

## Ground Network and Range Software Release Notice

<b>System to be Modified:</b> ATS at Wallops, Alaska, and Norway	<b>Release Number:</b>
<b>Request for S/W Change Numbers[RSC(s)] :</b>	<b>3.6</b>
<b>Originator:</b> Edward K. Payne <b>Phone:</b> (757)824-1104	<b>DRs Resolved:</b>
<b>Date:</b> 01 August, 2001	Discrepancy Tracking System Identification numbers: CDS ID #0017084 CDS ID #0017095 CDS ID #0017096 CDS ID #0017221 CDS ID #0017394 CDS ID #0017406 CDS ID #0018380 CDS ID #0018829 CDS ID #0018887 CDS ID #0019185 CDS ID #0019386

**DR Short Title:** ATS-AQUA Project Switch Modifications / Apogee 2208 Up-link Frequency Fix

**Design Review Required for RSCs:**     Yes     No      **Date Design Review Held:** 25 June, 2001

**Effort to Analyze RSCs:**            N/A Hours      **Effort to Implement RSCs:**    240 Hours

**SLOC**    350,000 total            400 added                    200 changed                    100 deleted

**Date Change Required:** 01 Aug, 2001      **Change Required for Mission:** AQUA data flows

**Modification Description – Provide General Description of Changes included in this Release (Include attachments to describe change/problem, if available):**

- 1) Modified the operation of the device driver code for the GDP911 Digital Matrix Switch and MSC 10693 Analog Matrix Switch when being used by ATS automated/scheduled event handling processes. The change is to force the matrix switches to clear all connections at the beginning and at the end of the time window for a scheduled track event time window.
  
- 2) Modified the Apogee 2208 TDF User Interface to correct problems with the internal representation of certain frequency values upon the saving of said value(s) to a configuration file for later retrieval.
  
- 3) Special Note 1: This change was driven by the need by the AQUA project team to have the ATS system world send data to the AQUA system world ONLY during scheduled AQUA events and NOT during any other period, so as to preclude the overflowing of the ability of the AQUA system world to receive and record data.
  
- 4) Special Note 2: This change has an added side bonus in that it corrects problems in the comparison of the settings sent to a switch for a given automated pass with the settings contained within a physical switch. This comparison/verification problem, which showed itself in numerous occasions of switch “red-boxing” on the ATS Master display, has been a source of great annoyance and a generator of numerous problem reports by tracking station staff, world wide.

**Software Technical Lead Approval Signatures:**

**Operation Technical Lead Approval Signatures:**

Date

Date

### Software Build Instruction

**Platform/Server** Intel X-86 chipset CPU with Windows NT 4.0 / Service Pack 6.0 and MS Visual Studio 5.0 installed.

**Input Directories (being delivered from):**

Initially from CD distribution media, then pushed to the “C:\Downloads\ATS36-07122001” directory on ATS machines

world-wide.

## **Output Directories (being delivered to):**

See Installation Instructions

## **Installation Instructions:**

### **Staging and Activation of ATS Release Candidate Software**

This section covers the steps necessary to successfully stage and activate new ATS release candidate software on an ATS target computer.

The steps presented here will guide the reader on how to

- How to create a “quarantine” directory for introduction of the new software to an operational ATS computer
- How to move the new “quarantined” software into “staging” directories in preparation for activation
- How to move the new software from the staging directories to the actual “run-time production” directories
- How to restore an operational ATS computer to a previous version of ATS software
  
- Procedural Note: The work of installing an ATS release candidate on a computer will be done inside of Windows NT Explorer.
- Procedural Note: Check off each of the boxes in the following sections as they are completed

### **Staging of ATS Release Candidate Software**

- Extra Special Procedural Note: Ensure that ALL ATS processes are shut down on ALL ATS computers** (to include each ATS Master and each ATS Remote Node computer) **PRIOR to beginning any ATS software staging work!** Follow these steps to gracefully bring down ATS:
  - First, shut down the ATS Master’s MonitorAndControl process by way of the MonitorAndControl’s “System” pull down menu “Shutdown M & C” entry. Supply the correct password when requested. Shutdown of the MonitorAndControl process will automatically shutdown the ATS Master’s copy of a General Resource Manager (GRM)
  - Next, shutdown the “Operations” General Resource Manager (Ops GRM) on each of the ATS Remote Node computers by way of making the Ops GRM window the current window and then entering the “CTRL-C” keystroke combination to begin termination of this console application. Wait for the Ops GRM window to clear. You can observe activity within the slaved process “Device GRM” window during the Ops GRM window shutdown
  - Finally, shutdown the “Device” General Resource Manager (Device GRM) on each of the ATS Remote Node computers by way of making the Device GRM window the current window and then entering the “CTRL-C” keystroke combination to begin termination of this console application. Wait for the Device GRM window to clear
- Environmental Note: The section, which covers the “copying / moving of a large quantity of files”, will generally take much less time if old instrument and controller log files, stale schedule files, as well as PTP “metadata” and “flag files” are deleted from the ATS Master and Remote Node computers
  - ATS computer general housekeeping will greatly reduce the amount of data / number of files which must be manipulated on the disk, greatly speeding this process
  - Currently there is not a formal process for handling this, so ask one of the ATS Sustaining Engineers for assistance. A formal process document for performing ATS housekeeping is under development

