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|--|--|---|---|------------------------|
| AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT | | | 1. CONTRACT ID CODE 12 | PAGE OF PAGES 1 5 |
| 2. AMENDMENT/MODIFICATION NO. 24 | 3. EFFECTIVE DATE November 23, 2004 | 4. REQUISITION/PURCHASE REQ. NO. 4200088325 | 5. PROJECT NO. (If applicable) | |
| 6. ISSUED BY Procurement Office George C. Marshall Space Flight Center National Aeronautics and Space Administration Marshall Space Flight Center, AL 35812 | CODE PS31-J | 7. ADMINISTERED BY (If other than Item 6) Jeffrey S. Jackson (256) 544-8935 Phone (256) 544-3223 Fax | | CODE PS31-J |
| 8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State, and Zip Code) Science Applications International Corporation (SAIC) Company 6, Technology Services Company 10260 Campus Point Drive San Diego, CA 92121 c/o 6725 Odyssey Drive, Huntsville, AL 35806 | | <input checked="" type="checkbox"/> | 9A. AMENDMENT OF SOLICITATION NO. | |
| | | | 9B. DATED (SEE ITEM 11) | |
| | | X | 10A. MODIFICATION OF CONTRACT/ORDER NO. NNM04AA02C | |
| | | | 10B. DATED (SEE ITEM 13) 1/1/04 | |
| CODE CAGE- 0T5L1 | FACILITY CODE SAP- 103429 | | | |

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15 and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

PR 4200088325 PLI's 1, 2, and 3

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS,
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

| | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A. |
| | B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b). |
| X | C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: FAR 43.103(a), the "Changes" clause, the "Limitation of Funds" clause, and Mutual Agreement |
| | D. OTHER (Specify type of modification and authority) |

E. IMPORTANT: Contractor is not, is required to sign this document and return 3 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

| | Negotiated Estimated Cost | Shared Savings Fee | Award Fee Earned | Potential Award Fee | Contract Value | Total Sum Allotted |
|-------------------|------------------------------|--------------------------|---------------------|------------------------|-------------------|-----------------------|
| Prev. Base Total | \$454,167,699 | \$0 | \$2,658,243 | \$24,442,579 | \$481,268,521 | \$134,648,287 |
| This Modification | \$4,525,821 | \$0 | \$0 | \$271,550 | \$4,367,570 | \$4,755,242 |
| Rev. Base Total | \$458,693,520 | \$0 | \$2,658,243 | \$24,714,129 | \$485,636,091 | \$139,403,529 |

SEE PAGE 2 FOR DESCRIPTION OF AMENDMENT/MODIFICATION

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect

| | |
|--|---|
| 15A. NAME AND TITLE OF SIGNER (Type or print) Julia A. Whitt, Contracts Manager | 16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) David A. Iosco, Contracting Officer |
| 15B. CONTRACTOR/OFFEROR | 16B. UNITED STATES OF AMERICA |
| 15C. DATE SIGNED November 23, 2004 | 16C. DATE SIGNED November 23, 2004 |
| <u>/s/ Julia A. Whitt</u> <i>(Signature of person authorized to sign)</i> | BY <u>/s/ David A. Iosco</u> <i>(Signature of Contracting Officer)</i> |

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT
(continued)

The purposes of this modification are as follows: (1) To definitize the Contractor's proposals SAIC-P-006 and SAIC-P-006, Revision A, entitled "Business Resources Analysis & Systems Support" dated October 1, 2004 and October 21, 2004, respectively. This effort will provide business information integration solution support including application solutions development, system support and sustaining engineering, configuration control support, and maintenance support. The proposals were submitted in response to NASA/MSFC letter request for proposal PS31-J/AA02C-04-071 dated September 10, 2004; (2) Revise the Not-to-Exceed amount for the IFMP Additional Module/Revised Schedule Change Order (Modifications No. 16 and 23) from \$2,800,000 (through November 30, 2004) to \$3,196,000 (through December 31, 2004); and (3) provide an amount of \$4,755,242 in incremental funding. Accordingly, NNM04AA02C is modified as follows:

- A. Under Section B, Clause B.2, Estimated Cost and Award Fee, the total of Estimated Cost is increased by \$8,515,975. This increase is by \$4,120,349 (from \$454,167,699 to \$458,288,048) for the base period reflected in paragraph (a) and as CLIN 001 in paragraph (b), by \$2,125,619 (from \$160,459,891 to \$162,585,510) as CLIN 003 in paragraph (b), and by \$2,270,007 (from \$163,847,118 to \$166,117,125) as CLIN 005 in paragraph (b). The total of Potential Award Fee is increased by \$510,959. This increase is by \$247,221 (from \$27,100,822 to \$27,348,043) for the base period reflected in paragraph (a) and as CLIN 001 in paragraph (b) (which includes the Earned Award Fee of \$2,658,243), by \$127,537 (from \$9,627,594 to \$9,755,131) as CLIN 003 in paragraph (b), and by \$136,200 (from \$9,830,828 to \$9,967,028) as CLIN 005 in paragraph (b). These amounts are further allocated by contract year as follows:

Paragraph (a)

| | Estimated Cost | Potential Award Fee |
|--------------------|-------------------|------------------------|
| 12/1/04 - 12/31/04 | \$155,048 | \$ 9,303 |
| 1/1/05 - 6/30/05 | \$991,403 | \$59,484 |
| 7/1/05 - 12/31/05 | \$991,402 | \$59,484 |
| 1/1/06 - 6/30/06 | \$991,248 | \$59,475 |
| 7/1/06 - 12/31/06 | \$991,248 | \$59,475 |

| Paragraph (b) | Estimated Cost | Potential Award Fee |
|-------------------|-------------------|------------------------|
| 1/1/07 - 6/30/07 | \$1,062,810 | \$63,769 |
| 7/1/07 - 12/31/07 | \$1,062,809 | \$63,768 |
| 1/1/08 - 6/30/08 | \$1,135,004 | \$68,100 |
| 7/1/08 - 12/31/08 | \$1,135,003 | \$68,100 |

- B. Under Section B, Clause B.6, Contract Funding, an amount of \$4,755,242 is provided in order to provide contract coverage through January 6, 2005. This action results from an increase in funding of \$5,009,028 (PR 4200088325, PLI's 1, 2, and 3) and a deobligation of \$253,786 as follows:

(\$ 93,695) PLI- 33/ ALI- 340
(\$155,000) PLI- 42/ ALI- 30
(\$ 5,091) PLI-27/ ALI- 310

In addition, an amount of \$2,963,043 is reallocated from Estimated Cost to Provisional Award Fee in order to provisionally fund 60% of the Potential Award Fee for the period 7/1/04 through 12/31/04 (\$3,046,753) and 60% of the Potential Award Fee for the period 1/1/05 through 6/30/05 (\$2,957,461). This is required in order to allow for the provisional billing of award fee during the current performance evaluation period as well as allow for billing during the next calendar year. Contractor billing of provisional award fee for any period shall not exceed 60% of the Potential Award Fee pool available for that period. Balance of fee shall be paid upon allocation of Earned Award Fee as determined by the UNITEs Fee Determination Official.

- C. Attachment J-1, Performance Work Statement, is revised to reflect the requirements definitized by the action in (A) above, as PWS section 5.1.4, Business Information Systems Solutions. Subsections of this revision include PWS 5.1.4.1- Application Solutions Development, 5.1.4.2- Systems Support and Sustaining Engineering, 5.1.4.3- Configuration Control Support, and 5.1.4.4- Maintenance Support. Because of the insertion of the effort within the PWS, subsequent pages are renumbered and therefore replaced in their entirety. It is mutually agreed that although incorporated within the statement of work by this modification and, notwithstanding the effective date of the modification, the contractor will not commence performance of the effort prior to December 1, 2004.

