



Maximizing the Benefits of a Network Inventory Management Platform

White Paper

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Introduction

These are exciting times for the broadband industry. Customers are increasingly relying on the broadband products and services delivered by communications service providers to enrich their lives. Broadband enables unique experiences for individual consumers; empowers government and organizations to better serve and engage citizens and constituents; and helps business and industry better execute their mission and vision for long term success. Indeed, broadband is the lifeblood for a 21st century society.

Communications service providers (CSPs) have invested significant resources, both capital and human, to build and maintain the networks necessary for this 'lifeblood.' These investments are perpetual, requiring an ongoing commitment. The complex nature of today's communications networks requires CSPs to provide important attention to details. Customers have little patience for service interruptions or delays. The expectations of today's customer are rising at a dramatic pace, and some of this changing expectation can be traced to the so-called Amazon-effect. Implications of this effect, according to a recent IBM Institute for Business Value research report can include¹:

- 76 percent of consumers expect organizations to understand their individual needs
- 81 percent of consumers demand improved response time
- 68 percent anticipate organizations will harmonize consumer experiences

Customers now expect a personalized, quick, and consistent experience. Therefore, tracking and managing all the elements of CSP networks has never been more important. The stakes in today's competitive landscape are quite high.

Having real-time visibility into critical network elements is crucial. With it, CSPs can better manage their networks, identifying, isolating, and addressing network problems more quickly. Additionally, CSPs are better able to meet or exceed customer demands and expectations for product innovation and network performance. Real time accurate visibility into the network can create tangible differentiation. Having real time knowledge of network capacity and capabilities paired with accurate customer locations gives CSPs the ability to better tailor product offers and promotions, resulting in better penetration and higher ARPU. These and many other important network and product management tasks can be achieved through a robust network inventory management platform. The end result is a better customer experience, a necessary component in today's competitive environment.

¹ The Amazon Effect: Rising Customer Expectations, <http://purplegoldfish.com/amazon-effect-rising-customer-expectations/>

Physical and Logical Network Management

A network inventory management platform gives CSPs a comprehensive end-to-end view of the physical and logical aspects of their network. Only when this comprehensive view is achieved, can CSPs gain the tremendous efficiencies that are now available to them. For example, when CSPs have total visibility into their network, they can more easily calculate the manual and automated processes required for service order delivery, ensuring efficient assignment of resources - important factors that impact a CSPs ability to turn up services quickly and at the lowest cost.

CSPs can now better understand the logical, or virtual flow of the network and as a result can better manage network demand and troubles. Understanding the physical and logical network flow can also contribute to better product performance and innovation. Insight gained from this comprehensive view of the network allows CSPs to confidently introduce new revenue generating services, removing guesswork as to whether the network can handle the load. These benefits help drive improved network and operational efficiency, leading to a lower total cost of operational expense for CSPs. It also positions CSPs to more easily introduce new products and services, contributing to revenue and profit growth.

Networks evolve and often times CSPs have multiple technology platforms to manage. CSPs may have multiple, disparate systems accomplishing these tasks. Or worse, many CSPs still utilize paper records or spreadsheets to keep track of their inventory. This reality can add complexity, cost, not to mention tremendous risk, to effective network management service delivery. A recent McKinsey IT benchmarking study of 80 telecom companies worldwide found that top performers had removed redundant platforms, automated core processes, and consolidated overlapping capabilities².

It's critically important that any network asset and inventory platform be technology agnostic, able to connect the dots of widely deployed technology platforms, which are often present on a single CSPs network. Additionally, CSPs need flexible and configurable capabilities to address rapid network evolution and innovation. Having seamless visibility across both the transport and access networks creates an optimal environment for provisioning of services in a rapidly changing environment, regardless of technology.

In today's competitive environment, this real-time visibility is paramount to 'table stakes.' It's required if a CSP intends to remain competitive. Service providers are now judged not only by a quality experience, but also by their ability to meet changing customer expectations for enhanced products and turn up of new services quickly. Without this visibility, quality suffers as the ability to anticipate network demands and quickly isolate trouble is severely diminished. In that diminished environment, the enhancement and introduction of new products can be a long, labourious process. These factors contribute to a poor customer experience, one that will put CSPs at a competitive disadvantage.

² How telecom companies can win in the digital revolution, <http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/how-telecom-companies-can-win-in-the-digital-revolution>

Identifier Management

A key component of any network inventory management platform should include effective Identifier management. Identifier management can quickly get out of hand without the proper platform to manage the various types of identifiers which may include telephone numbers, IMS identifiers, email addresses, IP addresses, and wireless network identifiers. Paper records or spreadsheets can spell trouble, especially in an environment where disaster recovery and business continuity are required practices for CSPs of all sizes. Centralized identifier management allows for the configuration of rules for automatic assignment, aging, and reporting across a range of networks, products and services.

When identifier management is fully automated, assigning and tracking of identifiers is simplified and enabling CSPs with additional insight based on the relationship between identifiers and their customers. This automation also frees up resources – resources that can now be applied towards higher value activities such as customer engagement.

Services and Applications Management

The scope of today's network inventory management platform is more than just physical network assets and numbers. It's also about products and services. In fact, inclusion of products and services into the platform generates tremendous benefits to CSPs. Being able to catalog a CSPs product and services portfolio, along with all the resources required to turn up that portfolio creates tremendous advantages.

