

Exhibit 300 (BY2010)

PART ONE	
OVERVIEW	
1. Date of Submission:	2008-09-08
2. Agency:	026
3. Bureau:	00
4. Name of this Capital Asset:	SOMD - Deep Space Network (DSN)
5. Unique Project Identifier:	026-00-01-05-01-2626-00
6. What kind of investment will this be in FY2010?	
Operations and Maintenance	
7. What was the first budget year this investment was submitted to OMB?	
FY2004	
8. Provide a brief summary and justification for this investment, including a brief description of how this closes in part or in whole an identified agency performance gap.	
<p>The Deep Space Network (DSN), in operation since the 1960s, provides critical communications and tracking for multiple spacecraft from three complexes located globally and operates year round 24 hours/7days to provide continuous contact with the spacecraft. The DSN fulfills NASA goals by supporting NASA deep space mission set, including NASA-funded missions and collaborative international missions. The DSN also serves as primary and backup facility for some high Earth-orbit and near-Earth missions. At any given time, the DSN supports more than 30 missions. The DSN complexes are located in Goldstone, California; Madrid, Spain and Canberra, Australia. Each complex includes buildings, structures, roads and commodes, utility systems and collateral equipment. Each complex has multiple tracking stations with antenna diameters ranging from 26m-70m to perform tracking, telemetry, and command (TT&C) functions over several frequencies. All together, there are 19 tracking stations in operation. Each complex also has a centralized signal processing center. The three complexes are connected, through a ground communication network, to a centralized network operation center at Monrovia, CA. There are other support facilities, which include a support area located inside JPL Space Flight Operations Facility, Pasadena, CA., a launch support facility located at KSC, FL. and Emergency Control Center located at Goldstone, CA. The DSN also makes scientific observations in support of NASA programs and for our host countries pursuing pure science. While most of the DSN funding is toward operations and maintenance, some minor investments are made in refurbishments, sustaining engineering, etc. of the DSN and in ensuring compliance with laws and regulations. Investments are also being made in the areas of strategic planning and studies, technologies, standards and spectrum management. The DSN Program is managed by JPL, a Federally Funded Research and Development Center (FFRDC), through a Prime Contract between NASA and the California Institute of Technology (Caltech.)</p>	
9. Did the Agency's Executive/Investment Committee approve this request?	
yes	
9.a. If "yes," what was the date of this approval?	
2008-06-19	
10. Did the Program/Project Manager review this Exhibit?	
yes	
11. Program/Project Manager Name:	
Pete Vrotsos	
Program/Project Manager Phone:	
202-358-1329	
Program/Project Manager Email:	
pete.vrotsos-1@nasa.gov	
11.a. What is the current FAC-P/PM certification level of the project/program manager?	
Senior/Expert/DAWIA-Level 3	
11.b. When was the Program/Project Manager Assigned?	

2008-03-03
11.c. What date did the Program/Project Manager receive the FACP/PM certification? If the certification has not been issued, what is the anticipated date for certification?
2008-08-08
12. Has the agency developed and/or promoted cost effective, energy-efficient and environmentally sustainable techniques or practices for this project.
yes
12.a. Will this investment include electronic assets (including computers)?
yes
12.b. Is this investment for new construction or major retrofit of a Federal building or facility? (answer applicable to non-IT assets only)
no
13. Does this investment directly support one of the PMA initiatives?
yes
If yes, select the initiatives that apply:
Budget Performance Integration
Competitive Sourcing
Financial Performance
Real Property Asset Management
13.a. Briefly and specifically describe for each selected how this asset directly supports the identified initiative(s)? (e.g. If E-Gov is selected, is it an approved shared service provider or the managing partner?)
Critical competency retentions addressed regularly; use resource management system which integrates scope, schedule, workforce and cost; information exchange and archive performed electronically; tasks/costs reviewed monthly and annually; most of the operations and maintenance services acquired through competitive sourcing; manage real property based on NPR 8831.2D, subjected to NASA facility reviews; R&D based on road maps responsive to strategic goals and plans.
14. Does this investment support a program assessed using the Program Assessment Rating Tool (PART)?
yes
14.a. If yes, does this investment address a weakness found during the PART review?
no
14.b. If yes, what is the name of the PARTed program?
10001144 - Solar System Exploration
14.c. If yes, what rating did the PART receive?
Effective
15. Is this investment for information technology?
yes
16. What is the level of the IT Project (per CIO Council's PM Guidance)?
Level 3
17. What project management qualifications does the Project Manager have? (per CIO Council's PM Guidance)
(1) Project manager has been validated as qualified for this investment
18. Is this investment identified as high risk on the Q4 - FY 2008 agency high risk report (per OMB memorandum M-05-23)?
no
19. Is this a financial management system?
no
19.a.2. If no, what does it address?
Communications
20. What is the percentage breakout for the total FY2010 funding request for the following? (This should total 100%)

