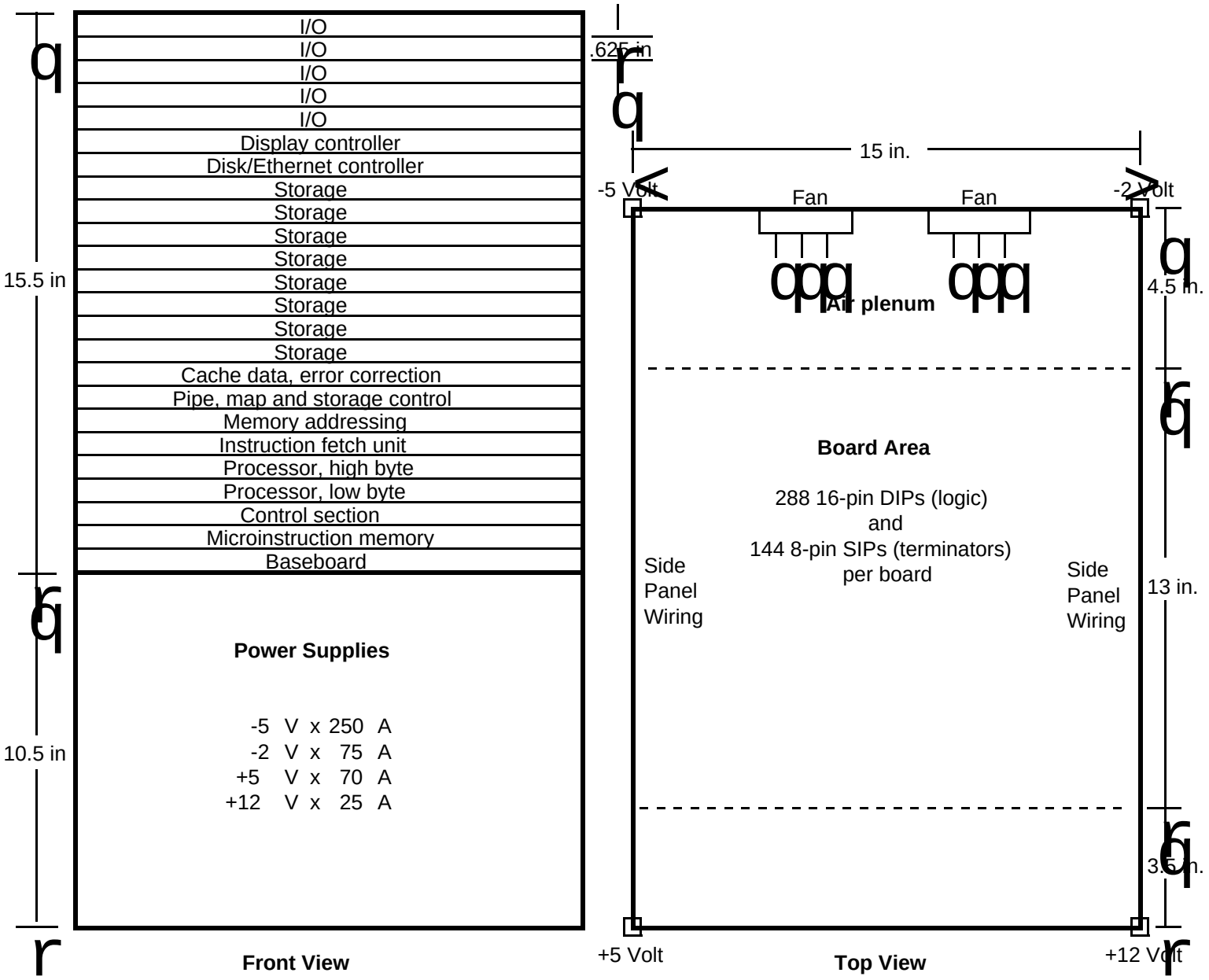

Figure 1a: Dorado chassis

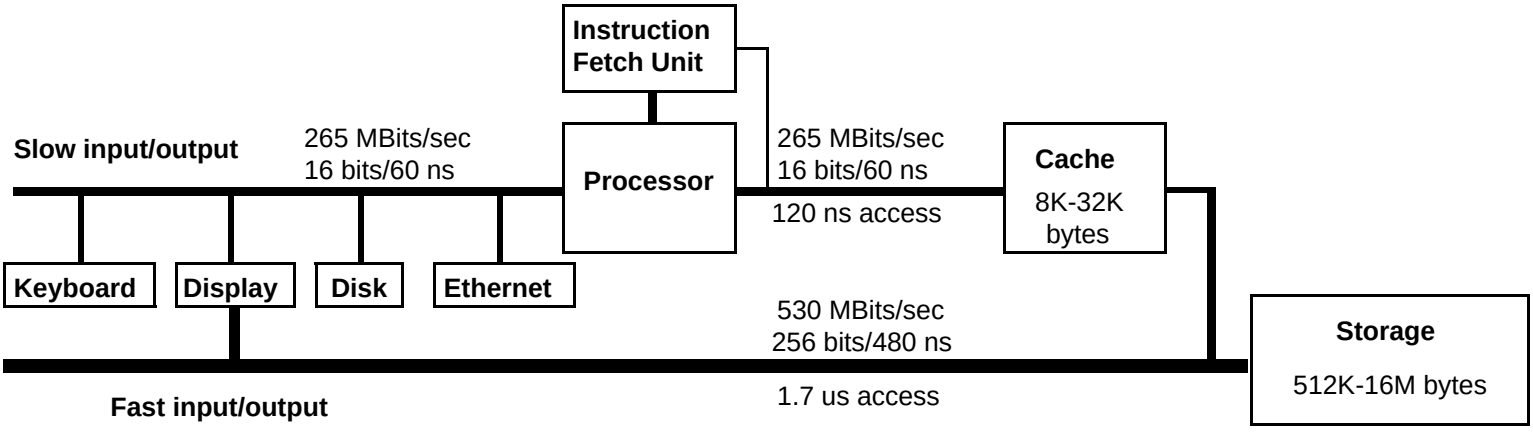

Figure 1b: Dorado block diagram

