Ovum believes wireless middleware will have a radical impact on the value chain. A new report argues the sector will help speed up the convergence of different types of vendors. Senior analyst and lead author Jessica Figueras shares her findings



RATTLING THE VALUE CHAIN

It's been heralded as the next big thing and condemned as dead in the water. So, where does wireless middleware actually feature in the evolution of next generation networks?

First, it's important to be clear what we mean by the term. Ovum's definition of wireless middleware is 'software functions that shield applications from complexity in the wireless access environment'. And the reason there's so much complexity to hide is because today's increasingly sophisticated service environment generates a huge amount of diversity.



Wireless middleware has arrived at centre stage because today's operators want to deliver a growing number of data-rich services. Obviously they want to market such products to as many different users as possible and they don't want to be limited by the diversity of devices currently available. The problem is that individual devices and the various platforms they employ are often radically different from one another. The role of middleware is to hide such differences from end-users and ensure a uniform service experience.

At a technical level, wireless middleware is a crucial enabler that can help operators, ASPs and enterprises get new data services out into the market fast. However, today's wireless middleware doesn't just play an enabling role, it's also turning out to be a disruptive technology – with repercussions right across the wireless value chain. This is because it gives those that own it control over the service environment. A platform that's capable of delivering content to many different types of device and across a comprehensive range of networks holds the promise of significant market share. Market-leading content owners will only want to partner operators that can give them access to the largest possible market segments.

At present, many operators are in danger of being seen simply as IP pipes, competing on the cost of network access alone, and pretty much the only way to go from there is downwards. The problem is that not all operators have the skills or the finances to occupy a prime position in the content value chain.

If operators decide they lack the customer-facing skills to be a big content player then they might well decide it is better for them to remain an IP bearer rather than a platform owner. In this case they would need to partner with organisations that were willing to host their own wireless middleware, such as enterprises or ASPs.

Just as the number of options available to operators has suddenly increased, there has also been an explosion in the number of small, smart software vendors with new technology at their fingertips. For a while it seemed such start-ups had a big future: there was a conspicuous gap in the market and they had the technology to fill it. However, innovative technology very soon becomes standard. The problem for some of these smaller wireless middleware vendors is that they've invested in early technologies, but without the resources to develop

them further have been forced to sit back and watch the bigger late entrants swallow up their market.

On one level, this goes with the territory. Smaller vendors are intrinsically vulnerable, especially at a time when a great deal of investment capital has been pulled out of this sector. However, those that do survive become excellent acquisition targets for larger vendors that want to play catch up. Now is a very good time for big companies that have been slow to take on the new technology.

As wireless middleware technology becomes an accepted element in the IT mix, key players have emerged. Microsoft, IBM and Oracle are all important in this space and while their strategies are quite different, all three are primarily focused on the enterprise space. Both IBM and Oracle have very good offerings in terms of depth of functionality, but the absence of high-profile marketing campaigns implies they are perhaps unsure if now is the right time for investment in wireless. Microsoft on the other hand, is mainly focusing on devices and building wireless functionality into its existing products – Microsoft Exchange being a good example.

In addition to these industry outsiders, many of the wireless infrastructure vendors have some kind of wireless middleware solution, with most focusing on consumer one-to-many offerings. What differentiates these two communities – the IT vendors and the wireless vendors – is that they tend to sell wireless middleware functionality in quite different ways.

IT vendors tend to regard wireless middleware as software infrastructure and they usually offer horizontal products supporting many different types of application. Wireless vendors on the other hand, tend to sell in conjunction with specific applications – essentially, a vertical approach to the market. The implication of this is that as a growing number of operators roll out more IP-based platforms and become increasingly involved with mainstream software, wireless vendors will become increasingly threatened by the IT community. These are uncertain times. The two markets are meeting in the middle, but no one yet knows where the middle is going to be. It's an environment in which strategic partnerships are going to become critical for success.

