

TO: Distribution
FROM: David M. Jordan
DATE: February 11, 1974
SUBJECT: System Maintenance Status, January 5 - February 8

1. Significant Events

Ron Rakip left on January 31, leaving us a bit short on man-power. For the moment, I have been trying to handle Ron's work, but in a couple of weeks we hope to get Pete Kelley started on hardcore installations and then on crash analysis.

We installed the final part of the New Directory Control, the new versions of the command loop and PL/1 signalling, and a variety of other changes and fixes. However, our planned installations of the DSU-191 software, `iox_`, and the EIS `pl1_operators_` all had to be postponed for one reason or another.

A. Online System Installations

During the past reporting period there were 178 changes to the online libraries, including changes to the telnet package and some changes in preparation for the `iox_` system. With the successful installation of 256K segments, the opportunity now exists to consolidate the source and object archives to one archive/bound segment. An installation of one larger than 64K archive was successfully performed, indicating that the installation tools can handle them. Several bugs in the archive command are currently being fixed and, once fixed, it should allow the conversion to single archives.

Work is progressing on the new network library. We hope to be ready to handle this library by the middle of March.

Our installation of the EIS version of `pl1_operators_` and then the new PL/1 and Fortran compilers and runtime procedures were further delayed by continuing problems with the EIS hardware.

B. Other Installations

During the past five weeks hardcore systems MSS 22.0, 22.0a, 22.1, 22.2, 23.0, and 23.0a were installed. MSS 22.0

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essentially completed the installation of the New Directory Control, which was begun with the installation of MSS 18.0. The only change which remains to be installed is from a max_seg_size of 255K to 256K. This change was not installed due to problems with the current pl1_operators_. MSS 22.1 included the conversion of a large number of procedures to Version 2 PL/1. MSS 23.0 included the new PL/1 signalling mechanism and the new version of the command loop. The other systems were primarily bug fixes and minor changes. In addition, BOS 1.32 was installed to fix several problems with BOS runcoms.

Perhaps more significant than the changes we did install were the changes that didn't make it. The DSU-191 and lox_ systems were not installed due to a variety of problems with the submissions involved.

C. Crash Analysis

During the past reporting period, our software reliability has been quite good. However, the hardware has seen better times as its reliability has been getting steadily worse. Hopefully this situation will clear up shortly. Another problem has been the large number of unanalyzed crashes. There appear to be several new and different ways to crash which result in little or no useful information being left in the dump.

	Jan 5-11	Jan 12-18	Jan 19-25	Jan Feb 26-1	Feb 2-8	Total
Hardware	1	3	8	6	13	31
Hardware Suspected	0	1	1	3	0	5
Software	2	6	2	1	1	12
Software Suspected	1	1	3	2	1	8
Not Yet Analyzed	0	0	0	3	0	3
Not Available	2	1	0	3	2	8
Other	3	2	3	1	2	11
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Total	9	14	17	19	19	78

2. Problem Areas

Since Ron Rakip left we have been somewhat short of man-power. Hopefully this won't impact our maintenance functions, but it now appears that some more long-range plans will be sacrificed at least for the time being.

Our hardware currently appears to have a large variety of problems. We have been trying to isolate problems and get them fixed, but the more we find to fix, the more we seem to encounter new problems. One could have hoped that the new hardware for the 6180 would be more reliable than the old 645 hardware, but that doesn't appear to be the

case.

3. Task Status

Pete Kelley is nearly finished with the current phase of his work on the online installation tools. The documentation tasks have (at least temporarily) been shelved so he can work on hardcore installations and crash analysis. Gary's work on the tools has nearly come to a stop as he has been working on the tape development effort. Hopefully he will be able to find some time to get some of his tasks cleared up in the not too distant future.

Our work in preparation for the new network library has continued, but at this point its hard to say when it will be done. We hope to be ready by the middle of March.

Arlene has been working on several new installation forms, and these should be ready in the near future.

4. Work Planned for the Coming Month

During the next few weeks we expect to install the DSU-191 and lox_ systems, and the EIS pl1_operators_. In addition, we expect to install a new version of the I/O Daemon and perhaps a new printer dm. We also expect to continue preparations for the new network library.

Hopefully Peter will begin learning about hardcore installations, and if possible about crash analysis. In addition, we hope to find a new programmer to replace Peter on the installation tools and to begin work on system testing.



PROJECT Library Maintenance Tools Project AREA Installation tool enhancements

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-SIAIUS
MTB describing MIS and its future plans (i.e. changes/documentation)	Kelley		12/21/73		* done
update_seg: SPS command documentation	Kelley		12/21/73		* done
update_seg: enhance automatic documentation (MCR 189)	Kelley	01/02/74	01/25/74		coding done - testing in progress
update_seg: remove 'a' access mode references from MIS (MCR 224)	Kelley	12/26/73	12/28/73		incorporated info documentation enhancement change deferred
MTB describing documentation format for MIS	Kelley				
update_seg: Increase size of online installations (MCR 188)	Kelley				not started

PROJECT Library Maintenance Tools Project _____ AREA _____ Library descriptor tools _____

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-SIAIUS
li/im: get and output ACLs, Initial ACLs, extra status (MEDIUM)	DIXON	12/15/73	12/30/73	1.5	*
li/im/lpr: add sorting options to commands (LOW)	DIXON	01/01/74	01/15/74	1.5	*
li/m/lpr: gather and output statistics on Library segments (LOW)	DIXON			1.5	
library_search_rules (lshr): code, document command which lists directories searched by li/im/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	

PROJECT Library Maintenance Tools Project AREA _____ Library descriptor tools

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-SIAIUS
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: most code finished 1 month ago; a few changes added last week; (this task was previously part of the library_descriptor compiler task)
reduction_compiler (rdc): code the reduction compiler (used to code the library_descriptor compiler)	Dixon	01/01/74	01/08/74	.5	Done
library_descriptor (ld): code, document the library descriptor data base compiler	Dixon	12/15/73	01/10/74	2.0	reductions for semantic analyzer almost complete
multics_library_descriptor: code, compile the library descriptor for Multics System Libraries	Dixon	02/28/74	03/01/74	.2	
multics_libraries: recode to use multics_library_descriptor generated by library_descriptor compiler	Dixon	01/10/74	01/15/74	.5	
library_info (li): code, document command which replaces msl_info (HIGH)	Dixon	10/05/73	10/30/73	1.5	Add options to command
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	03/10/73	04/01/73	1	prints segments now; make it print archive components, pt segs, chase links, print MSFs, etc
library_brief_map (lbm): code, document replacement for Roach's segment_list (MEDIUM)	Dixon	12/07/73	12/30/73	.5	

