

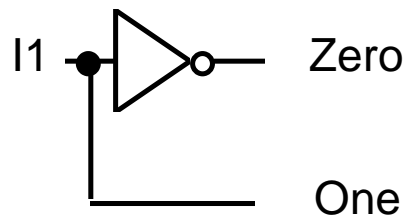
Tally Circuits

Steering Logic

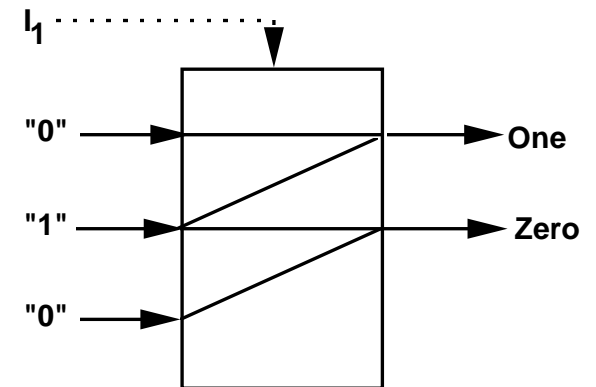
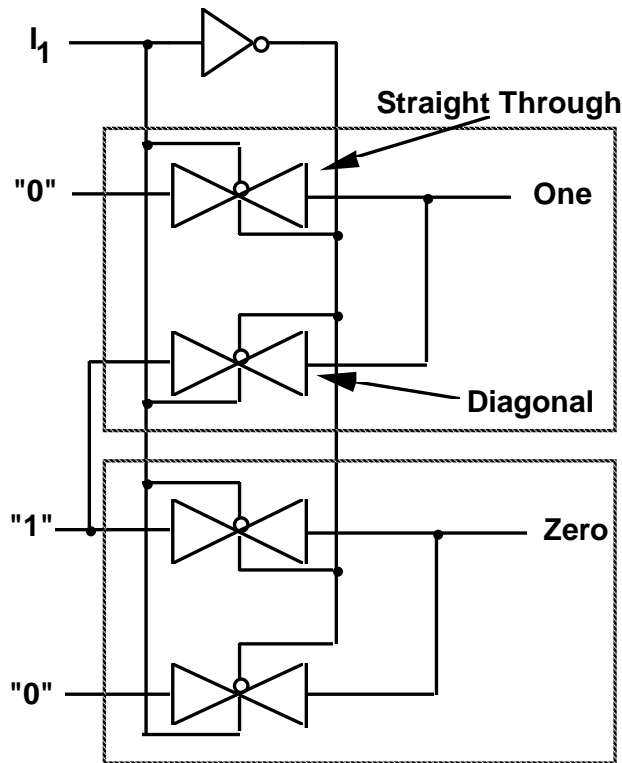
Complex Steering Logic Example