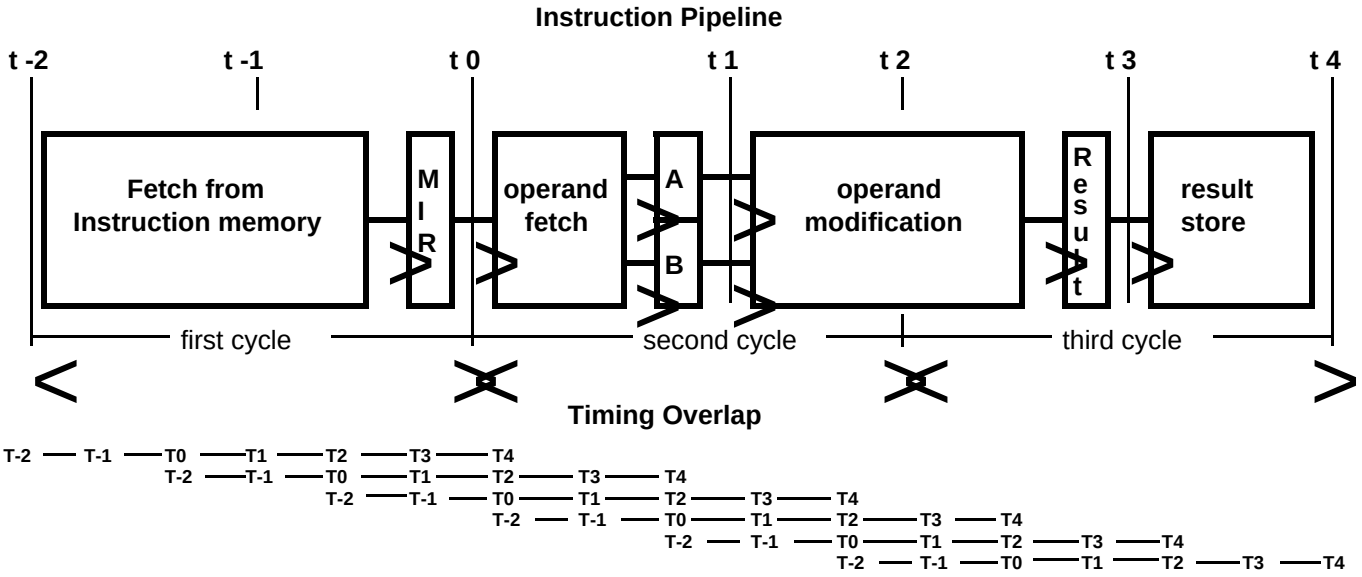

Figure 2: Instruction pipeline and timing overlap

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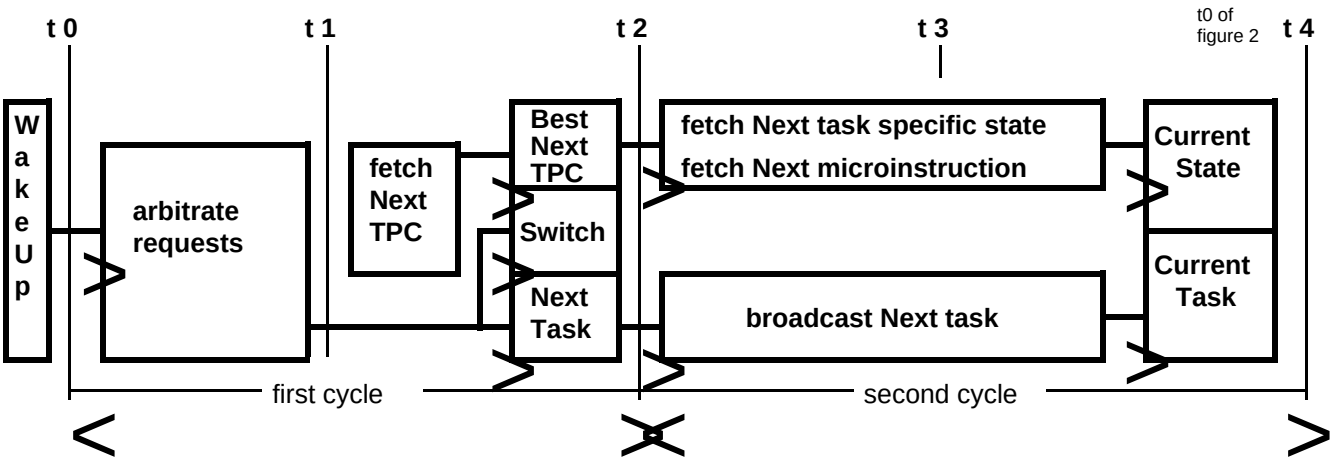

Figure 3: Task arbitration pipeline

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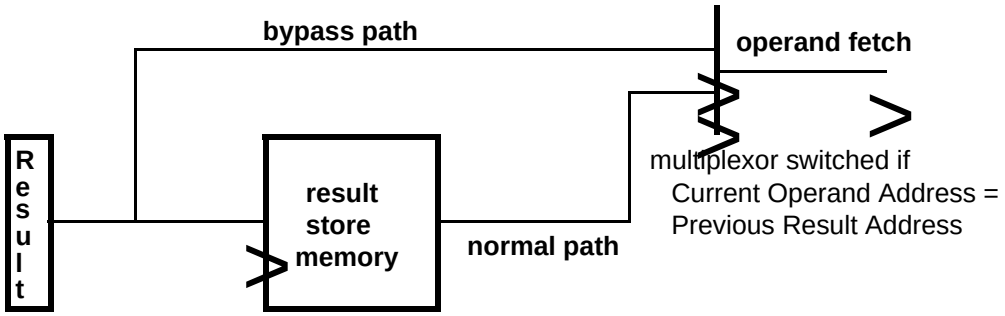

