

Honeywell

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JUN 16 1975

J. H. SALTZER

F O R U M L I S T

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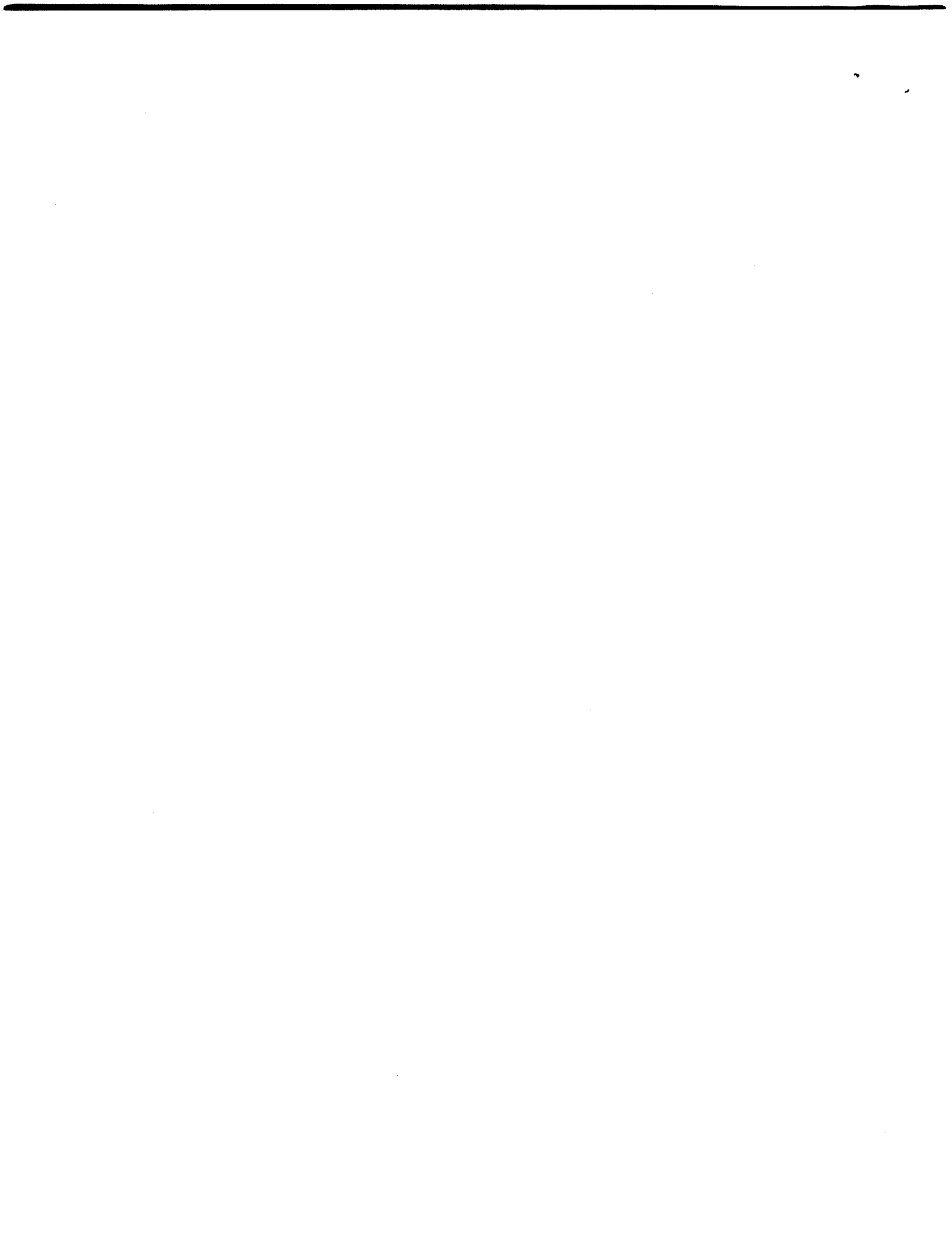
J. W. Gintell

G. M. Lundberg

J. G. Register

Prof. J. Saltzer

R. E. Shoemaker



Honeywell

To: List of attendees cc: List

Subject: FORUM Minutes for 3 June, 1975

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

Hardware - ED Kleinow

Memory Problems - SCU-C Store A. Parity errors occurring. FED installed new board. T&D's failing.