- D. Attachment J-2, Data Procurement Document, is revised to reflect incorporation of the reporting requirement for the effort delineated in (C) above as part of the monthly Program/Project Status Review Report, DRD 974MA-012. These changes are delineated on PWS pages J-2-3 and J-2-37-A.
- E. Attachment J-4, Performance Measurement Standards, is revised to reflect the addition of PWS section 5.1.4, Business Information Systems Solutions to the existing standards. These changes are reflected on pages J-4-36 and J-4-53.
- F. [

(b) (4)

- G. Modifications No. 16 and No. 23, dated August 16, 2004, and October 20, 2004, respectively, authorized SAIC, pursuant to the "Changes" clause, to provide support for additional IFMP modules that were delineated on the revised PWS replacement page J-1-49. As part of this effort, a Not-to-Exceed (NTE) cost of \$2,800,000 was established for the period ending November 30, 2004. This date was established as the anticipated date of proposal definitization. In order to allow sufficient time for proposal definitization, a revised NTE amount of \$3,196,000 is hereby established for the period ending December 31, 2004. The overall NTE for the entire period of performance remains unchanged at \$46,073,883. The contractor is not authorized to expend costs related to these contract changes in excess of this amount coinciding with the new anticipated definitization date of December 31, 2004.
- H. On the Standard Form 26, Award/Contract, Block 15G, the total contract value is increased by \$4,367,570 (from \$481,268,521 to \$485,636,091) in recognition of the actions taken in (A) above.

- I. The modification(s) made above are reflected in total on the change page(s) enclosed herewith. In order to reflect the change(s) made, the page(s) listed below are hereby deleted from, or added to, NNM04AA02C. Either bolded text or a vertical change bar included in the right margin indicates the specific area(s) of change.

| <u>Page(s) Deleted</u> | <u>Page(s) Added</u> |
|------------------------|----------------------|
| B-2 | B-2 |
| B-3 | B-3 |
| B-8 | B-8 |
| J-1-62 to J-1-87 | J-1-62 to J-1-88 |
| J-2-3 | J-2-3 |
| J-2-37-A | J-2-37-A |
| J-4-36 | J-4-36 |
| J-4-53 | J-4-53 |
| | J-7 (1 to 4) |

- J. In recognition of the modification(s) agreed to herein as complete equitable adjustments for the Contractor's "proposal(s) for adjustment" listed below, the Contractor hereby releases the Government from any and all liability under this contract for further equitable adjustment(s) attributable to such facts or circumstances giving rise the "proposal(s) for adjustment."

Contract
Change Identification
 NASA/MSFC letter
 request for proposal
 PS31-J/AA02C-04-071
 dated September 10, 2004

Contractor
Proposal Number
 SAIC proposal SAIC-P-006
 dated October 1, 2004 and
 submitted via SAIC letter
 SAIC-04-095 dated
 October 1, 2004

SAIC proposal SAIC-P-006,
 Revision A, dated
 October 21, 2004 and submitted
 via SAIC letter SAIC-04-109
 dated November 1, 2004

- K. All other terms and conditions of NNM04AA02C remain unchanged.

B.2 ESTIMATED COST AND AWARD FEE

(a) The estimated cost and contract fees are as follows:

| Contract Year | Period Covered | Estimated Cost | Shared Savings Fee | Earned Award Fee | Potential Award Fee |
|---------------|-------------------|----------------|--------------------|------------------|--|
| Base Year 1 | 1/1/04-6/30/04 | \$ 46,789,434 | | \$2,658,243 | \$0 |
| Base Year 1 | 7/1/04 - 12/31/04 | \$ 84,634,009 | | | \$ 5,077,922 (\$3,859,221 AF) (\$1,218,701 OF) |
| Base Year 2 | 1/1/05-6/30/05 | \$ 82,151,672 | | | \$ 4,929,101 (\$3,746,117 AF) (\$1,182,984 OF) |
| Base Year 2 | 7/1/05 - 12/31/05 | \$ 82,151,670 | | | \$ 4,929,100 (\$3,746,116 AF) (\$1,182,984 OF) |
| Base Year 3 | 1/1/06-6/30/06 | \$ 81,280,632 | | | \$ 4,876,839 (\$3,706,398 AF) (\$1,170,441 OF) |
| Base Year 3 | 7/1/06 - 12/31/06 | \$ 81,280,631 | | | \$ 4,876,838 (\$3,706,397 AF) (\$1,170,441 OF) |
| Option Year 1 | 1/1/07-6/30/07 | | | | |
| Option Year 1 | 7/1/07 - 12/31/07 | | | | |
| Option Year 2 | 1/1/08-6/30/08 | | | | |
| Option Year 2 | 7/1/08 - 12/31/08 | | | | |
| | TOTAL | \$458,288,048 | | \$2,658,243 | \$24,689,800 |

* AF denotes Award Fee

** OF denotes Objective Fee

(b) The estimated cost and award fees applicable to the base period and each option period are as follows:

| CLIN | Qty. | Unit | Estimated Cost | Award Fee |
|--|------|------|-------------------------|-----------------------|
| BASIC PERIOD (January 1, 2004 thru December 31, 2006) | | | | |
| 001 | 1 | Job | \$458,288,048 | \$27,348,043 |
| | | | <u>Estimated Amount</u> | <u>Maximum Amount</u> |
| 002 | 1 | ID/R | \$0 | \$1,500,000 |

| CLIN | Qty. | Unit | Estimated Cost | Award Fee |
|---|------|------|----------------|---|
| <u>OPTION PERIOD 1 (January 1, 2007 thru December 31, 2007)</u> | | | | |
| 003 | 1 | Job | \$162,585,510 | \$9,755,131 (\$7,413,890 AF) (\$2,341,241 OF) |

| | | | Estimated Amount | Maximum Amount |
|-----|---|------|------------------|----------------|
| 004 | 1 | ID/R | \$0 | \$500,000 |

| CLIN | Qty. | Unit | Estimated Cost | Award Fee |
|---|------|------|----------------|---|
| <u>OPTION PERIOD 2 (January 1, 2008 thru December 31, 2008)</u> | | | | |
| 005 | 1 | Job | \$166,117,125 | \$9,967,028 (\$7,574,941 AF) (\$2,392,087 OF) |

| | | | Estimated Amount | Maximum Amount |
|-----|---|------|------------------|----------------|
| 006 | 1 | ID/R | \$0 | \$500,000 |

(End of clause)

B.3 AWARD FEE FOR SERVICE CONTRACTS

(a) The contractor can earn award fee from a minimum of zero dollars to the maximum stated in **Clause B.2, "ESTIMATED COST AND AWARD FEE"** in this contract.

(b) Beginning 6 months after the effective date of this contract, the Government shall evaluate the Contractor's performance every 6 months to determine the amount of award fee earned by the contractor during the period. The Contractor may submit a self-evaluation of performance for each evaluation period under consideration. These self-evaluations will be considered by the Government in its evaluation. The Government's Fee Determination Official (FDO) will determine the award fee amounts based on the Contractor's performance in accordance with **ATTACHMENT J-5, UNITEs CPAF EVALUATION PLAN**. The plan may be revised unilaterally by the Government prior to the beginning of any rating period to redirect emphasis. Performance evaluation for PWS sections 3.0 and 5.0 will be evaluated against the standards delineated in **ATTACHMENT J-4, PERFORMANCE MEASUREMENT STANDARDS**. Any changes to this ATTACHMENT will be made by bilateral contract modification.

(c) The Government will advise the Contractor in writing of the evaluation results. The NASA/MSFC Financial Management Office, RS23 will make payment based on issuance of a unilateral modification by the Contracting Officer.

(d) The amount of award fee which can be awarded in each evaluation period is limited to the amounts set forth

B.5 PREMIUM FOR SCHEDULED OVERTIME (MSFC--52.222-90) (FEB 2001)

Pursuant to the clause entitled "Payment for Overtime Premiums," the amount of overtime premium authorized shall not exceed the amount specified below for the indicated period.

| <u>Period</u> | <u>Amount</u> |
|---------------|---------------|
| (b)(4) | |

B.6 CONTRACT FUNDING (1852.232-81) (JUN 1990)

(a) For purposes of payment of cost, exclusive of fee, in accordance with the Limitation of Funds clause, the total amount allotted by the Government to this contract is \$130,741,072. This allotment is for performance in all areas and covers the following estimated period of performance: contract award through January 6, 2005.

(b) An additional amount of \$8,662,457 is obligated under this contract for payment of fees.

(c) Recapitulation of funding is as follows:

| | <u>Previous</u> | <u>This Action</u> | <u>Total</u> |
|---------------------------------------|--------------------|--------------------|--------------------|
| Estimated Cost | \$128,948,873 | \$1,792,199 | \$130,741,072 |
| Shared Savings Fee | \$0 | \$0 | \$0 |
| Provisional Award Fee (Funded at 60%) | \$3,041,171 | \$2,963,043 | \$6,004,214 |
| Award Fee Earned | <u>\$2,658,243</u> | <u>\$0</u> | <u>\$2,658,243</u> |
| Total Sum Allotted | \$134,648,287 | \$4,755,242 | \$139,403,529 |

(End of clause)

B.7 INDEFINITE DELIVERY/REQUIREMENTS

(a) The completion effort (definite quantity) of this contract is considered to be those services negotiated for the estimated cost and fees for the basic contract period and each priced option period. Work that cannot be sufficiently identified, predetermined, or quantified is identified as Requirements work.

