

Tesco CTO Describes Europe's Hurdles

At RFID Journal LIVE!, the chief technology officer at U.K. retailer Tesco says that RFID has many worthy benefits, but merchants in Europe face more challenges than those in the U.S.

By Jonathan Collins

Apr. 12, 2005—European retailers deploying RFID in their supply chains and stores face far more challenges than their U.S. counterparts do, but the effort is still worthwhile, according to John Clarke, chief technology officer at U.K. retailer Tesco.

"It appears to me as a non-U.S. person that here, it's all ready, let's go do it and have fun. Whilst the European space is a very challenging environment, " said Clarke, speaking at the [RFID Journal LIVE!](#) conference in Chicago.

Despite the challenges Tesco faces, Clarke defended Tesco's decision to deploy RFID technology. He explained that radio frequency identification will help the company reduce out-of-stocks, increase inventory visibility, lower costs by reducing shrink and waste, and allow it to cut the prices of goods that its customers buy. "We do all this because it all makes sense. It makes life better for our customers, so it is worth doing for that reason alone," said Clarke

Clarke told the conference attendees that European deployments of EPC RFID are hampered by a whole range of issues—in particular, regulations limiting the operation and frequency available for RFID readers—that U.S. companies don't have to deal with.

"ETSI 302 208 compliant technology is providing a very significant challenge, and one that could require significant cost-prohibitive shielding [wherever readers are placed in close proximity of other readers]," said Clarke.

One issue for European RFID users is the inability of readers to use spread spectrum technology to maximize spectrum usage. Instead, European readers use a listen-before-talk function that can limit the time that a reader can actually operate if there is too much activity or noise in the same spectrum.

"Listen before talk is proving a significant challenge, and it may not work in dense reader environments," said Clarke.

Tesco is currently deploying around 3,000 EPC readers at 1,400 of its U.K. stores and 28 distribution centers this year. A group of its lead RFID suppliers will start sending RFID tagged shipments to the company this quarter.

Clarke listed a host of other regulatory restrictions that European companies face when deploying EPC RFID that U.S. companies do not. In the U.S., for example, RFID deployments can use 26 MHz of spectrum; in Europe, the limit is 2 MHz. That means 60 channels available to U.S. RFID deployments and just 10 to European implementations. In addition, European implementations also have lower power limits and

subsequently shorter read ranges.

But aside from encountering regulatory restrictions, European RFID users are troubled by problems caused by U.S.-centric RFID vendors, said Clarke.

For example, ETSI 302 208 readers are not available in sufficient quantities, performance of those readers varies, and there are additional charges levied for readers meeting the European specification. In addition, Clarke said, Tesco found that U.S.-made readers can interfere with wireless phone handsets because both are assigned the same spectrum. In the U.S., the spectrum assigned for UHF RFID in Europe is the same spectrum reserved for some police telecommunications. This can make it tricky for U.S. reader makers to fully test readers for the European market.

The problems European RFID users face include those involving RFID tags. Clarke noted that that 96-bit EPC tags are still in short supply, and that tag orders require long lead times. He complained that a high percentage of the tags it receives from tag makers don't function, especially when the tags have been shipped from the U.S. to Europe.

"They are rolled up, packaged and sent over in airplanes. Those conditions are not ideal and need to be tested," said Clarke.

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