

Asset management and document tracking are likely to be two of the biggest growth drivers, with UHF RFID sales taking the lead, according to Frost & Sullivan.

By Dave Friedlos

June 4, 2008—The market for passive radio frequency identification tags in the Asia Pacific region is set to triple in value to more than \$850 million over the next six years, according to market research firm [Frost & Sullivan](#).

Asset management and document tracking are likely to be two of the biggest drivers of growth in the RFID inlay market, says Frost & Sullivan analyst Richard Sebastian, as will increasing adoption in such industries as mining, oil and gas, and aviation. And although RFID is widely used in supply chain management, access control and other areas, he says, the fledgling market is likely to be boosted by the development of niche applications, such as DVD tracking, ballot tracking and sports timing.



Richard Sebastian

According to Sebastian, the RFID inlay market is gaining momentum in Asia Pacific with increasing usage, especially for big projects requiring large quantities of passive RFID tags. "The hype phase is over, and RFID is no longer just a science project," he says. "There is now much more understanding of the potential benefits RFID can deliver, and increasing standards and quality will continue to drive the market forward. But there is also a need to innovate, and continued research and development is required to ensure RFID remains profitable and sustainable. There will be also be growing demand for specialized inlays to support niche applications."

Total revenue for the passive RFID inlay market in the Asia Pacific region already rose to more than \$150 million in 2007, compared with just \$100 million in 2004.

But the biggest growth is yet to come, Sebastian says, claiming total revenue will increase to more than \$350 million in 2011, before soaring to more than \$850 million in 2014. "We expect constant growth annually," he states, "but strong demand is expected to really spur growth from 2009 on."

The biggest demand, Sebastian says, will be for ultrahigh-frequency (UHF) tags. In 2007, UHF tags made up just 15.6 percent of the passive RFID tag market, compared with 58.9 percent for high-frequency (HF) and 25.5 percent for low-frequency (LF). In 2014, UHF's share of the market is expected to soar to 46.2 percent of revenue, with HF accounting for 45.3 percent and LF just 8.5 percent.

"HF currently has the largest share of revenue, but we expect that to change significantly by 2014 as UHF technology becomes more stable and able to support more applications," Sebastian says. "UHF will largely be used for supply chain management, while HF will be used for access control and pallet

tracking, and LF will be used for applications such as animal tagging."

Increased efforts to standardize RFID technology, government backing and growing demand for visibility in the supply chain will all be drivers behind growth in RFID, Sebastian says. "The benefits of better visibility will be the biggest driver," he states. "Since RFID became a mainstream technology at the turn of the millennium, there has been greater awareness of the benefits from greater visibility in the supply chain, including streamlining operations and reducing costs."

But businesses in Asia Pacific must be wary of restraints that continue to exist within the industry, Sebastian notes, including the overall cost to deploy RFID, long lead times and late delivery of some projects, and the limitations of some operating frequencies. "Designing a proper RFID system is still a challenging task, but end users must also be careful not to overlook performance for price," he says. "There is no point in investing millions of dollars and choosing a cheap tag, because selecting the right inlay can be the difference between success and failure."

RFID is still a relatively new technology in the Asia Pacific region, Sebastian says, adding that the next two to three years will result in an influx of new and emerging applications becoming commercially viable. Sports timing, jewelry tracking, apparel tagging, flower tracking and applications for the oil and gas industry could all become increasingly popular in coming years, he says.

IndianOil Corp., India's largest oil company, has already announced that it will trial RFID tracking of cylinders of liquefied petroleum gas (LPG) to prevent theft. All cylinders will be tagged to track their movement from the time they leave a filling station and return for refill, and to identify who delivers and receives them. The pilot will be launched in September or October of this year.

"I believe asset management will be the most popular application in coming years," Sebastian says. "We already see this gaining huge interest among various sectors for one simple reason—all enterprises face tremendous pains when it comes to keeping track of their assets, particularly mobile assets. Considering asset management is applicable across all industries, this will likely be the most popular application down the road."

According to Sebastian, another application expected to prove popular will be document tracking. At present, the cost of tracking all of a company's documents is prohibitive, but the idea, he says, is already gaining traction in industries that require a high level of security and accountability, such as the financial sector and government agencies.

"While some of these projects are still confidential, I can tell that we are already seeing projects being deployed in Singapore, Malaysia, South Korea and Japan, just to name a few," he says. "With potentially thousands to millions of documents to keep track of, RFID could see huge growth in this area."