Figure 4: Bypassing example

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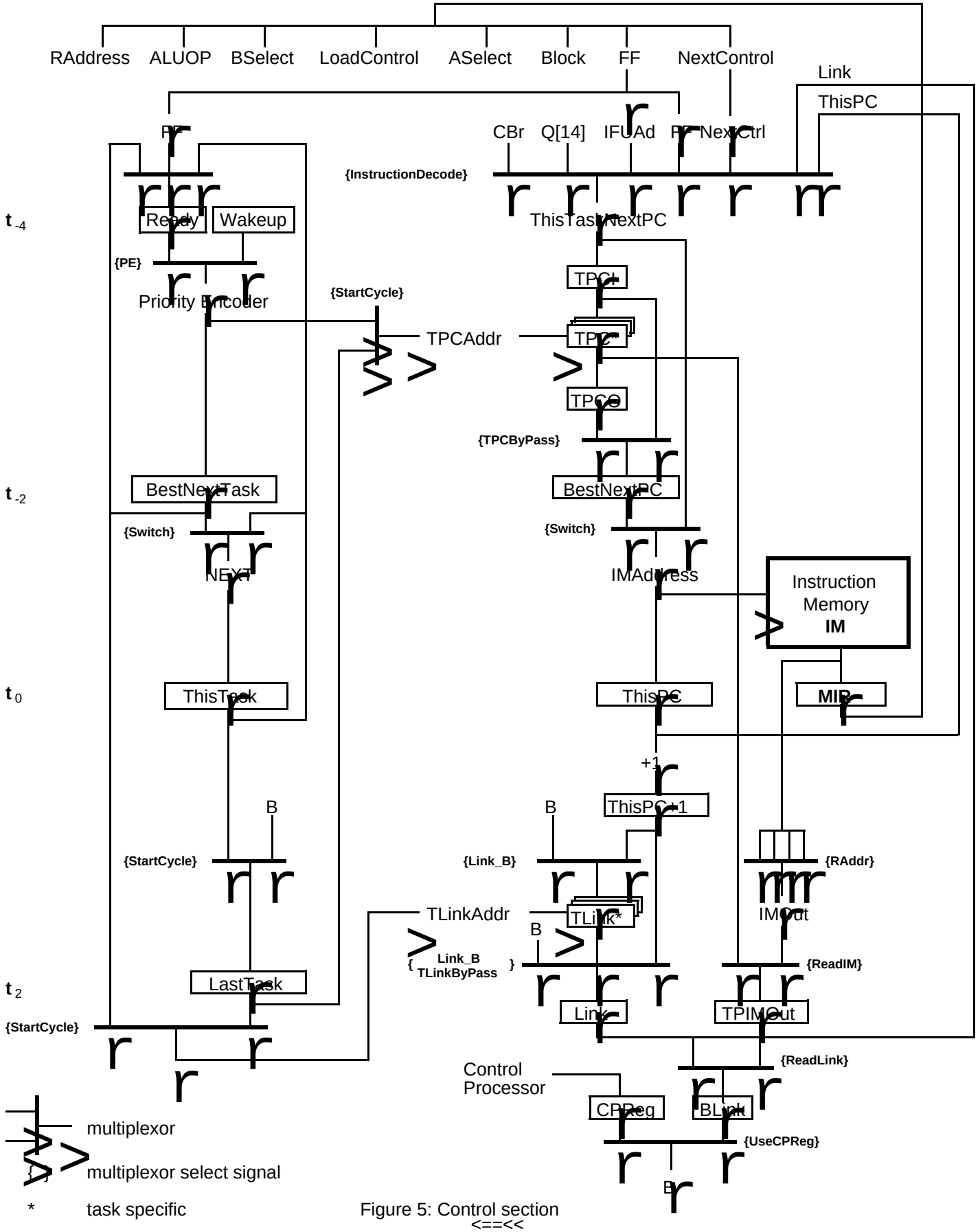

