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MAY 15 1975
J. H. SALTZER

F O R U M A T T E N D E E S

C.T. Clingen

D. Clarke

J.W. Gintell

R.E. Hoffman

G.M. Lundberg

J.G. Regester

Prof. J. Saltzer

R.E. Shoemaker



Honeywell

TO: List of Attendees cc: List

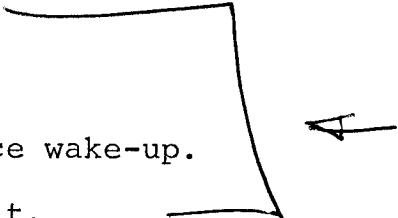
SUBJECT: FORUM Minutes for 6 May 1975

ATTENDEES: G. Ackerman-Lewis ED Kleinow
WJ Burner RA Roach
RJ Chevalier LJ Ryan
RM Gross RH Scott
DM Jordan JR Steinberg
PB Kelley

Hardware - ED Kleinow

- MTH 500's One unit had broken head cable.
FED replaced pin connector.
- PRT 301 Hood is not functioning properly in the "Low Paper" condition.
FED is going to check this problem out further during
the next scheduled PM.
- FCO Processor have about one (1) hour of FCO's outstanding
on each unit.

Software - D. Jordan

- MSS 25.5 installed and running.
 - 3 crashes last week related to NCP.
 - 2 of these were device wake-up conditions
 - 1 of these occurred immediately after device wake-up.
 - Bug list updated. New Bug #472 added to list.
 - 25.6 almost ready for installation.
 - New I/O interfacer version due.
 - Access isolation mechanism change due
- 

Other

FORUM will meet on alternate Tuesdays beginning Today. Next meeting scheduled for 5/20/75.



RJC/jmn





Massachusetts Institute of Technology
Programming Development Office
Cambridge, Massachusetts 02139

To: Forum Attendants
From: David M. Jordan
Date: May 6, 1975
Subject: Multics Availability, April 26 - May 2

Summary of Lost Time

	# of Crashes	Crashes	Time Lost Other	Total
Hardware Suspected:	1	0:07	0:00	0:07
Software Suspected:	3	0:46	0:00	0:46
Operations:	1	0:12	1:14	1:26
-----	-----	-----	-----	-----
Total:	5	1:05	1:14	2:19

Total lost time/Scheduled up time = 1:05/87:30 = .025 (97.5 up time)

April lost time = 4:58

May month-to-date lost time = 0:29

#	Time Lost		Explanation	Time Lost Due To
	Down At	Up At		
1	10:00 04/27	- 10:44 04/27	System late coming up	0:44 Oper
2	10:44 04/27	- 10:51 04/27	Crash, ERF 294	0:07 H? attempting to add 2nd CPU
3	09:00 04/28	- 09:30 04/28	System late coming up	0:30 Oper
4	08:52 04/29	- 09:12 04/29	Crash, ERF 295	0:12 Oper
5	17:49 04/30	- 18:00 04/30	Crash, ERF 296	0:11 S? (NCP)
6	18:19 04/30	- 18:25 04/30	Crash, ERF 297	0:06 S? (NCP)
7	16:31 05/01	- 17:00 05/01	Crash, ERF 298	0:29 S? (NCP)

