

**National Oceanic and Atmospheric Administration  
National Weather Service  
Telecommunication Gateway (NWSTG)  
006-48-01-12-01-3106-00  
Operational Analysis  
1<sup>st</sup> Quarter FY 2008**

## **Executive Summary**

NOAA's National Weather Service Telecommunication Gateway (NWSTG) consists of the NWSTG primary message switching system in Silver Spring, MD and the backup message switching system in Mount Weather, VA. The NWSTG is a critical element allowing NWS to satisfy the requirements for collection and distribution of hydro meteorological data. The NWSTG allows the NWS and its partners - public, private, and commercial - to perform their core functions. The NWSTG supports the NWS mission by collecting and distributing raw and processed hydro meteorological data and products. The National Weather Service Telecommunication Gateway (NWSTG) interfaces with a wide variety of partners and customers. All observational data ingested by the NWS passes through the NWSTG. The NWSTG acts as a message switch and routes these products to meet our customer's requirements. The NWS CIO/Telecommunication Operations Center (TOC) operates and maintains the NWSTG.

This report focuses on the operational state of the program as of December 31, 2007, and is based on guidance developed by the Department of Commerce. The NWSTG program directly facilitates NOAA's Strategic Goal to "Serve society's needs for weather and water information". The current program meets established cost, schedule and performance parameters.

This operational analysis (OA) is a quarterly status update of the program's performance based on the following:

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

### **1.0 Customer Results**

#### **1.1 Customer Requirements and Costs**

On November 27 through 29, 2007, OCIO hosted and chaired a WMO sponsored meeting to plan and coordinate the follow on to the existing telecommunication network which connects Australia, Japan, United Kingdom, and the U.S. through a contract with British Telecom (BT). Representatives from each of these countries attended as well as representatives from WMO and from Canada, Brazil, Argentina and the European Centre for Medium-Range Weather Forecasts (ECMWF) all of which are planning to become a part of the follow on system. Two options were settled on, either an extension to the existing contract or transition to the network currently supporting European and Asian Countries. We are targeting an early spring decision due to the time needed for transition if the decision is made to join the European network. Whether an extension of the existing contract is

chosen and supported by BT or we transition to the European network, a tender for a replacement to the Global Telecommunication System will be developed. This will address the additional requirements needed to support the WMO Information System well into the future.

## 1.2 Performance Measures

Several key system level performance measures are tracked on a regular basis to determine the effectiveness of the program. Key performance measures are: (1) System Availability, (2) Warning Message Latency, (3) Routine Message Latency, and (4) Traffic Volume.

**Table 1: Customer Results Performance Measure**

Measurement Area	Indicator	2006 Baseline	2007 Actual Result	FY2008 Q1 Actual Result	Comments
Customer Requirements	System Availability	99.99	100%	100%	
	Warning Message Latency	10 seconds	.75 sec	.75 sec	
	Routine Message Latency	60 seconds	.75 sec	.75 sec	
	Daily Traffic Volume	1.2TB	1.4TB	1.4TB	

## 2.0 Business Results

On December 3, 2007, TOC successfully conducted a NWSTG Backup System (BTG) Demonstration Test. The intent of the test was to show that the BTG had the capability to meet the same operational and performance criteria that the TG demonstrates if the communications path to our partners can be made available to the BTG. As customers modify their connectivity to connect to the network centric topology, they will acquire the catastrophic backup provided by the NWSTG Backup System while those not having done so remain dependent on the viability of the network access router at the NWSTG. This transition is the customer's responsibility and it is estimated that all will have completed the transition by 3QFY08.

