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Commercialization in NASA Space Operations

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Agenda

- **NASA's Plan**
- **Space Operations**
- **Space Operations Technology**
- **Space Operations Technology Strategy**



NASA's Plan

Reality - NASA's budget is flat

The prospect of getting additional funds from Congress for new program starts is faint

Where will the money come from\$?

The Game Plan

- Change strategy in the relationship of technology and missions
 - Technology enables the missions
 - One Galileo mission vs 12 small planetary missions - \$1.9 Billion dollars
- Integrate technology across the Agency
- Consolidate the management of space operations
- Implement strategies to reduce the cost of operations
 - NASA spends more than \$4 Billion/year on operations
 - **Outsource, privatize, commercialize**
- Redirect the cost savings to exploration and new program starts



Space Operations

Space Operations Management Office (SOMO) is an agency-wide provider of mission and data services. Includes the expertise and systems necessary to support the mission preparation and flight execution phases of a program or project.

Mission: Implement Agency space operations goals while successfully providing services which enable Enterprise mission execution

- Goal 1:** Meet the strategic mission needs of the NASA Enterprises while **reducing operations costs**, consolidating and integrating operations across the Agency, emphasizing the use of **technology**, and **increasing standardization and interoperability**
- Goal 2:** **Transition the civil service and Jet Propulsion laboratory (JPL)/Cal Tech work force** from routine, day-to-day operations to science, research, and development, except for core competencies
- Goal 3:** Transition all operations contracts for products and services to **performance-based contracting**
- Goal 4:** **Transition operations functions** that generate products and services to outsourcing, privatization, and, ultimately, commercialized services
- Goal 5:** **Restructure management and operational processes** using the concept of **customer/service provider**



Space Operations Technology

SOMO has overall responsibility for communications and operations technologies required to

- **Enable and/or reduce the cost** of future NASA missions, includes space and ground elements
- Promote sustained **U.S. Industry leadership** in commercial communications
- Maximize NASA's ability to **acquire commercial services** to meet its communications and operations needs.

The Space Operations & Communications Technology & Advanced Development Program

- **Defines NASA's program** for future communications and space operations technology development
- Supplies **new capabilities** required for SOMO to meet their mission
- Is an integral part of NASA's **strategy** to move towards using commercial services to cost-effectively meet the Enterprises' space operations needs, particularly the **Commercial Satellite Communications program**



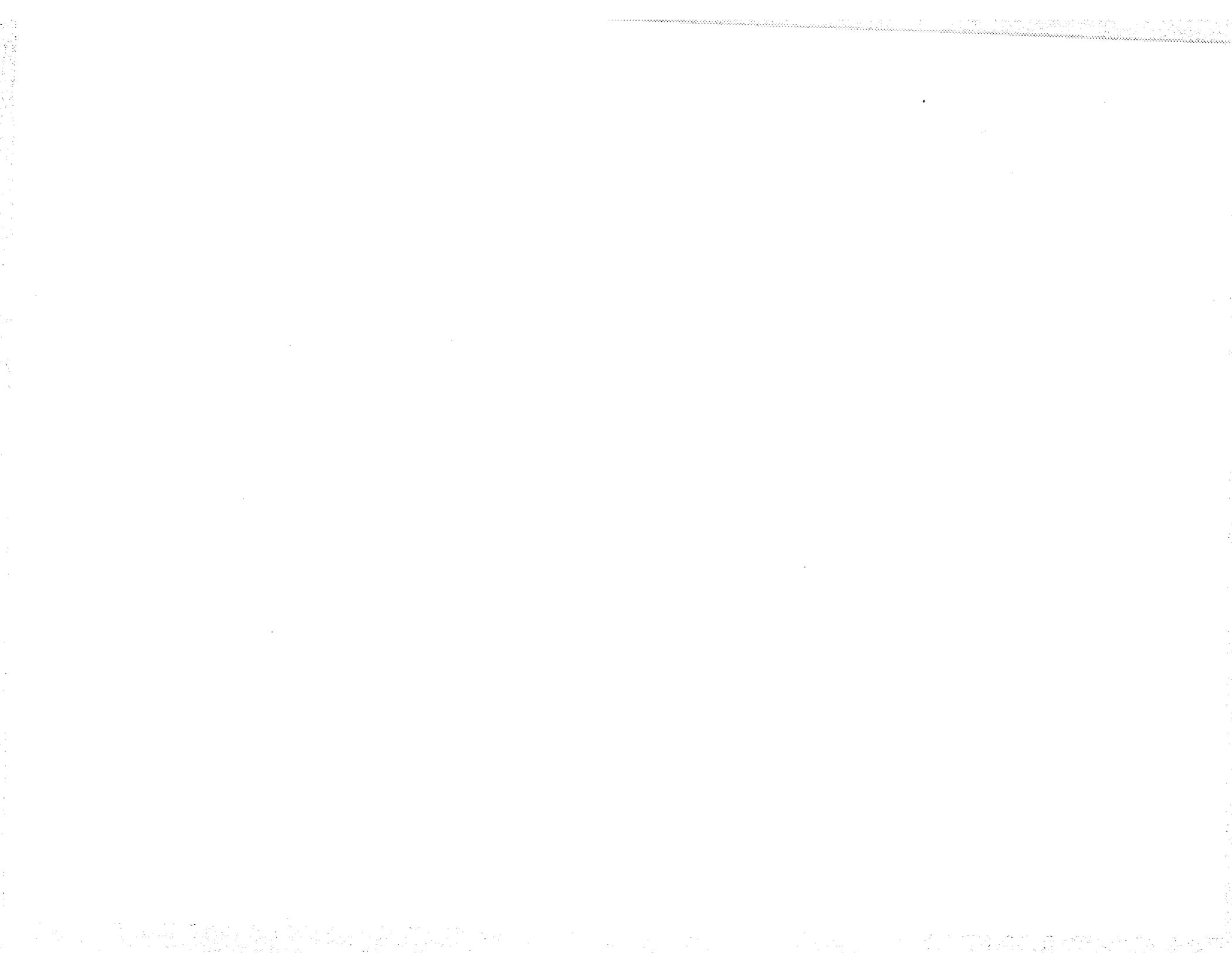
Space Operations Technology Strategy

Partner with the Commercial Satellite Communications Industry to

- Enable NASA's use of commercial services and assets to reduce the cost of operations
- Develop pre-competitive technologies to act as a catalyst to open new markets for the U.S. SatCom Industry

Near-term areas of collaboration

- Interoperability issues
- Critical areas of pre-competitive technology
- Trade studies and system architecture assessments
- SatCom workforce enhancement



Invited Session

Internet over Satellite Networks