Runtime Announces Bluetooth 5 Support for Apache Mynewt

Next Generation Embedded Networking Meets Free Open Source

SANTA CLARA, CA, US, March 30, 2017 /EINPresswire.com/ -- At Bluetooth World 2017, Runtime (http://www.runtime.io/) announced support for Bluetooth 5 for Apache Mynewt, an open source OS for constrained, embedded devices. The first ports are to the Nordic Semiconductor nRF52832 and nRF52840, the most recent addition to the market-leading system-on-chip nRF52 series.

Bluetooth 5 extends the capabilities of the already ubiquitous Bluetooth Low Energy (BLE) protocol spec: these enhanced capabilities include increased range and throughput options; larger frame sizes, advertisements, and advertising extensions; and a "connectionless" mode of operation. This increased functionality underpins the practical application of both IPv6 and mesh networking and true end-to-end application-layer security. Taken together, enhancements in Bluetooth 5 push the envelope of addressable use cases and markets from "consumer" to "commercial and industrial".

"Last year at Bluetooth World 2016, Runtime announced the world's first open source, controller-level BLE protocol stack for microcontroller-class (MCU) devices. This year, we are pleased to announce a step-change with Bluetooth 5 for Apache Mynewt," stated James Pace, CEO/Co-Founder of Runtime. "The benefits of deep, full-stack open source in embedded are proving self-evident: ease of debugging, hooks for manageability, configuration flexibility, and hardware abstraction. An open source, 'OS-first' approach will allow connected product companies to select best-of-breed SoCs, reduce switching costs, and exercise price leverage."

Apache Mynewt is an open source OS and application platform for embedded. Traditionally, connected product companies were stuck with integrating a mishmash of OS components: kernel, file systems, protocol stacks, boot loaders, and other proprietary binaries. The result was a bespoke "OS" that required costly ongoing internal maintenance and, often, incumbent technical debt. Apache Mynewt aims to provide to embedded developers all of the "undifferentiated" components of a general purpose OS with easy and modern build-and-package management. Apache Mynewt is completely open and is designed from the start to be managed: pre-deployment on the workbench and post-deployment in the field. Apache Mynewt includes the world's first commercially-applied OIC 1.1 application-layer framework (aka IoTivity-constrained), bringing a RESTful environment to the true edge of the network.

"The time is right for free open source software in embedded. Embedded SoCs are becoming platforms with more processing, more memory, more storage; and, yet, this MCU-class of devices will never run Linux or Android. The cost of these SoCs is also trending towards zero, ensuring their ubiquity and realizing the promise of the IoT," asserted Sterling Hughes, CTO/Co-Founder of Runtime. "Processing and connectivity are table stakes for an increasing number of products. Bluetooth 5 will increase the footprint of the IoT—ensuring a modern development platform, security, manageability, and open protocol stacks are key goals, which Apache Mynewt addresses."

Bluetooth 5 support is currently in private beta and will be released to open source in 2Q2017.

About Runtime
Runtime provides cloud-based management of connected devices and is a complete solutions provider for consumer, medical, commercial, and industrial IoT applications._

Free, open source software is essential to all Runtime offerings. Runtime supports Apache Mynewt, an embedded OS optimized for networking and built for remote management. Apache Mynewt provides the components developers expect from a modern general purpose OS, but for constrained devices that are incapable of running either Linux or Android. Check out http://www.runtime.io/

About Bluetooth® Wireless Technology
Bluetooth technology is the global wireless standard for simple, secure connectivity. Propelled by a global community of nearly 30,000 companies, Bluetooth serves to unify, harmonize, and drive innovation in the vast range of connected devices all around us. Through collective creation and shared technical standards, Bluetooth simplifies, secures and enriches the technology experience of users worldwide. Find out more at http://www.bluetooth.com.

About IoTivity and the Open Connectivity Foundation
IoTivity and the Open Connectivity Foundation are Linux Foundation Collaborative Projects. IoTivity delivers open source reference implementations of OCF standards. The current OCF baseline specification is OIC 1.1.

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