

# MAJORITY VOTE

## Truth Table

P	V	S	T	D	
0	0	0	0	0	
0	0	0	1	0	
0	0	1	0	0	
0	0	1	1	0	
0	1	0	0	0	
0	1	0	1	0	
0	1	1	0	0	
0	1	1	1	1	$\bar{P}VST$
1	0	0	0	0	
1	0	0	1	1	$P\bar{V}\bar{S}T$
1	0	1	0	1	$P\bar{V}ST\bar{T}$
1	0	1	1	1	$P\bar{V}STT$
1	1	0	0	1	$PV\bar{S}\bar{T}$
1	1	0	1	1	$PV\bar{S}T$
1	1	1	0	1	$PVST\bar{T}$
1	1	1	1	1	$PVSTT$

## Unsimplified Logic Expression

$$D = \bar{P}VST + P\bar{V}\bar{S}T + P\bar{V}ST\bar{T} + P\bar{V}STT + PV\bar{S}\bar{T} + PV\bar{S}T + PVST\bar{T} + PVSTT$$

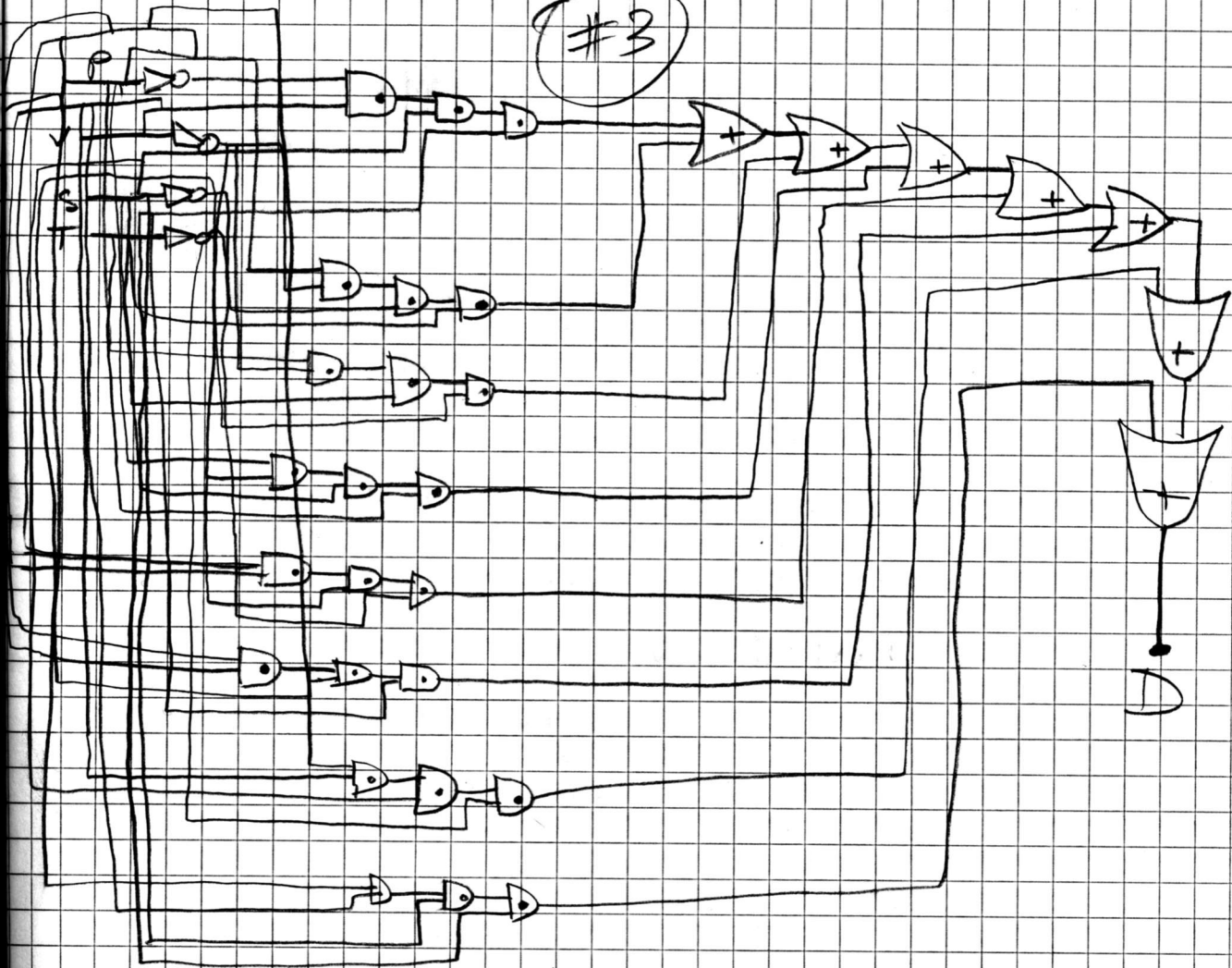
$$\begin{aligned}
 & \bar{P}VST + P\bar{V}\bar{S}T + P\bar{V}ST\bar{T} + P\bar{V}STT + PV\bar{S}\bar{T} + PV\bar{S}T + PVST\bar{T} + PVSTT \\
 & P\bar{V}S(\bar{T}) + P\bar{V}S(T) + P\bar{V}S(\bar{T}) + P\bar{V}ST + P\bar{V}ST \\
 & P\bar{V}S + P\bar{V}S + P\bar{V}S + P\bar{V}ST + P\bar{V}ST \\
 & P\bar{V}(S + \bar{S}) + P\bar{V}S + P\bar{V}ST + P\bar{V}ST \\
 & P\bar{V} + P\bar{V}S + P\bar{V}ST + P\bar{V}ST \\
 & P(\bar{V} + \bar{V}S + \bar{V}ST) + P\bar{V}ST \\
 & P(\bar{V} + \bar{V}(S + \bar{S}T)) + P\bar{V}ST \\
 & P(\bar{V} + \bar{V}(S + T)) + P\bar{V}ST \\
 & P(\bar{V} + \bar{V}S + \bar{V}T) + P\bar{V}ST
 \end{aligned}$$

