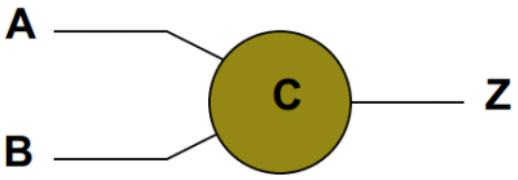
微流水线-实验报告（张里蒙）

2019年5月17日　　21:08

(1)muller C门的实现



真值表

A	B	Z
0	0	0
0	1	保持
1	0	保持
1	1	1

```
If a^b == 0:
    z=a
else:
    z=z
```

(2)用C单元实现两段握手

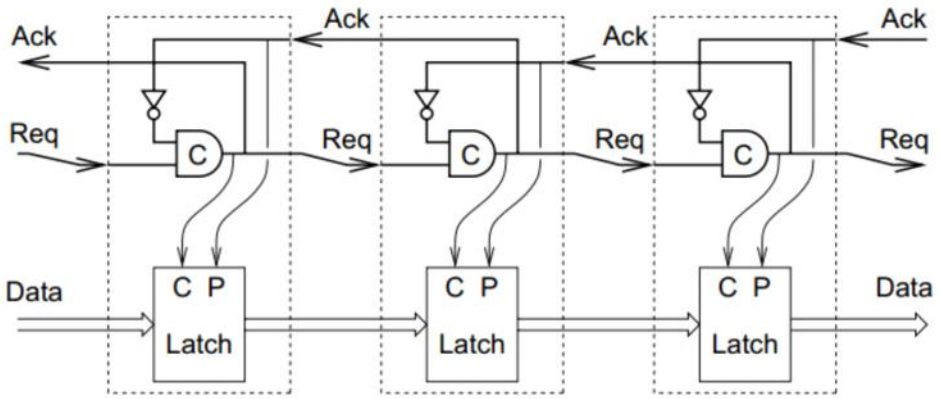
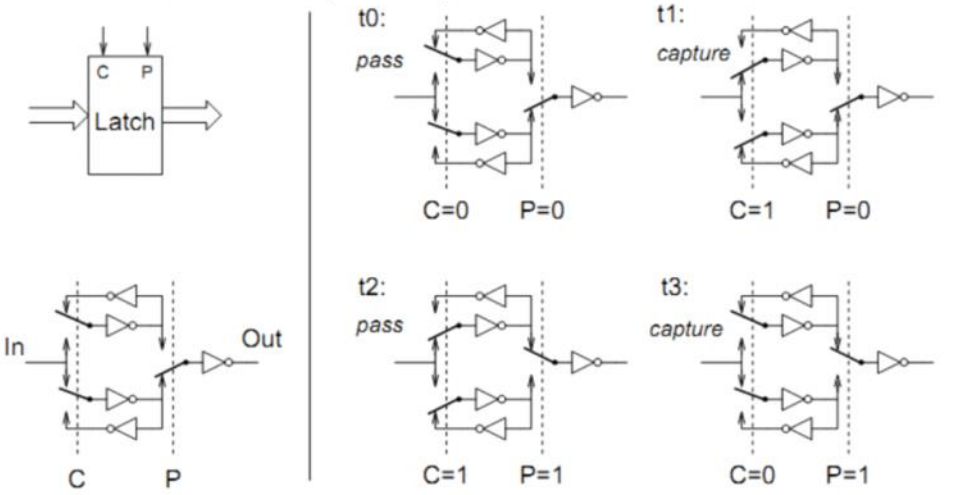
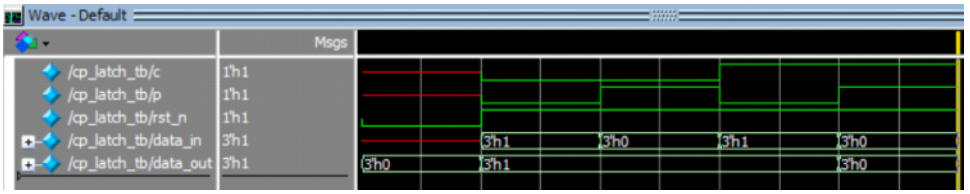


Figure 2.10. A simple 2-phase bundled-data pipeline.

