April 26, 1989

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Questions regarding this distribution list may be directed to John Mackovets (612/681-5913, DISTMH).

CRAY RESEARCH, INC.

RELEASE NOTICE

April, 1989

APOLLO STATION 2.03

This notice contains general release information,
feature descriptions, and their impact.

APOLLO Station 2.03 Release Notice

Document Number AO-2.03-BA-RN

April 1989

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INTRODUCTION

Version 2.03 of the Apollo station is now released. Highlights of the release are described in this Release Notice.

The system installation instructions are described in the 2.02 Apollo DOMAIN Station Administrator's Manual, publication SA-0251.

SUPPORT

The previous release of the Apollo Station was known as 2.02. That release will be supported through August 1989. The general policy for support of standard software is as follows:

Standard software as defined by Cray Research, Inc. (CRI), includes all COS and associated product set software and all software written by CRI to support the CRI stations. In general, bugfix and critical release support for major release "n-1" will be provided for at least 4 months after the shipment of major release "n".

The UNICOS operating system is derived from the AT&T UNIX System V operating system. UNICOS is also based in part of the Fourth Berkeley Software Distribution under license from the Regents of the University of California.

CRAY, CRAY-1, SSD, and UNICOS are registered trademarks, and CFT, CFT77, CFT2, COS, CRAY-2, CRAY X-MP, CRAY X-MP EA, CRAY Y-MP, CSIM, HSX, IOS, SEGLDR, and SUPERLINK are trademarks of Cray Research, Inc.

AEGIS, Apollo and DOMAIN (OS) are registered trademarks of Apollo Computer Corporation. (NSC) HYPERchannel are registered trademarks of Network Systems Corporation.

RELEASE CONTENTS

The Apollo station 2.03 release consists of the following:

- Apollo station 2.03 Release Notice (this document)
- Apollo station 2.03 Release Tape Cartridge
- Apollo station 2.03 Test Summary Report

All of the materials in the release package can be ordered by sending the order form at the back of this document to the Mendota Heights Distribution Center.

NOTE: A software license is required before the release tape can be shipped.

NEW FEATURES

The following new features are included in release 2.03 of the Apollo station. They are grouped by user impact and systems impact. The sections following this one describe the new features in more detail.

USER IMPACT

- Updates to the dialog displays
- Uppercase file names for SR10
- UNICOS environment improvements
  - Graphics facility supported for UNICOS
  - UNICOS password not echoed
  - Better prompt handling for interactive
  - Improved decoding of UD data for interactive
  - RELEASE and SAVE commands now available
  - File names used for job names
  - System Status priority field enhanced
- An alternative for Binary Blocked DISPOSE

SYSTEMS IMPACT

- 3.07/313 message error recovery
- Build procedures for SR9 and SR10

USER IMPACT

This section provides information for users on new features that will impact the user interface to the 2.03 Apollo station. The following features of the user interface have changed or been added:

- **Updates to the dialog displays**

  New releases of AEGIS have brought changes to various fonts and defaults. The ratio of the font to the size of the window used for CRAYCP and CRAY has been altered accordingly.

- **Uppercase file names for SR10**

  Release 2.03 allows the use of both lower and uppercase file names when used on SR10, following the rules adopted by SR10.

- **UNICOS environment improvements**

  - Graphics facility supported for UNICOS

    The direct dispose graphics facility provided for COS in previous releases is now supported for UNICOS. There are three direct dispose demos in the following directory:

    'graphics.dir/direct.dir/unicos_demos.dir'

    NOTE: With direct dispose graphics for UNICOS it is necessary to use a data format (-f) option of 'TC' or 'TB' when the graphics file is disposed.

    ADMINISTRATOR NOTE: There are no installation procedures provided for UNICOS because the location of the installed libraries on the Cray system is site-specified. The COS jobs should be used as a guideline on how to install the libraries.

  - Default UD Job submission

    All UNICOS file transfers are now made with a default data format (-f) of UD.

    ADMINISTRATOR NOTE: This feature is controlled by the 'Operating level' field in the configuration file. Set this field to 400 (or greater if you are using a higher level of UNICOS).

- UNICOS password prompt not echoed

  The station now recognizes the 'noechoe' flag in UNICOS interactive messages. If the 'noecho' flag in interactive messages is set, the Apollo station will not echo the input typed. For example, input entered in response to the 'Password:' prompt from UNICOS will not be echoed to the terminal.

