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The User's Desk: Understanding the value of RFID within IT Asset Management

Welcome back to the "User's Desk". After a two week hiatus the topic at hand is RFID and ITAM. The last post of the "User's Desk" left us posing the next topic, "…examine bar-coding vs. RFID and where RFID may be in the future of ITAM". Before jumping into this topic, I have asked a friend (John Pierre Kamel) an expert in the RFID field to share his thoughts and general impressions at the end of this blog. JP can layout his credentials for you as he expands upon the topic.

Many, if not all of us currently use the bar-code for a lot of our ITAM needs. Whether the bar code is an Asset Tag or Serial Number is moot, the point is a unique identifier for the machine within the ITAM database. The discussion is what works better and in what in environment? There are a lot of variables, in fact more than we may be able to fit within this setting. Let's describe an environment and look at the both Bar code and RFID. Our environment is one building, cubes, offices, two server rooms (one room is a secure development chamber behind a firewall). This mock company does software design so we have lots of systems and many users with multiple systems.

Let's assume we use the serial number as our unique identifier. When machines are received their serial number is scanned and manufacture/model information entered into ITAM. Machines are then imaged and distributed to employees in offices and cubes. PDA's with a built in scanner are used to update data. The IT Support is responsible for the PDA Scanners and updating the data when they install a machine. The same process is used for systems being installed in the server rooms. So time goes by and the finance department of our company is asking for an audit of machines for SOX compliancy. IT Support scans the systems. This goes moderately quickly in cubes and office though sometimes crawling under desks to scan systems is necessary. The cubes and offices where completed the same day. However, the server room(s) each has 7 rows of racks, each with 20 1U systems took the server room manager three days to scan each bar code (when he could get to them as some were on the bottom of the chassis). In the end, it took about a week to report back to finance. Note, this time frame was vastly improved compared to a time before ITAM. Because this company has a mature ITAM in place, they knew what to look for and where it would be. The scanning of systems was limited to those not reporting to the ITAM system. In our example, the server room manager only had to scan the secure chamber as no auto-discovery client is permitted to breach the protective firewall.

Enter an RFID solution. When machines are received, they are affixed an RFID tag (Passive). There are sensors at doorways leading out of shipping and receiving. The machines move to the IT location for imaging. They pass sensors on the doors to this area. On the imaging bench is another sensor (We can track movement of machines and time spent in areas without taking time out to scan). The machines are imaged and IT delivers the system to the cube/office of the user. The IT support person updates ITAM via a PDA enabled RFID sensor that person XYZ is the user of this system. This same process hold true for the server rooms. In the secure chamber, the machines are fitted with an "Active" RFID tag and the ceiling is fitted with sensors. The sensor in all cases reports back to the ITAM

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system to demonstrate location. The sensors in the secure chamber match the number of machines expected to be found during the audit so no one in IT needs to scan them. The computer room manager grabs his RFID handheld scanner, stands back three/four feet and scans an entire rack. 20 1U systems…20 unique scans, he is done in approximately 45 minutes to an hour. This would conclude the audit of the server room (non-firewalled). IT support takes a handheld RFID scanner and quickly goes cube to cube, office to office. No crawling under desks as the scan travel "through" the desk. Finance receives the report in approximately 24 hours.

What is missing from the RFID equation is money. When do we see a return on the investment? We know we save hours worked. We know we get better data in real time. We also get performance statistics. We also get various SLA metrics like how long in shipping/receiving, how long to be imaged, how long to be deployed. We also get potential work statistics by matching a persons "smart badge" with the RFID tag on the laptop we know how many of our laptops are going home each night. We match the both badge and tag as they leave the building. We can assume that additional work happens by either checking e-mail or doing more robust work by the person at home. Last, we have better security. Badge and RFID must match or security is alerted. But still, when do we see the ROI. I will leave this analysis (in general) for JP to examine.

The utopia of ITAM of course would be an RFID chip embedded on board of each and every system. A standard chip would not only serve RFID but would collect configuration data much like an auto-discovery tool. The data could be reported via the network or via the RFID signal to the sensors. At this time, I think such a consideration is not even on the drawing board.

