

REDEFINING THE NETWORK ECONOMICS OF MULTI-PLAY SERVICES

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White Paper

With the myriad of technology advancements, changing business models, and regulatory debates, the overall end game is still unclear. But what is clear is that service providers must build a next generation, converged network to deliver voice, data, and video services.

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1 Executive Summary

The service provider landscape is rapidly changing, and the pace of change will only increase over the next few years. Traditional telecommunication companies (telcos) that once only offered voice and data services are rapidly mobilizing their resources to design and deploy a converged IP infrastructure that is capable of delivering voice, data, and video services. Cable companies, having spent billions upgrading their infrastructure over the past few years, have been slowly rolling out voice services, contributing to the gradual erosion of the telcos' core revenue stream. Even wireless service providers have thrown their hat into the video ring with plans and architectures, such as the IP Multimedia Subsystem (IMS), in anticipation of delivering video and other services over a wireless last mile.

What appears inevitable is the level of competition among service providers will only increase going forward. With the growth of Internet based services, service providers also face the threat of competition from content providers or aggregators as these companies attempt to leverage the Internet to bypass the service providers who own the network infrastructure. As all of these new market dynamics develop over the next few years, service providers must formulate a clear strategy that positions them well regardless of the business models or technologies that win in the market.

From an economics perspective, there are three fundamental parts to the business equation:

Revenue – Expenses = Profits

At the end of the day, the service provider's goal is to maximize profits. To achieve this, there are fundamentally only two ways to do this—increase revenue or decrease expenses. The innovation and experimentation that is occurring with the new entertainment and content based services are really focused on the revenue part of the equation. Although important, the service provider who also focuses on the expenses portion of the economic profit equation will be the one that is able to create the most shareholder value in the long run.

2 Redefining the Broadband Edge

Fortunately for service providers there is plenty of innovation occurring among infrastructure vendors that will help them realize significant capital (CAPEX) and operations (OPEX) expenses. Innovation is occurring in every category from storage, to compression, to service management.

In particular, network equipment vendors have made some of the most significant advancements. Through the use of programmable ASIC technology, modular operating systems, and carrier Ethernet, next generation edge routers that combine the functions of what used to require multiple devices are now available on the market. This advancement enables a new approach to building broadband networks that simplifies the design, provides consistent services regardless of access technology, and significantly reduces both CAPEX and OPEX.

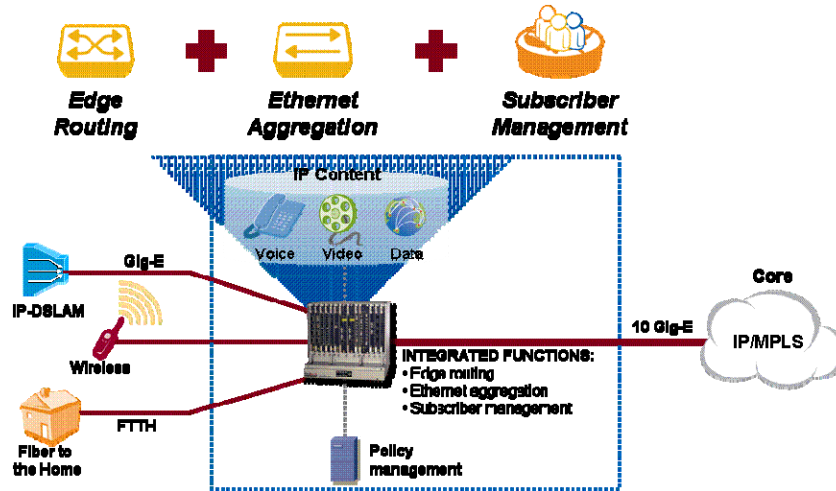


Figure 1) Sample TR-323 calculations for SmartEdge parts

As the figure above shows, deploying a new generation of routers that integrates edge routing, Ethernet aggregation and subscriber management into a single service platform simplifies the network. Reducing the number of network devices has several benefits. First, sparing costs are drastically reduced since there is only one piece of equipment instead of three. Storing and managing the logistics of spare equipment is one of the hidden costs that are often not evaluated but make up a significant part of the overall CAPEX. Second, having fewer devices results in savings in terms of hosting, expenses and even heating or cooling. Finally, the field technicians and operations personnel only need to be trained on a single piece of equipment rather than three. Given the hundreds, if not thousands, of operations people involved, this alone provides significant benefits in terms of productivity by reducing the amount of time they spend in training classes versus managing the network.

3 New Network Economics

A recent study by Yankee Group¹ validates the economic benefits of this next generation broadband architecture. Over a 12 month period, they conducted primary research and interviewed dozens of network planners at service providers around the world. While conducting the research, Yankee Group concluded that service providers must reexamine their network architecture for next generation services and make their networks operational cost effectively.

Yankee Group then analyzed the total cost of ownership (TCO) of building a multi-play network and uncovered that integrating edge routing, Ethernet aggregation, and subscriber management yields measurable TCO advantages. The highlights of the study are as follows:

TCO Advantages Summary	
TCO Advantage	22%
- Capital Expenditure	20.9%
- Operational Expenditure	52.6%
Internal Rate of Return Advantage	39.8%
Net Present Value Advantage	51.8%

4 A Winning Strategy for IPTV

With the myriad of technology advancements, changing business models, and regulatory debates, the overall end game is still unclear. But what is clear is that service providers must build a next generation, converged network to deliver voice, data, and video services. Furthermore, building this new network in the traditional manner will result in a capable network but one that does not maximize the profit potential for service providers.

With the advancements in networking technology today, service providers have the opportunity to redefine their network economics and really change the underlying cost structure for delivering next generation services. No matter what happens in terms of business models or regulations, service providers who build the most flexible and cost effective networks will have a strategic advantage over those who stick to traditional architectures and products.

¹ Integration of Edge Routing, Ethernet Aggregation, and Subscriber Management Yields TCO Advantages, Yankee Group, February 2006.

To enter the video market, service providers must build a next generation network that can support voice, data, and video services. Although risky, it is a necessary risk the telcos must take on due to the competition they are experiencing. However, with the right network, this risk can be minimized, and the network can become a strategic asset in the long run.

5 Further Information

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