

INTERDEPARTMENTAL

MASSACHUSETTS INSTITUTE OF TECHNOLOGY CAMBRIDGE, MASS. 02139

*from the office of*

March 4, 1971

To: Multics Administrative Distribution

From: J. H. Saltzer

Subject: Multics dial-up statistics

Enclosed are five additional months of Multics dial-up counts, updating the last report of October 7, 1970. In addition to the raw statistics, a few summary numbers are also tabulated on page 5, and a chart showing total call traffic is appended. As a measure of possible overload, the number of hours that the "last" trunk in a hunt group was in use is tabulated for each class of terminal. This measure is at best an approximation, since earlier trunks in the hunting pattern may free up while the last trunk is still accumulating "in use" time, but it is probably the best measure we have. This measure clearly identifies, in the tabulation for 1050/2741 trunks (dataswitch level 8), the points at which the number of lines was increased from 48 to 64, and where the grading pattern was improved.

In the months of January and February, the Honeywell exchange was apparently fully loaded 50 to 70% of the prime-shift time. It would appear that this group of lines, if expanded, could generate some more traffic. Similarly, the 2741/1050 lines (level 8) are just beginning to show symptoms of overload, probably accumulated during periods of 2-cpu, 50-user operations. As the system capacity increases, the number of hours of 2741/1050 overload should be watched very carefully. On the other hand, the M.I.T. model 37 ports (level 7) are still distinctly underloaded, with two or more completely accessible trunks free most of the time.

Since the ARDS ports are not arranged in a hunt group (they probably should be, to facilitate both use and statistics gathering) there is no simple measure of their load. We may note, however, that the number of calls per line (400-500) is double the number (200-250) experienced on all other Multics lines. Thus, expansion to six ports may generate additional traffic here, also.

cc: M. Berlan  
R. Conrod



NUMBER OF CALLS RECEIVED BY MULTICS SERVICE MACHINE

Dataswitch Level 7: (Model 37 Teletypes)

Trunk	4/5- 5/4	5/4- 6/1	6/1- 6/29	7/1- 8/3	8/4- 9/1	9/2- 9/30	10/1- 11/1	11/2- 12/1	12/2- 1/4	1/5- 1/31	2/1- 2/28
66	0	0	0	1	0	1	0	2	0	1	0
67	7	4	2	9	0	3	0	14	12	0	62
68	2	0	0	10	0	0	0	0	4	0	22
69	0	0	0	0	0	0	0	0	0	0	3
70	0	0	1	0	2	1	3	4	13	19	32
71	20	14	11	14	13	29	29	41	84	148	178
72	40	56	31	64	73	80	99	161	169	252	349
73	97	132	143	154	217	237	227	251	284	387	385
74	285	297	332	454	381	444	484	477	339	631	360
75	651	541	393	576	622	563	675	646	382	422	419
TOTALS	1102	1044	913	1282	1308	1358	1517	1596	1287	1860	1810

ARDS lines:

