CTSS BULLETIN # 57

SUBJECT: LØAD Command -- A new version

Purpose

The LØAD command has been reorganized in order to provide
greater flexibility and speed in loading programs from various
libraries. Programs and files may be loaded or searched as
libraries in the user's file, Common files and several System
files.

Implementation

The new version of LØAD is now available as LØAD SAVED
in the public file. The complete new library, as explained
in a separate bulletin, is not yet available. CSLIB may be
used from the public file and people using CTEST8 version
of MAD may use this new loader with MADLIB in the public
file. When the new versions of LØAD, MAD and TSS library
are put into effect as the standard commands, the message
of the day and a corresponding CTSS bulletin will be issued.

In order to provide an easier transition, the new loader
will temporarily provide the facility of using the old loader
and the old library. This facility will be somewhat slower
than the old loader.

        LØAD (ØLD)....

This will cause the old loader and the old library to be used
instead of the new. LØAD may be LØADGO, NCLØAD, or VLØAD. The

old loader and library will not be actively maintained and may
be discontinued or moved to the public file at some later date.

Usage

Call Sequence:

LØAD (ØRG) arg_i switch arg_j

LØAD may be LØAD, LØADGØ, NCLØAD or VLØAD.

(ØRG)   is optional and may appear anywhere in the list of arguments.
(ØRG) directs the loader to set the starting address to
the lowest entry point of the next routine loaded. This
allows the execution of a program without a MAIN program
or it allows the program to be started at some point
other than the (MAIN) entry.

arg_i may be a list of BSS files to be loaded from the current
file-directory. Initially, the current file-directory
is either the user's file-directory or a common file as
set by a COMPIL command.

If any arg_i is (LIBE), the following arg_{i+1} within
the current file-directory is searched as a library in
an attempt to find any missing routines.

If any arg_i is (SYS), the following arg_{i+1} in the
system file-directory is searched as a library.

If any arg_i is (NLIB), the system library will not be
searched for missing routines after the argument list has
been processed. An argument of (LIB) supersedes (NLIB).

switch   is an optional argument which switches the loader out
of the current file-directory into some other specified
file-directory. Switch may be (CFLn) where n is the
number of the common file $(0,1,2,3,4,...,P)$.

The arg_j are the same format as arg_i.

There may be any number of switches and each one supersedes the previous one.

Once the argument list has been processed, the loader will use only TSLIB1, if allowed, to search for any missing subroutines.

The user is switched to his own file-directory during t the NEED messages. Upon completion of the loading, the current file-directory is switched back to its initial status.

Library

The new library will consist of 3 or more files instead of a single file. These files will be searched separately, thus speeding up the loading process.

TSLIB1 BSS is the "STANDARD" library and contains all subroutines except the "DEBUG" library and special users or "RESTRICTED" libraries.

TSLIB2 BSS is the "DEBUG" library which contains FLEXPM, STRACE and FAPDBG.

KLULIB BSS is the first of a series of "RESTRICTED" libraries for special users and it contains all routines used in connection with the KLUDGE.

NOTE: if a user calls TRACE as a subroutine, it will not be found unless he specifies (SYS) TSLIB2 in the LØAD command. On the other hand, TSLIB2 will be searched automatically when the user uses the debug commands such as PM or FAPDBG.

Modifications and Corrections

1. The NEED list is more compact and prints faster.

2. If the user attempts to call a "DEBUG" command

while loading with VLØAD or NCLØAD, a comment is printed. A valid request may then be typed.

3. NCLØAD will work properly with programs using a CØMMØN area lower than the ERASABLE.

4. CØMMØN addresses are relocated with the same parity as on the assembly listing.

5. The key word of the MOVIE table is available in location 27_8. The address portion contains the origin of the MOVIE table, and the length of the table is shown in the decrement. This is the same word as that obtained by CAL= $MOVIE). If VLØAD or NCLØAD have been used, location 27_8 is zero, since the MOVIE table is over-written before execution of the program.

6. The mode of (LIB) or (NLIB) is not altered if one uses PM or any DEBUG command before the loading is completed.

7. The new loader is the same length as the previous one and will load starting from the same addresses. There may be variations of 1 or 2 locations due to the modification in CØMMØN relocation.