

To: Distribution
From: Pattie, Peter, Grace and David
Date: October 21, 1975
Subject: System Maintenance Status, September 20 - October 17

1. Significant Events

Grace and Dave are scheduled to be in Phoenix with Bob Daley for the HLSUA Forum XXI, October 20-22. There is some hope that the system will continue to operate in their absence.

Pattie has been quite sick for the past three weeks. She has spent several days in the infirmary, and the past two weeks in New York recovering with her parents. She should hopefully be back and feeling well again by the 20th.

Multics was down most of Friday, October 3, due to a number of reasons, eventually leading to a trouble prone Restore and Reload. For a blow-by-blow description of the problems encountered, see Bob's minutes of the Maxi-group meeting of October 7. (MSR 022)

Several members of the Phoenix System Assurance team were in Cambridge last week. We met with them on October 15 to discuss a variety of installation related topics, including plans for future installations, problems in Phoenix-Cambridge communications, and so on.

The Billerica Honeywell people are coming on the system in force. At this point about 25% of their work has been transferred to MIT, but the load on the system has been extremely heavy, with the system often having 75 or more users and no idle time during the day. We are trying to tune some of the more obvious parameters for this load, but it seems unlikely at this time that we will be able to accommodate the entire Billerica effort without more drastic measures. One positive element has been the apparent success of the Priority Scheduler in keeping the load groups within their specified usage limits.

The TeleNet TAC is currently being connected for the demonstration scheduled for October 20 in Portland, Oregon. We hope the demonstration goes well and convinces people of the power and utility of both networking and Multics.

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A. Online System Installations

In spite of Pattie being out for the past three weeks there were 23 logical changes to the online libraries during the past month. With Pattie gone, Peter has been doing the installations, but the listings are beginning to pile up. Included among the changes made were the installation of all administrative exec_coms in the tools library, a new version of update_seg and related programs, the addition of a variety of CalComp supporting routines to the IML, and numerous changes in preparation for separate static. At this time, the major outstanding submissions include Answering Service 8.2 and new PL/1 and Fortran compilers.

B. Other Installations

During this reporting period Hardcore systems MSS 27.0, 27.0a, and 27.0b were installed. MSS 27.0 included the new Known Segment Table / Reference Name Table strategy (which went in very smoothly). MSS 27.0a contained one bug fix, for the only bug found so far in 27.0; and MSS 27.0b contained bug fixes for the tty dim and RCP. At this time we are putting MSS 27.1 together. This system will contain changes to move access control information into the KST and several other minor changes and fixes.

C. Crash Analysis

Although the failure rate indicated below is reasonably low, we have been experiencing severe problems in a number of areas. On October 3 the system was down for most of the day after memory parity errors. In addition, major problems have continued in several areas resulting in several extended periods of less than full configuration. Also, problems have existed in the PRT301 and new PRT202 printers resulting in several extended periods when these devices have not been available. At the time of this writing several problems continue unresolved; it is hoped that they may be found and corrected over the next few days.

	Sep 20-26	Sep Oct 27-3	Oct 4-10	Oct 11-17	Total
Hardware	1	4	4	2	11
Hardware Suspected	1	0	0	1	2
Software	0	0	0	0	0
Software Suspected	0	0	0	0	0
Not Yet Analyzed	1	2	0	1	4
Not Available	0	0	0	0	0
Other	1	1	0	0	2
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Total	4	7	4	4	19

2. Problem Areas

Hardware problems seemingly too numerous to mention have been cropping up more quickly than they can be fixed. Over the past week or two we've experienced major problems with: SCU A, SCU C, E191's, the PRT-301, the Billerica supplied PRT-202, and CPU A. One hopes that these problems can be corrected in the near future, as time spent fixing things is time unavailable for normal preventative maintenance.

With the increase in usage caused by the Billerica people, the system has been very heavily loaded. This has resulted in reduced efficiency in the system and thus lowered throughput and higher response times. It now appears that very little more can be squeezed out of the system without significant increases in the amount of hardware (specifically main memory) available.

