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