

ZigBee steers course for telemetry applications

As the ZigBee standard becomes established for low power, low data rate wireless mesh networks, new applications are constantly emerging. Among the latest is a wireless boat autopilot that allows owners of sports boats to control their vessels wirelessly: the new Raymarine autopilot system uses ZigBee-ready wireless chips and networking software from Ember, and has been designed for hydraulic powerboats up to 8m. From anywhere on the boat, the system allows users either to steer a straight course, to go directly to a waypoint, or to choose one of the programmed fishing or trolling patterns, and to monitor marine electronics.

ZigBee is a recently-ratified industry

standard designed for low power, low cost, low data rate wireless mesh networks, operating at 250kb/s in the worldwide 2.4GHz ISM band and also at 20kb/s in the 868MHz band in Europe and at 40kb/s in the American 915MHz band.

ZigBee will be one of the technologies featured in the forthcoming IEE Colloquium on Telemetry and Telematics, scheduled to take place in London on 11 April. Malcolm Streeton of Roke Manor Research will outline the specification features and principle benefits of the ZigBee standard, focusing on its target markets and giving examples to illustrate its ease of use in applications. Mark Norris of Cambridge Consultants will present a

paper describing an experimental ZigBee indoor telemetry system, capable of monitoring mobile tags and providing coarse location assistance. The semi-static ZigBee network contains a mixture of static and mobile wireless nodes: the latter can be associated with hospital patients or high-value equipment in a practical system. The 802.15.4 physical interface and single-chip radio device will be presented, along with some experimental propagation results.

Ember

www.ember.com

ZigBee Alliance

www.zigbee.org

IEE Colloquium

www.iee.org/events/telemetry