

Satellite Operations Control Center/Command and Data Acquisition Stations (SOCC/CDAS) FY08 OA Analysis

The operational analysis (OA) is an annual, in-depth review of SOCC/CDAS program's performance based on the following:

- Customer Results
- Performance Measures
- Strategic and Business Results
- Financial Performance
- Innovation

The focus on this analysis will include a review FY08 performance, measures and results highlighting significant achievements/ performances. An historical review/ comparison of FY07OA will also be conducted to highlight significant information and contributions.

1.0 Customer Results

SOCC/CDAS program is fully meeting the customer's needs and the program is delivering the services that it is intended to deliver as outlined in the NOAA and NESDIS operational plans. SOCC/CDAS program primarily serves internal NESDIS customers, i.e. the Environmental Satellite Processing Center (ESPC) within the Office of Satellite Data Processing and Distribution (OSDPD). The data provided by SOCC/CDAS to ESPC is used to generate products which impact all economic sectors of the nation. The impact of these data and products are documented in the Economic Statistics for NOAA. The cost to the customer is as low as it could be for the results delivered.

1.1 Performance Measures

Prevent any deterioration in data delivered meeting quality/timeliness requirements (including dropouts). FY08 Current Performance Level 99.5% FY08 Threshold 98.5% of GOES data meeting quality/timeliness requirements per quarter. +1% over threshold as of September 30, 2008

Prevent any deterioration in DCS data that is successfully transmitted to users. FY08 Current Performance Level 100%. FY08 Threshold 98.5% of DCS data that is successfully transmitted to users per quarter + 1.50% over threshold as of September 30, 2008

Prevent any deterioration in POES data delivered meeting quality requirements (total data recovered) FY08 Current Performance Level 99.05% 98.5% of POES data delivered meeting quality requirements (total data recovered) per quarter +0.55% over threshold as of September 30, 2008

2.0 Strategic and Business Results

SOCC/CDAS program is meeting its own goals and objectives as well as those of the agency. Program management and controls are in place to ensure that the program continues to meet its goals and objectives and to monitor how well the SOCC/CDAS program performs.

2.1 Program Management and Controls

OSO performs extensive, continuous OA on the performance of its SOCC/CDAS operational components. This ensures system resources and ancillary supporting infrastructure (security, training, facilities, etc.) as well as labor resources remain optimally functional and configured to suit the NESDIS/NOAA's goals. OSO's OA covers a hybrid of system and non-system components.

OSO conducts an objective measurement of resource and performance metrics of the SOCC/CDAS elements on a periodic basis to ensure that operations are meeting all business and customer requirements.

For all IT components;

- Performance thresholds have been established.
- Performance is measured continuously through mainly automated process.
- Measurement is supplemented by a manual process when required.
- Performance data are gathered at the functional level and reported on a weekly basis.

2.2 Monitoring Cost, Schedule and Performance

Cost – OSO conducts a variety of budget analyses throughout the fiscal year. Obligations and expenditures are tracked on a weekly basis. Labor costs and full time equivalent usage are tracked on a bi-weekly basis. Variances to budget plans are analyzed monthly and reported to OSO Management as well as NESDIS management. A Needs Analysis is conducted annually. Key budget issues and risks are identified through these reviews and tracked by OSO management.

Schedule – The matrix annual operating plan is used to track key milestones. The final matrix annual operating plan for the current fiscal year is finalized when FY's appropriations are received. Monthly staff meetings allow the program manager to track progress towards key milestones and other operational aspects of the program (e.g., IT security compliance, data availability, etc.).

Performance – Contract performance is monitored to support both budget and performance measurements. Although the majority of OSO operations are conducted utilizing government FTEs, contractors are utilized to support operations at the Fairbanks CDAS and also provide support to OSO software maintenance and engineering.

All of these elements are provided to NESDIS senior management in a monthly quad chart that summarizes cost, schedule, and performance.

2.3 Security

SOCC/CDAS systems have been through a Certification and Accreditation (C&A) Process and have been granted Full Authority to Operate (ATO). All SOCC/CDAS systems have approved System Security Plans, Risk Assessments, and Contingency Plans in place.

C&As were completed as follows; DAPS/DCS, FCDAS Administrative LAN, and POES GS in September 2008, and GOES GS in May 2008.

WCDAS Administrative LAN's C&A is in process and is scheduled for completion in June 2009. Contingency plans testing and security control testing for all five systems were performed during FY2008.