- Better prompt handling for interactive

  Undefined characters are no longer printed when a prompt request is received from UNICOS.

- Improved decoding of UD data for interactive

  Newline characters are no longer printed when UD data is being sent to the display.

- RELEASE and SAVE commands now available

  The station RELEASE and SAVE commands are now supported for UNICOS.

- File names used for job names

  The name of the UNICOS job is the first 7 characters of the file submitted by the user.

- System Status PRIORITY field enhanced

  The PRIORITY field in the status displays now reflects a priority in the range 1-255.

- **An alternative to Binary Block DISPOSE**

  Release 2.03 contains two versions of the CBATCH facility. This facility performs all file transfers on behalf of users. The two CBATCH versions differ in how Binary Blocked (BB) disposes are handled. The facility compiled as '/STATION.DIR/CBATCH' handles BB disposes by placing a new line character (/n) at the end of every record. The facility compiled as '/STATION.DIR/CBATCH_BB' handles BB disposes by writing variable length records to disk that are readable by Fortran programs running on the Apollo system (each record contains a byte-count field at the beginning of the record). Users can use either version of CBATCH by starting the appropriate facility on their workstation.

  ADMINISTRATOR NOTE: You can also choose how these two versions are accessed by users. Both versions are compiled; however, you can copy the CBATCH_BB binary to the CBATCH binary so that the CBATCH_BB version is used by default.

SYSTEMS IMPACT

This section provides information for systems administrators on how the new features impact the station on a system and/or installation level.

NOTE: Before you install release 2.03, you must ensure that there are no jobs (including file transfers) running on the Cray system that originated from the 2.02 Apollo station. Any jobs on the Cray system that originated from 2.02 station will be lost if you install 2.03 while they are running.

- **Support for 307/313 messages**

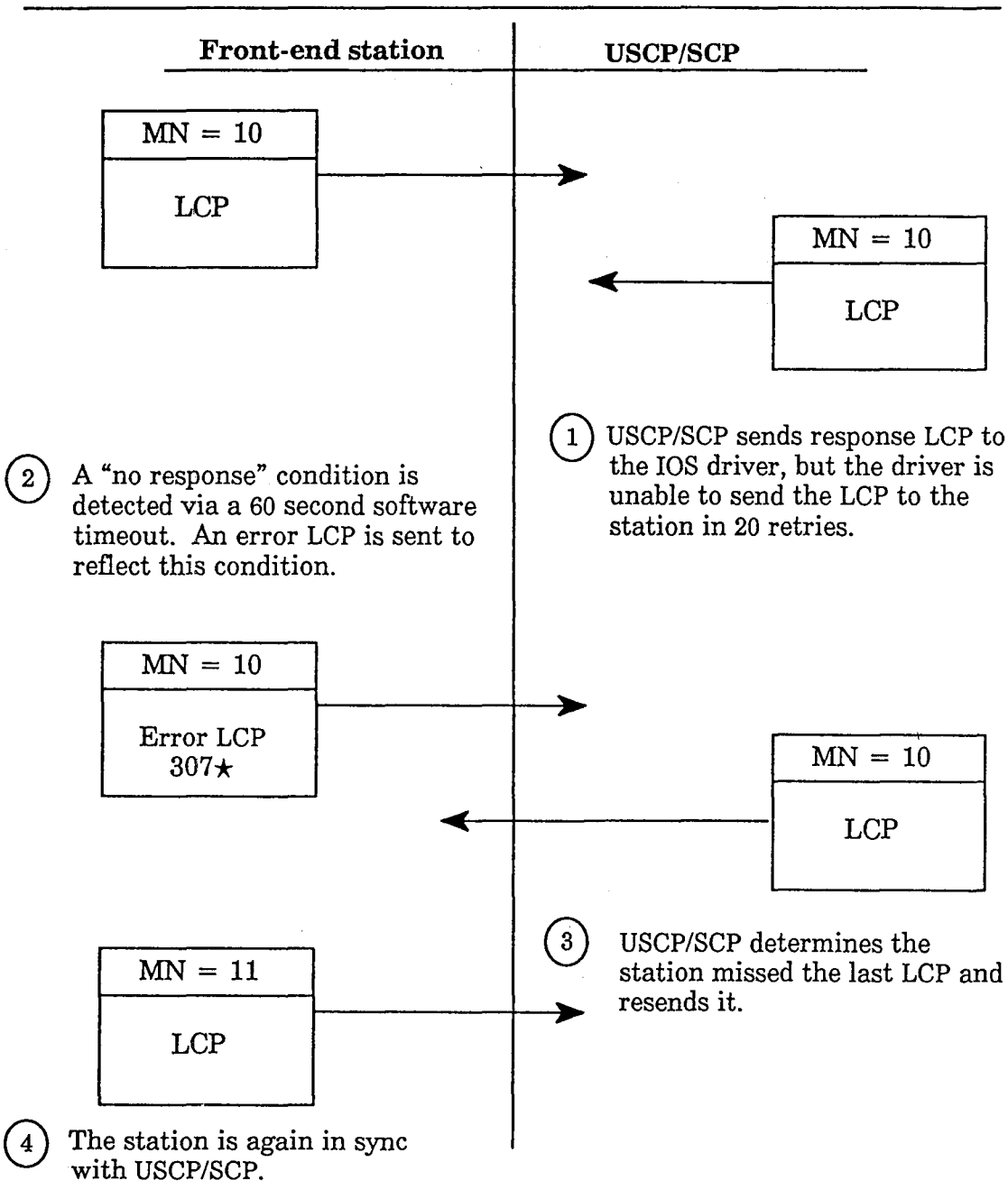
  The Apollo station now provides support for 307/313 messages. This support allows the attached station to synchronize with SCP or USCP when lost messages or timeouts are detected. Formerly, the station relogged to the Cray system in such circumstances; with version 2.03, the 307/313 messages will be transmitted.

