

Wireless sensors for home care and hospitals

Connecting sensors and equipment with smartphones and cloud services over internet...

The costs of healthcare are increasing due to the rising average age of the population in industrial countries, which has two major consequences: more diseases that result in longer hospital stays and greater numbers of elderly people who need care. With modern communication technology, patients can be at home for longer, but still be connected to the hospital.

Devices, such as patient alarms and biometric sensors, can be connected to a local network for communication with the remote centre where a doctor can supervise the status and recovery of the patient. This is now possible with new technology that works over the existing broadband connection in a patient's home.

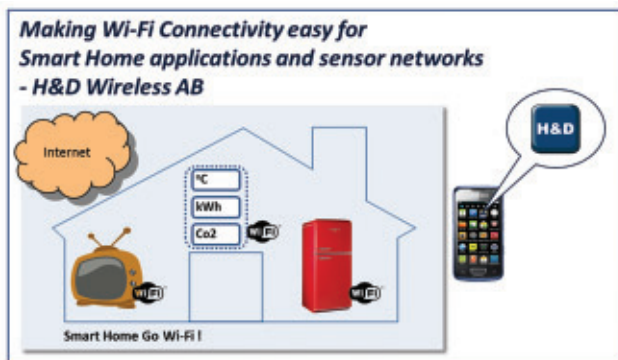
Based on the fact that more than 90% of the homes in Western Europe already have broadband connection, a free communication path and reliable data connection is possible, and is easy to install since the infrastructure is already there. For homes without broadband connection, ordinary PSTN-line or cellular connection can be used.

H&D Wireless AB (HDW) provides a sensor interface that takes care of all the communication from a sensor and sends the data to a specific server, smartphone or cloud service application. Both new and older equipment can be connected, and older equipment doesn't need to be modified as long as there is a

communication port on the equipment, such as a serial port.

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The target areas for these applications are homecare and hospitals. For homecare, both patients rehabilitating and the elderly can benefit from this remote monitoring technology. For instance, a patient's data such as weight, pulse, blood pressure, motion and position can easily provide important information about the status and long-term development of





the patient who is being monitored periodically. In addition, alarms can be triggered by the patient through local measurement, giving additional safety. At hospitals two major applications are in development: resource management and patient data log to record.

Resource management has been identified as an area where hospital costs can be reduced, for example, by knowing at all times where portable equipment is, such as wheelchairs, beds or waste baskets. To have data automatically transferred between the equipment to a patient's records, time and cost is saved and the risk of manual typing errors is removed.

Currently, field trials for weight monitoring over the internet are ongoing, as are research projects on biometric sensors for asthmatic detection using HDW's wireless remote monitoring technology.

HDW is a leading solution provider for the smart home market where the focus so far has been on energy

monitoring and savings for the home; the HDW technology is also being used in many white goods suppliers equipment, such as air conditioners and thermostats, and applications for healthcare are increasing.

HDW wireless modems are already in use with applications such as biometric sensors, resource management and refrigerators in the USA, the EU and Asia.

With the technology and products from HDW, hospitals or other healthcare providers, such as equipment manufacturers or service partners, can easily begin new services to lower costs and improve analysis and diagnosis based on more regular and continuous data. Products are available as standalone box units, which are self-contained with batteries or power adapters and antennas, and for equipment manufacturers HDW also provides its technology in modules that can be built into equipment or sensors. The modules come with all the communi-

cation protocols integrated into the embedded software and are fully FCC/CE certified, which reduces the development time and time to market significantly for both equipment and service providers and for hospitals.

For the full range of all the modules provided by HDW, please visit our website. We are happy to discuss your application and communication needs and are part of the project from the start to ensure a new system is up and running in the shortest possible time.



Pär Bergsten
 Founder and Chief Executive Officer
 H&D Wireless AB
 Tel: +46 708 274557
 par.bergsten@hd-wireless.se
 www.hd-wireless.se