Quang Do Huu Ngoc

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SUMMARY:

Quang is embedded engineer who experienced at developing the projects for health care, Lighting System (smart city), Data-logger usually working on ARM Microcontroller: STM32, MSP430, CC2420, CC2541. Working on low-power wireless protocols ZigBee, BLE, RFID also implement MCU interface: UART, SPI, IC2 … I am goal-oriented, critical thinking, inquisitive learner, fully responsible at job . Fluent in English(TOEIC 650+). Core competencies include:

C-Shell • Embedded Linux OS • Development C • Perl • C# • UML • Wireless protocol

PROFESSIONAL EXPERIENCE

PROJECT

Pulse oximeter: A non-invasive method for monitoring oxygen of blood. The advantage of the project is more wavelength of light help measure hemoglobin more precisely. I am responsible for software part. Porting SPI driver for communication between MSP430 F1 and optical biosensing AFE4490, sampling and encoding ADC register to read raw data (absorption of photodiode). Display the graphical results on Windows User Interface. Use UML to draw the flow chart.

Verify quality of software Module: Responsible for writing test case, test script to consider whether source code meet conditions about quality. Using Perl to generate the reports automatically. Getting the projects done on time. Good communication with manager and colleagues.

Street Lighting System: Configure, monitoring, control every cluster street lights. The different of this project is able to manage the sequence of lights on every street with low-power wireless protocols. Handle the faults make sure the system working stable when the environment is changing. Develop firmware allow control system by turning on/off the lights and collect data from light sensor, temperature for Monitoring application. The project take advantage of Multicast-RPL protocols (on ZigBee stack) provide flexible management model of system by associate any lights into different groups (represent a street) and ability to ensure the reliable connections between many street lights.

Data Logger: TI Sensor Tag with sensors reading temperature, humidity from environment and display the result via BLE (CC2541). By running BLE stack a low-power communication to display on tablets or smartphone when needed make a significant power consumption. The firmware can be upload through Over-the-Air downloads (ODA). Additionally, a basic feature is store the parameter with real-time clock (RTC) information into flash help logging the data.

EDUACATION

Bachelor of Engineer in Electronics & Telecommunication
University of Technology • HCM • 2014