Q/A

Vishnu Shah - 12/2/11

Majority Vote #3-4

#3



Vikram Shah... 12/09/11

#5 M.V.

$$VST + P(V+S+T)$$

$$VST + PV + PS + PT$$

$$\overline{P}VST + \overline{P}V\overline{S}T + \overline{P}V\overline{S}\overline{T} + \overline{P}\overline{V}ST + \overline{P}\overline{V}\overline{S}T + \overline{P}\overline{V}\overline{S}\overline{T} + \overline{P}\overline{V}ST + \overline{P}\overline{V}\overline{S}T$$

$$\overline{P}\overline{V}S(\overline{T}) + \overline{P}\overline{V}\overline{S}(\overline{T}) + \overline{P}\overline{V}S(\overline{T}) + \overline{P}\overline{V}ST + \overline{P}\overline{V}\overline{S}T$$

$$\overline{P}\overline{V}S + \overline{P}\overline{V}\overline{S} + \overline{P}\overline{V}S + \overline{P}\overline{V}ST + \overline{P}\overline{V}\overline{S}T$$

$$\overline{P}\overline{V}(S+\overline{S}) + \overline{P}\overline{V}S + \overline{P}\overline{V}ST + \overline{P}\overline{V}\overline{S}T$$

$$\overline{P}\overline{V} + \overline{P}\overline{V}S + \overline{P}\overline{V}ST + \overline{P}\overline{V}\overline{S}T$$

$$\overline{P}\overline{V} + \overline{P}\overline{V}(S+\overline{S}T) + \overline{P}\overline{V}ST$$

$$\overline{P}\overline{V} + \overline{P}\overline{V}(S+T) + \overline{P}\overline{V}ST$$

$$\overline{P}\overline{V} + \overline{P}\overline{V}S + \overline{P}\overline{V}T + \overline{P}\overline{V}ST$$

$$\overline{P}(\overline{V}+S) + \overline{P}\overline{V}T + \overline{P}\overline{V}ST$$

$$T(\overline{P}(VS) + P)$$

$$\overline{P}(\overline{V}+S) + \overline{P}\overline{V}T + \overline{P}\overline{V}ST$$

$$T(\overline{P} + \overline{P}(VS))$$

$$\overline{P}\overline{V} + \overline{P}S + \overline{P}\overline{V}T + \overline{P}\overline{V}ST$$

$$T(\overline{P} + VS)$$

$$\overline{P}(\overline{V}+T) + \overline{P}S + \overline{P}\overline{V}ST$$

$$T\overline{P} + VST$$

$$\overline{P}(\overline{V}+T) + \overline{P}S + \overline{P}\overline{V}ST$$

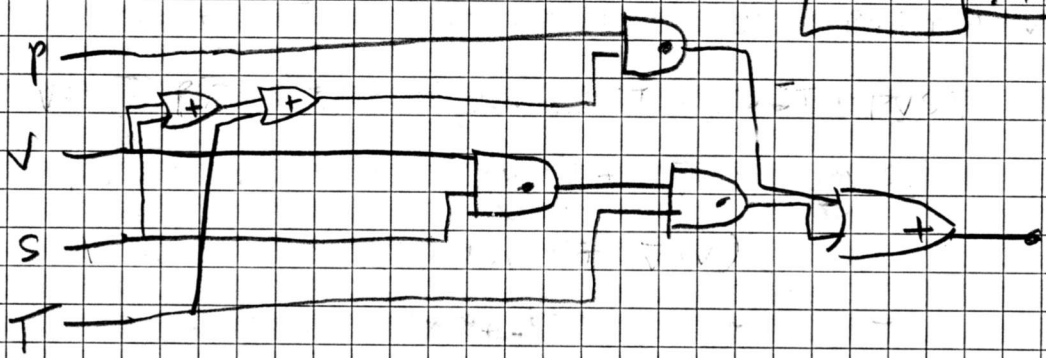
$$\overline{P}\overline{V} + \overline{P}T + \overline{P}S + \overline{P}\overline{V}ST$$

$$\boxed{\overline{P}\overline{V} + \overline{P}S + \overline{P}T + VST}$$

Vikram Shukla 12/14/11

$VST + P(V+S+T)$

#6 M.V.



Vehar Shah 12/19/01