### **Introduce the ATS Release Candidate Software To This Computer’s Quarantine Area**

- Start Windows NT Explorer on the ATS computer from which the ATS release candidate software will be installed
- Insert the ATS run-time distribution CD into the reader of this machine and attempt to expand the directory associated

with it

- Procedural Note: You may experience numerous read problems because of aging CD readers on the ATS computers
- Procedural Note: Retry the attempt to read the CD not fewer than 10 times
- Procedural Note: If the CD will still not read you may need to go to a different ATS computer with a CD reader that will accommodate the distribution CD
- Once the CD successfully is able to be read check to see if there is already a “C:\Downloads” directory present on this machine
  - If you don’t have a “C:\Downloads” directory, create one. This directory serves as a system quarantine zone
    - First click on the “C:” drive icon in the directory tree window on the left portion of the Explorer display
    - Next, from the “File” pull down menu, select “New”,
    - Next select “Folder”,
    - Next enter the text “Downloads”, then hit Enter
- Copy the wrapper directory “ATS##-MMDDYYYY” that you created in the section, “Distribution Wrapper Directory Prep” to the “C:\Downloads” directory on the current computer

### **Introduce the ATS Release Candidate Over to the other ATS Computer’s Quarantine Areas**

- Push the release candidate software to each of the ATS computers
  - Assign a drive letter to each of the other ATS computers in the tracking station
  - Ensure that you have a “C:\Downloads” directory on each of the other ATS computers within the station
  - Copy the wrapper directory “ATS##-MMDDYYYY” to the “C:\Downloads” directory on each of the other ATS computers

### **Create ATS Release Candidate Software 2<sup>nd</sup> Level Staging Environment**

- In this subsection you will create the release candidate software “staging” environment on each of the ATS computers.
  - If you are on an ATS Master computer, create the following directories:
    - “C:\Master35” If this one already exists, delete it to include all of its contents, then create a new one
    - “C:\Master36”
    - “C:\Wff35” If this one already exists, delete it to include all of its contents, then create a new one
    - “C:\Wff36”
    - Ensure that the “recycle bin” is empty to free up drive space
    - Create this directory collection on each of the other ATS Master computers
    - Complete the “Remote Node” staging directories setup that follows
  - If you are on an ATS Remote Node computer, create the following directories:
    - “C:\Node35” If this one already exists, delete it to include all of its contents, then create a new one
    - “C:\Node36”
    - “C:\Wff35” If this one already exists, delete it to include all of its contents, then create a new one
    - “C:\Wff36”
    - Ensure that the “recycle bin” is empty to free up drive space
    - Create this directory collection on each of the other ATS Remote Node computers
    - Complete the “Master” staging directories setup just above

### **Create a Snapshot of the Current Operational State of each ATS Computer**

- In this subsection you will do a large volume of file moving to duplicate the currently installed environment to enable the easy backpedal to the previous version of ATS software from the installation of the release candidate
  - For each of the ATS Master computers, copy, not move, the following directories and files:
    - The contents (to include all of the subdirectories of ), but not the directory name, of “C:\Master” over to both the directories “C:\Master35” and “C:\Master36”
      - Procedural Note: The copy operation may take some time because of the multitude of mission support

- profile subdirectories that must be copied
  - The contents (to include all of the subdirectories of ), but not the directory name, of “C:\Wff” over to both the directories “C:\Wff35” and “C:\Wff36”
  - Continue with the file moving in this subsection on each of the other ATS Master computers
  - Complete the “Remote Node” file moving directions that follow
- For each of the ATS Node computers, copy, not move, the following directories and files:
  - The contents (to include all of the subdirectories of ), but not the directory name, of “C:\Node” over to both the directories “C:\Node35” and “C:\Node36”.
    - Procedural Note: The copy operation may take some time as all of the subdirectories are copied
  - The contents (to include all of the subdirectories of ), but not the directory name, of “C:\Wff” over to both the directories “C:\Wff35” and “C:\Wff36”
  - Continue with the file moving in this subsection on each of the other ATS Master computers
  - Complete the “Master” file moving directions in the subsection just above

