The United States of America National Space Law Regime

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United Nations/Argentina Workshop on Space Law
"Contribution of Space Law to Economic and Social Development"
Jointly organized with the Argentinean Space Agency (CONAE)
and supported by the
European Space Agency (ESA)
5 to 8 November 2012
Buenos Aires - Argentina

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50 Years of the Evolution of the Law: The Law Follows Technology

- 1958
  - —Infrastructure response to Cold War exigencies
  - —Civil program and national security
- 1980s
  - —Commerce added to civil and military sectors
- 1980s and 1990s
  - —Technology applications
    - – Launch
    - – Remote sensing/Earth observations
    - – Global Positioning System
- 2000s: Regulatory refinement
- 2010: Codification USC Title 51

Infrastructure: 1958 National Aeronautics and Space Act

- Created the U.S. civil space program
- Established NASA
- Signed by President Eisenhower
- Multiple bodies of law
  - Contract, Tort, International, intellectual property, Space
- Wide variety of subjects
  - International Space Station, space settlements, Congressional Space Medal of Honor, Science, Space, and Technology Education Trust Fund, space commerce agreements
- Pub. L. No. 85-568, 72 Stat. 426 (Jul. 29, 1958)
- http://www.nasa.gov/offices/ogc/about/space_act1.html

Declaration of Policy and Purpose

- **Peaceful Purposes**
  - **"The Congress declares that it is the policy of the United States that activities in space should be devoted to peaceful purposes for the benefit of all mankind." NAS Act, Section 102 (a)**
  - **http://www.nasa.gov/offices/ogc/about/space_act1.html#POLICY**

- **Civil - Military Separation**
  - **"The Congress further declares that aeronautical and space activities...shall be directed by a civilian agency...except activities peculiar to or primarily associated with development of weapons systems, military operations or defense of the U.S...shall be directed by, the Department of Defense" NAS Act, Section 102 (b)**
  - **http://www.nasa.gov/offices/ogc/about/space_act1.html#POLICY**

1980s: Commerce

"Congress declares that the general welfare requires that NASA...seek and encourage, to the maximum extent possible, the fullest commercial use of space." NAS Act, Section 102 (a)

— http://www.nasa.gov/offices/ogc/about/space_act1.html#POLICY

- Commercial added to civil and military
  - —Commerce became the third space sector
- Information access, invention property rights for small and large businesses, etc.
  - —Added to civil sector and military sector

1980s and 1990s: Applications

Commercial Space Launch Activities

- 1984 Commercial Space Launch Act
  - Transportation Dept. established as regulatory agency
  - Encourage, facilitate, and promote private commercial space launches by develop licensing requirements through consultation with other agencies
- 1988 Amendments
  - Authorized U.S. Government to indemnify commercial space transportation for third-party liability
  - Insurance required for
    - i. third parties up to $500 million (U.S.)
    - ii. U.S. Government claims for property damage or loss up to $100 million (U.S.).
    - iii. U.S. Government pays for claims above these amounts
- 2004 Amendments
  - Commercial human spaceflight, i.e., "Space tourism"
  - Authorizes private and commercial passengers to engage in space travel
  - Establishes licensing of private sector spacecraft to bring paying passengers on sub-orbital flights.

1980s and 1990s: Applications

Remote Sensing - Earth Observations

- 1984 Land Remote Sensing Commercialization Act
  - Commercialization focus; privatized Landsat
  - Envisioned no need for public systems in future
- 1992 Land Remote Sensing Policy Act
  - Amended 1984 law
  - Public sector and environmental focus
  - Public and private distinction
  - Commerce Department licenses and regulates private systems
    - Company must disclose amount of government resources that went into launch or operation of the system
      - Fully government funded: all raw data available on nondiscriminatory basis
      - Entirely privately funded: data provided according to reasonable commercial terms and conditions. Data must be made available to a "sensed state"
      - Partial government support: some access to raw data on nondiscriminatory basis
        - Case by case basis with provisions included in license