Hardware	0
Software	0
Services	0
Other	100

21. If this project produces information dissemination products for the public, are these products published to the Internet in conformance with OMB Memorandum 05-04 and included in your agency inventory, schedules and priorities?

n/a

22. Contact information of individual responsible for privacy related questions.

Name

Mr. Michael Rodrigues

Phone Number

818-354-7588

Title

Project Manager

Email

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23. Are the records produced by this investment appropriately scheduled with the National Archives and Records Administration's approval?

yes

24. Does this investment directly support one of the GAO High Risk Areas?

yes

SUMMARY OF SPEND

1. Provide the total estimated life-cycle cost for this investment by completing the following table. All amounts represent budget authority in millions, and are rounded to three decimal places. Federal personnel costs should be included only in the row designated Government FTE Cost, and should be excluded from the amounts shown for Planning, Full Acquisition, and Operation/Maintenance. The total estimated annual cost of the investment is the sum of costs for Planning, Full Acquisition, and Operation/Maintenance. For Federal buildings and facilities, life-cycle costs should include long term energy, environmental, decommissioning, and/or restoration costs. The costs associated with the entire life-cycle of the investment should be included in this report.

All amounts represent Budget Authority

(Estimates for BY+1 and beyond are for planning purposes only and do not represent budget decisions)

	PY-1 & Earlier	PY	CY	BY
	-2007	2008	2009	2010
Planning Budgetary Resources	0	0	0	0
Acquisition Budgetary Resources	0	0	0	0
Maintenance Budgetary Resources	41.18	34.726	35.59	36.419
Government FTE Cost	0.068	0.068	0.068	0.068
# of FTEs	0	0	0	0

Note: For the cross-agency investments, this table should include all funding (both managing partner and partner agencies).

Government FTE Costs should not be included as part of the TOTAL represented.

2. Will this project require the agency to hire additional FTE's?

no

PERFORMANCE

In order to successfully address this area of the exhibit 300, performance goals must be provided for the agency and be linked to the annual performance plan. The investment must discuss the agency's mission and strategic goals, and performance measures (indicators) must be provided. These goals need to map to the gap in the agency's strategic goals and objectives this investment is designed to fill. They are the internal and external performance benefits this investment is expected to deliver to the agency (e.g., improve efficiency by 60 percent, increase citizen participation by 300 percent a year to achieve an overall citizen participation rate of 75 percent by FY 2xxx, etc.). The goals must be clearly measurable investment outcomes, and if applicable, investment outputs. They do not include the completion date of the module, milestones, or investment, or general goals, such as, significant, better, improved that do not have a quantitative measure.

Agencies must use the following table to report performance goals and measures for the major investment and use the Federal Enterprise Architecture (FEA) Performance Reference Model (PRM). Map all Measurement Indicators to the corresponding Measurement Area and Measurement Grouping identified in the PRM. There should be at least one Measurement Indicator for each of the four different Measurement Areas (for each fiscal year). The PRM is available at www.egov.gov. The table can be extended to include performance measures for years beyond the next President's Budget.