SCU-C Store B. Also has parity errors. FED has been checking out with no fix yet. Kleinow will call Phoenix to review diagnostic procedures.

Processor - CPU-B appears to have a board sensing phony Start-up faults. Boards have been swapped to see if condition moves.

Special session set up for Thursday for FED check-out of this problem.

PRT 301 - Hood problem. Need software mod to resolve the hood raising problem. Current software gets paper low status, waits for top of page then raises hood. MIT doesn't necessarily space to top-of-page.

Single Cycle problem. Chevalier has submitted a request for an engineering change to replace the Single Cycle button with a Manual Halt button.

Software - DM Jordan

- . MSS 25.6 installed as of 5-29-75. New answering service installed, includes TTY compatibility for MCS.
- . MSS 25.7 being worked on for installation. This system will include fix for bug #365.
- . PL/1 Compiler should be ready for installation later this week.

Other

VADIC - Based on recommendations from M Grady, Leo Ryan requested the phone company to check out and verify the decibel level on VADIC lines. Results were variations of from 2 to 12 DB. Phone company then set all DB levels to 5.

RJC/jmn





Massachusetts Institute of Technology
Programming Development Office
Cambridge, Massachusetts 02139

To: Forum Attendants
From: Peter B. Kelley
Grace Ackerman-Lewis
Date: June 3, 1975
Subject: Multics Availability, May 17 - 30

	# of Crashes	Crashes	Time Lost Other	Total
	-----	-----	-----	-----
Hardware:	8	2:10	0:00	2:10
Software:	3	0:49	0:00	0:49
Software Suspected:	1	3:17	0:00	3:17
Not Yet Analyzed:	2	1:45	0:00	1:45
-----	-----	-----	-----	-----
Total:	15	8:01	0:00	8:01

Total lost time/Scheduled up time = 8:01/175:00 = .045 (95.5% up time)

May month-to-date lost time = 10:49

#	sys.	date	time	type	brief explanation
318	25.6	05/30/75	16:32	NYA	dn355 mailbox time out
	25.6	05/29/75			NO CPASHFS
317	25.6x	05/28/75	09:30	F	spurious startup fault - CPU B
316	25.5	05/28/75	03:25	NA	no dump
315	25.5	05/27/75	19:39	F	spurious startup fault - CPU B
314	25.5	05/27/75	9:14	F	spurious startup fault - CPU B
313	25.5	05/26/75	10:53	F	spurious startup fault - CPU B
	25.5	05/26/75	10:32	NYA	Return to BOS - no message
	25.5	05/25/75			NO CPASHFS
312	25.5	05/24/75	23:18	F	spurious startup fault - CPU B
	25.5	05/23/75			NO CPASHFS
311	25.5	05/22/75	17:53	NYA	"Out of E191"
310	25.5	05/22/75	14:11	F	tty_free error 10 - vadic
309	25.5	05/21/75	15:00	NYA	ITT overflow - Network?
308	25.6x	05/21/75	09:32	S	Bug in 25.6x (system pulled)
307	25.6x	05/21/75	09:05	F	spurious startup fault - CPU B
306	25.5	05/20/75	08:53	S	Table initialization problem
305	25.5	05/19/75	12:56	H	Parity errors SCU-C Store A
304	25.6x	05/19/75	09:30	S	Bug in 25.6x (system pulled)
	25.5	05/18/75			NO CPASHFS
	25.5	05/17/75			NO CPASHFS

To: Administrative Distribution
 From: Peter B. Kelley
 Grace Ackerman-Lewis
 Date: June 3, 1975
 Subject: Multics Crash Analysis for April 19 - 25

Total number of crashes = 15 (ERF's 304 - 318)

Software:

Bug in MSS 25.6x (system pulled)	2
Shutdown with dummy user + no salvager run attempt to delete >pdd	1

Total	3

Hardware:

spurious startup fault - CPU B	6
parity errors SCU C stor A	1
tty_free error 10 - vadic	1

Total	8

Not Yet Analyzed:

out of F191 - clobbered file map	1
ITT overflow problem (Network?)	1
dn355 mailbox time out	1

