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## Identification

### Overview of the 6.36 System D. E. Joel

The 6.36 System provides a convenient method for a Project MAC CTSS user to assemble, simulate, and debug GE 645 programs from a remote console. The assembly and simulation functions are performed on a GE635 (see Section BE.7)

The main operational features of the system are as follows:

- (1) The user has access to the file-manipulation facilities of the CTSS. In particular, the user is able to produce files which are suitable for input to the Bootstrap Assembler and the EPL Assembler, and he is able to produce other files which direct the workings of various remote portions of the 6.36 system.
- (2) The user may write a tape, suitable for input to GECOS (the GE635 operating system), by using the merge-editor program. The GECOS input tape is a card-image tape which contains images of seven different kinds of cards:
  - (a) GECOS control cards (GE Hollerith)
  - (b) BSA input files (column binary)
  - (c) EPL assembler input files (column binary)
  - (d) Text and linkage from previous assemblies (column binary)
  - (e) Source cards for a GMAP program consisting entirely of calls which will direct the loading of the simulated 645 (GE Hollerith).
  - (f) Source cards for a GMAP program consisting entirely of calls which will direct the production, on the 635, of a CTSS input tape. This tape will bring the simulator's core dump, the error listings produced on the 635, and the assembler-produced text, linkage, listing, and debug files back to the CTSS files of the user.
  - (g) Program decks for various 635 programs, such as the loader, the Bootstrap Assembler, and the simulator (column binary), or calls to a 635 library for these programs.

These cards must appear on the GECOS input tape in an order which is determined by the structure of GECOS. Fortunately, these cards may be specified

to the merge-editor in arbitrary order. In cases (a) and (g), indeed, they never need be explicitly specified at all. In other cases, these cards may be specified rather indirectly, in what is thought to be a convenient manner.

- (3) After the GECOS tape has been written by the merge-editor, a dismount message is issued to the operator. He then dismounts the tape and takes it to the 635 for processing.
- (4) After simulation, a CTSS input tape is produced by the 635, and a simulated 645 core dump soon appears among the 6.36 user's CTSS files. This dump file may be examined by the user via the GEBUG program (BE.5.06), which allows the user to grasp the dump by any of a variety of handles.
- (5) At the same time that his simulated 645 core dump and error file appear among his files, the 6.36 user will have all of the files that he requested be returned to the 7094. The listing files and the error file may be printed by using the 6PRINT program (BE.5.05).
- (6) In the event of a system failure which prevents either completion of the 635 part of the run, or successful input of the generated CTSS input tape, the operations staff generate an error file to return to the user's CTSS filing system informing him of the status (BE.5.03).