U.S. Space Commerce, 1991
($ millions)

Transponder Leasing $850
Comm. Satellites $900
Mobile Satellites $205
Remote Sensing $170
Earth Stations $1000
Commercial Launches $500

Total Revenue: $3.6 billion
The US Share of Commercial Payloads has Decreased as Ariane's Share has Grown
World Communications Satellite Orders
Orders Scheduled for Delivery, 1991-1995
Large capacity geostationary satellites

U.S. 48
France 13
Japan 3
Italy 5
U.K. 4
Others 8
Total: 81

The U.S. Share of Prime Contracts for the
Construction of Commercial Communications
Satellites is Decreasing

Office of Telecommunications

<table>
<thead>
<tr>
<th>Time Period</th>
<th>U.S. Prime</th>
<th>Foreign Prime</th>
<th>Undetermined</th>
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<tbody>
<tr>
<td>1970-1979</td>
<td>87%</td>
<td>13%</td>
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<tr>
<td>1980-1989</td>
<td>71%</td>
<td>22%</td>
<td>29%</td>
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<tr>
<td>1990-2000</td>
<td>41%</td>
<td>29%</td>
<td>37%</td>
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<td>(Projected)</td>
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Emerging Markets

Lightsats
- lower capital and insurance requirements
- many potential applications

Remote sensing data
- value-added markets, new technologies

Navigation
- ground equipment and services, GPS-driven

Mobile communication
- land, air, and sea

Fusion of all of the above in consumer products

Office of Space Commerce

Space Activities at the Commerce Department

NOAA
- weather satellites, Landsat

National Telecommunications and Information Agency
- World Administrative Radio Conference '92
- international telecommunications policy

International Trade Administration
- monitors space trade agreements, competitions

Bureau of Export Administration
- export licensing for dual-use technologies

Office of Space Commerce
OSC Mission Description

- Serve as the principle unit for the coordination of space-related issues, programs and initiatives within the Department;
- Represent the Department in the development of U.S. policies and in negotiations with foreign countries to promote free and fair trade internationally in the area of space commerce;
- Act as industry's advocate within the Executive Branch to ensure that the Government meets its space-related requirements;
- Promote private sector investment in space by collecting, analyzing and disseminating information on space markets, and conduct seminars to increase awareness of commercial space opportunities;
- Assist commercial space companies in their efforts to do business with the U.S. government;
- Ensure that the U.S. Government does not engage in space-related activities that preclude or deter the commercial sector, and to promote the export of space-related goods and services.

Key Drivers for Commercial Space

- Future Government Commitment to New Space Activities
  - Space Station, new launch vehicle, NASP, SSTO
  - Mission to Planet Earth and the Moon-Mars program
  - Strategic Defense Initiative
- U.S. Response to Increased International Competition
  - Federal and State governments
  - private industry
  - dual-use technology proliferation, the industrial base, and national security
- Role of Commercial Space Activities
  - Source of Major New Markets
  - Spur to other Industries
  - A Means of Making Public Activities more Efficient
General DOC Space Policy Themes

- Stress Importance of Economic Competitiveness
  - embed concern for competitiveness and quality in USG programs
  - keep in mind during International cooperation discussions
  - open overseas markets, deter unfair trade practices
- Use Commercial Goods and Services
  - promote technology transfers between government and industry
  - discourage government competition with private industry
  - use anchor tenancy, service-buys, etc.
  - avoid direct subsidies, use market forces
- Ensure Commercial Concerns are part of National Decisions
  - seek and use industry input
  - national security, technology policy, and foreign policy

Themes in Specific Discussions

- Export Controls
  - consistency with multilateral agreements
  - predictability and timeliness in application
- Trade Negotiations
  - limitations on government supports, especially direct subsidies
  - consistent enforcement
  - reciprocity
- Government Procurement
  - encourage commercial-like practices in contracts
  - discourage government competition with industry
  - focus on operational requirements, not specifications
- Economic Policy
  - lower barriers to entry, foster competition
  - minimize government interventions in specific companies and industries

Office of Space Commerce
Getting Information on Space Business

**Department of Commerce sources**
- Office of Business Liaison
- Economic and Statistics Administration
- Economic Bulletin Board / CD-ROM
- Japan Information Center
- Trade Information Center (800) USA-TRADE
- U.S. Foreign and Commercial Service
- Bureau of Export Administration
- National Technical Information Service

**Other Government sources**
- Securities and Exchange Commission
- Federal Communications Commission
- State Department Defense Trade Controls
- U.S. Trade Representative's "Foreign Trade Barriers"

What does U.S. Space Commerce Need to Successfully Compete?

**Strategic Vision encompassing:**

- Superior technology - lower costs, higher quality
- Fair trade environment with minimal distortions
- Patient, affordable capital
- Removal of Government-created impediments
- Effective cooperation between Federal and State governments, academia, and industry