	Fiscal Year	Strategic Goal Supported	Measurement Area	Measurement Grouping	Measurement Indicator	Baseline	Planned Improvement to the Baseline	Actual Results
1	2008	Goal 6: Establish a lunar return program having the maximum possible utility for later missions to Mars and other destinations.	Mission and Business Results	Space Exploration and Innovation	Customers served	Number of deep space customers	Maintain at current level (assuming the number of missions requesting services does not decrease and the customers'™ requirements do not increase, then the DSN has sufficient funds to meet those commitments)	33
2	2008	Goal 6: Establish a lunar return program having the maximum possible utility for later missions to Mars and other destinations.	Customer Results	Service Availability	Space network availability	95%	Maintain at the same level	98.5%
3	2008	Goal 6: Establish a lunar return program having the maximum possible utility for later missions to Mars and other destinations.	Technology	Service Availability	Service Proficiency	98%	Maintain at current level	99%
4	2008	Goal 6: Establish a lunar return program having the maximum possible	Processes and Activities	Policies	Customer service agreements	Number of signed customer agreements: 24	Maintain at current level	33

		utility for later missions to Mars and other destinations.						
5	2009	Goal 6: Establish a lunar return program having the maximum possible utility for later missions to Mars and other destinations.	Mission and Business Results	Space Exploration and Innovation	Customers served	Number of deep space customers	Maintain at current level (assuming the number of missions requesting services does not decrease and the customers'™ requirements do not increase, then the DSN has sufficient funds to meet those commitments)	TBD
6	2009	Goal 6: Establish a lunar return program having the maximum possible utility for later missions to Mars and other destinations.	Customer Results	Service Availability	Space network availability	95%	Maintain at the same level	TBD
7	2009	Goal 6: Establish a lunar return program having the maximum possible utility for later missions to Mars and other destinations.	Technology	Service Availability	Service Proficiency	98%	Maintain at current level	TBD
8	2009	Goal 6: Establish a lunar return program having the maximum possible utility for later missions to Mars and other destinations.	Processes and Activities	Policies	Customer service agreements	Number of signed customer agreements: 24	Maintain at current level	TBD
9	2010	Goal 6: Establish a lunar return program having the maximum possible	Mission and Business Results	Space Exploration and Innovation	Customers served	Number of deep space customers	Maintain at current level (assuming the number of missions requesting services does not	TBD

		utility for later missions to Mars and other destinations.					decrease and the customers'™ requirements do not increase, then the DSN has sufficient funds to meet those commitments)	
10	2010	Goal 6: Establish a lunar return program having the maximum possible utility for later missions to Mars and other destinations.	Customer Results	Service Availability	Space network availability	95%	Maintain at the same level	TBD
11	2010	Goal 6: Establish a lunar return program having the maximum possible utility for later missions to Mars and other destinations.	Technology	Service Availability	Service Proficiency	98%	Maintain at current level	TBD
12	2010	Goal 6: Establish a lunar return program having the maximum possible utility for later missions to Mars and other destinations.	Processes and Activities	Policies	Customer service agreements	Number of signed customer agreements: 24	Maintain at current level	TBD

EA

In order to successfully address this area of the business case and capital asset plan you must ensure the investment is included in the agency's EA and Capital Planning and Investment Control (CPIC) process, and is mapped to and supports the FEA. You must also ensure the business case demonstrates the relationship between the investment and the business, performance, data, services, application, and technology layers of the agency's EA.

1. Is this investment included in your agency's target enterprise architecture?

yes

2. Is this investment included in the agency's EA Transition Strategy?

yes

2.a. If yes, provide the investment name as identified in the Transition Strategy provided in the agency's most recent annual EA Assessment.

Deep Space Network.

3. Is this investment identified in a completed (contains a target architecture) and approved segment architecture?

yes

3.a. If yes, provide the six digit code corresponding to the agency segment architecture. The segment architecture codes are maintained by the agency Chief Architect.

463-000

4. Identify the service components funded by this major IT investment (e.g., knowledge management, content management, customer relationship management, etc.). Provide this information in the format of the following table. For detailed guidance regarding components, please refer to <http://www.whitehouse.gov/omb/egov/>.

Component: Use existing SRM Components or identify as NEW. A NEW component is one not already identified as a service component in the FEA SRM.