1101	434	370	387	561	588
1102	251	304	199	610	438
1103	336	224	28	399	182
TOTALS	1021	898	614	1570	1208

## Dataswitch Level 8: (IBM 1050/2741)

<u>Trunk</u>	10/1- 11/1	11/2- 12/1	12/2- 1/4	1/5- 1/31	2/1- 2/28
85	560	517	410	612	465
86	163	230	344	99	33
87	422	430	344	338	202
88	256	418	476	416	280
89	273	571	481	448	396
90	637	555	388	374	260
91	566	573	473	604	306
92	572	749	673	539	463
93	130	237	220	313	190
94	389	684	706	546	447
95	70	89	99	33	25
96	0	80	195	129	49
97	207	417	306	327	269
98	331	553	421	408	344
99	48	193	390	236	108
100	74	227	140	112	63
101	66	0	0	9	11
102	3	72	11	35	30
103	3	80	23	102	27
104	21	120	80	120	78
105	66	190	122	199	145
106	192	299	310	354	237
107	224	396	369	253	266
108	357	539	368	422	324
109	535	705	755	484	409
110	649	689	707	531	312
111	167	206	196	342	205
112	22	91	15	0	2
113	26	73	34	72	79
114	246	337	305	317	268
115	440	741	440	650	454
116	407	514	442	641	414
117	721	1015	720	873	623
118	42	99	105	119	93
119	126	149	82	10	8
120	285	426	296	408	407
121	415	478	458	542	461
122	867	1017	826	910	693
123	0	31	17	14	7
124	3	72	166	125	56
125	294	400	110	392	328
126	380	584	506	594	390
127	683	842	655	526	562
128	246	363	300	408	295
129	206	326	352	256	186
130	30	77	102	82	44
131	103	104	57	31	6
133	0	0	168	200	292
134	122	660	830	754	634
135	209	273	182	336	214

(continued on next page)

Dataswitch Level 8: (IBM 1050/2741) continued

<u>Trunk</u>	10/1- 11/1	11/2- 12/1	12/2- 1/4	1/5- 1/31	2/1- 2/28
136	204	273	182	369	188
137	4	115	127	230	150
138	4	60	188	108	58
139	467	162	294	322	210
140	188	336	233	401	243
141	50	107	128	266	163
142	1	237	286	361	152
143	0	0	265	469	281
144	0	41	90	106	123
145	4	86	127	41	39
146	99	174	88	160	168
147	39	111	92	227	178
148	59	156	88	160	125
TOTALS	14340	20981	18912	20263	14449

Honeywell PBX (Model 37 Teletypes)

Ext.	4/5- 5/4	5/4- 6/1	6/1- 6/29	7/1- 8/3	8/4- 9/1	9/2- 9/30	10/1- 11/1	11/2- 12/1	12/2- 1/4	1/5- 1/31	2/1- 2/28
271	248	244	200	190	70	32	81	65	109	430	462
272	182	159	129	205	247	224	341	409	398	599	396
273	120	149	99	131	188	188	225	316	338	464	303
274	93	110	67	87	161	139	211	278	330	411	288
275	97	68	52	77	167	141	180	180	236	428	229
276	63	62	24	59	141	133	128	137	175	308	127
277	47	37	35	27	141	123	117	159	159	312	121
278	2	53	13	22	120	64	57	61	240	317	245
TOTALS	852	882	619	798	1235	1044	1340	1605	1985	3269	2171

Other Lines

Ext.	1384	1385	1636	1637	1638	1639	1111
	**	25	161	159	147	*	
	**	40	171	160	188	*	
	**	79	181	177	182	*	
	**	66	125	124	134	*	
	17	62	97	90	142	*	
	107	104	29	*	134	115	
	72	84	41	*	117	119	
	103	148	*	*	108	106	
	75	178	*	*	110	92	
TOTALS	492	421	559	619	449	408	385
							381
							305
							465
							455

\* Line in use whenever system is running; dial-ups are not counted  
 \*\* Line 1384 is attached to GIOC channel 208, which was defective, and thus not in use before 9/70.

SUMMARY OF DIAL-UP STATISTICS

Date	4/5- 5/4	5/4- 6/1	6/1- 6/29	7/1- 8/3	8/4- 9/1	9/2- 9/30	10/1- 11/1	11/2- 12/1	12/2- 1/4	1/5- 1/31	2/1- 2/28
TOTAL NUM- BER CALLS RECEIVED	11037	9485	9563	13049	13218	11695	18603	25461	23103	27427	20093

No. of days	29	28	28	34	28	28	31	30	32	26	28
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Working days	19	20	20	24	21	20	21	20	20	19	19
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Hours of Full load	MIT M37	0	0	0	0	0	0	0	0	0	0
	HISI M37	0.6	18	4	7	40	19	20	80	105	82
	2741/1050	4	3	8	26	31	22	**	0	3	4

\* number of lines increased from 48 to 64, 9/70.

