

Example

P: Pressure Sensor $\rightarrow 0 = \text{Safe} / 1 = \text{Unsafe}$ T: Temperature Sensor $\rightarrow 0 = \text{Safe} / 1 = \text{Unsafe}$ A: Alarm $\rightarrow 0 = \text{Alarm off} / 1 = \text{Alarm on}$

P	T	A
0	0	0
0	1	1
1	0	1
1	1	1

Example #2

W: Window sensor $\rightarrow 0 = \text{Off} / 1 = \text{On Open}$ D: Door sensor $\rightarrow 0 = \text{Closed} / 1 = \text{Open}$ K: Key $\rightarrow 0 = \text{No key} / 1 = \text{Key}$

$$S = K\bar{D} + K\bar{W}$$

11/14/24

AOI Logic Analysis Worksheet

①

X	Y	F ₁	TP1	TP2	TP3	TP4
0	0	0	1	0	1	1
0	1	1	0	0	1	0
1	0	1	0	1	0	0
1	1	0	0	0	0	0

X	Y	F
0	0	0
0	1	1
1	0	1
1	1	0

$$F_1 = \bar{X}Y + X\bar{Y}$$

②

$$F_1 = X \oplus Y$$

R	S	T	F ₂	TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8	TP9
0	0	0	0	1	0	0	0	1	0	0	1	0
0	0	1	0	1	0	0	0	0	0	0	1	0
0	1	0	1	1	1	1	1	1	0	0	0	0
0	1	1	0	1	1	0	0	0	0	0	0	0
1	0	0	1	0	0	0	0	1	0	0	1	1
1	0	1	1	0	0	0	0	0	0	0	1	1
1	1	0	0	0	0	0	0	1	1	0	0	0
1	1	1	1	0	0	0	1	0	1	1	0	0

Signature: *[Signature]*

Date: 11/14/24

Team Members:

Witness:

Date:

CONCLUSIONS

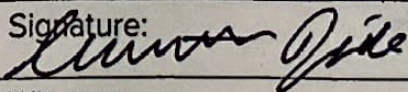
- (A) Take the inputs, consider their interactions and test points, and then evaluate the output
- (B) Pain
- (C) Finding the test points was much more tedious, but made it easier in the end.
- (D) Some as much, calculations can be easier than if things are not identical

$$A+B = A\bar{B} + \bar{A}B$$

These will always be the same!

11/5/24

Signature:



Date:

11/5/24

Team Members:

Witness:

Date:

Continued From Page #

34

Continued On Page #