2.4 Performance Measures

Processes and Activities –Timeliness- Improve POES data delivered meeting timeliness requirements to above 95%. Current Performance Level 99.05%. Threshold 95% of POES data delivered which meets timeliness requirements per quarter. +4.05% over threshold

Mission and Business Results- Improve GOES data delivered within navigation specification to above 95%. Current Performance Level 99.99%. 95% of GOES data delivered within navigation specification per quarter. +4.99% over threshold

Currently, there are no other organizations capable of doing this work better, more efficiently, or at lower cost.

3.0 Financial Performance

Financial performance is typically subjected to a periodic review for reasonableness and cost efficiency. Monthly budget reviews are held with the program manager, contracting officer technical representatives (COTR) and contract managers to ensure contracts are within cost and on schedule. Monthly reports from contractors are required to ensure the Government has the information it needs to evaluate cost performance. A detailed review of work and priorities is undertaken if cost is significantly above base lined values. Also, any necessary corrective actions are also identified and implemented.

4.0 Innovation to Meet Future Customer Needs

The following projects/initiatives have been implemented in FY2008, or were identified and initial planning to implement in the future has begun, to address future challenges, better meet customer needs, make better use of technology, and lower operating costs. Many of the 2008 activities included planning for future projects which will help to better meet customer needs while also resulting in lower operating costs and providing a project management approach to IT Security.

Better Use of Technology

Enterprise backup solution: Identification of, and planning for, an Enterprise backup solution began in FY2006 and continues today.

Centralized Intrusion Detection System: The NIST 800-53 requires that all mission critical systems have some form of Intrusion Detection System.

Commonly Shared Dual Factor Authentication Method: Dual factor authentication is the combination of a user selected password or user name, and a password generated by a specific device such as an USB flash drive or Smart Card mobile card.

GOES IFDS: The Wallops Intermediate Frequency Distribution System (IFDS) routes all uplink/downlink signals between the antenna systems and associated transmit/ receive equipment in the Operations building for all GOES spacecraft.

DCS: The DCS (Data Collection System) Alternate Data Distribution System (DADDS) is a backup to the existing DCS Automated Processor System (DAPS).

Centralized LAN Hosting FIPS and NIST Required Documents

Hardware was implemented to support a centralized server along with a backup server that will house all required NIST and FIPS security documentation. Through better use of technology, this effort will reduce the cost of multiple site document storage while providing a redundant centralized point to fulfill security requirements. An additional cost savings will be generated from centralized organizational approach.

Meeting Customer Needs

FCDAS and NWS Alaska Region Collaboration- In FY08, the FCDAS expanded its support to the NWS Alaska Region by supplying real-time DMSP data received by the FCDAS to the NWS Weather Forecast Office (WFO) Fairbanks Advanced Weather Interactive Processing System (AWIPS) system.

FCDAS and University of Alaska Geographic Information Network for Alaska (GINA) - FCDAS supplies satellite data from the Moderate Resolution Imaging Spectroradiometer (MODIS) instrument on the NASA Earth Observing Satellite.

FCDAS and WCDAS Stations supporting FORMOSAT-3/COSMIC missions- Commencing in April 2008, the Fairbanks and Wallops CDA Stations provide Telemetry, Command and Stored mission data recovery for the FORMOSAT-3/COSMIC mission.

Support to JASON-2- SOCC-CDA supported the successful launch of the JASON-2 spacecraft in June 2008, and the acceptance testing and assessment phase activities were completed. The JASON-2 CNES handover to NOAA OSD is planned for early FY09. The OSD handover to OSO is planned for mid-FY09.

POES DOMSAT link upgrade to 2.66Mbps:

POES currently Domestic Satellite (DOMSAT) links in order to transmit data between the CDASs and users, including the SOCC.

4.4 Better Use of Technology for Networking Demands

Transition to NETWORKX: Transition from GSA FTS2001 to NETWORKX is a government wide transition to a new 10 year telecommunications agreement with GSA.

FY08 Planning for New Projects to be Completed in FY09: During FY08 the initial plans were made and resources committed for the following projects that will be completed in FY09:

- Compunetix voice conference system upgrade
- JASON-2 Certification and Accreditation (C&A)
- JASON-2 transition to operations
- IJPS communication element C&A
- POES NOAA-N prime launch and transition to operations

- DMSP F18 launch and transition to operations
- GOES-O launch and transition to operations
- Upgrade the FCDAS power plant and security system
- Upgrade the WCDAS 8meter antenna