Welcome !

3rd **LEIBNIZ CONFERENCE OF ADVANCED SCIENCE**

- S E N S O R S Y S T E M E   2 0 0 6 -

Lichtenwalde   **12. - 14.Oktober 2006**

Ubiquitous Electronic Intelligence/ Sensor NW

The ultimate goal of a sensor network system is "to extract knowledge from the data it collects and to use their information to intelligently react and adapt to its surroundings".
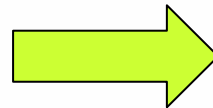
K.A. Delin, 2004

Market for Wireless Sensor Network Nodes

- ➢ Home automation
- ➢ Car automation
- ➢ Industrial automation
- ➢ TeleHomeCare
- ➢ Environm. monitoring
- ➢ Security

- ➢ Building automation
- ➢ Traffic automation
- ➢ Service automation
- ➢ Medical aid
- ➢ Precision acriculture
- ➢ Military

of Nodes >> 10^{11}

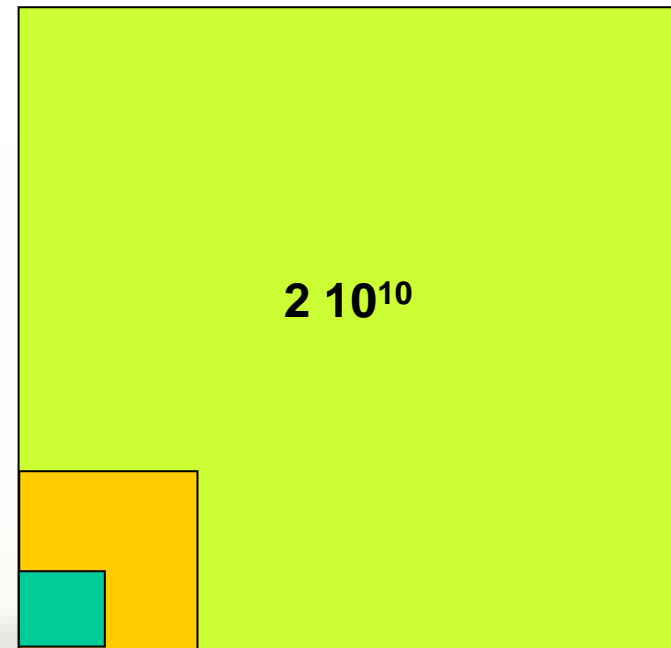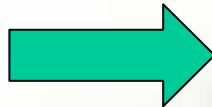# Market Potential for Home Automation

1 … 3 10^{10} potential sensor nodes
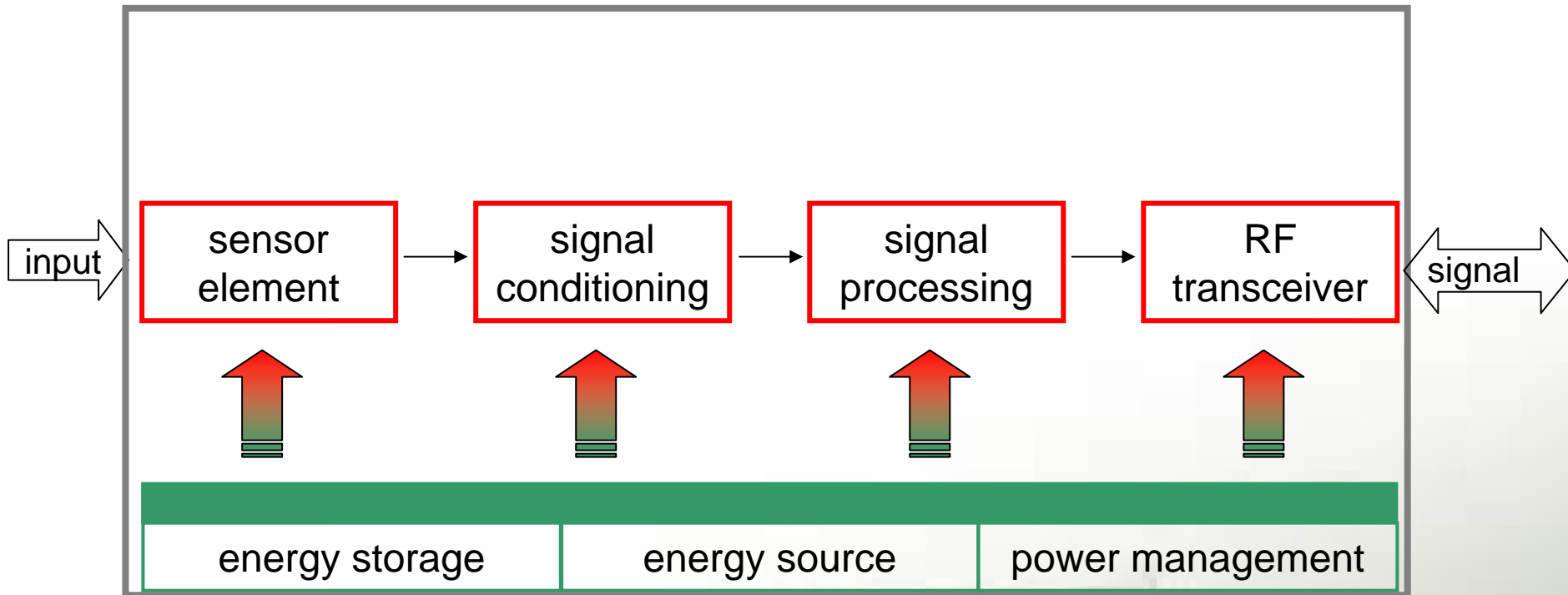
1.3 10^9 computer/mobile phones

