

EPCglobal Ratifies ALE Software Standard

Application-Level Events, the first EPCglobal software standard to be ratified, directs how EPC data is collected and filtered.

By Mary Catherine O'Connor

Sept. 23, 2005—[EPCglobal](#), a not-for-profit standards organization that is commercializing and driving the global adoption of Electronic Product Code (EPC) technology, has ratified an Application-Level Events (ALE) software standard for managing EPC data. ALE software, which can process tag data from Gen 1 or Gen 2 EPC tags, provides an interface for filtering and consolidating EPC data from interrogators.

Bob Celeste leads EPCglobal's Software Action Group and its Filter and Collection Working Group, which led the ALE standardization process. He explains, by way of example, "if you have a pallet full of tagged cases that enters a reader field, the ALE [software] will tell the readers something like, 'I only want to hear from the pallet tag,' or it might say, 'I only want to read case tags and not the pallet tag.'"

ALE software is important because it enables users of RFID technology to control the EPC data collected and avoid overloading their systems with useless data. Eventually, these users may want to share their EPC data with other trading partners through the emerging EPCglobal Network, an Internet-based network of technologies and services enabling companies to retrieve data associated with EPCs. Standards-based ALE middleware will help ensure that this data is generated in a consistent manner.

According to Celeste, ALE software can be used to write data to specific tags within a reader's interrogation field, rather than all of the tags. It also enables users to associate a specific read of an EPC tag with the interrogator that picked it up. (For an analysis of ALE capabilities, see [ALE: A New Standard for Data Access](#)).

Representatives from more than 100 companies helped develop the standard. Celeste says the standardization process took about a year, and that a number of software vendors, including [Acsis](#), [ConnecTerra](#), [GlobeRanger](#), [IBM](#), [Progress Software](#) and [Reva Systems](#), have developed RFID middleware using the specification that has been ratified as the EPCglobal ALE standard. The companies all performed tests to see if the ALE software systems they'd each developed, based on the EPCglobal specification, would interoperate, so as "to ensure that the specification would actually work in the real world."

Now that the ALE has been standardized—the first software standard to be ratified by the EPCglobal board of governors—EPCglobal will begin certification testing of various vendors' ALE middleware. The process will be similar to the certification testing EPCglobal has already begun for hardware based on the Gen 2 standard (see [EPCglobal Certifies Gen 2 Hardware](#)). The first round of tests will certify whether individual ALE-based software products conform to the standard. Secondary tests will confirm whether they interoperate with other ALE middleware.

End users of RFID technology might already be running RFID middleware with an ALE layer based on the ALE standard, such as those made by ConnecTerra or other companies with representatives in the filter and

collection working group. Now that the ALE standard has been finalized, Celeste says, more middleware providers will likely soon begin using it.

The EPCglobal ALE standard is royalty-free, so companies building it into their software offerings do not need to pay licensing fees to any organizations. In March, *RFID Journal* reported that [Intermec Technologies](#), an Everett, Wash., RFID systems provider and one of the largest holders of RFID patents, had made a claim that it would charge reasonable and nondiscriminatory (RAND) royalties for the use of two pieces of intellectual property it said were part of the draft Application-Level Events (ALE) specification (see [Intermec Files New EPC Royalty Claims](#)). EPCglobal's patent counsel later determined the Intermec IP is not essential to the ALE standard, and Intermec agreed to its decision.

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