(b) Requirements work is specified as that effort that exceeds the performance bands specified in **PWS sections 5.1, MSFC Applications and Web Services, and 3.9.4 and 5.10.4, Maintenance.**

executives, equal employment opportunity outreach, export control and safety information.

5.1.4 Business Information Systems Solutions

The contractor shall provide MSFC customers with process and integration improvements and automated solutions. The contractor shall provide integrated solutions suitable for MSFC projects, programs, directorates, and institutional business customers. The Business Information Integration solutions shall include, but not be limited to, the following: 1) Accounting Resources System (ARS); 2) Workforce Information Management System (WIMS); 3) Rosetta comprehensive crosswalk system; and 4) the Marshall Resources Planning Tool (MRPT). The contractor shall extract data from multiple data sources, including IFM modules, for integrated solution support with automated reports.

5.1.4.1 Application Solutions Development

The contractor shall provide integrated solutions suitable for all MSFC projects, programs, directorates, and MSFC institutional business customers. The solutions developed shall include, but are not limited to the following: 1) elevation of the Accounting Resources System (ARS) application to the level that will support Center requirements with new and enhanced reporting and graphics capabilities; 2) evaluation and development of the Rosetta concept for the deployment of financial WBS, and the program technical WBS database for the MSFC Business offices applications; and 3) provision of an overall guideline management and tracing capability. The contractor shall also provide administrative application support for CaER. The contractor shall report monthly the project status and import data from IFMP Business Warehouse applications such as RPS and ARS (974MA-012).

5.1.4.2 Systems Support & Sustaining Engineering

The contractor shall provide the overall management effort required for budget integration and the study of logical relationships among RPS, WIMS, MRPT, and IFM modules and others. The contractor shall also provide application mentoring and sustaining support for this effort. The contractor shall provide MSFC Center resource data to other systems such as the Earned Value Management System. The contractor shall provide reports relating to the importing of actuals from IFMP BW into applications such as RPS and ARS (974MA-006). The contractor shall develop an automated monthly Resource status smartbook and presentation structure. The contractor shall provide hands-on training, with resource material, for business information application users. Finally, the contractor shall provide overall change management for business solutions. The contractor shall report monthly the project status and import data from IFMP Business Warehouse applications such as RPS and ARS (974MA-012).

5.1.4.3 Configuration Control Support

The contractor shall establish and facilitate the operation of a Level II Configuration Change Board, a Level III Document Control Board (DCB), and a software configuration control board for control of application solutions created for the Chief Financial Office (CFO). This effort shall include development of all appropriate board process documentation and secretariat duties as outlined in NWI 8040.2 and MPG 7120.3. The contractor shall report monthly the project status and import data from IFMP Business Warehouse applications such as RPS and ARS (974MA-012).

5.1.4.4 Maintenance Support

The contractor shall provide daily support as required in support of, at a minimum, the following maintenance activities: 1). maintenance and enhancement of monthly planned versus actual and other status reporting applications such as ARS and RPS; and 2) maintenance and enhancement of the RPS application in support of planned vs. actual resource formulation reporting along with yearly POPs and Ops activities, Travel System maintenance, Guideline Tracer maintenance and enhancement. The contractor shall evaluate and maintain awareness of the upcoming IFM modules and other work activities pertaining to IFMP, particularly as it pertains to transitioning ARS and other MIS resources to the IFMP environment. The contractor shall ensure that RPS, ARS, Guideline Tracer, and other solutions are accessible by all supporting Centers, as applicable. The contractor shall report monthly the project status and import data from IFMP Business Warehouse applications such as RPS and ARS (974MA-012).

5.2 COMPUTER SYSTEMS SERVICES

The contractor shall provide midrange computer systems services to support the application services described in Paragraph 5.1. Computer systems services encompass providing hardware, operating systems, other systems software, computer operations, hardware/software maintenance, technical assistance, and other requirements for applications execution. These services include operation/maintenance of existing systems, acquisition/implementation of COTS products, database administration, and development of unique systems in compliance with established architecture standards. The system configuration documentation shall be maintained in the online Midrange Node Book in accordance with DRD 974MA-007.

5.2.1 Business, Engineering and Scientific Midrange

The contractor shall provide computer systems services to support MSFC's administrative, business, engineering and scientific applications. These applications execute on midrange computers identified in Appendix A, Category I. In providing these services, the contractor shall:

- a. Provide hardware and systems software enhancements to meet customers' requirements in response to changing workloads and technologies.

- b. Provide and maintain operating systems, database management systems, compilers, libraries, and all other systems software necessary for the operation, execution and security of the computer and communications systems.
- c. Operate and maintain computer, peripheral, data acquisition, and communications systems, to include system initializations and recoveries, storage management, and print production and dissemination.
- d. Provide system administration such as program and data security, scheduling, and quality control.
- e. Provide security support as required by NASA, in particular, adhering to new security bulletins and installation of patches to fix known vulnerabilities as well as working within restrictions involving firewalls and other security-related constructs, maintaining compliance with NASIRC bulletins, utilizing Secure Shell for host authentication, user authentication, and encryption, and the use of TCP/IP wrappers and System monitoring for anomalies and security break-in attempts.
- f. Provide management of users to include: addition and deletion of userids, disk quotas, accounting and access control, utilization reports, consultation on advancing technologies, video and imaging support and data visualization (DRD 974MA-006 and DRD 974MA-007).
- g. Provide backups and restoration of the systems including all system files, file systems, directories, and/or user files.

5.2.2 User-Owned Midrange

The contractor shall provide computer systems services to support user owned midrange systems. These systems are identified in Appendix A, Category II and III. In providing these services, the contractor shall:

- a. Provide hardware and systems software enhancements to meet customers' requirements in response to changing workloads and technologies.
- b. Provide and maintain operating systems, database management systems, compilers, libraries, and all other systems software necessary for the operation, execution and security of the computer and communications systems.
- c. Operate and maintain computer, peripheral, data acquisition, and communications systems, to include system initializations and recoveries, storage management, and print production and dissemination.
- d. Provide system administration such as program and data security, scheduling, and quality control.
- e. Provide security support as required by NASA, in particular, adhering to new security bulletins and installation of patches to fix known vulnerabilities as well as working within restrictions involving firewalls and other security-related constructs, maintaining compliance with NASIRC bulletins, utilizing Secure Shell for host authentication, user authentication, and encryption, and the use of TCP/IP wrappers. System

monitoring for anomalies and security break-in attempts must be accomplished.

- f. Provide management of users to include as required by the users: addition and deletion of userids, disk quotas, accounting and access control, utilization reports, consultation on advancing technologies, video and imaging support and data visualization (DRD 974MA-006 and (DRD 974MA-007).
- g. Provide backups and restoration of the systems including all system files, file systems, directories, and/or user files.

5.2.3 Test Area

The contractor shall provide computer systems operators to support MSFC's Test Area data acquisition systems. These systems, support MSFC's East and West Test Areas, include various HP Alpha computers, MODCOMP computers, PC's, plotters, printers, disk drives, tape drives, and controllers. These data acquisition systems record raw test data, convert the data to engineering units, display tabulated and graphical results during the tests, and provide post-test conversion and storage of data for distribution. These systems are operated during the day shift and during test periods.

5.2.4 National Space Science and Technology Center (NSSTC)

The contractor shall provide engineering, software and hardware maintenance, operations, and system administration for all the NSSTC.

5.2.4.1 Infrastructure Systems

In support of the infrastructure systems, the contractor shall:

- a. Monitor the physical cable plant, including 24x7 monitoring for environmental change in key areas; provide Uninterruptible Power Supply (UPS) maintenance and engineering; and dark fiber maintenance and engineering between MSFC and NSSTC.
- b. Engineer, operate and maintain NSSTC routers, firewalls, switches, Virtual Private Network (VPN) and dial-in devices, and IP Telephony systems.
- c. Engineer, operate and maintain infrastructure peripherals, such as network printers, electronic facsimile system, scanners, wireless access points and network based TV (IPTV) screens and systems.
- d. Engineer, operate and maintain infrastructure server systems, including web, e-mail, domain, IP Telephony and unified messaging servers, domain controllers for Active Directory, and other servers supporting core network functions (see services below).

