

2012 Space Security Index Launch in Europe
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TCBMs in Support of Space Safety and Sustainability

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Presentation Overview

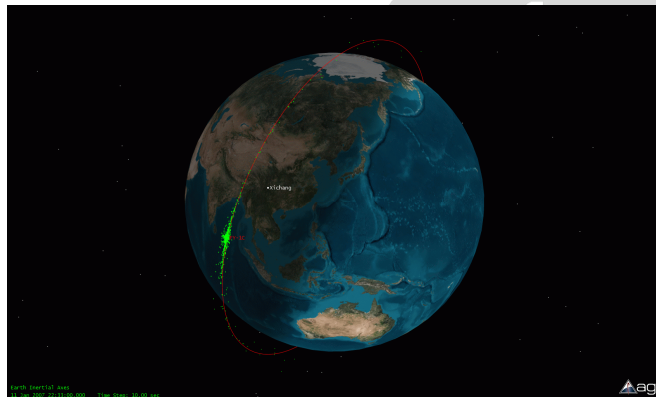
1. Background
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1. Background

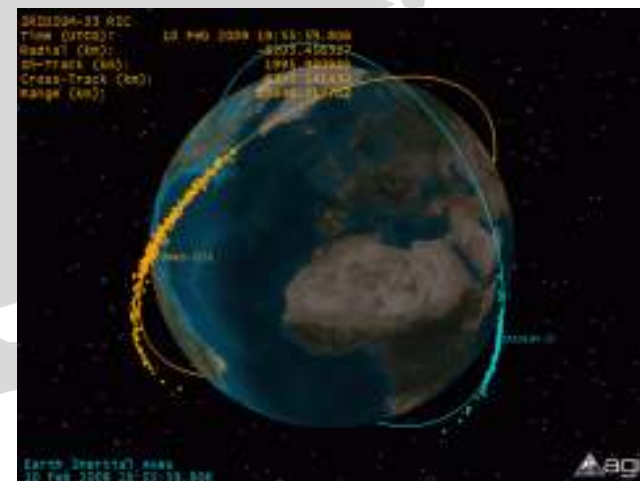
- Various challenges to safety and sustainability -- growing attention to both natural and man-made threats
- Development of overarching space security framework has been incremental
- TCBMs in support of efficient management of space activities
- TCBMs included in existing Treaties and/or proposed norms, including
 - Outer Space Treaty; Registration Convention
 - ITU Constitution
 - UNGA Resolutions (e.g. 47/68, 59/115, 62/101, 62/217, 63/90, etc.)
 - IADC/UN Space Debris Mitigation Guidelines
 - UNCOPUOS initiative on “Long-Term Sustainability of Outer Space Activities“
- Existing framework for space activities as a baseline for future measurement of TCBM effectiveness
- International Code of Conduct as Europe’s main space diplomatic initiative needs to be reinforced by practical TCBMs

2. Need for Space TCBMs

- Space-related benefits are accompanied by significant risks
- Areas of high concern include:
 - Environmental threats (e.g. orbital debris, space weather, etc.)
 - Crowding of satellites in geostationary orbit (GEO)
 - Limited availability of radiofrequency spectrum
 - Man-induced threats (e.g. jamming, radiofrequency interference, cyber attacks, etc.)
 - Heightened terrestrial geopolitical tensions



Feng Yun 1C debris 5 minutes after impact
(Source: T.S. Kelso, 10 Feb 2007)



Iridium 33/Cosmos 2251 Collision (Source: AGI)

3. International Architecture for Space

Current International Architecture for Space:

- UN Conference on Disarmament (UN CD)
 - PAROS Resolutions
 - Group of Governmental Experts (GGE) on Space TCBMs
- UN Committee on Peaceful Uses of Outer Space (UNCOPUOS)
- International Telecommunication Union (ITU)
- International Organization for Standardization (ISO)
- International Code of Conduct for Outer Space Activities

Governance Proposals - Top Down:

- Improved SSA
- International Code of Conduct for Outer Space Activities
- PPWT
- Canada's 2009 Working Paper (CD/1865)

Governance Proposals - Bottom-Up:

- Codes of Conduct/Best Practices Guidelines (e.g. Space Debris Mitigation Guidelines, Long-Term Sustainability Initiative)
- Advancing Space Safety
- Space Traffic Management (STM)
- Commercial initiatives

4. TCBMs and International Space Code of Conduct

Space Security Policy in Europe:

- Configured jointly by the EU Member States, ESA, and the EU
- European Space Policy (ESP) as a basis for European space security strategy
- Striking balance between the foreign policy and security interests of individual MS and those of the EU

International Code of Conduct:

- Proposed by the European Union (EU) in December 2008, September 2010 and June 2012
- The Code is voluntary and designed to serve as alternative to legally-binding proposals for prevention of arms race in outer space or bans on space weapons
- Includes transparency and confidence-building measures (TCBMs) as basis for consultations with key third countries involved, or interested, in outer space activities
- Currently structured outside of traditional multilateral institutions like UN and the CD
- Code seeks to gain widespread support among international space actors by setting relatively modest commitments
- Several countries, including the U.S., Australia, and Japan, have expressed willingness to join the EU in its effort to develop an International Space Code of Conduct

5. Bottom Lines on Space TCBMs

- TCBMs discussed in various frameworks, including:
 - UN First Committee (GGE on Outer Space TCBMs)
 - UNCOPUOS (Long-Term Sustainability of Space Activities WG)
 - International Code of Conduct of Outer Space Activities
 - National Policies (e.g. the U.S. 2010 National Space Policy)
- Behavioural governance proposals stress different aspects:
 - Technical (e.g. LTSSA WG)
 - Political (International Code of Conduct; GGE on Outer Space TCBMs)
- Current challenge for the space community is to avoid achieve consistency in these efforts
 - Independent of the specific space activities being discussed (i.e. commercial, civilian, military), it is highly desirable that all actors conduct their space activities responsibly

5. Bottom Lines on Space TCBMs

| Limitations | Strengths |
|---|--|
| Not binding | Reflect certain international understanding |
| Can be unresponsive to breaking developments in space | Can preempt or deter irresponsible behaviour |
| Are difficult to negotiate multilaterally on select space security topics | Can provide policy framework to advance specific behavioural objectives |
| Have been used for selfish national purposes (e.g. a signatory with hidden agenda, a delaying tactic, etc.) | Can reinforce a space culture of cooperation and peer review |
| An uneven track record of past success | Can help reverse present deterioration of overall space security environment |

6. Space Situational Awareness (SSA) in Support of TCBMs

- SSA supports safe and secure operations in space
- SSA reinforces sustainable use of space:
- Growing demand for more timely and consistent SSA:
 - US: intensified efforts to collaborate with other nations: Canada, Australia, France, ESA, EU
 - Europe: ESA's SSA Programme; recognition of SSA requirement at the EU level
 - Japan: improvement of national SSA capabilities discussed at political level
 - Commercial efforts: Space Data Association (SDA)

7. Conclusion

- Countries are striving to achieve a comprehensive approach to space sustainability
- A number of global initiatives are underway (e.g. space debris mitigation, collision avoidance, long-term sustainability initiative, development of TCBMs, International Code of Conduct, etc.)
- Europe's steady efforts to support international space security will strengthen its diplomatic role and identity in this arena
- TCBMs can support the global sustainability quest by advancing a collaborative path to space security
- Need to forge agreements, built on SSA and TCBMs, to achieve greater transparency, accountability, enforceability and space governance
- Absence of these modalities puts at risk the peaceful, safe, predictable and reliable use of space