Saturday
4/26

Sunday
4/27

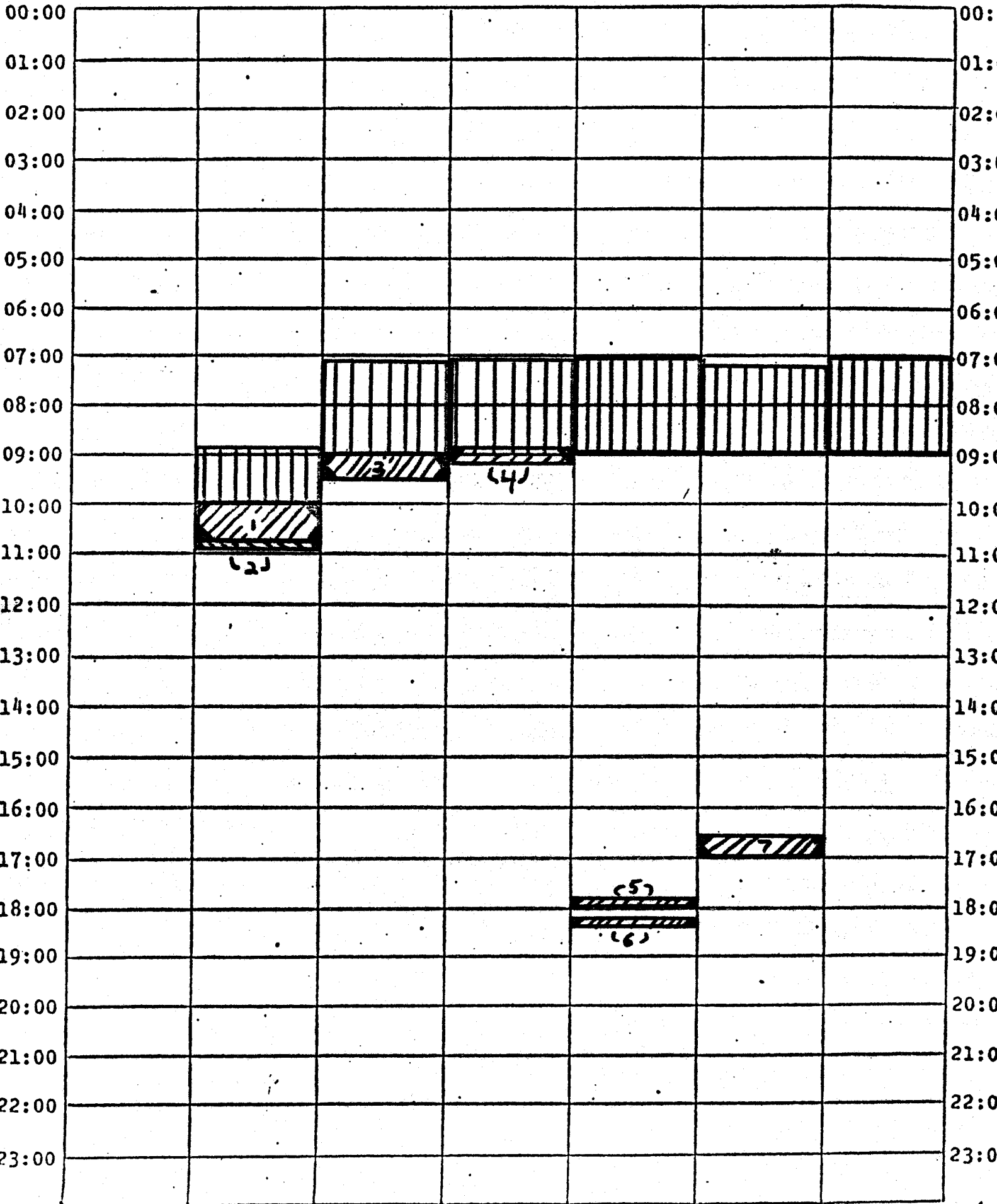
Monday
4/28

Tuesday
4/29

Wednesday
4/30

Thursday
5/1

Friday
5/2



#	sys.	date	time	type	brief explanation
	25.5	05/02/75			NO CRASHES
298	25.5	05/01/75	16:31	S?	Large number of device wakeups generated by the MCP
297	25.5	04/30/75	18:19	S?	Problems with initializer as a result of ENF 296
296	25.5	04/30/75	17:09	S?	Large number of device wakeups generated by the MCP
295	25.5	04/29/75	04:52	Oper/S	Operator forgot to run salvager after shutdown with dummy user
	25.5	04/28/75			NO CRASHES
294	25.5	04/27/75	10:44	H?	Crash while adding second CPU
	25.5	04/26/75			NO CRASHES

To: Administrative Distribution
From: David M. Jordan
Date: May 6, 1975
Subject: Multics Crash Analysis for April 26 - May 2

Total number of crashes = 5 (ERF's 294 - 298)

Hardware Suspected:		
Problems adding second CPU		1

		Total 1
Software Suspected:		
Problems due to large number of NCP device wakeups		3

		Total 3
Other:		
Operations/Software:		
Operator forgot to run salv after shutdown with dummy user still logged in		1

		Total 1

This segment contains a list of known CPU hardware bugs/deficiencies.

