

Gen 2 Finds a Path to ISO Approval

An EPCglobal committee has announced a recommendation that solves an issue concerning eight bits in the EPC UHF Gen 2 standard's numbering scheme.

By Mary Catherine O'Connor

Jan. 18, 2005—When the [EPCglobal](#) announced last month that its board of governors had ratified the ultra-high frequency (UHF) second-generation air interface protocol as an EPC standard, one issue stood in the way of it being accepted by the International Organization for Standardization (ISO). EPCglobal announced today that a committee comprised of representatives from EPCglobal, ISO and GS1 (formerly called EAN International) has agreed on an approach to resolve that issue.

The matter concerned eight bits of data in the EPC numbering scheme. ISO designates these eight bits for an Application Family Identifier (AFI) to identify the source of the product, but EPCglobal, which refers to these eight bits in an EPC as a EPC header, was concerned that ISO would not set aside enough numbers to accommodate all of the EPC source numbering needs (see [Gen 2 Faces Eight-Bit Obstacle](#)). The committee's recommendation is that a preceding binary indicator (a bit consisting of either a one or a zero) be added to the Numbering System Identifier field in the tag that would identify the following eight bits as either an AFI or an EPC header.

"So for example, if I have a one in that first position, it means I read the next eight bits as an AFI. If I have a zero there, I read the next eight bits the way EPCglobal reads the eight bits," explains Sue Hutchinson, director of product management for EPCglobal US.

"This [assuming ISO approves the Gen 2 standard] allows us to keep both the EPC and the ISO communities whole, but allows them to use the same air interface protocol for UHF," she says. "This also allows an end user to buy UHF Gen 2-compliant tags and readers that can be used for a very broad range of applications, both inside the supply chain and outside the supply chain. "

Hutchinson says the AFI committee members went through a rigorous technical process to make sure that of all the alternatives they explored, they would propose the one that offered the best and most flexible usage for everyone. The committee's recommendation will now be submitted as an enhancement request in the EPCglobal standards process. It will also be submitted to the ISO 18000 standards body, which is meeting next week, Jan. 24-25, in Florida.

Steve Halliday, president of consultancy High Tech Aid, is the head of the EPCglobal Hardware Action Group, which developed the Gen 2 standard, and is also on the ISO committee that will consider the Gen 2 standard for approval under the ISO 18000-6C standard. He says there's little that can be done to hasten the ISO approval process, and that it will likely be roughly 11 months before ISO declares or rejects the standard.

"We'll be taking the EPCglobal documentation and turning it into an ISO document so that it can be sent out to ISO members for its first ballot period, which will last three months," he says. "Once this is complete, we'll hold a ballot resolution meeting, make any necessary changes to the standard, and then send it out for the

second, four-month balloting period. After this, there is a final, two-month ballot. It's a painfully slow process, but the news of this recommendation is very positive, and I am confident that it will work well."

"In context," says Hutchinson, "this is just another step along the way for us. We've been saying all along that as soon as the Gen 2 standard was ratified by EPCglobal, we'd be submitting it to ISO to work through their ratification process. We want the world to end up with a harmonized UHF air interface protocol. It's what's best for all of us."

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