MayBe help page

By Avishai Adler (2001)

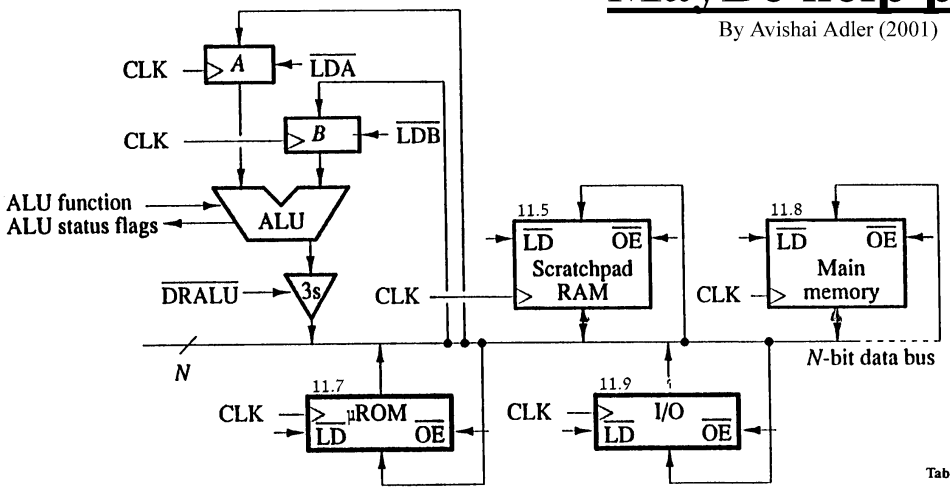

Figure 11.2 Microinterpreter data paths.

Table A2.1 Control-ROM output word.

Address increment	ALU inputs						N.C.	COND S/L		Drive select			Load select		
ADR+	F_3	F_2	F_1	F_0	$\overline{C}$	M	X	I	S	D_2	D_1	D_0	L_2	L_1	L_0

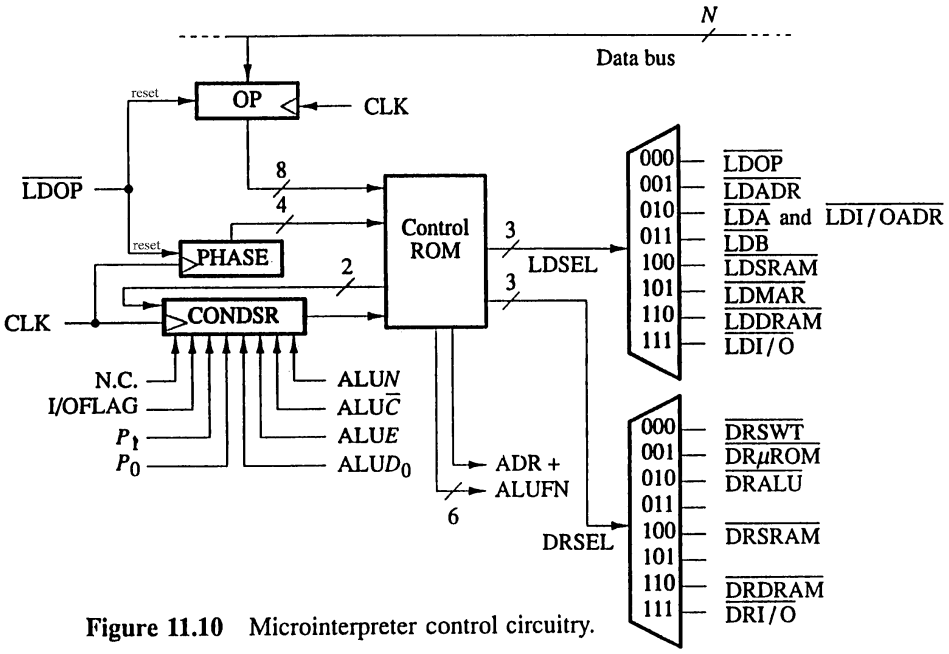

Figure 11.10 Microinterpreter control circuitry.