Figure 5: Control section

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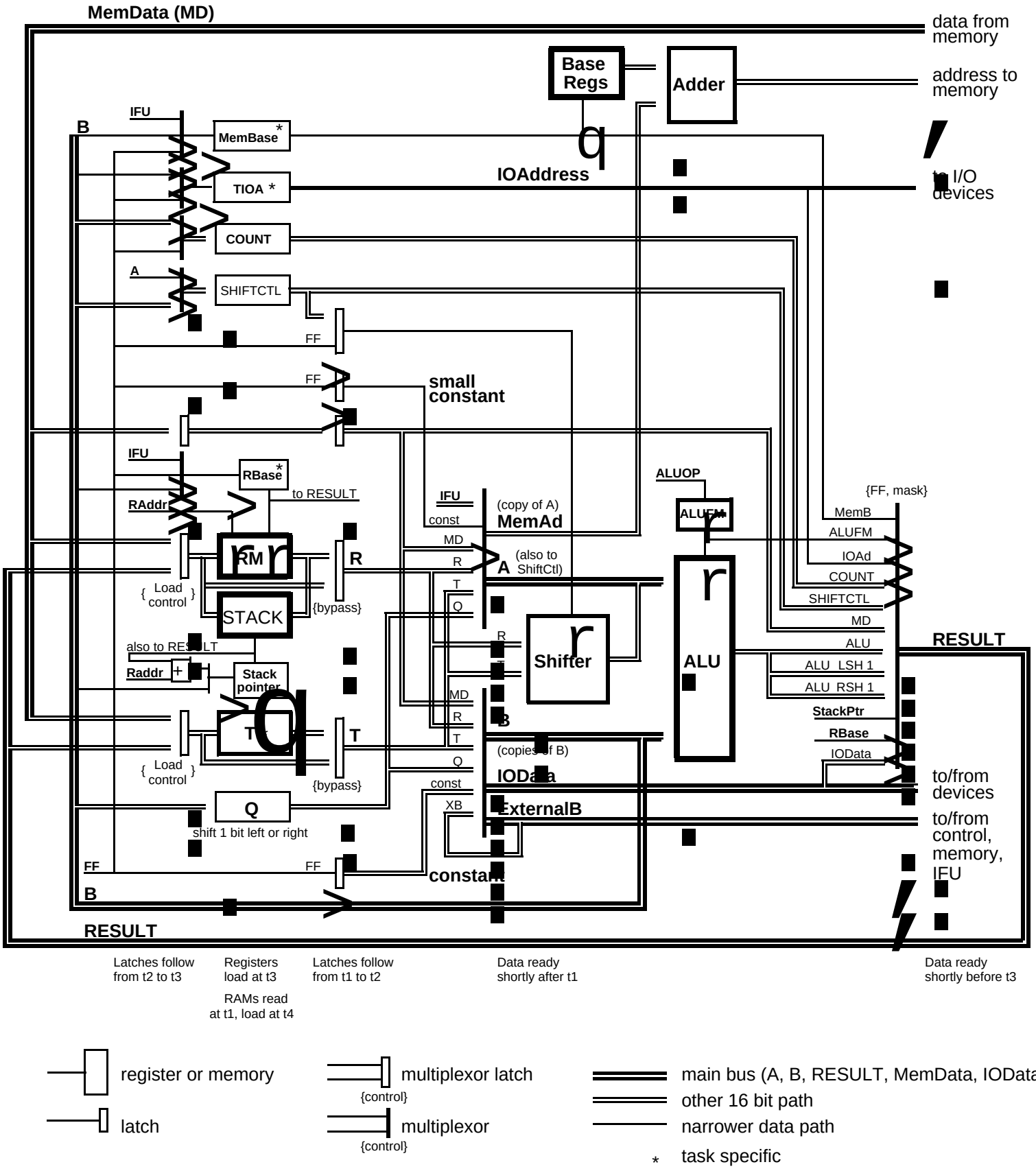

Figure 6: Data section

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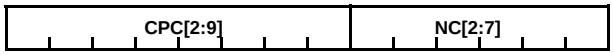
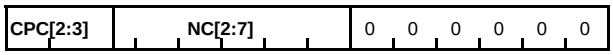
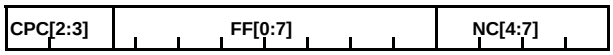
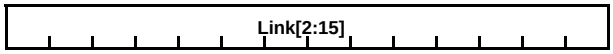
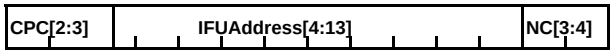
NextControl 0 1 2 3 4 5 6 7	Instruction type	ThisTaskNextPC (CPC = CurrentPC, NC = NextControl)
1 0 *ADDRESS BITS*	Local Jump/Call	
1 1 *ADDRESS BITS*	Global Call	
0 0 0 0 *ADDRESS BITS*	Long Jump/Call	
0 *ADDRESS BITS # 000x* *BRANCH CONDITION*	Conditional Jump/Call	
0 1 *RETURN FUNCTION* **1 1 1**	Return	
0 0 1 *NEXT NUMBER* **1 1 1**	IFU Jump	
0 0 0 1 x **1 1 1**	undefined	

Bit 15 is lsb

R is branch condition

Conditional Branch

NC[5:7]	*-or-*	*FF*	*Branch condition*
0		60	ALU = 0
1		61	ALU < 0
2		62	Carry'
3		63	Count=0 (& Count_Count-1)
4		64	R < 0
5		65	R odd
6		66	IOAtten' (non-emulator)
--		67	Overflow'

A long, local or conditional branch is a CALL if, before any modification by branch conditions or dispatches, ThisTaskNextPC[12:15]=0; otherwise it is a jump.

Loaded into Link by Call, Return, or IFUJump

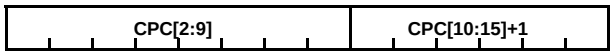


Figure 7: Next address formation

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