



***Second International Workshop on  
On-Orbit Satellite Servicing:***  
**Legal Issues in On-Orbit Satellite Servicing**

**May 31, 2012**

# Key Legal Issues in On-Orbit Satellite Servicing

- Legal risks and risk allocation
- International space treaties
- Contractual risks and insurance
- Regulatory approvals
- Export control and technology transfer
- Political risk
- Bankability issues
- Military/civil missions

***Understand the playing field and think creatively to tackle legal issues with the goals of efficiently allocating risk and arriving at solutions.***

# I. Background Risk Issues and Significant Risk Reduction Steps

- Risk Management:
  - Responsibility for damage (legal risk of failure and impact to participating parties and third parties)
  - Financial consequences of mission (commercial risk of an unsuccessful mission)
  
- Parties need to identify risks early on and approach methodically and creatively

# Identifying Operators' Commercial Risk: Liability and Failure of Venture

- Intra-party property risks:
  - “Oops! – I tried to fix it but ended up destroying your satellite!”
  - “You broke my servicing vehicle!”
  
- Third-party liability risks:
  - “Oops! – I tried to fix it but ended up destroying someone else’s satellite!”
  
- Performance risk:
  - “Well ... I tried to fix it and didn’t hurt anything, but it didn’t work.”

# Market Risk Reduction: Liability and Commercial Failure

- Allocation of risk among parties arising from international treaty regime
- Contractual risk allocation between parties
  - Parties knowing what risks they are signing up for
  - Attempt to execute efficiency principle
- Market risk reduction: Insurance regime

**GOAL = Efficient allocation of risk**

# International Treaty Regime

- **1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space (the “Outer Space Treaty”)**
- **1972 Convention on International Liability for Damage Caused by Space Objects (the “Liability Convention”)**

***Treaty regime permits activities but there are consequences and responsibilities....***

# Claims Under International Treaty Regime

➤ **What basis exists for a claim under treaty regime?**

– **Fault-based regime for damage occurring in space.**

Article III of the Liability Convention:

*“In the event of damage being caused elsewhere than on the surface of the Earth to a space object of one launching State or to persons or property on board such a space object of another launching State, the latter shall be liable only if the damage is due to its fault or the fault of persons for whom it is responsible.”*

➤ **Who can pursue a claim under the treaty regime?**

– **Only State Parties can pursue a claim.**

Article IX of the Liability Convention:

*“A claim for compensation for damage shall be presented to a launching State through diplomatic channels.”*

➤ **What about claims outside of the treaty regime?**

– **Tort-based claims between commercial actors. Determination of jurisdiction becomes a matter of national law.**

Article XI of the Liability Convention:

*“Nothing in this Convention shall prevent a State, or natural or judicial persons it might represent, from pursuing a claim in the courts or administrative tribunals or agencies of a launching State.”*

# Contractual Provisions Regarding Risk

- **First-party property and intra-party:** Each party bears risk of loss to its property and injury to its personnel. No risk of loss liability to other party.
- **Third party:** Reciprocal indemnification or third-party liability insurance with respect to liability to third parties. Indemnification provision might include cross-indemnification for liability arising from third parties.
- **Overall Limitation of Liability:** Liability for breach of contract may be limited to size of contract, could be sized at different phases of contract. Affiliate liability may be explicitly disclaimed.
- **Performance warranties:** Shared or no risk for mission failure.

## **An example of terms we might expect to see in a contract:**

Risk of loss of servicing vehicle shall remain with servicer and servicer is responsible for procuring insurance for vehicle and serviced satellite. Such insurance is required to remain in effect until completion of mission. Operator is to be named as additional insured for coverage of loss related to operator's property.

# Other Contractual Issues to Consider

- **Termination and milestones:** Termination may be triggered by material default, bankruptcy, decision by either party not to proceed at certain key points. Payment milestones to match completion of phases. (May also be a requirement term for financing.)
- **Exclusivity and related issues:** Can other operators use services? Any revenue sharing, marketing or other aspects of relationship?
- **IP Ownership:** Each party might retain exclusive ownership of its own IP, developed prior to effective date. Servicer gives Operator a non-exclusive, worldwide, non-transferable and irrevocable license (except in event of breach). Operator may give Servicer a license for any required data.
- **Assignment:** Can rights and interests be assigned to third party? Prior written consent of other party required? If so, any carve-outs for lenders? Affiliates? Other parties with same ability to carry out obligations? How to measure?

# Space Insurance

Variations of property (first-party) and third-party liability insurance:

- Pre-launch insurance
- Launch and initial operations insurance
- In-orbit insurance
- Third party launch liability insurance
- Spacecraft product liability insurance
- Political risk insurance
- Investment protection insurance (proprietary business method patent)

## II. Regulatory Approvals: Licensing/Authorization of Frequencies

- **Servicing vehicle:**
  - Authorization from international registering state and national licensing state; authorization for uplink (to receive directions from Earth via radio frequencies).
  
- **Roving vehicle:**
  - Authorization from the relevant regulatory bodies.
  
- **Regulation of satellites:** Orbital slots and associated frequencies regulated by the International Telecommunication Union and various domestic regulatory agencies, e.g. U.S. Federal Communications Commission (FCC) or U.K. Office of Communications.
  
- **Responsibility between contracting parties:** Typically, each party responsible for obtaining regulatory approvals necessary for its own performance of obligations, with reasonable assistance provided by other party. Where joint approvals required, parties obligated to work cooperatively.

# III. Compliance with Export Control and Technology Transfer

## Export Controls & Economic Sanctions Regimes:

- **International Traffic in Arms Regulations (ITAR)**
  - State Department - U.S. Munitions List (USML)
  - Military Items & Technology
- **Export Administration Regulations (EAR)**
  - Commerce Department - Commodity Control List (CCL)
  - Commercial & “Dual Use” Items & Technology
  - Homeland Security/Customs Service Export Clearance Enforcement
- **Foreign Assets Control Regulations (FACR)**
  - Treasury Department - Targeted Prohibitions on Financial and Business Transactions
- **Foreign Corrupt Practices Act (FCPA)**
  - Anti-bribery plus Recordkeeping and Accounting Controls

# IV. Managing Political Risks

- Governments as customers (appropriations, etc.)
- Governments as regulators (licenses)

# V. Bankability of Military and Civil Missions

Potential challenges to funding:

- Financing military activities – commercial banks, ECAs
  - Policies and regulations
  - Collateral value of assets
- Example: Most commercial banks may not fund an anti-tank weapons system.

# VI. Bankability of Government Contracts

Potential unique challenges to funding can be addressed using same strategies and approaches:

- Assurance of Congressional actions and programs
- Multi-year appropriations
- Familiarity with government procurement process
- Substance of the “deal” (risk, milestones, LDs, other aspects)

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