

**PC-201**

**Rick Mallon**

**Preparing Back-Office Systems to  
Support FTTH Networks**

**2012  
FTTH  
CONFERENCE  
& EXPO**

**THE FUTURE IS NOW**



# Preparing Back-Office Systems to Support FTTH Networks

Rick Mallon, Vice President, Product Management  
Sigma Systems

Rick.mallon@sigma-systems.com  
416 943 9696  
www.sigma-systems.com

## Table of Contents

Introduction .....	3
Paying for the Pipe .....	3
Provisioning challenges in the fiber world .....	4
Importance of the cloud to this new world .....	5
What telecommunications operators will need .....	6
Conclusion .....	7



## Introduction

Telecommunications operators are investing billions of dollars for new high-speed broadband infrastructure – FTTH, 4G, VDSL2 – in order to support more services like IPTV, VoD, home management services, cloud storage and remote backup. However, many operators are still struggling to fill these pipes with incremental products and services that customers are willing to pay for because they are using an outdated approach to selling, ordering, and delivering services. To make the necessary transformation, they need a different yet reliable, way to sell and deliver services, generate increased ARPU and ultimately achieve an acceptable return on what is a massive capital investment.

The challenge is to transform from a utility model with a captive market to a retail model where consumers are demanding more personalized and specialized services – but where margins are thin, competition is fierce, and the pace unforgiving.

Gone are the days when a small handful of telecom services – voice, video, data and mobile – offered to millions of customers added up to a solid business case. As noted by Gartner, Value Added Services (VAS) can generate more than 20% additional revenue as compared to traditional services. It is imperative that operators properly prepare their customer-facing and back office systems to support a retail-oriented end-to-end process.

Working towards the automation of service provisioning is an absolute necessity. The old process of receiving an order from the customer, typing it into a BSS system, then adding the product to the order management system, then moving information over to an OSS is no longer sustainable. This old system needs to be replaced with a catalogue-driven system where the systems feed off the catalogue and automate the end-to-end process of selling, ordering, and delivering products and services reducing the need for hard coding or manual intervention.

This is a fundamental shift for operators who will have thousands of products to manage and need the ability to mix and match and bundle those services at retail speed. Every time they run a promotion, every time they introduce a new service, operators need to treat this as part of their product portfolio and allow the systems to automatically extend themselves to support this constant change in requirements.

## Paying for the Pipe

There has been a positive movement towards investment in FTTH in order to meet the ever-increasing bandwidth demands of the new world of services. This move requires a heavy infusion of capital, and a strategy that allows operators to get a return on that multi-million dollar investment. Fiber-optic networks can offer much more than merely increased internet speeds and improved TV services. According to a February 2012 McKinsey Report “The Fiber Future”, higher Internet broadband speeds could deliver a nearly 80 percent increase in the potential revenue pool.

In a November 2011 report on VAS, Gartner estimated that revenues for IPTV and VoD services alone could reach 26.75 BUSD and IPTV advertising revenue for consumer fixed services could reach 997 MUS\$ by 2015 in developed markets. Estimates for

developing markets reach 4.74 BUSD for IPTV and VoD and 209 MUSD for IPTV advertising. This represents just a slice of the potential as more value added services become available. This is also where telecommunications operators are running into a stumbling block. How can they increase uptake of value added services in order to justify the investment?

In the past, telecommunications operators could sell 2 to 4 services with a 70-80% uptake rate. But in the converged IP services world, the model is hundreds of products with 4 to 5% uptake. How can you change your service delivery model to support this: hire more sales resources or embark upon a retail approach? It is the retail approach that provides you with a scalable model that supports a multitude of products and puts the power of purchase in the customer's hands.

In order to capitalize on these opportunities, operators need to quickly adapt their approach to selling these products. By offering a combination of different broadband access options in conjunction with a collection of high-bandwidth services, operators have the opportunity to significantly increase revenues. Operators need to look beyond the concept of triple play and pursue a service mix that helps drive an increase in ARPU, such as video conferencing, school-related services, advance communications, and home management services. As noted by McKinsey, South Korea has pioneered e-learning, e-health, and e-government – all services driven by the widespread availability of broadband (broadband penetration at 94 percent and highest penetration of fiber to the home at 44 percent).

This does not mean that operators can take the one-size-fits-all approach. Customers are still demanding more personalized services, which requires a localized approach to the way high-speed access and services are packaged, priced, and delivered.

### Provisioning challenges in the fiber world

However, everything comes with a price. Fiber delivers speed but it also adds complexity to the back office. Order entry errors are still a major driver for customer dissatisfaction and ultimately churn. According to McKinsey, a third of all customer fiber orders fail after order entry. Of the ones that are successful, only 20 percent of those are incident free. Errors continue to plague operators and impede the provisioning process.

No wonder so many telecommunications operators are turning to today's advanced order and provisioning solutions to help manage the clutter. Well-designed solutions reduce errors, which are a major cost to operators. An error rate of as little as 3 to 5% may not sound like much but it can add up to more than 10 MUSD in added operating expenses. Together, the improvement in accuracy combined with improved revenues from the retail-oriented order to activation process make the investment in the right solution a must.

Systems categorically do two things better than people: (1) they automate predictable processes and (2) they are much less prone to human error. Automation brings the cost of operations down, not just because you can do more with less (cut headcount) but even more importantly because you gain new levels of accuracy, which boosts efficiency and improves the customer experience.