### **Move the ATS Release Candidate out of Quarantine Areas**

- In this subsection you will move the release candidate files out of the quarantine directories over to the staging directories in preparation for formal activation in a later subsection
  - For each of the ATS Master computers, copy, not move, each of the following files from the directory “C:\Downloads\ATS##-MMDDYYYY\Master” over to “C:\Master36” directory. Overwrite each when prompted
    - Each of the executable files. “\*.exe”
    - Each of the library files, “.dll”
    - Each of the text files, “\*.txt”
    - The “*initialization.txt*” from the C:\Downloads\ATS##-MMDDYYYY\Master\Station directory to the “C:\Master36” directory
  - For each of the ATS Master computers, copy, not move, each of the following files from the directory “C:\Downloads\ATS##-MMDDYYYY\Wff” over to “C:\Wff36” directory. Overwrite each when prompted
    - Each of the executable files. “\*.exe”
    - Each of library files, “.dll”
  - Complete the “Remote Node” file moving directions that follow
  - For each of the ATS Remote computers, copy, not move, each of the following files from the directory “C:\Downloads\ATS##-MMDDYYYY\Node” over to “C:\Node36” directory. Overwrite each when prompted
    - Each of the executable files. “\*.exe”
    - Each of the library files, “.dll”
    - Each of the text files, “\*.txt”
  - For each of the ATS Remote Node computers, copy, not move, each of the following files from the directory “C:\Downloads\ATS##-MMDDYYYY\Wff” over to “C:\Wff36” directory. Overwrite each when prompted
    - Each of the executable files. “\*.exe”
    - Each of library files, “.dll”
  - Continue with the file moving above in this subsection on each of the other ATS Master computers

### **Activation of ATS Release Candidate Software**

- In this section, upon approval from the chief site shift lead, you will formally activate the release candidate software by moving it to the operations / production directories
  - For each of the ATS Master computers, copy, not move, each of the following files from the directory “C:\Master36” over to the “C:\Master” directory. Overwrite each when prompted
    - Each of the executable files. “\*.exe”
    - Each of the library files, “.dll”
    - Each of the text files, “\*.txt”
    - The “*initialization.txt*” from the directory “C:\Master36\Station” over to the “C:\Master\Station” directory
  - For each of the ATS Master computers, copy, not move, each of the following files from the directory “C:\Wff36” over to the “C:\Wff” directory. Overwrite each when prompted
    - Each of the executable files. “\*.exe”
    - Each of library files, “.dll”
  - Complete the “Remote Node” file moving directions that follow

- For each of the ATS Remote computers, copy, not move, each of the following files from the directory “C:\Node36” over to the “C:\Node” directory. Overwrite each when prompted
  - Each of the executable files, “\*.exe”
  - Each of the library files, “.dll”
  - Each of the text files, “\*.txt”
- For each of the ATS Remote Node computers, copy, not move, each of the following files from the directory “C:\Wff36” over to the “C:\Wff” directory. Overwrite each when prompted
  - Each of the executable files, “\*.exe”
  - Each of library files, “.dll”
- Continue with the file moving above in this subsection on each of the other ATS Master computers

### Reverting to the Previous Version of ATS Software

- In this section, upon approval from the chief site shift lead, you will “unload” the release candidate software and restore an earlier version of ATS software to the operations / production directories. Check off each of the steps as they are completed
  - For each of the ATS Master computers, copy, not move, each of the following files from the directory “C:\Master35” over to the “C:\Master” directory. Overwrite each when prompted
    - Each of the executable files, “\*.exe”
    - Each of the library files, “.dll”
    - Each of the text files, “\*.txt”
    - The “*initialization.txt*” from the directory “C:\Master35\Station” over to the “C:\Master\Station” directory
  - For each of the ATS Master computers, copy, not move, each of the following files from the directory “C:\Wff35” over to the “C:\Wff” directory. Overwrite each when prompted
    - Each of the executable files, “\*.exe”
    - Each of library files, “.dll”
  - Complete the “Remote Node” file moving directions that follow
    - For each of the ATS Remote computers, copy, not move, each of the following files from the directory “C:\Node35” over to the “C:\Node” directory. Overwrite each when prompted
      - Each of the executable files, “\*.exe”
      - Each of the library files, “.dll”
      - Each of the text files, “\*.txt”
    - For each of the ATS Remote Node computers, copy, not move, each of the following files from the directory “C:\Wff35” over to the “C:\Wff” directory. Overwrite each when prompted
      - Each of the executable files, “\*.exe”
      - Each of library files, “.dll”
- Continue with the file moving above in this subsection on each of the other ATS Master computers

### Special Instructions:

**Delivered to CM by:** Edward K. Payne

Date: 03 August, 2001

**Build Completed by:** Initial Release Candidate: Edward K. Payne

Date: 13 July, 2001

Final Release to Operations: Edward K. Payne

Date:

**Testing Approved by:** Karen Clark

Date

**Operations Approval to Install:** James R. Hendrickson

Date

**Installation Completed by:** Edward K. Payne

Date 25 July, 2001

**Software Installation Accepted by:**

Date

Called by: CSOC-WFF-LOP-001902, CSOC-WFF-LOP-001904, CSOC-WFF-LOP-001894

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