Table A2.4 Useful ALU functions.

Control inputs						
F_3	F_2	F_1	F_0	$\overline{C}$	M	Output
0	0	1	1	1	1	00000000
1	1	0	0	1	1	11111111
1	1	1	1	1	1	A
1	0	1	0	1	1	B
1	1	1	1	1	0	$A-1$
0	0	0	0	0	0	$A+1$
1	0	0	1	1	0	$A+B$
0	1	1	0	0	0	$A-B$
1	0	1	1	1	1	A AND B
1	1	1	0	1	1	A OR B
0	1	1	0	1	1	A XOR B
0	0	0	0	1	1	$\overline{A}$ (1's complement)

Table A2.2 Condition shift register control inputs.

Inputs		
I	S	Action
0	0	Load condition register
0	1	Shift condition register right
1	0	No change
1	1	No change

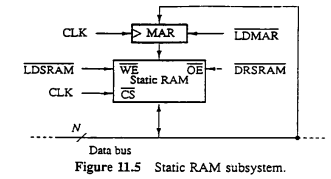

Figure 11.5 Static RAM subsystem.

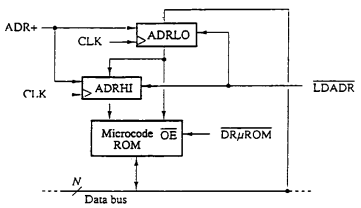

Figure 11.7 Microcode ROM with 16-bit address register.

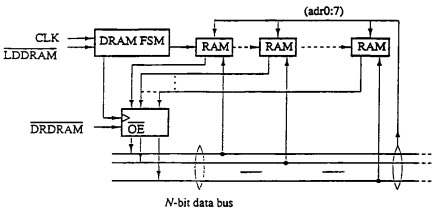

Figure 11.8 Main-memory (dynamic RAM) subsystem.

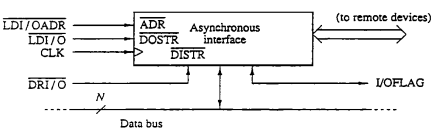

Figure 11.9 Communications interface.

Table A2.3 Function decoding: 74181 ALU inputs and functions.

Control inputs				Function performed if $M=0$ (arithmetic)	Function performed if $M=1$ (logical)
F_3	F_2	F_1	F_0		
0	0	0	0	$A+1-\overline{C}$	$\overline{A}$
0	0	0	1	$(A$ OR $B)+1-\overline{C}$	$\overline{(A$ OR $B)}$
0	0	1	0	$(A$ OR $\overline{B})+1-\overline{C}$	$\overline{A}$ AND B
0	0	1	1	$-\overline{C}$	00000000
0	1	0	0	$A+(A$ AND $\overline{B})+1-\overline{C}$	$\overline{(A$ AND $B)}$
0	1	0	1	$(A$ OR $B)+(A$ AND $\overline{B})+1-\overline{C}$	$\overline{B}$
0	1	1	0	$A-B-\overline{C}$	A XOR B
0	1	1	1	$(A$ AND $\overline{B})-\overline{C}$	A AND $\overline{B}$
1	0	0	0	$A+(A$ AND $B)+1-\overline{C}$	$\overline{A}$ OR B
1	0	0	1	$A+B+1-\overline{C}$	$\overline{(A$ XOR $B)}$
1	0	1	0	$(A$ OR $B)+(A$ AND $B)+1-\overline{C}$	B
1	0	1	1	$(A$ AND $B)-\overline{C}$	A AND B
1	1	0	0	$A+A+1-\overline{C}$	11111111
1	1	0	1	$(A$ OR $B)+A+1-\overline{C}$	A OR $\overline{B}$
1	1	1	0	$(A$ OR $\overline{B})+A+1-\overline{C}$	A OR B
1	1	1	1	$A-\overline{C}$	A