To S. Amarel

Saul am Tom and I have given alot of thought to ways in which a rigorous proposal for augmenting the Rutgers facility could be formulated on the rationals of further service to SUMEX-AIM as a community; and distingushed from what would be the self-evident merits of further support to your own research project. [The letter, I believe, would have to be given specific review by an IRG in terms of a separate specific proposal; and I think we must be very careful are.g. in anticipation of eventual competitive renewal am not to invade the prerogatives of that review procedure under the coloration of a SUMEX-AIM facilitation. And you will note this is a private message in the light of the obvious delicacy of its substance.]

We certainly can see some benefits along the lines of the backup expedient we had discussed; but there are a lot of problems and we wonder if the full expense; to US as well as to YOU, of staffing so as to maintain day-to-day plug-to-plug compatibility, as well as of the hardware costs, is not too much for the anticipated benefits. We have so many problems almost too much for the anticipated benefits, we have so many problems almost too much areas as LISP version maintenance in maintaining program compatibility that we foresee a very substantial bunden if we jointly undertake the obligation of doing this in response to such diverse user groups as would be involved in Rutgers cum SUMEX AIM, Nor would you want to delegate the management decisions to SUMEX staff that would be the most efficient way to accomplish this goal.

Perhaps this is still not impossible; it is after all primarily in the backup mode that the PERFECT compatibility would have to be implemented; so that if your charter assured that, on legitimate call from SUMEX-AIM (the detailed rules for which would be in the hands of AIMEXEC, but such as to assure that vital demonstrations, clinical applications, report generation and the like, could be continued at Rutgers during scheduled SUMEX downtime, and in some measure in response to unscheduled), that Rutgers would mount the CURRENT SUMEX version of TENEX and of support files (like the FORTRAN, SAIL and LISP libraries), some more comfortable latitude might be feasible for specialization of the two systems. Unform tunately, some of these systems are so written that users do not have the option of calling on one or another alternative; and the software effort to remedy that stupidity would at this point be prohibitive.

Rainer Schulz will shortly message you about some measures of the effort that would be involved in your bringing up TENEX. That should not be difficult. You will also require probable one fulltime additional permaps with the resonablity of liaison with SUMEX, and we may indeed have to augment our own staff almost as much for the same purpose.

And then we have to solve the problem of file transfer; DATACOMPUTER is a possible future option; it is down at this very moment, and it is obvious that it is not a reliable expedient this year, In all candor, I do believe that from the SUMEXHAIM perspective, the proposed investment has and the probable future costs that will follow with it we are the most cost effective use of available funds. (For example, in a year or two, when we are more heavily loaded, the upgrading of the KI to a KL processor can probably give us a 2 or 3X increase in thruput at relatively little cost, we are at a point on the investment-yield curve (taking stafing also into account) where it makes little sense to distribute the investment into fragments,

MOWEVER, there is another area where it would be sensible to experiment with some diversification of service, and the augmentation of your facility

might be a very effective way to go into this, namely if you were to focus on a totally different mode of community support, e.g., by running TOPS=10 for its non-TENEX successors] for the benefit of SUMEX=AIM users who are having difficulties in adapting their programs to TENEX; We believe many of these problems will eventually be solved, but some perhaps only at unreasonable expense compared to just having time available on a TOPS=10 machine. Also the conversions would be very much facilitated if we could examine the running code as it was IN FACT being executed under TOPS=10.

In our opinion, this widening of options to SUMEX=AIM users would be of greater benefit as a return for augmenting your system, than would be the exact duplication of SUMEX=tenex. With efficient communication between our two systems, there may even be occasions when users would run program segments alternately under TENEX and under TOPS=10 in accordance with the availability of the appropriate software.