A Brief Survey of Remote Sensing Law Around the World

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Background:
Participants and License Types

- Two kinds of licenses, at least
  - Satellite operations
  - Data use

- Space farers and emerging spacefarers
  - Shifting dichotomy
    - Spacefarers/Developed Nations and Nonspacefarers/Developing Nations
    - Some developing nations are now spacefarers
      - Algeria, Brazil, Nigeria, e.g.
Different "Drivers": Space Segment, Ground Segment, Data Stream

- **Space Segment**
  - Cold War Driver

- **Ground Segment**
  - Partial Cold War Driver
  - Increased in Globalization Era

- **Data Stream**
  - Globalization Era Driver
Background: Kinds of Remote Sensing Law and Policy

- **General, global observations**
  - Disasters Charter, e.g.

- **Major remote sensing nations**
  - Space segment focused
    - Canada, Europe, France, India, Japan, Russian Federation, e.g.

- **Non-remote sensing nations**
  - Ground segment focused law
    - UK, e.g.
### The Big Picture: Land Data Distribution Policies

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The Big Picture
Distribution Policies and Rationales

~ 2004 - Present

**Why**
Survival of, and economic justification for, space systems

**To**
As expanded a user base as possible within growing national security restrictions

**By**
By whomever can succeed, but increasing tendency to be some form of government worldwide.

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General Observations

• Driving force of legislation is compliance with treaties and international obligations
• U.S. law is apparent standard
  —Not to the "letter" but with due consideration
• Hybrid public - private environment
  —Law will not change this
• Space segment vs. ground segment
  —Satellite vs. data focus
    – U.S. vs. Europe, for example
Canada

- Data Access Control Policy
  - "transactional"
- Operations license: public, private, hybrid
- Case-by-case review
  - "shutter control"
  - tasking records
  - notify re: substantial foreign agreements and change in operational characteristics
  - need permission to transfer ownership, etc.
- Very similar to U.S. law
• Operations and data inextricably intertwined
  — No private systems or licensing, per se
  — "commercial" means what is done, not who does it
  — Hybrid public - commercial systems
    – Government systems operate commercially

• Data driven, but growing focus on space segment

• Multilateral agreements on satellite-by-satellite basis, e.g., Envisat, ERS-1, ERS-2

• Maastrict Treaty, agriculture and remote sensing
Joint Principles Sentinel Data Policy

- Anybody can access
  - no difference between public, commercial, scientific, European or non-European users

- Free data licenses

- Available free via a "generic" online access
  - subject to user registration, accepting terms and conditions

- Additional tailored access modes and conditions
• EC has proposed a Basic Legal Act
  — i.e. a Regulation of European Parliament and the Council
  — on the basis of the Commission proposal for a European Earth Observation program (GMES) and its initial operations (2011 – 2013)

• Basic Act to be adopted towards end of 2010
• Data Availability Directives:
  — “INSPIRE Directive” (2007/2)
  — “PSI Directive” (2003/98)

• Directives on IPR and data protection:
  — “Copyright Directive” (2001/29)
  — “Database Directive” (96/9)
  — “Protection of Privacy Directive” (2002/58)
• Data driven
  — Focus: return on investment of public funds
  — Open civil regime
• **SPOT** considered "privatized" not "commercialized"
• LOI no. 2008-518 du 3 juin 2008 relative aux opérations spatiales
  — First English translation in 34 J. Space L., 2008
    — Phillipe Clerc, Head, Legal Services, CNES
• “primary space-based data” must be declared to the administrative authority
  — Determination is made that data does not harm foreign policy or defense interests
  — Measures may be prescribed to safeguard these interests
  — 200,000€ fine for noncompliance

• Provisions do not apply to
  — Ministry of Defense activities
  — Satellite operations
  — Data reception
• **Three kinds of licenses**
  — satellite operation
  — general data distribution
  — specific data transactions

• **Two-tiered “security data policy” analogous U.S.**

• **National security; commercial secondar**
  — Data distribution mechanism creates system in which operator ("Betreiber"), distributor ("Datenanbieter") or operator/distributor ("Betreiber zugleich Datenanbieter") will be licensed
  — Required to implement a “geomatrix” provided by government
    - includes check list to determine transaction sensitivity
    - potential liability if a distribution mistake is made
      - Penalties may include incarceration.
India

- **Remote Sensing Data Policy (RSDP), no law**
  - Comprehensive; space and ground segment driven
  - Acquisition and distribution from Indian and foreign satellites for civilian users in India
  - Data is a public good
  - No provisions for operating licenses

- **Allows sale of commercial 1-m imagery**
  - Controls distribution
  - Military sites removed from *Ikonos* images before domestic distribution

- **Same requirement for 5.8-meter imagery from India’s own satellites**
Japan’s Basic Space Law

- Establish data use system in 1-2 years
  - Collect User Opinions
    - User and supplier coordination committee
  - More User-Friendly Satellite Data Use System
    - make the most of private sector current assets and know-how
  - Make Standardized Data Policy
    - balance limits on distributable resolution and price with publicly funded data as widely as possible
  - “analyzed information” policy
Russian Federation (CIS)

- **Operations**
  - Broad federal legislation
  - Licensing, certification, liability, safety, insurance and government control
  - License required, few specifics: insurance
  - Protects IP and commercial secrets of foreign entities operating under Federation's jurisdiction
  - RS includes environmental monitoring and meteorology

- **Sale of high resolution satellite imagery**
  - Conflicts between intelligence and commerce
  - Requests for lists of available images and image orders have been denied, delayed and canceled due to national secrecy
    - Particularly pre - 1992

- **Different rules over time, e.g., SPIN, ALMAZ, etc.**
United Kingdom

- Ground-segment focus
  - Space segment focus follows later

- House of Lords
  - “Main effort should be ground and user segment”
  - Specialize in radar
  - National data distribution network
  - Support postgraduate education in remote sensing and digital cartography

- National legislation: Space Act
  - No specific mention of remote sensing
  - Authorizes government to require licenses
1992 Land Remote Sensing Policy Act

- 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
The Public-Private Spectrum for Data Access Policy

Public
- All Tax Money
- Full nondiscriminatory access at cost of reproduction/free

Hybrid
- Public and Private Money
- Case-by-case determination

Private
- All Private Money
- Access to sensed states only on commercial terms

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Questions?
Comments?