

To: Distribution
From: David M. Jordan
Date: June 17, 1974
Subject: System Maintenance Status, May 18 - June 14

1. Significant Events

We presented 5 of the Multics lectures in the past month, completing those lectures scheduled for our group. Although I haven't yet seen the reviews (which must have been in the Globe by now) I think that the lectures went quite well and may prove useful in the future.

As Multics is now a standard Honeywell Large System a number of people from IPC and PDO spent several days at the recent Honeywell Large Systems Users Association (HLSUA) conference in Philadelphia, attempting to get the Multics users organized. Its somewhat comforting to know that we're not the only ones in the same boat...

A. Online System Installations

During this reporting period there were only 126 changes to the online libraries, due in part to the large number of installations which had to be pulled due to bugs. It begins to appear that the various test and audit procedures which have been applied so effectively to the hardcore system are not being used with the online changes, thus resulting in our having to make installations several times before getting a reliable change.

B. Other Installations

During the past month a relatively small number of changes to the hardcore system were installed. MSS 23.10, 23.10a, and 23.11 were installed and included a new version of page control and quite a few minor bug fixes and changes. MSS 23.12, which was to have been installed last week, contains the long awaited new version of `system_control` and several fixes for the `tty dim`. It is expected that this system will be installed early this week. BOS system 1.37 was also installed. This system included changes to a large number of BOS modules, including several fixes for the DataNet 355 software.

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C. Crash Analysis

System reliability has continued to improve during this reporting period, with an average of less than 1 crash per day. Software reliability appears quite good with the exception of the typewriter dim - DataNet 355 package which is still having problems handling the MDS 2400. The improved software reliability has been reflected in the software bugs list which has only one priority 1 entry and a steadily decreasing number of priority 2 entries.

	May 18-24	May 25-31	Jun 1-7	Jun 8-14	Total
Hardware	2	0	1	1	4
Hardware Suspected	0	0	0	1	1
Software	7	4	1	1	13
Software Suspected	0	0	2	0	2
Not Yet Analyzed	0	0	0	0	0
Not Available	1	0	1	0	2
Other	3	0	0	2	5
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Total	13	4	5	5	27

2. Problem Areas

Our most major problem at the moment appears to be the hash table overflow problem we've been having with directory hash tables. We've made a new version of update_seg to help limit the number of names in a directory, and we're working on getting the Network library set up, but the basic problem still remains and affects not only our installation libraries, but also some users' libraries.

The current Honeywell work on the Air Force security system additions may present us with problems in the not too distant future. Because Honeywell has contracted to install these security controls in the standard system, and because they will probably install them at MIT first, we may run into serious problems with reliability. In addition, its not at all clear that work we will probably end up doing is in the best interests of MIT or, for that matter, the country.

We continue to experience serious problems with the MTS-500 tape drives. A discussion was held at the HLSUA conference which seemed to indicate that other MTS-500 users have experienced a wide variety of problems with little or no constructive response from Honeywell.

Our printer has been down for about a week. The FE's have apparently fixed a number of problems, but at this point the printer is still down.

3. Task Status

Gary's work on the installation tools continues to be delayed by his work on other projects. Once again this month he has had to slip most of his work for another month.

Our work on the Installation Systems PLM is continuing, but not as quickly as we might have hoped. I am hopeful that we will be able to concentrate a bit more on the PLM in the next few weeks.

Our work on setting up the network library has made some progress, but it too is taking longer than we had expected. However, we do expect to get the new library "on the air" in the next month.

4. Work Planned for the Coming Month

With the removal of the development machine now scheduled for June 29, we are hoping to get a chance to catch up on all our hardcore installations. At this point we aren't too far behind, and a couple of days without people submitting changes should give us the time we need.

