

Project MAC

Artificial Intelligence Project
Memo **83**

Memorandum: MAC-M-248
July 3, 1965

To: Project MAC Participants
From: Peter Samson
Subject: Use of MACIMP

*SEE MEMO. 118 (Revised)
"PDP-6 Software update"
Donald Eastlake.*

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MACIMP is a PDP-6 program which can load from DECTape to core memory, dump core onto DECTape, or verify a previously dumped file against memory. Normally, just before it loads, it clears all of memory to 0 (except itself and locations 0 through 37); and, in general, it does not dump locations containing 0. (It also does not dump itself, or locations 0 through 37.) In this way, a short program uses only a few blocks on tape. MACIMP uses the MAC PDP-6 file structure and directory scheme, and writes files in mode 1.

To start MACIMP, put the tape MACIMP SYSTEM on unit 1 and press READ IN with TA = 0. If this has no effect, try TA = 1 or 2. If these fail, put the paper tape MACIMP in the reader and START, TA = 20. If the loader at 20 is absent, load the MACIMP paper tape like the RIM Loader Loader.

To tell MACIMP which tape unit to use, type the unit number followed by ALT MODE. The ALT MODE will be agreed as 0. Initially MACIMP is set to use the DECTape it was loaded off; the tape number need be specified only to change it.

To load a program off the currently selected tape, the following commands are available: (, is a space,) is a carriage return, and @ is an ALT MODE.) Just before loading, all load commands set location 40 to 0.

- MACIMP SUBNM1 SUBNM2) clears core, loads program SUBNM1 SUBNM2, goes to starting address of program loaded.
- @ SUBNM1 SUBNM2) clears core, loads program, sets starting address, stays in MACIMP.
- M SUBNM1 SUBNM2) does not clear core, loads program, sets starting address, stays in MACIMP.
- T SUBNM1 SUBNM2) DIT 34000 should be in core when this command is given; the program SUBNM1 SUBNM2 should be in SHLK mode. Core is cleared except for DIT, the program is loaded, the symbols for the program are added to DIT's symbol table, and control goes to DIT.
- N SUBNM1 SUBNM2) Same as T but does not clear any core.

To set the starting address, type it as an octal number followed by ALT MODE. The starting address must be greater than 7. To go to the current

starting address, type **G**. To dump core, type **D** **SUBNM1**, **SUBNM2**. If another **SUBNM1** **SUBNM2** exists on that tape, it is deleted. The new file will be in **DUMP** mode. The current starting address is written as the starting address of the dumped program.

The command **K** **SUBNM1**, **SUBNM2** deletes **SUBNM1** **SUBNM2** from the file directory, but does not write the modified directory onto tape. That is accomplished by dumping.

The command **F** causes a printout of the file directory of the current tape. The first column is the mode, according to the following table; the second column is the first subname; next comes the second subname.

MODE	CHARACTER PRINTED
ASCII	~
DUMP	!
SEIK	"
RELLOC	#

To check for agreement between memory and a file on tape, type **I** **SUBNM1**, **SUBNM2**. A bell will be typed if they disagree.

In general, **MAGIMP** will type out a bell for any error it detects; other than 1 unit of the selected number; checksum error on reading; disagreement on **I**; no symbols found for **T**; file not in directory for read; not enough room on tape or in file directory for dump.

The program uses 37176 through 37377 for temporary storage (including file directory) and sits in 37400 through 37757. The entry point is 37400. **MAGIMP** leaves 0 in 37176.