  The messages are not invoked for hardware errors.

  The 307/313 messages are supported under UNICOS 2.1 (or higher) and COS 1.16 (or higher). If you are running at COS or UNICOS levels which do not support 307/313 messages, the station will abort and relog rather than send or receive 307/313 messages.

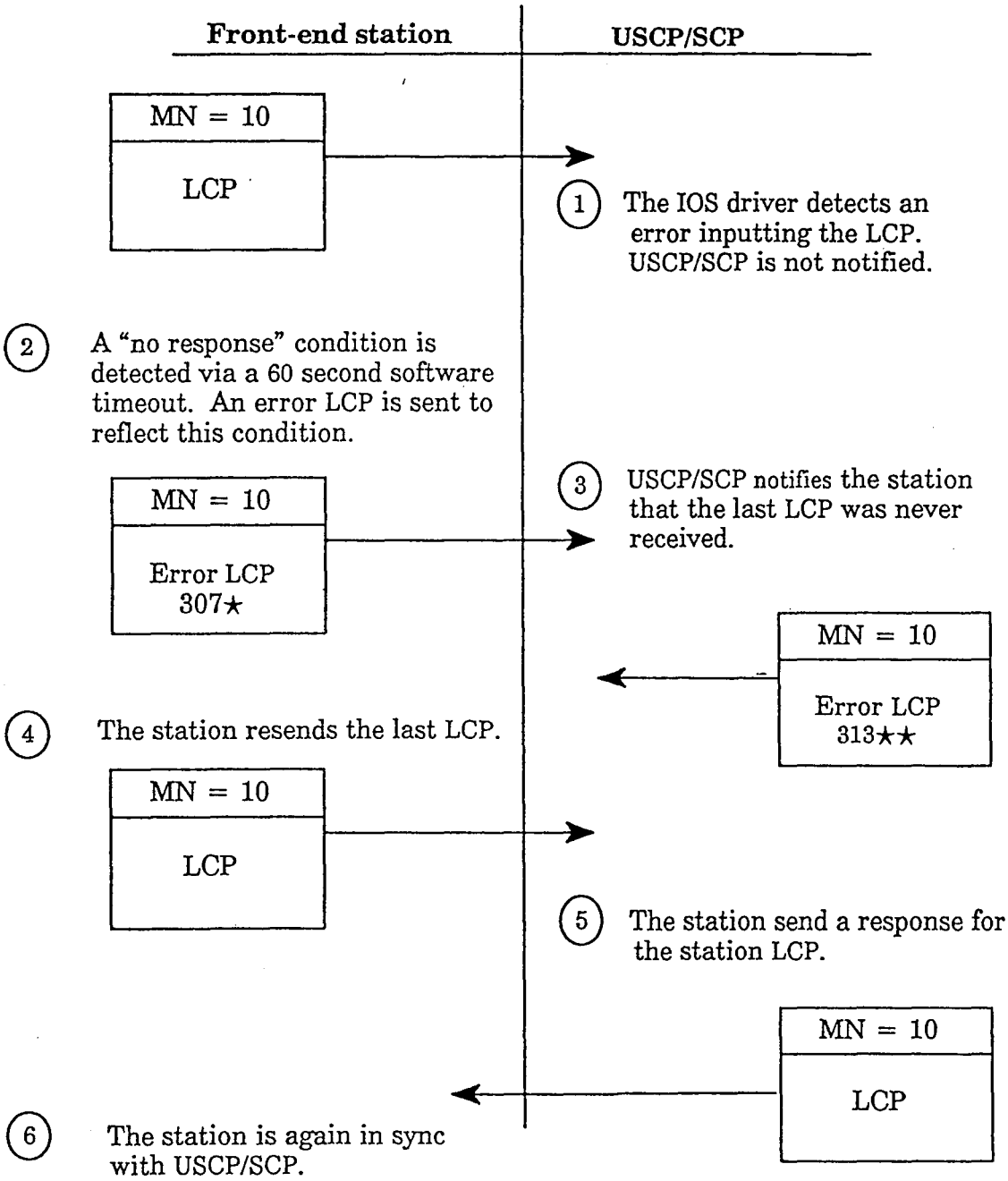
  Figures 1 and 2 on the next two pages illustrate how 307 and 313 messages operate. Figure 1 illustrates the recovery procedure when the IOS driver is unable to send a response LCP to the station. Figure 2 illustrates the recovery procedure when the IOS driver fails to receive an LCP sent by the station.