(3)实现CP-latch

- 引入特殊的capture-pass锁存器





(4)实现一个模块block

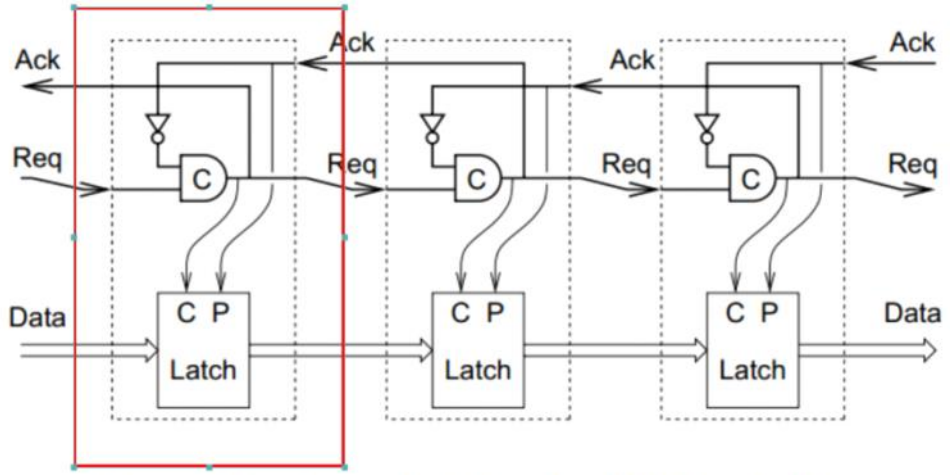
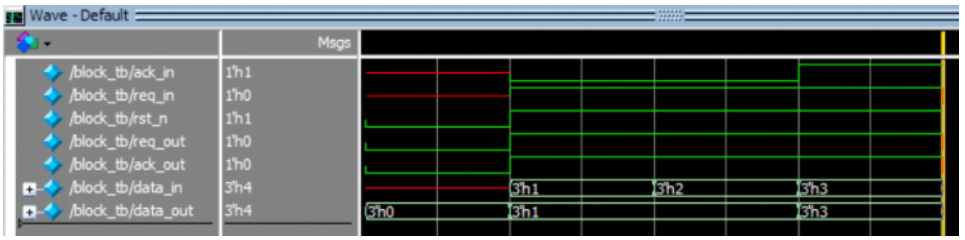
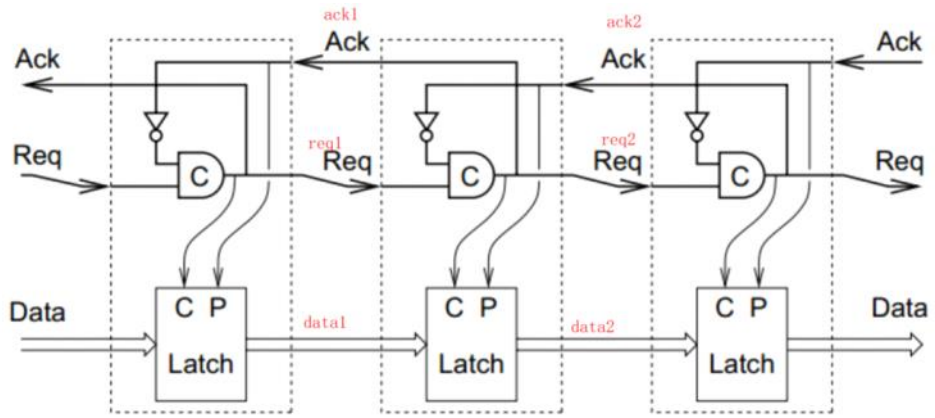


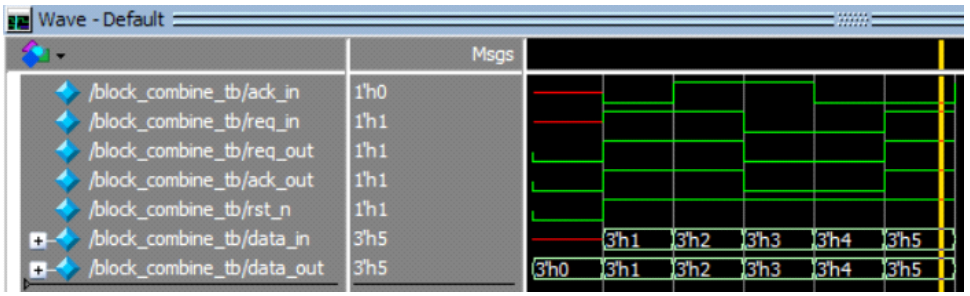
Figure 2.10. A simple 2-phase bundled-data pipeline.



Ack_in	Req_in	C	P	CP-latch	Data_In	Data_out
0	1	1	0	capture	1	1
0	1	1	0	capture	2	1
1	1	1	1	pass	3	3

(5)实现3个block的流水线(block_combine)





如上图所示，输入为12345时，输出端为12345，实现了FIFO功能

(6)实现6个block的流水线(block_combine_6)

(7)流水线的右端没有不给应答信号，流水线充满后的状态

如图，流水线一直不给应答信号，流水线中只有数据1.