3G Billing – What's all the fuss?

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In the face of declining voice service margins, Communications Service Providers are investing heavily in deploying and marketing "3G" networks that are capable of supporting an ever-increasing variety of data services from streaming video, to gaming, to proprietary business applications, to mobile commerce transactions for tangible goods and services. However, as 3G finally makes it into the mainstream, its success is inextricably linked to how the CSPs charge and bill for services in ways that are both intuitive and acceptable to the end user while also being relevant to the CSP's costs and billing capabilities.

A range of possible solutions exists, with a range of implications for the Business Support Systems, Internal Business Processes, Content Providers, and End Customers. Each solution has inherent costs and time to market factors. They are also, as yet, un-proven in the market place. This article examines several of these approaches and how CSPs are adapting their systems and processes to handle them.

By the Drink

Initially many providers have deployed the most direct - and easiest - method to charge for data services: by the byte. In a sense this was the natural approach for an industry steeped in decades of experience with pricing based on how much network capacity the service uses. When data services came along mediation systems were adapted to capture the 'size' of the content that was downloaded, sent, or consumed and the transaction was based on a published price per byte, KB or MB. Small 'buckets' of data were frequently included with each pricing bundle to incent customers to try the amazing new services available on the device that was previously just a wireless phone. This approach is direct, presumably profitable, and consistent with the CSPs legacy operating model. However, there are a couple of issues that make this approach problematic:

1. Network elements need to be finely tuned and closely monitored to ensure that a given content product, or even category of products, always generates the same "size" of network usage. That is to say, a photo of the latest pop idol that downloads today at 250 KB can't download tomorrow at 850 KB. Customers tend to compare purchases and pricing. Consistency across content that is perceived to be of identical size to customers is critical.

2. The vast majority of the population has no personal frame of reference for how big a MB is. Tell them that the $8.35 charge on their bill is the result of 1.67 MB data consumption and they are likely to not purchase many data products in the

future because they don't understand what they are buying and how much they will be charged. Allow them to rack up hundreds of dollars in charges during their first month of blissfully ignorant usage and you will lose the customer.

Many mediation and billing systems on the market today can provide metered billing for data services on the basis of data volume. However, the costs to train customer care agents to understand the sizing and rating methods, and the lengthy calls to call centers from confused customers will inhibit take-up of the new data services, and may eat away their margins as well. The content-rich services 3G is intended to carry will break new ground by divorcing the cost of service from the network capacity required to deliver them. At best, billing on the basis of network usage leaves a significant portion of the potential revenues to the Content Provider or in the customer's pocket. At worst, it leaves the CSP with a loss on every piece of content delivered.

All You Can Eat

The easiest solution to both of the problems identified with metered billing for data and content is to provide large 'buckets' of content and data for a monthly charge. "All you can eat" is a bit of a misnomer in that most carriers will put a cap on usage covered by the charge to avoid exposure, but the amount provided in the bucket is usually more than sufficient for the majority of customers. The positive aspect for the end customer is they avoid bill shock, they know what they will be charged. The downside from the customer perspective is All You Can Eat Plans can deter the casual or trial user as the entry cost is too high for a service that has yet to prove its worth.

The positive aspects for CSPs are: Monthly Recurring Charges are generally billed in advance, and most billing systems are well equipped to handle Monthly Recurring Charges. Additionally, there are few billing disputes. However, with large buckets CSP's margins are open to erosion. The "all you can eat" deal will attract customers who eat a lot, and therefore cost the CSP a lot, leaving little or no profit. Secondly, if "all you can eat" becomes the market norm then the only way for the CSP to differentiate is on the price of the bucket, and the competition for acquiring and retaining customers dissolves into a price war.

One Man's Steak….

A pricing model that better supports the customer's perceptions of what they are purchasing and the CSP's needs for controllable margins is to rate content and data services based on the value of the given content or service. For example, a screen saver of last year's first place football club probably has a higher perceived value to more people than a picture of last year's winner of the home and flower show. Both would be approximately the same 'size', but the majority of customers would be willing to pay more for the former. Value-based pricing would also allow the CSP to more easily enter into contracts with content providers – who certainly expect to be paid based on the 'value' of their content and not the size.

The downside of value-based pricing is that it requires complex capabilities across most of the front- and back-office systems including the POS, Website, CRM, Provisioning, Billing, Finance, and Partner Management systems. Briefly, the impacts include:

- POS and Websites must be able to reflect the current pricing for a given piece of content prior to the actual purchase. This implies a complete integration with a universal product catalog that contains the actual charges that will be used by the billing system during rating. Today, many carriers manually replicate pricing information from their billing systems in their customer facing touchpoints. This will not be feasible in the new world of proliferating and volatile value-based content and data services.
- CRM systems will have to be integrated with the same universal product catalog for the same reason, but the CRM system will also need visibility to the entire purchase, provisioning, and usage sequence of events to be able to respond to questions and issues with delivery. When customers know what they are paying for a specific product they tend to have higher expectations on the quality of the product than if they perceive it to be a 'free' service included in their bundle. Agents will have to provide accurate credits/refunds based on the specific price for the content or data service in question.
- Billing, rating, and invoicing systems will need to be able to support the variety of price points associated with each piece of content and data service. Additionally they will need to provide accurate descriptions of the content or data service purchased on the invoice. Given the possibility of thousands of different content and data products on the menu, it goes without saying that the billing system must be using the same universal product catalog previously mentioned.
- Finance and Partner Relationship Management systems will need to be able to handle the complex financial settlements processes for this new class of products and services. CSPs have for decades dealt with settlements issues relating to voice services, for example, roaming, access charges, long distance, etc. But in that environment the total number of external partners with which a CSP had to 'settle' numbered in dozens. With content and data service providers multiplying like rabbits, CSPs might be expected to have relationships with hundreds. The critical point is that access to a given content or data service could become a differentiator, so it behoves CSPs not to limit their content sources because their finance and settlements systems can't accommodate the new model.

With these capabilities in place, the challenge CSPs face then becomes one of promoting the right content services to the right customers and making the price transparent and simple enough for the customers to accept.

To give itself the greatest probability of success with 3G, the CSP must align its business processes, organization and systems including, but not limited to, all those discussed above to support these new services with the agility to adapt rapidly to their successes and failures. The CSP must also provide these new services, including their pricing and billing, as part of an intentional, differentiated customer experience that entices the customer to divert portions of his or her spending from other channels to the CSP.

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Neil has more than 20 years management and consulting experience. He has worked extensively in the communications industry for fixed network and mobile operators in many parts of the world. His expertise covers business development, management, marketing, information systems strategy, change management and all stages of the software systems lifecycle. Neil was President of the Global Billing Association from 2002 to 2004 and remains a member of the GBA Executive Council.