N Input Tally Circuit: count # of 1's in the inputs

I_1	Zero	One
0	1	0
1	0	1



Conventional Logic for 1 Input Tally Function

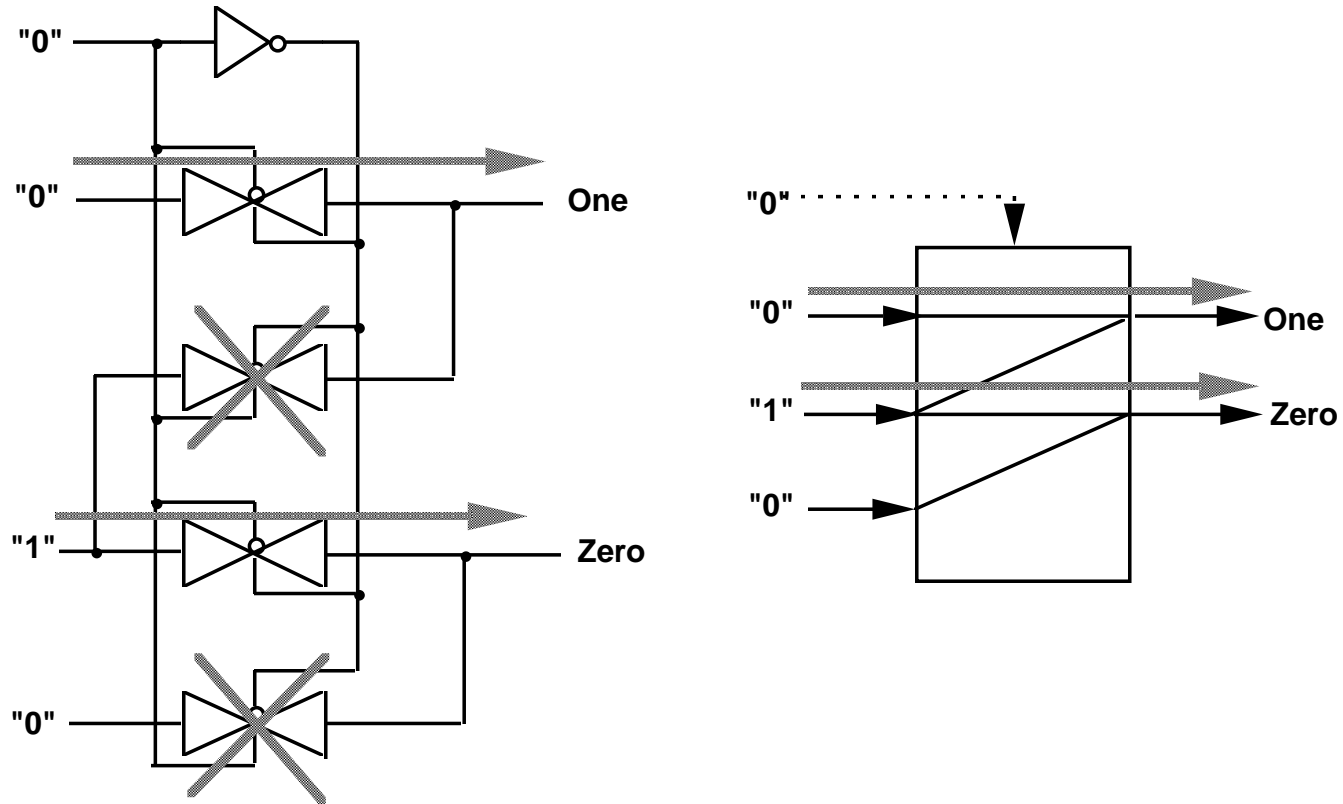


Switch Logic Implementation of Tally Function

Steering Logic

Complex Steering Logic Example

Operation of the 1 Input Tally Circuit



