TO: Distribution

FROM: David M. Jordan

DATE: April 22, 1974

SUBJECT: System Maintenance Status, March 16 - April 19

1. Significant Events

Grace Lewis began work on April 1, filling the position left open in the group when Ron Rakip left. She has been spending most of her time learning the in's and out's of the system.

Peter Kelley has completed all but some low priority work on the new installation tools. While a fair amount of work lies ahead in the production of PLM documentation, the required coding work has been finished. Unfortunatly, Gary Dixon's tape work has continued to limit the time he has available for completion of the library tools.

FED installed the second million words of new-style Bulk Store last weekend with almost no loss of system time. Now perhaps we'll be able to tell whether the new memories are more reliable and easier to maintain than the old.

Versions of pl1_operators_ which make use of the EIS hardware have now been installed both in the online libraries and in hardcore. No accurate determination of the impact of the EIS operators on system performance has yet been made, but hopefully system throughput has gone up.

A. Online System Installations

During this reporting period there were 278 changes to the online libraries including the EIS pl1_operators_, a new version of the message segment software, and upgraded versions of many metering tools. New versions of the PL/1 and Fortran compilers, which include changes for iox_ and EIS, have been submitted. We expect to begin processing this submission in the next few days.

B. Other Installations

During the past five weeks hardcore systems MSS 23.6, 23.7, 23.7a, and 23.8 were installed. Included among the changes installed were the Version 2 network software, the 2 channel tape dcm, the final hardcore changes required for the MDS 2400 remote printers, and the installation of the

EIS pll_operators_ in ring 0. In addition to   the   hardcore
changes,   BOS 1.36 was installed to fix a timing problem in
the HSLA software.

We had hoped to get quite a few more changes   installed
over   this   reporting period, but a wide variety of problems
with several of our planned installations resulted   in   many
changes   not   being installed. Hopefully we will be able to
catch up to submissions again during the next few weeks.

C. Crash Analysis

Over the   past   five   weeks   the   system   continued   to
maintain   a very high level of reliability, averaging only 8
crashes/week.   Unfortunately,   many   of   the   crashes   were
caused   by   software   problems and fixes have been installed
for fewer than half of these crashes.   Hopefully,   however,
fixes   will   be submitted for some of the remaining problems,
allowing us to maintain and even   improve   this   reliability
record.

	Mar 16-22	Mar 23-29	Mar 30-5	Apr 6-12	Apr 13-19	Total
Hardware	7	0	1	4	3	15
Hardware Suspected	0	0	0	0	0	0
Software	4	2	5	2	4	17
Software Suspected	2	0	0	0	2	4
Not Yet Analyzed	0	0	0	0	0	0
Not Analyzable	0	0	0	0	0	0
Other	0	2	0	1	1	4
Total	13	4	6	7	10	40

2. Problem Areas

Our   most   serious   problem   at   this   point   is   the
continuing communications problem with CISL.   Although   it
doesn't   happen   often, we occasionally find that particular
system changes have   been   designed,   coded,   and   submitted
without being properly reviewed. Unfortunately, by the time
these   submissions get to us there is very little to be done
but to complain and install them.

CISL is attempting to   maintain   certain   libraries   at
Phoenix while maintaining others here.   This is resulting in
a   certain   amount   of   confusion   as   questions   about   the
relative up-to-dateness of a particular   library   are   often
very   difficult   to answer. We have strongly recommended to
CISL that they pick one system or   the   other   in   which   to
maintain   all   the libraries, but they seem to feel that the
problems we've pointed out can be minimised.

A variety of problems have   shown   up   in   the   recently
installed IO Daemon system. The result of these problems

has been a great deal of Operational difficulty, but CISL doesn't seem to think that these problems merit immediate attention. As a result, we have been left with a system which currently manages to break down at least once a day.

A variety of problems with several hardcore submissions has resulted in hardcore installations falling behind by quite a bit. Somehow, one could easily get the impression that not all of the various steps used to insure smooth installation of changes are being used by the development groups.

3. Task Status

Peter Kelley has finished all of his high priority tasks for the new installation tools. At this point we are about to begin work on the rather massive amount of documentation required for the Honeywell PLM on installation procedures.

Gary Dixon remained busy with the tape project and thus has made only slight progress on his installation tools tasks. However, his work on the implementation of a library descriptor system is nearing completion and, once completed, should allow more progress on several other tasks.

4. Work Planned for the Coming Month

During the next several weeks we hope to get the new compilers installed and to catch up on hardcore installations again. In addition, we hope to complete work in preparation for the new Network library, and to get started on the installation system PLM.

