

'Largest Global Pilot Yet' in the Works for EPCglobal

The standards organization will track containers moving from Hong Kong to Japan and from Shanghai to Los Angeles.

By Claire Swedberg

Nov. 1, 2006—Standards organization [EPCglobal](#) is undertaking its largest global pilot yet. A two-phase system to track sea shipments will test both passive and active RFID technologies, as well as sensors and the EPC Information Services (EPCIS) for data exchange.

EPCglobal's Transportation and Logistics (TLS) Industry Action Group is leveraging an RFID infrastructure that already exists for monitoring shipments between Shenzhen and Hong Kong (see [H.K. Launches RFID Supply Chain Project](#)). The Hong Kong government funded the earlier project to the tune of US\$1.8 million. The infrastructure was originally put in place in 2005, says Gay Whitney, EPCglobal's director for standards development, as part of a pilot focused on tracking crates within Hong Kong and China as they moved from manufacturer to distributor. The new pilot will focus on tracking containers globally, as well as monitoring data about those containers and their movement through ports and customs.

Phase One of the pilot, to be completed by next February, will track shipments using passive EPC Gen 2 UHF RFID tags traveling from a Hong Kong port to one in Japan. Containers in Hong Kong transporting clothing items for an unnamed manufacturer will be tagged in Hong Kong, then read as they enter and exit ports. This requires the TLS to build additional infrastructure. Japan's [Ministry of Economics, Trade and Industry](#) (METI) is providing financing for the pilot.

Whitney says the pilot "will demonstrate the core level of interoperability between Hong Kong and Japan—using EPC Information Services (EPCIS) databases—and the ability to read the container at multiple points." EPCIS is a network infrastructure in which companies or agencies store data associated with EPCs in secure databases accessible on the Web. The EPCIS will enable users to provide different levels of data access to different groups. The Hong Kong EPCglobal Network will allow participants to access information about shipments' movements via the Hong Kong and Japan EPCIS databases. It will use an Object Name Service (ONS) to look up unique EPCs and locate information about the item associated with the code. The pilot may also include the EPC Discovery Service for track-and-trace capabilities through the network or another similar service, Whitney says.

Phase Two, which will be completed in October 2007, will take place at the [Port of Shanghai](#) and at the [Port of Los Angeles](#). This phase will involve multiple manufacturers, as well as customs agencies for both China and the United States. The technology will incorporate reusable active tags with batteries and sensors.

The TLS will utilize information generated from this phase of the pilot to make future plans regarding standard requirements for active RFID tags. "This will be a cross-industry, global pilot including multiple products," Whitney says. For the TLS, she adds, "there is nothing more valuable than real-life data to use in

developing requirements."

Data exchange will also be more complex in Phase Two, Whitney states. An increasing number of parties will have custody of each container, and multiple EPCIS databases will allow access of data to a variety of parties, including those who are not necessarily trading partners, such as a carrier and a product vendor or customs agency. (For example, if a shipper wants to learn the status of a container but does not know where it is in the supply chain, the shipper can trace the entire route of that shipment and all of the parties who had custody of it.) All of this will be more extensive than Phase One, in which only one vendor, one carrier and two customs agencies are involved.

The pilot is taking place now because of a convergence of several technology trends, Whitney explains. "We will have the opportunity to leverage existing standards [such as EPCIS] that may not have been the case a year ago," she says, "and active tagging, batteries and sensors are ready to be tested for future standards."

Several hardware and software companies will be included in both phases of the pilot, but Whitney says they can not yet be named. Some of the carriers involved will be DHL, Maersk Line, NYK Line, Schenker and Schneider National.

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