

MONTHLY PROGRESS REPORT

June 1 - 30, 2009

Task No. 294

Description: Global Precipitation Measurement Flight Software Engineering

GSFC TM: xxxx, Code 582

Task Summary

The task provides engineering support for the GPM FSW requirements, design, development, and verification efforts. The GPM FSW engineering effort is utilizing the Flight Software Branch's (FSB) Library (FSBL) to manage the following reusable FSW artifacts: the Core Flight System (CFS) and the Guidance Navigation and Control (GN&C) framework and its associated artifacts. This task provides FSW engineering support functions such as configuration management and tool configuration support.

Overall Progress

GPM

- Continued working on Command Ingest (CI) requirements and source code:
 - Participated in the CI Requirements Review. Updated the requirements document in MKS to incorporate comments from the Review and other recommendations from the C&DH DTL. Generated document report from MKS and sent it out to the DTL.
 - Moved Command Authentication requirements from the CI requirements document to a new separate controlled document in MKS for added security, as recommended by the DTL. Generated document report from MKS and sent it out to the DTL and Software Systems Engineer.
 - Updated the CI source code inherited from LRO for GPM-specific changes – mainly dual transponder and preliminary command authentication using the FIPS Keyed-Hash Message Authentication Code (HMAC) with SHA-224 algorithm.
- Participated in the Telemetry Output (TO) Requirements Review. Updated the requirements document in MKS to incorporate comments from the Review and other recommendations from the DTL. Generated document report from MKS and sent it out to the DTL.
- Made extensive updates to the GN&C Requirements document in MKS based on changes requested by the GN&C DTL and approved by the FSW IRB. Generated document report from MKS and sent it out to the DTL.
- Attended the first FSW IRB meeting.
- Continued to attend bi-weekly FSW Status meetings.
- Continued to complete the website with CFS incorporated to GPM releases.
- Added TO task to GPM from lro-4.3.3.2.
- Modified the field values on the DCR form upon PDL's request and made the changes into the existing DCRs affected by the modifications.
- Modified the TEST records to maintain test artifacts differently.
- Assisted new users and the testers to use the GPM CM system.
- Assisted users who had issues with connecting to the server.
- Attended the network meeting for TLSERVER3/TLSERER4 maintenance.

Task# 294

- Tested and verified the backup and restore process for TLSERVER3 and TLSERVER4.
- Completed the build and release procedure template for future GPM builds.
- Dropped and moved files in the GNC folder in source Integrity.
- Continued to work on the MKS 2007 server upgrade to Service Pack 5 (SP5).
Successfully tested the upgrade on the MKS test platform.

cFE/CFS/FSRL

- Updated requirements in MKS as requested by the CFS PDL. Generated and provided CFS requirement reports, test summary reports and RTTMs from MKS as requested by the PDL and Test Team.
- Continued to maintain and administer the FSRL in GForge:
 - Worked with the System administrators to find a mechanism to protect ITAR-sensitive files (such as cFE) in FSRL from access by unauthorized users.
- Continued to attend FSRL CCB meetings.

GPM C&DH Flight Software

- Prepared monthly report for project
- Integrating prototype SW app.
- Studying how to handle non bus-controller mode by sending Scomm check-in message
- Fixed DCR 7616; DCR 8295
- More integration and testing SW app. (got RX pkt working from SWTS)
- CI app requirements review
- Design meeting on 10 min. telemetry buffer requirement.
- DIO board interrupt handling h/w s/w meeting.
- Worked CFE DCR 4670; DCR 4410
- Attended GPM TO requirements review
- SpW app. doxygen commentation
- Reviewed SpW IRD
- Reviewed 1553 IRD
- Investigated CF device numbering on MCP750 under LINUX
- More doxygenating SW code.
- Preparing for SW app design review and code walkthrough.

GPM ACS Flight Software

- Continue to review GPM documentation
- Supported DI MCE Code Review

GPM cFS FSW

- Attended bi-weekly CFS developers software status meetings
- Supported CCB to review proposed changes to DS application requirements
- Continued development of DS application per changes to requirements
- Continued unit test development for DS application
- Made updates to cFE Time Services per DCR 4490, 4676, 8274
- Continued to support analysis of GPM time services
- Continued conversion of DS source code comments to Doxygen format

GPM FSW Lab

Task# 294

- Purchased and help setup some equipment for the GPM software and hardware development labs.

Current Problems/Risks/Corrective Actions (Technical/Schedule/Cost)

- None.

Planned Work for Next Reporting Period

Work planned for the next reporting period is as follows:

- Provide requirements management support for cFE, CFS, and GPM as required.
- Continue to work on the Command Ingest code.
- Test Command Authentication algorithm with additional test data sets, when they become available.
- Continue to work on SP5 upgrade for MKS 2007 on test bed, and plan production server upgrade.
- Provide Administration support for FSRL in GForge. Continue to work with System Admins. to establish procedures for non-GSFC personnel access.
- Attend FSRL CCB meetings.

Task Deliverables

Deliverable Item/Milestone	Deliverable Due	Actual Delivery
Monthly Progress Reports	Monthly, by the 15 th	Delivered
Configured FSBL GForge server	12/30/07	Completed prior to task start on Task 053.
GPM configuration management (CM) plan	03/19/08	02/05/08
FSB standard compliant CFS/GPM CM system	03/19/08	03/19/08
CFS/GPM FSW CM support as needed	09/30/08	09/30/08
Amendment 2		
Configure and Populate FSRL GForge server	As needed	Ongoing
GPM FSW Build 1.0	02/01/09	Build 1.0 beta released 3/23/09; Build 1.0 final released 5/6/09 – provided CM and Requirements Management support
GPM FSW Build 2.0	04/01/09	Build 2.0 release re-scheduled for Sept. CM and Requirements Management support ongoing
CFS/GPM FSW CM support	As needed	Ongoing
GPM FSW (GN&C, C&DH) Build 2.0 (A,C,D,G)	09/30/09 (*1)	
Prototype command authentication FSW (I)	09/01/09 (*1)	
Preliminary GPM FSW (GN&C, C&DH) Build 3.0 (A,C,D,G)	02/04/10 (*1)	
Equipment purchase orders/equipment for Build 0.2 (E, F).	11/30/08	11/30/08
CFS/GPM FSW Build 0.2 (Requirements, Design, Code, and Unit Tests) (A)	12/15/08	Schedule is being revised by TM
Equipment purchase orders/equipment for	1/15/09	1/15/09

