



Ebusiness technologies: foundations and practice

Web services in practice

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In this video we're going to take a look at the web services paradigm from the perspective of web services developers. We'll also examine some of the factors that influence successful developments. Crucial to these developments are the goals of inter-operability, reuse and secure message exchange, all of which are underpinned by open standards. When considering the design of web services it's important to distinguish between those built for internal use only and those built to support business partnerships.

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You can think of web services as effectively two types of web services, two categories. On the outside and on the inside. Web services on the inside is about integration, is about you know, being optimum. It's about optimising your process, how you go about things, which is all about reducing cost. Web service on the outside is about collaboration, is about dealing with partners, is about B to B, business to business. So it's about increasing your market share. So web services, if people think of web service in those kind of business terms, you know, inside saving cost, outside increasing revenue, then they will be less gap between the business and IT.

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Web services, and the ability to, you know, cos it's kind of publishing, subscribing services that you register in a repository and you tell people where they are and how you might want to use them, is actually a good way of going about doing IT things. So at that level, yes, it's a good thing to do and yes, it's probably the right thing to do. Certainly the one we would be promoting in terms of how you do this kind of stuff.

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Web services built upon the foundation of open standards such as SOAP, WSDL and XML provide the core functionality of the new paradigm and it is within this new paradigm that lie the goals of inter-operability, reuse and security. Inter-operability has been a major impediment to previous attempts at supporting communications across organisational boundaries as the major vendors of development tools have perhaps unwittingly locked users into proprietary standards. The web services paradigm has a clear goal to overcome such limitations.

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My view on the inter-operability for web services whether you're consuming say a dot.net web service or something from J to E and so forth. Ideally cos it's ultimately all XML based, it feels like technically it should be reasonably straightforward to, to inter-op I think there's probably going to be some practical differences in terms of the implementation and the priorities of the different vendors that are providing these implementations. But I would hope that, you know, going forward a lot of these should be easily ironed out.

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Web services gives you the inter-operability piece that perhaps in previous iterations of the architectural paradigm, where we had more portability through Java ahead of C++ but didn't really solve the inter-operability piece, certainly not above the network layer, if you see what I mean. So it's much more now a web services in which more of a convenient way of communicating and a level of abstraction which is more meaningful.

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The hope of consumers and developers alike is that standards from bodies such as OASIS will deliver inter-operability in a way similar to that achieved for the internet by the internet

engineering taskforce. The OASIS WS series of standards could prove crucial but some, such as the developers of Tesco Direct, couldn't wait. There may also be occasions where proprietary solutions are more appropriate.

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I think standards are incredibly important for inter-operability of distributed systems. If you look historically at the role that that the IETF played for the adoption of internet standards, that was clearly an incredibly, incredibly important body for the adoption of those technologies at the high level. OASIS is certainly going to play a very, very similar role, albeit not as possibly as much of a see-change as the internet technologies that underpin web services, but I think the OASIS positioning within their, the environment is extremely important. It's very well placed in terms of vendor support and it serves its purpose.

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We often for example if we're consuming or creating dot.net web services, then Microsoft platform will have supported SOAP in that example to a certain extent. Other mechanisms such as the WS related standards for security transactions and so forth, they feel like they're still in early days and so we've not explicitly used them at the moment. Depending on how they get developed and how vendors such as Microsoft and others support them. It's possible we might use them later but at the moment that area of it seems to have been less widely used by us.

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Do we wait for standards or do we act now? I mean we basically have taken a decision in '99 to roll out an application even though at that time all that was available was a very early paper by Ted Patterson about SOAP. There was nothing on web services. So at the end of the day, it's the business driver that is the main, main thing that you need to take into account.

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If the bank was faced with a situation where there was a proprietary mechanism or a publicly recognised standard, it would try to use the public standard every time. That is always going to be the case, the driving force behind our centralised or reused service, like an infrastructure service of the type that I have responsibility for within the bank. There will always be a place for point to point solutions with their own service definitions or completely proprietary solutions.

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The standards dimensions of web services extends beyond the standardisation bodies. Legislation also plays its part.

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Legislative compliance has been one particular area, certainly for the bit-based industries, you know, banking, insurance, Telcos, you know, those kind of industries have been forced and obliged to become much more affective in response to compliance needs both from a shareholder perspective but also in terms of, you know, organisational and government at the very highest levels.

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If you think about it, an organisation like Tesco can partner with anyone. The reason they partner with a small West London company is because of the support you know. We don't lock them in. We believe in partnership and transparency for our clients. As a result we want them to be as open as possible and the best way to be open and, you know, and for you to achieve as much as possible in terms of ROI, is to use standards wherever they exist to make it easier to, you know, to collaborate with others.