5.2.4.2 Infrastructure Services

In support of the infrastructure services, the contractor shall:

- a. Maintain the Domain Name Service (DNS), Dynamic Host Control Protocol (DHCP), Windows Internet Naming Service (WINS), Radius authentication protocol, Microsoft Active Directory, and Network Time Protocol support (Stratum 0).
- b. Operate and maintain the VPN server and client software and Dial-in service.
- c. Provide integrated electronic mail, voice mail and personal fax services.
- d. Provide printer and user data storage services.
- e. Provide backup services for all infrastructure systems. The contractor shall maintain an offsite storage facility for backup tapes for disaster recovery.
- f. Provide port-level security (switch level) administration.
- g. Provide wireless access services engineering and maintenance.
- h. Provide system administration for the following systems:
 - 1) SGI.
 - 2) Linux.
 - 3) Solaris.
 - 4) W2K/NT/XP.
 - 5) Win 9x.
 - 6) Macintosh (9.x and OSX+).
 - 7) OpenVMS.

5.2.4.3 Desktop User Services

In support of the desktop user services, the contractor shall:

- a. Provide engineering, hardware, operating system installation, troubleshooting, and reconfigurations.
- b. Maintain user software for desktop-based antivirus scanning and operating system security patches.
- c. Install, relocate, configure, and maintain IP Telephony (Voice over IP) services.
- d. Provide centralized application services, including user data areas, applications, system application downloads and patches.
- e. Provide backup of user desktop data areas as directed by the COTR.

5.3 CUSTOMER REQUESTED HARDWARE MAINTENANCE

The contractor shall also be responsible for hardware maintenance of MSFC's non-ODIN computer equipment, including laboratory equipment, referenced in Appendix A, Category III. In providing this service, the contractor shall:

- a. Perform repairs and other Remedial Maintenance (RM) following equipment failure in accordance with approved Operability/Maintainability Plan (prepared in accordance with DRD 974RM-001).

- b. Perform scheduled Preventive Maintenance (PM) checks and repair equipment malfunctions in accordance with approved Operability/Maintainability Plan (prepared in accordance with DRD 974RM-001).
- c. Install and relocate IT computer equipment.
- d. Maintain systems through engineering changes and updates.

5.4 TELECOMMUNICATIONS SERVICES

The contractor shall provide telecommunications services to support the MSFC and Michoud Assembly Facility (MAF) customers. These include telephone, facsimile, and other services.

5.4.1 Telephone Service

The contractor shall provide telephone services at MSFC and MAF. These services include operation/maintenance of existing capabilities, development or acquisition of enhancements, and implementation of enhancements. In providing this service, the contractor shall:

- a. Operate and maintain the telephone and voice mail systems and associated equipment.
- b. Provide telephones and associated features such as call forwarding, conferencing, call pickup, transfer, voice mail, and other features.
- c. Install, relocate, configure, and maintain the telephone instruments and other end-service equipment and capabilities.
- d. Install, configure, and maintain small conferencing units for the office environment.
- e. Provide overhead paging service capable of broadcasting voice messages in specified areas.
- f. Provide pager services, cellular telephones and wireless communication services for authorized personnel.
- g. Operate and maintain the voice over Internet Protocol (IP).
- h. Provide specification of requirements, design, implementation, procurement, and operations of local telephone service, including dial-tone, inbound/outbound trunking, fiber to near-site locations, and access to 911.
- i. Provide specification of requirements, design and interface to long distance switched voice and data services, provided by FTS2001.
- j. At MSFC only, provide operator assistance for placing international calls, directory assistance, and other operator-required functions.
- k. At MSFC only, compile and prepare the MSFC Telephone Directory (DRD 974MA-007).
- l. Provide and maintain telephone service for fire rescue locations as designated by the MSFC Safety Office. Fire rescue locations are designated in multi-story buildings to assist the handicapped with evacuation in case of a fire.

- m. Provide, test, and maintain power fail telephones. Power fail telephone circuits do not connect to or go through the MSFC telephone system. The power fail telephones shall operate in the event the MSFC telephone system loses power or becomes inoperable.

5.4.2 Facsimile Service

The contractor shall provide facsimile services that include MSFC and MAF facsimile. These services include maintenance of existing capabilities, development or acquisition, and implementation of enhancements. In providing this service, the contractor shall:

- a. Maintain the existing facsimile machines and services.
- b. Procure, install and maintain facsimile hardware and services including those appropriate for the transmission of Government classified documents.
- c. Procure, install and maintain facsimile hardware and software to integrate this service with MSFC electronic mail services.

5.4.3 Other Services

The contractor shall provide other services required to meet customer requirements. These services include maintenance of existing capabilities, development or acquisition, and implementation of enhancements. In providing these services, the contractor shall:

- a. Provide fixed, portable, and mobile radios.
- b. Provide radio frequency spectrum management service.
- c. Provide and maintain interbuilding cable systems and system documentation (DRD 974MA-007).
- d. Provide and maintain the Emergency Warning System (EWS), the Marshall Access Control System (MACS), and the Video MACS (VMACS).
- e. Provide emergency telecommunications and operations support services during disaster/emergency situations such as fire, explosion, accident, bomb threat, civil disturbance, terrorist-related incidents, flood, ice, snow, and tornadoes.
- f. Operate and maintain a central distribution capability for voice, video, and data products (incoming and generated).
- g. Provide and maintain dedicated transmission services between local customers and host computer systems.
- h. Provide and maintain cable distribution systems and system documentation (DRD 974MA-007).
- i. Provide, set up, and maintain portable audio-visual equipment for special events.
- j. Design, develop, implement and maintain conference room capabilities.

- k. Schedule and operate the Contracting Officer's Technical Representative (COTR) designated video teleconferencing rooms.
- l. Schedule the conference facilities located in Morris Auditorium, Conference Rooms P106, P110, and 815 in building 4200, and operate the facilities, including the audio/visual equipment.

5.5 INFORMATION TECHNOLOGY (IT) SECURITY SERVICES

The contractor shall provide IT Security services to the MSFC customers, including the NSSTC (an offsite facility in Huntsville). These services include maintenance of existing capabilities, development or acquisition, and implementation of enhancements. In providing these services, the contractor shall:

- a. Ensure that all IT resources and components administered by the contractor are secured to minimum requirements in accordance with **NPR 2810.1**.
- b. Provide early warning, detection and resolution of vulnerabilities or security incidents. This includes threat notification responses, risk management, network monitoring, centralized database collections, security response tracking and analysis, and forensics of IT Security incidents.
- c. Develop and test prototypes of IT security tools, techniques, and training.
- d. Install and maintain firewalls for the MSFC and NSSTC private and public networks.
- e. In concert with Agency requirements, manage and maintain secure authentication services for MSFC customers, including token-based and smart card services (see section 3.3.5).
- f. Develop, evaluate, and test prototypes of IT security tools, techniques, and training specific to the MSFC and NSSTC environment.
- g. Perform risk assessments, vulnerability scans and assist with system security life-cycle development planning, security plan composition and maintenance, and other procedural/technical protective controls for MSFC and NSSTC IT resources (DRD 974CD-001).
- h. Assist with the implementation and administration of specific IT management disciplines, standards, and conventions as promulgated in Federal and Agency statutes, regulations, policies, procedures, administrative instructions, information bulletins, and directives.
- i. Provide support for disaster recovery planning, contingency planning, vulnerability analysis, risk and exposure management, corrective action planning, sensitive disciplines, training, and reporting.
- j. Provide rehabilitation support for IT resources impacted by hostile code or malicious software, including:
 - 1) Detection, validation and eradication services for MSFC and NSSTC information systems;
 - 2) Restoration of the system to its pre-infected configuration;
 - 3) Reallocation of resources to ensure the efficient and timely eradication of widespread infections.