This cataloging process gives CSPs the ability to dynamically configure services to a customer's specification, creating a clear competitive advantage. CSPs can identify in real time the specific network assets, numbers, addresses, cables and fibre necessary to deliver a service, affording highly customized solutions. This capability creates unmatched flexibility, allowing CSPs to meet the ever-changing expectations of customers, in an efficient and orderly process.

In addition to enabling highly customized services, this benefit also offers tremendous insight into a CSPs overall business. Insight that can be leveraged for better business planning and execution. CSPs now have data that can be used to match network resources with revenue projections and product planning. This network intelligence helps vastly improve the overall network management function, more closely tying it to overall CSP business planning.

Creating Service Agility and Optimal Execution

Today's competitive broadband industry compels CSPs to be agile in order to meet changing customer requirements, and do so in the most efficient methods possible. The very nature of broadband is about introducing and enabling a range of experiences that can put tremendous strains on networks. But customers have no sympathy for CSPs who buckle under the strain.

For example, just as CSPs adjusted to the tremendous demand for bandwidth that over-the-top video created, now comes UHD 4K video, which in theory demands 4x the bandwidth. Just as CSPs engineered their network to handle the tremendous uptick in upstream bandwidth demand due to customers uploading photos and videos to social media, now comes virtual reality, with even more bandwidth and shorter latency requirements. The introduction of new applications across both consumer and business customer segments will only accelerate. U.S. CSP CenturyLink says by 2020, CSPs need to be able to operate in a network that generates 50 trillion gigabytes of data annually³.

This reality requires CSPs to optimize their network for better execution, as well as mine their network for the intelligence that allows them to adapt and adjust as required. This network agility and optimization can only be achieved through real-time visibility into all aspects of the network, regardless of technology. A centralized location for all network resources not only provides this visibility, but also is the foundation for: automating the business rules that govern efficient network operation; introducing new revenue generating products; and optimizing service delivery.

A proper network inventory management platform enables all of these success factors, while reducing both CAPEX and OPEX. Reducing costs are critical in this environment, as next generation IP-enabled services tend to have thinner margins than legacy services. At a recent industry conference, CenturyLink CTO Aamir Hussain highlighted that CenturyLink's ongoing network transformation project requires the telco to generate \$2.50 in new digital services revenue for every \$1 they lose in legacy revenue to maintain similar profit margins⁴. Better network efficiency allows CSPs to maximize revenue potential for better network return on investment.

³ CTO: 50 Trillion GBs of Data is Driving CenturyLink Network Transformation, <http://www.telecompetitor.com/cto-50-trillion-gbs-of-data-is-driving-centurylink-network-transformation/>

⁴ CenturyLink Touting New MVP, <http://www.lightreading.com/automation/centurylink-touting-new-mvp/d/d-id/735466>

SaskTel International and the Optius Platform

SaskTel International (SI), a subsidiary of Canadian CSP SaskTel, has been serving the CSP community for over 30 years with software and service solutions. Our solutions are based on usage and success cases established by our parent company SaskTel, a provider with a 110 year track record of operational excellence. This unique relationship gives SI first hand CSP perspective and results in solutions that are tailor made for the service provider community.

The SI Optius platform was specifically developed to meet both the service order management and the network inventory management needs of global service providers, both large and small. SI's inventory management solution works in conjunction with order management to provide clients with the most optimal network, service, and customer management tools necessary to excel in their business. Optius is a tried and proven solution, based on actual marketplace experience through SaskTel. Key features and benefits include:

- **Customization** – Our thorough understanding of the CSP environment ensures a highly customizable solution to fit any CSP business technologies and processes.
- **Great Scalability** – The Optius platform scalability profile can deliver a global CSP experience to service providers of any size.
- **Ease of Integration** – Our open architecture affords easy integration with relevant systems and processes – such as with trouble management systems, billing and geographic information systems (GIS) to name a few.
- **TM Forum Framework** – Built to TM Forum's Framework, Optius inventory management incorporates necessary best practices and standards to ensure optimal end-to-end management.
- **24/7 Customer Support** – Our support team has a demonstrated commitment to high customer satisfaction, professionalism, and responsiveness for timely resolution of support issues.

SaskTel International prides itself on business relationships that deliver results. Beyond the benefits that come from our ownership structure with CSP SaskTel and the unique perspective that brings to our product portfolio, perhaps our best asset is our people. SI's team is comprised of individuals with deep IT and telecom experience, obtained through decades of real world implementations in CSP environments. That experience positions the SI team to successfully manage and implement complex IT projects that are transformational in nature, turning a CSP's business support systems platform into a critical business tool that reduces risk and maximizes opportunity. With over 30 years in business, we consider our clients to be our partners and we build long-term relationships to foster continued growth and success.

Conclusion

CSPs have invested tremendous resources in their networks in order to deliver a competitive broadband experience. To best monetize that investment, CSPs need to optimize their network to meet changing customer demands and expectations, while lowering their costs. It is not a trivial pursuit.

SI offers an integrated, end-to-end Operational Support Systems (OSS) and Billing Support Systems (BSS) solution covering and automating all key functions of the 'order-to-cash' process; including [order management](#), [plant inventory and assignment](#), [activation](#), [trouble management](#), [workforce management](#), [billing](#) and [customer relationship management](#). By implementing a robust network inventory management platform, like SI's Optius, CSPs have the tools necessary to achieve this vision regardless of their chosen networking technology. With it, CSPs gain real time visibility into all aspects of their network, including network assets, network capabilities, service catalogs, and number management. Optius can tie all of these components seamlessly together, ensuring optimal performance. As a result, CSPs are agile and efficient, able to competently deliver the products and services necessary for a competitive and winning customer experience.

