



Microsoft BizTalk Server 2006 R2: RFID for Everyman

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A long time in the coming, **Microsoft** has finally launched its RFID BizTalk Server. The ramifications of its introduction will reverberate throughout the world of RFID, making this a watershed moment in the ongoing effort to create mass adoption of the technology.

Interest is strong in a broad range of manufacturing and supply chain applications for RFID, our recent study of 200 U.S. companies found. While these issues dwarfed regulatory mandated applications, adoption is still hindered by costs, architectural complexity, and lack of commercial, off-the-shelf RFID applications—so much so that spending growth will be constrained to less than 20% for 2008.

Microsoft BizTalk Server 2006 R2 could change all of that.

RFID middleware can now be officially consigned to history

Microsoft is a year late in bringing BizTalk Server 2006 R2 to market, delivering RFID edge management on a service-oriented architecture (SOA) platform. But in the fractious world of RFID technology, it's better to wait and get it right.

And if the experiences of the Microsoft development partners who have been exercising this technology hard for the past year is any indication, the wait was worth it. In one fell swoop, Microsoft has changed the rules of how we deploy and manage RFID technology at the edge, using a technology with a massive user base for device management and line-of-business application development.

RFID middleware duplicated the functions of other enterprise technologies

Early on, one of the major stumbling blocks in RFID adoption was the lack of technology to make RFID readers an extension of enterprise applications. Enter RFID middleware: part device controller, part development platform, part data repository, and part integration layer. Expensive and complex, its introduction was necessary to create momentum for RFID adoption.

But it wasn't a perfect answer either. Developed mainly by smaller technology vendors and integrators, RFID middleware duplicated many of the functions that the supply chain, manufacturing, and enterprise technologies already performed, and in the end buyers questioned its long-term value.

For example, for many automation and manufacturing software companies, RFID is just another sensor technology to be connected to their proven real-time networks, and the data can be conditioned and stored with other event and time-series data in their data historians. But with no manufacturing player with the market share, nor the supply chain expertise and applications to lead the market, manufacturing software firms had to cede ground to RFID middleware vendors.

However, using existing technologies and standardizing as much as possible on infrastructure and platform are fundamental tenets for any well run IT organization. For lack of a better alternative, middleware was and is still used for pilots, but no major company we are aware of has firmly committed to using RFID middleware in full production, enterprise wide.

Microsoft market presence and scale is a boon for RFID adoption

With the entry of Microsoft into the RFID market, companies now have an RFID platform developed and supported by one of the world's largest technology companies that fits neatly into their enterprise, supply chain, and manufacturing SOA strategies. From the reader to enterprise applications, the introduction of BizTalk Server 2006 R2 allows for a consistent technology approach that can't be replicated by independent middleware vendors.

Microsoft's entry, though, is significant for much more than just underlying technology. RFID adoption has been slowed by cost, lack of value propositions, lack of trained resources, and a paucity of applications that can take advantage of its unique value.

This is all about to change as RFID development begins on a scale unimaginable even a year ago:

- **Expertise**—Everything from device management and business process management to integration is done using BizTalk, SQL, and Windows servers sitting on the .NET framework. Rather than a select group

of skilled technicians trained on specific RFID middleware technologies, we now have a huge community with skills ubiquitous to any IT organization ready to support the RFID infrastructure and blend it creatively with their mainstream technologies. RFID devices and data can now be integrated as easily as barcodes or standard shop-floor, operations-planning-and-control (OPC) instruments.

- **Channel sales**—At its most recent partner's conference unveiling BizTalk Server 2006 R2, Microsoft had 7,000 software vendors and resellers in attendance. In manufacturing, more than 90% of the software firms build their applications on Microsoft technologies and have been steadily abandoning their proprietary integration architectures in favor of BizTalk Server, for example. The accumulated industry knowledge and reach far outstrips anything seen in the former RFID middleware ecosystem. Most Microsoft manufacturing, supply chain, and ERP vendors will now either be developing or selling RFID, driving innovation and market penetration to new levels.
- **Cost**—RFID Middleware is expensive relative to the cost of BizTalk Server 2006 R2 licenses by at least a factor of 10 and often lacks the breadth to handle other devices and data. Microsoft's RFID technology won't be everything to everyone, but price will be the great equalizer.
- **Technology partnerships**—Big companies like to do business with big companies. Microsoft's close working relationships with companies like **Intel** and **HP** will speed joint development and reassure Fortune-class customers that RFID has a very productive future ahead of it.
- **Market presence**—Microsoft technologies already support thousands of companies, both large and small, throughout the world. BizTalk Server 2006 R2 becomes an extension, not an addition, of its technology platform.

BizTalk Server 2006 R2 ends a chapter in the ever-changing RFID story

Standardization at the edge of our supply networks is inevitable if the pace of RFID adoption is to grow. Of course, many dislike anything Microsoft but still look for consistency in their architectural direction. For them options like **IBM** and **BEA** exist.

But let's not lose sight of the significance of Microsoft's announcement. With BizTalk Server 2006 R2, it has opened the RFID community up to new thinking, new ideas, and boundless energy to make the technology succeed. It opens the door to a whole new wave of RFID innovation, giving emerging software companies an affordable platform on which to develop their applications.

BizTalk Server 2006 R2 is not yet the perfect solution to every RFID challenge. As with any first release of a software product, there are sure to be shortcomings. It must deal with issues like proprietary interfaces and an incomplete partner community.

Looking at the long-term picture, Microsoft's entry is the most significant RFID event we will see in 2007, and we expect our pre-BizTalk RFID forecast of 20% growth in spending in 2008 to be blown away.

We have some new research we'll be sharing in the next few weeks on the applications being considered for RFID. In the meantime, here's some of our existing analysis and predictions for RFID:

- "The Role RFID Will Play in the Search for Perfect Logistics"
- "The Evolving State of RFID"
- "Instrumenting DDSN With RFID"