Software Release Notice

System: AGS/SGS **Release:** NASA 4.0
Date: June 2, 2000

Modification Description:

Poker Flat/Svalbard Station Upgrade

The following changes are planned for Poker Flat and Svalbard Ground Stations software. The following modifications have been completed since the NASA2.51 release:

Description

1. Enhanced Exciter redundancy switching. When swapping exciters on the SCC between uplink and test inject, all the exciter set up information also changes place. (CSC RFS 10)

2. Added bit sync data per channel to sysdefaults file to accommodate easy change out of bit syncs. (NASA AQUA)

3. Corrected initialization of Marconi instruments for boresight tests. (CSC RFS 10).

4. Added GPS timing enhancement. Changed software to give the ACU a new format of program track commands to enhance program tracking. Read new data from ACU, to have more accurate pass log data. Made runtime configurable so this feature could be easily disabled. (NASA GPS Timing Improvement)

5. Added initialization of the Marconi Modulation Meter. Sets the uplink Marconi modulation meter to PM when entering the screens which show mod index. (Lien item 10C)

6. Changed _TrainLowPassAngle from 30.000000 to 70.0000 in sysdflts.ascii (Lien Item 15B&C)

7. Added ADEOS-2 tape media id (CSC RFS 07)

8. Fixed the TOD to TLE Conversion Error. (Warranty)

9. Added feature for scheduling to handle geo sync satellites. (NASA LIEN Item 20C&D)

10. Added diagnostic to trap and report time difference between the system and the ACU (NASA GPS Timing Improvement)

11. Added feature to use current time for picking vectors for pass generation (Svalbard Operator Request)

12. Replace XRT Calls with direct Motif Calls for graphing (NASA UAF)

Files Affected:

The files that were developed and/or utilized as part of NASA 4.0 are listed in Attachment 1: NASA 4.0 FILES.

Hardware Requirements:

N/A

Validation Procedures:

NASA 4.0 will be validated on site 6/9/00 through 6/11/00 and continued daily testing at NASA/AGS for scheduled satellite passes. It will then be requested for SGS.

This Test Plan covers the following items on the 11- meter lien list:

Item	Description
#10	C. Marconi defaults to FM. Change to PM, SA code not sending initialization string. Fix at AGS and SGS.
#15	B. Correct train axis positioning problem 9at time s the rain axis is 180 degrees out). Move limit from 30 to 70 degrees at AGS. C. Correct train axis positioning problem at SGS.
#20	C. Provide geo-synchronous satellite tracking at AGS. D. Provide geo-synchronous satellite tracking at SGS.

#10 Control Marconi

Procedure:

a. Take the Marconi Modulation Meter (2305) offline using the Instrument Enable screen on the SCC and change the setting to FM using the front panel. Put the Marconi Modulation Meter back on line and go to the uplink screen on the SCC. Notice that the Marconi changes to PM.

Passed: _____ Failed: _____ Tester's Name: _____

#15 Train Axis

NOTE: The train axis azimuth indicator displays the position of the high side of the train.

Procedure:

a. Schedule a test pass for a satellite that has a maximum elevation of less than 70 degrees.
b. During the pass notice that at the time the satellite is at maximum elevation the train axis read out (train axis azimuth) shows the train axis to be located at 180 degrees opposite the azimuth associated with the satellite's maximum elevation.
c. Perform the same test with a satellite that has a maximum elevation greater than 70 degrees.
d. During the pass notice that at the time the satellite is at maximum elevation the train axis read out (train axis azimuth) shows the train axis to be located at the same azimuth associated with the satellite's maximum elevation.

Passed: _____ Failed: _____ Tester's Name: _____

#20 Geo-synchronous Satellite Tracking

Procedure:

a. Enter ephemeris for a geo-synchronous satellite such as TDRS..
b. Select and schedule the above satellite for tracking and achieve autotrack or verify that pointing angles are correct.

Passed: _____ Failed: _____ Tester's Name: _____

Known Bugs or Limitaions:

Some open DRs may not be resolved in this release due to equipment constraints.

.

Installation Procedure:

To install this release, create a rel4.0 directory in the /home/aaas/releases directory. Copy Install and nasa4.0.tar.Z in to this directory. From /home/aaas/releases/rel4.0, run. /Install nasa4.0.

The installation script will create new bin and etc directories modify the bin and etc links to look at the new release directories. The old etc directory will be copied to the new etc directory. New executables will be placed in the new bin directory.

Edit sysdlt file:

add ADEOS tape labeling information
geo satellite schedule information

Documentation Affected:

N/A

Comments:

.

Approval:

The software modifications described in this release notice has been validated and accepted.

_____ _____

NASA AGS/SGS Project Managers Date

SOFTWARE RELEASED:

The software modifications described in this release notice have been completed and released to ground station operations.

_____ _____

System Manager Date

_____ _____

NASA Program Monitor Date

Attachment 1
NASA 4.0 Files

The bin Directory:

```
AntennaControlStartup
Nasa
NasaStart
Start
Stop
authent
configud
control
dpsHndlr
errhandler
eup
executive
getNtpSyncInfo
ioh
pcltrans
pedcont
postPassShell
rci_client
rci_rmt
rci_server
reccon
dst410
recsch
resetLANGateway
rmqs
schedmon
snyHndlr
start.awk
start_ntp
status_l
stop.awk
stop_ntp
sup
tapelog
terminal
testexec
time_code_handler
track
uactask
winPrint
```

The etc Directory:

sysdflt