Reused Name and UPI: A reused component is one being funded by another investment, but being used by this investment. Rather than answer yes or no, identify the reused service component funded by the other investment and identify the other investment using the Unique Project Identifier (UPI) code from the OMB Ex 300 or Ex 53 submission.

Internal or External Reuse?: Internal reuse is within an agency. For example, one agency within a department is reusing a service component provided by another agency within the same department. External reuse is one agency within a department reusing a service component provided by another agency in another department. A good example of this is an E-Gov initiative service being reused by multiple organizations across the federal government.

Funding Percentage: Please provide the percentage of the BY requested funding amount used for each service component listed in the table. If external, provide the funding level transferred to another agency to pay for the service.

	Agency Component Name	Agency Component Description	Service Type	Component	Reused Component Name	Reused UPI	Internal or External Reuse?	Funding %
1	DSN-SPS	Authorized Users can submit web-based request for network services and components.	Systems Management	Remote Systems Control			Internal	1
2	DSN-SPS	Schedule and configuration confirmation is provided by the customer.	Customer Relationship Management	Customer Feedback			Internal	1
3	DSN-DMR/DSA	DSN Service Agreements are negotiated annually for customers.	Customer Relationship Management	Partner Relationship Management			Internal	1
4	DSN-RAP	Joint User Resource Allocation Process and DSN Scheduling enables planning support to mission users.	Human Capital / Workforce Management	Resource Planning and Allocation			Internal	1
5	DSN-DRMS/CRMS	Discrepancy Report Management System (DRMS) and Change Request Management System (CRMS) record and track closure process of operational failures and development anomalies, respectively.	Tracking and Workflow	Process Tracking			Internal	1
6	DSN-PDMS	Products Data Management System (PDMS), Interface Agreement Database, DSN Telecommunications Design Handbook, serve as repository of operational documentations on DSN requirements, interfaces, performance, and	Management of Processes	Change Management			Internal	4

		operating procedures.						
7	DSN-DDORS	Dynamic Object Oriented Requirements System (DOORS) enable management of DSN requirements.	Management of Processes	Requirements Management			Internal	0
8	DSN-ECR/ECO	Engineering Change Requests (ECR) and Engineering Change Orders (ECO) process provide change control on equipment environment.	Management of Processes	Configuration Management			Internal	0
9	DSN-SCD	Project Management Reports and Service Capability Development (SCD) process provides the framework for project management and product delivery.	Management of Processes	Program / Project Management			Internal	2
10	DSN-PER	Project Management Reports and Performance Analysis Process prompt assessment of risks.	Management of Processes	Risk Management			Internal	2
11	DSN-PPQA	QA certification of hardware and software, Acceptance Testing process, and Verification/Validation of Requirements assures product quality.	Management of Processes	Quality Management			Internal	0
12	DSN-DOCU	Docushare libraries and Team Center enables collaboration and communications among team members.	Organizational Management	Workgroup / Groupware			Internal	1
13	DSN-ICIS	Institutional network support group maintain and monitor communications network for communications purpose (email, databases and documents access, meeting makers, etc.).	Organizational Management	Network Management			Internal	1
14	DSN-STRG	Strategy Planning Office and the annual Program Operation Planning process help defining long-term goals and roadmaps.	Investment Management	Strategic Planning and Mgmt			Internal	2
15	DSN-NBS	New Business System (NBS) requisition system and Just-in-time procurement catalog support procurement of hardware, software and contract services.	Supply Chain Management	Procurement			Internal	1
16	DSN-SERV	Service Catalog (820-100) identifies services provided by DSN.	Supply Chain Management	Catalog Management			Internal	1