While partnerships between big players are likely to make the headlines, start-ups that have survived the first wave of investment jitters still have a significant role to play in this market. In the carrier market in particular, small vendors have a unique opportunity to do very well on the back of a single contract. Hutchison 3G for example, has signed contracts with a lot of small and innovative players, buying important and very specific elements of their technology. From the vendor's perspective, these major deals can mean the difference between surviving and going under.

The recent partnership between IBM and O_2 coupled with the Microsoft and Deutsche Telekom collaboration on wireless Web services (using the .NET Compact Framework) seem to imply an interesting new development. What these relationships are actually about is the manner in which the operator connects to its content partners – how it exposes its platform and allows its partners to develop against it. In the years ahead, such partnerships are likely to prove extremely important, not just to the evolution of next generation service portfolios, but also to the allocation of revenues derived from such portfolios.

Curiously, the area in which operators have totally failed to seize the moment is in hosting their own enterprise wireless middleware. When Ovum first started looking at the enterprise market we could see that carriers had a real opportunity to host certain kinds of wireless middleware, enabling enterprises to wireless-enable applications without having to make large investments in their own wireless middleware. Operators may well have seen the opportunity but extraordinarily, they completely failed to do anything about it. In terms of technology they had the resources to take advantage of a very real pent-up demand, but exploiting the conjuncture would have required a complete change in the way they sell to enterprise. And to date very few operators have shown themselves capable of making the leap.

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At present, most operators sell to junior telecoms managers: they sell bundled deals, devices and air time. Having to go to an enterprise and sell them something that is strategic, complex and possibly quite expensive, has proved completely beyond most players. In the meantime, systems integrators and software vendors have been more than willing to leap into the breach. Perhaps the only consolation for the market as a whole is that at least someone is doing something to satisfy customer demand, and at least operators will receive revenues from the traffic.

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One hurdle to the provision of a comprehensive mobile enterprise offering is the scale involved. From the enterprise perspective, an end-to-end solution is essential, but this is easier said than done: there are multiple technologies involved in such a product, few of which have been designed to work together. For this reason alone it's inevitable it will be the bigger players that come to dominate this end of the market. System integrators like HP and IBM are already conducting wireless enterprise trials, but the projects are large and complex and it's tough to move users beyond the trial stage. The likely resolution to this impasse will be consortia of global players working towards an integrated enterprise offering.

This isn't to say wireless middleware in the enterprise is restricted to large vendors. Broadly speaking, the business falls into two categories: one is about core business processes – sophisticated wireless-enabled applications like field force automation and supply chain management. The other side of the business is more tactical and concerns relatively easily implemented applications like email and file access.

The first, heavily vertical, category will undoubtedly be dominated by the systems integrators – as this is often about bringing automation to areas never automated before. While this is often the space that holds most of the business value, it is also very complicated to implement and requires solution providers to grapple with business issues that have not been systematically addressed in the past.

The second category is more horizontal and basically concerns users with light information needs, devices and PDAs. This part of the market is tougher to derive large scale business value from but a lot easier to address. Unsurprisingly, all the noise is around this segment of the market, where a wider range of vendors will find they have many more opportunities.

It is this kind of diversity – and the large number of devices available – that is one of the driving forces behind wireless middleware, and it's not going to go away. In the past decade or so, the IT industry has been inhibited by the fact that the PC has provided such a uniform access environment. Diversity is liberating, and the arrival of technologies that allow applications to be more channel-agnostic and flexible has encouraged diversity to start filtering back into the software development environment. Increasingly developers will be able to address much wider markets, by creating applications that are applicable across multiple devices and networks.

Ovum believes wireless middleware is not simply an enabler but will prove a catalyst for change right across the industry. It has a key role to play in speeding up the process of convergence between different types of vendors. Over the next five years wireless vendors need to change to remain competitive; they need to embrace the partnership approach to market development and forge closer relationships with the IT vendor community. Those that fail to move fast enough are going to find companies like IBM, Oracle and Microsoft encroaching on their space.

Throughout its short history, the operator community has been sheltered from the mainstream software industry. But a seismic shift is happening. Whether the players concerned like it or not, the fate of the wireless industry is becoming deeply dependent on the software supply chain. ■

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