



What's in a name?

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There are various ways to define the new framework that links networks, services and the customer, but whatever you call it the underlying change is real. Alun Lewis reports.

The telecommunications industry has a serious – and growing – problem with its vocabulary and the terms and definitions that it uses in its everyday work. As complexity continues to constantly increase across technologies, systems and business models – as well as customer relationships and demographics – we're starting to find that the mental maps and organisational structures that have served us well for a few years are now beginning to fail.

These issues are especially acute in the OSS/BSS sub-sectors. These are increasingly having to interwork on an intimate basis with areas that would have been traditionally seen as largely separate, such as the service creation, delivery and management functions that were usually associated with the switching environment, rather than the back office IT systems. Adding even more complexity to the mix are the ever-growing importance and power of the business development and marketing disciplines and departments who should bring an understanding of the customer to the organisation. Add to these the eternal pressure to get new services to market ever faster and cheaper and their importance goes still further.

Industry leaders and commentators might bleat on endlessly about the importance of 'joined up' telecommunications services and operations and the need to take a truly holistic approach to the next generation mobile network. Unfortunately, the day-to-day reality is that conceptual issues are still sometimes compounding an already difficult problem, despite the best efforts of organisations like the TeleManagement Forum in bringing clarity and transparency to an extremely dense topic.

The eternal curse of our industry seems to be that we often use the same words to describe different things – or different words to describe the same things. In terms of the 'joined up' operations highlighted above – linking physical network and service inventory systems with service creation and delivery and CRM and billing and tariffing systems – there are already a host of overlapping terms and concepts that are used to map and describe this space. Is it about service fulfilment, resource management, service orchestration, product and service lifecycle management, catalogue management or some even newer invention of the vendor marketing departments? The choice is yours, but you'd better make sure that your suppliers and partners are using the same definitions otherwise you might be at risk of making some expensive mistakes....

Impacting confidence and revenues

These issues – abstract though they may seem when compared with the physical realities of radio engineering, handset design or base station roll out – are impacting on both business confidence as well as bottom line revenues. According to a new survey by Comptel's inventory management division (formerly Incatel), only eight percent of the 25 European mobile operators surveyed thought that their OSS was well adapted enough to cope with the market demands of evolving networks, 3G and new mobile services. More specifically, two-thirds of the operators stated that their OSS could not adequately support network provisioning and that, while around three-quarters of operators saw network inventory as the most important OSS component, another two-thirds found it hard to keep their inventory systems up to date with the actual network elements involved.

Oliver Suard, director of marketing for Comptel's inventory management division, comments: "The breadth and complexity of many mobile operators' service components are now mirroring the complexity of the underlying delivery infrastructure and associated network elements. As a result, there's an emerging need to adopt decomposition and abstraction approaches to properly understand the links between services and the network inventory – and that requires clear language and definitions. The TMF may be doing good work with its NGOSS, eTOM and SID initiatives that identify common processes at particular levels, but individual operators all have their own specific situations and terminology, as well as inherited OSSs that they simply throw out.

"The emerging concept of catalogue management – though it might be interpreted in different ways – can be a very useful way of bridging the traditional divides between the network engineers, the IT departments and the marketing and business development teams and helping each to understand the other and work more closely together. The last few years have seen a focus on the use of inventory systems as a way of reducing costs and increasing the return on network investment. Some mobile service providers are now concentrating more on the order to delivery side of things and in this context the OSS can directly and actively help in revenue generation by speeding service delivery and increasing the reliability and integrity of the services on offer. There's no point in building and marketing a service if the underlying infrastructure – which in a mobile environment often means drilling down to an individual's handset – is incapable of delivering it."

The importance of operating in an increasingly pressurised and multi-dimensional commercial world is accentuated by Yogen Patel, VP product marketing for Ceon Corporation. "Product creation and product management is enough of a complex and difficult task as it is – even in a closed and static environment. The task of managing complex products through their lifecycle in the highly dynamic world of today is considerably more challenging, especially given the many sources of change that now have to be dealt with – for both internally sourced services as well as supplier or partner sourced products and services. What are needed are product creation and product management software systems – that have the marketing managers in mind as the primary application users – and these are finally appearing in the marketplace, providing a logically centralised and self-contained environment for the flexible modelling, creation, definition, integration, query and export of a catalogue of simple and complex products."

