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Paper title: TeLEOS-1 in Multi-Source Maritime Security and Safety Application

Author name(s):

Mr Seah Peng Hwee, VP Space Systems, ST Electronics (Satcom & Sensor Systems)
Mr Tan Tze Chung Maverick, Manager, ST Electronics (Satcom & Sensor Systems)

Proposed presenter(s):

Mr Tan Tze Chung Maverick, Manager, ST Electronics (Satcom & Sensor Systems)

Mailing address:

1 Ang Mo Kio Electronics Park Road, #06-02, ST Engineering Hub, Singapore 567710

Phone, fax, and e-mail for all authors and presenters:

Sea Peng Hwee seah.penghwee@stee.stengg.com
Tan Tze Chung Maverick tantzechung.maverick@stee.stengg.co

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Abstract

Riding upon the success of X-SAT launched since 20 Apr 2011, ST Electronics (STEE) has embarked on small satellite manufacturing through its ST Electronics – Satellite Systems, a joint venture company. STEE is currently developing TeLEOS-1, the first commercial satellite to be launched in Near Equatorial Orbit (NEqO) in Q4 2015. TeLEOS-1 differentiates itself from the world players of Earth Observation satellites in Sun Synchronous Orbits by providing high responsiveness and high availability data by nature of its low inclination orbit at 10 to 15 degrees. However, this is achieved at the expense of foregoing global coverage for equatorial belt coverage. The equatorial belt covers many major shipping routes. TeLEOS-1 imageries are especially applicable for maritime security and safety, a business application which many service providers are offering in conjunction with AIS correlation for vessels. STEE – Satcom & Sensor Systems aims to be a commercial service provider in value-added geospatial services using multiple satellite imagery sources together with TeLEOS-1 in the mix for effective surveillance and classification of vessels over global coverage through fusion with Automatic Identification System (AIS), Long Range Identification & Tracking (LRIT) as well as information vessel traffic management & information system for a near real time recognised maritime situation picture. Besides the TeLEOS-1 S-400 bus, STEE also has the SS-150 bus in partnership with ATK of USA for microsatellites of less than 200 kg mass. One or more electro-optical microsatellites can supplement the user's capability for enhanced maritime security and safety. The specifications of SS-150 and S-400 buses will be introduced.