State-of-the-art provisioning solutions bring retail workflow, end-to-end order management from order capture through supply chain and inventory management and out the door at the retail outlet or via web order and delivery. By streamlining the former clutter of systems, operators can move up to new levels of efficiency by improving accuracy.

Automated order management and provisioning is a major driver that will accelerate the move towards retail models and help operators achieve the needed ARPU to pay for the investment in fiber. With the right automation, customers can browse the catalogue and order the products they need. Back office systems can manage this process through to billing without the need for more human resources. This allows operators to keep their overhead costs low while providing the superior customer experience that drives demand and ultimately revenue.

The best of these order management solutions provide provisioning automation for not only the new pipes but also for the value-added services offered over them. It's all about automation: accurate order handling, provisioning activation, and transaction support. The ability to package a diverse set of services on demand requires solutions with an inherent flexibility based on dynamic workflow which can be seamlessly integrated with both the customer portal on the front end and the billing system on the back end.

#### Importance of the cloud to this new world

Gartner estimates that cloud-computing revenues could reach 10,601 MUSD for developed markets and 2,951 MUSD in developing markets by 2015. Operators need to tap into the innovation and investment underway in the SaaS space since this is where many of the new products will be generated and ultimately retailed by the operator. Supplementing traditional services with newer SaaS-based services for both the consumer market and the small-to-medium business (SMB) provides a key offering to customers.

Operators have the choice of being a bit pipe, a smart pipe, or moving towards a service broker model. The form in which the latter takes can vary significantly, but it can be broken down into three partnership categories:

**Advertising Channel** – At a basic level, the telecom works with the SaaS provider to merely publicize a particular cloud application to customers. No billing or provisioning is done and the telecom typically earns a sales commission.

**SaaS Partner's Application Distribution** – The next step up is full brokerage of the SaaS solution, doing provisioning and Tier 1 customer support for the application where the SaaS partner's brand is fully visible to the customer.

**White Label Distribution** – Finally, the telecom could roll the SaaS partner's application into a larger suite. So the customer sees a family of SaaS brands rather than the telecom's label – even though it's the same third party applications under the covers.

The provisioning solution also has to enable this model by both supporting cloud services with on-net services and delivering all this with a single bill. The ability to combine subscription rate services with traditional services is essential.

## What telecommunications operators will need

In the new world of retail, telecommunications operators will need dynamic, low cost order management and provisioning solutions that support a broad set of services via an integrated catalogue. Rather than adapt the solution to their business and end up in the never-ending cycle of customizing workflows to meet changing requirements, companies need a solution that is agnostic to the access technologies and can dynamically create workflows without hard coding.

Within this end-to-end process, a set of flexible and powerful order capture components are required.

Serviceability – determination of what services are available to be offered to a subscriber

Resource Reservation – as part of the order capture process the system has to enable the CRM to reserve resources such as a DN, URL or other resource required for the order.

Order Acceptance – upon receiving the order, the system drives the process through to the completion of the order.

Order Notifications – status updates and queries are provided to client applications to ensure that the client has a full record of the current status of each order.

In addition, the order management and provisioning process needs a comprehensive set of capabilities to manage the remainder of the order to provisioning process:

- Manage complex service orders
- Maintain a holistic and up-to-date view of the subscriber's service profile
- Automatically determine the workflows that must be executed to provision and activate a service or service change for a subscriber
- Enable the automation of service provisioning and activation through direct integration to service and resource delivery platforms
- Integrate to 3<sup>rd</sup> party external SaaS vendors to support order flow
- Integrate to external customer care system for order capture
- Manage service inventory
- Authorize services

The catalogue should maintain a definition of all services supported and map the services with the appropriate resources in order to manage those entities most effectively. The service specifications can be imported and composed into product specifications and bundled with other offerings. Each order has a service specification to fully orchestrate the order across all applications involved within order fulfillment. This will provide a representation of all services that are activated on the network, the resources that are involved in the delivery of that service, and an association to all order line items that have historically modified that entity. This type of integrated view is imperative for provision of value-added services.

Many companies would state that they are already demanding standard-based solutions from their suppliers. But typically those same companies end up customizing their

solutions to support their existing business needs, a short-term solution that limits future options. Analysys Mason recently commented that operators are finally starting to realize that solutions are not standard once they start customizing them and hard coding in customizations does not create an environment in which solutions can adapt quickly to today's demanding retail business model.

New content, new services are being created constantly, and the order management and provisioning solution needs to put the power in the customer's hands to order services on demand – a solution that allows the services to sell themselves. The ability for the OSS to analyze the impact of an incoming order and dynamically set the workflow is an essential requirement as the market moves forward.

### Conclusion

Telecommunications companies today are facing a two-pronged challenge: deploy FTTH to deliver high-quality value added services while at the same time transforming to a retail-oriented approach in order to recoup this investment. No wonder telecommunications operators like Hong Kong CSL bring in retail experts as CEOs. To thrive, telecommunications operators must implement innovative solutions that combine both telecommunications and retail Best Practices. The back office of the past needs to be augmented with solutions that support this transformation. The best place to start is to deploy dynamic, scalable, and extensible order management and provisioning solutions integrated with the service catalogue. Automation of the end-to-end order management process is a key to success. It will enable you to drive your business forward and maximize the return on your FTTH investment.