Deliverable Item/Milestone	Deliverable Due	Actual Delivery
Build 1.0 (E, F).		
CFS/GPM FSW Build 1.0 (Requirements, Design, Code, and Unit Tests) (A)	02/01/09	Schedule is being revised by TM
GPM FSW Build 1.0 (C)	02/01/09	Schedule is being revised by TM
CFS/GPM FSW Build 2.0 (Requirements, Design, Code, and Unit Tests) (A)	04/01/09	Schedule being revised by TM
GPM FSW Build 2.0 (C)	04/01/09	Schedule being revised by TM
CFS Data Storage Application (H)	08/01/09 (*1)	
GPM FSW (GN&C,C&DH) Build 2.0 (A,C,D,G)	09/30/09 (*1)	
Preliminary GPM FSW (GN&C,C&DH) Build 3.0 (A,C,D,G)	02/04/10 (*1)	

Note:

(*1) Deliverables Added per Amendment 3

MONTHLY PROGRESS REPORT
April 1 - 30, 2009

Task No. 261
Description: GOES-R Ground Systems Engineering
GSFC TM: xxxx, Code 581

Task Summary

The National Oceanic and Atmospheric Administration (NOAA) operates a system of Geostationary Operational Environmental Satellites (GOES), providing continuous monitoring of the Earth from directly above the equator. GOES is collaboratively developed and acquired by NOAA and NASA. The GOES-R Ground Segment Project (GSP) is responsible for Ground Segment (GS) acquisition, development, operations, sustaining engineering activities. This task provides systems engineering and specialty discipline engineering services for the GOES-R GSP engineering and technical management activities.

Overall Progress

Work performed during the reporting period is as follows:

- All
 - Participating in the source selection processes of the Ground Segment Project (GSP) “GS Contractor” proposals.
 - Participating in Working Groups (WGs), Integrated Product Teams (IPTs), and Integrated Development Teams (IDTs) that have started – Data Engineering WG (DEWG), Software Engineering WG (SWEWG), Ancillary Data Relay System (ADRS) IPT, Antenna IPT, Archive IPT, Advanced Weather Information Processing System (AWIPS) IPT, GOES-R Access Subsystem (GAS) IPT, Infrastructure IPT, Image Navigation and Registration (INR) IPT, Facilities IPT, Telecommunications IPT, Security IPT, GRB/eGVAR IPT, User Readiness Working Group, and DEWG Metadata Subgroup.
 - Continuing preparation and review of the remaining WG, IPT, and IDT Charters as they evolve.
 - Continuing preparation of Functional and Performance Specifications (F&PSs) and Statements of Work (SOWs) for the Antenna System, GAS, ADRS, and High Rate Information Transmission/Emergency Managers Weather Information Network (HRIT/EMWIN) “Domain-5” system, and for the Remote Backup (RBU) facility.
 - Attended mandatory GSFC Safety Awareness Week classes.
 - Attended the GSP “All-Hands” meeting April 15.

- Task Management / Technical Lead
 - Serving as a senior technical subject matter expert for the GSP.
 - Prepared draft acquisition decision briefings for presentation to the Source Selection Official.
 - Supported continuing preparation of the revision/update of the GSP Project Plan.
 - Representing GSP in a Space Weather Prediction Center (SWPC) working group to help define future roles and responsibilities for space weather product processing.
 - Revisited the Tecolote cost estimate for the 28 L2+ SWx that are not currently in the GOES-R Program baseline with SWPC. SWPC had placed substantial contingency in the lines of code (LOC) numbers received last month, and which served as the basis of estimate for possible costs of product implementation. SWPC agreed to do a better scrub on their LOC numbers.
 - Participating in all GSP IPTs and IDTs.
 - Participating in GSP and Program Systems Engineering (PSE) Risk Board meetings.
 - Participating in the monthly GSP Project Status Review (PSR) and serving as a facilitator.
 - Reviewed the Office of Systems Development (OSD)/Office of Satellite Data Processing and Distribution (OSDPD) Management Plan, and the Office of Satellite Operation (OSO) Management Plan.
 - Leading the GSP “Gold Team” review of Antenna System, GAS, and ADRS documents for the respective acquisition packages.
 - Source Selection support.
- Product Generation Systems Engineering
 - Participated in the DEWG Metadata discussion regarding metadata fields for L2+ products. Agreed ATBDs are currently not mature enough to designate metadata, but should be by the 80% release in September 2009.
 - Responded to questions posed by the User Readiness Working Group led by xxx yyy regarding GRB transition planning. Provided contract delivery dates for the Product User’s Guide (PUG; initial draft of which is due at GS PDR in 2010), and the GS GRB simulator in early 2013.
 - Reviewed and provided comments on the GLM CDRL 80 draft document.
 - Participated in five AWG meetings to discuss: 1) ADRS data requirements; 2) metadata for various product levels; 3) conversion factors from radiance to reflectance metadata; 4) perceived L1b risks, and 5) general weekly meeting topics.
 - Also discussed differences between the current GOES-I/P and GOES-R GS providing calibration data. Calibration data for legacy GOES are carried forward in the GVAR data stream, where as the magnitude of the ABI calibration data will not permit transport over the GRB link. The GS Functional and Performance Specification (FP&S) calls out requirements to push full resolution instrument

- calibration data to the systems at the CDAs, providing secure remote access to those who need the data for calibration monitoring.
- Participated in two DEWG Metadata Team telecons reviewing Data Management document. Drafting new paragraphs describing L0 and L1b metadata.
 - Held the GRB/eGVAR IPT Kickoff meeting on April 29. The meeting was well attended. Two issues were identified: 1) who's looking after remote user impacts; and 2) is there a need for an ICD for the eGVAR interface.
 - Source Selection support.
- Integration & Test Engineering
 - Continued to support ABI INR weekly review meetings.
 - Met with NSOF personnel to discuss ABI CDRL 120 (ABI Operations Handbook); consolidated comments and submitted to GOES-R Flight personnel.
 - Returned to supporting the INR Simulator/Matlab efforts through Program Systems Engineering (PSE).
 - Provided comments on proposed Data Item Descriptions (DIDs) for the GLM Ops Handbook.
 - Supported the DEWG and metadata meetings; reviewed Strawman GOES-R Metadata Model.
 - Source Selection support.
 - Computer Hardware Engineering
 - Participated in SUVI L1b definition discussion on April 3. Purpose was to address questions that arose during the AWG L2+ space weather (SWx) product CDR regarding the content and definition of SUVI L1b.
 - Coordinated review of draft GLM CDRL 80 and sent consolidated comment list to Flight.
 - Completed analysis of projected L1b data rate for SEISS based on PDR instrument design.
 - Attended Radiance versus Reflectance briefing presented by xxx yyyy of the Calibration Working Group (CWG). PSE accepted the CWG recommendation to keep L1b in radiance (as currently defined) and add a coefficient per band to allow users to convert radiance to reflectance factor. An action was assigned to aaaa/bbbb to work with xxx yyyy to determine metadata and spacecraft ephemeris needs and timing for additional parameters to support conversion to reflectance.
 - Attended AWG meeting to discuss candidate risks associated with L1b and instrument performance. It was determined no new risks need to be written for the GSP in this area.
 - Attended and supported kick-off of the GRB/eGVAR IPT.
 - Completed NOAA badging process. (This should simplify logistics of attending meetings at NOAA facilities.)
 - Source Selection support.
 - Data and Information Engineering
 - Organized and conducted the Metadata team telecons on April 8, 22, & 23, and the

