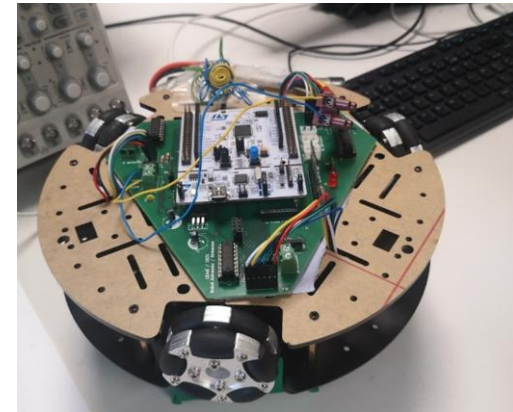
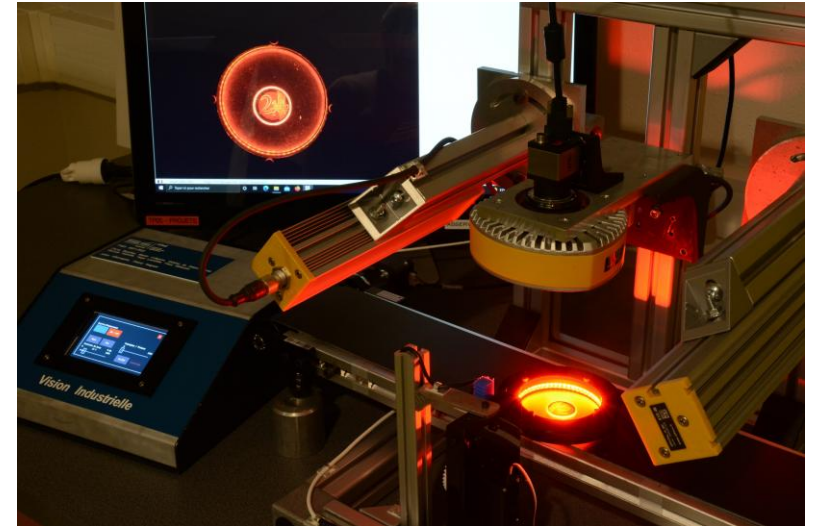
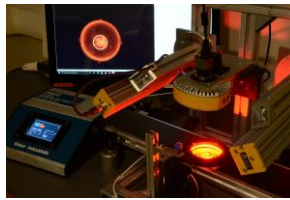


