

Space Security: *Norms, Resiliency, and Protection*



Erik Eliassen

14 April 2016

www.sscspace.com



A close-up, low-angle shot of a satellite antenna structure. The antenna is white and metallic, with a large, flat, rectangular panel extending from a central hub. The panel is supported by several thick, cylindrical struts. The background is a clear, bright blue sky. The lighting is bright, creating sharp shadows on the antenna's surface.

We provide multi-application
satellite management services
to the global space community,
from mission idea to
operational end-of-life



SSC BUSINESS AREAS



**Science
Services**



**Satellite
Management
Services**



**Engineering
Services**



Technology



UNIVERSAL SPACE NETWORK

Global connectivity for space operations



26 March 2015

The world's largest multi-mission ground station network



SOME OF OUR CUSTOMERS...



www.sscspace.com



Thoughts on Resiliency

- Resiliency is a function of several variables
 - Robustness (encryption), redundancy (proliferation), recovery (to a new baseline), etc.
- Resilience is not an “End State”, it’s a “continuous process”
- Resilience is not big, formal institutions “doing” risk management
 - Several nodes working independently or cohesively when required
- Over-connectedness is as much a problem as is not connected enough
- Recognize systems become fragile and break for several reasons
- The International Space Community needs to work together to protect the natural resource of space for the benefit of humanity



Problems and Challenges

- Over regulation
 - Spectrum management
 - Unnecessary bureaucratic approvals



- Cyber threats



Space has always been a crucible for innovation.....

Solutions

- Get curious
- Defy Tradition
- Push Boundaries
- Know Thy Customer
 - They will shape the products and services you deliver more efficiently than you can often think of internally

