

Taking Singapore Into Space, And Beyond

Posted 10 Mar 2017 15:58 Updated 10 Mar 2017 16:15

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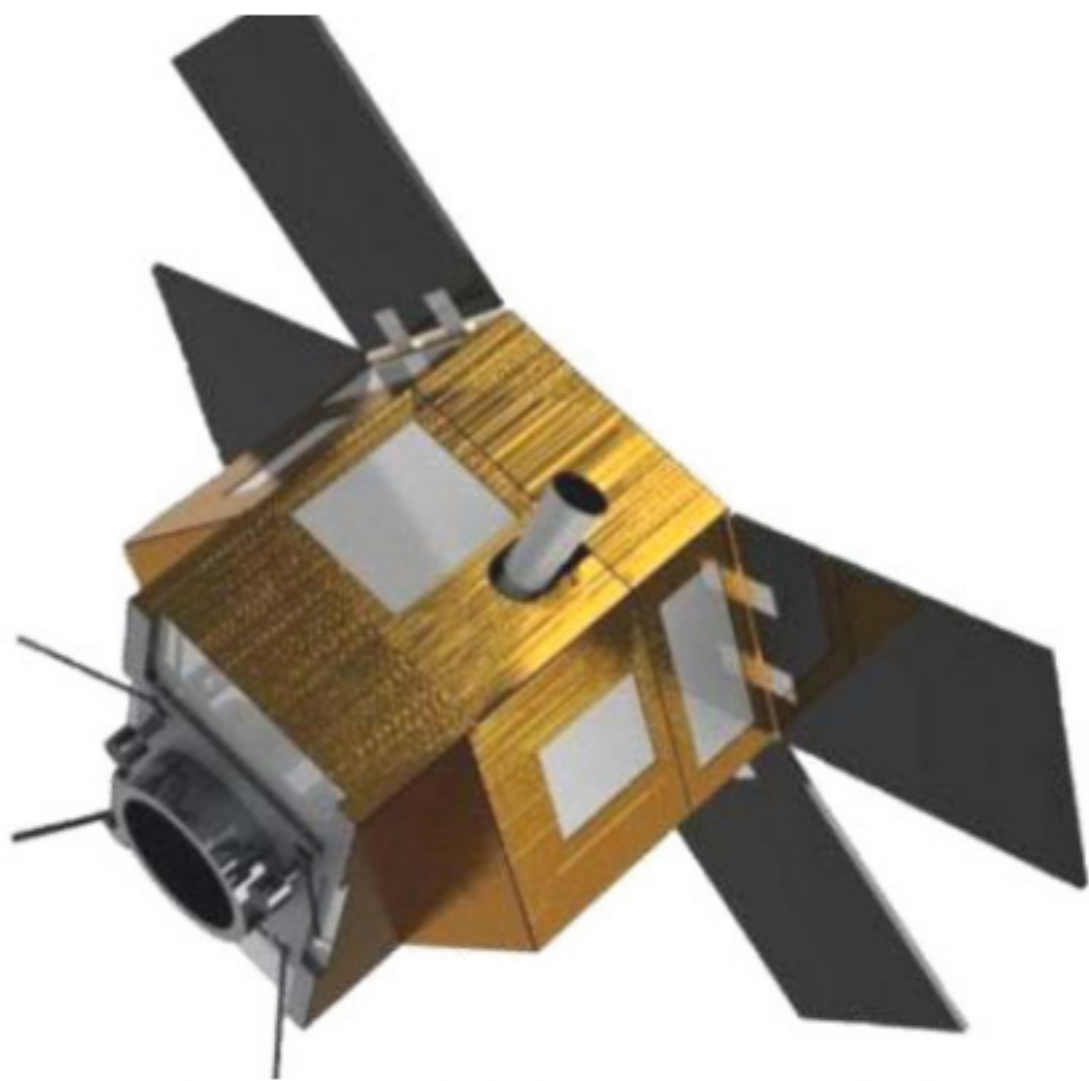
They came from different organisations, bringing with them different specialisations, but all of them had one goal – to put Singapore’s first commercial satellite into space.

Blazing into a night sky in December 2015, TeLEOS-1 – the first made-in-Singapore commercial satellite – has catapulted Singapore among the stars and also opened up boundless down-to-earth opportunities for both people and businesses.

A Little Red Dot in Space

Just like the little island from which it was designed, developed and built, the Singapore satellite is smaller than others in space, but is just as capable.

“TeLEOS-1 is the first Singapore, locally-built Low Earth Observation Satellite that provides high-resolution image capabilities. It is able to match those satellites that are commercially built by the established companies around the world” highlighted Ong Kien Soo of ST Electronics (Satellite Systems) and project leader of the team.



(TeLEOS-1 : Singapore’s first commercial Earth observation satellite. Photo: ST Electronics)

A multi-disciplinary team of 70 engineers from ST Electronics with support from the National University of Singapore, Nanyang Technological University and DSO National Laboratories, provided the brains and brawn behind the TeLEOS-1.

Although the satellite was born from research and development, the team made TeLEOS-1 responsive to business needs.

With the capability to make more frequent orbiting passes, the satellite gathers and sends data from space to Earth quickly and more frequently. More importantly, it sends high resolution, crystal clear images taken at a distance of up to one metre and under different lighting conditions, thereby expediting vast areas of research and application from meteorology to intelligence.

“TeLEOS-1 flies in the Equatorial Orbit,” explains Kwoh Leong Kwong from NUS Centre for Remote Imaging, Sensing and Processing.

“We can respond to any requirement to take images much faster than traditional satellite and we are the only country in Southeast Asia with this capability at the moment,” he adds of the satellite that covers the equatorial belt. This includes many major shipping routes, disaster prone and forest fire regions, meaning it is able to contribute to high-responsive needs in maritime security and safety, Humanitarian Aid and Disaster Relief and environmental activity verification.

Another Star in Satellite Technology

Although a newcomer to the satellite industry, the Singapore team didn’t just match the know-how of others. They also did it better and faster, taking just over five years to get the Singapore satellite up and into space.

Singapore is now on a new trajectory to move into the high-end space industry because of one team who simply dared to innovate.

“Space engineering is difficult... By being able to do such satellites, it is a testament to our ability to do complex engineering projects,” said Dr Desmond Lim of DSO National Laboratories.



(TeLEOS-1 team representatives from NTU, ST Engineering, DSO and NUS. Photo: A*Star)

The team took home the prestigious President’s Technology Award 2016 in recognition of their far-reaching work.

As a result Singapore now sits among the league of countries with satellite developing capabilities, ranging from design and development to manufacturing and assembly. New careers and educational pathways, such as satellite and space engineering have opened up as a result of this project, along with fresh economic avenues from satellite services and products, to innovation and development.

Reach For The Stars

The stage is now set to celebrate another contribution in the realm of science and technology.



The President’s Technology Award is now open to receive [nominations](#) of teams or individuals who deserve to be recognised for outstanding contributions to research and development, resulting in the discovery or use of significant technology for commercial use.

That one shining star among the many, needs your help to shine even brighter.

Nominate now! More information available [here](#).

