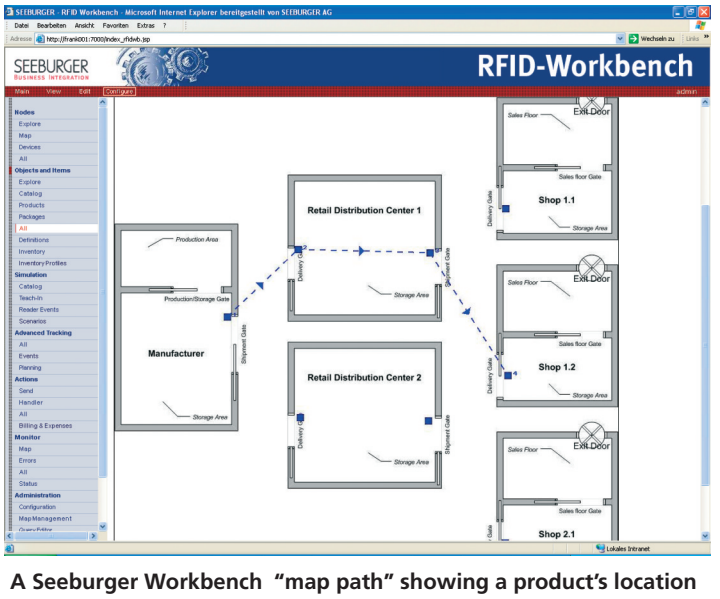
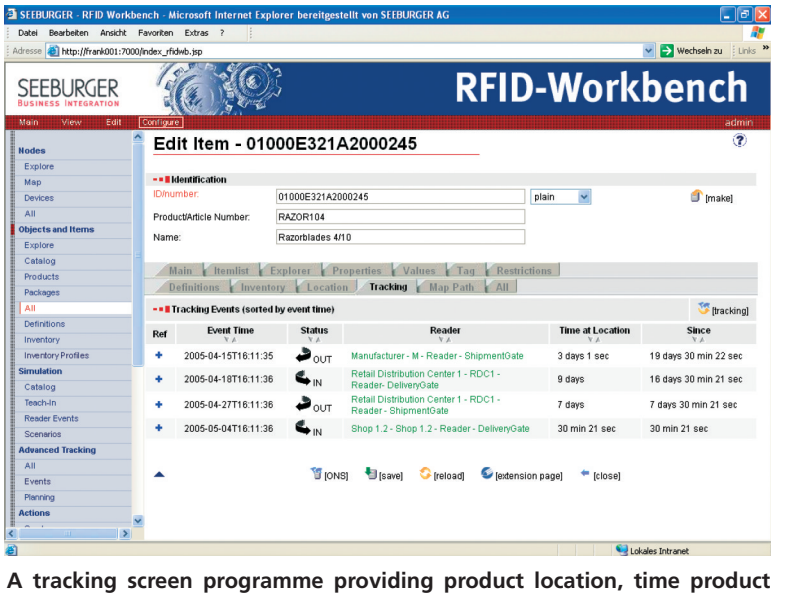


A Seeburger Workbench "map path" showing a product's location in a supply chain



A tracking screen programme providing product location, time product read at RFID reader location, time product standing at location and product route history

MAKING RFID HAPPEN

Rakesh Harji, managing director, Seeburger (UK) says the company's middleware solution cost-effectively eases the path towards RFID implementation

The benefits of virtually eliminating manual data entry and manual business process transactions through the use of automatic data collection (ADC) have been realised by many companies throughout the world for several years. Implemented correctly, it improves accuracy, speed of fulfilment and on-going operational costs. RFID is the latest technology for achieving more comprehensive and flexible ADC solutions, but perceived fears over the cost of implementation and uncertainty over the true benefits that can be attained are still holding the market back from total acceptance.

RFID's main advantage over previous ADC technologies is in the volume and scope of information that can be made available. However, to actually derive any benefit from this information, it needs to be available to core systems and applications where it can be processed, analysed and exploited to generate a true real-time view of an organisation's operational status. This requires some form of middle tier software that sits between the readers that gather the data and the supply chain execution or ERP systems.

The middle tier software allows data to be managed as a valuable corporate asset because the data itself can appreciate over time if it is aggregated and the proper analyses are applied. As products move through the supply chain they can generate real-time demand alerts and the improvements in data accessibility and quality have a positive impact on demand forecast accuracy. Ultimately, companies can gain real-time visibility into customer purchase decisions, which helps them to more accurately and positively react to and influence the marketplace.