Interfaçage Numérique

Systèmes embarqués

Julien VILLEMEJANE

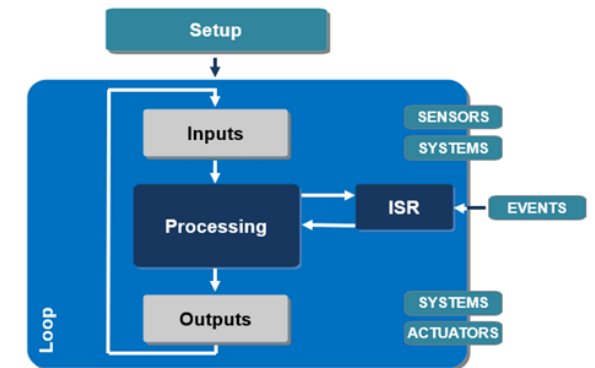
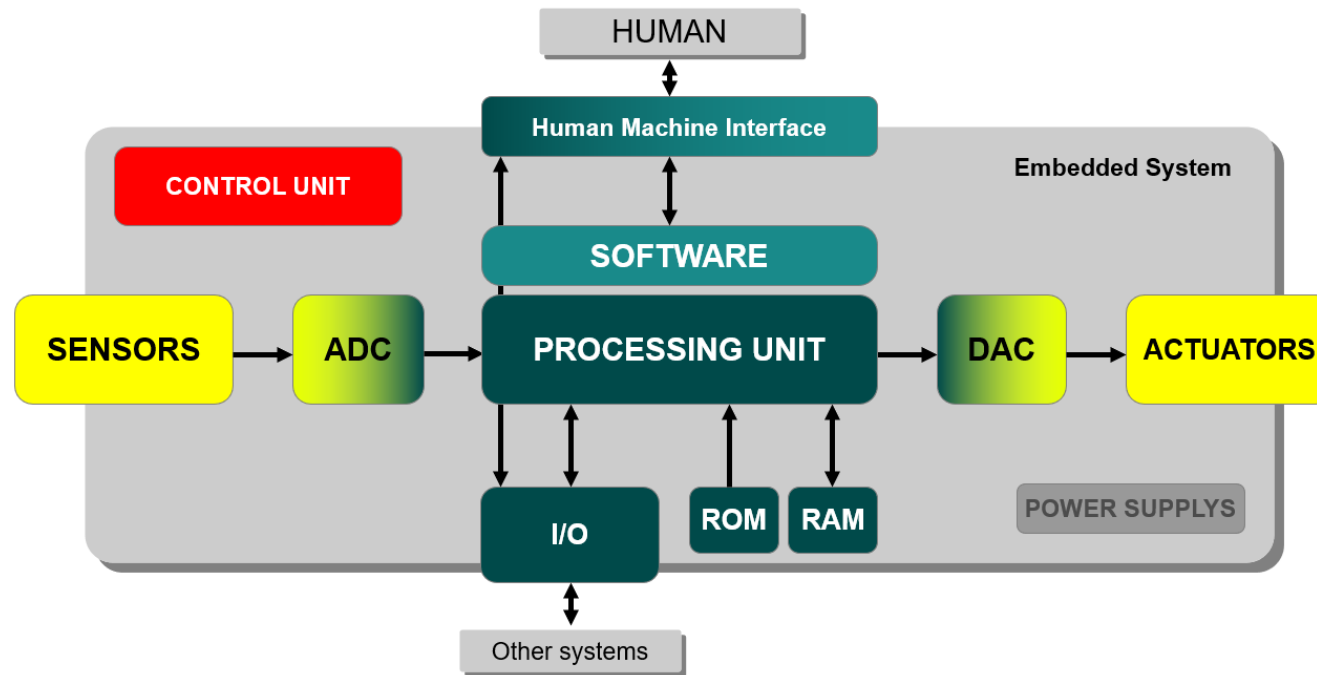
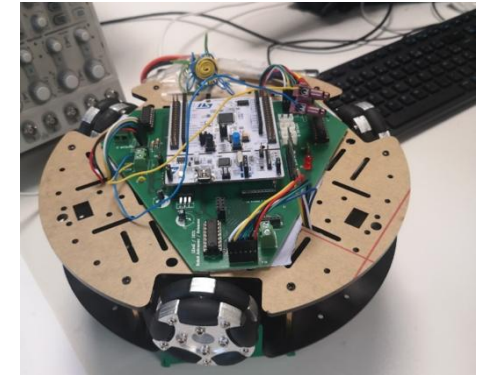