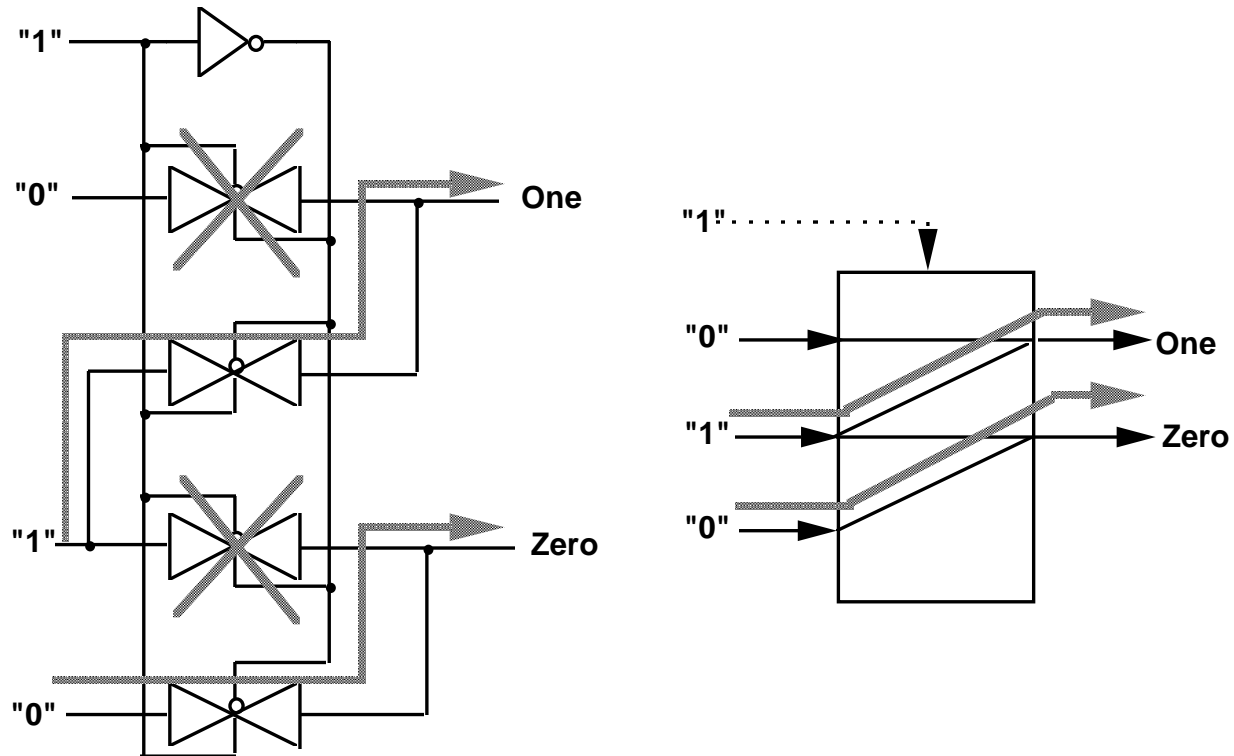
Input is 0, straight through switches enabled

Steering Logic

Complex Steering Logic Example

Operation of 1 input Tally Circuit

N inputs, N+1 outputs, count the number of inputs '1'



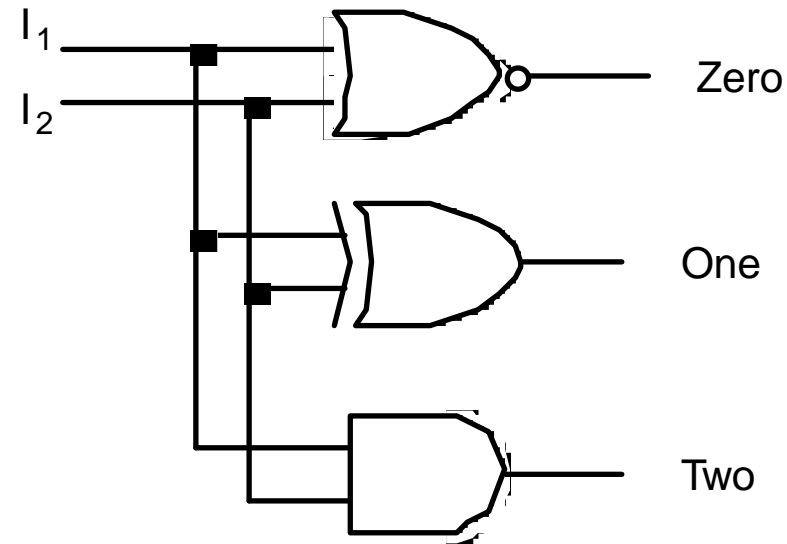
**Input = 1, diagonal switches enabled
I1=1 (asserted)**

