To: Prof. F. J. Corbató
          Prof. M. L. Dertouzos
          Prof. J. H. Saltzer

From: K. T. Pogran

Jerry,

Thought you might like to see this before I distribute it to FJC + MLD.

Ken

Subject: Reaction of an outside-MIT Multics user to the
          possibility of IPC taking a "marketing" approach to
          Multics.

Date: 3 April 1975

    As you may know, the Center for Advanced Computation at the
University of Illinois has been a substantial user of Multics
service at MIT for several years. I have come to know quite well
Professor Peter Alsberg, who has been the "prime mover" there as
far as encouraging Multics use is concerned. Pete has become
quite disenchanted, with the apparent turns for the worse that
Multics service has taken. After Jerry Saltzer mentioned at a
CSR staff meeting that IPC might be encouraged to take a
"marketing" approach to develop new customers for Multics which
could result in a price decrease, I took the liberty of
mentioning this to Pete. Pete's reaction was prompt, detailed,
and enthusiastic. He has given me permission to distribute his
comments.

    One problem in using the material Pete has provided is that
his credibility at IPC is somewhat strained at the moment.   Pete
obtained a "quantity discount" from Wes Burner two years ago,
predicated upon his group's obtaining a particular research
contract.   His group didn't get the contract, the contracts they
did get did not generate the same volume of usage, and (I
believe) Pete did not use the quantity of Multics resources he
had contracted for.

    However, the projects he describes in the attached memo are
projects stimulated by his group, but not totally performed by
his group. They represent, I believe, the sorts of projects
which could be attracted to Multics, if Multics service at MIT
could be made sufficiently attractive. In this spirit, then, I
present Pete Alsberg's comments.

Ken,

        Boy O Boy but do I dig the rumor. I think my project would
be willing to take a 50K chunk. Actually there is substantial
usage from this campus other than directly from CAC projects.
This was growing until the last price increase. Since then, I
have noticed a sharp reduction in Multics expenditures and all of
the new users we so carefully cultivated are cutting back and
some have completely eliminated Multics funding. In contrast, If
rates had been slightly reduced and memory added (memory units
represent over half of all charges and CPU about 20-25%), I think
the curve would have taken a steeper uphill course. Examples:

1. Manny Donchin paid to have us build him special network
    software to let him couple CCN number crunching with
    Consistent System data management. His Multics expenditures
    jumped up (I know of $12K he spent of our money before he
    went production!). Right after the price rise, he cut his
    Multics to zero and went straignt CCN (with some BBN based
    TENEXing). That cost you dearly because his usage was going
    nowhere but up and to substantial levels.

2. We had shifted NIPC (our IRIS user) to a combination of UCSD
    and Multics. Their usage was also growing (but only at the
    small tens of $K level) until the price rise. Now it is
    dropping and may have gone to zero.

3. We put the Corps of Engineers Research Lab up on Multics.
    They built a whole space planning system in PL/1. It is now
    operational. Their usage was substantial but they work
    within a fixed computer budget. The current price structure
    is forcing them off the machine. I was out there a week and
    a half ago for a demo of the system to a CINCPAC guy who
    wants to use it on Multics over the net (he is already on the
    net). Unforturnately, they have (CERL that is) decided to
    reprogram the system in FORTRAN so they can nave a chance to
    shift it off of Multics. But they aren't gone yet and they
    represent a real marketing multiplier (they bring in the
    CINCPAC's, etc. who want to use their packages).

4. We have a whole slew of CAC projects for the state that we
    had planned to do on Multics but are now shifting to our own
    UNIX machine because of Multics costs. Some of these were
    already partially up on Multics when the price rise came and
    now they are all off or in the process of getting off (e.g.,
    the Dept. of Public Aid training project was started on
    Multics but we are in the process of shifting it off).

5. There are also University users at the Dept. of Physics, the
    Center for Adv. Study, the Dept of Comp. Sci., the Lab. for
    Atmos. Sci., etc.

    The problem is NOT that a 25% increase in CPU charges by
itself hurts so much (for most users it only look like a 4-5%
price rise overall). It is, however, the straw that has broken
the camel's back for several users. Combined with a cutback in
service of the only cheap shifts it is a killer. It is the lack
of cheap shifts, for example, that is forcing many of the CAC
projects off. The less well funded ones cannot afford to develop
their systems at Shift 1 and Shift 2 rates. On top of this, the
limited availability of Multics makes it look primarily like a
Monday-to-Friday 8 to 5 machine to us. For example, I am tired
of getting kicked off the machine at 10:30 PM local time just
when I am about to get something done and 9:00 AM to 4:30 PM on
weekends is a hard time to hit. So I have just given up Shift 2
and Shift 4 usage because it is too frequently inconvenient to
use. I find myself thinking more and more that prime shift is
the only time I can count on continuous Multics access and I tend
not to think of comming back to work at nights or on weekends.

    The upshot is that the price rise in an already marginally
affordable machine loses users. The lack of a cheap shift kills
experimentation and lops off a whole less well funded user
community because they can't afford to build their software
anymore, and the limited Multics hours flies in the face of the
24-hour computer utility concept. The result is a very
anti-marketing, anti-production user appearance to the outside
world. Quite frankly, I can't think of a better way to kill
Multics. But then, perhaps that is the intention of IPC
administration.

Pete