ME 4370 - Mechatronics - Spring 2016

It is all about it Timing - PCs vs. MCUs

Overview :

A microcontroller, or MCU is fundamentally different from a personal computer. MCUs are capable of operating on *precise* timing routines while personal computers run on a *non-deterministic* timing. Therefore, one specialized capability of an MCU is precise timing of input and output as well as internal events. Personal computers cannot do this.

Measure Time :

How could we make a timer? Lets talk about some ideas.

1. moon and stars (sun)
2. seasons
3. sand, hourglass
4. pendulum, time based on ω_n

We use CRYSTALS !!!

Timing on a PC :

Why does it take so long for a to PC application to load? What is going on in the background that we are not seeing? The short answer is, very many things all at once.