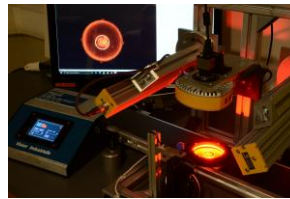


Systèmes embarqués

Spécificités d'un système embarqué

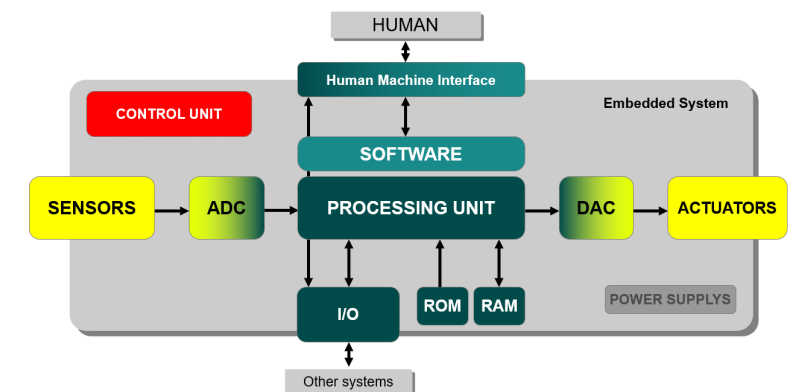
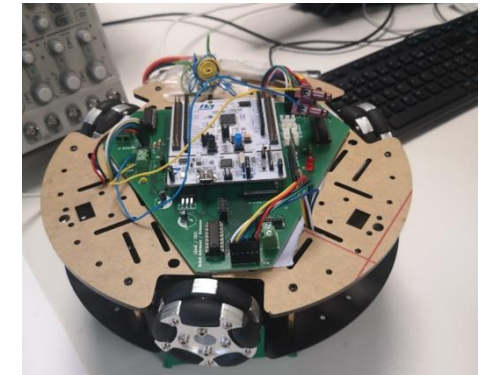
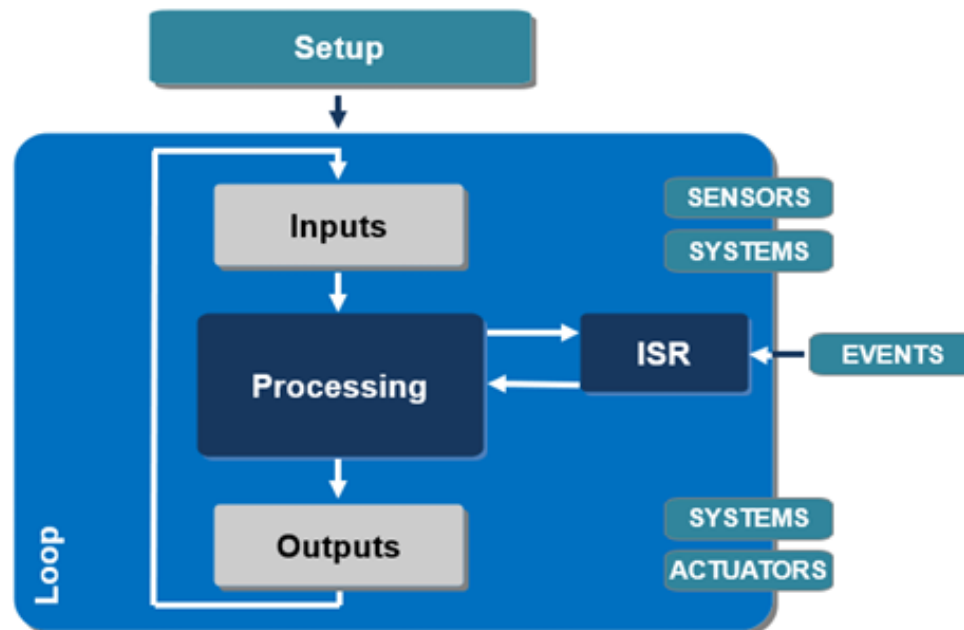
- regroupement d'un **système matériel** et d'un **logiciel**
- **architecture spécifique** / exécution d'un ensemble de tâches particulières
- réactif, autonome et en contact permanent avec son environnement

