MASSACHUSETTS INSTITUTE OF TECHNOLOGY

PROJECT MAC
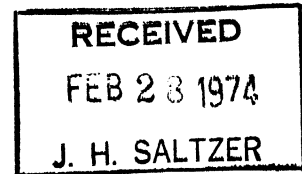
TO: Weston J. Burner

FROM: Kenneth T. Pogran

DATE: February 27, 1974

SUBJECT: Multics Network Service Outage

On Monday morning, February 25, we experienced a Network service outage on Multics due to hardware problems, the first since February 1, 1974. Unlike most of our previous Multics Network hardware problems, this outage was due to trouble with Honeywell equipment, rather than with the ABSI. The problem was eventually located and bypassed; however, the difficulty we had in tracking down the problem and the fact that (as of this writing) the problem is bypassed rather than corrected, have prompted the writing of this memo.

The maintenance panel of the Development System IOM has always been a great aid in quickly tracking down Network hardware problems. This time, however, the maintenance panel did not perform as expected. Honeywell F.E.D. indicated that, while circuit changes (F.C.O.'s) had been made to IOM maintenance panel, they did not affect its operation. We wasted about an hour determining that the panel did _not_ behave as it had previously and that the difficulty we were having in tracking down our original problem was, in fact, due to this change in maintenance panel behavior.

Finally, at about 1:00 p.m. on Monday, we established that the problem was either with one of the Honeywell Common Peripheral cables connecting the Service IOM channel which serves as the ABSI "read" channel to its peripheral switch, or in the Honeywell peripheral switch itself. Honeywell F.E.D. bypassed the switch by running a new cable from the IOM channel directly to the ABSI, and normal service was resumed at approximately 1:30 p.m.

On Tuesday morning, further experimentation with the help of F.E.D. determined that the problem was with the peripheral switch itself, which must be replaced. F.E.D. did not have a replacement switch on site, and agreed to order one. Thus, at the time of this writing, the problem is bypassed rather than corrected, for without the peripheral switch, it is impossible to use the ABSI with the Development System.

Normally, the temporary inability to use the ABSI on the Development System is not a major inconvenience. However, conversion of the Network Control Program to Version II PL/I is currently listed as a Priority 1 bug and Doug Wells planned to complete Development System checkout of the Version II NCP this week. Roger Roach has been alerted to this problem.

In summary, while Honeywell F.E.D. was quite helpful with cable checkout and replacement, and in ascertaining that there was a change in IOM maintenance panel operation, we were hampered by the maintenance panel change; further, the lack of a replacement peripheral switch (a device known to be unreliable) on site is hampering our ability to check out fixes for a Priority 1 bug.

KTP/smc

xc: D. D. Clark
     R. A. Roach
     J. H. Saltzer
     J. E. Ward