

## IT Analysis – It's a question of scale...

By Clive Longbottom, Service Director, Quocirca Ltd

At a recent IBM analyst event, I had several discussions with IBM executives looking at different aspects of how to use IT in today's business and other environments. Although these discussions came at things from many different angles, a high degree of commonality was obvious in what IBM's approach is.

For example, discussions on what IBM is doing in defence work, with the need for battlefield sensor devices feeding back information to battlefield headquarters and from there to central headquarters, did not seem all that different to what is required for the sensor and actuator work being carried out in manufacturing, retail and oil and gas. Likewise, a lot of automation for the home and the business all seemed to carry the same underlying basic needs, even if the end result may be seen as a little different.

Even within the pure IT environment itself, the need for data centres to become more intelligent means that better measurement of what is there, what it is up to and what this signifies will mean that much has to be done to improve how we integrate sensor networks into the traditional IT measurement and management systems – and then open up opportunities for intelligent data centres to become the hub for the intelligent organisation.

If we start at the home level, a presentation was given by one of IBM's Master Inventors and Distinguished Engineers, Dr Andy Stanford-Clark. Here, Andy took us through the way that he has wired his house up to such an extent that he can go in to Second Life and enter a virtual copy of his house, and if he turns the lights on in the virtual world, his lights are turned on in the physical world as well. He has also created feedback loops so that he can see his electricity and water usage through several different visual means, and has automated many different aspects of how the house runs itself.

At the defence level, we see the need for sensors monitoring events on the battlefield to be highly distributed but completely independent of any

one single network path, so that the information always gets through. And finally, at the commercial level, we see the need for small events to be measured and aggregated and then the data needs to be mined and reported, and actions triggered on the findings.

At a high level, these all seem to be fairly different problems, requiring different solutions. But, IBM has decided that it can take a similar approach to all of these, along the way being able to leverage its knowledge and best practices to create economies of scale at a financial level. How is all of this done? Well, at one end of the problem is straightforward web services instantiated under a typical service oriented architecture (SOA) construct. IBM's Websphere Enterprise Service Bus (ESB) acts as the means of passing information in and out of the main IT systems. Nothing too new here – it's mainly just down to how well any vendor's SOA capabilities are, and IBM is pretty good in this area.

But, when we look downstream in to the sort of environments where sensors and actuators are, we come up against a whole different set of problems. For example, if something needs to call a specific service, it has to somehow get that request from where it is needed to the ESB before it can be passed through to the archetypical SOA environment. Within the downstream side, we really don't have the richness for the provision of fully functional SOA service databases, such as a universal description, discovery and integration (UDDI) engine, or a change management database (CMDB) as we would find in the standard IT network. Network connections are likely to be intermittent, patchy and operating with more challenging bandwidth availability.

Therefore, something special has to be done here, and IBM has taken a lead in providing a federation of ESBs, such that mini-ESBs can be used within the downstream side, along with specific versions of its messaging capabilities to store information and forward it on when the conditions are right. By using an ESB construct, the technologies downstream can be abstracted,



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getting away from any need for end-to-end proprietary approaches. Indeed, such an approach provides capabilities for partners (both existing data partners and new partners in the engineering, process and building environments) to bring proprietary control and sensor networks into the greater realm of standardised IT. In this way, existing management tools (such as Tivoli, Unicenter, OpenView and Patrol) can act on events that they may not have had visibility of before and correct issues before they become problems.

IBM is putting a lot of focus on this, and is well placed to do well. It has already got a lot of experience in the RFID and telemetry markets, and its previous work in pervasive computing should bear fruit here.

However, bringing in the right partners in the right markets may be challenging – the likes of Foster Wheeler, ABB, Bechtel and others in civil and commercial construction may not immediately be open to how IBM can offer appreciable value in their space. Likewise, what IBM is trying to do spreads across many different roles within an organisation – many of whom may not see themselves as being interested in what IT can do for them (for example, facilities management staff with skills in existing proprietary systems).

But, IBM still has deep pockets, even in a market that is turning sour. If anyone can push this through as a valid future approach, IBM can – and it has case studies to provide proof points in many of the markets.

## About Quocirca

Quocirca is a primary research and analysis company specialising in the business impact of information technology and communications (ITC). With world-wide, native language reach, Quocirca provides in-depth insights into the views of buyers and influencers in large, mid-sized and small organisations. Its analyst team is made up of real-world practitioners with first hand experience of ITC delivery who continuously research and track the industry and its real usage in the markets.

Through researching perceptions, Quocirca uncovers the real hurdles to technology adoption – the personal and political aspects of an organisation's environment and the pressures of the need for demonstrable business value in any implementation. This capability to uncover and report back on the end-user perceptions in the market enables Quocirca to advise on the realities of technology adoption, not the promises.

Quocirca research is always pragmatic, business orientated and conducted in the context of the bigger picture. ITC has the ability to transform businesses and the processes that drive them, but often fails to do so. Quocirca's mission is to help organisations improve their success rate in process enablement through better levels of understanding and the adoption of the correct technologies at the correct time.

Quocirca has a pro-active primary research programme, regularly surveying users, purchasers and resellers of ITC products and services on emerging, evolving and maturing technologies. Over time, Quocirca has built a picture of long term investment trends, providing invaluable information for the whole of the ITC community.

Quocirca works with global and local providers of ITC products and services to help them deliver on the promise that ITC holds for business. Quocirca's clients include Oracle, Microsoft, IBM, Dell, T-Mobile, Vodafone, EMC, Symantec and Cisco, along with other large and medium sized vendors, service providers and more specialist firms.

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