

## **Backgrounder on Wearable Electronics**

### **Definition of Wearable Electronics**

The term wearable electronics refers to the functional, robust implementation of microelectronic circuits into innovative textiles or garments (smart clothes) in a way that is suitable for everyday use. When electronic capabilities are integrated into textiles, miniaturized semiconductor chips with low power-consumption levels are mounted on the fabric in special housings, and thin conductors are woven into the fabric to make electric connections.

Project partners with innovative ideas for wearable electronics concepts are waiting in the starting blocks. For the textile industry, a new wave of innovation has already begun.

### **The Market for Wearable Electronics**

Modern integrated circuits provide the basis for advances in many areas and make it possible to realize applications that even recently were rejected as inconceivable. The textile industry – one of the largest industries, and one that affects everyone – stands to benefit from the advantages of smart functions that can now be implemented for the first time by integrating electronic elements into textiles. Thus, the market outlook for “smart textiles” is very promising.

According to the analysts from the US market research company Venture Development Corporation (VDC), the global market for wearable computing and communication systems will reach a volume of over 270 million US dollars in 2007, and it is expected to grow at a rate of more than 25 % annually.