- DEWG telecon on April 15.
- Conducted an internal review of the Volume 2 of the Data Management Plan: Strawman Metadata Model document. Received almost 200 review comments from the DEWG. Discussed all the review comments at the Metadata telecons and came to agreement on the response. Planned the revision of the document in response to the review comments.
 - xxx yyyy will revise the document.
 - Met with xxx yyyy and xxx yyyy to discuss the need for metadata lists from the AWG ATBDs with three other DEWG members (xxx yyyy). Agreed on an action plan with the AWG. xxx yyyy will gather the planned metadata for L2+ baseline products by October 15, 2009.
 - Participated in the AWIPS IPT telecon. Modified GOES-R Metadata based on Working Group inputs from the face-to-face meeting.
 - Wrote the data dictionary of the GOES-R metadata model. Mapped the metadata in current GOES high level products to the GOES-R metadata model. Delivered the edited version of GOES-R Straw-man metadata model to the working group for review.
 - Participated and made the comments on the review comments from the metadata working group.
 - Lead the Archive IPT
 - o Continued to address issues with the GOES-R to CLASS IRD. This document has undergone additional “gold team” review and comments have been made both by the “gold team” as well as CLASS. (This work is ongoing.)
 - o Continued to make preparations and work with the CLASS team, for the June SRR/SDR for CLASS.
 - o Appraisal activities by the NOAA Archives continue with the GOES-R Questionnaire.
 - o Continued to support the bi-weekly Technical Interchange Meetings (TIMs) with CLASS created to resolve IRD and schedule issues.
 - Continued to support the DEWG.
 - o Completed re-writes of sections of the metadata plan document, incorporating comments received after the first round of reviews (working group review). The document will now be sent out to the wider GOES-R GSP for additional review.
 - Attended the kick-off meeting of the GRB/eGVAR IPT.
 - Source Selection support. (xxx yyyy)
- Communications & Networks Engineering
 - Participated in Antenna IPT meetings.
 - Continued development of Antenna F&PS, CONOPS, RFP, SOW, CDRL, and Sections “L” and “M” of the solicitation package.
 - Facilities Engineering
 - Facilities IPT

- Finalized Facilities IPT Charter and members list.
- Generated a first cut of the Antenna Infrastructure requirements and distributed for comment.
- Reviewed and made comments to the comments on the antenna infrastructure requirements.
- Edited the Facilities Implementation Plan to reflect the latest round of antenna infrastructure changes and distributed for comment.
- Reviewed and commented on RBU SOF, and Occupancy Agreement.
- Chaired the second Facilities IPT meeting and generated the related agenda and meeting minutes. Distributed the meeting minutes for comment.
- Reviewed and made comments to the RBU security requirements.
- Revised RBU site selection requirements adding a requirement for bucket truck parking.
- Supported the NSOF Floor space CCB. Generated and distributed the related floor plans for comment.
- Started the WCDAS Floor Space CCB process. Generated and distributed the related draft floor plans for comment.
- Antenna IPT
 - Supported Antenna IPT in the review/comment of the related F&PS.
- Meetings: NSOF Floor Space CCB; Dev Team; Antenna IPT; Facilities IPT; and RBU Occupancy Agreement and SFO Review
- Software Development & Sustainment Engineering
 - “Gold Team” review of GAS documents.
 - Held several Archive IPT and Tiger Team meetings to negotiate interface and performance requirements with CLASS and the Archives.
 - Continuing to assisting CLASS to develop SDR/SRR package for June presentation to the GSP
 - Coordinated with AWIPS Management following joint GAS / AWIPS IPT; consensus was reached and AWIPS has signed interface document.
 - GAS coordination continues (doc review and coordination with management regarding procurement approach).
 - Held SOW walkthrough meeting with GAS IPT.
 - GOES-R Antenna Acquisition document preparation continues; Held Antenna Tiger team meetings to recommend approach to key requirements.
 - Held monthly GS SE/Development combined Risks and Issues meeting.
 - Led GSP / OSD Management meeting ... continued coordination of joint acquisition approach to the GAS.
 - Briefed GOES-R GS architecture to the IT Security Working Group as inputs to C&A boundary discussion.
 - Continued to incorporate comments to OSO Management plan.
 - Reviewed GSP Development Management Plan.
 - Provided review/feedback for numerous GSP and Program ECRB CRs/PCs.
 - Drafted Project Status Review inputs and briefed Development Lead on all on-going activities.

- Coordinated and supported Risk Management Board meeting.
- Source Selection support.
- Configuration Management
 - GSP Documentation tree was reviewed by the SE “Gold Team.” The tree architecture is currently being update with changes designed to map to the WBS.
 - Continued to provide technical support to the GOES R Safety and Mission Assurance team in the area of developing project monitoring and control processes.
 - Continued to support Algorithm Working Group (AWG) systems engineer to develop CM processes for work packages including the management of test data.
 - Attended Fundamentals of Systems Engineering course provided by zzz on April 14-15.
 - Attended IRMA (New Risk Management Tool) demonstration and the initial training session.
- Product Distribution Engineer
 - Major changes have taken place to Antenna Procurement:
 - Tiger team to review and recommend change based on the Request for Information (RFI) results.
 - GSP management added Pad/Facilities and IFDS switch to main antenna contract.
 - Antenna Procurement team reorganized.
 - Completed antenna “Tiger Team” effort on-schedule and with all recommendations accepted to go forward in the procurement.
 - Worked to implement findings of the Antenna “tiger” team into procurement documentation.
 - Incorporated IFDS/antenna facilities specifications into the F&PS, now called the “tech specification.”
 - Reviewed the antenna CDRL/DID, GFP list.
 - Reviewed changes to the F&PS (tech spec), SOW, WBS, Section L&M and other contract documentation.
 - Produced new acquisition schedule to incorporate red team activities and new time line.
- Enterprise Management Planning – OSD-3
 - Updated Environmental Satellite Processing Center (ESPC) Data Volume Workbook which is getting more visibility and use. Minor updates included moving Jason into core spacecraft category, changing NOAA-N⁷ to NOAA-19, adjusting fly-out data for Jason and NPP based on latest information, and fixing a bug.. The Workbook contains four main output sheets, all tied to a fly-out chart from 2009 to 2020: Temporary Storage Data Volume, Daily Average Data Transfer Rate, Daily Data Volume, and Ingest Daily Data Volume. The Workbook was designed originally for GOES-R, but was expanded for an enterprise view that now includes all NOAA and Non-NOAA satellites processed

