THE CP/M STARTUP FEATURE

There is an undocumented CP/M feature which will allow the automatic execution of a command each time CP/M is cold-booted. If there is some command or series of commands which users consistantly want to execute each time they boot CP/M, you may want to enable this feature.

As of MIRAGE 1.10, we have stuffed the command "B:SUBMIT A:INIT" into a magic place in CP/M where it will automatically be executed at cold-start time if you patch the file MBOOT.BT as detailed below.

This command will cause CP/M to "submit" a file of commands. This is somewhat like running a Data General batch job. For example, if you were to type "SUBMIT <filename>" at the console, SUBMIT would execute command lines in the text file named "<filename>.SUB" as if you were entering them from the console. (See pages 25 through 27 of the the CP/M Operating System Manual for information about SUBMIT.COM and XSUB.COM, a related program).

When this option is enabled, the SUBMIT program will be executed from the B: disk, using the input file "INIT.SUB" from the A: disk. The A: disk must be read/write (R/W) because SUBMIT insists upon creating a temporary file on the A: disk while it is executing. (There's no way around this).

However, if you followed our suggestions in the MIRAGE Reference Manual regarding default Virtural Floppies (page 3-14 for RDOS and DOS, page 4-15 for AOS and AOS/VS), you probably have MUTIL.VF mounted read-only as everyone's A: disk, and "private" virtual floppies mounted R/W on each user's B: drive. If you executed SUBMIT in this environment, you would get the BDOS error "Read Only" when SUBMIT tried to create its temporary file on the A: disk. Therefore, if you want to use the startup feature, you'll have to change the default disk assignments to allow the A: disk to be read/write.

Here's how we suggest doing this: Remove any links you've made for the A: and B: disks for all users (on RDOS or DOS, use the UNLINK command; on AOS or AOS/VS delete the links), and relink MUTIL.VF to each user's default B: disk. Then link a "private" disk for each user to their default A: disk. If you're not sure what we're talking about, see page 3-14 for RDOS or page 4-15 for AOS or AOS/VS in the MIRAGE Reference Manual.

Next, create a "submit" file, "INIT.SUB" on each user's private A: virtual floppy.

Now, when the startup command "B:SUBMIT A:INIT" is executed, it
will use the shared copy of SUBMIT.COM on the shared B: disk, but
will use the private copy of INIT.SUB on that user's "private" A:
disk.

How to enable the feature

To enable this startup feature, it's necessary to patch the file
MBOOT.BT, which contains the copy of CP/M, using the disk file
editor under your DG operating system (DEDIT on AOS, FED on
AOS/VS, or SEDIT on RDOS or DOS - see your system documentation
for information on how to use these utilities).

Location 103 octal of the file MBOOT.BT contains 077400 octal by
default, which must be changed to 077417 octal to enable this
feature. Change location 103 octal back to 077400 octal if you
want to disable the feature. If you make this patch while the
server is running, you'll have to stop and re-start the server
for the patch to take effect.

Why would you want to use this feature?

Here at RDS we use many DG terminals, and one of our problems has
been trying to remember to run the DGCRT utility each time we
boot CP/M. At first, the answer seemed obvious - have the CP/M
startup option run DGCRT at cold start time. Well, not all our
users have DG terminals. Don't forget that since there is only
one copy of CP/M for all the MIRAGE users on one DG system (it's
in the file MBOOT.BT), if we used the startup feature to run
DGCRT it would effect all users on our system whether they had DG
tubes or not! We realized that simply stuffing "DGCRT" into that
magic place was not the answer. We decided to use the startup
command "B:SUBMIT A:INIT" so that each user could create their
own personalized series of startup commands in their own copy of
"INIT.SUB". Here are examples of the contents of two INIT.SUB
files we use here (comments added for clarity):

```
1)    B:DGCRT BRN      /set up CP/M for a DG tube
      B:WHAT           /see which disks are mounted
      B:STAT           /find out how much space is left
                       /        on the disks

2)    B:WHAT           /see which disks are mounted
      B:XSUB           /take console input from this file
      B:RPRINT         /this user always wants to use RPRINT
      $LPT             /RPRINT prompted for this input
                       /        note that this person isn't
                       /        using a DG terminal
```

Some final notes

1) The file "SUBMIT.COM" must be on each user's B: disk (generally the "shared" MUTIL disk) or that user will get the error message "B:SUBMIT?". This is not a fatal error.

2) A file called "INIT.SUB" must exist on each user's A: disk or that user will get the error message "Error On Line 001 No 'SUB' File Present". This is not a fatal error.

3) As stated above, each user's A: disk must be read/write, or that user will get the error message "Bdos Error on A: R/O".

4) The file "INIT.SUB" is a simple text file which may be created and edited using any text editor, such as CP/M's "ED". Again, see the CP/M Operating System Manual, pages 25 through 27 for information about SUBMIT and XSUB, a related command.