Rotary Wing UAS Targets

Live demonstration emulates the threat of small multi-rotor drones to Royal Canadian Navy's large vessels

Executive summary

QinetiQ Target Systems (QTS) has introduced a new service to the Royal Canadian Navy (RCN), conducting a live demonstration to emulate the threat of small multi-rotor drones to large naval vessels. The demonstration was carried out under the $C8.5M Unmanned Targets Repair, Overhaul and Engineering contract, awarded to QTS in 2015.

> "The information and results obtained during the demonstration are vital for the RCN's development of remotely piloted systems use at sea, and the evaluation of ships' critical defence systems. We are very pleased with the support that QinetiQ Target Systems provided to us during this demonstration."

DNR-2 Unmanned Systems Section Head Commander, Simon Nadeau

The brief

To inform RCN force development requirements regarding a suitable rotary wing unmanned air systems target (RW UAS-T), our customer required a solution that enabled it to carry out live training against air targets, experiment with new RCN Anti-Air Warfare (AAW) requirements, force protection live scenarios, and conduct Test & Evaluation (T&E), including jamming on UAS for shipborne EW capability.

QINETIQ

Our solution

QTS conducted a RW UAS-T capability demonstration from a Halifax-class frigate, in order to inform the RCN's force development decision-making processes. We flew our Snyper multi-rotor target alongside Lockheed Martin's Indago quadcopter, using our Universal Target Control Station (UTCS), which facilitates the operation of multiple unmanned systems from a single command centre.

The RCN has operated fixed wing aerial targets and marine surface targets using QinetiQ's UTCS for more than 30 years, but the introduction of rotary wing targets is a first for the service.

A Class 2 UAV – Mosquito UHV-T – was also on board as part of an evaluation process of the feasibility of operating larger VTOL (vertical take-off and landing) UAVs.

Outcomes and benefits

The successful demonstration provided the following outcomes and benefits for our customer:

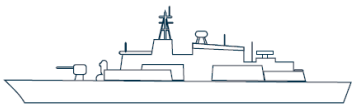
- The successful operational test and evaluation of all ship-board sensing systems, which will enable Royal Canadian Navy crews to fight and detect threats within a controlled environment to enhance reaction times and skills.

- Through this demonstration, RCN are enabled to train as they fight and react as needed. This in turn will develop the RCN UAV threat training syllabus, identifying, tracking and neutralising with a QTS low-cost target.

- Working with QTS provides the customer with a low cost C4ISR capability.

As a trusted partner of the RCN, QTS has 30 years of experience in safe unmanned vehicle operations, technically competent systems, and a multi-domain UTCS. Several other QTS products are currently deployed worldwide, and this development for a customer need is an add-on capability.

QTS works closely with the customer to identify the solution in a cost-effective way to ensure all requirements are met.



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The Snyper target is one of several QinetiQ technologies designed to help customers tackle threats from small unmanned aircraft. These include the Obsidian detection system and, as part of the Dragonfire Consortium, a laser weapon capable of destroying drones mid-flight.

QinetiQ is always on your side, protecting, improving and advancing your vital interests

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