Figure 1. IOS driver unable to send response LCP to station



★ Error LCP code 307 = HYPERchannel error

Figure 2. IOS driver fails to receive LCP sent by station



★ Error LCP code 307 = HYPERchannel error
★★ Error LCP code 313 = USCP/SCP missed previous LCP

o **Build Procedures for SR9 and SR10**

Release 2.03 supports both Domain/IX 9 (SR9 AEGIS) and Domain/OS 10 (SR10). The release contains build procedures for SR9 and SR10. The build procedure names used in the Administrator's manual will build the station for SR9 AEGIS. There are complementary build procedures for SR10 located in the same directories as the SR9 procedures. They are as follows:

AEGIS SR9	DOMAIN OS SR10
station_build.sh	station_build_sr10.sh
remote_build.sh	remote_build_sr10.sh
copy_station_exe.sh	copy_station_exe_sr10.sh
build_user_interface.sh	build_user_interface_sr10.sh
build_craycp.sh	build_craycp_sr10.sh
build_logfile.sh	build_logfile_sr10.sh
build_drll_2.03_driver.sh	build_drll_2.03_driver_sr10.sh
build_pil50_2.03_driver.sh	build_pil50_2.03_driver_sr10.sh

These build procedures should be used whenever the station is to be installed on a node running SR10. The following procedures should be followed for installing your station on an SR10 node:

1) If your DSP fileserver is running SR9 but you have nodes running SR10, you must rebuild the user interface programs accessed by the SR10 node. Section 2.4 of the Apollo DOMAIN Station Administrator's Manual, publication #SA-0251, describes how to install the Apollo station on user nodes. These instructions can be followed; remember to perform the steps for installing the software (as described in the manual) "if the user node is of a different type". Also remember to use the REMOTE_BUILD_SR10.SH scripts.

2) If your fileserver is running SR10, please follow the following steps for installing your Apollo station:

   a) The software must reside on the disk drive of a node running SR10. Choose an account and directory structure that has write access for the user.server.none account. This requirement is important because the station processes run under the user.server.none account and must read and write to the /station.dir directory.

      At the very minimum, the file access permissions for the directory entries from the /cray_station.dir directory all the way down to the /station.dir directory must be readable and writable by the user.server.none account.

   b) A link to the /dev directory of the node that will run the Apollo station processes must be made to `node_data/dev. This can be performed by logging onto the node that will run the Apollo station processes as root and then issuing the following command:

      ```
      $ /com/crl /dev `node_data/dev
      ```

   c) You can now build the station driver and the rest of the processes as described in Sections 2.3.2 and 2.3.4 of the Apollo DOMAIN Station Administrator's Manual. Remember to use the BUILD_XXXX_2.03_DRIVER_SR10.SH and STATION_BUILD_SR10.SH scripts.

