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Lean Satellite: delivering satellites' values with low cost and short time

Abstract:

Development and utilization of micro/nano/pico satellites are proliferating worldwide.

Those satellites utilize non-traditional, risk-taking development and management approaches to deliver the satellite's value to the customers or users with low cost and short time.

The satellite size becomes inherently small as the risk becomes too big to take when the non-traditional approaches are applied to a big satellite.

To emphasize the philosophy rather than the size, those satellites are sometimes called lean satellites.

Kyushu Institute of Technology (Kyutech) has been engaged in international standardization of lean satellite testing to improve the mission success rate based on

its experience on satellite testing carried out at Center for Nanosatellite Testing (CeNT) where more than 50 lean satellites including the ones from overseas were tested for the past 9 years.

Kyutech is also engaged in space technology capacity building to assist the non-space faring countries entering the space sector through CubeSats.

Since 2015, Kyutech has assisted 8 countries from Asia, Africa and Latin America developing, launching and operating their own first satellites.

This presentation gives an introduction to the lean satellite concept and an overview of Kyutech's activities toward lean satellite mission assurance, proliferation to non-space-faring countries, and others.