E D I T O R I A L

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Now into its third issue, DSTA Horizons continues to reflect the wealth of ideas present in our thriving local defence ecosystem and to bring out the spirit of knowledge sharing in the community. The heightened interest in DSTA Horizons, seen from the increased number of articles submitted, can only be attributed to the authors, past and present, who have dedicated time and much effort to share their work. Kudos to all of you!

Attesting to the breadth and depth of knowledge abound, this issue of DSTA Horizons includes 10 articles. Of these, three have been presented at international conferences while one has won the Commendation Award in the 2005 CDF Essay Competition. The publication begins with the article Joint Data Link Warfare, which examines the use of data links in enabling joint warfare, and posits a conceptual joint data link architecture to enhance joint operations.

Cognitive Radio and its Potential Benefits, which explores the future in radio systems and wireless communications – the Cognitive Radio, follows. Essentially a smart radio that possesses situational awareness and the ability to adapt to the environment to enhance communication, the Cognitive Radio has the potential to bring about vast benefits in both military and commercial operations.

The third article, JEWEL – M&S Environment for the SAF, highlights one of DSTA's many innovations – the Joint Modelling and Simulation Environment for Wargaming and Experimentation Labs (JEWEL). The Joint Battle System, a distributed simulation system based on JEWEL, is currently used by the SAF Centre for Military Experimentation as a test bed and training platform.

As its name suggests, the fourth article, Indirect Seawater Cooling and Thermal Storage System in Changi Naval Base, depicts another of DSTA's solutions to the Singapore Armed Forces (SAF). The engineering innovation is cost-effective, resource and energy efficient, and has received the IES Engineering Achievement Award

2000, the BCA Energy Efficient Building Award 2002 and the ASEAN Energy Award 2002.

Less technical but nevertheless relevant and important subjects in the defence technology community are also featured. DSTA Horizons 2007 includes articles such as Managing Intellectual Property in Procurement – Applicable Laws and Policies for MINDEF and the Local Defence Industry, which sheds light on the effective framework adopted by the Ministry of Defence (MINDEF) and the SAF to manage intellectual property rights in defence procurement.

Another article, Safety Culture in the Defence Development and Acquisition Environment, deliberates on how to put in place a robust safety management framework and foster a safety culture within the defence community.

DSTA is transforming itself into a knowledge enterprise, in which our members are empowered through the effective creation, storing, and sharing of knowledge. The seventh article Building the Workplace for a Knowledge Enterprise tracks our journey thus far, and shares the initiatives that will continue to shape and enhance our work processes.

The eighth article, The Organisation Compass – Enterprise Architecture, examines the use of Enterprise Architecture to design the blueprint comprising business processes, data, and the IT infrastructure to help MINDEF and the SAF realise their business operating models.

The ninth article, Reliability Growth Planning and Analysis of a Combat System Using Duane Model and Crow Extended Reliability Growth Model, provides a useful case study for professionals seeking to apply reliability growth methods for development testing. It describes in detail the application of the Duane Model and the Crow Extended Reliability Growth Model on a combat system.

With the increasing sophistication of technology, better denial and deception techniques are being used to deny traditional means of intelligence collection. The last article, MASINT – The Intelligence of the Future, explores the potential of a new discipline – Measurement and Signature Intelligence (MASINT) – and how it can be developed to boost intelligence collection capability.

We hope these articles continue to stimulate learning and sharing, and look forward to compiling yet another enriching issue of DSTA Horizons with contributions from the defence technology community.