2000s: Regulatory Refinement: Remote Sensing

The Public-Private Spectrum for Data Access Policy

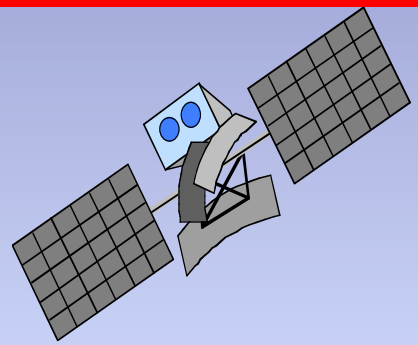
Public	Hybrid	Private
All Tax Money	Public and Private Money	All Private Money
Full nondiscriminatory access at cost of reproduction/free	Case-by-case determination	Access to sensed states only on commercial terms

1980s and 1990s: Applications

Global Positioning System

- Combination of national defense and civilian law
- "GPS": satellites, signal equipment, ground stations, data links, and command and control facilities
- Congress finds GPS "essential element" in civil, scientific and military because of U.S. industry which provides equipment and services
- Defense Secretary authorized to provide and sustain GPS for national security
- Commerce Secretary to sustain efficient management and protect spectrum
- Transportation Secretary coordinates augmentations
- Commerce and Trade Representative coordinates commercial and civil use
- International cooperation, the President encouraged to:
  - operations free of direct user costs
  - Agreements with international organizations and foreign governments

One System:
Different Parts, Different Sector Responsibilities

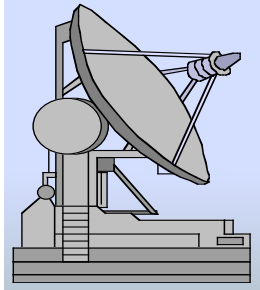


Data Stream

- Government Owned and Operated
- Civil Version Available to Users at No Charge
- Separate Military Signal
- "Selective Availability" Eliminated

Space Segment

Military Owned and Operated



Ground Segment

Private sector commercial equipment and services

National Center for Remote Sensing, Air and Space Law

2000s: Regulatory Refinement: Commercial Human Space Flight

- **Law and regulations address suborbital flight**
  - **Ship leaves Earth, goes beyond air space to very high altitude, returns to Earth**
  - **Does not go into orbit and then orbit Earth**
- **Law looks to the physics of air travel and space travel**
  - **Aircraft operate on dynamics of "lift"**
  - **Rockets operate on dynamics of "thrust"**

2000s: Regulatory Refinement: Commercial Human Space Flight

- Regulatory definition of "suborbital rocket":
  - —"vehicle, rocket-propelled in whole or in part, intended for flight on a suborbital trajectory, and the thrust of which is greater than its lift for the majority of the rocket-powered portion of its ascent."
- Commercial craft have more "thrust" than "lift" on ascent
  - —law defines craft as a rocket, not an aircraft

2000s: Regulatory Refinement: International Space Station Code of Conduct

- Required by IGA and establishes
  - —Guidelines and procedures
  - —Commander's authority and responsibility
- Applies to all NASA-provided persons including
  - —USG employees,
  - —Uniformed Armed Services members
  - —U.S. citizens who aren't USG employees
  - —foreign nationals

2000s: Regulatory Refinement: International Space Station Code of Conduct

Establishes

- On-orbit chain of command
- Relationship between ground and on-orbit management and management hierarchy
- Work and activity standards in space and, as appropriate, on the ground
- Elements and equipment responsibilities
- Disciplinary regulations
- Physical and information security guidelines

2000s: Regulatory Refinement: International Space Station Code of Conduct

Commander's Authority and Responsibility

- On behalf of all Partners
- Enforce
  - —safety procedures
  - —physical and information security procedures
  - —crew rescue procedures

2010, Codification: Title 51 of the U.S.C

- National and Commercial Space Programs
- Brings all space law into a single section of the U.S. Code
- Does not change the law
- Brings U.S. Space Law into the 21st Century
- Journal of Space Law Title 51 Special Issue downloadable for free at

http://www.spacelaw.olemiss.edu/jsl/back-issues/jsl-37-1.html

Questions?
Comments?