

Scaling new heights in defence capabilities

DSTA and NUS to partner start-ups to develop new security solutions

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A new collaboration space between the Defence Science and Technology Agency (DSTA) and the National University of Singapore Enterprise will be set up to partner local start-ups to develop solutions for Singapore's defence and security.

The DSTA@71 lab, a physical space that will be set up at the JTC LaunchPad by the end of this year, is one of the ways DSTA is looking to hasten the pace of innovation, said Defence Minister Ng Eng Hen yesterday.

He was speaking at the annual Defence Technology Prize (DTP) award ceremony at the DSO National Laboratories where he announced the new lab.

Dr Ng also emphasised how strategic trust between the Ministry of Defence (Mindef), the Singa-

pore Armed Forces (SAF) and the defence technology community has created new ideas and capabilities for Singapore's defence.

"You can tell that this strategic trust occurs when the SAF proactively offers its officers to be embedded into the DTC (defence technology community)... that they put people with you in your department, this is the epitome of strategic trust – because it is a marriage that produces offspring," he said.

This strategic trust has allowed defence organisations to aim high, encouraging all defence and security partners to go even further, he added. "And it is crucial if you are scaling peaks, as the SAF and the DTC are now asked to do," he said.

"Our challenge to defend Singapore in the face of internal resource constraints as well as the complexity of external threats means that we must find new heights to ascend



Professor Gan Chee Lip, director of Temasek Laboratories @ Nanyang Technological University, was one of the seven winners of the Defence Technology Prize yesterday.
ST PHOTO: JONATHAN CHOO

to fulfil our missions."

He said strategic trust between the SAF and the defence technology community is strengthened when parties deliver on their promises – something the latter has done "time and again".

It is also through the DTP that significant contributions to Singapore's defence are recognised, said Dr Ng. The DTP was established in 1989 and is Mindef's most prestigious defence technology prize.

Among the seven prize winners was the director of Temasek Laboratories @ Nanyang Technology Uni-

versity, Professor Gan Chee Lip, 44, who was recognised for his work, including research on hardware Trojans.

Prof Gan leads a team that studies how to secure systems against malicious hardware modifications. These capabilities ensure the trustworthiness of the hardware used in Singapore's defence systems.

With the increased use of electronics in defence capabilities, the threat of malicious hardware being embedded into systems cannot be ignored especially if manufacturing is outsourced, said Prof Gan.

"Often we identify software vulnerabilities and these can be updated or patched. But the issue with Trojans embedded in hardware is that you have to physically remove it," he said.

His team has developed techniques and software that can identify compromised hardware, even if it is a tiny chip in a complex system.

"This is especially important when used in defence systems, where high security, high integrity and high performance are needed," said Prof Gan.

Another award winner was the di-

rector for DSO's Information Exploitation Programme, Dr Ng Gee Wah, 54, for his work in tracking and identifying maritime intrusions.

Terming the awardees as "sherpas" who guide the SAF and Singapore to ascend greater heights, Dr Ng said: "We now operate in a rarefied atmosphere where few climbers operate."

"The SAF and the DTC must have strategic trust and work even more closely together if we are to scale more summits."

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