

Porta Digitale di Input/Output

Corrado Santoro

ARSLAB - Autonomous and Robotic Systems Laboratory

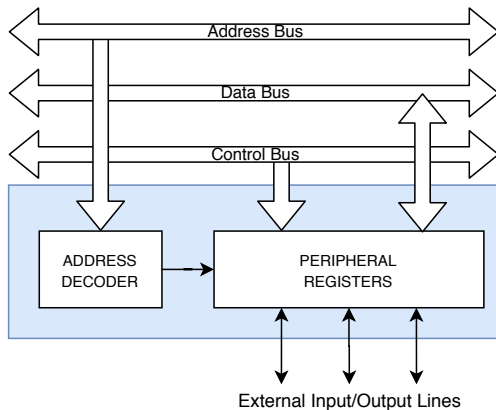
Dipartimento di Matematica e Informatica - Università di Catania, Italy

santoro@dmi.unict.it

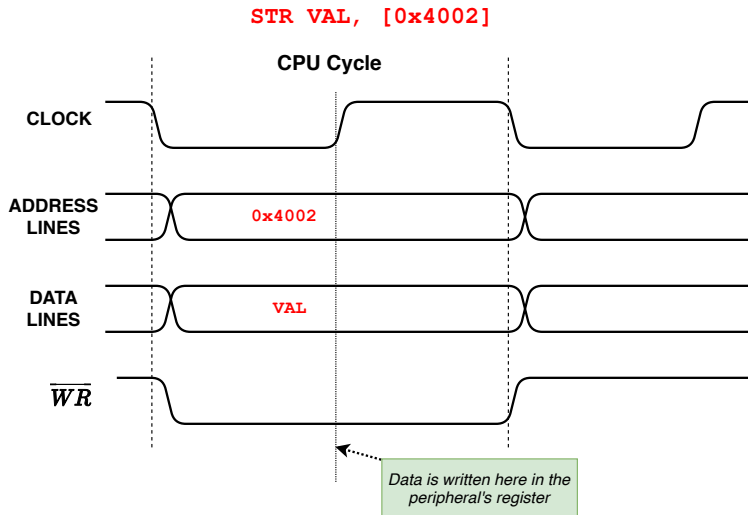


Architettura degli Elaboratori

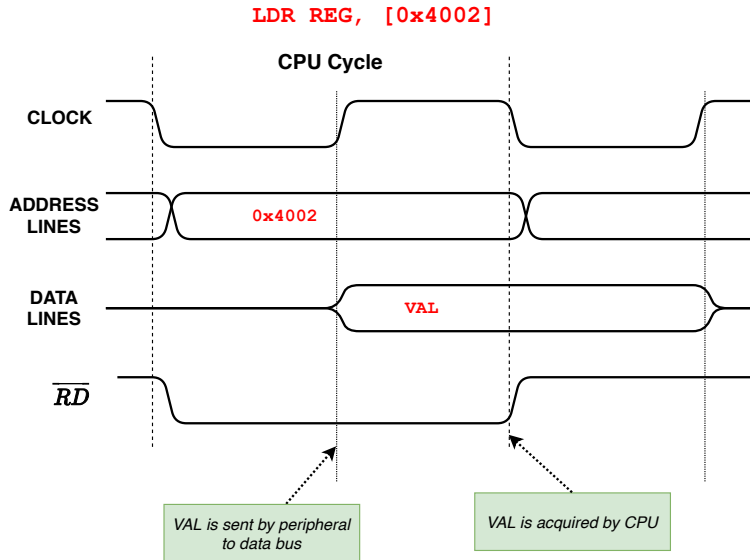
Bus di Sistema e Input/Output



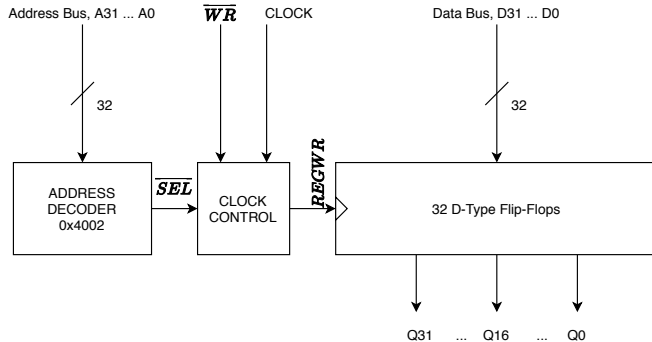
Bus Sincrono e Scrittura su I/O



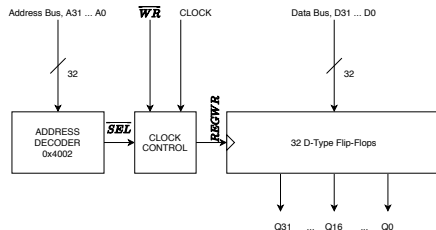
Bus Sincrono e Lettura da I/O