- k. Maintain awareness of, monitor for, and provide protection against denial of service attacks, intercepted transmission, and unauthorized access or intrusion into NASA resources.
- l. Handle, protect, and track administrative Privacy Act Information and proprietary data in accordance with applicable regulations and procedures (Attachment J-10).
- m. Collaborate with other entities to effect a strong IT security posture.
- n. Assure compliance with architecture standards and guidelines (Attachment J-10).
- o. Ensure that all personnel requiring access to DoD Classified information or networks have a minimum of a final Secret Security clearance or higher.
- p. Provide support for forensic investigations to MSFC Protective Services and other law enforcement agencies.
- q. Provide engineering for NASA standard PKI certificate servers located at MSFC.
- r. Implement MSFC conversion to and operation of Agency standard IT resource account management system.

5.6 DOCUMENTATION REPOSITORY SERVICES

The contractor shall provide documentation repository services required to meet customer requirements. These services include operation/maintenance of existing capabilities, development or acquisition, and implementation of enhancements. In providing these services, the contractor shall:

- a. Operate the central Documentation Repository.
- b. Receive, manage, store, and distribute officially released engineering drawings, associated technical documentation, and standardization documentation.
- c. Transition from paper-based to integrated electronic documentation management, including receiving, indexing, storing, distributing, and appropriate archiving.
- d. Maintain proprietary, restricted-access and export control document files in accordance with relevant Marshall and NASA Directives and related regulations and guidelines.
- e. Maintain and transition legacy master microfilm aperture card file and microfiche files.
- f. Prepare in acceptable media and formats any official record documents being transmitted, through coordination with the MSFC Records Manager, to the National Archives and Records Administration (NARA) for archival purposes.
- g. Maintain the MSFC Records Staging Area (RSA).
- h. Operate, maintain, enhance and integrate the Electronic Document Management System (EDMS) in collaboration with MSFC's Configuration and Data Management function.

- i. Provide design, development, conversion and integration support for MSFC Forms.
- j. Support center and Agency electronic business/knowledge management information resource functions, including Scientific and Technical Information (STI) Program, MSFC Technical Report Server (MTRS), electronic forms, records management, and directives.

5.7 AUDIO VISUAL INFORMATION SERVICES

The contractor shall provide centralized management, operations, and production capability for various audio visual information services and products including creation of content, assembly and editing of content, and distribution of content. Audio visual services comprise imaging/photography, television and video, graphics/publications, in-house reproduction, commercial printing procurement, and interactive multimedia. These services include maintenance of existing capabilities, and development or acquisition and implementation of enhancements.

5.7.1 Content Creation

The contractor shall provide the capability to create content in a variety of physical and electronic media. In performance of this function, the contractor shall:

- a. Provide still and motion picture photography and videography for documentation of MSFC ceremonies, programs, component tests, special events, and other customer requirements.
- b. Create graphic, publication, and web content including text, tables, charts, illustrations, still and motion images, photo research and caption, technical or creative writing, and animation adhering to all applicable NASA/MSFC procedural and regulatory guidance.

5.7.2 Content Assembly

The contractor shall provide capabilities to prepare physical and electronic content for eventual distribution. In performance of this function, the contractor shall:

- a. Provide editing capabilities for video and interactive electronic content.
- b. Provide design, layout, editing, and proofing capabilities for graphics/publications for electronic and physical distribution.
- c. Provide editing, proofing, and preparation of still and motion images for electronic and physical distribution.
- d. Provide live television production for internal distribution on MSFC Centerwide television and NASA TV.
- e. Provide support for streaming live and on-demand video and audio to end-user desktops. This includes such things as video-based training, distance learning, and MSFC Centerwide television.
- f. Provide programming of video, audio, text, animation, and graphic elements for interactive multimedia products and Internet distribution.

- g. Assist authors of STI in complying with NASA and MSFC standards for publication of manuscripts. Manuscripts and documents must comply with "Guidelines for Documentation, Approval and Dissemination of NASA STI", NPG 2200.2, and include a completed SF 298, Report Documentation Page, and NASA Form 1676, Document Availability Authorization, in the final author package.
- h. Maintain existing photographic, visual aids, graphics/publications, reproduction, audio, film, and tape libraries, archives, and databases.
- i. Provide research, writing, editing, and imaging services to support the MSFC and NASA image archive web services. Provide coordination with MSFC scientists, engineers, historians, and the public.

5.7.3 Content Distribution

The contractor shall provide numerous physical and electronic means of distributing audio-visual content. In performance of this function, the contractor shall:

- a. Provide videotape, CD-ROM, DVD, and other optical and magnetic media duplication of video, still and motion images, and interactive content.
- b. Provide photographic prints and electronic files in a variety of sizes, resolutions, and quantities.
- c. Provide paper and electronic files of graphics/publications content.
- d. Operate the duplicating facilities at MSFC capable of duplicating / printing paper, electronic publishing and electronic content in accordance with Public Law 102-392 and Section 207 of the Joint Committee on Printing (JCP) and Binding Regulations, as well as the Government Printing Office Quality Assurance Through Attributes Program (QATAP) for Quality Level III.
- e. Provide commercial printing procurement services in accordance with the MSFC Printing Officer, and through new and existing Government Printing Office (GPO) contracts. Procurement of printing services will be in accordance with Title 44 of the US Code and Public Law 102-392, October 6, 1992 (amended by Public Law 103-283, July 22, 1994), Section 207 and the NPG 1490.5.
- f. Provide live television distribution locally on MSFC Centerwide Television and NASA TV.
- g. Provide live and on-demand delivery of streaming services to NASA users and the public.
- h. Provide conference outreach activities support for technology based industry briefings.
- i. Provide lamination, mounting, and matting.

5.8 IT PROCUREMENT SERVICES

The contractor shall provide IT equipment and IT software necessary to fulfill MSFC requirements, within the guidance of the Federal Acquisition Regulation (FAR),

including utilizing government and NASA/MSFC contracts or site software license agreements.

5.9 CUSTOMER SUPPORT

The contractor shall ensure that all customer service elements of this contract are supported. This function shall include the customer support center, service requests, and user training.

5.9.1 Customer Support Center

The contractor shall receive, track, and resolve customer service problems. In performance of this function, the contractor shall:

- a. Operate an integrated customer support center 24 hours a day, 7 days a week. The customer support center will work cooperatively with other help desks to resolve all problems regardless of the initial determination of the origin of the problem.
- b. Receive all trouble calls and promptly effect resolution.
- c. Operate and maintain the on-line status system to query, update, and display information related to problems and resolutions (DRD 974MA-006).
- d. Provide feedback regarding problem resolution as requested by the customer.
- e. Perform trouble reporting and tracking (DRD 974MA-006).
- f. Provide reports of status, summaries, and statistics (DRD 974MA-006).
- g. Verify resolution with the customer prior to closing the trouble call.
- h. Provide customer information and assistance regarding the use of Center Operations services.
- i. Provide user notification of outages and activities.
- j. Upon resolution of a trouble ticket/outage of service, provide the customer written information regarding the reason for trouble/outage, corrective actions taken, and relevant information for any follow-on action.

5.9.2 Service Requests

The contractor shall receive, process, and execute customer service requests. In performance of this function, the contractor shall:

- a. Operate and maintain the on-line service request system for inputting, assigning, tracking, statusing, and archiving customer service requests as part of the MICS (DRD 974MA-006).
- b. Implement only authorized service requests.
- c. Provide the necessary coordination between the customer, CIO for funding verification and the technical support functions required to satisfy the request.

- d. Provide monthly reports (DRD 974MA-006) to COTR designated personnel that explain status of service requests.
- e. Close each service request only after customer notification and acceptance.

5.9.3 User Training

The contractor shall provide training to customers for services developed or implemented under this contract. In performance of this function, the contractor shall:

- a. Develop and conduct a formal user-training program to include classes, videotapes, hard copy tutorial information, computer-based tutorial information, and reference information (DRD 974MA-007).
- b. Provide specialized training for both hardware and software, where COTS product training is not available.

5.10 INTEGRATED SERVICE DELIVERY SUPPORT

The contractor shall provide the integrated service delivery support functions necessary to perform the services described in Section 5 of this PWS. These functions include: engineering, implementation, maintenance, configuration management, collaboration, and disaster recovery.

5.10.1 Engineering

The contractor shall provide systems engineering and sustaining engineering support functions to perform the services described in this PWS.

