(h) SOFTWARE -DISC OPERATING SYSTEM

NASCOM have announced their intention to provide the CP/M operating system, for disc users. This will open up the possibility of running hundreds of CP/M programs which already exist, including larger more powerful versions of BASIC, as well as other languages. We hope you will support the committee's belief that this is the way that we should go for large systems.

We hope that we have answered all the questions asked by Mr.Griffiths. If not, write back to us. All queries are welcome, although we can never hope to answer all of them.

The Editor

Dear Sir,

I thought NASCOM users might be interested in some additional Z80 opcodes that I have discovered. They all operate on IX or IY and their effectiveness hinges on the fact that IX and IY are functionally similar to HL. In general, instructions operating on HL will operate on IX or IY if preceeded by DD or FD. From this it can be deduced that the internal microcode of the Z80 addresses HL, IX, IY indirectly by a 2 bit register address pointer which is cleared at the start of each new instruction. When this pointer (call it P) is 00 then instructions operate on HL when it is 10 they operate on IX and when it is 11 they operate on IY. The effect of the instruction prefix DD is to set P to 10 and the effect of FD to set it to 11. Similarly, there must be other flip flops to select between the alternate register and accumulator sets.

Because of this any instruction normally accessing the H or L registers can be used to access the high or low order bytes of IX or IY if prefixed by DD or FD. This gives 80 new instructions. I have tested these on a NASCOM using a Zilog processor. I assume that similar instructions exist for rotate and shift, test, set, reset, which would give 124 more instructions. I have tested EX DE and IX and found that they do not work.

Yours faithfully,

W.P.Cockshott
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