Design of Embedded Systems (DES)

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Course 5
1 October 2014
Planning

• 8 Oct: industrial examples + discuss #10 + explain #11 (LED clock)
• 15 Oct: discuss #11 + demo clock + first assignment with small Lego Rover
• 22 Oct: discuss Rover results + Bluetooth extension
• 29 Oct & 5 Nov: Autumn break
• 12 Nov: DSL/Eclipse explanation

NOTE: in HG 01.028
10d: measure interrupt latency by using special cable which connects two PCs:
   – it connects D0 of one PC to interrupt line S6 of other and vice versa
• Enable interrupts on parallel port
• PC1 & PC2 first both set D0 to high \[set \text{ioperm}\]
   – \text{outb(inb(0x378) | 0x1, 0x378)};
• PC1 measures time (\text{now = rt\_timer\_read();}) and set D0 low and high again \[in \text{some order}\]
   – \text{outb(inb(0x378) & 0xfe, 0x378)};
• PC2: interrupt handler sets D0 low and high again
• PC1: interrupt handler measures time
Assignment for 8 October 2014

Xenomai exercise #10

partly: not VMware results, not extra load 10c
- 10a: deliver Linux PC program
- 10b: deliver results of Linux PC (not VMware)
- 10c: NOT
- 10d: deliver program and results

Mail results before Tuesday 7 October 18:00