TASK AREA Programming Support

TASK DESCRIPTION	PERSONNEL	START	FINISH	CHANGES/STATUS
Update development reload.ec and system test exec_coms	Jordan	continuing	task	
Look into compare_source_statement as replacement for cpa.				Compare all source statements ignoring differences in comments and formatting
Design and implement an online system for registering modules being worked on, etc.				Proposal submitted to Gintell. Hope he has man-power
Look into the possibility of maintaining a module change history log.				May be part of sign out log project
Look into the possibility of making the source libraries generally accessible to users.				
Create a system for processing backup error files to allow notification to users of errors encountered	Lewis	5/1/74	6/15/74	Error file parsing completed, work progressing on control and notification portions
		5/1/74	6/30/74	

PROJECT Library Maintenance Tools Project AREA library descriptor tools

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-N	CHANGES-STATUS
lex_string: code a lexical analyzer to parse a character string into tokens which are processed by the compilers below	Dixon	12/15/73	01/10/74	.5	Done
reduction_compiler (rdc): code the reduction compiler (used to code the library_descriptor_compiler)	Dixon	01/01/74	01/08/74	.5	None
library_descriptor_compiler (ldc): code the library descriptor data base compiler	Dixon	01/01/74	02/11/74	2.0	
multics_libraries_ld: code the library descriptor for Multics	Dixon	12/15/73	01/10/74	2.0	code 90% complete
System_Libraries		12/15/73	06/30/74	3.0	
library_search: recode to use multics_libraries_ld generated by library_descriptor_compiler	Dixon	02/28/74	03/01/74	.2	Done
library_info (li): code, document command which replaces msl_info (HIGH)	Dixon	03/05/74	03/18/74		
library_map (lm): code, document command which replaces msl_global_format (HIGH)	Dixon	01/10/74	01/15/74	.5	
library_print (lpr): code, document command which prints groups of library segments (HIGH)	Dixon	03/01/74	07/08/74		
library_map (lm): code, document command which replaces msl_global_format (HIGH)	Dixon	10/05/73	10/30/73	1.5	Add options to command
library_print (lpr): code, document command which prints groups of library segments (HIGH)	Dixon	10/05/73	08/15/74		
library_map (lm): code, document command which replaces msl_global_format (HIGH)	Dixon	05/25/73	06/25/73	3	Add options to command
library_print (lpr): code, document command which prints groups of library segments (HIGH)	Dixon	06/30/73	08/15/74		
library_brief_map (lbm): code, document replacement for poach's segment_list (MEDIUM)	Dixon	05/10/73	04/01/73	1	prints segments now;
li/lm: get and output ACLs, initial ACLs, extra status (MEDIUM)	Dixon	10/02/73	08/15/74	2	make it print archive components, pt segs, chase links, print MSFs, etc
li/lm/lpr: add sorting options to commands (LOW)	Dixon	12/07/73	12/30/73	.5	
segment_list (MEDIUM)	Dixon	108/15/74			
li/lm: get and output ACLs, initial ACLs, extra status (MEDIUM)	Dixon	12/15/73	12/30/73	1.5	
li/lm/lpr: add sorting options to commands (LOW)	Dixon	08/30/74			
li/lm/lpr: add sorting options to commands (LOW)	Dixon	01/01/74	01/15/74	.5	
commands (LOW)	Dixon	08/30/74			

PROJECT Library Maintenance Tools Project AREA library descriptor tools

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
document the above procedures and subroutines	Dixon	03/01/74	05/30/74	3	documentation on
lm/lpr: gather and output statistics on Library segments (LOW)	Dixon	03/01/74	09/30/74	5	reduction_compiler, lex_string_, lex_error_, compact_area_done; MTB submitted
library_search_rules (lsr): code, document command which lists directories searched by li/lm/lpr for a given library (LOW)	Dixon			1.5	
library_get (lgt): rewrite gls to use library descriptor				2	
library_cleanup (lcln): clean up the code; use library descriptor				1.5	
library_object_cref (loc): rewrite cross_reference to use library descriptor				2.5	
library_include_cref (lic): rewrite lcref to use library descriptor & source maps in standard obj segs				2	

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PROJECT Library Maintenance Tools Project AREA Installation tool enhancements

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-M	CHANGES-STATUS
MIS: write Honeywell PLM - Library Maintenance Manual	Kelley				continuing
msa_manager; modify to not store segno as bit count of MSA components. (MCR 242)	Kelley	06/03/74	06/07/74		testing before submission for installation.
update_seg; increase size of online installations (MCR 188)	Kelley				waiting for submission of MCR 242.
update_seg; modify to limit the number of names retained on replaced segments.	Kelley	06/07/74	06/07/74		MCR submitted; awaiting approval.
update_seg; modify documentation task to report bindfile changes.	Kelley				awaiting approval/installation of appropriate binder modification.

