

Rosich

To: Distribution
From: David M. Jordan
Date: March 24, 1975
Subject: System Maintenance Status, February 22 - March 21

1. Significant Events

Arlene has left the Multics Systems Assurance group and moved to the PDD DOS group at OAS. This will undoubtedly cause problems as there are currently no plans to find a permanent replacement. Before leaving, Arlene spent a great deal of effort finishing up her work on library_fetch, which is now about ready for installation.

The first phase of the Access Isolation Mechanism (AIM) was finally installed in MSS 25.0. At this point we are attempting to assure that the various special tools involved are both working properly and sufficient to handle any problems. We also installed an AIM salvager and expect to begin allowing the development group to make use of the new features in the next week or so.

A great deal of effort went into the library tools during the past month. The reduction_compiler was installed in tools and almost all programming for library_descriptor, library_info, library_fetch, and library_cleanup has been completed. At this point a small amount of programming and a large amount of documentation remain to be done to complete this phase of the tools.

The first two sessions of the PDD/OPD workshop have been held. Unfortunately, the OS and RDMS groups are not able to attend, and so far Bob Daley has had other commitments. Other than not having these people attend, the workshops appear to be going well.

A. Online System Installations

During the past month there have been 68 changes to the online libraries. Included among the installations were a new iox_compatible tape dm, the new record_stream_ i/o module, and the reduction_compiler.

Multics Project internal working documentation. Not to be reproduced or distributed outside the Multics Project.

B. Other Installations

This reporting period saw the installation of a large number of hardcore systems. Included among the new systems were MSS 25.0, 25.1, 25.1a, 25.2, 25.3 and 25.3a. Changes installed included: the first phase of the Access Isolation Mechanism (AIM), changes to allow the use of disks as I/O devices, a new linker to allow the combination of stacks, lots, and combined linkage sections in one segment, and numerous fixes and minor changes. In addition, Salvager 2.30, including AIM changes was installed and BOS 1.42 was prepared for installation in the next day or two.

C. Crash Analysis

During this month the system continued to operate fairly reliably, although hardware problems in the past week or two have been a cause for some concern. It begins to appear that, although the software can be kept pretty well under control, we will have to accept continued hardware problems.

	Feb 21-28	Mar 1-7	Mar 8-14	Mar 15-21	Total
Hardware	2	0	3	6	11
Hardware Suspected	0	0	0	3	3
Software	1	1	0	0	2
Software Suspected	0	0	0	0	0
Not Yet Analyzed	0	0	0	1	1
Not Analyzable	1	0	0	1	2
Other	2	0	0	0	2
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Total	6	1	3	11	21

2. Problem Areas

The printer continues to give us significant problems, as we seem to be able to expect several extended periods of down time every few weeks. One major problem with the printer is that it isn't vital to system operation and thus may not be getting the attention it deserves.

We seem to have run into several strange problems with our CPUs. Several of the hardware crashes mentioned above were due to such things as internal parity errors in the processors. At this point the FFs are working on the problems, but don't seem to have too much to work on.

With Arlene gone and no permanent replacement being sought, we're having to make do with an understaffed group. With work on the installation tools winding up and Pattie returning to more regular hours, this should not present too

much of a problem.

During the past month three submissions managed to fail the submission testing procedures we use. This wouldn't be too bad, except that the three submissions came from three different members of the Systems Assurance group. This had us worried until we realized that we're trained to process submissions, not to prepare them.

3. Task Status

The library tools project has made great progress in the past month. Nearly all programming and debugging has been completed and work on guiding the new tools through the installation process has begun. The reduction compiler was installed in tools, a design review was held for library_fetch, library_descriptor and library_cleanup are nearly finished, library_info is now in general testing mode, and MCPs for the above are being prepared. It is expected that one or more MTRs will be produced and design reviews held for most of the tools in the next few weeks. In addition, work is beginning to pick up on the library_tools PLM, the only major task remaining for this phase of the tools.

4. Work Planned for the Coming Month

We expect to finish all programming and debugging on this phase of the library tools. In addition, we hope to get most of the tools prepared for installation, and expect some of them to be installed before the end of April. In addition, we hope to get into the library tools PLM enough to make a good start on it.