- in the NSOF.
 - Attended April 1 kick-off meeting for Exostrategies task for developing a Mission Planning Tool for SOCC.
 - Attended: Ingestor IPT meeting on April 2, 16, and 30, and ESPDS (Environmental Satellite Processing and Distribution System) SOW (“umbrella”) Review at NSOF on April 16.
 - Attended: GAS SOW “Gold Team” Review April 7, GAS IPT meeting on April 9, and GAS SOW CDRL Gold Team Review on April 9 (Gold Team reviews were not truly gold due to lack of GOES-R personnel working SEB business.)
 - Attended SGT-sponsored 2-day training on Systems Engineering, April 14-15.
 - Provided review and comments on a variety of documents: Draft ESPDS Development Source Selection Plan, ESPDS Development SOW (“umbrella”) versions 0 and 1, GOES-R GS Project Status Review (4/28), GAS SOW v0.7, and GAS (GOES-R Access Services) Work Assignment SOW v8a.
 - Wrote the introduction to the ESPDS SOW.
- Instrument Interface Engineering
 - **General**
 - Attended the GLM communications workshop in Palo Alto, CA.
 - Sent a message to the instrument lead (xxx yyyy) concerning moving the first release of the operations handbook for all the instruments to CDR. The issue is being discussed.
 - Met with the NASA software lead and the two contractor software leads concerning the requirement to filter telemetry points on the instruments. A decision to meet with each contractor to determine whether they are putting all their data out at the highest rate already, or if they might see some benefit from choosing to only send a point at a set rate was made. The meetings have not yet been held. It is assumed they will be held just prior to each instrument CDRs.
 - Participated in instrument and summarized for GSP.
 - **ABI**
 - Read through GOES-N/O/P Imager Ops Handbook (OH) for comparison with ABI OH. Found the –N/O/P OH seems to be a mixture of several different documents in our CDRL list. This document should be kept on hand when an official release is put out by ITT. If there is something missing at that point, we will put it into a set of comments to ITT.
 - Held two ABI ops handbook review meetings. Created summary of comments and other information and sent to the distribution list. These comments will be used in the meeting with ITT scheduled for May.
 - Reviewed the GOES-I/M OH.
 - Continued work on ABI issues and watch items.
 - **EXIS**
 - Participated in weekly EXIS project meetings.
 - **GLM**
 - Answered a question regarding the availability of the cloud mask product

- for GLM.
 - Provided a new DID for the OH for GLM. Used the comments generated from the meetings about the ABI handbook to come up with missing requirements for the GLM DID. Expect the updated DID to be added via a CCR.
 - Reviewed GLM CDRL 65, system performance plan. Wrote up comments and passed on to GLM lead systems engineer.
 - Participated in weekly GLM systems and project meetings.
- **SEISS**
 - Participated in weekly SEISS project meetings.
- **SUVI**
 - Reviewed and summarized SUVI PMSR 8.
 - Participated in weekly SUVI project meetings.
- **Spacecraft and Ground**
 - Reviewed cloud TRR slides.
 - Continued to provide support to the GS and the Program regarding instrument operations, other operations, flight software and testing.
 - Consulted with team members who have direct responsibility to deliver documentation in the capacity of the instrument operations lead.
 - Served as a GSP to Flight Project resource to ensure all top level requirements reflect correct operational guidelines and operational activities are not overlooked.

Current Problems/Risks/Corrective Actions (Technical/Schedule/Cost)

- None.

Planned Work for Next Reporting Period

Work planned for the next reporting period is as follows:

- All
 - Continue supporting GSP Source Selection activities: GS Contractor going to “award,” and GOES-R Access Subsystem (GAS) and the Antenna System getting ready for RFP releases.
 - Engage in GSP IDTs, IPTs, and WGs as they become active and functional.
- Task Management / Technical Lead
 - Source Selection support.
 - Assist with the rollout and coordination of the GSP IDTs, IPTs, and WGs, and support specifically assigned teams.
 - Facilitate GSP activities with extended partners in NOAA offices; especially OSD.
 - Assist with Remote Back-up (RBU) facility requirements definition, and support interactions with GSA for selection of a facility and site.
 - Continue support to Space Weather Processing Center’s (SWPC’s) efforts to

define a long-term role, re-allocation of SWx tasking, and identification of supporting budgets. Preparing to generate a new cost estimate for development of SWPC's Level-2+ (L2+) products based on new source lines of code (SLOC) estimates received from SWPC in April.

- Product Generation Systems Engineering
 - Complete notional draft of Transition from GVAR to GRB Plan (notional because GS Contractor has to deliver a transition plan in response to CDRL SE-02). Action due date end of June.
 - Continue interaction with the DEWG regarding instrument data and metadata descriptions.
 - Participate in instrument monthly status and CDRL required review presentations.

- Integration & Test Engineering
 - Continue to support ABI INR weekly review meetings (topics are unknown until the week of the meeting).
 - Continue to support DEWG and Metadata Group activities.
 - Attend the ITT CDRL 120 Review (ABI Operations Handbook).
 - Support the Matlab configuration and testing to perform INR simulations.

- Computer Hardware Engineering
 - Discuss L1b data timing concerns with Algorithm IDT.
 - Support GRB/eGVAR IPT activities.
 - Coordinate PG IDT activities during xxx yyyy leave (May 4-15).
 - Hold PG L1b IPT kick-off.

- Data and Information Engineering
 - Review GOES-R documents in support of acquisition activities.
 - Continue the development of the GOES-R Data Management Plan.
 - Modify and edit the GOES-R strawman metadata model based on the review comments from the Metadata Subgroup.
 - Attend telecons to present the updated version of metadata model to the GOES-R working group members.
 - Create the final pre-release version of GOES-R metadata models based on working group's comments and release the final version to Government for review.
 - Answer questions from Government review process.
 - Continue to provide support to the DEWG.
 - Continue leadership of the Archive IPT.
 - Continue to support GAS IPT activities.
 - Continue to support AWIPS IPT activities.
 - Continue to support Telecom & Security IPT.
 - Continue to support the GRB/eGVAR IPT.

