THE STANDARDIZER'S VIEWPOINT

REDUCING OPERATIONAL COSTS IS A STRONG IMPETUS FOR TMN STANDARDS

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What role has Australia played in the development of TMN (Telecommunications Management Network)-related standards?

There have been two network management standards initiatives in Australia, starting in about 1988. Australia played a key role in the development of the CMIP (Common Management Information Protocol) standards and the subsequent international standardized profile activity. Similarly, Australia, through the active support of Telecom Australia (now Telstra), heavily contributed to the development of ITU-T TMN standards. Interestingly, even though the major local network equipment providers are headquartered outside Australia, there is keen interest in the continuing development of network management standards to ensure they are usable in the real world.

Are the standards mature enough to enable scalable TMN solutions?

Yes and no. The world of network management is unlike most other standardization activities. In most cases, telecom standards are "vertically" focused – for example, SS7 (Signaling System 7) or ATM (Asynchronous Transfer Mode), where the technology and functionality are bound to a single focus. Network management, by comparison, touches on just about every aspect of telecommunications, from detailed equipment management specifications for SDH (Synchronous Digital Hierarchy) to complex network-wide traffic management.

The basic infrastructure standards to enable TMN implementations are now mature and are supported by industry such as computer hardware and software vendors, and network equipment providers. Such standards include CMIP, X.500, OSI Naming and Addressing, and generic and specific network equipment object models.

However, further work on distributed processing and distributed management is required to cater for large-scale, open systems solutions to complex network and service management problems posed by increasing use of network intelligence for services such as PCS.

What are the key business drivers for telecommunications network management (TMN)?

The one key driver is the reduction of operational costs. Usually, this driver is the result of competition or impending competition and privatization. As telecom operators are balancing return on assets with customer satisfaction, integrated and consistent network management actually enhances both sides of the equation. On the one side, consistent application of network management will allow automation of complex processes and hence drive down costs. On the other side, consistent use of network management information will enable customer care initiatives, enhancing the network operator's ability to react quickly to customer requirements.

What is the major issue for successful implementation of TMN?

In most cases, from my experience, it's the ability of the stakeholders and key financial managers of network operators to understand the value of the rather large investment needed for TMN. It is large if considered as a single exercise. However, if all IT (Information Technology) and network and service management projects are treated consistently by applying TMN principle and using implementable solutions, then the net cost is much lower – mainly in the cost of human resources. The increase in the return on investment in TMN is realized by buying off-the-shelf and shifting risk to vendors and reducing the cost of internal development by code re-use and re-use of deployment processes, which is the most significant IT cost.

What is the state of play for TMN in Australia?

Both Telstra and Optus, the most significant network operators, are now proceeding to the marketplace looking for network and service management systems based on TMN and derivative standards. Both are now inclined to buy off-the-shelf, with the decision criteria of fit including aspects such as open systems, open protocols, object models and so on.Substantial Network IT projects that will utilize TMN standards are either under way or about to proceed within the next 12 to18 months.

The Network Management Forum is now officially represented in Australia, providing ready access to the NMF's specifications. These lean heavily on ITU-T and ISO network management standards, and focus them towards real implementations and interoperability. Also, Austel is now interested in the application of TMN principles to issues such as exchange of operational information (faults, billing/usage, customer) between network and service providers. Fortunately, because of the relative maturity of standards in this area, regulatory and industry initiatives can proceed with a fair degree of industry support and capability.

Interview by Nigel Hopkins