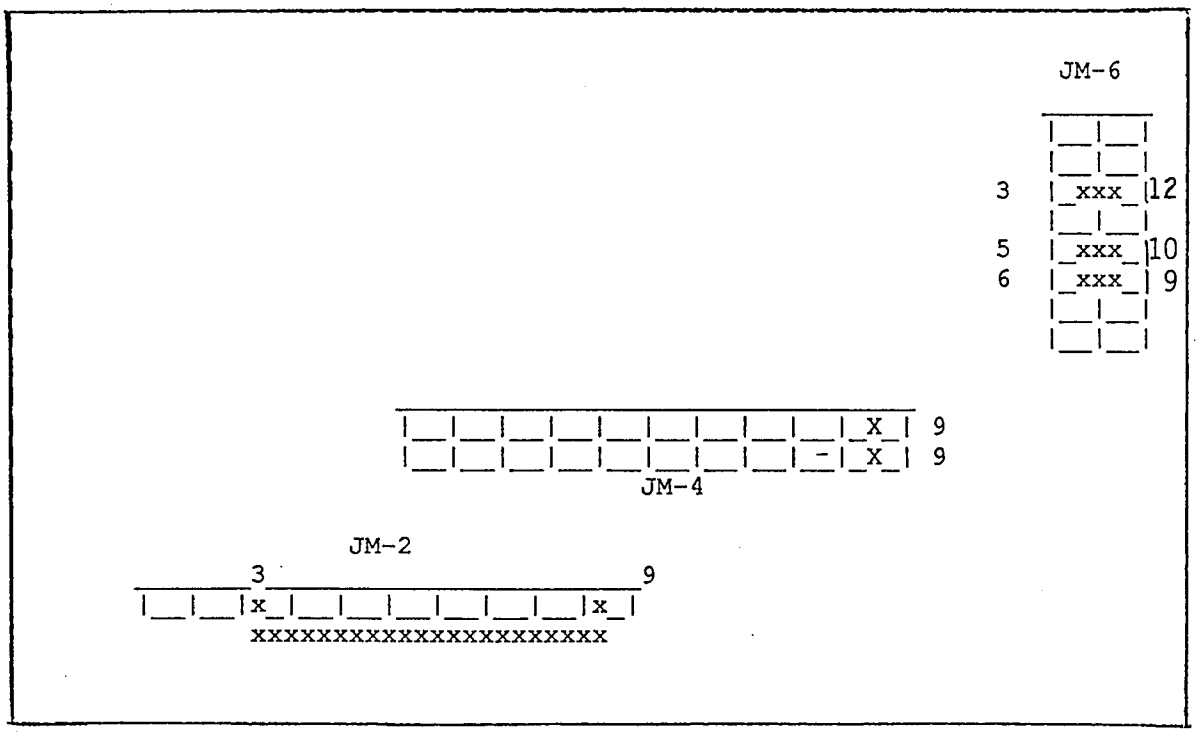
3) It is recommended by Cray Research that you do not run the Apollo station on a DSP running SR10 being accessed by user clients running SR9. This is because of the vast differences in the user accounting structure of the two versions of the operating system; file system security may be compromised if you attempt this type Apollo station access.

   If your DSP fileserver is running SR10, every attempt should be made to upgrade user client nodes to SR10 before they use the Apollo station.

DOCUMENTATION UPDATES

Documentation for 2.02 should be updated as follows for 2.03:

- Any references to 2.02 should be replaced by 2.03.
- Any AEGIS commands specified in uppercase should be replaced by lowercase equivalents.
- The PI150 hardware diagram was missing one link between pins 6 and 9 of JM-6. The following diagram shows all links correctly.