- Communications & Networks Engineering
 - Participate in GSP Risk Board and All-Hands meetings.
 - Finalize the Antenna SOW for Gold Team Review.
 - Participated in Antenna IPT review of Sections L&M.
 - Participate in review meetings of the GOES-R Ground Antenna Specification (RFP), including the expanded scope to include pad construction and IFDS switch in the procurement.

- Facilities Engineering
 - Source Selection support.
 - Support the Facilities IPT.
 - Update draft facilities implementation plan and schedule per changes/comments and place on portal.
 - Continue with NSOF and WCDAS Floor Space CCBs.
 - Support Antenna IPT.
 - Support EM IPT.

- Software Development & Sustainment Engineering
 - Source Selection support.
 - Continued development of GOES-R GS Development Management Plan
 - Continued development of OSO Management Plan.
 - Continued CLASS SDR/SRR package development support.
 - GOES-R Antenna Acquisition (Gold Team review).
 - Coordinate and establish regular OSDPD-GSP technical interchange meetings (TIMs) to address multiple OSDPD-related issues. (This was put on hold pending SEB activities)

- Configuration Management
 - Submit updated GS SE Documentation Tree and Master Document list to CCB for review and approval.
 - Work with Adrian Rad to develop processes and training plans for new Risk Management Tool. Also, work with Adrian to take over the GS Risk Management task.
 - Continue to support the development effective change management practices for GAS and other affiliated areas. Also, support the tight GAS document preparation requirements.
 - Improve configuration management process where GS changes from the AWG flow up to the MRD and LIRD.
 - Make progress in modifying the GS SE CM plan so it is fully compliant with NOAA requirements and NASA Standard SDT-0005.
 - Continue to collect and categorize user interface/HMI improvement for the WINDCHILL CM tool. Based on this data, prepare an optimum WINDCHILL configuration and user interface report that also includes appropriate training and coordination with the Flight and Program teams.

- Product Distribution Engineer
 - Support the Antenna IPD.
 - Ensure “Red Team” review of all antenna documents.
 - Prepare documents for end of May draft RFP release.
 - Participate in the GRB IPD

- Enterprise Management Planning – OSD-3
 - Continue to support development of the GAS SOW, CDRL, Requirements Specification, and IRD.
 - Continue to support development of ESPC Product Distribution and Access (PDA, previously EAS) System Requirements, with a focus on GAS and NDE.
 - Continue to support development of OSD acquisition documents that will meet the requirements for GOES-R access services, as well as other ESPC development projects under the ESPDS “umbrella” SOW.
 - Support engineering tasks for NSOF OSD GOES-R development.

- Instrument Interface Engineering
 - Continue working on the telemetry filtering issue, the diagnostic mode issue, and the ops handbook contents and release date issue.
 - Resume work on NSFO training presentation.
 - Continue participation in instrument weekly meetings and provide comment and clarification and be an interface when needed.
 - Continue work on instrument software reviews and documents.
 - Continue involvement with NOAA GSP and NASA Flight Project.
 - Review and provide comments on CDRLs as delivered by the instruments.

Task Deliverables

Deliverable Item/Milestone	Deliverable Due	Status
Monthly Progress Reports	Monthly, to the TM by the 18th	Delivered
Monthly Financial Reports (i.e., “533s”)	Monthly, by the TM by the 18th	Delivered
Weekly Progress Reports	Weekly by e-mail	Delivered
CCR Materials	As required by the Task Manager	None Required This Period
Support to Project Reviews	As required by the Task Manager	None Required This Period

Deliverable Item/Milestone	Deliverable Due	Status
Technical and Managerial Meeting Minutes, Reports, Presentations, and Project Reviews	- Assisted in preparation of Industry Day presentation	Completed – 19Feb08
	- Assisted in preparation and review of the DOC ARB briefing	Completed – 28Apr08
	- Assisted in preparation of the GS Contractor Source Selection Plan (SSP)	Completed – 19May08
	- Prepared Kick-off briefing for OSD partnering	Completed – 31Jul08
	- SSO Briefing	Completed – 16Oct08
	- SSO Briefing #2	Completed – 17Dec08
	- Attended SWx ATBD CDR	Completed – 18-19Mar09
	- SSO Briefing #3	Completed – 30Apr09
Engineering Analysis Reports	- Remote Back-up Candidate Site Evaluation	Completed – 26Jun08
Financial and Budget Planning Estimates for Technical Areas of Effort	- Reviewing and Updating the GS CARD	Delivered – 07Mar08
	- GOES-R GSP 300b (Rev-3)	Delivered – 24Jun08
	- SWx L2+ Product Set Implementation Cost Estimate	Delivered – 23Apr09
Task Closeout Report Input	Within 15 days after Task end	Not Required This Period

MONTHLY PROGRESS REPORT
May1 - 31, 2009

Task No. 054
Description: LRO C&DH Software Design Support
GSFC TM: xxxx, Code 582

Task Summary

This task provides flight software engineering, materials, and technical expertise to support the LRO C&DH flight software development including.

- 1) *C&DH Software Lab Setup:* Work with the LRO Flight Software Lead to develop an equipment list for the software development lab. The list will include model numbers, manufacturers, quantities, and cost estimates. Once the equipment list is approved by the ATR, Microtel will purchase and/or manufacture/assemble the equipment as required and deliver all equipment to the LRO software development lab. Produce a C&DH SW Lab User's Guide, to include normal power-up/configuration procedure(s), normal and emergency power-down procedures. Also included will be a lab configuration sheet including hardware serial numbers and software version numbers.
- 2) *LRO Instrument ICD Review:* Review and comment on the interface control documents (ICDs) between the LRO instruments and the C&DH software. The comments will be delivered electronically to the ATR and the LRO systems engineering team.
- 3) *LRO C&DH SW Preliminary Design:* Work with the LRO Flight Software Lead to develop a preliminary design for the C&DH flight software. Document design decisions in PowerPoint charts/drawings suitable for use in the LRO Software Design Review.
- 4) *LRO C&DH SW Requirements Document:* Assist the LRO Flight Software Lead in developing the C&DH Software Requirements Document. Completed document sections or comments will be delivered electronically to the ATR.
- 5) *Build 1 Software Development:* Work with the Common Flight Executive (cFE) development team to finalize build 1 of the cFE and configure it for use as the core of the LRO C&DH flight software.
- 6) *Maintain LRO Development Lab*
 - 6.1 Microtel will maintain the configuration of the LRO Software Development Lab as needed to support development activities. This may include software, hardware, cabling, and furniture changes approved by the ATR.
 - 6.2 Microtel will make repairs and upgrades to lab hardware and software as approved by the ATR. Repairs or upgrades will be documented in the monthly status report.
 - 6.3 Microtel will update the Spacewire Test Set (SWTS) software as needed to support LRO software development. SWTS documentation will be updated accordingly, and delivered to the ATR
- 7) *Support LRO C&DH Software Development*
 - 7.1 Microtel will support Code 582 in the development of the detailed design of the LRO Command and Data Handling (C&DH) software. A design peer review package will be delivered to the ATR for each assigned software subsystem.