Related activity

Against this backdrop, there's also significant related activity here coming from the Service Delivery Platform community, as Mac Taylor, principal consultant at the Moriana Group explains. "With service providers under pressure to deliver ever-larger numbers of services to the mass market, how can they reuse shared service delivery components?"

"This is where the concept of the Service Exposure Layer (SEL) comes in – a new and important element of an SDP as it can deliver voice and data service capabilities both internally – and externally – to third party service providers and enterprise users. The higher level of abstraction and simplicity of operations provided by the SEL allows for easy use by non-technical IT developers with little telecom-specific knowledge. An SDP can therefore be seen as transforming lower-level service capabilities provided by a Network Abstraction Layer into the higher-level capabilities exposed by the SEL."

These emerging disciplines of product catalogue management do seem to have the potential to tie together physical and service inventory issues in new and beneficial ways – and bridge the cognitive divides between different service provider departments.

Paul Hollingsworth, product marketing director at Celona Technologies believes that, "Tens of service delivery platforms and often hundreds of other systems holding product, content and service definitions slow time to market and add yet more costs to operational budgets. On top of this are all the vulnerabilities and damage to customer confidence that result when services fail to be successfully delivered as a result of mismatches between the data held on separate systems. The arrival of IMS is only going to compound these problems and increase the overall challenge.

"To put it bluntly, service providers have a choice of migrating all their existing systems onto a few strategic platforms – or take control of the wider data management issues. The first option isn't feasible in the sorts of time frames that service provider now require and a quick calculation shows that both risk and costs will be high. The alternative is to use an application that can deliver master data management dynamically, allowing the unification of product/customer and inventory data that is currently dispersed widely around different systems. This can make the data more accurate, meaning that there are fewer errors with each transaction and overall change can happen faster across the organisation.

"This is why some operators are now electing to use a federated strategy, where data mastering is shared across many systems. When it comes to IMS, not all of today's systems can be turned off in order to launch new IMS service software architectures as many existing systems are required to support profitable – or even unprofitable, but mandatory – services for many years. As IMS products become more complex and mature, operators will move towards implementing large, complex and composite products and services – yet only turn on part of the implementation. What's needed are systems that can deliver rapid product activation from a predefined product set. The TMF's NGOSS, for example, might be critical to creating joined up systems in the future, but isn't that much help in integrating non-standard applications that are going to be in production for many years to come. Reliance on standards is not really an option in this area today."

Especially acute

These issues of managing new services and infrastructures are especially acute given the mobile sector's move not just into new content-based services, but also into new delivery routes, such as through fixed-mobile convergence or the addition of WiFi and WiMax to the radio path.

Paul Scarff, director of Wireless OSS Product Management at Sigma Systems: "In some ways, the cable operators have already been in this place of offering multiple services and important lessons can be learned from their experience. One of the most relevant lies in giving customers the ability to easily experiment with new services. That necessarily requires having the right amount of integration and flexibility in both the back office and the delivery network to allow services to be quickly rolled out on a trial basis to individual customers – and then rolled back again equally rapidly if they don't actually take up the service. The problem is that because of the intricate cross linkages that are needed to create particular service bundles, each trial has to employ what is essentially a craft-based base approach. This is obviously no longer tenable given the cost and performance pressures that the entire industry now works under.

"In an organisational context – and irrespective of whatever specific words you use to describe it – the emerging area that we call service management helps service providers understand all the processes involved in satisfying the customer and can provide an invaluable bridge between the network and marketing departments. It's very short-sighted to hear a service provider's technology team saying, 'We don't need service management – we've already got inventory management.' This issue is going to become increasingly acute as MVNO models take off and mobile operators begin to decide what services or parts of their core catalogue they will expose to third parties."

The benefits of adopting a more holistic approach to service management was also stressed by Telcordia's Beau Atwater, Chief Architect, Global Solutions, in the context of his company's recent launch of an enhanced fulfilment suite. "Taking a federated strategy gives service providers much more latitude in responding quickly to market opportunities, linking billing and CRM more directly in with the physical aspects of network operations and service management.

"Not only is it easier, faster and cheaper, but the use of user-friendly GUIs and integral business rules and logic helps eliminate the need for highly skilled and expensive staff for much routine, day to day work. It also increases customer satisfaction by ensuring that only those customers able to receive a particular service get offered it."

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