

MASTER OF SCIENCE IN ENGINEERING SCIENCE

GENERIC BLUETOOTH DATA MODULE

Ali M. Aljuaied-Lieutenant Commander, Royal Saudi Naval Forces

B.S., Pakistan Naval Academy, 1988

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Advisor: Xiaoping Yun, Department of Electrical and Computer Engineering

Second Reader: Baer Wolfgang, Department of Computer Science

Sensors are being used in many industrial and military applications. The most common ones are temperature and pressure sensors. Communicating with sensors has long been limited either to wired connections between the sensing element and the control station or to expensive, proprietary wireless communications protocols.

The emerging Bluetooth technology enables fast, efficient sensor communication, which eliminates wired connections and the associated manual tasks of initiating, checking, and changing sensor connections. It will be useful for a broad range of data-acquisition, measurement, control, monitoring, and similar applications. Bluetooth products currently available in the market support many usage models such as printer, headset, etc.

This thesis discusses and investigates the feasibility of interfacing sensors with Bluetooth modules by using off-the-shelf components. A prototype interface board was developed and connected to a Bluetooth module. Testing results showed that it is viable to implement Bluetooth-based wireless sensors for shipboard applications.

KEYWORDS: Sensors, Computing and Software, Wireless LAN, PAN, Bluetooth

