

U.S. Orthopedic Maker Plans to Track Surgical Kits

Symmetry Medical, a provider of orthopedic equipment and implants, plans to attach RFID tags to its products as part of a partnership with Solstice Medical, a developer of RFID solutions for medical equipment.

By Beth Bacheldor

March 13, 2007—[Symmetry Medical](#), an independent provider of implants, instruments and carrying cases to orthopedic device manufacturers, plans to begin attaching RFID tags to its products as part of a partnership with [Solstice Medical](#), a provider of solutions for managing the life cycle of medical equipment.

The two companies are working together to introduce RFID into the medical device supply chain. This should enable manufacturers, distributors and health-care providers to better track, inventory and maintain orthopedic implants; the instruments utilized to embed and remove the implants and perform other surgical procedures; and the carrying cases used to organize, secure and transport such medical equipment and supplies.

"RFID is a technology that should have profound impact on how surgical implants and medical assets are managed," says Barry Parker, senior VP of design and development for Symmetry Medical, based in Warsaw, Ind. Parker says RFID tags will help health-care providers track cases containing hundreds of instruments, all of which must be manually counted several times, including at the start and conclusion of surgery. Having RFID tags to track each instrument within a case, he adds, will make it easier to ensure that all instruments are accounted for—and that none are mistakenly left inside the patient.

Symmetry Medical also stands to gain from the RFID technology. "Our benefit should come in the form of adding more value to our customers," Parker says, explaining that RFID will provide its customers new tools to track the instruments they consign to hospitals. Additionally, Symmetry plans to leverage RFID technology within its own manufacturing processes. "We do have some tangible benefits to data collection," Parker explains. "Because we execute the manufacture of an entire instrument kit across multiple, global facilities, we can use the RFID technology to logistically coordinate all of the processes and parts."

Solstice Medical will provide Symmetry the RFID tags, as well as related engineering and integration expertise. In addition, Solstice will offer its expertise in acquiring the necessary related hardware, such as RFID interrogators.

Although Symmetry and Solstice have not yet determined which of Symmetry's products they will start tagging, and when, they have decided the tags will be EPC UHF Gen 2 tags, designed to withstand washes, decontaminations and steam-autoclave cycles in excess of 275 degrees Fahrenheit (a typical method hospitals employ to sterilize instruments). "We want to create a standards-based platform so standard readers can be used," says Daniel Sands, CEO of Solstice Medical, based in Fort Wayne, Ind. "We are trying to create an environment in the supply and logistics market that is easy to implement."

According to Parker, the partnership between Symmetry and Solstice puts the two companies in a good spot to begin working with an orthopedics device supplier. "In terms of working with the original equipment manufacturers (OEMs), there is a lot of interest," Parker says. "Now, it is about finding the right OEM that wants to utilize the RFID technology. We are now at the point where we can respond to that need."

For the past several months, Solstice has been testing a variety of active and passive RFID tags it has developed, to determine which tags are most suitable to use on surgical implements and medical implants (see [Lab Focuses on Testing Tags for Health-Care Applications](#)). The first tag the company intends to release commercially, in April, is a rigid EPC Gen 2 passive UHF tag. In addition, Solstice eventually expects to resell other vendors' passive HF and LF tags, as well as some active tags. Sands anticipates that most of his company's solutions for supply chain applications will be based on standards, but for closed-loop apps, it might consider proprietary air-interface protocols.

The RFID tags are intended to help track and trace the movement of medical devices and instruments up and down the supply chain, and to assist organizations in accounting for all the devices within a certain case. What's more, the tags can document when an instrument goes through the required sterilization processes, thus ensuring proper care has been taken and improving patient safety.

RELATED ARTICLES Other organizations within the medical device supply chain are already tagging products. Last summer, [Biomet](#), an orthopedic implants manufacturer, conducted an RFID project in which it added 13.56 MHz passive tags to five kits, each containing about 100 instruments and parts used to implant orthopedic knees (see [Biomet Tags Its Orthopedic Knees](#)). The RFID tags were designed to help make sure each set was complete before it was shipped to a surgeon, and to determine which parts or instruments were used or missing when the kits returned to Biomet.

Moreover, the [U.S. Food and Drug Administration](#) (FDA) is investigating how the use of a unique device identification (UDI) system, such as one making use of RFID technology, might improve patient safety by tracking medical devices in the supply chain (see [FDA Reviews Comments on Device-ID System](#)).

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