5.10.1.1 Systems Engineering

The contractor shall perform systems engineering for existing and proposed systems. Within the scope of this function, a system typically includes the combination of hardware equipment and systems software. Systems software includes operating systems, compilers, database management systems, transaction management systems, switching systems, performance and utilization tracking systems, libraries, utilities, and other software necessary for the operation and execution of IT systems. In performance of this function, the contractor shall:

- a. Maintain and update customer requirements (DRD 974MA-007).
- b. Perform, in accordance with OMB guidelines for business cases, trade studies to maintain, balance, and optimize requirements allocations across subsystems (DRD 974MA-007).
- c. Maintain requirements inventory for all customer subsystems (DRD 974MA-007).

5.10.1.2 Sustaining Engineering

The contractor shall perform sustaining engineering on operational systems that are managed by the contractor. In performance of this function, the contractor shall:

- a. Perform system performance studies, recommending appropriate changes to eliminate potential system bottlenecks, resources conflicts and system overloads (DRD 974MA-007).
- b. Isolate problems in systems and effect proper resolution, including the reporting, statusing, and documenting of changes (DRD 974MA-006).
- c. Perform capacity analysis of existing computational and telecommunication systems (DRD 974MA-007).
- d. Provide capacity planning recommendations based on analysis and changes in requirements and technology (DRD 974MA-007).
- e. Provide risk analysis and management that shall include continual identification and assessment of technical, schedule, cost, and organizational risks involved with the operation of systems (DRD 974MA-002).

5.10.2 New Service Implementation

The contractor shall provide design and development; systems integration and testing; and implementation support functions for new service implementation. This includes, but is not limited to, documentation, drawings, pricing methodology, budgeting, operations approach, schedule, and training material.

5.10.2.1 Design and Development

The contractor shall design, develop, and prototype IT systems to meet customer requirements. The contractor shall develop and document engineering specifications and drawings for components and systems that implement the designs (DRD 974MA-007). In performance of this function, the contractor shall:

- a. Define requirements that shall include collecting and documenting customer (including written buyoff) or system requirements (DRD 974MA-007).
- b. Analyze the defined requirements ensuring that functionality, reliability, availability, maintainability, security, affordability, and policies and procedures are addressed. Perform systems engineering trade studies to optimize requirements allocations across subsystems (DRD 974MA-007).
- c. Develop designs consistent with generally accepted engineering guidelines and practices.
- d. Maximize commonality and the use of COTS components.
- e. Coordinate external interface designs with the responsible oversight organization.
- f. Conduct design reviews as requested by COTR designated personnel or customers.

- g. Develop engineering prototype hardware and software components, subsystems, and systems to verify design and certify requirements.
- h. Support the upgrading of the integrated infrastructure for all information systems.
- i. Acquire, fabricate, assemble, and modify components, subsystems, and systems.
- j. Support partnerships with industry, academia, and government agencies to accelerate the use of advanced technologies to meet NASA requirements.
- k. Identify and coordinate local physical and electrical interfaces between the host facility, suppliers, and customers.

5.10.2.2 Systems Integration and Testing

The contractor shall be responsible for integration of hardware and software into operational configurations of computational and telecommunication systems. The contractor shall ensure that all elements of the system cohesively function as a fully integrated, operational system. The contractor shall perform testing of hardware, software, and telecommunication products. In performance of this function, the contractor shall:

- a. Ensure customer-established functional requirements are met.
- b. Ensure conformance with the applicable federal standards.
- c. Ensure interoperability with existing systems.
- d. Ensure design concepts are not inadvertently changed during the integration process.
- e. Perform verification and validation testing independent of the design organization.
- f. Perform technical reviews of integration and testing activities as requested by COTR designated personnel.

5.10.2.3 Implementation

The contractor shall install and integrate hardware, systems software, services and applications software components into fully operational systems and verify satisfaction of the customer's performance requirements. In performance of this function, the contractor shall:

- a. Assemble, install, connect, inspect and "stage" the systems.
- b. Integrate, verify functionality, and document implementation of the services (DRD 974MA-006).
- c. Perform verification testing of the systems under simulated load conditions, and assess failure modes of the systems.
- d. Provide the customer written instructions that contain all relevant information for reporting a problem related to the service, equipment or software.

5.10.2.3.1 Installation

In performance of this function, the contractor shall:

- a. Install the components into a fully operational configuration to meet the customer requirements.
- b. Schedule implementations to minimize disruptions or impacts to services.
- c. Verify that the connections, support equipment, and software for the system have been properly installed.
- d. Ensure property control requirements (e.g., identification tags and stickers) are met (as defined in the approved Government Property Management Plan, which is prepared in accordance with DRD 974LS-001).

5.10.2.3.2 Assessment and Acceptance Testing

In performance of this function, the contractor shall:

- a. Verify that the system is installed properly, and that the system satisfies customer's requirements using test and assessment methods, and written customer buyoff, as appropriate.
- b. Conduct an acceptance review with CIO and customers, as requested by COTR designated personnel, presenting a summary of the verification results.

5.10.3 Configuration Management and Control

The contractor shall prepare, implement, and maintain a Configuration Management Plan which describes the technical and administrative functions necessary to identify and document the technical requirements of a system or project, control changes, deviations, and waivers to these technical requirements, and record and report change processing and implementation status in accordance with DRD 974CM-001. The contractor shall maintain as-implemented systems configuration information to include hardware model numbers, software revision levels, user interface details, and circuit details, such as circuit numbers, circuit types, originating and terminating locations, installation date, and service request reference number (DRD 974MA-007).

5.10.4 Maintenance

The contractor shall maintain in a fully operational condition all hardware and software for those systems which the contractor has responsibility (see Appendix A). Items to be maintained, consistent with the categories of hardware and software described in this PWS, may be routinely added or deleted throughout the period of performance of this contract. These changes are considered within the scope of this PWS and shall not, in general, be construed as changes within the meaning of the "Changes -- Cost-Reimbursement -- Alternate II" clause of this contract as long as the total number of hardware items to be maintained (see DRD 974RM-001, Operability/Maintainability Plan) is not less than 8,000 and not greater than 18,000. In performance of this function, the contractor shall:

- a. Prepare, implement, and maintain the Operability/ Maintainability Plan in accordance with DRD 974RM-001.
- b. Maintain an online system that contains information on operational failures, incidents, discrepancies, and problem disposition and resolution that includes a daily log of all maintenance and repair activities (DRD 974MA-006).
- c. Prepare and deliver status reports (DRD 974MA-006) providing information on outages, such as component involved, period of downtime, and corrective actions.
- d. Compile and maintain a list of key contacts responsible for coordinating and conducting the required hardware and software maintenance functions (DRD 974MA-007).
- e. Maintain warranty protection and conditions for equipment in warranty.
- f. Maintain vendor subscriptions describing and providing updates and enhancements.
- g. Maintain a complete, up-to-date, and accurate list of spare parts and related material necessary to maintain the equipment (DRD 974MA-007).
- h. Ensure availability of parts for both maintenance and production functions.
- i. Maintain a real time, up-to-date service record for each system. The record shall include: the date and type of equipment, service performed, list of parts used and costs, staff-hours utilized, and downtime, or time not available for use of equipment (DRD 974MA-007).
- j. Maintain a working relationship with vendors or other NASA Centers necessary to obtain required items or maintenance in a timely manner.
- k. Maintain up-to-date vendor documentation for all systems (DRD 974MA-007).
- l. Coordinate maintenance activities with customers, other service providers, and other contractors.
- m. Maintain a complete, up-to-date, and accurate list of software licenses.

5.10.4.1 Preventive Maintenance (PM)

The contractor shall perform PM, defined as maintenance performed by the contractor that is designed to keep the hardware and software in proper operating condition. The PM is performed on a scheduled basis, normally during the Principle Periods of Maintenance (PPM) defined for each system in the Operability/Maintainability Plan (DRD 974RM-001).

- a. In performing PM on hardware equipment, the contractor shall:
 - 1) Develop PM schedules that minimize disruption to customer operations. Provide PM schedules in accordance with DRD 974RM-001.
 - 2) Perform adjustments, cleaning, lubrication, and replacement of parts as specified according to published maintenance procedures.

- 3) Install latest releases of Field Change Orders (FCO's) and other hardware updates.
- b. In performing PM to software, the contractor shall:
 - 1) Acquire, test, and install software updates. Software tests and installations shall normally be performed during scheduled system test periods.
 - 2) Track and renew system software licenses (DRD 974MA-007).
 - 3) Evaluate vendor-supplied updates or patches for applicability.
 - 4) Implement system software releases.