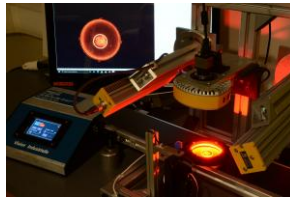




Systèmes embarqués

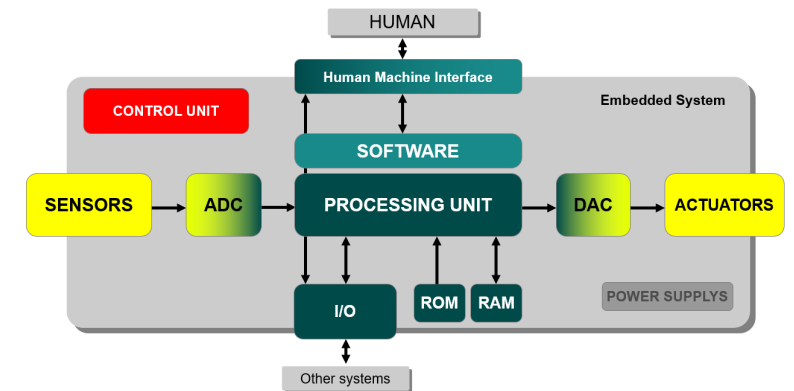
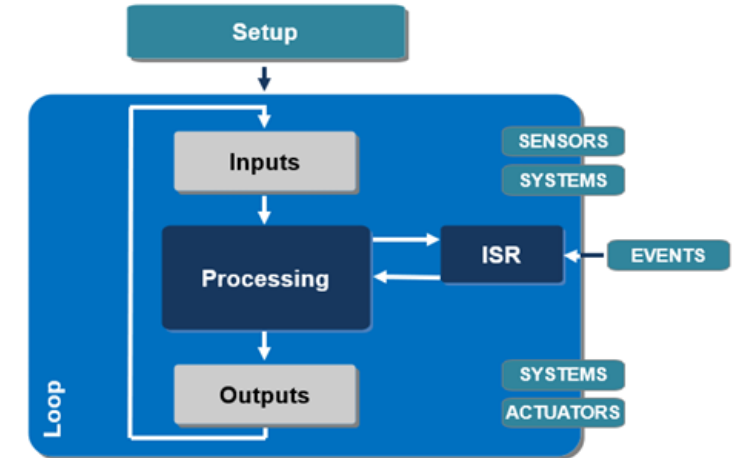
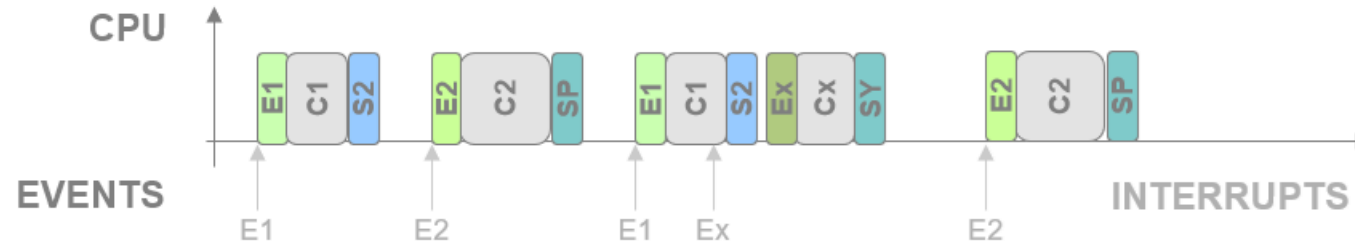
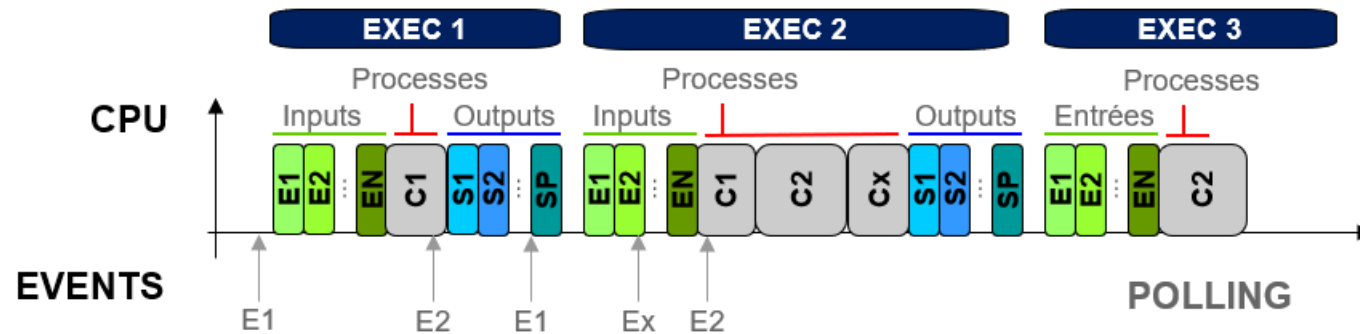
Programmation d'un système embarqué

