Battlefield system bags defence tech prize

PUBLISHED OCT 21, 2017, 5:00 AM SGT

Network system boosts communication across SAF units, helps pinpoint enemies

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Rather than communicate through voice on a radio system on the battlefield, Singapore Armed Forces (SAF) soldiers can now indicate an enemy's location by tapping it on a map on a smartphone.

Photos and videos can also be sent to command posts away from the front line, so that commanders can better assess the ground situation and call for reinforcements if necessary.

This is possible with the Secure Army Battlefield Internet (ABI), a network system that streamlines communication across the SAF, such as the army and air force.

The team behind the project was one of the five team winners at the annual Defence Technology Prize yesterday, the most prestigious defence technology award given out by the Ministry of Defence. There were also two individual winners.

The ABI system was jointly developed by the Defence Science and Technology Agency (DSTA), DSO National Laboratories, the Singapore Army and ST Electronics. It features a real-time map developed for battlefield conditions where critical network infrastructure may be destroyed. The ABI allows different units deployed in different locations to share information quickly, accurately and securely.

For instance, when a soldier on the battlefield is hooked up to the ABI system with his commanders, there is less latency than communicating by radio, so information can be conveyed faster between them, said the project's team leader Hee Yong Siong, 44, who is the head of information for innovation (land systems) at DSTA. There is also less room for human error in communications, for instance in passing down instructions, he added.

Defence Minister Ng Eng Hen gave out the awards at a ceremony held at DSO National Laboratories.

Another team from DSO National Laboratories won an engineering award for developing an air surveillance system that is able to detect both commercial and non-commercial drones, including those small enough to almost fit into a palm.

Not only would the system help to prevent accidental collisions by hobbyists' drones into key installations such as military bases and government buildings, it would also be crucial in stopping those with malicious intent from carrying cameras and explosives into these sensitive areas, said the project's team lead Tay Poh Kok, 49, who is a programme manager at DSO.

The team of about 20 from DSO worked with DSTA and the Republic of Singapore Air Force to develop the technology, which is now ready to be put into operation.