2.7 10^8 housholds

2 10^{10}

USA and Western Europe alone

Wireless Sensor Network Node (1)

Power: about 1mJ/b over 50m

Wireless Sensor Network Node (2)

sensor

antenna

SOC (digital, analog, RF)

power supply
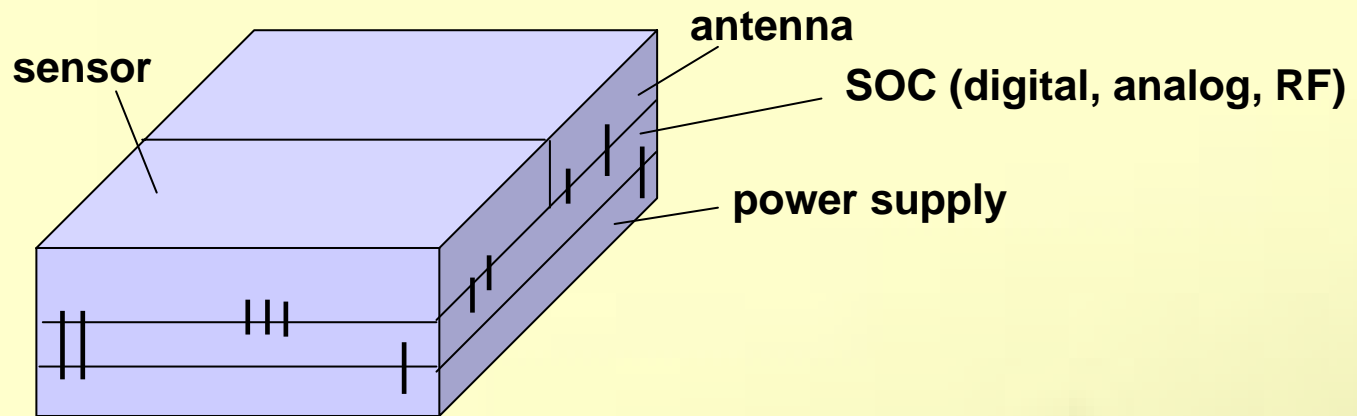
Environmental Issues

➢ **Pollution**

some 10^{10} parts / year ?

➢ **Recycling**

how to get the parts?

Legal Issues

➢ **Privacy**

productivity and comfort vs. privacy

➢ **Liability**

who takes the responsibility?

Social Consequences

- ➤ **Dramatic increase of productivity**

  the 2% rule (J. Riffkin)

- ➤ **Distribution of profit**

  356 of the richest families own 40% of the wealth (J. Riffkin)

The ultimate social Challenge

Free development of every personality

or

?