- 7.2 Microtel will develop code for each assigned subsystem according to Code 582 branch standards. A code walkthrough package will be delivered to the ATR for each subsystem
- 7.3 Microtel will perform and document Unit Tests for each assigned subsystem according to LRO development team unit test standards. A Unit Development Folder will be delivered for each assigned subsystem.
- 7.4 Microtel will integrate each assigned software subsystem with the rest of the LRO software on the LRO development lab hardware. Integration progress/problems will be reported in the monthly status report.
- 7.5 Microtel will debug and repair problems with the assigned subsystems as they are reported by the LRO test team. Each bug fix will be documented in the LRO software problem reporting/CM system
- 7.6 Raytheon will provide the LRO project with flight software engineering support, material and technical expertise necessary for the LRO C&DH Flight Software development. This includes support for a Configuration Management Librarian.
- 7.7 Raytheon will add additional testing, requirements management, and documentation support to the existing LRO software development and lab support task.

Overall Progress

Work performed during the reporting period is as follows:

- Prepared monthly progress report for the project

GNC

- Verified the fix for DCR 2647 – OM event ID assignment
- Helped develop the stol proc, dbx, and pages to dump, decom, and display for the Exception and Reset log provided by cFE ES task.
- Tested the DV tables generate process in FSW Maintenance lab using the updated STOL procs. Updated the DV table generation process instructions.
- Supported review of Safing table updates planned for post LOI.

C&DH

- Attended weekly CDH flight software status meetings
- Continued to provide flight software shift support for mission rehearsal simulations
- Supported review meetings re post-LOI changes to Limit Checker (LC) safing tables
- Completed coding of post-LOI changes to Limit Checker (LC) safing tables
- Supported development of Exception and Reset Log display pages
- Completed revisions to Limit Checker Task (LC) User’s Guide
- Continued to support development of process to create and load flight tables

FSW Lab Development

- No Activity

Work performed during the reporting period is as follows:

- Completed the CM audit for LRO-4.3.3.2.

Current Problems/Risks/Corrective Actions (Technical/Schedule/Cost)

None.

Planned Work for Next Reporting Period

Work planned for the next reporting period is as follows:

- Continue FSW support

Task# 054

- Continue FSW lab maintenance
- Provide CM support as needed.

Task Deliverables

Deliverable Item/Milestone	Deliverable Due	Actual Delivery
Monthly Progress Reports	Monthly, by the 15 th	Delivered
Maintain LRO Development Lab	3/31/08	Completed 3/31/08
Detailed Design Peer Review Packages (as assigned by ATR)	6/30/06	Completed 5/25/06 (3 day PDR Peer Review Presentation).
Unit Development Folders (as assigned by ATR)	3/31/07	Completed 3/31/07
Documented Problem Resolutions (as assigned by ATR)	9/30/07	Completed 9/30/07
1 SWTS, 3 SpaceWire-PCI Cards,	September 2006	November 06
10 SpaceWire cables	September 2006	September 06
1 SWTS, 3 SpaceWire-PCI Cards	October 2006	November 06
10 SpaceWire cables.	October 2006	October 06
2 SWTS, 1 SpaceWire-PCI Card	December 2006	December 2006
25 SpaceWire cables	December 2006	December 2006
12- 1 meter SpaceWire cables	December 2006	December 2006
5 - 5 meter SpaceCat cables	December 2006	November 2006
Amendment 2: SW CM		
Setup LRO CM system using MKS tools based on Code 582 DCR Template	8/31/06	7/31/06
Provide DCR and requirements metrics from the CM tools	Monthly	Monthly
Supply data for configuration audits for each LRO FSW build.	Build Schedule: Build 1 – January 2006 Build 2 – July 2006 Build 3 – February 2007 Build 4 – August 2007	Build 1 – Not done (prior to task start) Build 2 – October 2006 (Build rescheduled by TM) Build 2.5 – April 2007 Build 3.0 – August 2007 (Build rescheduled by TM) Build 4.0 – January 2008 (Build rescheduled by TM) Final Build 4.3.3.2 – May 2009
Amendment 5: Test/Requirements		
Test scenarios and test procedures	As assigned by FSB-designated FSW Test Lead	As assigned.
Test results packages reviewed according to FSB standards	As assigned by FSB-designated FSW Test Lead	As assigned.
Build 2.5 Testing complete	3/31/07	Rescheduled by TM. xxxx responsible for system testing of the final build 4.0.
Build 3.0 Testing complete	6/30/07	Rescheduled by TM.

Deliverable Item/Milestone	Deliverable Due	Actual Delivery
		xxxx responsible for system testing of the final build 4.0. Scenarios verified with Build 3.0 11/30/07.
Build 2.0 User's Guides	11/30/06	Draft -- 11/02/06
Build 2.5 User's Guides	1/31/07	Draft -- 12/08/06 Build 4.2 (Final) User's Guides – 9/30/08 Updates – 1/31/09.
Amendment 6: Test/Requirements		
Build 4.1 Testing complete	June 2008	xxxx responsible for system testing. Scenarios verified with Build 4.1 6/30/08. Build 4.2 procedures completed 8/29/08.

MONTHLY PROGRESS REPORT

May 1 – 31, 2009

Task No.: 305
Description: Multi-Mission ASIST Ground System Support
GSFC TM: xxxx, Code 583

Task Summary

This task provides support for the Advanced Spacecraft Integration System Test/Front End Data Systems (ASIST/FEDS) for multiple missions. The support includes development, integration and test and operations phases. The ASIST/FEDS ground system is currently supporting the SDO, MAP, GMSEC, XTE/TRMM, LRO, DSILCAS and JWST missions.