Steering Logic

Complex Steering Logic Example

Extension to the 2-input case

I_1	I_2	Zero	One	Two
0	0	1	0	0
0	1	0	1	0
1	0	0	1	0
1	1	0	0	1

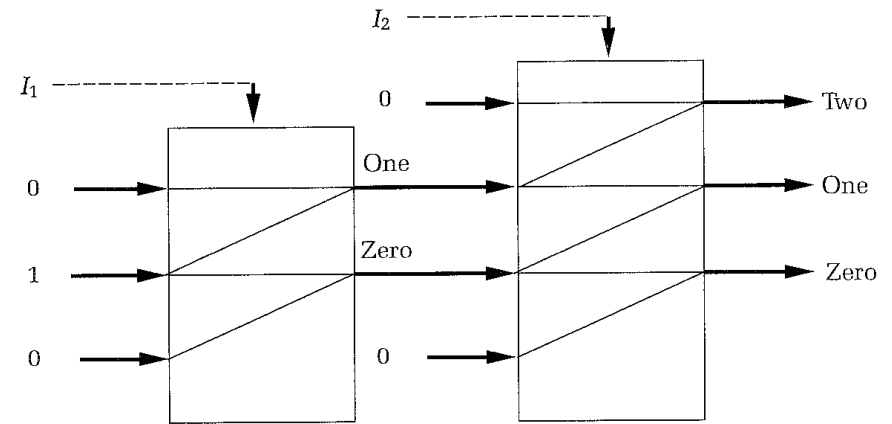
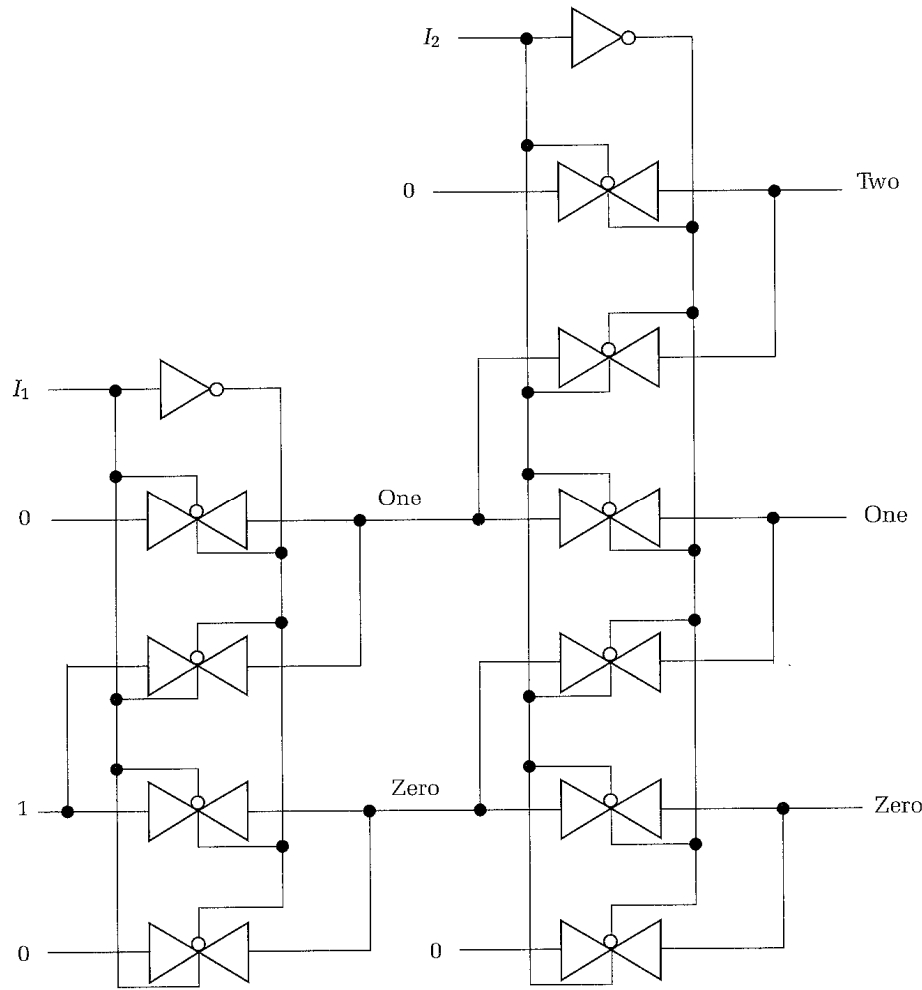


Conventional logic implementation

Steering Logic

Complex Steering Logic Example

Switch Logic Implementation: 2-input Tally Circuit



Cascade the 1-input implementation!

Steering Logic

Complex Steering Logic Example

Operation of 2-input implementation