Esempio di Porta Digitale di Output



Esempio di Porta Digitale di Output

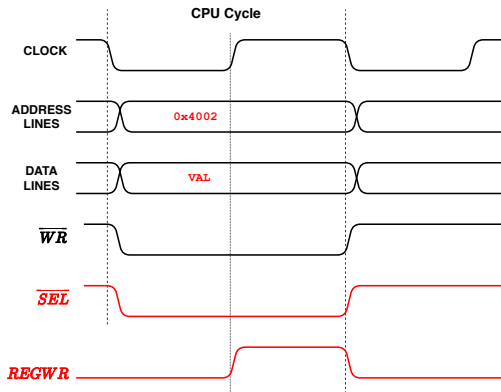


Address Decoder

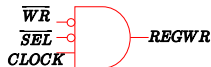
$\overline{SEL} = 0$, when *address* = 0x4002

$$\overline{SEL} = \overline{A_{31} \dots A_{15} A_{14} A_{13} \dots A_3 A_2 A_1 A_0}$$

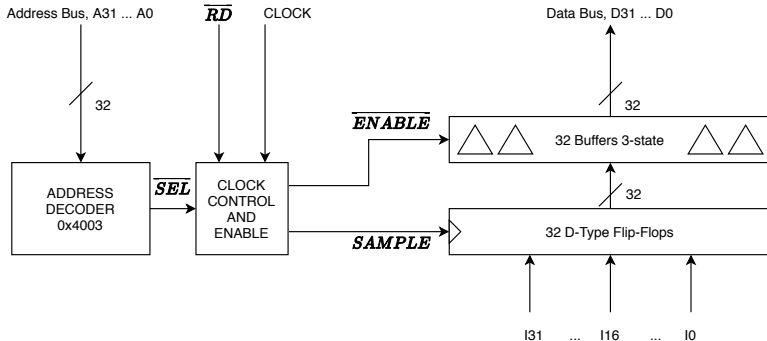
Esempio di Porta Digitale di Output



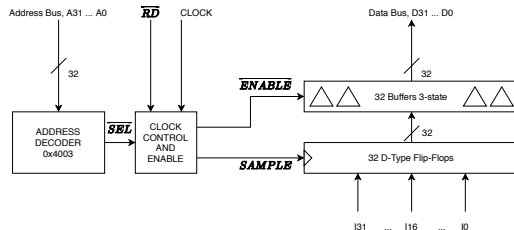
$$\overline{REGWR} = \text{CLOCK} \cdot \overline{\overline{WR}} \cdot \overline{\overline{SEL}}$$