5.10.4.2 Remedial Maintenance (RM)

The contractor shall perform RM, defined as that maintenance performed which results from equipment and software failure. It is performed as required on an unscheduled basis. RM shall be performed on all hardware and software elements specified in this contract. In performance of this function, the contractor shall:

- a. Perform RM promptly after notification that the component is inoperative.
- b. Ensure that the RM is performed to meet the customer's requirements and minimizes operational impact to the customer.
- c. Plan, implement, and enforce operational procedures to ensure that the system continues to operate while any failed component is being replaced. Document operational procedures in the Operability/Maintainability Plan (DRD 974RM-001).
- d. Ensure that the maintenance tools, spares, procedures, skills, and response times are adequate to meet the requirements of the approved Operability/Maintainability Plan (DRD 974RM-001).

5.10.5 Collaboration

The contractor shall establish and maintain contact with internal and external technical working groups consisting of IT professional associations and vendor systems experts to assist in accomplishing its mission.

5.10.6 Disaster Recovery

The contractor shall test the Disaster Recovery Plan (prepared in accordance with DRD 974MA-007) to ensure the orderly recovery from a disaster that may render all or part of information facilities, systems, and equipment inoperable. The contractor shall also test the Business Continuity Plan (prepared in accordance with DRD 974MA-007).

APPENDIX A SYSTEMS RESPONSIBILITIES

Category I. CIO Managed Systems for which the Contractor shall have Systems Manager Responsibilities

| SERVICE TYPE | SYSTEM NAME | CURRENT MODEL |
|----------------------|--|---|
| MSFC Services | Internet Gateway | Sun |
| | Midrange Computer Systems | IBM RS6000, Compaq DL380, SGI, HP DEC Alpha, Sun |
| | Test Area Systems | HP Alpha, PCs, MODCOMP |
| | MSFC Telephone Systems | EADS Northern Telecom PointSpan |
| | MAF Telephone Systems | EADS Northern Telecom PointSpan |
| | MAPTIS Systems | Compaq NT and DEC Alpha |
| | MAPTIS II System | Dell Precision 420 Dual CPU |
| | Video MSFC Access Control System | Lenel |
| | MSFC Access Control System | LYNX Intel |
| | Radio, Paging & EWS | see DRD 974RM-001 |
| | Audio/Video Systems | see DRD 974RM-001 |
| | Infrastructure Security Services (Firewalls, ACE authentication services, risk assessment and scanning) | Cisco, Solaris, Win2K, Linux, SGI, Nokia/Checkpoint |
| | NSSTC Infrastructure | Cisco (IOS, CAT OS, embedded), W2K/NT4/W98, SGI, Linux |
| | NSSTC User Applications Systems Support | SGI, Linux, OpenVMS, W2K, Solaris |

**APPENDIX A
SYSTEMS RESPONSIBILITIES (CON'T)**

| SERVICE TYPE | SYSTEM NAME | CURRENT MODEL |
|---------------------|-----------------------|--|
| Agencywide Services | All Development Tools | see DRD 974RM-001 |
| | NACC | IBM 9672-RB6, IBM 3490, IBM 3480, STK 9500, STK VSM, STK 9310, Sun V880, IBM P series |
| | Midrange Computer | IBM RISC 6000, Compaq, Sun, Dell 2650, Sun V480 |
| | IFMP | Compaq DL-360, DL-380 Compaq 1850R, 3000, 6000, 6500 and 7000 Dec Alpha 4100 and 8400 Sun E10000, Sun 6500, Sun 4500, Sun 450, Sun V880, Sun SPARC 2 and 10, Sun Ultra 5, 10 and 60 Various Gateway and Micron Workstation class servers |

**APPENDIX A
SYSTEMS RESPONSIBILITIES (CON'T)**

| SERVICE TYPE | SYSTEM NAME | CURRENT MODEL |
|------------------------|---|--|
| Agencywide NISN | PSLA database NISN Service Request System | SUN UNIX, Remedy |
| | Intrusion detection sensors | CISCO PIX, Checkpoint |
| | Video Teleconferencing System (ViTS) ViTS Rollabout (VRA) system | Video codecs, viewstations, mixers, Audio/Video cassette recorders, cameras, video controllers, remote controls, character generators, terminal servers, video monitors, amplifiers, display units, document cameras, audio/video matrix switch, camera controllers, echo cancellers, plasma screens, touch screens, projectors, multipoint control unit (MCU); Polycom |
| | Video Conferencing Reservation system (VCRS) | Oracle with web interface. NT server with access to an ADE RISC 6000 database server |
| | Voice Teleconferencing Systems | Polycom voice conferencing units, audio modules, audio mixers, audio synchronizers |
| | Voice Teleconferencing Service | Polycom, Shure, Gentner audioconferencing units |

**APPENDIX A
SYSTEMS RESPONSIBILITIES (CON'T)**

| SERVICE TYPE | SYSTEM NAME | CURRENT MODEL |
|------------------------|---|--|
| Agencywide NISN, con't | Mission Voice Switching System (VSS) | 2048 port digital switch |
| | Routed Data Service | Cisco/Juniper/Bay routers, patch panels, modems, fiber modems/multiplexers/repeaters, inverse multiplexers, channel service units, channel banks, CSU/DSUs, disk drives |
| | Mission Network Service Assurance Plan (NSAP) backbone | Conversion devices |
| | High Rate Data/Video Service System | Statistical Multiplexer |
| | NASA Directory Service | Sun Solaris, Syntegra Mail*Hub |
| | NISN Activity and Outage Posting and Notification System (AOPNS) NISN Mission outage notification system (MONS) Flash Reporting System | Sun UNIX |
| | Enterprise Network Management Center (ENMC) | Sun SPARCstations |

**APPENDIX A
SYSTEMS RESPONSIBILITIES (CON'T)**

Category II. CIO Managed Systems for which the Contractor shall have Limited Responsibilities

| SERVICE TYPE | SYSTEM NAME | RESPONSIBILITIES |
|----------------------------------|---|--|
| MSFC Information Services | Photographic and Visual Service System | Operations |
| | IES | Software Maintenance & Sustaining Engineering |
| Agencywide | Secure voice teleconferencing system | Operations & Maintenance |
| | SMARTCards | Operations & Maintenance |

Category III. Non-CIO Managed Systems for which Contractor shall have Limited Responsibilities

