Is Real-Time Billing and Charging a Necessity?

By Jesse Cryderman

Gone are the days when a telco's role was simply to provide reliable voice service and send a bill at the end of the month. Now, carriers are required to manage greater and greater amounts of data on their wireless networks while a wider variety of devices are activated everyday, and consumers desire greater functionality and app services.

While parsing out the processes that are required to enable today's networks, questions of new billing and charging models naturally arise: Can traditional systems keep up with the tidal wave of demand? Are there ways to monetize new services that require real-time billing and charging? What are some innovative solutions?

Several B/OSS vendors believe the time is now for carriers to move to a converged billing and charging

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platforms that encompass both pre- and post-paid customer bases, and offer flexibility for both carriers and customers.

Pipeline recently spoke with a pioneer in the field of billing and charging, Matrixx Software CEO Dave Labuda, as well as Scott Rice, VP Production Billing with Sprint to get both the vendor and carrier perspectives, and shed some light on real-time billing and charging.

Dave Labuda, Founder and CEO, Matrixx Software

Pipeline: Is there a need for a departure from traditional batch billing, and why?

Dave Labuda: We've entered a perfect storm brought

on by a number of market forces, including an explosion of smartphones and data services, the end of "all-you-can-eat" billing, and a need for greater transparency in billing. This is coupled with an increase in market competitiveness, and as a result, carriers are looking for ways to converge subscriber bases onto a single platform.

P: How are carriers currently responding to this need?

DL: Various stop-gap, byte-counter methods, but they are actively seeking solutions. Pre-paid subscribers are processed in real-time and post-paid are processed with classic batch billing.

P: How urgent is the need for real-time billing and charging?

DL: The most urgent movement forward in real-time billing is in data services. Carriers are rushing much more aggressively to real-time data services. Operators are currently writing off huge chunks of revenue. There is less urgency in voice/messaging, but most operators have a long-term plan to move everything real-time on a single charging platform.

P: How does the evolution to 4G effect the landscape?

DL: LTE broadens the opportunity. As a packet-only technology, voice becomes essentially another data service. Every RFP we've seen from operators requires a

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realtime option.

P: What are the requirements of the next generation of charging?

DL: There are three fundamental requirements. Flexibility: all the cool configurability, device models, and pricing options. Predictability: A system that offers guaranteed performance, uptime, and latency. Historically flexibility and predictability are at odds. Then you have Scalability, which requires a whole different set of [technology].

P: How does such a system benefit operators?

DL: Carriers are trying to push up the value chain. As soon as an operator is asking a broker for 3rd party goods, they are losing money. And they are keenly aware of this. A byte is not a byte. Blind byte accounting and charging doesn't measure usage in any meaningful way.

P: How does it benefit customers?

DL: Customers want greater transparency and no risk of bill shock. They want to establish their own limits, and be warned of overages. This is not possible on a large scale with traditional batch billing and charging. Pre-paid customers already have some of these options, post-paid don't.

P: Do we really need more complexity in billing? Haven't customers voiced a preference for less complex, flat-rate billing?

DL: I will argue that evidence is only true because people haven't yet understood that they can get a better deal with real-time billing. Look, it happens all of the time, people choose to add complexity when it offers better value. Groupon adds complexity to a person's life, it doesn't remove it. EBay adds complexity. But consumers have flocked to these services once they understand the potential for savings. It's human nature-people will try to match their spending to what their value as precisely as possible.

Scott Rice, VP Production Billing, Sprint

Pipeline: What can you tell me about real-time charging and billing from a carrier perspective?

Scott Rice: Real-time charging and billing does need to be part of the infrastructure over the coming years but not necessarily engaged for all services. Movement toward all-IP networks and the movement of voice traffic

to all IP will take time and traditional billing capabilities will remain necessary for large parts of companies' core business.

Real time charging is really about linking the product catalog with the network through the use of policy management capabilities. There will be customers who are heavy users of real time based services, but customers who remain traditional users will remain for some time to come.

P: Is a move to converged real-time charging and billing urgent?

SR: Not necessarily. A valid approach certainly is to service multiple billing approaches (prepaid, session based, data) from a strong core that is flexible enough to support multiple billing and charging approaches. It is possible to bring in other approaches separately without the capability being part of a converged core. In theory the best unit cost and the best customer experience can be delivered over time by unifying the customer

information, product catalog and billing capabilities.

P: How does a changeover to 4G/LTE impact this discussion?

SR: 4G, regardless of network type, really just drives the usage and therefore impact of new "data" based services that will require more control capabilities to manage bandwidth, access to premium services and various bucket pricing options.   The linkage between billing and policy is the key.

P: Is money being lost through the cracks because few real-time options exist?

SG: That really depends on the pricing approaches being offered by the company.   An infrastructure that takes days to deliver data usage for aggregation and billing does open the possibility for leakage for the services generally available today.

However if the current infrastructure supports getting data usage from switch to the biller within a shorter timeframe, for example 15 minutes, the opportunity for leakage is negligible.   As data usage grows even the best performing traditional usage management and billing capabilities will need to link to more policy controlled real-time or very near real-time usage aggregation, rating and customer account balance management.

P: Are there on-demand services that could create new revenue that require real-time billing and charging?

SR: Yes, everyday new ideas are being explored in the area of using the wireless data network to provide services.   In the United States the pace of mass adoption of additional on-demand services which in theory will carry a premium cost is still debatable. Over time the consumer experience will most likely evolve which drives adoption of on-demand types of services.

As the available services grow real time policy managed billing and charging will need to be part of the infrastructure to determine if the customer will pay for a service, to collect payment and then to instruct the network to deliver that service.

P: This seems like a step further away from flat-rate billing–Do customers really want more complexity in billing?

SR: Customers never want more complexity in billing. Unlimited offers are still relevant in the U.S. led by Sprint. As more and more on-demand services are available and adopted there could be more complexity in the billing rendered to the customer simply by providing detail around the on-demand purchases. Even for customers on an unlimited based core plan, additional content buy-ups may be offered and that will make the rendered billing information more complex.

The ability to provide simple information the way the customer wants to see it across multiple touchpoints (device, web, etc...) will have to evolve to try to simplify the experience.   Customers will evolve as they start to adopt and purchase on-demand services and you could even see an environment closer to a pre-paid "pay-as-you-go" approach in the future for all wireless.

Is it Time for Real-Time?

As we've heard from both sides of the discussion, agile, real-time billing and charging is important and must be a part of the billing, charging, and policy management approach for modern carriers. It is no doubt an innovative way to monetize, bill, and manage attractive new services. The real questions are how urgent the need for a converged platform is, and how quickly the transition to a fully real-time environment will occur. Like many of the topics covered in this issue, time will reveal the answers to these questions, but real-time billing, charging, and policy control is an innovation that is here to stay.