

[CLICK HERE TO SAVE](#)

AFTER SAVING,
[CLICK HERE TO VIEW
FULL SCREEN/RESTORE](#)

Navigation tips:

- Click on the arrows at the foot of each page to go back or forward
- To execute email or web links, click on the relevant link
- For optimum viewing, open in Adobe Reader 6. [Click here for download](#)

Contents Email Print Save Exit

IBM

Industry Focus

Retail & Wholesale Distribution



Issue 7 September 2004



Market Trends 4

RF-ID technology will eventually live up to its current hype, reports a new IBM White Paper.

On Demand Solutions 6

Server 'virtualisation' may not sound much to the average IT consumer, but it allows retail and distribution companies to cost-effectively scale their computing power up or down as needed.

Technology Trends 10

Peter Bartram sympathises with logistics companies struggling to integrate their different bits of supply chain technology.

Investment Options 12

How can retailers extract competitive advantage from IT when budget limits stop them buying the new hardware, software and services required? Innovative financing methods could be the answer. Kevin Taws of IBM explains what's on offer.

Comment

RF-ID (radio frequency identification) technology is a major talking point in this issue of *Retail & Wholesale Distribution Industry Focus* – an electronic information service provided by IBM.

RF-ID represents something of a conundrum for retail and distribution companies. Trials by the likes of Wal-Mart, Metro Group, Tesco, Woolworth's and Marks & Spencer point up the promise the technology can offer. But industry watchers warn of the lack of established standards in this area.

Retailers are advised to take a balanced approach, avoiding falling for the hype or succumbing to the backlash against that hype (see pages 4-5).

Elsewhere, we look at financing options which enable consultants and systems integrators to help clients avoid the big upfront costs which can stall retail automation projects (pages 12-15).

Market Trends

RF-ID: the way ahead

Radio frequency identification (RF-ID) has the potential to bring much-needed benefits to retail supply chains. We summarise a new IBM White Paper on the technology.

Despite the current hype, radio frequency identification (RF-ID) systems have been with us for decades: the first prototypes date back to the 1940s. What is new, however, is the emergence of global standards, the falling cost of the technology, the pervasiveness of the internet, and the realisation that RF-ID has the potential to facilitate business process change.

RF-ID technology comprises tags, readers and a suitable IT infrastructure. The tags can contain details of a specific item, or a group of items when used to label pallets or cages. Active tags 'broadcast' this information while passive ones need to be powered by readers which can track the item or group of items as they move from production line to retail store. This information is then collected, processed and integrated with enterprise systems.

'In the past five years there have been numerous successful RF-ID implementations'

Interest in RF-ID has been building steadily since 1998 when researchers at the Massachusetts Institute of Technology established the Auto-ID Center to study new ways of tracking and identifying objects as they moved between physical locations. But visions take time to become reality and achieving international agreement on radio frequencies, for example, has not been easy and it is taking longer than expected to finalise the EPC Gen 2 standard. Yet in the past five years there have also been numerous successful RF-ID implementations which

do not comply with the emerging EPCglobal Network standard, including Woolworth's, Scottish Courage, Marks & Spencer, Wal-Mart, Tesco and Metro Group.

With the notable exception of Metro, progress on many of these key projects has been slow and problematic. The danger for RF-ID is that excessive hype over such large-scale plans as Wal-Mart's initial programme is leading to loss of interest in the technology when these projects fail to materialise in the expected timescales. This could lead to many businesses delaying investment in RF-ID and so ultimately failing to reap the very real benefits that will quickly start to accrue.

For retailers, a phased approach is clearly essential. Tesco, Marks & Spencer, Woolworth's and others have all achieved real benefit from limited-scale projects. Marks & Spencer is happily running an item-level tagging programme in six stores but if this is to be scaled up to a wider range of product lines across all stores, then considerably more integration with central systems would be needed.

Systems integrators and consultants need to:

- Be realistic about what is achievable
- Ensure a clear reality check on projects – keeping within the limits of current technology but maintaining scalability for rapid escalation
- Accept that the current generation of systems is not standard but what is there is still sufficiently robust for limited implementation.

RF-ID will eventually transform supply chains with total visibility in real time. In the retail space this will not only reduce the problem of stock-outs but will facilitate a granular understanding of demand patterns by item and store that could improve performance monitoring and revenue management. Eventually, RF-ID may well live up to the current hype.

■ For a copy of the full White Paper on RF-ID, please go to: ibm.com.

On Demand Solutions

Power and potential of p5

IBM believes its latest eServer pSeries systems provide everything systems integrators need to deliver on demand business solutions.

