

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
 - O Bluetooth connection in between
- Possibly a wireless Internet connection on the data terminal





User Interface Unit

□ Cellular phone is a fairly good choice

- **O Almost always with the user**
- **O** 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

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Bluetooth Protocols



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Hardware





Goals

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