The question of whether the offline libraries should be reorganized for compatibility with the online tools has once again been raised. We expect to spend some time over the next few weeks thinking this out and updating our previous decisions to stick with the older formats.

3. Task Status

Peter and Grace have completed their work on the library tools with the completion of both library_cleanup and library_descriptor. At this time, a small amount of work remains in getting all the tools ready for installation. Gary has submitted the first draft of the PLM for publication as an MTB, but it is expected that the MTB will be distributed only to a subset of the regular MTB distribution due to its size and limited audience.

Grace has completed all of the work on notification to users of errors encountered by Backup. One minor bug was corrected and the whole system appears to be working smoothly. One almost immediate benefit has been realized as almost all errors previously encountered by Backup have now been corrected.

Roger reports that the mechanisms for generating lists of library source contents have now been converted to use `library_map` and appear to be working smoothly.

4. Work Planned for the Coming Month

Answering Service 8.2, which has been held up for nearly a month due to a variety of bugs, should be installed in the next few days. It is hoped that this Answering Service will correct a number of problems and add some new capabilities.

Installation of the separate static hardcore system (in preparation for the pre-linking system) should take place soon. In addition, new versions of both PL/1 and Fortran, compatible with the new separate static conventions, should also be installed soon.

PROJECT System and User Support AREA

TASK DESCRIPTION PERSONNEL SIARI FINISH P-N CHANGES-SIARIUS

Online Installations	Kelley Dratel		Continuing Task		
Maintain source lists	Roach		Continuing Task		
Maintain cross reference lists	Kelley (Dratel)		Continuing Task		
Maintain listings	Dratel		Continuing Task		
Crash Analysis	Ackerman-- Lewis (Jordan)		Continuing Task		
Hardcore Installations	Ackerman-- Lewis (Kelley)		Continuing Task		
Operator Interface	Jordan (All)		Continuing Task		
Maintain Hardcore Cross Reference	Jordan		Continuing Task		
Consulting	All		Continuing Task		

PROJECT Programming Support AREA

TASK DESCRIPTION	PERSONNEL	SIARI	FINISH	P-W	CHANGES-SIARIUS
! Maintain and improve library ! submission tests	! Kelley	! Continuing Task			
! Convert cross reference to v2	! Kelley	! 4/15/73			
! Upgrade all online installation ! tool exec_coms for the 6180 and ! install in the libraries and ! document them.	! Kelley	! 3/26/73			! ec's have been revised.
! Look into compare_source_statement ! as replacement for cpa					! Compare pl/1 source ! statements ignoring ! differences in comments ! and formatting
! Design and implement an online ! system for registering modules ! being worked on, etc.					
! Create a system for processing ! backup error files to allow ! notification to users of errors ! encountered	! Ackerman-- ! Lewis	! 5/1/74 ! 5/1/74	! 6/15/74 ! 2/15/75		! Operational.
! Make test_tape work again	! Ackerman- ! Lewis				
! Provide Prime support.	! Ackerman- ! Lewis				
! Provide Network support as needed.	! Jordan				
! Assist in Implementation of an ! Autocall Facility.	! Jordan	! 10-27-75	! 12-15-75		

PROJECT Library Maintenance Tools Project AREA Installation tool enhancements

TASK DESCRIPTION	PERSONNEL	START	FINISH	P-W	CHANGES-STATUS
Honeywell PLM - AN80: Library Maintenance Manual	Kelley				continuing
library_cleanup: to replace cleanup using the library descriptor	Kelley	11/04/74	11/18/74		awaiting installation
upd_log_task: fix bug in locking strategy	Kelley	11/04/74	09/02/75		Installed
object_test: fix bug which deletes some ALM segments	Kelley				Awaiting MCR approval
recode object_test_ & upd_doc_task_ for changes to object info	Kelley	07/21/75	07/25/75		Installed
modify updating tools to use different hardware for copying segments	Kelley				Installed
Fix bug in library command delete.	Kelley				MCR 1274 - Awaiting approval
Fix bug in msa_manager_ introduced with MSS 27.0	Kelley				MCR submitted