Australian Government
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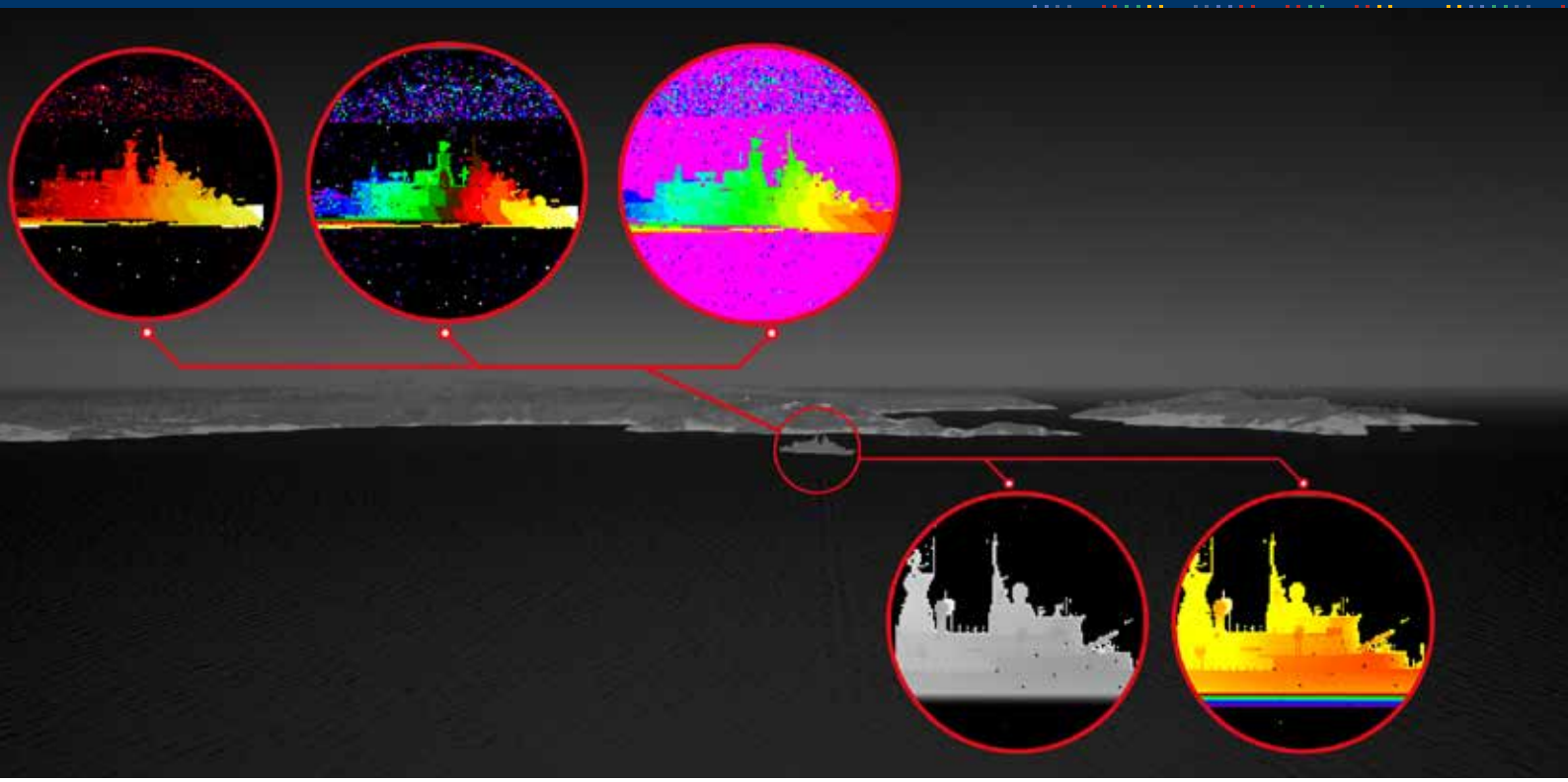

High accuracy threat recognition for next generation aircraft

DST researchers are looking to fuse imagery from modern infrared sensors and laser detection and ranging (LADAR) sensors to obtain high accuracy threat recognition for efficient countermeasure response.

Through its work in this area, DST is hoping to give future aircraft tactical superiority in countering missile and other threats.

DST's research has two objectives:

1. To detect incoming missiles as far away as possible
2. To classify incoming missiles more precisely

The research involves investigating high-accuracy methods for pixel-level object recognition by fusing imagery from a passive infrared sensor and an active LADAR sensor. The passive, relatively low resolution infrared sensor will provide wide field of view coverage to search for possible threats and will direct the slew of the active, higher resolution LADAR onto the potential threats for identification.

Partnering opportunities

DST is seeking to collaborate with academia and industry partners on a variety of topics including deep learning for target recognition using infrared and LADAR modalities, processing of high dynamic range images and development of fast detection and tracking algorithms.

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