

Foundation to Create Free EPC Software

The RadioActive Software Foundation plans to develop software for all EPCglobal RFID standards and make that software available to the general public.

By Claire Swedberg

June 3, 2005—Two companies have founded the [RadioActive Software Foundation](#), a nonprofit open-source community of organizations and individuals devoted to developing software for all [EPCglobal](#) RFID standards. The foundation will make that software available for free to the general public.

Canadian RFID systems integrator [N4 Systems](#) and software and services provider [Refactored Networks](#), based in Kennesaw, Ga., formed the foundation as an extension of a one-year-old RFID middleware project known as RadioActive. That project is still one of three main goals the foundation is undertaking. The foundation includes 30 individual members from 10 different countries and has generated interest from major RFID companies, according to Refactored Networks' CEO, Michael Mealling.

All software the foundation develops will be released for free under the Apache 2.0 license, which allows users to do what they choose with the software—except claim they wrote it.

The group's mission is to help accelerate the EPCglobal standards adoption by providing software for those standards, says Mealling, who is also an EPCglobal Software Action Group participant, chairman of the Object Name Service (ONS) committee and a RadioActive founding member. The foundation is incorporated in Delaware and has offices in Toronto and Atlanta.

"We intend to act as [a] technical leader and look out for the industry as a whole, rather than one private interest," Mealling says. "We will work to ensure that patents do not encumber anything the foundation provides."

The foundation's establishment was prompted partly because code donations companies had made to the RadioActive project fell outside the scope of RFID middleware. Companies can donate code that is unnecessary for their product and earn tax write-offs. The imminent publication of the EPC Information Service (IS) standards was another impetus for the foundation's creation.

"It's mostly a timing thing," Mealling explains. "We were having software donated by organizations wanting to join at a time when it was obvious that EPCglobal would be publishing standards within the next few months. So the timing seemed right to just go ahead and retool to match the new standards."

The foundation will continue its middleware-development work, now known as the Fusion Application-Level Events (ALE)/Middleware project, with the goal of creating a testing tool for EPC middleware after EPCglobal publishes its middleware standards.

Sometime this year, the foundation will also initiate two software projects. The Neutrino project is aimed at creating software tools to exchange data between supply chain partners and interface with EPCglobal Network

infrastructures such as ONS and Discovery Service. The Graviton Simulator Project, meanwhile, will develop a driver-based hardware simulator that emulates RFID hardware readers from different manufacturers.

"We expect a 1.0 release by [the second quarter] 2006," says Mealling, "but open-source projects have a 'release early, release often' philosophy, which means that useful components could be available by the end of summer [2005]."

The founders liken the EPCglobal Network as a whole to the Internet, with RFID tags acting as URLs, and the tags' associated data being the Web site for that tag. The software the foundation develops, Mealling adds, will act similarly to an Internet search engine. With Discovery Service software, for example, companies will be able to search for an RFID tag without requiring connected links between each point of the tag's travels.

The foundation's members, most of whom represent developers and consultants in the RFID industry, receive two primary advantages for their membership. One advantage, Mealling says, is the prestige of "knowing something they are working on [such as writing software for the foundation] is being used." The members also have access to a larger pool of developers and experience. "It's a community of open-source Java developers," Mealling states. Working with others on these software projects, he claims, can be a boost to an individual's career or an organization.

Earlier this year, software integration firm [i-Konect](#) announced that it, too, is developing a free, open-source RFID middleware platform (see [Startup Opens Up RFID Middleware](#)).

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