Sun Software Smartens RFID Readers

RFID reader makers ThingMagic and SIS Technologies are adding Java System RFID Software to their devices to perform tasks now managed by external middleware.

By Claire Swedberg

June 29, 2005—Sun Microsystems has announced it is working with a number of RFID reader (interrogator) and device companies, including Intermec, SIS Technologies and ThingMagic to help create smart RFID readers and other devices for use with radio frequency identification. The devices will use the newest version of Sun's Java System RFID Software—for Java Platform Standard Edition (Java SE) and Java Platform Micro Edition (Java ME)—to enable interrogators and appliances to process data as they read RFID tags, as well as filter data. In so doing, they can take on many tasks currently managed by external middleware and eliminate much of the data previously sent directly to the user's network.

At the JavaOne Developer Conference this week in San Francisco, ThingMagic is running Java ME and the Sun Java System RFID Software on its Mercury4 RFID readers to show how intelligent interrogators can enable greater levels of sophistication in processing information. SIS Technologies' 915 MHz Mustang reader is already available with Java SE and the Sun Java System RFID Software.

Most basic interrogators, according to Sun's director of RFID products, Sam Liu, "are nothing more than RFID transceivers." They read RFID tags and send data to the network. With the new Sun Java system, he says, "smart readers can intelligently process the data before it ever hits the network."

Such processing can be used for very basic inventory tracking, such as determining how many cases have passed through the warehouse in a specific period of time. Sun Java System RFID Software will allow the devices to provide that information to the user. In addition, more complex tasks, such as tracking particular objects or recalling defective or outdated items, can also be facilitated by smart readers. In such cases, end users can have the device programmed to signal when a particular tag or kind of tag passes it.

By providing data processing and filtering capability at the device level, Liu says, Sun Java system software will also eliminate the need for a portion of external RFID middleware, simplifying the entire system for end users.

While the Sun Java System software smart readers will not replace the market for basic interrogators, he adds, they offer an alternative to businesses with high inventory traffic. These businesses often receive volumes of inventory at read rates of multiple times per second. The smart readers would reduce infrastructure costs by decreasing the amount of middleware necessary, as well as simplifying the data processing system for the end user.

The Sun Java System RFID Software, which supports EPCglobal ALE (Application Level Events) specification, is available now for Java SE and will be available in July for Java ME. When installed in an RFID reader, Jave SE or ME supports of the operation of Java-based middleware such as Sun Java System RFID Software. Reader manufacturers such as SIS Technologies will pay a varying amount for the Java

software, Liu says, on a per-device model.

The software uses Jini Network Technology, an open architecture that enables RFID reader manufacturers to create network-centric services. It also integrates with the Java management console, which allows provides end users a way to centrally monitor and manage large numbers of RFID devices.