

Siemens Launches RFID Pilot to Track Surgical Sponges, Procedures

The company's IT Solutions and Services division is working with Munich's Isar River University Hospital.

By Beth Bacheldor

April 24, 2007—[Siemens IT Solutions and Services](#), a division of [Siemens](#), has teamed with a hospital in Munich, Germany, to test the use of active and passive RFID tags to track sponges, swabs and other items used during surgery, and to track the surgical process itself.

[Klinikum Rechts der Isar](#) (Isar River University Hospital) wants to test how well RFID technology can be used to ensure that sponges and swabs utilized during surgery aren't inadvertently left behind inside a patient's body. According to Siemens, the project will leverage passive 13.56 MHz RFID tags, which will be manually woven into the sponges for the purpose of the test.

The concept of tagging RFID sponges, while still mainly in experimental stages, isn't new. Since 2004, Pittsburgh-based startup [ClearCount Medical Solutions](#) has been developing a surgical sponge with an embedded passive RFID tag (see [Surgical Sponges Get Smart](#)). In November 2006, [Medline Industries](#), an Illinois distributor of medical supplies, began marketing a system using passive 145 kHz tags to detect any surgical gauze, towels and sponges that might have been left behind in a human body after an operation (see [Medline Markets RFID System for Surgical Sponges](#)).

The Siemens and Klinikum Rechts der Isar project, however, may be the first such initiative to test RFID-tagged sponges that has been conducted by such a major computer company. Siemens IT Solutions and Services provides a range of IT solutions, including consulting, outsourcing and systems integration, to companies across numerous industries. It also provides IT services to other internal Siemens divisions, and serves as Siemens' research and development arm. Siemens is a global provider of electrical engineering, electronics and IT products and has approximately 475,000 employees. The company's sales in 2006 were reported at about \$119 billion.

Siemens IT Solutions and Services has also participated in other RFID projects. In February, emergency medical information service provider [MedicAlert](#) and [California State University-Stanislaus](#) (CSU) began a 12-week pilot testing whether RFID-enabled medical cards can provide a more efficient method of collecting and forwarding patients' health-related data at the point of medical service. The pilot is using RFID interrogators supplied by Siemens IT Solutions and Services (see [MedicAlert Aims to RFID-Enable Medical Records](#)). Siemens and Klinikum Rechts der Isar plan to install a stationary RFID reader in the operating room to scan the tags on sponges and swabs so they can be tracked from the moment of removal from storage, as they are used during the surgery and upon being discarded.

RELATED_ARTICLES Additionally, Siemens is also working with the Munich hospital to track surgical

staff during procedures. Before scrubbing down, each staff member will affix an ID card to his or her clothing containing an active RFID transponder that identifies the person's role (such as anesthesiologist). As nurses and doctors enter the operating room, a fixed reader will scan each card. At the end of the surgery, the staff will turn in their RFID-enabled cards, which will then be scanned again. In this manner, the RFID reader will document the start and stop times of procedures. During surgery, a reader will document each staffer's position as well. Siemens and the hospital have yet to determine the operating frequency of the active tags, the company says.

Siemens is supplying both the tags and readers for the project. Testing of the hardware kicked off last month. The company is now working to improve the reading distance and define the specific medical processes that will be involved in the project. Both projects are expected to go live this summer, and are slated to last three years.

Copyright ©2005 RFID Journal, Inc. All Rights Reserved