Back end systems like ERPs and warehouse management systems (WMS) are not normally designed to run RFID in real time, which makes the middle, integrating software level essential. It filters the massive amounts of data generated from the readers and allows organisations to use it to generate real-time decisions.

Develop a clear understanding

In order to get on the right road to RFID, companies have to develop a clear understanding of what they are trying to achieve, what the business improvements and benefits will be and how fast the return on investment is going to be. To help achieve this, Seeburger has developed what it believes is a unique product that allows companies to simulate RFID processes before large-scale deployments. It can be used as a standalone RFID operating solution for pilot projects and small companies and also in an implementation that is fully integrated with internal enterprise applications and external trading partners.

The RFID Workbench is designed to address the full spectrum of RFID middleware needs, enabling an organisation to implement RFID on a phased basis without changing middleware packages or engaging multiple providers. It has a modular architecture for step-by-step implementation, with the ability to scale from a standalone platform to full enterprise application and trading partner integration without changing systems or providers. The software delivers platform independence, with a 100% Java-based architecture that permits deployment in any Java-compatible Windows, UNIX or AS/400 environment.

The Workbench allows rapid integration with enterprise applications and trading partners, making it considerably less costly than other solutions. A "best-of-breed" graphical user interface makes it easy to visually represent the supply chain to aid setup and tracking of products from point to point.

The Simulation Mode enables companies to map and test RFID infrastructure and processes –

"COMPANIES HAVE TO DEVELOP A CLEAR UNDERSTANDING OF WHAT THEY ARE TRYING TO ACHIEVE, WHAT THE BUSINESS IMPROVEMENTS AND BENEFITS WILL BE AND HOW FAST THE RETURN ON INVESTMENT"

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including simulation of events, product flows and data flows – before an implementation. This can be extended using the highly configurable event management tools that enable granular control of routing and other functions, including the unusual ability to configure events and reports differently for different distribution centres.

By using this tool, companies can quickly identify the best path to RFID implementation and can also accurately assess the potential cost savings and return on investment. Having used the simulation tool to model logistic processes, test reader placement, and fine-tune RFID infrastructure, companies can use this setup as a starting point for the real implementation.

Standard mode

The Standard mode for RFID Workbench is a standalone operating solution for pilot projects and small companies including tag verification, EPC/UPC product code matching, event management and alarm activation, local event configuration, graphical displays, and a variety of other features that enable companies to implement RFID projects quickly and economically. The more advanced RFID Workbench/PRO enables full integration of RFID tag data to an organisation's ERP, WMS or MIS systems; linking of databases for filtering, comparison and analysis of RFID information; and forwarding of data to external partners for use in managing the supply chain.

The strength of the software is that it allows companies to plan and develop a system ideally suited to their requirements. For many companies, the need for RFID is created by the need to comply with industry mandates and for this they need to print tags, ensure they are working and that they can be programmed with Electronic Product Codes (EPC) or Universal Product Codes (UPC).

The Workbench allows tags to be stored in a catalogue, allowing companies to verify that when they left the facility they did in fact work, thereby avoiding the penalties and fees that some large organisations levy on faulty tags. It also enables tag consolidation by matching the data of cases being read while packed to a single pallet tag. This is necessary as it can be difficult to get a 100% read of packed cases on a full pallet due to interference of packaging, location of tags, or type of load (for example it is difficult to read through liquids). It is necessary to tag both cases and pallets because loads will eventually be broken down and cases need to be read individually.

A key incremental benefit of RFID is enabling companies to collect all data into one area so that customer service can verify what has been shipped and what has been ordered. This requires integration to existing internal systems such as ERP, WMS or other catalogues as well as external trading partners to ensure all data is collected in a central location and eliminates spaghetti infrastructures.

Ultimately, suppliers need to integrate RFID data into multiple back-end systems within their own enterprise and share that data with partners and customers via web portals and other electronic interfaces. Companies can use the Workbench to access UCCNet (ONS) to receive not only codes of what they are sending out, but also to receive verification of transferred goods, thereby eliminating manual labour costs and counterfeiting. RFID makes it almost impossible to ship counterfeit products as the EPC verifies brand authenticity.

Further improvements in customer service are generated from increased inventory availability and reduced stock outs, as well as streamlining shipping notification processes and improving responsiveness to customer needs.

In many cases, companies are required to send an Advanced Shipping Notice (ASN) as soon as the goods leave their bay or get paid faster if they send an ASN. Workbench provides a Document Exchange that sends an ASN automatically when a pallet is logged as going through the last reader to the customer. □