

Embedded Systems

Networks and Embedded Software

Introduction

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Embedded Systems (1)

- Classification



Personal Computer
General-purpose



Embedded System
Specific control functions

Embedded Systems (2)

- Characterization
 - Not seen as being computers
 - I am using a MP3 player, not a computer
 - Embedded into another system
 - Is part of the MP3 player
 - Perform process control
 - Display track list
 - Handle track selection
 - Control volume

Embedded Systems (3)

- Characterization (continued)
 - Environment imposes constraints
 - Size
 - Must fit into device
 - User Interaction
 - Buttons or touch screen instead of keyboard and mouse
 - Power consumption
 - Device must work with batteries
 - Costs
 - Low cost high quantity products

Embedded Systems (4)

- Examples

- Automotive

- Engine Control
 - Antilock Breaking Control



- Communication

- Switch



- Domestic

- Microwave oven
 - Washing machine