Overall Progress

Work performed during the reporting period is as follows:

- Continued modification of ASIST and FEDS. Work included:
 - Modified ASIST startup to scale windows for smaller screens.
 - Modified event colorizer to allow user-created color changes within event messages.
 - Cleaned up startup of SAMMI/removed dependency on NEWUSER variable.
 - Added option for user to select use of Min OR Max packet time to determine frame time (for spacecraft ordering).
 - Modified archiver to overwrite Finish (2) entries in index files, whenever a file was temporarily closed due to LZIP while FEDS is running.
 - Modified inter-frame delays to only take into account (for delay purposes) time increases (this prevents the data “lumpiness” issue).
- Specific projects:
 - SDO–Supported I&T, MOC testing, and all labs.
 - MAP–Supported MOC as requested. Corrected issue with spacecraft-order playback of VC3 data; helped configure FEDS to support merged Playback/Retransmit channels.
 - LRO–Provided support for five strings of LRO.
 - GMSEC–Supported GMSEC on SDO.
 - JWST–Provided support as requested.
 - DSILCAS–Provided support as requested.
 - XTE/TRMM–Provided support as requested.
 - MMS–Supported integration of ASIST with SC Simulator.
 - GPM–Provided support to SC Simulator development; investigated SWTS configuration.

Work performed during the reporting period is as follows:

- Continued ASIST/FEDS Build/Release Testing Support and IDR/UPR problem resolution support
- Provided Build/Release SDO MOCC Support.
- Continued Ground System Software Consulting Support.

- Continued Mission I&T Ground System Support.
- Continued Mission Operations Control Center Development and Ground Systems Engineering Support.
- Attended SDO Engineering meetings and reviews.
- GPM/MMS requirements definition.
- Provided MMS/GPM IGSE design support.
- Provided MAP problem resolution support/requirement definition.

Current Problems/Risks/Corrective Actions (Technical/Schedule/Cost)

None.

Planned Work for Next Reporting Period

Work planned for the next reporting period is as follows:

- Continue to provide support to users of ASIST.
- Continue to provide systems engineering support for the ASIST GSE development.
- Continue testing the next ASIST release.

Task Deliverables

Deliverable Item/Milestone	Deliverable Due	Actual Delivery
Monthly Progress Reports	Monthly, by the 15 th	Delivered
Provide ASIST ground system engineering and user support for the SDO project including I&T, launch and SDO MOC releases	12 Months / 2/4/10 (*2)	Ongoing
Provide ASIST ground system user support for the MIDEX/MAP project including MAP MOC relocation	12 Months / 2/4/10 (*2)	Ongoing
Provide ASIST ground system engineering support for the GMSEC project including I&T and GMSEC API releases	12 Months / 2/4/10 (*2)	Ongoing
Provide ASIST ground system engineering and user support for the XTE/TRMM project including help desk for upgraded facilities	12 Months / 2/4/10 (*2)	Ongoing
Provide ASIST ground system engineering and user support for the LRO project including LRO FSW lab	12 Months / 2/4/10 (*2)	Ongoing
Provide ASIST ground system engineering and user support for the DSILCA project including DSLICA FSW lab	12 Months / 2/4/10 (*2)	Ongoing
Provide ASIST ground system engineering and user support for the JWST project including JWST FSW lab	12 Months / 2/4/10 (*2)	Ongoing
Provide ASIST ground system engineering and user support for the SDO project including I&T, launch and SDO MOC releases	12 Months / 2/4/10 (*2)	Ongoing
Support the GPM EGSE Team to develop a spacecraft simulator and the C&DH rack, and provide lab support.	6 Months / 2/4/10 (*2)	Ongoing
Support the MMS EGSE Team to develop a spacecraft simulator and the C&DH rack, and provide lab support.	6 Months / 2/4/10 (*2)	Ongoing
Mod 3		
GPM EGSE - Deliver 5 ASIST workstations - Deliver 2 FEDS workstations	2/4/2010 (*2)	
MMS EGSE and C&DH Labs - Deliver 4 ASIST workstations - Deliver 2 FEDS workstations	2/4/2010 (*2)	
ELC I&T - Deliver 3 ASIST workstations with dual monitors	2/4/2010 (*2)	

- Provide an archive workstation		
Final Task Report	Within 15 days of task end date	

Note:

(*1) Deliverables added per Amendment 2

(*2) Deliverables added/amended per Amendment 3

June TO64 ITOS Monthly

GSFC TM: xxxx, Code 583

Highlights

System Admin.

- None

GLAST Ops SW Dev/I&T

- Delivered the GFEP user's guide, delivery documents and CD's to the project.

GLAST ACD

- None

SET

- None

Sustaining Eng Enhancements

- None

Sustaining Eng Universal Fixes

- None

Sustaining Eng Release/Patch

- None

ULDB

- None

Sustaining Eng Swift

- None

GMSEC General

- Updated ITOS to use the GMSEC API 2.6.

GMSEC XML

- None

GFEP SW Develop

- None this time period

LRO

- Continued providing ITOS and general system administration support for the MOC, FlatSat and Flight Software labs. Configured the FSW ITOS machines to be clones of the FlatSat ITOS machines to serve as a backup when the FlatSat is not available. Met with MOC managers to discuss support during launch and early mission. Launch of LRO was on June 18th. ITOS personnel provided 24 hour on-site support for the first few days during launch and the LOI's. There were no ITOS issues during the early mission. Continuing to visit the MOC and provide 24-hour on call support.
- For CFDP: Provided MOC, I&T and Flight Software support of CFDP usage and testing. Working on adapter for DSN CFDP. Implemented timeouts in the DSN utility. Need test data from DSN.
- For LRO I&T: ITOS personnel supported launch of LRO at KSC. Supported aliveness test following spacecraft being placed atop the rocket. Supported integrated system test with the spacecraft. Performed some sys-admin work at the ASOC to get ITOS running there. After launch helped pack up equipment. All personnel are now back at GSFC.
- Continued Data Management System (DMS) usage support at LRO I&T and MOC. Continue to resolve remaining SOARS.

General

- Assisted in locating all GSFC tagged equipment in the ITOS lab that belongs to the 583 branch.
- Passed ITOS lab safety inspection.
- Working on issue with the configuration monitor application not producing the desired result. This is probably an issue with not using the correct logic to produce the desired result. Will work with TC's to resolve issue.
- Completed testing of the command log decoder and spacecraft event decoder for Swift with test data provided by project. Still waiting for go ahead to release the patch.
- Looking into making mods to the command subsystem to handle a different format of a 4800 bit NASCOM block needed by Capitol College.
- Working on issue of spacecraft event messages being dropped during playback while acquiring real-time data.

