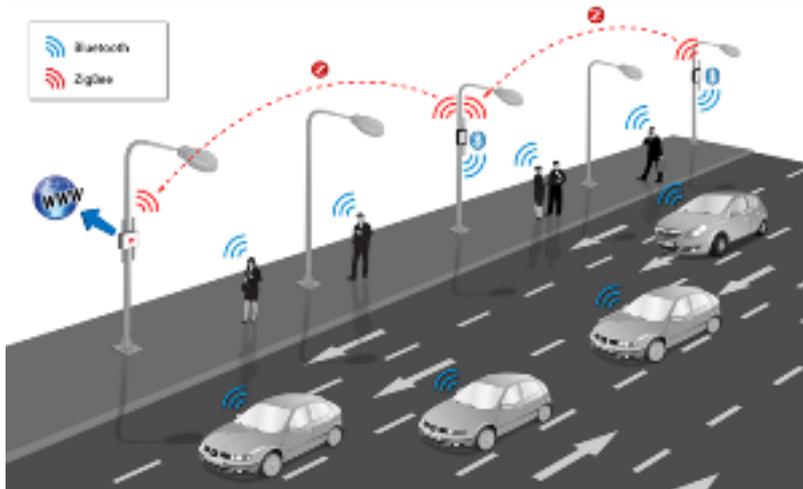


Wasmote Traffic Monitoring Combines Bluetooth and ZigBee

Posted by Janine E. Mooney, Editor November 14, 2011



Libelium announces the launch of the new Vehicle Traffic Monitoring Platform as part of its Smart Cities solution. The platform is capable of sensing the flow of Bluetooth devices in a given street, roadway or passageway while differentiating hands-free car kits from pedestrian phones. Sensor data is then transferred by a multi-hop ZigBee radio, via an internet gateway, to a server. The traffic measurements can then be analysed to address congestion of either vehicle or pedestrian traffic.

Understanding the flow and congestion of vehicular traffic is essential for efficient road systems in cities. Smooth vehicle flows reduce journey times, reduce emissions and save energy. Similarly the efficient flow of pedestrians in an airport, stadium or shopping centre saves time and can make the difference between a good and a bad visit. Monitoring traffic – whether road vehicles or people – is useful for operators of roads, attractions and transport hubs.

Libelium's Vehicle Traffic Monitoring Platform enables system integrators to create intelligent monitoring systems for the urban environment. Libelium's CTO David Gascón says, "With widespread use of Bluetooth devices both vehicular and pedestrian traffic can be monitored anonymously by detecting and tracking the MAC addresses of such devices". He adds, "The platform can help drivers avoid congested roads through provision of real time warnings on electronic displays or via smartphone applications". Similarly, pedestrian monitoring enables improvements to be made in the operation of airports, shopping centres, tourist attractions and sports stadiums. Such data can even be used to assess the suitability of emergency evacuation plans or even to detect 'hot' routes inside commercial centres for marketing and product placing purposes.

The Platform uses the new Expansion Radio Board for Wasmote which allows two different types of radio to be connected at the same time. In this case a Bluetooth radio is used as a sensor to make inquiries and to detect nearby devices, while the

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ZigBee radio sends the information collected using its multi-hop capabilities. Six power levels allow sensor operators to set an “inquiry zone” from between 10 and 50 metres. Although Bluetooth, ZigBee and WiFi all operate in the 2.4 GHz ISM band, Wasmote uses Adaptive Frequency Hopping (AFH) to enable the Bluetooth radio to identify channels already in use by ZigBee and WiFi devices and thus avoid interference.

Libelium provides complete support services to system integrators developing and deploying the Vehicle Traffic Monitoring Platform. The platform will be presented in two of the major Smart Cities events: Intelligent Cities (Hamburg, 8-10 November 2011, booth H/14.3) and in Smart City Expo (Barcelona, 29th November 2011, booth G705).

More info is available at:

http://www.libelium.com/vehicle_traffic_monitoring_bluetooth_sensors_over_zigbee

[1]

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