

Software Release Notice

System: WGS

Release: WGS 3.1.7

Date: March 28, 2001

Modification Description:

This is an Upgrade for the Wallops Ground Station.

The following changes are planned for the Wallops Ground Station software. The following modifications have been completed since the NASA 3.1.6 release:

1. Changed the shortened prepass from 20 seconds to 45 seconds and activate shortened prepass for pass start times slightly in the future.
2. Added a test to status logging to not send status packets if the receiving queue is not emptying them fast enough.

Files Affected:

The files that were developed and/or utilized as part of NASA 3.1.7 are listed in Attachment 1: WGS 3.1.6 FILES.

Hardware Requirements:

N/A

Validation Procedures:

Shortened Prepass (45 seconds)

On the Schedule screen, choose a pass, which started slightly in the past (about one minute) or within one minute of the future. Hit the save button, and notice that there is a short prepass (about 45 seconds), rather than a 2.5 minute prepass, before tracking begins.

Known Bugs or Limitations:

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

The following are limitations to the shortened prepass feature:

All of these limitations could result in loss of data.

- a. Train may not have adequate time to position properly. If a high elevation pass, and the Train gear is not at a proper position, the Azimuth may not be able to keep pace with the satellite near the point of closest approach.
- b. Cable wrap may not have adequate time to position properly. This could result in the pedestal reaching a limit in the middle of the pass.
- c. There is inadequate time to zero the receivers on noise. The 930 tracking receivers remember their last zeroing. If a 930 receiver is power cycled, it does not have a valid zeroing value. If the configuration of the 930 receiver changes the IF bandwidth, the prior zeroing value is invalid. If a 930 receiver has a valid zeroing value, the consequences of not zeroing again during prepass are inconsequential. Else, it could result in autotracking on noise and the dish heading for a limit. Or it could result in not autotracking at all. The data signal strengths logged and displayed could also be misleading, if the software was just restarted without having the chance to zero those signal strengths as well.

Installation Procedure:

To install this release, first check to see that there is adequate disk space available by typing `df`. There should be at least 150MB available. If not, back-up to tape and then delete old unused releases in the `/home/aaas/releases` directory. Create a `rel3.1.7` directory in the `/home/aaas/releases` directory. Copy the file `wgs3.1.7.tar.Z` in to this directory. Uncompress and `untar wgs3.1.7`. This will create a `bin` directory with the new executables.

Copy (`cp`) the directory **rel3.1.6/etc** to a new `rel3.1.7/etc` directory. Using the copy (`cp`) command will automatically create the new directory and populate it with the contents of the old directory. Modify the `bin` and `etc` links under `/aaas/` to look at the new release directories.

Copy the executables `winPrint` and `pcltrans` (if they exist) from `rel3.1.6/bin` to `rel3.1.7/bin`. Run a `diff` between `NasaStart` in `rel3.1.6/bin` and `rel3.1.7/bin`. If there are differences, then use the older version of `NasaStart`.

Rename the files in the directory `3.1.6/etc` for `tapelog` files, `ephtxt.txt` and the `config` directory. Then create links of those files and directory to `rel3.1.7/etc/`. By creating those links then the configuration files are kept up to date no matter what release of software is activated.

Create a script called `sw3.1.6` which will remove the links under `/aaas/` for `bin` and `etc` and restore them to `rel3.1.6/bin` and `rel3.1.6/etc`. Create a script called `sw3.1.7` which will remove the links under `/aaas/` for `bin` and `etc` and link them to `rel3.1.7/bin` and `rel3.1.7/etc`.

Activation Procedure:

SCC 3.1.7 activation procedure (must be installed with ATS 3.3 or later):

(1) Select option "Exit" from the "Session" menu. This action will close the SCC graphical user interface (GUI) and stop all SCC processes. Processes are stopped after "Stopping rci" and "Removing Stale Message Queues" messages are displayed. Hit "enter" to display the SCC command prompt, "wgs-11m >".

(2) Type "sw3.1.7" to switch to SCC release 3.1.7. Type "Start" to start the SCC processes. The SCC GUI main window will show "NASA Version WGS 3.1.7".

Restore Procedure:

SCC 3.1.6 restore procedure (must be installed with ATS 3.3 or later):

(1) Select option "Exit" from the "Session" menu. This action will close the SCC graphical user interface (GUI) and stop all SCC processes. Processes are stopped after "Stopping rci", and "Removing Stale Message Queues" messages are displayed. Hit "enter" to display the SCC command prompt, "wgs-11m >".

(2) Type "sw3.1.6" to switch to SCC release 3.1.6. Type "Start" to start the SCC processes. The SCC GUI main window will show "NASA Version 3.1.6".

Documentation Affected:

N/A

Comments:

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Approval:

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

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| _____ | _____ |
| NASA WGS Project Manager | Date |

SOFTWARE RELEASED:

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

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| _____ | _____ |
| System Manager | Date |

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| _____ | _____ |
| NASA Program Monitor | Date |

Attachment 1
WGS 3.1.7 Files

The bin Directory:

AntennaControlStartup
Displays
Nasa
NasaStart
Start
Stop
authent
configud
control
dpsHndlr
errhandler
eup
executive
file.lst
getNtpSyncInfo
ioh
pcltrans
pedcont
postPassShell
rci
recon
recsch
resetLANGateway
rmqs
schedmon
snyHndlr
start.awk
start_ntp
status_1
stop.awk
stop_ntp
sup
tapelog
terminal
testexec
time_code_handler
track
uactask
winPrint

The etc Directory:

The etc/hpib directory:

N/A

The etc/config directory:

N/A

The etc/defaults directory:

N/A