063				
062	04/13/75	ENG	2	IPR faults occur if target string of move (etc) is zero length.
061	01/15/75	Inst		CMFN does not always work
060	01/15/75	FEU	2	CMPC sometimes fails
079	10/14/74	***	2	Bounds faults not being recognized on decimal instructions (PHAB-PE036, PHAB-PG060)
078	10/14/74	Inst	2	Ring alarm faults are only sampled at RTCD time (PHAB-PE052)
077	10/14/74	***	2	packed pointer load faults (FCO not yet released)
076	09/05/74	Inst		CMPC sometimes fails at page boundaries.
075	08/26/74	Inst		MLR sometimes stores extra fill characters.
074	08/05/74	Inst		CMPC sometimes fails with multiple page faults.
073	05/02/74	***	1	MLR (CMPC, etc) will not work with 1048576 characters.
072	05/02/74	Inst		ADMP sometimes fetches operand from even word instead of odd.
071	05/02/74	***	2	CMPB fails with certain bit offsets not on character boundaries.
070	03/25/74	Inst		XED'd instructions fail to do indexing correctly (PHAB-PE052)
069	03/18/74	Inst		MLR and CMPC place fill characters in last few words at page bdry
068	03/11/74	Inst		MPY gets overflow on -2**35 Inst -2**35.
067	02/14/74	Inst		MLR sometimes places 8 zeros near page boundary.
066	02/14/74	Inst		MVN gets fixedoverflow when moving 02.
065	02/13/74	Inst		MLR sometimes changes a single character to fill character at page boundary.
064	02/12/74	Inst		MLR moves 8 characters extra at page boundary.
063	02/05/74	Inst		CMPC fails at connect fault time processing fill chars.
062	02/04/74	Inst		CSL instruction fails across boundary boundaries.
061	01/24/74	Inst		MVI sometimes fails if take page fault on table.
060	01/12/74	Inst		MLR gets op-not-completes.
059	01/12/74	Inst		MLR get no-write-permission by miscalculating TSR.
058	01/12/74	Inst		CMPC sometimes gives wrong results.
057	01/03/74	Inst		MLR instruction fails across boundary boundaries.
056	01/03/74	Inst		SRFG gets op-not-complete if at end of page.
042	10/13/73	Inst		CI and/or S2 modification does not always work.

The severity of the problem is interpreted as follows:

1. Severe, the problem is holding up system progress.
2. Medium, the problem is annoying but can be circumvented.
3. Slight, the problem is not very serious.

***. Fix known, awaiting installation.

(END)

