AppleShare PC: Using with Extended Memory (11/94)

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TOPIC --

I want to load parts of PhoneNet Talk software into extended memory. I also
want to load AppleShare Print Server and File Server into the top 3MB of
expanded memory on a 4MB 386 machine. I'll be running PFS FirstChoice and the
QEMM-386 utility.

Can I do this? How?

DISCUSSION ---

Yes, most of AppleShare PC can be loaded into a PC's "high memory" (conventional
memory is the range from 0 to 640K, high memory is the range between 640K and
1024K). High memory is generally used by the PC BIOS, expansion cards, video
memory, and other system resources. Very few PCs use their entire address range
for such purposes. Most machines have space available that can be mapped to
extended memory and used to load user software, such as drivers and TSR
(Terminate and Stay Resident) utilities.

Unfortunately, DOS doesn't have a standard way to manage high memory ranges for
user programs. It also can't find available ranges within high memory. Using
this space means that programs sharing the same memory space may begin to write
over each other resulting in unpredictable crashes, freezes, and generally weird
behavior.

The QEMM-386 utility addresses this problem by providing extended, expanded, and
high memory management functions. Extended and expanded memory is beyond the
scope of this discussion and is somewhat irrelevant to your problem. What you
should be concerned about is high memory.

QEMM-386 maps out available high memory ranges. Once this is done, QEMM-386 can
then begin to "LOADHI" specific software, usually drivers and TSR utilities.

This whole process is a bit involved but is documented well in the QEMM-386
manuals. We strongly recommend that you read it. Below is a rough outline of
the procedure. This general procedure must adapt to fit the needs of the
specific hardware and software you're using.

1) Install AppleShare PC, and confirm it functions satisfactorily,

allowing it to load from the AUTOEXEC.BAT file.

2) Perform a basic install of QEMM-386. Modify its line in the
    CONFIG.SYS file, enabling its "ON" option. Reboot. QEMM-386 and
    AppleShare PC should both load.

3) Exercise the installed hardware, meaning format floppy disks, print
    something, send something through each COM port, and so forth. The
    idea is to access memory ranges that may be associated with the PC
    hardware.

4) Without rebooting, use the QEMM analysis feature to determine
    which high memory ranges are available and which are already in use by
    the PC.

5) Modify the CONFIG.SYS line for QEMM-386 to INCLUDE and EXCLUDE the
    appropriate memory ranges discovered in the previous step. Also,
    remove the ON option you added in step 2. Reboot.

6) Use the QEMM-386 Optimize program to find which parts of the system and
    AppleShare PC it can load into the new high memory. This is a fairly
    automated process, but it requires three reboots. When complete, the
    Optimize program should indicate how much conventional memory was saved
    by loading software into high memory instead of conventional memory.

7) Confirm that the MINSES.EXE program is not one of those that is loaded
    into high memory. If it is, change it by removing the reference to
    LOADHI that loaded it. MINSES is a required part of the AppleShare PC
    software, but will cause problems if loaded into high memory. (MINSES
    and REDIR were both written by Microsoft, and assist in directing
    standard DOS commands to network devices.)

This is a very short description of the process, but it should give you a
general idea of what to do. Again, we recommend reading the QEMM-386 manual for
exact details. In addition to installation, the manual covers the different
capabilities and uses for each PC memory type.

Additional information can be obtained from Farallon Computing, Inc.

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