As demand for computing power soars in response to the growing need for business information, many organisations have tried to solve the supply and demand problem by buying extra servers and integrating them with existing systems. A perfectly acceptable solution, but not necessarily the best for an IT department that is under pressure to reduce total cost of ownership while increasing services to the business.

Adding more servers to the IT infrastructure may have the desired effect of delivering extra power, but research shows that as more and more servers are installed, average utilised performance drops. This means new servers are not used efficiently and it is difficult to cost-justify their purchase.

Additional servers, typically implemented quickly to run one or two business applications, also mean more complexity, a bigger management headache and higher system administration costs – the very antithesis of what the IT department wants to achieve as it works to manage costs and build a flexible IT infrastructure capable of delivering on demand business services that will sustain a company's competitive edge.

IBM eServer pSeries provides an alternative to this 'more is better' solution by offering a server virtualisation strategy that can deliver more business value than a pure server consolidation programme. And systems integrators and consultants can play a role in helping clients to realise the full potential of the latest pSeries – Power 5, or p5. Based on IBM processor technology, the Power 5 series builds on the Power 4 series. This latter already out-performed comparable machines from HP



Colin Grocock:
'IBM is head and shoulders above the competition'

and Sun Microsystems, putting the Power 5 series an extra step ahead of the competition and making it part of an ongoing development programme towards the compatible Power 6 series.

As Colin Grocock, Business Development Director of the IBM eServer range, puts it: 'In terms of microprocessor power, IBM is head and shoulders above the competition.' For example, an IBM 16-way p5 server delivers similar functionality to a 64-way HP Superdome system in a symmetric multi-processing architecture*.

As well as performance advantages, the Power 5 series – which ranges from a two-way to a 16-way processor configuration – has the flexibility to support multiple workloads and deliver the ultimate goal of on

demand business. Central to these capabilities are the virtualisation technologies within the IBM Virtualisation Engine. One such technology is micro-partitioning, an innovation that follows IBM's 2001 introduction of logical partitioning – which enabled users to consolidate multiple application workloads – and its 2002 launch of dynamic logical partitioning, enabling dynamic reassignment of workloads.

Pushing the technology still further, micro-partitioning allows an individual processor to be dedicated to a number of operating environments at any one time, meaning more work can be done with a single system than before. The systems administrator sets policies for what is required in terms of the business and virtualisation tools, and workload management systems automatically deliver to the brief, reducing complexity and costs, and creating an on demand environment that can respond rapidly to changing needs.

As any mainframe operator will tell you, these have been familiar techniques available in their environment for many years. It's only recently that IBM has applied these technologies to the IBM eServer pSeries to deliver these higher, and more economic, utilisation rates. Virtualisation does not stop at the edge of the server, however, with IBM's technology extending to cover storage and communication adaptors, thus making use of virtualisation and shared resources throughout the enterprise infrastructure.

Spare capacity

If business on demand is the corporate cry, the murmur in the IT department is of capacity on demand. Here again, the p5 allows customers to buy enough power to meet their immediate needs but also have spare capacity to cope when demand escalates.

A customer buying an 8-way p5 may, perhaps, want the extra capacity of four further processors. These can be included in the system at no initial cost and activated when needed, with the customer paying for the extra power on a usage basis. The extra capacity can also be included in the server's virtualisation processes and be subject to the system administrator's policies, making it an integral part of the

complete system as soon as it is switched on. For many seasonal businesses, such as those in the retail sector, the ability to increase and decrease capacity adds a vital element to the meaning of business on demand.

Another option for those needing extra power is available in the top-of-the-range 16-way p5-570. The p5-570's so-called 'pay as you grow' modular architecture means additional modules can be added to existing components, building a large single system of up to four p5-570s rather than creating the management problems associated with four separate systems.

From a systems integrator's point of view, the performance, capacity options and upgrade path of the p5 make the system hardware an attractive proposition for customers with all sorts of different needs. But it also shines in terms of software, with its logical partitioning and dynamic workload assignment supporting numerous operating systems – namely AIX, Linux and i5/OS – on the same processor. This, in turn, means a broader range of applications can be run in response to the needs of the business.

Security is also to the fore, with a series of IBM authentication, access control, filtering and identity management technologies built into the p5 series, making the system ready to go as soon as it is implemented. With enough power to service most businesses, the p5 is also a solution for the systems integrator offering managed services to a number of clients.

