Wireless Sensor Networks - Applications, Market and Technology Trends

Description: This report analyzes the development of advanced technologies and markets for Wireless Sensor Networks (WSN). Particular, it addresses and updates:

- Radio and technology standards supporting WSN, including: UWB, ZigBee, Bluetooth, IEEE 802.11
- Related markets
- USN (Ubiquitous Sensor Network) concept, applications and development
- IP-based WSN
- Green telecom and WSN with extremely low requirements to maintenance
- Self-powered WSN
- Unattended Ground Sensor (UGS) technologies and markets
- Applications-WSN and UGS
- Current WSN implementation
- Survey of vendors portfolios.

The report covers a wide spectrum of modern trends in the WSN industry. The USN concept is evolving, and it promises a “universal” global connectivity and processing power that even difficult to predict today-it is expected that USN-based services will make our everyday life safer and allow many new applications that are not imaginable today.

Another area that attracts a lot of the industry attention (and covered in this report) is the design of low power consumption WSN nodes; power harvesting and other techniques make such nodes maintenance very easy-no wiring and no battery maintenance; they also fit to global requirements to make telecom “greener”. The report also stresses the importance of the development IP-based WSNs; such a development allows effective sensors networking and connectivity to external networks.

Target Audience:

This report provides the WSN technologies and markets analysis and assessments; it concentrates on the recent developmental trends. The report is useful for service providers, retail operators, vendors, network operators and managers, investors and end users seeking to gain a deeper understanding of WSN-based structures opportunities and barriers.

For systems integrators, the report provides an analysis and assessment of competing products currently available as well as an estimation of the overall opportunities in the coming years. The end users can gain a more thorough understanding of product’s market and capabilities as well as the economics.

Research Methodology:

Considerable research was done using the Internet. Information from various Web sites was studied and analyzed; evaluation of publicly available marketing and technical publications was also conducted. Telephone conversations and interviews were held with industry analysts, technical experts and executives. In addition to these interviews and primary research, secondary sources were used to develop a more complete mosaic of the market landscape, including industry and trade publications, conferences and seminars.

The overriding objective throughout the work has been to provide valid and relevant information. This has led to a continual review and update of the information content.

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- BBN (Raytheon BBN Technologies)
- Crossbow (WSN)
- Crane (WSN-ZigBee)
- Elta (UGS)
- Exensor (Sensor Systems)
- Intel (Chipsets)
- Freescale (sensors)
- FluxData (UGS)
- Harris (UGS)
- IWT (UGS Mesh)
- L3 (UGS)
- McQ (UGS)
- MeshDynamics (Mesh)
- Millenial Net (Mesh-UGS)
- Nelco (Remote Sensors)
- NorthropGrumman (UGS)
- Octave Technologies (SW, WSN)
- Qual-Tron (Sensors)
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  - Cymbet
  - EnOcean
  - Grape Networks
  - GreenPeak
  - GreyStone
  - JDL
  - Jennic
  - Perpetua
  - Rittal
  - SensorDinamics
  - Sensinode
  - Sentilla
  - Spinwave
  - TI

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