



Live, virtual and constructive simulation, and synthetic environments

The use of integrated live, virtual, and constructive (LVC) systems for training is expected to provide a range of benefits to the Australian Defence Force, including reduced costs, increased safety and enhanced training outcomes obtained from live-flying.

In addition the use of LVC systems enables the generation of scenarios of sufficient scale and complexity to fully exercise fifth generation capabilities, and allows these new platforms to be exercised in a secure environment.

While some of the components required for LVC integration in the aerospace domain already exist, a great deal of research and development will be needed to make the most of the capability and extend it to the land, maritime, joint and coalition domains.

Artificial intelligence techniques will be employed to develop synthetic teammates and adversaries and support the automation of exercise control functions; advanced data analytics will be exploited to manage and interpret the large amounts of data inherent in large-scale exercises; synthetic environments representing the natural world and the electromagnetic spectrum will be developed to allow for realistic training; and real-time behavioural and physiological measures of operator state will be used to adaptively train ADF personnel.

Partnering opportunities

Opportunities exist to collaborate with DST in the areas of artificial intelligence, data analytics, training analysis and design, measurement of human performance, virtual and augmented reality, and simulation technologies.



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