LADEE

- Traveled to Ames to attend a Ground Data System working session with LADEE folks.
- Met with LADEE flight software group to discuss cFE table maintenance and ITOS.
- Met with LADEE personnel to discuss providing instrument simulators. They will send us their ICD's and we will study them and provide work estimate.

Multisource Data Base

- None

Milestones/Schedules/Deliverables

- None this time period

Problems

- None at this time

Risks

- None at this time

Staffing

- Unchanged

Customer Meetings

- Attended LRO weekly status meeting.

2-Week Event Look

- Continue to support SET, GFEP, GLAST, GMSEC and LRO labs, meetings and personnel.
- Release ITOS 7-8 patch 12.
- Continue work on outstanding software fixes and enhancements needed by LRO.
- For LRO
 - Support LRO prelaunch activities at KSC.
 - Support ITOS systems in FSW and FlatSat Labs.
 - Support LRO Flight Software lab.

MONTHLY PROGRESS REPORT

June 01 – 30, 2009

Task No. 226

Description: System and Security Administration for ISD Labs and Offices

GSFC TM: xxxx, Code 585

Task Summary

The METS Team provides Information Technology (IT) technical support to the Information Systems Division (ISD) facilities and desktops systems. ISD facilities support a variety of activities associated with NASA projects, including: development of ground software for new missions, science processing, test beds, and technology development. The METS Team provides: 1) System Operations Support; 2) IT Security Support; 3) System Administration Support for all ISD facilities computers, desktop non-ODIN non-lab computers, and peripherals; 4) Hardware Support; 5) and Desktop Support (non-ODIN non-lab non-HST).

All activities of the METS Team will comply with CD-013-L-GSF-5001: AETD Laboratory Systems Multi-Program/Project IT and OA-700-M-GSF-7002: OAIT - Admin Desktops (non-ODIN) security plans.

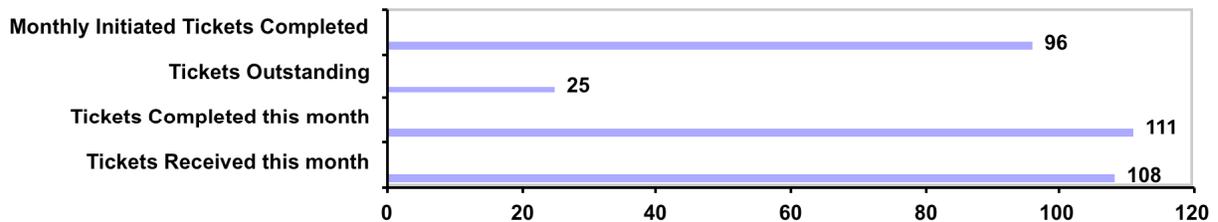
Overall Progress

Work performed during the reporting period is as follows:

- There were no reported violations from TripWire to report this month.
- Supported 34 requests from Web Developers to promote various files and folders within the AETD Web Farm infrastructure.
- Supported 26-service request from the IPP office; mostly for web file transfers; and building a new laptops for IPP staff.
- Twenty requests were received this month for Desktop-associated work. This included resolving printing problems, new systems configuration support, excessing old systems, and diagnosing hardware and software problems.
- Additional desktop and laptops were quickly built to support Code 580 summer students. These were all built and configured on short notice.
- Several large-scale systems were spec'ed out to fulfill procurement obligations.
- Multiple Code700 directed initiatives were implemented within Code 580. The Active Directory (AD) structure was collapsed in preparation for the NCAD migration; Adobe software was patched or removed from vulnerable systems in a large scale.
- The Data Protector (DP) backup system presently has a total of 329 systems being serviced.
- Code 585 System Administrators moved the GMSEC Lab to its temporary location.
- Various operating system patches were applied to the Windows, Mac and Linux servers:
 - Windows Server 2003 Windows Malicious Software Removal Tool - June 2009 (KB890830)
 - Windows Server 2003 Security Update for Windows Server 2003 (KB970483)
 - Windows Server 2003 Cumulative Security Update for Internet Explorer 7 for Windows Server 2003 (KB969897)
 - Windows Server 2003 Security Update for Windows Server 2003 (KB970238)
 - Windows Server 2003 Security Update for Windows Server 2003 (KB968537)

- Windows Server 2003 Security Update for Windows Server 2003 (KB961501)
- Windows Server 2003 Update Rollup for ActiveX Killbits for Windows Server 2003 (KB969898)
- Code 585 system administrators supported the AETD Directorate Computer Security Engineer (DCSE) by continuing to assist in the development of an AETD-wide remote syslog server and supporting clients.
- Work was completed this month in the development of a remote backup server for Code 580 nonODIN macintosh systems that use the OSX v10.5 “Time Machine” backup service.

The following chart shows the activity of all Trouble Ticket items as of 30 June 2008:



Current Problems/Risks/Corrective Actions (Technical/Schedule/Cost)

- None to report at this time.

Planned Work for Next Reporting Period

Work planned for the next reporting period is as follows:

- Monitor and tighten security on Windows/Unix/Mac OSX servers.
- Continue system audits for compliance of NASA CIS/FDCC Benchmarks.
- Provide AETD Computer Security Officials (CSOs) with PatchLink and CIS/FDCC status reports
- Manage the Continuous Monitoring of the AETD Lab Security Plan and the six security plans of Code 200.
- Continue Certification and Accreditation (C&A) for FY09 for Codes 200 and 500.

Task Deliverables

Deliverable Item/Milestone	Deliverable Due	Status
Monthly Progress Reports	Monthly by the 10 th	Delivered
Weekly Status Report	Weekly	Delivered
Updated spreadsheet of ISD backups including the backup schedule for each system by lab name as well as desktops and workstations	Monthly by the 10 th	Updated spreadsheet of ISD backups including the backup schedule for each system by lab name as well as desktops and workstations

Deliverable Item/Milestone	Deliverable Due	Status
Updated spreadsheet based on Code 580 data in the Center-provided IP Management System of the status of compliance with NASA standards and Agency Mandates	Monthly by the 10 th	Updated spreadsheet based on Code 580 data in the Center-provided IP Management System of the status of compliance with NASA standards and Agency Mandates
Group account report for ISD facilities	July 31, Oct. 31, Jan 31, April 30,	Delivered: April 30, 2009
Network diagrams for all ISD facilities	July 31, Jan 31	Delivered: April 30, 2009
Detailed capacity planning and performance monitoring web farm report	July 31, Jan 31	Delivered: April 30, 2009
Annual Training plan including cost	August 13, 2007	Delivered: August 10, 2007
List of computer supplies & materials needed for next FY	July 31, 2008	None Required This Period