SPRs CLOSED

SPR NO.	DESCRIPTION
29325	EOF SEQUENCE UNAVAILABLE IN APOLLO STATION UNICOS CINT SESSION.
29777	CRAY CONTEXT DOESN'T RECOGNIZE TWO IDENTICAL COMMANDS IN A ROW.
29779	AN EXECUTE FROM WITHIN CRAY CONTEXT CAUSES STATION RELOG ON HYPERCHANNEL ERROR.
29828	CAN'T EXECUTE SAME COMMAND TWICE IN A ROW FROM CRAY CONTEXT.
22802	TIME STAMP NEEDED FOR LOGFILE MESSAGES.
22801	LOGON RETRY COUNT NOT RESET.
22800	SYNCON WILL ACTIVE POLL WHEN NOT NEEDED.
22703	STATION MESSAGES ARE NOT PRINTING CORRECTLY.
22707	CBATCH DOESN'T DELETE DATASET STREAM ON PPN, CAN, OR MCL.
22655	SYNCHRONOUS REQUESTS FROM CRAY CONTEXT CAUSE STATION RELOG.
22645	STATION WON'T COMPILE UNDER AEGIS 9.5.
22456	TEXT FIELDS FOR CRAY AND CRAYCP BAD.
20999	PROBLEMS IN CRAY GRAPHIC LIBRARIES.
20167	DATASET DISPOSED TO APOLLO BB IS NOT READABLE WHEN RECORDS CONTAIN ODD NO. OF WORDS.
19237	PI150 CONNECTION DIAGRAM INCORRECT IN SA-0251.
19236	NSC DIAGNOSTICS ON PI150 PRODUCE UNDOCUMENTED RETURN CODES.
18642	LINE FEEDS INSERTED INTO DISPOSED BLOCKED BINARY DATASETS.
18382	HEX COMPLETION MESSAGES.
23897	CSUBMIT TO A STATION CONFIGURED WITH UNICOS=YES WILL HANG.
23956	APOLLO STATION DOES NOT RELOG AUTOMATICALLY.

SPR NO.	DESCRIPTION
24272	INTERACTIVE TO UNICOS INSERTS INTERMITTENT NEWLINES TO TERMINAL OUTPUT.
27246	DATASET TRANSFER FROM A BATCH JOB DID NOT WORK.
27247	THE PATHNAME OF JOB'S OUTPUT WAS NOT CORRECT.
28005	ELAPSED TIME NOT CALCULATED CORRECTLY FOR AUTO RETRY.
30427	STATUS DISPLAY MAX 85 ENTRIES, DATABASE FULL, STATION LOGS OFF.

OUTSTANDING KNOWN SIGNIFICANT PROBLEMS

The following known significant problems are outstanding at the time of this release.

A problem exists with the interface CRAY that if an argument is entered on the command line interface which is greater than that expected. This causes CRAY to exit. This has no permanent effect and the problem is rectified by specifying the correct arguments.

If you are running SR10 on your DSP fileserver and the STMASTER process terminates with an error message when it is started up, the /station.dir/logfile_mbx file must be deleted and the process restarted. This is not an Apollo station problem but rather an Apollo SR10 problem.

TESTING STATUS

The Apollo station 2.03 release was tested in the following environments:

CRAY XMP/228 in a production environment running COS 1.17 connected through the IKON driver to an Apollo DSP90 running SR 9.7.

CRAY XMP/218 in a production environment running UNICOS 5.0 connected through the IKON driver to an Apollo DSP90 running SR 9.7.

CRAY XMP in a production environment running COS 1.17 connected through the IKON driver and NSC PI150 to an Apollo DN900 running SR 10.0.

CRAY XMP/218 in a production environment running UNICOS 5.0 connected through the IKON driver to an Apollo DSP90 running SR 10.0.

The testing was conducted both in Mendota Heights, MN and at Bracknell in the UK. The following is a list of the areas that were tested:

File Transfers

- Different types
- Different sizes

User Interface

Error Handling

Functionality

SPR Testing

A detailed description of the testing is in the Test Summary Report, included in the release package.

APPENDIX A. Apollo station 2.03 ORDER FORM

TO Cray Research, Inc.
2360 Pilot Knob Road
Mendota Heights, MN 55120
U.S.A.

Attn: Distribution Center - Order Desk

SUBJ: Apollo station 2.03 Release

FROM: _____

Site Code: _____

Please send me the items checked below:

_____ Apollo station 2.03 whole Release Package and documents with tape cartridge

Additional copies of separate components (specify desired number):

_____ Apollo station 2.03 Release Notice

_____ Apollo station 2.03 Test Summary Report

Note: No Manual changes were done for this release; any updates are documented in the Release Notice

_____ Apollo DOMAIN Station Reference Manual

_____ Apollo DOMAIN Station Administrator's Manual

_____ Apollo DOMAIN Station Internal Reference Manual

_____ Cray Research, Inc. 3-Ring Binders

Note: Please ensure the required licensing is in place before ordering the APOLLO station 2.03 release. If you have any questions or if licensing is not in place, contact your regional contract administrator or Lois Olson, Software Licensing Coordinator at (612) 681-2910.