the practice of comparing business processes, performance and best practices. NATO STO has researched on developing a documentation standard for multidisciplinary design optimization benchmarks to develop guidelines that would provide a researcher to understand and to implement the vehicle optimization .

The Medium Altitude Long
Endurance (MALE) UAV.
Source: Pre-Release Report AVT-
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NATO studies Study on Chemical, Biological and Radiological Defence



NATO STO convened the Multinational Exercise for the NATO Human Factors and Medicine Panel (HFM). It is the culmination of the long term scientific study on Chemical, Biological and Radiological Defence. The aim is to identify existing and emerging threat environments and understand how to strengthen defence.

NATO studies Network Management & Cyber Defense for Federated Mission Networking



NATO STO identifies the required functionalities, associated information exchange, data model, implementation technologies, and test specifications to implement Network Management and Cyber Defense functionalities in a way that different mission partners will be interoperable.

NATO assesses the value of cyber operations in military operations



NATO STO has met to finalize a research proposal that focusses on improving the ability of NATO, NATO nations and NATO Partners to employ cyber operations in a military context. The research will develop analytical approaches to assess the use of different kinds of cyber operations, inform cost-benefit analyses and foster the integration of cyber capabilities.

The use of different kinds of cyber
operations in contributing to
military objectives (Source FFI)

NATO evaluates Implications of Proliferated Satellite Constellations to NATO Operations



Artist's Concept: Proliferated LEO ("Mega") Constellation

NATO STO hosted a workshop to identify specific aspects of commercially provided spacecraft systems and their services, their vulnerabilities to space hazards, risks and threats, interoperability and command and control requirements that need further assessment, study or experimentation.

NATO investigates Cognitive Radar



Transmitter/receiver of the Cognitive Radar Engineering Workspace (CREW) at The Ohio State University

NATO STO has created a task Group to advance the understanding of Cognitive Radar. This is a radar that 'thinks for itself' and in some sense 'learns' about the target scene and constantly optimises its operation in response to a dynamically changing environment. The Task Group has identified a number of scenarios in which cognitive behaviour may provide benefit.

NATO studies Next Generation Synthetic Battlespace



The Synthetic Environments plays an important role in replicating the current and the future battlespace. During a two-day Symposium in Vienna in October 2019, NATO STO has challenged the international community of interest to think about the future mission environment and to explore how Modelling and Simulation may be used in this context to address National and coalition needs.

NATO Centre for Maritime Research and Experimentation (CMRE) researchers received IET 2019 Premium Award for Best Paper in Radar, Sonar & Navigation



Harpo OEX AUV acting as receiver in the CMRE network during LCAS16 trial.

The paper titled, 'Cooperative Robotic Networks for Underwater Surveillance: An Overview,' has as main aim to review the underwater surveillance scenario within a framework of four research areas: underwater robotics, acoustic signal processing, tracking, distributed information fusion, and underwater communications networks. This overview also introduces new challenges for underwater researches and studies.