TASK AREA   Maintenance (Online Libraries)

TASK DESCRIPTION	PERSONNEL	START	FINISH	CHANGES/STATUS
Online installations	Scherer (Kelley)	continuing task		
Maintain source lists	Roach	continuing task		
Maintain cross reference lists	Scherer (Kelley)	continuing task		new lists generated on 03/30/74 and 04/19/74
Maintain info file archives	Roach	continuing task		
Maintain listings	Dratel (Kelley)	continuing task		

TASK AREA   Maintenance (Hardcore and Hardware)

TASK DESCRIPTION	PERSONNEL	START	FINISH	CHANGES/STATUS
Crash Analysis	Jordan (Kelley)	continuing task		
Hardcore Installations	Kelley (Jordan)	continuing task		
Operator Interface	Jordan (Roach)	continuing task		
Maintain Hardcore Cross References	Jordan	continuing task		

TASK AREA ____ User Interface

TASK DESCRIPTION	PERSONNEL	START	FINISH	CHANGES/STATUS
Consulting	All	continuing	task	
MPRF Handling	All	continuing	task	
MMTU Handling	Spall	continuing	task	

TASK AREA Library Maintenance Programming Support

TASK DESCRIPTION	PERSONNEL	START	FINISH	CHANGES/STATUS
Maintain and improve library submission tests.	Scherer	continuing	task	
Modify submission testing soft-ware for the "network" library and to use get-library-segment	Scherer	11/15/74	3/1/74	Compiled, not yet tested due to large number of installations
convert cross references to v2,	Scherer	4/15/73		Shelved for lack of time
Upgrade all online installation tool exec coms for the 6180 and install in the libraries and document them	Scherer	3/26/73		
Make changes to installation and testing systems to support the "network" library	All	1/15/74	3/15/74	Delayed by large number of installations

TASK DESCRIPTION	PERSONNEL	START	FINISH	CHANGES/STATUS
Update development reload.ec and system test exec_coms	Jordan	continuing	task	Modifications made for new 10 daemon procedures.
Look into compare_source_statement as replacement for cpa.				Compare pl1 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 accessable to users.				

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-M	CHANGES-STATUS
update_seg: enhance automatic documentation (MCR 189)	Kelley	01/02/74	01/25/74		Installed
update_seg: incorporate safety-switch	Kelley	01/02/74	02/28/74		submitted for installation
MTB describing documentation format for MIS	Kelley				scrapped: started writing PLM instead
cv_dir_acl_: fix bug MPRF 7050	Kelley				MCR submitted
MIS: write Honeywell PLM - Library Maintenance Manual	Kelley				continuing
update_seg: increase size of online installations (MCR 188)	Kelley				not started

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-M	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 ; 01/01/74	01/08/74 ; 02/11/74	.5 ; 2.0	Done
library_descriptor_compiler (ldc): code the library descriptor data base compiler	Dixon	12/15/73 ; 12/15/73	01/10/74 ; 04/30/74	2.0 ; 3.0	code 90% complete *
multics_libraries_.id: code the library descriptor for multics System libraries	Dixon	02/28/74 ; 03/05/74	03/01/74 ; 03/18/74	.2	Done
library_search_: recode to use multics_libraries_.id generated by library descriptor compiler	Dixon	01/10/74 ; 03/01/74	01/15/74 ; 05/15/74	.5	*
library_info (li): code, document command which r places msl_info (HIGH)	Dixon	10/05/73 ; 10/05/73	10/30/73 ; 05/30/74	1.5	Add options to command *
library_map (lm): code, document command which r places msl global format (HIGH)	Dixon	05/25/73 ; 06/30/73	06/25/73 ; 05/30/74	3	Add options to command *
library_print (lpr): code, document command which prints groups of library segments (HIGH)	Dixon	05/10/73 ; 10/02/73	04/01/73 ; 05/30/74	1 ; 2	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 ; 05/30/74	.5	*
li/lm: get and output ACLs, initial ACLs, extra status (MEDIUM)	Dixon	12/15/73	12/30/73 ; 06/15/74	1.5	*
li/lm/lpr: add sorting options to commands (LOW)	Dixon	01/01/74	01/15/74 ; 06/15/74	.5	*

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-M	CHANGES-STATUS
document the above procedures and subroutines	Dixon	03/01/74 03/01/74	05/30/74 06/30/74	3	reduction_compiler documentation 90% complete
lm/lpr: gather and output statistics on library segments (LOW)	Dixon			1.5	
library_search_rules (lsr): code, document command which lists directories searched by ll/lm/lpr for a given library (LOW)	Dixon			1.5	
library_get (lgt): rewrite gis 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	