

EXTENDED ABSTRACT ONLY

# The Diversity of New Zealand's Defence Operations Analysis

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**Abstract:** The Defence Technology Agency (DTA) is the principal advisor to the New Zealand Defence Force (NZDF) on Science & Technology matters. As a small organization DTA has a particular focus on providing expert systems-analytic advice to our military sponsors. DTA's Operations Analysis (OA) section forms a leading part of these efforts and we describe here some of the challenges that this area faces and how they are being met.

Operations Analysis work at DTA was originally focused on Army requirements, with particular foci on field experimentation and modelling & simulation. It has since moved into supporting requirements across all services and warfare domains, and whilst the staffing numbers increased the requirements for support increased more.

Current areas covered include:

- strategic level analysis;
- support to capability acquisition;
- support to operations; and
- analytic support within DTA to technology programmes.

The team is diverse, covering staff with physical sciences, engineering and psychology backgrounds. This diversity gives us strength to deal with a range of problems that may arise.

Such a range of foci would typically be covered by multiple and substantial analytic groupings overseas so we must adopt strategies for dealing with our resourcing limitations, which include:

- Strong linkage with sponsors at all levels of NZDF so that the most pressing support requirements can be discerned and fully understood.
- Prioritization based upon the technical complexity of the project/work area concerned.
- Prioritization based upon likely impact to NZDF should the study area fail to be adequately supported. Factors such as overall breadth of impact, risk to life and financial impact are some of those considered.
- Recognition that many analytic techniques can be used across military services and analytic application levels, from operations through to strategic level.
- Strong use of collaborative links such as through TTCP and bilaterally.
- Carefully considering the strengths of the current OA team so that work is shaped around that.

A recent successful initiative has been to encourage other traditionally more technology focused areas at DTA to become more analytically focused so that they can cover areas that OA would have historically covered. DTA's size and its lack of geographic distribution facilitates such cross-lab efforts.

In terms of quality and impact our strategies have included:

- Direct access to decision making fora so that layers of interpretation are avoided.
- Direct access to experimentation activities and Operators so that advice can be provided at the point of use. This allows compromises to be assessed and advised on in real time.
- International liaison (e.g. through TTCP) in order to exchange expert advice, data and tools; including for the purposes of peer review. These links are especially critical given the sensitive nature of our work.

The presented paper will provide practical instances from our work programme that illustrate these points. It will show that even with a relatively small effort one can be effective and make a difference.

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