Total	3

Not Analyzeable:

no dump	1

Total	1

Saturday
5/17

Sunday
5/18

Monday
5/19

Tuesday
5/20

Wednesday
5/21

Thursday
5/22

Friday
5/23

00:00							00:00
01:00							01:00
02:00							02:00
03:00							03:00
04:00							04:00
05:00							05:00
06:00							06:00
07:00							07:00
08:00							08:00
09:00				5	5		09:00
10:00	1		2 3	5	6		10:00
11:00							11:00
12:00							12:00
13:00			4				13:00
14:00						8	14:00
15:00							15:00
16:00					7		16:00
17:00							17:00
18:00						9	18:00
19:00							19:00
20:00							20:00
21:00							21:00
22:00							22:00
23:00							23:00

Saturday
5/24

Sunday
5/25

Monday
5/26

Tuesday
5/27

Wednesday
5/28

Thursday
5/29

Friday
5/30

00:00							00:00
01:00							01:00
02:00							02:00
03:00							03:00
04:00					15		04:00
05:00							05:00
06:00							06:00
07:00							07:00
08:00							08:00
09:00							09:00
10:00				13	16		10:00
11:00		12					11:00
12:00							12:00
13:00							13:00
14:00							14:00
15:00							15:00
16:00							16:00
17:00						17	17:00
18:00							18:00
19:00							19:00
20:00				14			20:00
21:00							21:00
22:00							22:00
23:00							23:00

#	Time Lost		Up At	Explanation	Time Due Lost To
	Down At	Up At			
1	10:00 05/17	- 10:42 05/17		Special Session	0:42 S Problem with 25.6x - system pulled
2	9:27 05/19	- 9:45 05/19		Crash, ERF 304	0:19 H parity errors SCU C stor A
3	9:45 05/19	- 10:04 05/19		Special Session	0:15 S attempt to delete >pdd
4	12:56 05/19	- 13:25 05/19		Crash, ERF 305	0:07 F spurious startup fault - CPU B
5	8:53 05/20	- 9:15 05/20		Crash, ERF 306	0:16 S bug in MSS 25.6x (system pulled)
6	9:06 05/21	- 9:13 05/21		Crash, ERF 307	3:17 S? IIT overflow
7	9:35 05/21	- 9:51 05/21		Special Session, ERF 308	0:09 F tty_free error 10 - vadic
8	15:52 05/21	- 19:09 05/21		Crash, ERF 309	0:29 NYA out of F191
9	14:11 05/22	- 14:20 05/22		Crash, ERF 310	0:00 F spurious startup fault - CPU B
10	17:53 05/22	- 18:22 05/22		Crash, ERF 311	0:25 F spurious startup fault - CPU B
11	23:18 05/24	- 0:00		Crash, ERF 312	0:14 F spurious startup fault - CPU B
12	10:32 05/26	- 10:57 05/26		Crash, ERF 313	0:11 F spurious startup fault - CPU B
13	9:14 05/27	- 9:28 05/27		Crash, ERF 314	0:00 MA no dump
14	19:39 05/27	- 19:51 05/27		Crash, ERF 315	0:30 F spurious startup fault - CPU B
15	3:25 05/28	- 0:00		Crash, ERF 316	1:16 NYA dn355 mailbox time out
16	9:30 05/28	- 10:00 05/28		Crash, ERF 317	
17	16:32 05/30	- 17:48 05/30		Crash, ERF 318	

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

083				
082	04/19/75	ENG	2	IPR faults occur if target string of move (etc) is zero length.
081	01/15/75	Inst		CMPN does not always work
080	01/15/75	FED	2	CMPC sometimes fails
079	10/14/74	***	2	Bounds faults not being recognized on decimal instructions (PHAB-PE036, PHAB-P6060)
078	10/14/74	Inst		Ring alarm faults are only sampled at RTCD time (PHAO-PE052)
077	10/14/74	***	2	Packed pointer load faults (FCO not yet released)
076	09/05/74	Inst		CMPC sometimes falls at page boundaries.
075	08/26/74	Inst		MLR sometimes stores extra fill characters.
074	08/05/74	Inst		CMPC sometimes falls with multiple page faults.
073	05/02/74	***	1	MLR (CMPC, etc) will not work with 1048576 characters.
072	05/02/74	Inst		ADWP sometimes fetches operand from even word instead of odd.
071	05/02/74	***	2	CMPO falls 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	02/06/74	Inst		CMPC fails at connect fault time processing fill chars.
062	02/04/74	Inst		CSL instruction fails across boundfault boundaries.
061	01/24/74	Inst		MVT 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 ISR.
058	01/12/74	Inst		CMPC sometimes gives wrong results.
057	01/03/74	Inst		MLR instruction fails across boundfault boundaries.
056	01/03/74	Inst		SREG gets op-not-complete if at end of page.
042	10/13/73	Inst		CI and/or SC 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)

