Control systems and Computer Networks

Embedded and Networked Systems

Dr Alun Moon

Lecture 1.1

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- Networked communicates with other devices and computers to co-ordinate actions and distribute the workload.

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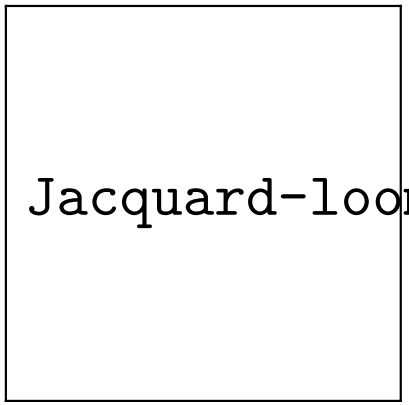
- Challenging, demanding, fun, & very satisfying to work on

Jacqard Loom

Early industrial automation



- Punched Cards controlling loom
- 1804
- manufacturing textiles with such complex patterns as brocade, damask and matelassé

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examples

- More than 86 billion ARM®-based chips shipped to date.
- Microchip – PIC and AVR (ATmega in Arduino)

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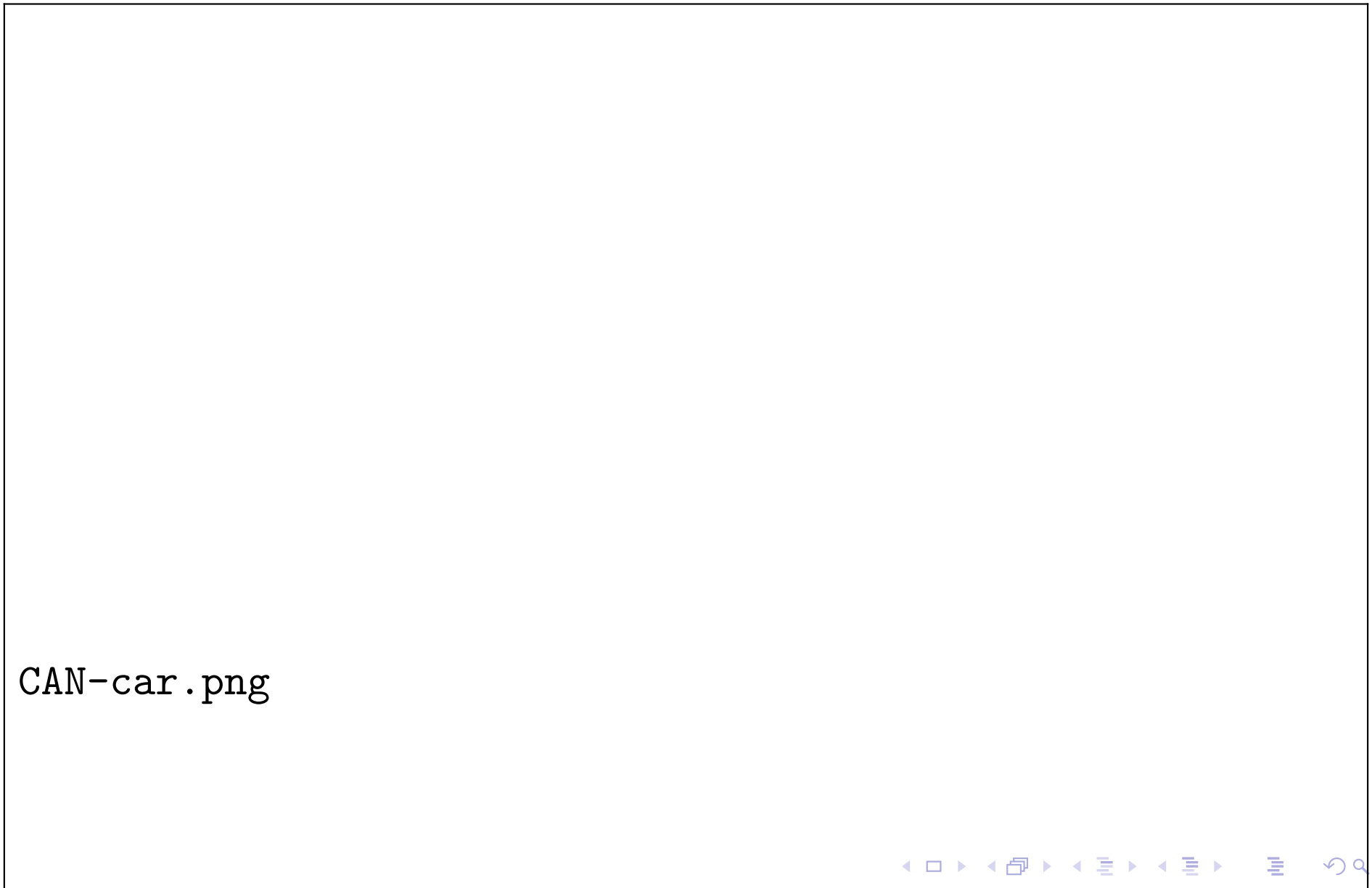
- May be the first "networked" embedded system

Modern Network of systems



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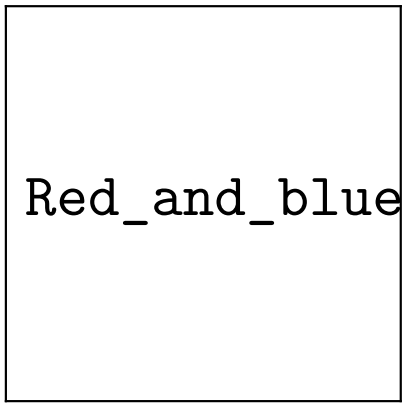

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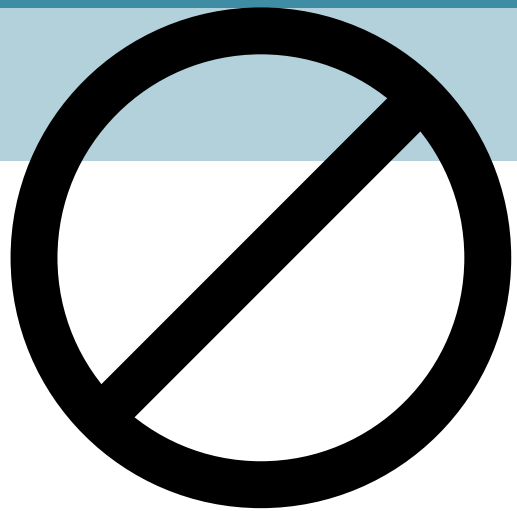

Red_and_blue_pill.png

You take the red pill – you stay in Wonderland, and I show you how deep the rabbit hole goes.

Morpheus, The Matrix