



NETWORK MONETIZATION STRATEGIES IN AN IP WORLD

Introduction

Today's broadband carrier is tasked with maximizing revenue, while also reducing cost to keep pace in a changing business marketplace. It's critically important in an environment where next generation IP-based services generally have smaller margins than legacy TDM services. These tasks are achievable, but you must know where to look. Both revenue and cost reduction opportunities exist and can be derived through a comprehensive analysis of a carrier's technology, its services and bundle design, and its operations.

There is a sense of urgency. Legacy products and services built around TDM infrastructure are in rapid decline. They are being replaced with IP-based services that unfortunately tend to have lower profit margins. For example, CenturyLink CTO Aamir Hussain highlighted this reality at a recent industry conference. Commenting on CenturyLink's ongoing network transformation project, Hussain revealed that the telco now has to generate \$2.50 in new digital services revenue for every \$1 they lose in legacy revenue to maintain similar profit margins .

This revenue disparity reality means that broadband service providers will need to deploy more IP-based services, both consumer and business focused, to keep pace with revenue and profitability goals. Additionally, service providers will need to lower their costs by implementing more efficiency in their networks.

Leveraging Technology

There are significant opportunities to both increase revenue and lower cost through leveraging rapidly evolving technology. These opportunities revolve around using new software-driven network tools to lower the cost of provisioning and network management, while also analyzing network traffic for incremental revenue opportunities.

Today's networks offer tremendous intelligence and insight. By mining networks for that intelligence, service providers can leverage it for tangible gains. Luckily, the software now associated with

provisioning and managing networks provides a path to gain and use this intelligence.

Provisioning

Provisioning services and applications for both consumer and business customers has evolved rapidly and now presents considerable cost reduction opportunities. Modern OSS and BSS platforms now offer automated flow through provisioning for service orders, that can take a request for new service from order to completion, with little or no human interaction. This process can replace historical manual processes that were inefficient and costly. As a result, zero-touch provisioning coupled with self-installs by customers are now achievable, significantly reducing costs through things like reducing and/or eliminating truck rolls.

Network Management

The introduction of new technologies like software defined networking (SDN) and networks function virtualization (NFV) will have a dramatic impact on network management with lower CAPEX and OPEX implications, as well as increased revenue opportunities.

A primary goal of SDN is to replace network hardware elements with software control and automation, which can be open sourced. Rather than service providers continually adding new hardware for each function of the network, either in access or transport, SDN can use software on 'commoditized' hardware to achieve the same management function, but at much lower cost. One example that is discussed often today is software defined access (SDA) for broadband networks. With SDA, an operator will be able to centrally provision the delivery of broadband access circuits from the central office to the customer premises, say XGS-PON or Gfast, without the need for manual provisioning at either end.

While related, NFV performs different functions in the network. NFV 'virtualizes' aspects of the network, including service delivery of applications. Historically, an operator would have to devote new hardware and management systems for each



instance of an end application, say a network security appliance for a business customer. With NFV, an operator could virtualize that application on multiple servers in a central datacenter, reducing or even eliminating the need to deploy separate hardware and management components every time its delivered. This has profound implications for lowering the cost of service delivery.

With emerging technologies like SDN and NFV, an operator's NOC becomes much more powerful. Network management becomes more centralized and NOCs can now truly manage a network from end-to-end. NOC network management systems provide tremendous intelligence, creating better stability and performance for the network. NOCs can now discover and pinpoint network troubles and performance issues not only in real time, but even can predict them before they happen. More stable and higher performing networks allow operators to extract more revenue out of them by creating a better customer experience and by being able to offer reliable SLAs.

Leveraging Service Design

Today's networks generate a wealth of intelligence that through analytics, can identify revenue opportunities. Flow analysis, offered on several vendor broadband access platforms, gives operators tremendous insight into customer behavior. When properly analyzed, operators can better design and tailor their products and bundles to match the behavior of customers.

They can identify upselling opportunities for better broadband, targeting high bandwidth households who are heavy into gaming or OTT video for example. Or customers who are doing a lot of video conferencing during the day may be home-based businesses and can be targeted with the right marketing message, highlighting business friendly applications.

Analytics and Analysis

This type of analysis and implementation is critical in today's environment. As discussed earlier, broadband service providers will need to deploy

more services than they have done historically, in order to replace the higher margin legacy services that are now in decline. By using analytics to better understand their customer base, service providers can better target the product mix that will appeal to them. There is a wealth of new applications in home and business segments that can be potentially offered. By analyzing the intelligence generated by today's networks, service providers can select the right product mix that makes sense for their markets. If done correctly, this approach can be a significant contributor to not only revenue growth, but a better experience as well.

Leveraging Network Operations

These revenue growth and cost reduction opportunities within the network have profound implications on network operations. Managing today's network and the emerging technologies they use has unique staffing requirements. Specialized skills are required and networks now require 24/7 monitoring. Significant investment in highly skilled human resources will be required. These requirements can introduce unwanted incremental costs to network operators, especially for smaller operators with limited scale who may not be well positioned to absorb these costs.

Partnering and Managed Services

There are strategies to significantly lessen these costs though. Partnering with other service providers for staffing, NOC services, and other network operations functions can be explored. This allows multiple service providers to share in these expenses, which can make a significant positive impact to the bottom line.

There are also a range of managed services options that service providers can explore. Many aspects of network operations including NOCs can be outsourced to managed service providers (MSPs). By employing an MSP, a service provider can gain highly technical expertise and network management at a fraction of the cost of what it would take to build, staff, and manage that capability on their own.



Conclusion

The business of providing telecommunications and broadband services is evolving rapidly. The decline of high margin legacy services like dial tone and T1 circuits has already altered the landscape. Service providers are now tasked with addressing these changes by replacing that lost revenue with IP-based services and by reducing their costs of doing business.

IP-based services generally have lower margins than legacy TDM services, meaning service providers need to consider adding more products and services than they may have done historically. Additionally, cost reduction strategies must be pursued. There are strategies to consider that accomplish both objectives including leveraging technology, service and bundle design, and network operations.

These strategies can help introduce new products and services, while also improving the customer experience. They also can be fundamental to lowering a service providers total cost of doing business. The end result can help service providers thrive in a changing and challenging business environment.

About the Authors



Mike Ockenga is the Manager of IP Services for Finley Engineering. Mike leads the Services group in project implementation from installation through completion. He also manages system monitoring with customer notification and serving as the customer contact for projects. A strategic thinker and a meticulous project manager ensuring successful implementation, Mike has mastered network integrations, managed datacenter relocations, leadership of internal and external personnel and performed a number of architecture design and deployment projects. To contact Mike you can email m.ockenga@finleyusa.com or visit our website at FinleyUSA.com.



Andy Heins serves as Senior Consultant – Strategy and Operations, for Finley Engineering. Mr. Heins leads strategic discussions and planning with clients across multiple markets and initiatives, from broadband planning, feasibility and implementation to energy integration and planning. Mr. Heins is a veteran of the telecommunications industry and began his career at Finley in early 2009. Prior to joining Finley, Heins was the General Manager of Alma Communications Company in Missouri. While with Alma, Heins assumed various management and operations roles, and in 2006 deployed the first 100% Fiber-to-the-Home (FTTH) network in the State of Missouri.