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4:00 to 5:00 p.m.

## ***Space Traffic Management and Control Architecture***

By

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# Defining STM Requirements

1 - A Space Traffic Management Zone must be defined and enforced

- Licensed satellite operators
- Conforming satellites to STM regime
- Patrol and enforcement procedures
- High traffic zone: 600 to 1200 km altitude



# Defining STM Requirements

2 - All spacefaring nations must agree and be accountable

- No national borders in space
- In low-earth orbits, all satellites use the same region of space
- An organization with international representation will have to oversee and control space traffic



# Defining STM Requirements

## 3 - Space laws and treaties for STM

- New laws and treaties to implement and managing space traffic
- Liability laws and limits must be established
- Regulations governing licensing and enforcement of traffic laws



# Defining STM Requirements

## 4 - Satellite Design Impacts

- Future satellites must have tracking transponders and agile maneuvering capabilities
- Licensed satellites must be serviced and refueled periodically



# Debris control and management

Debris remediation is required for safe space flight

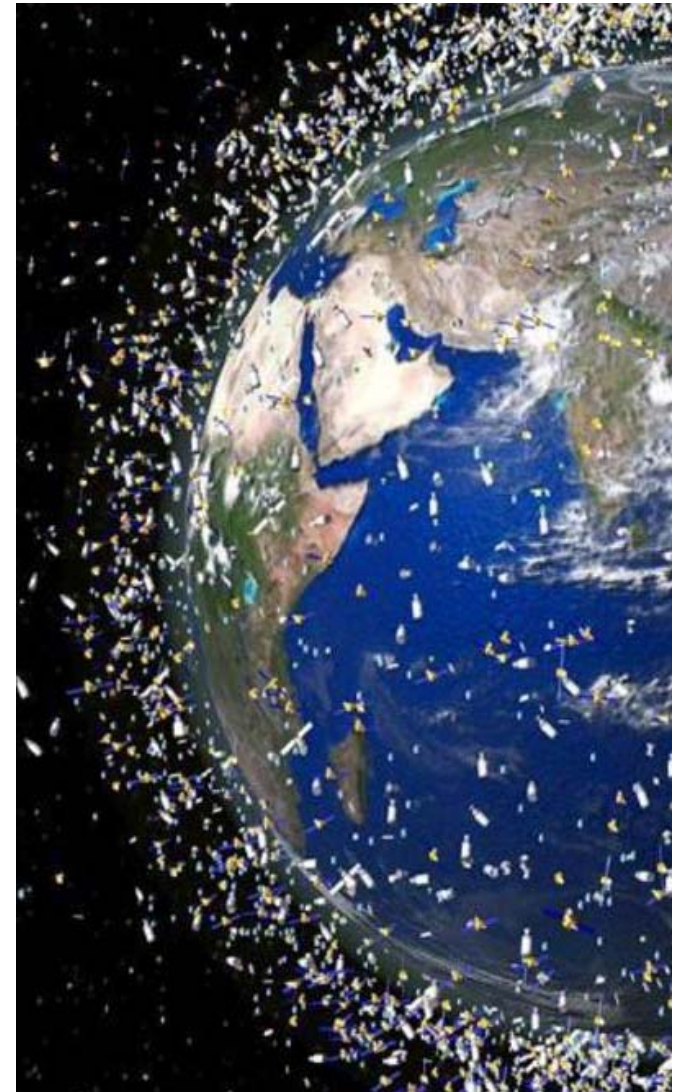
- Comprehensive detection, identification and tracking of the debris population
- Permanent debris removal and control regime for safe flight

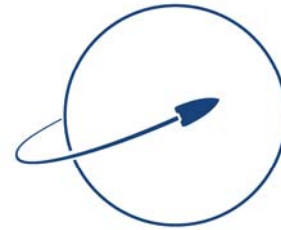


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# Conclusion

The STM challenge is like that of Air Traffic Control except all objects are travelling independently at Mach 25 in all directions at all altitudes and with little control.





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**QUESTIONS?**

**THANK YOU**

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