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News Release

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Smart systems to give hi-tech edge to battlefield decision-making

Technology that can process vast streams of information from military intelligence sources is being developed by scientists and engineers.

The development will seek to enable operatives in the field to assess their surroundings and identify threats more quickly and accurately.

Newly developed systems will gather information from a wealth of sources in modern conflict, interpreting streams of real-time and historical data.

These will draw upon traditional sensor systems such as radar, sonar, satellites and surveillance cameras alongside newer feeds such as from drones, mobile phones, social media and intelligence analysis. In combination, these will be used to create an information advantage for the modern military.

The £4 million project is funded by the Ministry of Defence (MOD) and the Engineering and Physical Sciences Research Council.

It will be carried out as part of the third phase of the University Defence Research Collaboration (UDRC) in Signal Processing, which will be led for the next five years by the University of Edinburgh with Heriot-Watt University, the University of Strathclyde and Queen's University Belfast in collaboration with MOD's Defence Science and Technology Laboratory (Dstl) and UK defence industry.

Professor Mike Davies of the University of Edinburgh's School of Engineering, who is leading the project, said: "We're aiming to give military personnel access to the most useful information, with minimal overheads.

"The rapid growth of modern sensing and communication technology represents a potential threat in the hands of our adversaries, but there is a real opportunity to exploit new processing and machine learning techniques to gain an information advantage."

Jordi Barr, Principal Scientist, Dstl, said: "Information has always been key to military advantage, and with the proliferation of information sources comes both opportunity and threat for our armed forces.

"This project builds upon previous success by bringing the discipline of signal processing to bear on today's larger, heterogeneous, more dynamic information landscape. The research conducted and the communities fostered by the project during the coming five years and

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beyond will provide MOD with underpinning algorithms, advice and world class researchers to gain the edge in future information-rich contested environments.”

For further information, please contact:

Catrina Kelly, Press & PR Office, 0131 651 4401; 07791 355940; Catrina.Kelly@ed.ac.uk

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