IBM and MEMSIC bring ease of use to wireless sensors

I-Micronews

IBM announced a contract with MEMSIC Inc. (NASDAQ GM: MEMS), a leading micro-electromechanical systems and sensor solution provider, to offer one of its most popular sensors with new IBM software that enables enterprises to build smarter products and systems. The announcement was made at the 2010 Sensors Expo & Conference.

As billions of interconnected chips exist in the world today, companies and governments are working to take advantage of wireless sensors and analytics to

* reduce cost and waste;
* improve efficiency and productivity;
* improve the ability to anticipate changes; and
* raise the quality of services, such as, healthcare, building maintenance and transportation.

However, programming and connecting wireless sensors can be challenging, therefore limiting the ability of companies, governments and universities to take advantage of wireless sensor technology.

To change this, MEMSIC will bundle its IRIS wireless sensor motes with a new software platform, invented by IBM scientists in Zurich, called Mote Runner. This advanced hardware and software combination offers organizations a proven, low-cost sensor with open, portable, and developer-friendly software.

Motes — also known as wireless sensor nodes — gather sensory information, such as temperature, movement, or light and communicate that data across a network of wireless sensors.

In a separate announcement, IBM also announced the availability of the Mote Runner development kit as a free download on its emerging technologies website.

"*As a leading sensor manufacturer and wireless sensor networking infrastructure solution provider we are delighted to see ease of use brought to wireless sensor networks without compromising efficiency,*" said **Steve Tsui**, Vice President of Worldwide Sales, System Business at MEMSIC, Inc. "*We share the same vision as IBM, of a world that is instrumented and connected with sensors, which is why we are pre-installing Mote Runner on our IRIS mote. This powerful combination will provide an efficient, scalable, easy to implement and cost effective solution.*"

About IRIS and Mote Runner
The MEMSIC IRIS is a 2.4 GHz wireless sensor mote used for enabling lowpower wireless sensor networks, such as monitoring the temperature and electricity in a

high rise office building or traffic patterns on a busy intersection.

Now pre-installed with Mote Runner, IRIS users can benefit from:

* The use of a programming language such as Java, in combination with a highly efficient virtual machine developed from the ground up for use in sensor networks, providing application portability and shielding developers from the complexities of the underlying hardware without sacrificing performance
* A simulation environment, a web-based management dashboard, and an integrated development environment based on Eclipse, provide a userfriendly platform for testing, debugging, and maintaining applications for MEMSIC IRIS motes running Mote Runner. This enables advanced simulation prior to deploying motes in the field, thus eliminating most programming errors before deployment
* The Mote Runner execution engine has been designed to be very efficient in terms of power* consumption while delivering a high runtime performance; thus the combined Mote Runner/IRIS mote can be ideally used with energy harvesting techniques, to utilize for example, solar power as a source of energy.
* Physical access to remotely deployed sensor motes to update them with new functionality is not an option for many mote deployment usage scenarios, such as installations across large agricultural areas, in a multi-story building, or in locations with unique climates such as a rain forests or glaciers. Mote Runner caters to this by including the ability to push or pull changes wirelessly with minimal interruption to the established network.

"*Mote Runner on MEMSIC IRIS motes is a wireless sensor network in a box,*" comments **Thorsten Kramp**, computer scientist and developer of Mote Runner at IBM Research - Zurich. "*The combination of MEMSIC's popular IRIS mote with Mote Runner makes developing for and operating a wireless sensor network easy and straightforward.*"

The contract was signed in June 2010. Sets comprising Mote Runner on MEMSIC motes can be ordered via all MEMSIC distribution and sales channels starting July 2010.

Available on IBM alphaWorks
To encourage exploration, the Mote Runner software development kit is available free of charge for non-commercial use to universities and students and available as a 90-day evaluation trial for corporate users on the IBM alphaWorks website. IBM also is also providing free support on the IBM alphaWorks website.

About IBM
For more information see www.ibm.com/smarterplanet [1]

About MEMSIC Inc.
MEMSIC Inc. (NASDAQ:MEMS), headquartered in Andover, Massachusetts is a leading provider of MEMS sensor components, sophisticated inertial systems and leading-edge wireless sensor networks for diverse real world applications ranging from automotive, consumer, industrial and aerospace. Our proprietary approach combines leading edge technologies with mixed signal processing circuitry to

provide an industry-leading level of application support.

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