As Grocock concludes: 'The Power 5 provides fantastic performance at a great price – plus virtualisation, micro-partitioning, security and true point-and-click delivery.' While IBM's competitors are busy developing 'the next big thing', IBM can demonstrate the power of the p5, not only in technological and business terms but also in the market statistics that show IBM gaining share in the Unix server market.

*Source: <http://www.tpc.org>. HP results are as of 07/01/04. IBM results submitted on 07/12/04.

Technology Trends

Game of consequences

IT has brought many benefits to the supply chain but also some less benign results, says Peter Bartram.

When computers were first introduced, we were told they were going to revolutionise the way we performed logistics. Well, yes, I'm prepared to go along with that. We were also told IT would make some tasks in the supply chain – tracking goods from warehouse to customer, for example – easier. Again true.

But the unintended consequence is that we've now got so many different bits of software which work in different parts of the supply chain that many companies find making it all work together a tough job – especially if there's been a lot of M&A activity and supply chains with different software are merged.

So along come those helpful guys from the management consultancies. We've got an answer, they say. It's called enterprise application integration (EAI) – software designed to link other pieces of software so that you can create the kind of end-to-end information flows that are so important in supply chains.

Sounds great. Except there's another unintended consequence. The EAI software itself has now become so diverse that it's not always easy to know which type of integration product to use for which task or which package will solve which business problem. Perhaps it's time to get a handle on all this.

The first point is that there's nothing particularly new or startling about EAI software – which has evolved from technologies that have developed over the past 15 years. What makes it more relevant in logistics is the way supply chains have become heavily dependent on a whole range of software packages over the past few years.

Add in the fact that supply chains have to be more flexible and change shape more often to meet new business demands and you have a more urgent requirement for information technology to be able to respond to the business.

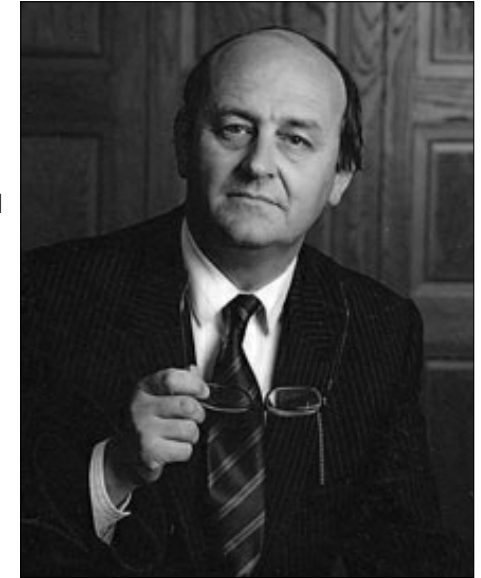
So what different IT systems have we got? First up are the business process management (BPM) solutions. Then there are systems that combine elements of BPM with enterprise application management – including vendors such as IBM, Microsoft, Sun and Sybase who provide the platforms on which integrated systems can run.

There are the big players in ERP and finally application integration software players such as TIBCO, webMethods, SeeBeyond, Vitria and CommerceQuest.

The consequence of all this is that integrating supply chain systems is now more possible than ever before – and more necessary – but it's not always easy (or cheap).

The key question is whether doing it is going to provide payback. And the answer to that rests on evaluating the trade-off between the investment and the productivity gains, customer service improvements or cost savings that will flow from it.

■ **This article appears in the current issue of *Logistics Europe*. Visit www.logisticse.com/frn/tpl/publication/currentissue.php.**



Peter Bartram: evaluate trade-off between investment and productivity gains

Investment Options

Finance with finesse

IBM Global Financing's leasing and financing options open up new opportunities for consultants and systems integrators.

Retailers may crave new IT solutions, but in this fast-moving and volatile sector, being able to justify investment can be difficult. The proposal may be tempting, but for some retail companies the upfront cost of buying and implementing the necessary hardware, software and services can be prohibitive, denying them the IT systems on which to build their business.

This frustration is also felt by IT consultants and systems integrators working in the sector. But it can be alleviated through financing methods other than direct one-off payments. IBM Global Financing has long experience of financing IT purchases for companies and now works regularly with consultants and systems integrators to help them provide IT solutions and financing options for their retail clients.

IBM Global Financing is the world's largest IT financier with an asset base of around \$36 billion. It has over 125,000 customers across 40 countries and delivers 10% of IBM's total profit with less than 1% of the group's employees. In 2003, it originated \$38 billion in financing. Such success can only be sustained by continually meeting market demand for flexible financing options. It is here that IBM Global Financing diverges from financiers such as banks, using its knowledge of IT markets to offer competitive deals – including features such as residual value and asset recovery services – which most banks do not have the expertise to provide.

