

RFID: Looking Beyond the Retail Promise

Although RFID volumes in the retail and pharmaceutical markets fell short of expectations, the technology saw widespread deployment in other sectors.

By Priyanka Gouthaman

Feb. 26, 2007—The year 2006 witnessed mixed reactions within the RFID industry. The initial optimism generated by retail-driven mandates failed to translate into revenues during the year, adversely impacting volume-based pricing strategies. While RFID volumes in the retail and pharmaceutical markets fell short of expectations, the widespread deployment of the technology in other vertical and application markets was a highly significant trend.

Several RFID vendors have begun exploring niche opportunities in non-retail markets to diversify the risk from their RFID investments. While the future potential for the technology in retail applications is expected to be high, companies are strategically safer with expanded vertical portfolios to remain profitable in the short term.

Exploring Non-traditional RFID Opportunities

There has been considerable RFID activity in certain industrial sectors, such as semiconductors, petroleum, chemicals, oil and gas, building materials, industrial safety equipment and maintenance, repair, and overhaul (MRO) equipment. Increased adoption of the technology in these markets is particularly significant, because they were not among the early adopters of RFID. Interest within the consumer supply chains of several industrial sectors has also propelled the pervasive use of RFID technology. While these sectors are not likely to emerge as high-volume markets, Frost & Sullivan expects the potential for RFID-based industrial manufacturing applications to grow at a compound annual growth rate (CAGR) of 13.3 percent from 2005 to 2012 in North America. Other large application niche areas include livestock tagging, tracking of animals or pets, tracking of food supply chains and personnel tracking in prisons and correction facilities.

Why Look at Niche Sectors?

A major portion of the interest for RFID appears to be centered on supply chain applications, especially in the retail sector. Since verticals such as retail and pharmaceutical are expected to generate significant demand for RFID tagging volumes, most market participants have developed RFID products catering to supply chain applications. Consequently, this could lead to increased competition for such markets among the RFID vendor community. Larger vendors with the requisite scale of production and distribution reach will likely be able to sustain the pressures of low price points. Niche markets, therefore, represent the ideal opportunity for smaller market entrants with highly specialized technology and product solutions.

The primary driver for RFID adoption also differs among mainstream verticals and other niche market segments. Mandates and legislative factors are significant drivers in such sectors as retail, health care, automotive and aerospace. Although compliance pressures have largely contributed to the early RFID interest in retail and other sectors, they have not ensured scaling up of end-user investments. Several pilots and deployments were launched with the short-term vision of only meeting mandate deadlines. The absence of mandate pressures within niche market sectors is expected to be highly significant since the project is more

likely to be built around an existing business case rather than other external factors.

RELATED_ARTICLES Looking Ahead

The challenge with respect to niche applications is the requirement for highly customized solutions that are optimally functional in extreme environments. Several industrial sectors require their RFID-based systems to operate in varying conditions of temperature, pressure and humidity. In addition, certain applications are also subject to difficult conditions involving dust and metal interferences. Companies aiming to compete for such niche sectors must develop product design capabilities that successfully address these challenges. Product development strategies are, therefore, a key focus in niche market segments.

Targeting niche markets for RFID applications is not likely to be the ideal strategy for all market participants. It is also important to realize that today's specialist niche areas could lose significance in the future or attract several market entrants, thereby increasing competition. Even within established RFID application areas, companies constantly need to look out for niche opportunities to differentiate themselves in the marketplace. For instance, inspection applications within supply chains represent a largely unexplored opportunity. Niche market sectors, thus, presents a profitable avenue until the demand for volumes increases within larger vertical market segments.

Priyanka Gouthaman is a research analyst with the auto-ID practice at Frost & Sullivan, an international growth consulting company that monitors, among other things, the global auto-ID industry for market trends, market measurements, best practices and strategies.

Copyright ©2005 RFID Journal, Inc. All Rights Reserved