

# Radio-Frequency Identification: Asset Control at Your Fingertips

By Marcus Scholes



**T**imes are tough for everyone, including public school districts. During the past decade, school districts have faced the dual challenges of tightening budgets and increasing fiscal responsibility and oversight.

Many school districts have found a way to manage their assets, reduce staff requirements, increase accountability, and save money on insurance premiums by implementing unified fixed-asset management programs and accompanying asset-tracking technologies, such as radio-frequency identification.

Most people recognize RFID as the tiny tags placed in or on an item to help determine its location. RFID is incorporated in automated toll-road payment systems, ID cards, and retail products. In fact, the technology evolved from retail store security methods and from technologies such as bar coding, which was initially geared toward inventory management.

RFID has been making waves for over a decade as commercial organizations sought to leverage the ease and accuracy of goods tracking to drive down costs and improve product availability. The technology is still advancing in this arena, especially with the continued decrease in pricing for the individual RFID tags, which can now cost just a few cents each. The technology has been strongly embraced by other entities as well, including libraries, museums, industries, and higher-education institutions to track valuable assets ranging from computers to vehicles.

With increased focus on improving asset accountability and saving money, the time is optimal for school districts to also consider the benefits of RFID.

## RFID in School Administration

Since the adaptation of more stringent reporting requirements such as Governmental Accounting Standards

Board Statement 34, one of the more time-consuming tasks for school and district administrators has been maintaining accurate asset registers. Studies have shown that as much as 50% of an organization's listed assets are no longer in use, are missing, or are so poorly identified that they may not be located. These issues can lead to difficulties with planning asset maintenance, replacement, and even insurance coverage in the event of a fire or other disaster.

Districts can take two important steps to remedy these problems:

- Institute a dedicated fixed-asset management program.
- Incorporate asset-tracking technology like RFID or barcodes.

The first step provides greater overall fiscal management and responsibility, with streamlined and consolidated control features, while the second ensures reliable asset location monitoring. The return on investment resulting from decreased staff time, reduced asset loss, and lessened insurance premiums generally covers the implementation costs for both undertakings within a year or two. The benefits also extend to enhanced fiscal reporting, which allows for greater accountability up the administrative chain of command.

## The Asset Challenge

The next generation of accounting principles for entities in the United States is the International Financial Reporting Standards (IFRS). These standards will soon replace the existing generally accepted accounting principles and other traditional rules at commercial institutions; similar requirements for public entities such as school districts will undoubtedly follow.

IFRS require greater fixed-asset management accountability and the provision of a full audit trail. Unfortunately, many school districts currently use antiquated and inefficient methods, like spreadsheets, which produce poor fixed-asset management processes and inaccurate asset registers.

From highly mobile items, such as laptops and PDAs, to district buses and vehicles, and even information technology infrastructure that may include multiple components that are frequently changed by staff, some school districts have no idea what happens to many assets once they are in use. But how can a district afford to devote valuable staff time to a manual audit? Furthermore, manual audits can be notoriously inaccurate; horror stories abound of organizations that have embarked on manual audits only to discover many months into the exercise that only 60% of their assets have been checked.

The ability to use RFID technology to scan hundreds of assets at once from a single point, while ensuring the

continuity of the educational mission, has the potential to transform the entire asset management process.

## RFID in Practice

The first decision a district must make when implementing RFID is whether to opt for active or passive RFID tags. Active RFID tags use internal batteries to power their circuits and to broadcast radio waves to a reader, which can be situated more than 300 feet away. Because these tags contain more hardware than passive RFID tags, they are more expensive—\$40–\$60 per tag.

Passive tags are significantly cheaper—well under 50 cents each. They rely on the reader as their power source and have lower production costs, so they can be applied to less-expensive merchandise. Like the merchandise on which they are placed, these tags are disposable. However, passive tags are limited to about a 20-foot range and hold little information, constraining the development of a single source of all asset history.

For example, organizations can leverage the additional memory on active RFID tags to create a complete history of each asset, from initial purchase order number, location, and unique serial number to maintenance history and child/parent asset relationships.

With this technology, one person at each school or campus can be responsible for maintaining a list of the assets at his or her location. Using a handheld PDA, he or she can simply walk through a facility on a regular basis; the assets are automatically scanned and information is input directly into the district's asset register and maintenance system. Exception reports can be instantly generated to highlight any missing assets.

By creating a single source of asset purchase, location, maintenance, and disposal information, organizations can reduce errors and immediately view maintenance status at any time. This up-to-date and automated information system not only saves significant time but is also simple and straightforward, requiring minimal resources, which drives down costs.

Despite growing pressure to deliver greater fiscal responsibility and asset accountability, school districts simply cannot afford to undertake repeated manual audits, each of which can take months. By adopting RFID, not only can scan-based audits be done easily and regularly in a matter of minutes without affecting the other functions or the district's educational mission, but RFID can also integrate with the full asset history to ensure unprecedented accuracy and auditability of the entire asset register.

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**Marcus Scholes** is vice president of U.S. operations for Real Asset Management International in Boston, Massachusetts. Email: [mscholes@realassetmgt.com](mailto:mscholes@realassetmgt.com)