Convergence of IT and Networking Enables Telecom Providers to Deliver Blended and Personalized Services

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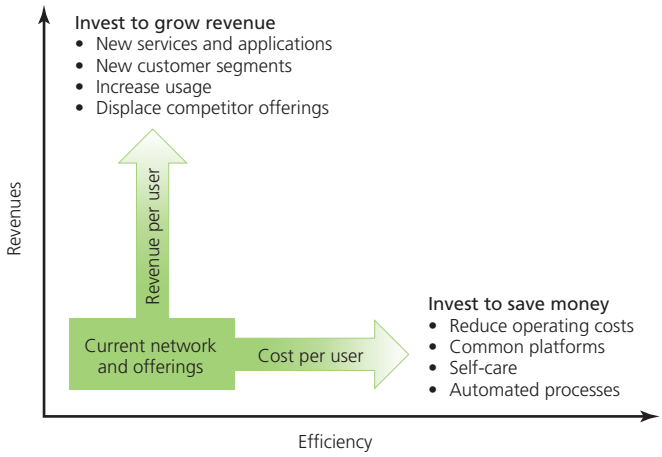
The telecommunications industry is in the midst of a major transformation. End-user market segments are becoming more diverse in their needs and requirements, resulting in an increased demand for sophisticated, individualized communications services. The once-separate worlds of media, entertainment and communications have converged, with discrete, standalone services giving way to an increased demand for blended and personalized services (including voice mail, e-mail, instant messaging) delivered to any device over any network.

This new paradigm offers tremendous opportunity that can drive innovative offerings to market quickly and create unique customer experiences. IDC estimates the market for blended services in the United States reached $74 billion USD (€50 billion) in 2007 and will grow to $111.6 billion USD (€75.6 billion) by 2012. To effectively exploit the lucrative opportunities in this market, service providers must examine current business models and look for new ways to meet the escalating requirements of consumers and business clients. Failure to adapt to new market environments will relegate providers to suppliers of basic transport, which has become a commodity.

Migrating to Next-generation Networks

To address the evolving needs of consumers, service providers are embarking on comprehensive transformation programs to streamline operations and improve their competitive position. The strategies executed implement architectures that deliver reduced costs through operational efficiency, and revenue growth by creating agility in deploying new services (Figure 1).

Figure 1: **Service provider strategic imperatives**



Source: IDC 2008

Historically, the majority of service provider revenue was generated from a large installed base of legacy network assets.

As providers developed new offerings, they built service-specific networks that operated in parallel to existing networks. This created a highly complex, segmented infrastructure that was expensive to run, manage and maintain.

Service providers are now migrating to next-generation networks that evolve traditional network architectures away from discrete, service-specific networks to deliver services run on a common, shared IP infrastructure. Streamlining the network enables operators to alleviate redundancies inherent in a traditional network model and create an efficient operational environment, reducing capital expenditures, support and maintenance costs in the network and Operational Support Systems/Business Support Systems (OSS/BSS) domains. Addressing inefficiencies is a critical step in reducing service providers' cost structure, freeing money to invest in service development.

Creating an Agile Service Environment

The worldwide market for telecommunications services reached $1.3 trillion USD (€800 billion) in 2007. IDC expects it to reach $1.4 trillion USD (€900 billion) by 2011. Part of the slow growth during this period is due to technology substitution in core voice services. However, increased competition is also adversely impacting revenue for service providers. As providers make investments to drive revenue growth, achieving a sustainable competitive advantage over nontraditional competitors has become a strategic imperative.

The communications competitive landscape has expanded to include entrants with business models that offer customers a completely new experience. Web 2.0 companies such as Google/YouTube, MySpace and eBay/Skype offer compelling value propositions that are challenging the business models of established communications service providers. While these companies leverage the traditional service provider's network, they use advertising-based business models to deliver innovative services such as video-sharing, messaging and music, often offering services for free.

The biggest advantage Web 2.0 companies enjoy over service providers is their ability to rapidly create and deliver new services. The service development cycle for a service provider is typically 12 to 18 months. Many of the Web 2.0 players can deliver new services in as little as six weeks. To effectively compete in this environment, service providers must reevaluate their existing service delivery process.

As service providers build revenue-generating applications in the IT domain of the network – rather than the network domain – they increasingly use IT-based technologies such as Service-oriented Architecture (SOA) as a foundation for creating new services. Within the SOA framework, service delivery platforms (SDPs) such as IPTV share common service enablers such as messaging, presence and location to support the delivery of blended services across different access networks and devices.

Creating an effective service delivery environment that tears down network silos is an essential component of the service providers' transformation strategy. The convergence of networks and IT within this environment has quickly become a key enabler in the delivery of blended services.

While convergence is defined in many ways, we define the term as follows:

Convergence leverages common service enablers, via open standard interfaces, to create, deliver and support blended services over a common IP network. Convergence of IT and networks in the service layer is driven by:

- Inter-working of applications and multiple SDPs
- Providing open interfaces to network resources
- Reuse of common enablers (for example, location, presence) to build new services

While SOA and Web services are common in the OSS/BSS environment – where they have been used to support various types of integration efforts – the architectures are unproven in terms of supporting real-time services with the level of scale, latency and reliability service providers require. Consequently, providing solutions that support carrier-grade delivery, scalability and reliability is a critical requirement for service providers.

Overcoming Obstacles

The biggest obstacle to achieving convergence goals is the elimination of silos that separate IT and network operations. As networks evolved, these organizations have operated autonomously; however, the status quo will not work moving forward. To achieve convergence, these groups must come together to cohesively deliver and support a broad set of converged services. Many of the pioneers of transformation pointed to hindrances with the organiza-tional structure as being the major inhibitor to a successful convergence.

Establishing an organizational readiness plan before a transformation project is implemented is critical. In many cases, this leads to a comprehensive review of the current organizational structure and business processes, with a focus on making changes to ensure a smooth transformation process. Within an operator's organization, this means effectively bridging the gap between IT and network operations groups.

Achieving Success

The ultimate goals of a transformation plan are to:

- Drive greater levels of efficiency within the provider's current infrastructure
- Find ways to add value to existing services
- Meet the demands of rapid innovation and deployment of new services

Achieving these goals requires the combination of a well-devised plan, a dedicated team and the right third parties to meet the challenges of bringing together network operations and IT to quickly drive innovative services to market. By taking a planned approach in executing a strategy, the convergence of IT and net-working in the telecommunications industry is enabling service providers to transform business, network and services operations to improve their competitive position. ●

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Note: This Market Perspective does not necessarily represent the views of Alcatel-Lucent.