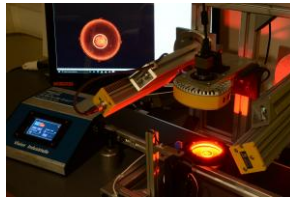




Systemes embarqués

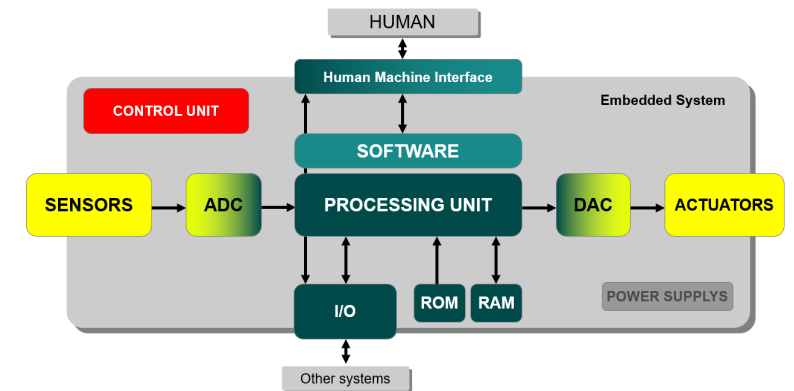
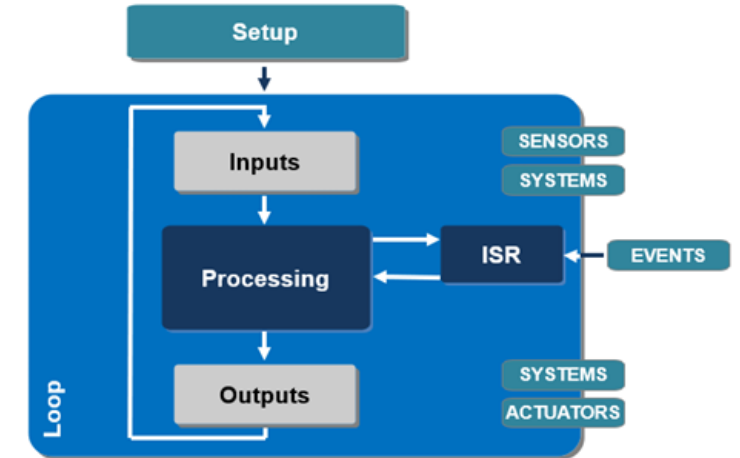
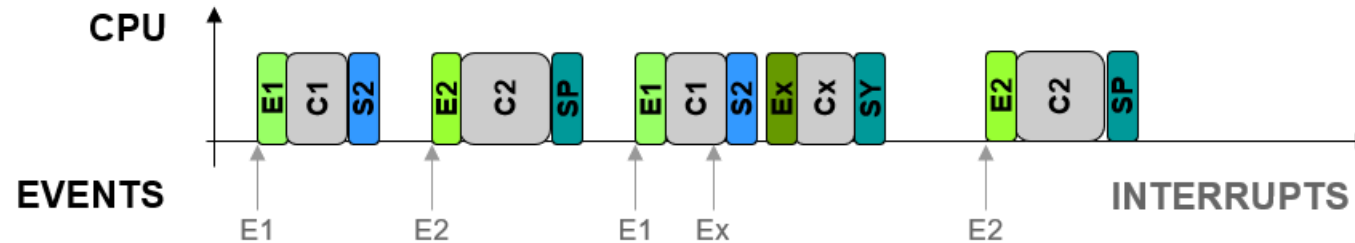
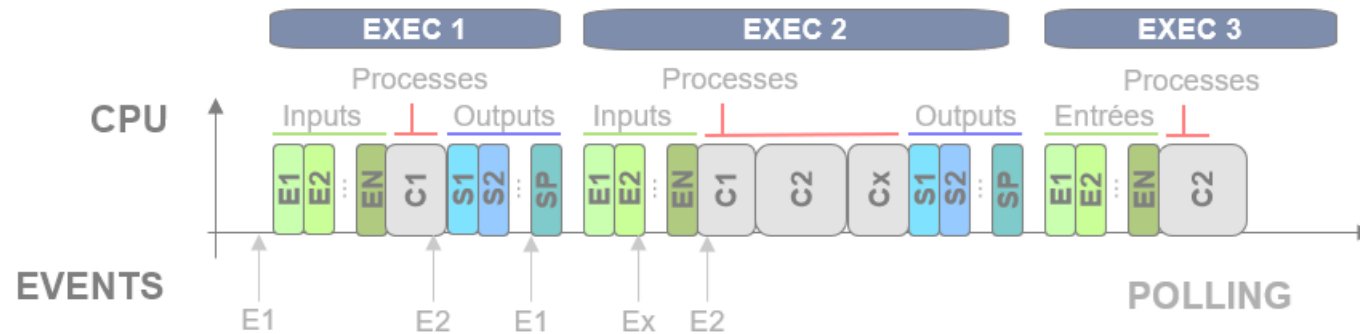
Programmation d'un système embarqué

