

Singapore may get small satellites to do the work of big ones



Singapore Polytechnic engineering students (from left) Pan Ziyue, Goh Qian Zhe and Julian Kang with a prototype cube satellite that they developed at the Global Space and Technology Convention at Sheraton Towers yesterday. The trio, who have their own start-up called MakerFoundry, won the 2018 Space for Humanitarian Aid challenge on the use of space technology for disaster relief. ST PHOTO: TIMOTHY DAVID

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New centre here to have them fly in formation so they cost less but work faster than big satellites

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Singapore could be one of the first few countries in the world to have small satellites flying in formation.

This allows the satellites to do the same work as a larger one, but cheaper and faster.

This initiative would be the first such effort in Asia, said Minister for Trade and Industry (Industry) S. Iswaran yesterday at the Global Space and Technology Convention.

The plan is a move by the new Satellite Technology and Research Centre, jointly launched by the National University of Singapore and DSO National Laboratories last week.

Mr Iswaran noted that the space industry has shifted to small satellites, whose numbers have increased from 20 in 2011 to more than 250 last year.

"Aided by advancements in miniaturisation of electronics and an increase in companies offering space launch services, small satellites promise more comprehensive coverage and flexible usage at a lower cost," said Mr Iswaran.

He said this opens up new possibilities for businesses, noting that the global space industry is estimated to be worth US\$330 billion (S\$434 billion).

The new centre's efforts to fly small satellites in formation require "high-precision navigation and high-complexity engineering", said Mr Iswaran.

However, it will build the "deep capabilities" needed to develop advanced satellite applications such as in-orbit servicing.

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MR S. ISWARAN, Minister for Trade and Industry.



burgeoning space sector, such as through encouraging careers in the industry.

It also plans to launch a six-month-long accelerator programme for space start-ups here in the second quarter of this year, said SSTA president Jonathan Hung.

There is a need for a "more structured and sustainable accelerator programme to support space start-ups in Asia", he said.

One start-up that could benefit from the programme is MakerFoundry, comprising Singapore Polytechnic engineering students Julian Kang, Goh Qian Zhe and Pan Ziyue.

The three 18-year-olds won a competition, organised by the SSTA and aerospace firm Airbus, on the use of space technology for disaster relief.

The trio - who developed an app that allows people to access satellite networks to report their location after a disaster - see the potential of the space sector to do good.

Said Mr Pan: "That's where I see us, doing something that benefits society."