WPAN and WLAN Sub-GHz Communications - Technologies, Markets, Applications

Description: This report provides the WPAN/WLAN sub-GHz 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 WLAN/WPAN opportunities and barriers.

This report addresses properties and benefits of wireless communications in the sub-GHz ISM bands. Particular, it stresses the importance of such technologies in the development of HANs, Smart Grid, BA&C and other related cases.

The following Sub-GHz technologies, related markets, standards and applications are analyzed:

- ZigBee
- Insteon
- Z-Wave
- EnOcean
- Wavenis
- IEEE 802.15.4g
- IEEE 802.11af
- IEEE 802.11ah.

The major attractions of these sub-GHz technologies include:

- Extended range – they allow 5-10 times longer reaches in comparison with 2.4 GHz band transmissions. This is the result of smaller losses when signal is traveling through various obstacles; besides, the sub-GHz ISM bands are less crowded
- Low power consumption
- Support of multiple applications that allow a relatively slow rate of transmission.

The industry shows all signs of the interest in utilization of sub-GHz ISM bands; such communications offer great opportunities that were not realized until recently.

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Digi (RF, Sub-GHz)
Ember (Chipsets)
EnergyHub (Smart Home)
GreenPeak (WSN)
Helicomm (Modules, Sub-GHz)
Jennic-NXP (Chipsets-Modules)
Freescale (Chipsets, Sub-GHz)
Microchip Technologies (Chipsets, Sub-GHz)
Nuri Telecom (AMR Application)
Oki (Chipsets)
Renesas (Platforms, AMR, Sub-GHz)
Silicon Laboratories (Chipsets, Modules, Sub-GHz)
Synapse (Modules, Sub-GHz, Protocol)
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