Esempio di Porta Digitale di Input



Esempio di Porta Digitale di Input

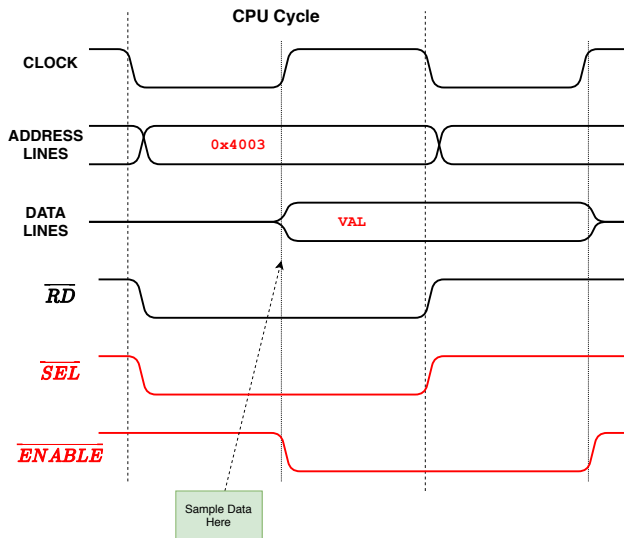


Address Decoder

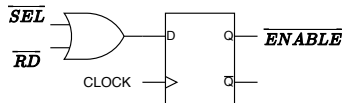
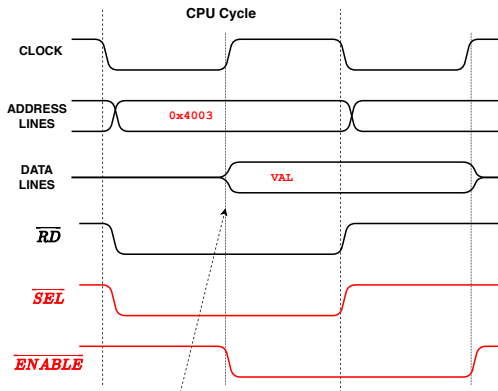
$\overline{SEL} = 0$, when address = 0x4003

$$\overline{SEL} = \overline{A_{31} \dots A_{15}} \overline{A_{14}} \overline{A_{13} \dots A_3} \overline{A_2} \overline{A_1} \overline{A_0}$$

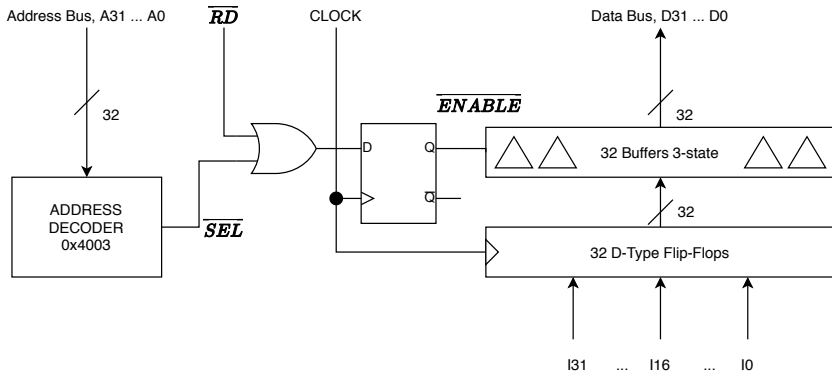
Esempio di Porta Digitale di Input—Timing



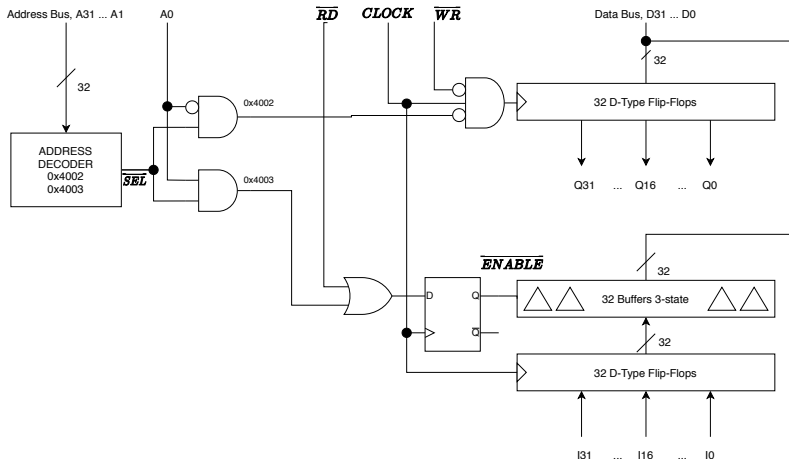
Esempio di Porta Digitale di Input—Segnale di Enable



Esempio di Porta Digitale di Input



Porta Digitale di Input/Output Completa



$$\overline{SEL} = \overline{A_{31} \dots A_{15}} A_{14} \overline{A_{13} \dots A_3} \overline{A_2} A_1$$

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