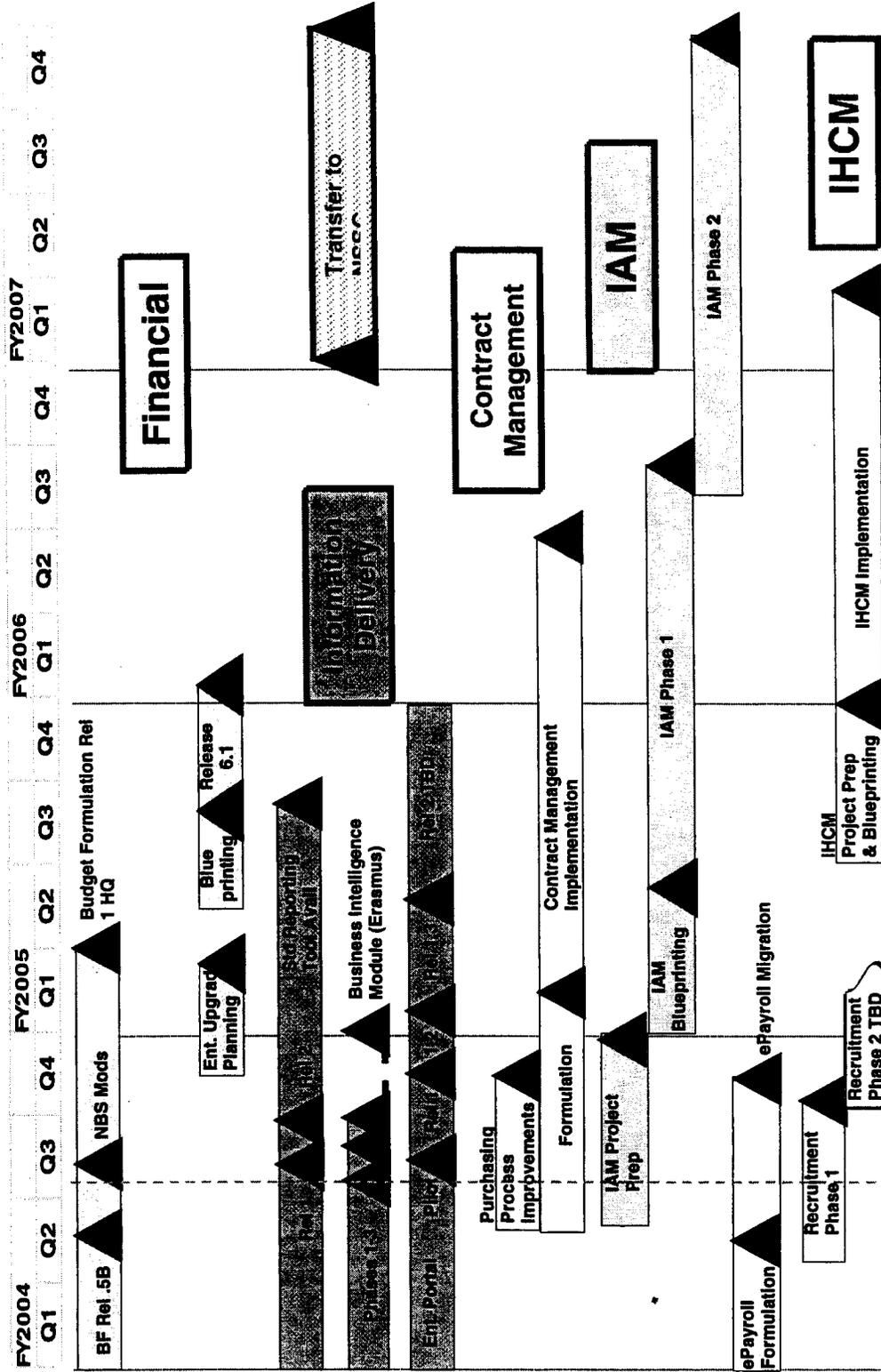
| SERVICE TYPE | SYSTEM NAME | RESPONSIBILITIES |
|----------------------------------|---|---|
| MSFC Information Services | User owned midrange | Operations, and Maintenance |
| | All other MSFC IT Computer Equipment (except HOSC) | Hardware Maintenance (see DRD 974RM-001) |
| Agencywide, NISN | Voice teleconferencing service | Interface with provider & reporting |
| | VoTS scheduling system | Interface with provider & reporting |
| | NISN Mission video system | Interface with provider & reporting |
| | Video Teleconferencing Service | Interface with provider & reporting |
| | WAN Transmission Services | Interface with provider & reporting |
| | High Rate Data/Video Service System | Interface with provider & reporting |
| | FAX Broadcast Service | Interface with provider & reporting |

APPENDIX B APPLICATIONS/WEB CATEGORY DESCRIPTIONS

| CATEGORY | DESCRIPTION |
|----------|--|
| 1 | NASA-wide or MSFC-wide application service or web site, critical or highly visible or complex application/web service. |
| 2 | Medium scale application service or web site, less complex, with medium criticality |
| 3 | Administrative and support application service/web site, or small user community |

APPENDIX D
IFMP ROLLOUT SCHEDULE

IFMP & Selected eGov Schedule egov



| National Aeronautics and Space Administration | | | DATA PROCUREMENT DOC. | | |
|---|----------|----------|---------------------------|-------|--------|
| PAGE REVISION LOG | | | NO. | ISSUE | |
| | | | 974 | Basic | |
| NOTE: The current revision is denoted by a vertical line in the outer margin adjacent to the affected text. | | AS OF: | SUPERSEDING: | | PAGE: |
| | | 01-01-04 | | | |
| INSERT LATEST REVISED PAGES. | | | DISCARD SUPERSEDED PAGES. | | |
| ITEM | PAGE | STATUS | ITEM | PAGE | STATUS |
| Mod 3 | J-2-1 | | | | |
| Mod. 3 | J-2-3 | | | | |
| Mod. 3 | J-2-19 | | | | |
| Mod. 3 | J-2-28 | | | | |
| Mod. 3 | J-2-35 | | | | |
| Mod. 3 | J-2-38 | | | | |
| Mod. 5 | J-2-22 | | | | |
| Mod. 10 | J-2-9 | | | | |
| Mod. 10 | J-2-25 | | | | |
| Mod. 10 | J-2-36 | | | | |
| Mod. 10 | J-2-37-A | | | | |
| Mod. 22 | J-2-12 | | | | |
| Mod. 24 | J-2-37-A | | | | |

MSFC - Form 3461-2 (Rev August 1970)

DATA REQUIREMENTS DESCRIPTION (DRD)

1. **DPD NO.:** 974 **ISSUE:** Basic
2. **DRD NO.:** 974MA-012
3. **DATA TYPE:** 3
4. **DATE REVISED:**
5. **PAGE:** 1/1
6. **TITLE:** Contractor Program/Project Status Review Report
7. **DESCRIPTION/USE:** To provide the contractor's status of major activities and projects across all UNITEs service areas, including performance against contract standards/metrics and any items or issues that may impact performance evaluation.
8. **OPR:** AD30 9. **DM:** AD30
10. **DISTRIBUTION:** Online with hard copy to CO and COTR
11. **INITIAL SUBMISSION:** Monthly report: submit online prior to initial Program/Project Status Review following the effective date of this modification.
12. **SUBMISSION FREQUENCY:** Monthly report: submit online prior to each monthly Program/Project Status Review.
13. **REMARKS:**
14. **INTERRELATIONSHIP:** PWS paragraph 2.1.a, 5.1.4.1, 5.1.4.2, 5.1.4.3, 5.1.4.4
15. **DATA PREPARATION INFORMATION:**
- 15.1 **SCOPE:** The report provides the contractor's status of major activities and projects across all UNITEs service areas, including performance against contract standards/metrics and any items or issues that may impact performance evaluation.
- 15.2 **APPLICABLE DOCUMENTS:** None
- 15.3 **CONTENTS:** The Contractor Program/Project Status Report shall:
 - a. Capture action items, provide status, metrics, critical projects, wrap-up, risks, and issues based on currently utilized format.
 - b. Describe the contractor's self-assessment of performance of the PWS tasks.
 - c. Describe the contractor's self-assessment of performance against the contract performance standards for both objectively and subjectively measured areas of the PWS.
- 15.4 **FORMAT:** Contractor format is acceptable.
- 15.5 **MAINTENANCE:** None required

PERFORMANCE SURVEILLANCE PLAN MATRIX - UNITEs- ATTACHMENT J-4-(G)

SOW Section

NASA insight/surveillance/deliverables

Frequency

5.0 MSFC INFORMATION SERVICES

5.1 MSFC Applications and Web Services

5.1.1 Product Line Organizations

5.1.2 Support Organizations

5.1.3 Office of the Director and Staff Offices

5.1.4 Business Information Systems Solutions

1. Periodic Review of On-line Systems
2. Review of DRD's (see distribution list) per ISO process
974MA-005 Financial Management Report
974MA-006 Reports
3. Meetings documenting contractor actions
4. Review of Contractor Performance against Kt Rqts
5. Project Plans and schedules
6. Availability Report
7. Trouble Ticket Report
8. Federal laws and Government and NASA policies regarding website development.
9. Customer Surveys

1. As needed (TM)
2. Monthly (TM)
Monthly (TM)
3. As needed (TM)
4. Monthly (TM)
5. As needed (TM)
6. Monthly (TM)
7. Monthly (TM)
8. Monthly (TM)
9. Quarterly (TM)

(Mod. 24)

| PERFORMANCE REQUIREMENTS SUMMARY/ MADRS – UNITEs | | ATTACHMENT J-4-(H) | |
|---|---|---|----------------------------------|
| SOW Section | Performance Standard | MADR | WEIGHT |
| <p>5.0 MSFC INFORMATION SERVICES</p> <p>5.1 MSFC Applications and Web Services</p> <p>5.1.1 Product Line Organizations</p> <p>5.1.2 Support Organizations</p> <p>5.1.3 Office of the Director and Staff Offices</p> <p>5.1.4 Business Information Systems Solutions</p> | <p>A. Contractor shall provide trouble ticket response/resolution by application category as specified in the Applications and Web Services Table.</p> <p>B. Contractor shall adhere to established schedules for deliverables.</p> <p>C. Contractor shall respond to inquiries regarding status of specific application/web services projects <= 24 hours of Technical Monitor request.</p> | <p>See Attachment J-4-(F)</p> <p>See Attachment J-4-(E)</p> <p>0%</p> | <p>45%</p> <p>45%</p> <p>10%</p> |

(Mod. No. 24)