## 3.0 Financial Performance

4.0

<b>NWSTG BUDGET PROFILE</b>				
(\$K)	FY08	FY09	FY10	FY11
<b>CAPABILITY:</b>				
DME	0	0	0	0
SS (Steady State)*	21,058	21,058	21,058	21,058
<b>Total</b>	<b>21,058</b>	<b>21,058</b>	<b>21,058</b>	<b>21,058</b>

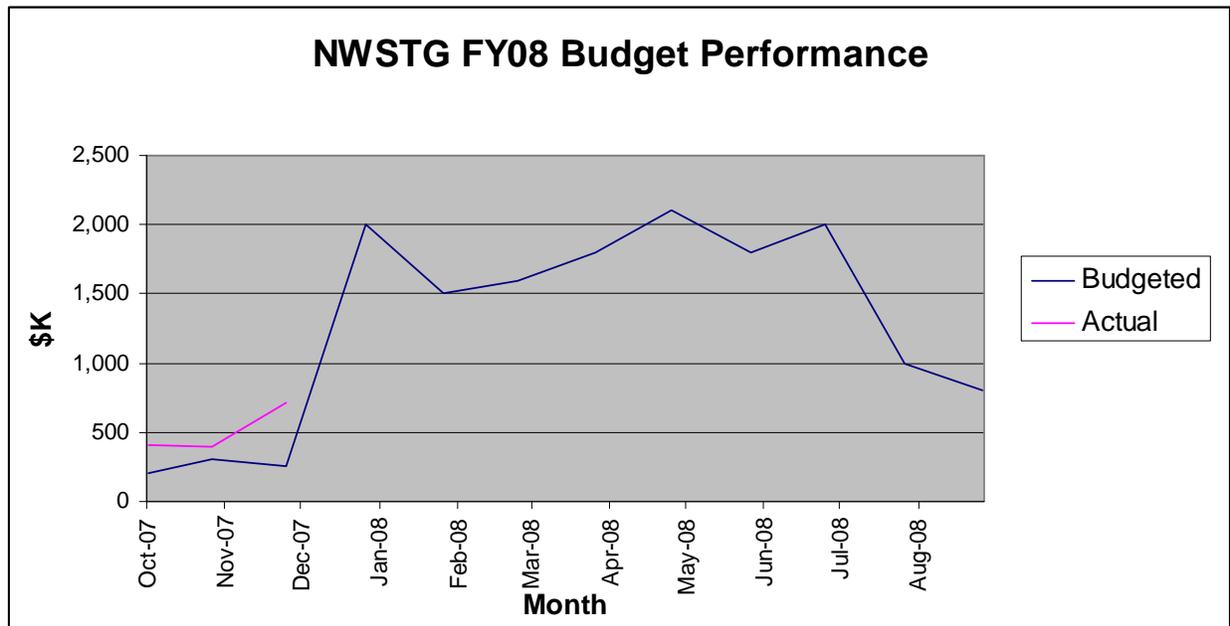
*\*includes Legacy System Replacement PAC funding*

<b>IT COMPONENTS:</b>	FY08	FY09	FY10	FY11
Hardware	1,642	500	500	400

Software	100	100	100	100
Support Services	950	850	850	850
Telecommunications	8,368	9,176	9,156	9,331
IT Security	1,004	1,004	1,004	1,004
IT Training	30	30	30	30
Operations & Maintenance	1,908	1,991	1,871	1,850
Facility Infrastructure Refresh	347	698	838	784
<b>Subtotal</b>	<b>14,349</b>	<b>14,349</b>	<b>14,349</b>	<b>14,349</b>

<b>FULL TIME EQUIVALENTS:</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
NWSTG Steady State	6,709	6,709	6,709	6,709
<b>Subtotal</b>	<b>6,709</b>	<b>6,709</b>	<b>6,709</b>	<b>6,709</b>

### 3.1 Current Performance vs. Baseline



### 4.0 Innovation to Meet Future Customer Needs

The NWS TOC is constantly seeking innovative ways to operate efficiently within the current budget environment and improve performance and scalability for future customer requirements by effective use of processors, storage, and bandwidth. While there were no specific actions in this quarter, the TOC is currently engaged in investigations on ways to improve FTP service to the user community.