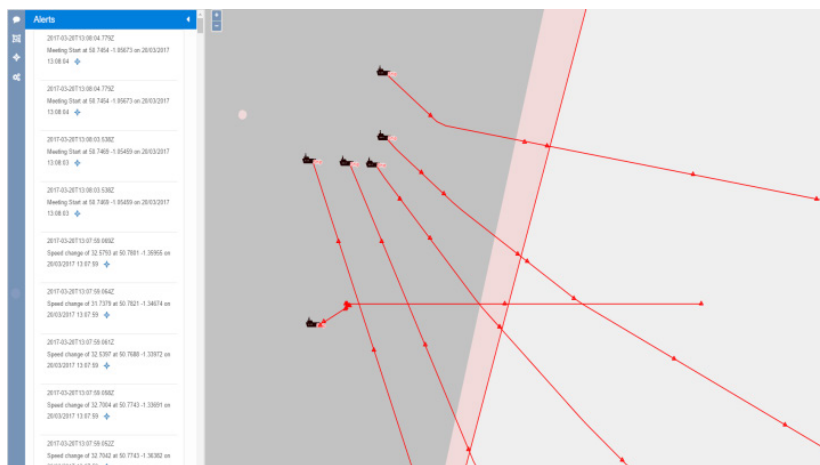




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# EPAS

Every Platform A Sensor



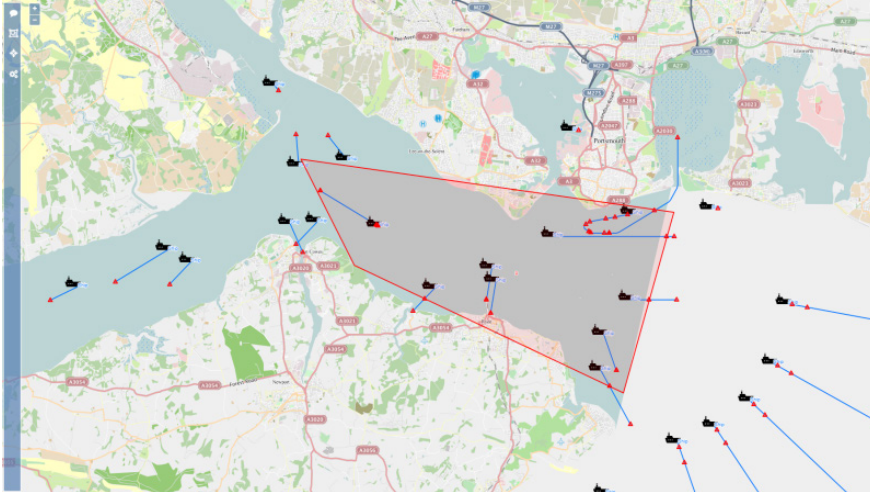
Uncommon formation behaviour

## Executive summary

The UK Ministry of Defence (MOD) has identified a concept vision, EPAS, in which all platforms could be used to collect data within a battlespace. QinetiQ has provided its expertise to investigate the ways in which this concept could become a reality, and developed a concept demonstrator to visualise the potential benefits of the system for the MOD customer.

## The brief

The UK MOD has identified a significant potential to exploit the collection capability of Non-Directed Intelligence Surveillance and Reconnaissance (NDISR) assets. The concept vision (EPAS) is that all platforms, including humans, operating within a battlespace will automatically collect data. Crucially, this automatic collection will not impact on the primary mission of the platform, or the workload of the crew or individuals.



Vessel movement in a congested area

For this concept to become a reality it would require continuous collection by a platform's sensors throughout a mission, as opposed to focusing collection purely on a Named Area of Interest (NAI). As a result, large amounts of information, some of which will have potential intelligence value, will be collected. This information will be passed to the future Single Intelligence Environment Corpus (SIEC), which is currently in development. QinetiQ was asked to investigate innovative potential methods in which the sensors currently aboard military platforms could be better utilised throughout the duration of a mission.

## Our solution

In response to the challenge of investigating innovative solutions, we conducted our research with the focus as follows:

- The platform used for the initial research was the Wildcat Helicopter Maritime Attack (HMA2)
- Creation of software to combine data from multiple sensors to produce 'fact' messages that can be fed into the SIEC. Essentially, this involves the conversion of 'track' information into a textual



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Wildcat Helicopter Maritime Attack 2

message, based on behavioural parameters dictated by an intelligence analyst.

- Establishing the plausibility of utilising a real-time data link to feedback low bandwidth information during the mission, instead of transferring the data by some form of media such as a removable hard drive on mission completion

We then produced a concept demonstrator to visualise the potential benefits of such a system.



QinetiQ's concept demonstrator was showcased at events, including WITIA and Information Warrior 2017.

## Outcomes and benefits

QinetiQ's concept demonstrator so successfully showed the potential benefits of the MOD's conceptual system that it was showcased at a number of events receiving extremely positive feedback and interest from those who attended. These events include:

- The Warfare In the Information Age (WITIA) Programme, researching how technology can improve situational awareness and ultimately decision making
- Information Warrior 2017, a series of exercise scenarios and presentations where emerging technology was showcased to a Maritime and Dstl audience

The outcome of these demonstrations was that both QinetiQ and the customer were satisfied that EPAS had clear potential to become an extremely powerful tool to provide reporting on information that would otherwise not have been collected. The bespoke algorithms we produced within the EPAS programme have enabled the system to automatically glean potentially valuable information and intelligence that would have been missed.

“ It's the stuff that we missed that's important! ”

- An experienced HMA2 Wildcat pilot

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