This segment lists some of the known bugs in 6180 Multics.

- 372 05/05/75 1 *** Attempt to boot fails if process dirs left after previous shutdown
- 365 03/12/75 1 *** Several timing loops for 355 timeouts are too short (with cache processors)
- 357 02/21/75 1 mjg Bug(s) exist in Network locking software -> dx55 timeouts
- 373 05/21/75 2 salvager (regular) fails to detect active segments (need to run long salvager)
- 369 04/10/75 2 Shutdown with 2 CPUs may result in a loop (stz used to clear lock, should be stac)
- 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 mjg 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 mjg tty dlm seems to be able to go blocked for output and forgets to wakeup
- 376 05/22/75 3 printer dlm does not indent lines containing tabs correctly
- 375 05/22/75 3 printer dlm does not raise hood when out of paper
- 374 05/21/75 3 pmutfparity_check prints out wrong address of the parity error (see online for 05/21 1600)
- 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 msla does not handle star convention properly (MPRF 8010)
- 362 03/02/75 3 sbh delete_name gives incorrect error message on a msec (bug in cname_\$flite)
- 360 03/02/75 3 Salvager appears not to flush its logging buffer when finished (errors absent from log)
- 359 03/02/75 3 Initialize_peek_limits leaves old (possibly dangerous) limit table on an error (missing seg)
- 358 02/27/75 3 reb EXL compiler faults if used for 1st time after debug has listed object code (fixed with prelinking)
- 354 02/12/75 3 rfm 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 -in option when -pi 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 08/27/74 3 tac IO.SysDaemon was charged for a large negative amount of cpu time (08/26/74)
- 324 08/27/74 3 tvw 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 07/26/74 3 tac Initializer's alarm clock can fail and doesn't resync properly. (see online for 07/26/74)
- 315 07/24/74 3 amk Long salvager (after clean shutdown) is detecting bad filemap checksums
- 305 07/02/74 3 mjg Logout messages get lost due to timing problems in tty dim
- 302 06/29/74 3 cross directory retrievals sometimes fail (see RAR for details)
- 282 05/05/74 3 mam qedx fails to find expressions like /a.bc.*abd/ in strings like "a.bc a.b a.bd"
- 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 (dies 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 timer_manager_ may not properly reset alarm calls if called more than once from same loc (V1)
- 216 11/29/73 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 07/26/73 3 jmg absentee or I/O message segments can get truncated by ms salvager with no messages
- 141 07/22/73 3 *** >system_library_fools should be removed from default search rules
- 129 07/07/73 3 jmg renaming directories does not terminate them and can cause serious problems
- 377 05/22/75 4 out of disk (E191) syserr message has a \000 on the end
- 363 03/02/75 4 unbump fails to do its function completely (user logged out on new_proc - MPRF 8019)
- 336 09/26/74 4 IO Daemon's save request does an automatic start
- 307 07/02/74 4 mjg hardwired Terminate does not get identified correctly when turned on after system is up (on 150 baud)
- 197 10/29/73 4 rar iss has not been updated for 6180 libraries

*** - fix completed (to be installed)

Inst - fix installed

Massachusetts Institute of Technology

Information Processing Center

Multics availability for last week to 05/24/75 2359.0

Table with columns: Time, Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Time. Rows contain time slots and availability status (e.g., 2 256 2.01, 2 384 2.01, shutdown, crash).

Massachusetts Institute of Technology
Information Processing Center

Multics availability for last week to 05/31/75 2359.0

Table with columns: Time Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Time. Contains detailed availability records for various times and dates, including status indicators like 'shutdown', 'crash', and '316'.