

Counterspace Trends and Their Effect on Security and Stability

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Human-Generated Space Objects

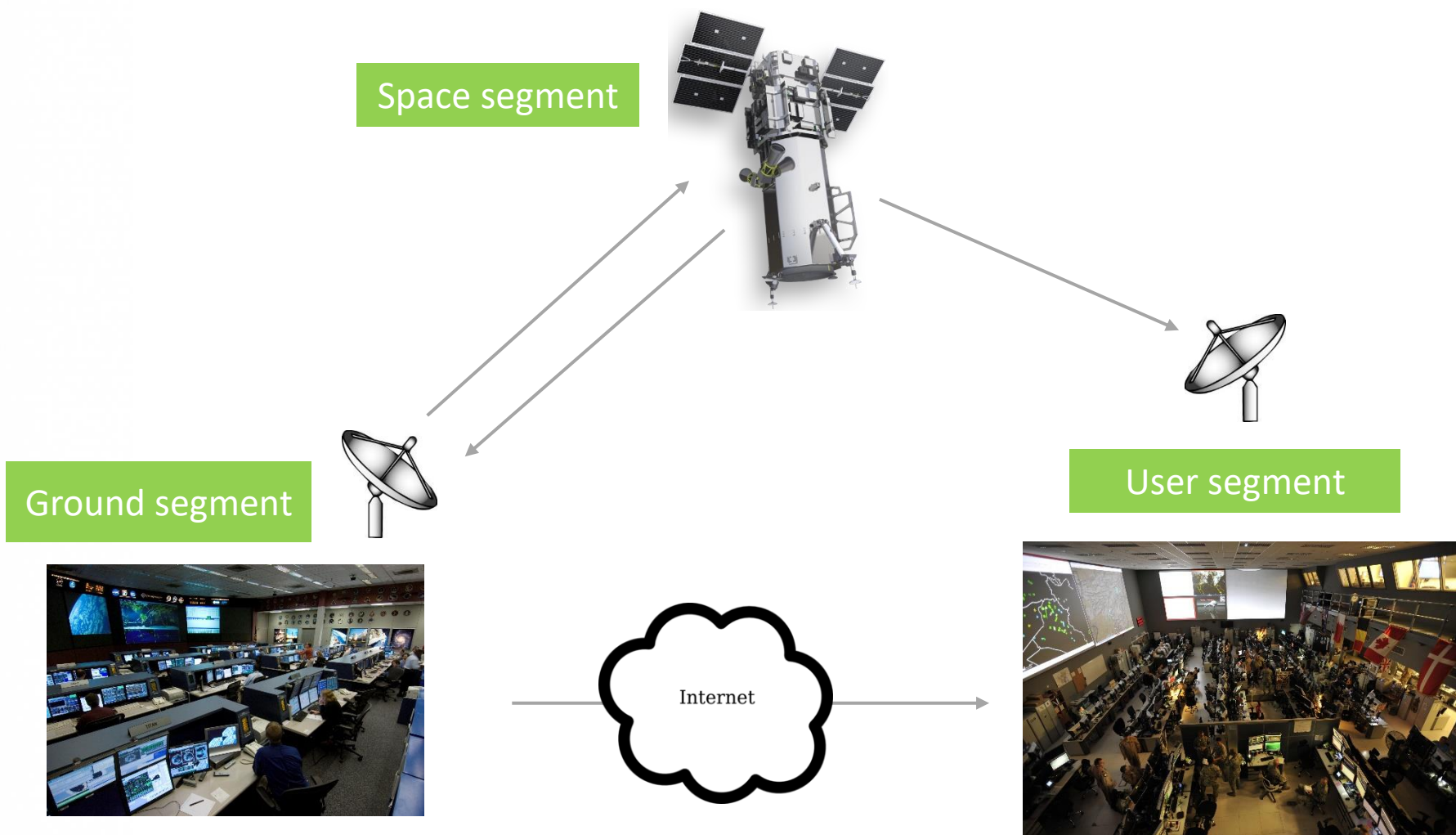
- Active satellites as of Nov. 17, 2024:
 - Total: 10,739
 - United States: 7628
 - Of which, SpaceX' Starlink: 6604
 - Russia: 274
 - China: 938

Orbital Debris

Larger than 10 cm	~40,500	Sources of new debris
Between 1 and 10 cm	~1,100,000	Can cause major damage
Smaller than 1 cm	130 million	Can cause minor damage



A space system is more than just a satellite





2024 Global Assessment

	US	Russia	China	India	Aus.	France	Iran	Israel	Japan	North Korea	South Korea	UK
LEO Co-Orbital	■	▲	■	●	●	●	●	●	●	●	●	●
MEO/GEO Co-Orbital	■	■	■	●	●	●	●	●	●	●	●	●
LEO Direct Ascent	■	■	▲	■	●	●	●	●	●	●	●	●
MEO/GEO Direct Ascent	■	■	■	●	●	●	●	●	●	●	●	●
Directed Energy	■	■	■	●	●	■	●	●	●	●	●	●
Electronic Warfare	▲	▲	▲	■	■	■	■	▲	■	■	●	●
Space Situational Awareness	▲	▲	▲	■	■	■	■	■	■	■	■	■

Legend: none ● some ■ significant ▲

Questions?

Thanks.

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