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Suggested topic: Resource Sharing in Special session (Preference Oral Presentation)

**Development of Interoperable Multi-Satellite Operations Platform**

*Shih-Chieh Chou1\*, Ming-Chih Cheng2, Bo Chen3*

*1Assistant Researcher,* National Space Organization, National Applied Research Laboratories, Email: [jay@narlabs.org.tw](mailto:jay@narlabs.org.tw), TEL: 886-3-578-4208 #1729

*2Researcher,* National Space Organization, National Applied Research Laboratories, Email: franz.cheng@narlabs.org.tw, TEL: 886-3-578-4208 #9487

*3PricipalEngineer,* National Space Organization, National Applied Research Laboratories, Email: bochen@narlabs.org.tw, TEL: 886-3-578-4208 #1571

8F, 9 Prosperity 1st Road, Hsinchu Science Park,

Hsinchu 30078, Taiwan

*\**Corresponding author, *proposed presenter*

**Abstract**

FORMOSAT-2, an earth observation remote sensing satellite has been launched and operated by National Space Organization, National Applied Research Laboratories (NARLabs-NSPO) of Taiwan since 2004. Its unique daily revisit feature with 2-m GSD has demonstrated tremendous benefits in various applications especially in disaster response and continuous change detection monitoring. NSPO is determined to become one of the high resolution image providers in the world. Therefore a follow-on FORMOSAT-5 satellite is being developed and targeted to launch in 2015.

From the demand perspective, with growing variety of space resource availability in recent years, horizontal interoperability of satellite programming operation is crucial to provide decision-support platform for users with different purposes. Based on experience operating FORMOSAT-2 satellite, NSPO is developing a satellite multi-mission programming system prototype with web service interface. This system, Formosa SPS (sensor planning system), can be used for determining the feasibility of an intended sensor planning request and it features a common platform of sharing satellite resource. Meanwhile, due to the orbit feature, there are different chances that a specific AOI (area of interest) lies within the field of view for different satellite in certain period of time. Therefore, systematic analyses are performed in real-time for multi-satellite scenario. 3D simulation system using free application programming interface (API) technology is also being developed. In this paper, we will introduce the background and objective of this system development and present its mechanism and function. Formosa SPS 1.0 is OGC Compliant certified.

**Keyword :** Multi-Satellite Operations、OGC Sensor Planning Service、FORMOSAT-2