

# Human Factors in Combat ID – An International Research Perspective

**Julie Gadsden**, UK MOD Defence Science and Technology Laboratory

**David Krause**, Defence Science and Technology Organisation, Australia

**Murray Dixon**, Canadian Forces Experimentation Centre

**Larry Lewis**, Joint Center for OA, US Joint Forces Command

The Technical Cooperation Program (TTCP) has recently completed a multi-national (Australia, Canada, UK, US) Action Group study of fratricide mitigation. Amongst its findings were that the human factors portion of the possible solution space is the least understood but could offer significant cost/benefit. This led to the recommendation that the TTCP nations should increase the level of investment in Human Factors R&D with attention to studies involving:

- a. Human decision making and support;
- b. The factors affecting preconceived notions of the area of operations;
- c. The factors affecting environment and target perception;
- d. The effects of morale on combat effectiveness and friendly fire;
- e. Human-machine interfaces.

This paper describes the work of the TTCP Action Group, with particular emphasis on the human factors issues. An outline of the recent and current research programme in the UK addressing some of these issues for Combat ID is also provided.

We developed and tested a paradigm to train experienced teams for combat identification in simulated Air Force Intelligence, Surveillance, and Reconnaissance (ISR) and Dynamic Targeting Cell (DTC) teams. Teams performed about 16 hours of simulated missions, which had many differences, such as different time sensitive targets, and many similarities, such as particular areas having a higher probability of specific enemy threats. The pattern of differences and similarities then changed in ways that occur in operational settings. We present evidence that such changes are challenging, that they can be learned, and that this learning should foster better combat identification.