\*\* level regraded, 10/70





Number of telephone calls

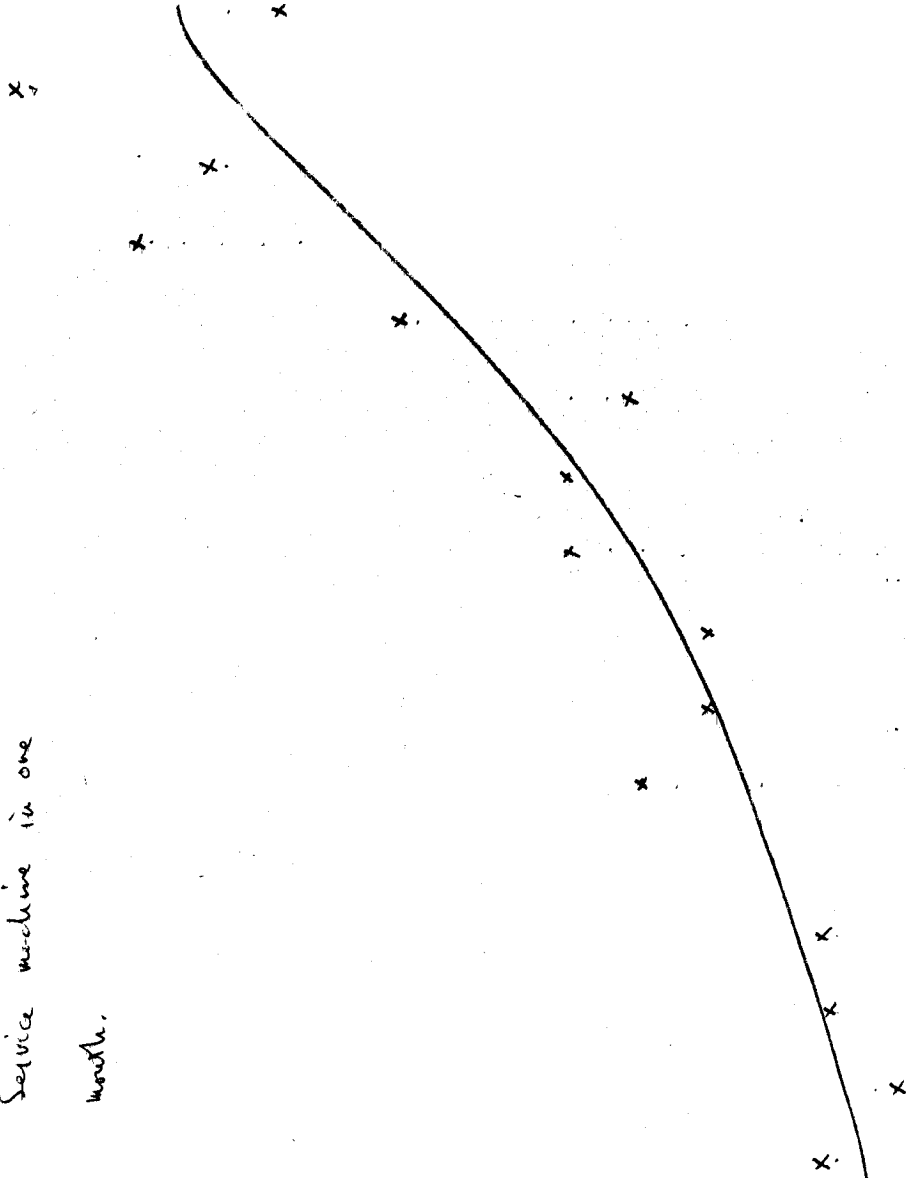
Received by Multics

Service machine in one month.

3000

7000

10000



11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4  
1969-1970 | 1970-1971

