

Billing for Billions

By Jesse Cryderman

One of the most fascinating aspects of the telecommunications industry is its scale: the enormity of the global communications network and what it takes to keep it afloat is staggering. Take this example:

In just a few short years, the world will average two connected devices per person. If we apply recent population statistics, that's nearly 14 billion connected devices making trillions of requests and transactions weekly. If you were to count one digit every second, it would take 32,000 years to reach a trillion; yet service providers are putting plans in place to operate, on that scale, on a weekly basis!

As Jeff Yoshimura from Zuora points out, "Service providers have to be able to deliver a broad portfolio of services. It's what customers want. And the billing solution needs to empower them to do that, not be an impediment. And changes need to be recognized in days or even in real time, not weeks, months or years. They need to deliver it to different customer segments with different packaging and pricing options. And they need to be able to adjust to customer demands and competitive moves quickly. If they don't, someone else will."



As real-time/on-demand billing becomes standard, BSS processes and billing are becoming ever closer to the network and more important than ever. For most in the industry, it is clear that traditional billing cannot meet the demands of the future, nor do companies want to make capital investments into traditional billing models as they have in the past. How are carriers dialing in their billing solutions to manage the dramatic growth in terms of network integrity? What new solutions exist? What about cloud-based billing? We posed the question to two leaders in the billing and BSS industry to better understand how carriers can effectively manage billing for billions.

Jeff Parker, CEO, Monolith Software

What are some challenges that carriers face as they try to ensure their billing processes of the future meet growing demand?

The challenge is really tying together the whole flow through provisioning process. Billing is not a standalone function. The key thing that needs to occur is workflow automation. Customer order is entered, service is provisioned, service is monitored, billing functions are set up, service performance reporting is put in place, etc. In order for CSP's to save money and streamline operations, there must be connections via the various systems (e.g. order system and billing system share the common customer ID of record; billing system and network inventory system have some common reference point between the two). It is much easier to have the order system and the billing system in sync. It is much more difficult to have the network inventory system and the billing systems tied together accurately. Until that issue gets solved, there will continue to be challenges in tying BSS and OSS systems together.



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What should carriers be asking for, in terms of BSS and OSS, in order to maintain network integrity as demand for data-rich services and real-time transactions explodes?

The billing/order entry teams can set up the customer info and process the order quite well. The operations teams can monitor the technology adequately. The challenge has been, and will continue to be, tying the two worlds together. Operations speaks in terms of device names, ip addresses, and interfaces. The BSS guys speak in terms of customer name. The challenge is creating an automated bridge between these two worlds. People have been trying to do this for ages and it is still one of the biggest challenges facing CSPs.

Jeff Yoshimura, VP, Zuora

Can cloud-based billing systems compete with the products offered by entrenched traditional BSS vendors, and is cloud-based billing gaining traction in the Service Provider space?

The time has come for billing in the cloud. We believe the market has changed so dramatically in the industry that service providers need cloud-based billing systems to effectively compete. The emergence of smart phones, devices and tablets carrying voice, data, Internet and video is transforming the communications industry. According to the Cisco Visual Networking Index, by 2015, there will be 7.2 billion mobile devices and more than 2/3 of network traffic will be consumed by video. Since the launch of the iPhone and iPad, more than 10 billion apps have been downloaded, according to Apple. These Internet and technology advancements are giving rise to a plethora of new providers and subscriber services.

To survive in this innovative environment, service providers must be able to launch new products and services rapidly, have the flexibility to change pricing, packaging and promotions in real-time, and manage their customer relationships online. Unfortunately, service providers have been burdened by inflexible, slow to implement, and costly legacy, on-premise billing systems that were built for traditional telco billing, not for billing and servicing customers in the cloud.

To address these dramatic and indefinite changes by embracing the cloud, service providers can get to market quickly to deliver new services to consumers,

One source of massive cash - and carbon - output can be found idling alongside worksites all over the globe.

have the flexibility to iterate and experiment with pricing and packaging often, and provide customers with an online self-service experience to purchase services and manage their plans online.

Further, our belief is that big companies and small companies aren't interested in buying traditional telco billing platforms. Finally, we don't expect anyone to unplug a traditional BSS system. Companies have invested far too much to simply rip and replace. The better strategy that we work with customers on is seamless co-existence today and measured migration over time.

What should carriers be asking for, in terms of billing systems, in order to maintain network integrity as demand for data-rich services and real-time transactions explodes?

To ensure network integrity, billing platforms need to be open. They need to be able to share and accept data from the network. They need to be able to meter and bill from the network. They need to be able to communicate and authenticate with a range of network devices. Cloud-based billing systems deliver the greatest level of flexibility to achieve this.

BSS processes and billing are becoming ever closer to the network, perhaps even embedded into hardware (billing on the box)—do you see such a reality in the future?

The reality is the box is a commodity. The value added services is what the consumers will pay for. That's what service providers need their billing system to focus on. Services can be delivered on the consumer devices, e.g. Pandora, Netflix, etc., and that needs to be tied to the billing system. That's just today. There are a whole host of service portfolios that will be added in the future. Devices are tremendous platforms for enabling this new age of services.

What are the advantages of a subscription model over a traditional billing model?

The subscription model is all about putting the customer at the center of your business. The traditional billing model is tied around a single customer engagement and metering that over time. The customers want more than that today and service providers need to be able to deliver on that. The difference between the two models can be seen most vividly in revenues where subscription revenues are more predictable over time and customers can upgrade, add more services, 6 for 1.

What does the future look like, in terms of billing, and how do we get there?

The future of billing is in the cloud. Service providers will wake up, if they haven't already, that they need to adopt cloud-based platforms in order to effectively compete in the market. A given service provider will be required to deliver 50-100 services at any given time. Today, most service providers cannot effectively handle this range.

New Platforms, New Processes

It's not just the vendor community who is trumpeting the horn for new billing processes. Independent analysts and billing specialists are saying the same thing. Doug Newdick, who publishes one of my favorite BSS blogs in cyberspace, writes that most people working in the telecommunications billing arena have been striving toward a single, real-time charging platform for ten years. He recently posted, "If we just re-create the old business processes on new platforms we will not have convergence and we will not deliver the business benefits that convergence promises."

Similarly, Tony Poulos, BSS Evangelist at the TM Forum, recently penned an article entitled, "Bye-bye Billing, Goodbye," wherein he writes, "The idea that we will still need multiple billing and rating engines with complex tariff plans at a time when voice will be so commoditized it will have little or no value seems daft."

The reality is that billing will definitely undergo change, and it is perhaps best summarized in a new report by Visiongain. "Driven by the changing mobile data/voice model and the shift to next generation networks (NGN), billing vendors are under pressure

At current fuel prices, that's an annual cost of roughly \$300,000,000 for fuel alone.

to provide increasingly complex billing models, yet maintain a simplistic customer interface. The evolution of the mobile industry has rendered a traditional billing models and billing systems untenable, making it critical for operators and service providers to embrace the new billing solutions."