

Fonctionnement Sonar

Trigger

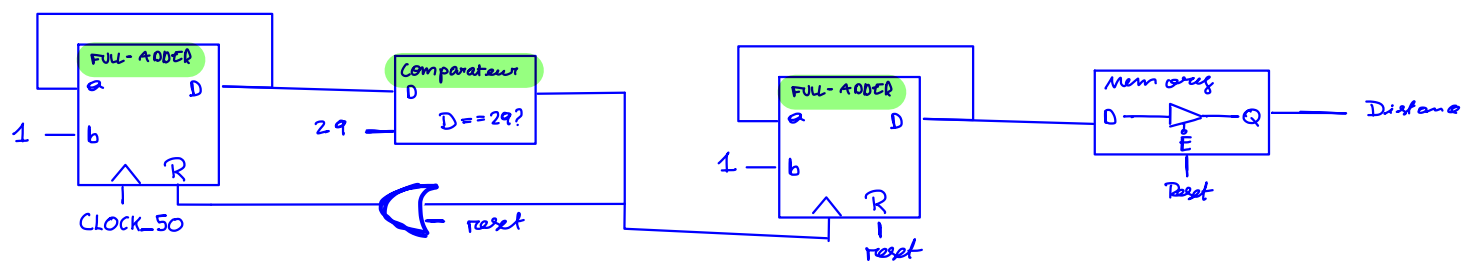
ECHO

$$\Delta T = \frac{\text{Compteur}}{\text{CLOCK_50}} [s]$$

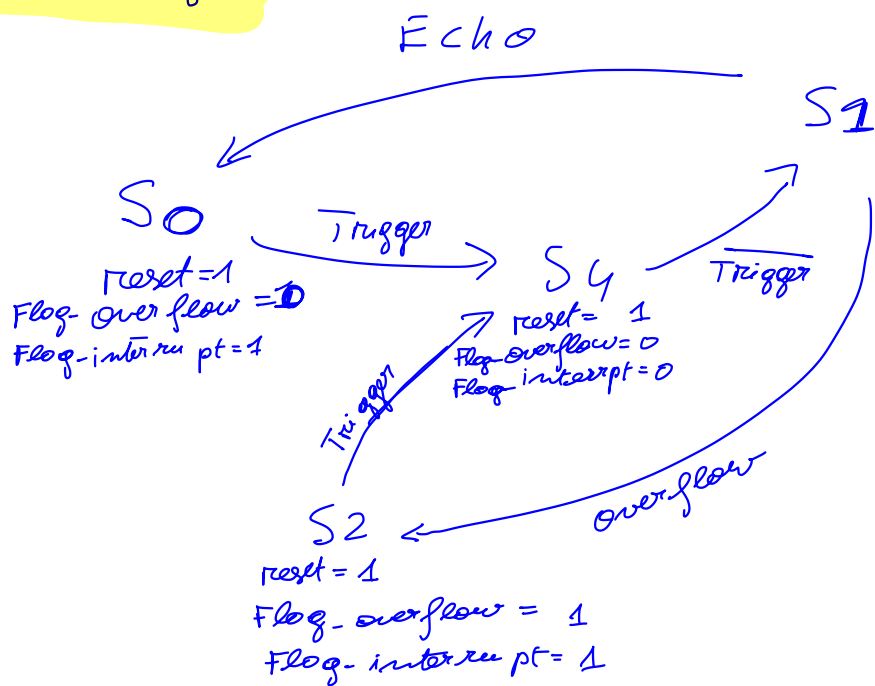
$$\text{distance} = \frac{\text{Compteur}}{\text{CLOCK_50}} \cdot \frac{1 \mu s}{58 \mu s} = \frac{\text{compteur}}{2900} [cm]$$

$$= \frac{\text{compteur}}{29} [0.1mm]$$

Sonar Design



FSM Design



S0: Stand by

S1: computing

S2: overflow

S4: stand by trigger

