

0-36. As far as system calls within the allowed function range are concerned, the programmer doesn't have to do anything to translated programs to get them to run under MS-DOS other than to correctly map the registers.

MS-DOS also supports the warm boot function of CP/M-80. A jump to location 0 under MS-DOS executes a software interrupt, INT #32, which is functionally a program end and the normal way to exit from a program.

Manipulating File Control Blocks

The file control block used in CP/M-80 consists of a 36-byte block, which describes the disk drive on which to find or create the file, the file name, and information relating to which record of the file is desired.

At least so far as normal file-access requests are concerned, both MS-DOS and CP/M-86 treat this block of information the same.

System-level information is quite different in the two cases, and pro-

grams that look at system bytes within the file control block need to be changed for MS-DOS to function correctly. The MS-DOS file control block has many more features, including the date the file was created

The problems encountered in mapping instructions and registers can be formalized and solved by using a variety of software tools.

or last updated, the logical record size, and the file size. These system-information bytes are in areas within the file control block that application programs normally do not access. Nevertheless, converting programs to make use of MS-DOS file control blocks should take little effort.

Conclusion

There is, in fact, little if any difference in the difficulty of translating sound CP/M-80 programs to CP/M-86 or MS-DOS. With CP/M-86, the programmer will have to make minor changes to gain access to the operating system. With MS-DOS, the programmer will have to make minor changes to handle the extra features of the MS-DOS file control blocks.

Next month, we will make further comparisons between MS-DOS and CP/M-86. We will include some benchmarks made with the Compu-pro 8085/8088 dual-processor S-100 system. We will report not only the results of running programs under both CP/M-86 and MS-DOS on the same 8088 in the same machine, but also the results of running the same programs under MS-DOS running Emulator-86 on the same 8088 in the same machine. Although that may sound more like a cat chasing its own tail than a test of operating systems, we will try to keep it all straight. ■

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7420	.18	7495	.50
7421	.18	7496	.30
7425	.25	74107	.25
7427	.25	74122	.40
7430	.18	74125	.40
7432	.25	74144	2.50
7438	.35	74145	.50
7440	.18	74148	1.00
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7443	.65	74155	1.45
7444	.60	74160	.80
7445	.60	74161	.80
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74S10	.55	74S174	.95
74S15	.55	74S175	.95
74S20	.55	74S181	4.00
74S22	.75	74S182	2.75
74S30	.35	74S186	3.50
74S37	1.25	74S240	3.50
74S51	.60	74S244	3.50
74S65	.65	74S19	9.50
74S74	.55	74S472	15.00
74S85	2.00		

STATIC RAMS

2111	2.85	8/2.50 ^{ns}
2112	2.85	8/2.50 ^{ns}
2114	2.80	4/14.00
2116	2.00ns	7/2.50
MM6116	200ns	11.50 4/10.50 ^{ns}

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8728	1.20
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2732 (5V)	10.50	8/9.25 ^{ns}
2752	11.50	8/10.25 ^{ns}

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7818	
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7908	
7912	
7918	
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10/5/30	16	10/1/80
10/9/70	20	10/2/70
10/12/70	22	10/2/70
10/15/70	24	10/2/70
10/18/70	28	10/2/70
10/17/70	40	10/3/80
1017WTP		1017WTP