

13 Vendors Submit EPC Proposal

A group of RFID technology providers have submitted a proposal for a new UHF Electronic Product Code protocol.

By Mark Roberti

Apr. 20, 2004—Thirteen providers of RFID and related technologies announced today that they submitted a proposal for a UHF Generation 2 protocol specification to [EPCglobal](#), the organization charged with commercializing Electronic Product Code (EPC) technology. The list of companies behind the proposal includes [Intermec](#), [Philips Semiconductors](#), [SAMsys Technologies](#), [Texas Instruments](#), [UPM Rafsec](#) and [Zebra](#) (the full list appears at the bottom of this article).

EPCglobal wants to create a single UHF protocol that will replace the current Class 0 and Class 1 protocols and work well around the globe. It created a set of criteria required by end user companies and had asked RFID vendors that have joined the organization to submit proposals by Apr. 14 for a Gen 2 protocol that would meet those requirements. Three other proposals were received.

EPCglobal and the [Auto-ID Labs](#), the research group supporting EPC technology, will evaluate the submissions based on the end user criteria and a detailed engineering analysis. EPCglobal may also call on independent third-party experts to help with the evaluation, says Sue Hutchison, EPCglobal's product manager and facilitator for the organization's hardware action group.

"Our job over the next 45 to 60 days is going to be to do a full and complete technical evaluation of each proposal against the end user requirements to see which approach—or combination of approaches—will give us a workable second-generation protocol that will serve the EPCglobal community for at least the next few years," Hutchison says. "We know a lot more now than when the Version 1 protocols were published. We have the benefit of implementation experience, which will allow us as a community to come forth with a much stronger second-generation protocol."

If needed, EPCglobal may hold a "bake off"—performance tests using prototypes of EPC tags based on the different protocols proposed—before the hardware action group completes a final draft specification for the protocol.

"Our goal is to finish the last-call working draft on a single second-generation UHF protocol before we get too far into the summer," says Hutchison. "We will then continue to work through the EPCglobal standards development process for ratification by our board of governors well before the end of the year."

Hutchison declined to name the companies behind the other three proposals, citing EPCglobal's need to maintain complete neutrality in the selection process. The proposal by the group of 13 vendors is a refinement of a previous submission that the group made in the final weeks of the Auto-ID Center's existence, according to Bill Allen, marketing communications manager for Texas Instruments. (The Auto-ID Center developed the Class 1 and Class 0 protocols and then handed off commercialization of the technology to EPCglobal and research to the Auto-ID Labs.)

The 13 companies are seeking to jump-start the process of creating a second-generation EPC specification. "Hopefully, this submission will spur the market and move things forward," Allen says. "We're ready to rock and roll."

The proposed specification describes a 96-bit field-programmable RFID tag that can operate in the UHF spectrum (868 to 956 MHz) globally and supports secure communication between reader and tag. The protocol includes a 32-bit kill command that renders the tag inoperable. Allen says systems using the protocol would be able to read 1,700 tags per second in North America and 600 per second in Europe, where there are tighter restrictions on the power output of readers.

Allen also said that the protocol is compatible with ISO 18000-6, a proposed global standard for RFID tags operating in the UHF spectrum. If EPCglobal endorses the group of 13's proposal, the companies involved plan to try to get the specification approved quickly as an international standard by the International Organization for Standardization (ISO). Hutchison says one of EPCglobal's goals is to make the new specification an ISO standard, and EPCglobal is looking at when it should start moving that process forward.

Note: The 13 companies supporting the proposal are [AWID](#), [Impinj](#), [Intelleflex](#), [Intermec](#), [MeadWestvaco](#), [Intelligent Systems](#), [Philips](#), [QED Systems](#), [SAMsys](#), [Savi Technology](#), [Sirit Technologies](#), [Texas Instruments](#), [UPM Rafsec](#), and [Zebra](#).

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