

Overview

The logic function B AND NOT A.
Case I, A input only. (Banks pp. 63-64)

THE LOGIC FUNCTION: B AND NOT A

Case I, A input only.

"B and not A" has the truth value false for A input only. Thus the signal moving downward should be destroyed and nothing should reach the exit wire on the right.

Case II, A and B Both Input.

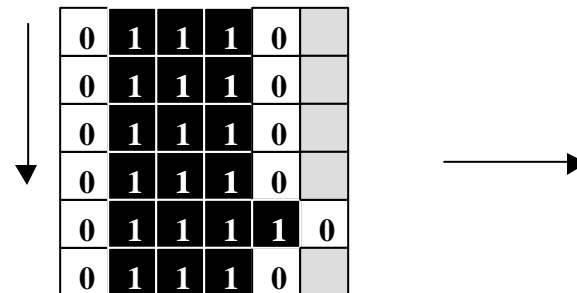
Again the truth value of this function should be false or no output. These first three cycles show the signals entering the logic function element. Note the resemblance to the fanout element.

THE LOGIC FUNCTION B AND NOT A

Case III, B Input Only.

This is the one case in which a signal should reach the output wire. The operation is exactly parallel to the fanout operation except that the signal trying to get out the A input is annihilated by the extra 1 on the right side of the A input wire. Only selected cycles are shown.

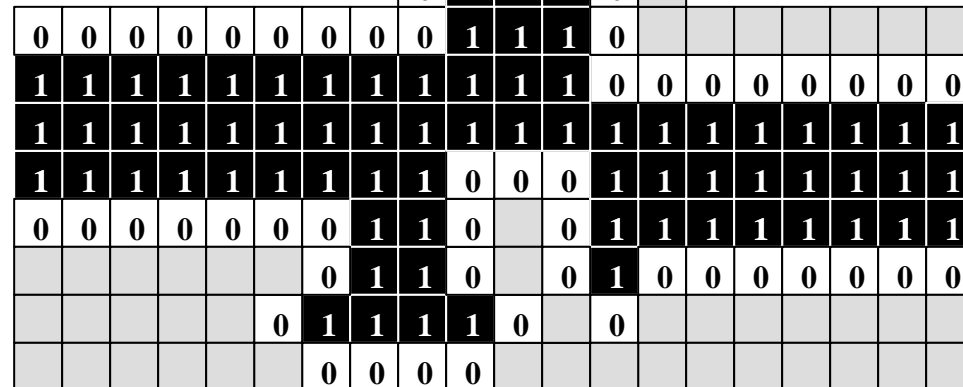
A



TRUTH TABLE

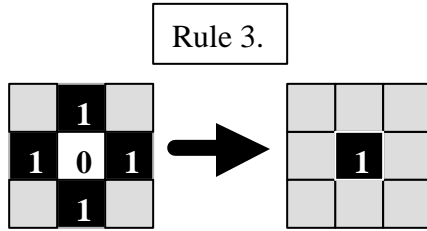
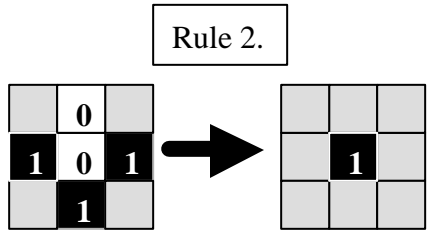
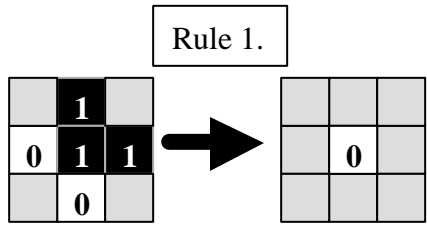
	A	
	0	1
0	0	0
1	1	0

B



output wire

The logic function: B AND NOT A.
 Case I, A input only. 6-cycle animation.



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cycle 4
      1 1 1
      1 1 1
      1 1 1
      1 1 1
      1 1 1 1
      1 1 1
      1 1
      1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
      1 1      1 1 1 1 1 1 1 1
      1 1      1
      1 1 1 1
  
```