The point to all of this is not to take anything away from bar-codes. The capital outlay still makes them much more reasonable than RFID. I see three tiers.

1. No ITAM – So the audit would be done by hand, all systems and take a long time and probably be stored on a spreadsheet.
2. ITAM system with Bar Codes – Scan the tags of those systems not reporting electronically via an auto-discovery tool.
3. ITAM system with RFID – Scan all passive tagged systems

With all this in mind, I will turn the prose over to JP.

Thank-you Kelon. Before I start reviewing some of the specifics around RFID, I thought it might be a good time to review some statistics on AM and ITAM. According to the Aberdeen Group, more than 67% of companies consume at least 5-10% of their revenue in asset management operations (both AM & ITAM), with more than 50% of these companies still relying on manual asset management processes to effectively track and maintain their assets.

Additionally, the need to secure both information and IT assets has risen significantly in recent years. According to Gartner Group research, there has been an 80% increase in the number of companies reporting stolen laptops containing sensitive information between 2006 and 2008. In fact, Gartner reports the chances of an enterprise laptop being stolen are as high as 1 in 10. Moreover, as the number of IT assets an organization has increases, the need to track and secure IT assets, and the information contained on them, becomes even more important…..and more difficult. In addition to

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laptops, organizations find themselves trying to track a diverse set of IT assets, including servers, multi-media projectors, and tape back-ups, to name a few.

Over and above this, government legislation, originally designed to regulate financial reporting and protect personal privacy have had an impact on how assets need to be tracked and maintained. The introduction of Sarbanes Oxley introduced the need to account for all assets on a balance sheet on a yearly basis while California Senate Bill 1386 and Gramm-Leach-Bliley Act introduced privacy laws that required organizations that maintain personal information about individuals to inform those individuals if the security of their information is ever compromised. While these factors have lead to the increased labor associated with tracking these IT assets, they have also led to a liability associated with gaps in information that might arise as a result of human oversight or error.

OK….let me get back to RFID. RFID, like bar-coding, is a simple data collection tool. The main difference between RFID and bar-coding is the ability to automate workflows and data collection in ways that were previously impossible. RFID, unlike barcodes, does not require line of site to "read" a tagged item, is capable of reading many items at once, which as you know from the grocery store, is not possible with barcodes, and can store more information than a barcode.

This quickly leads to several key benefits over a barcode enabled system:

- An RFID enabled system can automatically track the movements of tagged assets in your facility, initiating alerts when an item "goes" where it shouldn't, significantly reduce the labor associated with tracking and logging the movements of sensitive IT assets.
- An RFID enabled system can rapidly collect inventory information, significantly reducing the level of effort required to maintain status and condition information about an asset
- An RFID tag can contain asset specific information and can be updated dynamically, making it easier to maintain an asset.
- RFID enabled tags are less sensitive to "outside damage" then a barcode, as scratches or smudges to the outside do not affect the readability of the tag.
- A recent time in motion study at a Data Centre showed that the RFID-based inventory process was six and a half times faster than the bar code-based procedure, 11 times as fast as the manual method, and enabled tracking that was previously not possible without extensive manual effort.

Based on my experience with customers, the value of RFID enabled ITAM solutions go beyond the ability to count assets faster. The true value was the ability to have automated visibility into an IT asset's lifecycle. This in turn significantly decreased the Total Cost of Ownership (TCO) of the asset while decreasing the liability exposure an organization faced.

About JP Kamel

John-Pierre Kamel is the RFID & Serialization Practice leader at Excellis Consulting Corp and has over 10 years of enterprise strategy and solutions experience, focused primarily in RFID, wireless and mobility solutions. Mr. Kamel has been involved in numerous mobile enterprise engagements and led strategy sessions for a wide range of clients. He has worked with retailers, high tech, manufacturers,

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government, and transportation companies in the area of RFID strategy, business case development, feasibility testing and solution roll-out. Mr. Kamel is currently the Co-Chair of EPCGlobal's Strategic Advisory Council, is a member of GS1 Canada's board, and sits on multiple RFID standards and governance committees across North America.

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About Excellis

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