
Debate on Space Situational Awareness and Space Traffic Management in Japan

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Background of Japanese Debate

- Japanese defense forces were excluded from space
 - 1969 Diet Resolution of “exclusively peaceful purpose”
 - Defense authorities were not allowed to invest, develop, own, operate or use space system
 - To this day, Japan does not have military satellite
 - One exception: X-band Comsat via PFI
- US request for Japan to participate in SSA
 - MoD was not in favor for investment
 - There was no asset MoD needs to protect
 - JAXA was in favor of upgrading existing facilities
 - Difficulties for sharing information with civilian agency

Debate in Japan to Join SSA

- SSA as private goods
 - Japan has interest in SSA since there are number of civilian satellites in operation
 - Clear awareness of the risk of space debris and possible intentional attack
 - JAXA, operator of many civilian satellites, interested to take this opportunity to improve its SSA capabilities
- SSA as public goods
 - SSA provides safety in orbital environment
 - Japan needs to contribute to avoid free-riding
 - Constraints for civilian agencies to participate – needs to be military organization

Why Japan Decided to Participate

- Responsible Stakeholder
 - Japan needs to contribute as a spacefaring nation
 - Contributing to international security
 - Strengthening alliance with the US
 - Increasing awareness of the importance
 - Since ASAT test in 2007, MoD gradually increased its awareness of the vulnerability of US forces
 - SSA would improve securing US assets which would eventually improve defense and deterrence capability of Japan
 - SSA is good as both public and private goods
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Japan's Debate on STM

- No clear definition
 - “planning, coordination, and on-orbit synchronization of activities to enhance the safety, stability, and sustainability of operations in the space environment”
 - Planning – National Space Activities Law
 - Coordination – CSpOC catalogue
 - On-orbit synchronization – CSpOC warning
- Need to take the lead in norm-setting
 - On-orbital services – End of Life mission, Active Debris Removal, Satellite refueling
 - Increasing number of small satellites

Japan's Plan for STM Rule-making

- Coordinating national space regulations
 - LTS Guidelines
 - Encouraging coordination with ADR and OOS
 - Space Sustainability Rating
 - TCBM
 - Increasing transparency – obligations for operators to announce their orbital positions
 - CBM – providing orbital info and flight plan, surveillance over operation
 - Sharing orbital information
 - Open Architecture Data Repository
 - Commercial SSA
 - Who would be a traffic cop?
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