Smoke Signal Broadcasting DOS-68 for SWTPC MF-68/DC-x Controller

Smoke Signal Broadcasting (SSB) supplied the DOS-68 operating system with their BFD-68 Floppy Disk System for the SWTPC 6800. DOS68 was developed by SSB and is very similar to the FLEX operating system – both from the operator's perspective and the internal workings of the OS.

Thanks to recent work by Roberto Sancho Villa, you can now run DOS-68 using the SWTPC MF-68 (DC-x controllers) on your SWTPC 6800 (i.e., the BFD-68 is not required).

DOS-68 came in versions that started in RAM at $6080, $A080, or $C080. The version for which we have a bootable disk image is the $C080 version. RAM is required from $BC00-$DFFF for DOS-68 and the code to support the MF-68. DOS-68 also expects the SWTBUG monitor and monitor RAM ($A000-$A07F) to be present along with 32K of RAM from $0000 through $7FFF.

Creating a DOS-68 Boot Disk

The PC2FLOP utility allows creation of a floppy disk from a disk image on the PC. The disk image is transferred using the XMODEM protocol through an MP-S serial port on the SWTPC 6800 and using a terminal emulator on the PC. DOS-68 disks are SSSD with 35 tracks, 128 byte sectors, and 18 sectors per track. PC2FLOP provides the option to format the disk.

To run PC2FLOP on the SWTPC 6800, load the file "PC2FLOP.S19" using the "L" command in SWTBUG. After the load completes, type "G" to execute the program (or "J 0100"). When PC2FLOP prompts you to send the file, use the XMODEM send option of your terminal emulator to send one of the "DOS68…" .DSK files from the "Disk Images" folder. Note: Choose the XMODEM checksum option, not CRC.

At 9600 baud it takes just over two minutes to create a disk. I like to put the 9600 baud clock from the CPU board onto the 600 baud motherboard line. I've never needed to use 600 baud and the "600" reminds me of 9600. See "MP-A 9600 Baud Mod.jpg" in this same folder for details of how to provide 9600 baud to the MP-S boards.

The FLOP2PC utility can be used to backup a disk to a disk image file on your PC. Load and execute FLOP2PC.S19 in the same manner as PC2FLOP.

Booting DOS-68

To boot the DOS-68 disk, load the file LOADER.S19 using the "L" command in SWTBUG. After the load completes, type "G" to execute the loader and boot the disk (or "J BC00"). See the file "Sample Session.txt" for a typical DOS-68 session.

File Transfer between a PC and DOS-68

Using a terminal emulator and the XMODEM protocol, the PCGET and PCPUT utilities allow transfer of files between a PC and a DOS-68 system. PCGET retrieves a file from the PC into DOS-68 and PCPUT sends a file from DOS-68 to the PC. Both of these utilities are on "DOS68 v5.1 with PCGET PCPUT" disk image in the "Disk Images" folder. Random files (uncommon) are not supported at this time.