Kevin Taws, Partner Financing Manager for IBM Region North, explains that, essentially, IBM Global Financing has three complementary lines of business: financing for end-user customers acquiring hardware, software and services; commercial financing for IBM business partners;

and asset disposition and sale of used equipment through the Global Asset Recovery (GARS) division. GARS is a major support to the lease business and, worldwide, handles around 22,000 end-of-lease machines every week. Consultants and systems integrators may use all of these financial services, but in the retail sector Taws suggests it is leasing and asset recovery that are most useful in closing contracts.

'IBM Global Financing's differentiators in the retail sector are based on its understanding of the market's need to constantly drive forward despite budgetary constraints,' says Taws. Based on this market knowledge, he cites the company's residual value-based offering as an example of a solution that provides specific benefits for retailers. The offering builds the residual value of equipment at the end of the lease into the original deal – allowing customers to make acquisitions when they need to, but giving them lower total cost of ownership and enabling them to justify the overall expenditure by spreading payments and identifying benefits throughout the period of the lease.

Depending on the nature of the business – perhaps a new retail initiative rather than an ongoing proposition – IBM Global Financing can tailor the length of the lease to suit the business need, again building in residual value upfront to reduce the customer's cost and risk. In a diverse market, Kevin Taws believes that such choices are essential to winning clients' confidence and is keen to offer as many practicable options as possible to retail customers.

Another example are the pre-stated secondary terms that can be included in IBM Global Financing leases, giving customers full certainty of the cost



Kevin Taws: understands the market's need to constantly drive forward

of the financing solution. Some customers may want to send equipment back to IBM Global Financing at the end of the lease, while others may want to choose the pre-stated terms for the extension of the lease. An upgrade programme that helps maintain the customer's competitive position could also be included, shifting the risk of technical obsolescence to IBM Global Financing. Like accurate residual values, pre-stated terms are the preserve of IT experts rather than financiers at large.

As Taws points out: 'Working with these options, consultants and systems integrators can avoid the impasse sometimes created by contracts that require upfront payment. If they need help from IBM Global Financing to set up the right leasing facilities for clients, that is always available, as is the opportunity for IBM Global Financing experts to talk in more detail to the clients. We appreciate that one size does not fit all. We will work with consultants and systems integrators to engage with their clients when they feel the time is right.'

Similarly, IBM Global Financing can offer financial support to consultants and systems integrators who may be relatively small compared to their clients, but have specific niche software or specialist skills that appeal to the customer. In this instance, IBM Global Financing rather than the consultant or integrator will buy the necessary equipment and lease it to the customer, taking the consultant or integrator out of the loop but leaving it with the margins from supplying software, solutions and services.

Taws explains: 'For a niche retail specialist, this sort of lease offset arrangement opens up previously unattainable parts of the market, fostering company growth as well as a greater choice of potential suppliers for large customers in the market.'

IBM Global Financing also provides large retailers and their systems integrators with roll-up leases. These allow a company to acquire equipment on an ongoing basis over a period of, say, three months, with IBM Global Financing paying the invoices once they are cleared by the

customer and rolling-up the costs to create a single lease for the customer. The lease is drawn up on monetary terms – for example £10,000 of new equipment acquired in the period will be leased at a fixed rate – and the customer typically pays on a quarterly basis.

As well as reducing the administration costs and complexity of multiple leases, IBM Global Financing's roll-up scheme also gives advance notice of changes to rates or residual values, so customers can plan the cost of equipment acquisition for the quarter ahead.

Asset recovery

Acquiring IT solutions at an affordable cost may be vital for retailers, but so too is consideration of what happens when the lifecycle of equipment draws to a close, as the disposal of old machines can be costly. Restrictions on how such equipment can be disposed of are also about to get tougher as a new EC Directive comes into force.

Proving the claim that it offers end-to-end financing propositions, IBM Global Financing runs Global Asset Recovery Services in parallel with its leasing offerings. This service offers a suite of solutions to dispose of IBM and non-IBM IT hardware equipment. Customers can enjoy one-stop disposition support including shipping, resale of marketable assets and recycling on new or used equipment.

IBM Global Financing sells pre-owned hardware – more than \$1.5 billion was sold in 2003 – back to customers through consultants, systems integrators and other IBM business partners, with a warranty and after being refurbished and tested. This pre-owned equipment is often leased as part of a new solution and used for back-up, testing or software development by the retail customer.

As Kevin Taws concludes: 'IBM Global Financing can capture and finance a whole solution, giving consultants and systems integrators more market opportunities and retail customers more options to meet their business needs.'