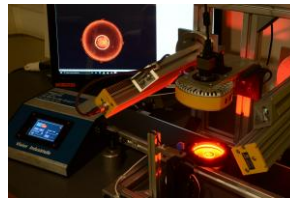




Systèmes embarqués

Programmation d'un système embarqué





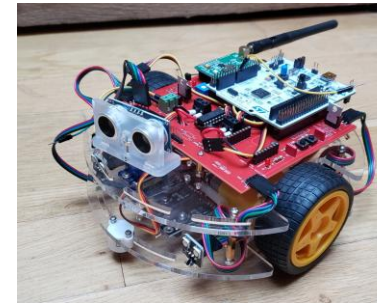
Systèmes embarqués / TP

Robot

STM Nucleo

Robotique

Communication

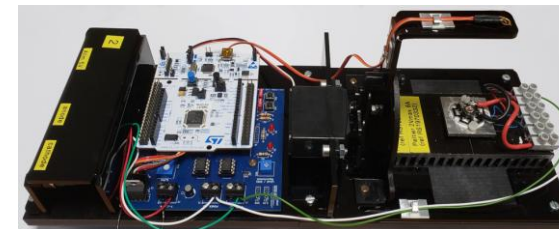


Rayonnement de LEDs

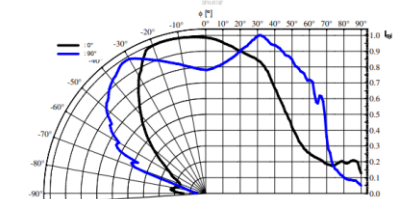
STM Nucleo

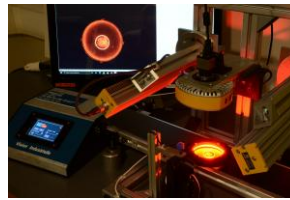
Protocole Série

LEDs Puissance



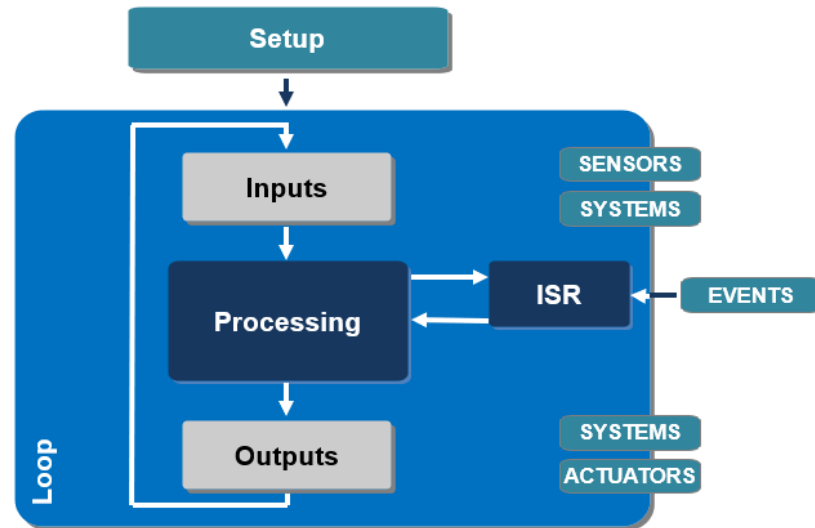
Radiation Characteristics 7). 8)
 $I_{\text{rad}} = f(\varphi)$



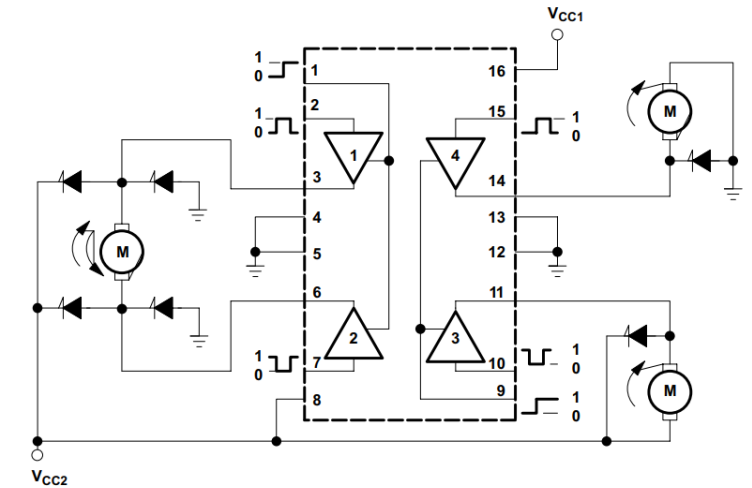


Systèmes embarqués / TP

Interactions avec l'environnement



Pilotage d'un moteur



Principe de la modulation de largeur d'impulsions