With Arlene gone, we must get someone trained to process online submissions in order to provide a backup for Peter. We hope to get started on this in the next week or two.



PROJECT Maintenance (Hardcore and Hardware) AREA

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
Crash Analysis	Kelley (Jordan)	Continui	ng Task		
Hardcore Installations	Ackerman-- Lewis (Kelley)	Continui	ng Task		
Operator Interface	Jordan (Roach)	Continui	ng Task		
Maintain Hardcore Cross Reference	Jordan	Continui	ng Task		

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PROJECT Maintenance (Online Libraries) AREA

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
Online Installations	Kelley (Dratel)	Continui ng Task			
Maintain source lists	Roach	Continui ng Task			
Maintain cross reference lists	Kelley (Dratel)	Continui ng Task			
Maintain listings	Dratel	Continui ng Task			

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PROJECT Library Maintenance Program Support AREA

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
Maintain and improve library submission tests	Kelley	Continuing Task			
Convert cross reference to v2		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			

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PROJECT User Interface AREA

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
Consulting	All	Continui ng Task			
MPRF Handling	All	Continui ng Task			
HMTU Handling	Williams	Continui ng Task			

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PROJECT Programming Support AREA

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
Look into compare_source_statement as replacement for cpa					
Design and implement an online system for registering modules being worked on, etc.					
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	Ackerman-- Lewis	5/1/74 5/1/74	6/15/74 2/15/75		

PROJECT Library Maintenance Tools Project AREA Installation tool enhancements

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
MIS: write Honeywell PLM - Library Maintenance Manual	Kelley				continuing
update_seg: modify documentation task to document unbundled library (MCR 735)	Kelley				Installed
update_seg: modify to set the default max length of segments to their current length; add option to set length if different from current length. (MCR 807)	Kelley	10/29/74	11/08/74		Installed
update_seg: fix bug in documentation program (MCR 819)	Kelley	10/21/74	10/25/74		Installed
cleanup: modify to use the library descriptor	Kelley	11/04/74	11/18/74		testing
		11/04/74	03/15/75		

PROJECT Library Maintenance Tools Project AREA library descriptor tools

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
reduction_compiler (-dc): make relative syntax functions PL/I quick blocks	Dixon	01/27/75	01/29/75	.1	INSTALLED
library_descriptor_compiler (ldc): simplify/increase-flexibility-of root naming strategy to meet requirements of Multics library descriptor	Dixon	01/29/75	01/31/75	.1	DONE
library_descriptor_compiler (ldc): document the compiler	Dixon	12/09/74	12/20/74	.6	DONE
multics_libraries_.ld: recode according to documentation using upgraded ldc	Dixon	02/03/75	02/05/75	.2	DONE
multics_library_search: implement search technique for library_fetch, library_cleanup, library_info	Dixon	01/27/75	02/07/75	.6	DONE
lib_output_node: implement info entry point for use by library_info; this entry formats output for terminal	Dixon	02/05/75	02/07/75	.1	DONE
library_info (li): code, document command which replaces msl_info	Dixon	10/05/73	10/30/73	1.5	Done, except for documentation
li/lm: get and output ACLs, initial ACLs, extra status	Dixon	12/15/73	12/30/73	1.0	Coding Underway
li/lm/lpr: add sorting options to commands				.5	NOT NEEDED; THIS TASK WILL BE DROPPED
document the above procedures and subroutines	Dixon	03/01/74	05/30/74	3	Writing of Library Maintenance PLM underway

PROJECT Library Maintenance Tools Project AREA _____ library descriptor tools

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
lm/lpr: gather and output statistics on Library segments				1.5	
library_descriptor (lds): code, document command which lists directories searched by lm/lpr for a given library	Ackerman-- Lewis	11/04/74 11/04/74	12/20/74 03/28/75	1 4	Coding Underway
library_fetch (lf): rewrite gfs to use library descriptor	Scherer	10/21/74 10/21/74	12/30/74 03/15/75	2 2.5	DONE
library_cleanup (lcln): clean up the code; use library descriptor	Kelley	11/04/74 11/04/74	12/30/74 03/28/75	1.5 2	Delayed because of online installation work
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	
library_check (lck): write program to check on consistency of libraries	Ackerman-- Lewis			3	