17	DSN-ALL	OAO Alliance computer replenishment system automates the hardware upgrade/procurement.	Supply Chain Management	Storefront / Shopping Cart			Internal	1
18	DSN-PDMS	Products Data Management System (PDMS) enables documentation storage, maintenance and retrieval of information	Content Management	Content Authoring			Internal	2
19	DSN-PDMS	Products Data Management System (PDMS) enables documentation storage, maintenance and retrieval of information.	Document Management	Document Referencing			Internal	0
20	DSN-DOCU	DSN docushare libraries, Interplanetary Directorate Technical Progress Reports supports identification.	Knowledge Management	Information Sharing			Internal	0
21	DSN-SEV	DSN service execution automation via Temporal Dependency Network (TDN) encodes knowledge of experts into knowledge base of expert system.	Knowledge Management	Knowledge Engineering			Internal	0
22	DSN-PDMS	Products Data Management System (PDMS) stores, protects, archives, classifies, and retires information.	Records Management	Record Linking / Association			Internal	0
23	DSN-PERA	Performance analysis activities and reports helps uncover persistent operating problems and trends of performance.	Analysis and Statistics	Forensics			Internal	0
24	DSN-UTP	Universal Telecom Predictor and Radiometric Predictions enable study of spacecraft tracking feasibility.	Analysis and Statistics	Mathematical			Internal	0
25	DSN-DRMS	Discrepancy Report Management System (DRMS) enables graphical display of failures; Service Preparation Subsystem (SPS) enables graphical displays of resource loading and tracking predicts.	Visualization	Graphing / Charting			Internal	0
26	DSN-DESIGN	Document drawing services produces product designs in diagram format.	Visualization	CAD			Internal	0
27	DSN-RAP	Forecasting resource loading per mission subscription of service via Resource Allocation Process.	Business Intelligence	Demand Forecasting / Mgmt			Internal	0

28	DSN-RMS	New Business System Financial tracking enables forecasting to year-end.	Business Intelligence	Demand Forecasting / Mgmt			Internal	0
29	DSN-NBS	NBS Financial tracking system; Schedule tracking via MS Project.	Reporting	Ad Hoc			Internal	0
30	DSN-DRMS/CRMS	DRMS and CRMS system allows query and extraction of problem reports.	Reporting	Ad Hoc			Internal	0
31	DSN-NBS	New Business System (NBS).	Asset / Materials Management	Property / Asset Management			Internal	0
32	DSN-DNS	OAo Contract enables automated computer upgrade/replenishment.	Asset / Materials Management	Computers / Automation Management			Internal	1
33	DSN-SCD	Service Capability Development process and CRMS support capability development and testing.	Development and Integration	Instrumentation and Testing			Internal	0
34	DSN-BOSS	Business Operation Support System (BOSS) enable electronic employees' listing and their location/organization.	Human Capital / Workforce Management	Workforce Directory / Locator			Internal	0
35	DSN-JOB	JPL Job! system supports employee hiring	Human Capital / Workforce Management	Workforce Acquisition / Optimization			Internal	0
36	DSN-ITSTY	IT Security services (LDAP, etc) provide perimeter firewalls, access control, unauthorized entry detection.	Security Management	Identification and Authentication			Internal	1
37	DSN-MM	Outlook toolsets	Collaboration	Shared Calendaring			Internal	0
38	DSN-DNS	Outlook, and other email toolsets.	Collaboration	Email			Internal	0
39	DSN-MM	MeetingPlace web; Meetme system.	Communication	Audio Conferencing			Internal	0
40	DSN-VCF	DSN video conference capability.	Communication	Video Conferencing			Internal	0
41	DSN-VOIP	Voice-over-IP integration.	Communication	Voice Communications			Internal	0

5. To demonstrate how this major IT investment aligns with the FEA Technical Reference Model (TRM), please list the Service Areas, Categories, Standards, and Service Specifications supporting this IT investment.

FEA SRM Component: Service Components identified in the previous question should be entered in this column. Please enter multiple rows for FEA SRM Components supported by multiple TRM Service Specifications.

Service Specification: In the Service Specification field, Agencies should provide information on the specified technical standard or vendor product mapped to the FEA TRM Service Standard, including model or version numbers, as appropriate.

