



Nanotron

Standards creating competitive advantage

Nanotron is a small-sized engineering company founded in Berlin, Germany, in 1991 and active in the global information and communication technology (ICT) sector. With the support of venture capital, Nanotron started up its own technology development in 2001 and was able to build a patented technology based on CSS (Chirp Spread Spectrum), a spread-spectrum technique that uses wideband linear frequency modulated chirp pulses to encode information. Its first product, the nanometer, was introduced in 2004 to enable the implementation of wireless networks.

Company name: Nanotron Technologies GmbH

Country: Germany

Industry: Information and telecommunication

No. of employees: 25

Revenues/profits:
USD 4.5 million/N.A. (in 2010)

Main products/services:
Nanotron's current product portfolio focuses on physical position localization: wireless products that help to protect and find people, animals and valuable assets by transmitting information about their location.

Main use of standards:

- Product design
- Marketing and sales

Most important standards used:

- ISO/IEC 24730, *Real-time locating systems*



- IEEE 802.15.4, *Low-rate wireless personal area networks*
- DIN EN ISO 9001, *Quality management systems*

Economic benefits generated by standards: USD 1.48 million (close to 33% of sales revenue in 2010).

Key qualitative benefits: Involvement in standards development and early adoption of standards established the company's technology leadership within its field.

What were the major benefits for Nanotron of using standards?

Using standards allowed Nanotron to:

- Become an industry leader for remote sensing and real-time location devices
- Specify product requirements precisely on the basis of standards
- Increase customer confidence in Nanotron products by basing them on standards
- Reduce product development costs
- Increase the accuracy of product descriptions and technical documentation
- Optimize company internal processes

How did standards lead to these benefits?

By engaging in standards development, Nanotron was able to contribute its technology, including patents, to standardization and, hence, shape the content of future standards. At the same time, it was able to bring its internal developments in line with the development of new standards.

A portfolio of products based on International Standards enables Nanotron – which is a small company – to reassure potential customers as to the long-term reliability of its technologies and generate the confidence to invest in its products.

Nanotron was able to exploit its technical leadership image and the network of relations it had developed through its standardization work by establishing commercial relations and licensing its technology to large multinational companies.