Multics Software Bugs List as of 14:31 Monday, May 5, 1975

472 05/05/75 1 Attempt to boot fails if process dirs left after previous shutdown
 365 03/12/75 1 *** Security bug allowing user to patch PDS
 357 02/21/75 1 m9 Several timing loops for 355 timeouts are too short (with cache processors)
 356 02/21/75 1 daw Bug(s) exist in Network locking software -> pxxx timeouts
 369 04/10/75 2 Shutdown with 2 CPUs may result in a loop (stz used to clear lock, should be stacc)
 367 03/25/75 2 status with "-md" option also gives bit count, records used and max length
 361 03/02/75 2 Output to one terminal can end up in another user's input buffers (MPRF 8035)
 352 01/14/75 2 Deletion of CPU appears to result in clobbered words (ERFs 207 & 208)
 350 01/02/75 2 m9 Users who hangup may not be logged out
 348 12/03/74 2 Security problems in the automatic creating of home directories
 346 11/25/74 2 Backup bombs when handling dir with msf indicator on but no inferior segments (See 11/23/74)
 339 10/10/74 2 rem bug in traffic controller (-> idle loops)
 318 07/25/74 2 m9 tty dim seems to be able to go blocked for output and forgets to wakeup
 371 04/12/75 3 delete_dir can not delete directories with lower ring segments (gives misleading message)
 370 04/12/75 3 set_acl says "no match" if satisfying entry names all in lower rings
 366 03/22/75 3 user can get into loop creating/destroying processes thus tying up system.
 364 03/02/75 3 msa msa does not handle star convention properly (MPRF 8010)
 362 03/02/75 3 sdn delete_name gives incorrect error message on a mseg (bug in cname_\$file)
 360 03/02/75 3 Salvager appears not to flush its logging buffer when finished (errors absent from log)
 359 03/02/75 3 EXL initialize_peek_limits leaves old (possibly dangerous) limit table on an error (missing seg)
 358 02/27/75 3 rab EXL compiler faults if used for 1st time after debug has listed object code (fixed with prelinking)
 354 02/12/75 3 rim initialize_peek_limits fails if any error is encountered while processing (security problem?)
 353 01/14/75 3 delete_dir fails if safety switch is on
 347 12/03/74 3 I/O driver ignores -ln option when -pl is used
 338 09/26/74 3 restarted printer requests indicate a zero charge (\$0.00)
 337 09/26/74 3 IO Daemon restarts can start at wrong request if more than one cycle is being saved
 325 08/21/74 3 IO SysDaemon was charged for a large negative amount of cpu time (08/26/74)
 324 08/21/74 3 tvc message coordinator can lose a wakeup and then stops printing
 323 08/21/74 3 tac Users log out but remain in who table; also, process dirs not always deleted
 322 08/21/74 3 srh command_processor_ can get fatal process errors (with some cases of iteration)
 320 07/25/74 3 tac initializer's alarm clock can fall and doesn't resync properly. (See online for 87/26/74)
 315 07/24/74 3 amk Long salvager (after clean shutdown) is detecting bad filemap checksums
 305 07/02/74 3 m9 logout messages get lost due to timing problems in tty dim
 302 06/23/74 3 cross directory retrievals sometimes fail (see RAR for details)
 282 05/02/74 3 mam qex fails to find expressions like /a.bc.*abd/ in strings like "a.bc a.b a.bcd"
 268 03/05/74 3 rsc IO Daemon prints an lengthy error message when request deleted from under it
 258 02/11/74 3 shw Boot cold won't work if too much disk storage (des on fsdct page fault)
 240 01/10/74 3 eds lock does not handle directory deletions well. (May result in seg fault -> crawlout)
 238 03/18/74 3 srh floor_manager_ may not properly reset alarm calls if called more than once from same loc (V1)
 216 11/23/73 3 shw System crashes on attempts to wire a page in a RMS
 180 09/01/73 3 *** retrieve does not accept control files with 50 names as documented (limit about 20) (Documentation change)
 179 09/01/73 3 *** retrieve sometimes requires full primary path names (supposed to accept alternate names) (Documentation change)
 148 07/25/73 3 jwg absenteer or i/o message segments can get truncated by ms salvager with no messages
 141 07/22/73 3 *** >system_library_tools should be removed from default search rules
 129 07/07/73 3 jwg renaming directories does not terminate them and can cause serious problems
 363 03/02/75 4 unbump fails to do its function completely (user logged out on new_proc - MPRF 8019)
 336 09/25/74 4 IO Daemon's save request does an automatic start
 307 07/02/74 4 m9 hardware Terminals do not get identified correctly when turned on after system is up (on 150 baud)
 197 10/23/73 4 rar iss has not been updated for 6180 libraries

*** - fix completed (to be installed)

inst - fix installed