SRM Component	Service Area	Service Category	Service Standard	Service Specification (i.e., vendor and product name)
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1	Partner Relationship Management	Service Access and Delivery	Access Channels	Web Browser	Netscape, Microsoft Internet Explorer
2	Partner Relationship Management	Service Access and Delivery	Access Channels	Collaboration / Communications	Emailing: Outlook, webmail
3	Partner Relationship Management	Service Access and Delivery	Delivery Channels	Intranet	FTP, Client API, web service
4	Partner Relationship Management	Service Platform and Infrastructure	Database / Storage	Database	Oracle-based application
5	Partner Relationship Management	Service Platform and Infrastructure	Database / Storage	Storage	RAID
6	Partner Relationship Management	Service Platform and Infrastructure	Hardware / Infrastructure	Servers / Computers	Sun Microsystem, Vertex FPGA, Avtec telecommunications products, RTLogic telecommunications products, Motorola PowerPC products, Cisco routers
7	Partner Relationship Management	Component Framework	Data Management	Database Connectivity	Oracle-, LDAP-based applications
8	Program / Project Management	Service Platform and Infrastructure	Database / Storage	Database	Oracle-based applications, MS Excel
9	Process Tracking	Service Platform and Infrastructure	Software Engineering	Software Configuration Management	Harvest, Oracle-based applications
10	Change Management	Service Platform and Infrastructure	Delivery Servers	Web Servers	Apache

6. Will the application leverage existing components and/or applications across the Government (i.e., FirstGov, Pay.Gov, etc)?

yes

6.a. If yes, please describe.

Not directly, but have been accessing GSA CORE.gov site to evaluate components for reuse. NASA uses FirstGov and has an Integrated Financial Management Program separate from this investment. This investment relies heavily on COTS. Investment currently has in place contingency support agreements with other government agencies for use of their assets. NASA is currently using assets from NOAA and NPOESS Integrated Program Office for operational support.

PART THREE

RISK

You should perform a risk assessment during the early planning and initial concept phase of the investment's life-cycle, develop a risk-adjusted life-cycle cost estimate and a plan to eliminate, mitigate or manage risk, and be actively managing risk throughout the investment's life-cycle.

Answer the following questions to describe how you are managing investment risks.

1. Does the investment have a Risk Management Plan?

yes

1.a. If yes, what is the date of the plan?

2006-03-31

1.b. Has the Risk Management Plan been significantly changed since last year's submission to OMB?

no

COST & SCHEDULE

1. Was operational analysis conducted?

yes

1.a. If yes, provide the date the analysis was completed.

2008-08-01

What were the results of your operational analysis?

Based on the results of the operational analysis, the DSN investment continues to meet cost, risk and value expectations: Financial Performance: DSN provides monthly reports to the SMD and SOMD/Space Communications DAAs on the cost, schedule and technical aspects of the investment. DSN's annual O&M costs continue to be comparable to planned costs. Since FY03, DSN's procurement costs (this includes contractor labor, hardware, software, and ODCs) have resulted in less than a 10% variance from the planned costs. The only costs with more than a 10% variance are Center G&A and Service Pool costs which are variable, and controlled at the Center level and not within DSN's control. User Results: DSN users are satisfied with its services. DSN commits to providing 95% return of telemetry sent from spacecraft, 95% of requested commands sent, and 95% successful tracking passes. In reality, the level is generally >98% for each category as measured monthly on an antenna and subsystem basis. User requests for individual services and requirements are documented in service level agreements (DSAs) and Detailed Mission Requirements (DMRs) between the DSN and the user. Strategic/Business Needs: DSN continues to support NASA's deep space communications through providing standard and custom services. Each DSN service has defined performance metrics which are calculated, reported and evaluated monthly. The DSN is currently exceeding all goals for its performance metrics. Innovation: Annually, the DSN reviews existing user requirements and solicits future requirements from NASA Headquarters as well as programs/projects. In parallel with the user requirements reviews, the DSN reviews use trends and the technological state of the network infrastructure. Based on these analyses, recommendations are made for modifying the infrastructure or outsourced contracts to accommodate user requirements, changes and necessary infrastructure changes. These recommendations are prioritized based on impact to mission success and safety, risk of service interruptions due to failure, cost (one-time and long-term), user demand, technology improvements, and schedule. Recommendations to Space Communications also identify alternatives and impacts if the initiatives are not funded.

G