TO: R. C. Daley   cc: C. T. Clingen

                                                              F. J. Corbató ✔

FROM: J. W. Gintell   J. M. Grochow

DATE: October 2, 1969

SUBJECT: Removal of Dependence upon GECOS

It is obvious that there are a number of good reasons for expediting the removal of our dependence from GECOS. I list here our various uses of GECOS (in decreasing frequency of use) and what must be done to remove each dependency.

GECOS Printing of Segment Dumps

GECOS is used each day to print the segment dumps which are taken on tape. The expedient solution is to provide a BOS program which will print these dumps. This task is an easy one, for all the "machinery" needed is available in BOS. A later implementation task can permit these dumps to be printed by Multics, but low priority can be given to this effort. I recommend that Stan provide this program during the next several weeks before he is tied up with 270 work.

GECOS EPL/EPLBSA Compilations

EPL and EPLBSA compilations are performed under GECOS for programs which are too large to be compiled on Multics. These compilers are also used occasionally by persons who prefer to use it to the Multics compiler. Although a "refoff" option could be provided for the Multics compiler which would allow all compilations to be done on Multics, I recommend that this not be done. The simple enforcement of a policy which permits no such compilations would solve this problem and force the occasional too-large program to be rewritten. This policy could be instituted immediately.

GECOS Use to Print Card Files of Segment Library Information

GECOS is used to print the contents of card files prepared
by Terone which document the contents of the segment libraries.
This activity can easily be replaced on an interim basis by
the use of edm on Multics to edit segments containing this
information. Assistance must be given to bring the original
card deck onto Multics. The eventual solution to this
problem is the use of the MSL facility to prepare these listings.
I recommend a prompt cessasion of the use of GECOS for this purpose.
This will have the additional effect of adding impetus to
getting the MSL under production.

GECOS Use to Prepare New FORTRAN and FL Compilers

This use of GECOS is the most difficult technically to remove;
however, it too is not extremely difficult particularly now
that a multi-segment-file i/o capability is available. The
pops interpreter or some pops themselves need be modified to
use the multics i/o system to output listing files and accept
input files when performing fl compilations. A new fl command
must be prepared that is modelled after the fortran command
which has this capability to deal with multi-segment files.
The fl compiler must be checked out in this environment. This
effort will require some work by Mosely Meer and Ke Shih but
should be able to be completed within several months.

GECOS Use to Perform TMG Compilations of the PL/I Error Message Segment

TMG and EPLBSA under GECOS are used to produce the PL/I error
message segment. A PL/I program to prepare this segment under
Multics is planned. The incentive of no allowable use of TMG
under GECOS would expedite the completion of this task.

Miscellaneous Use of GECOS

GECOS is used very occasionally for miscellaneous reasons
suchaas dumping tapes. This can be scheduled if and when it
is needed.

GECOS Use to Assemble the BASIC Compiler

Alas, after removing all these other uses of GECOS, there
is a new emerging use for GECOS to assemble the BASIC
compiler. To circumvent his activity is a major task so
there will need to be scheduled GECOS runs to perform these
assemblies. We should not expect many of these assemblies.

Summary and Proposed Schedule

Date	Action	Personnel
10/1	Start of implementation of BOS segment dump printing	Stan
10/6	Publish Policy Memo starting plans for GECOS	Jerry
10/15	Schedule GECOS jobs with permission of System Administrator only	Ed Reardon, Jerry
10/15	Design and plan for Modification to fl pops to operate properly in Multics with multi-segment files	Mosely and Ke Shih
10/15	Segment registry information placed and updatable in Multics	Terone and Judy
10/25	Print all segment dumps under BOS	Ed, Stan
12/1	Completion of fl implementation	Mosely and Ke Shih

J. W. Gintell

JWG/jk