Bluetooth And Smart Clothes

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Introduction

- A smart clothing application consists typically of some sensors and a user input and display device.
- Connection between these should be as unobtrusive as possible.
- A low power wireless link would be most convenient.
Application structure

- Microcontroller unit with sensors, tactile feedback etc. embedded in clothing
- Separate handheld user interface/data gathering device
  - Bluetooth connection in between
- Possibly a wireless Internet connection on the data terminal
Cellular phone is a fairly good choice
- Almost always with the user
- No separate device is necessary

SymbianOS or Java support in cell phones makes it possible to embed the applications in them

Bluetooth link to communicate with the sensor devices

Possibly a link to services on the Internet via e.g. GPRS
Bluetooth link

- Both software for communication and hardware for the sensor device’s side need to be implemented
- Our goal is to make a general purpose Bluetooth enabled microcontroller module suitable for various applications
Bluetooth Protocols

- OBEX
- TCP/IP
- AT Commands
- PPP
- TCS BIN
- SDP
- RFCOMM
- L2CAP
- LMP
- Baseband
- Bluetooth Radio

Audio

Host Controller Interface
Hardware
Goals

- Implementing some example applications
- Testing various ideas, also in the area of smart environments
- Demonstrating associated web services