



CLOUD BILLING

As telecom services increase in complexity, so too do the demands on telcos' billing systems. *By Nithyasree Trivikram*

Mobile data has been growing about 10 times faster than voice in the recent years, and the number of subscribers worldwide reached its five billion mark in July, with mobile penetration standing at 74%, according to a study by US research firm, Wireless Intelligence study.

While this level of growth presents major opportunities for telcom operators, it is also gives rise to numerous challenges, and charging and billings systems are among them.

In the prepaid market, 35% of new

phones are being added every month in emerging markets. Here, billing presents a different kind of challenge. A further layer of complexity is added by the growing popularity of value-added services such as content, games and films.

BILLING AND CHARGING

The range of telecom products is proliferating rapidly, and includes traditional wireline subscriptions, prepaid offerings such as tokens and scratch cards, multiple fixed and mobile data plans, and third party offerings such as television.

All of these can be offered in various multi-play bundles in order to improve profitability and customer retention.

However, to make a success of this, operators require an integrated, comprehensive billing and charging system that addresses the demand for multiple services. Furthermore, operators can lose valuable revenue by failing to update their billing systems to cope with additional services, particularly when they depend on real-time information about a customer's credit.

For example, Manoranjan Mohapatra,

“Convergence is the term used to combine all prepaid and postpaid transactions and subscriptions to enable accurate, real-time customer billing and monitoring.”

Omar Barzanji, Technology Partners



Omar Barzanji warns operators about the risks of revenue leakage.

CEO of Comviva, says that about 10-30% of people who call to access content are denied because they do not have enough balance. “Here, an operator can sell by giving credit to a subscriber by carefully evaluating the creditworthiness of the subscriber,” he says.

“Prepaid is about real-time charging and billing based on a per call basis. And the dynamism of decision-making involves both policy at the marketing level and the ability of the technology to support the policy of giving overdrafts for negative balance,” he adds.

Omar Barzanji, CEO of Technology Partners, agrees that real time information is vital for billing systems. He also thinks that it is important to highlight the difference between a billing system and a charging system when discussing billing issues. “A charging system collects the details of customers’ usage activities and also manages the transaction life cycle, and these transactions are to be collected in real-time. Whereas billing systems are intended to generate bills periodically to customers, manage the payments and publish an interface to their data for CRM integration. But increasingly, billing requires real-time interaction to include new products such as prepaid accounts,” he adds.

One company that is seeing growing demand for billing systems that cater to an increasingly complex telecom market is Comptel. Olivier Suard, marketing director, Comptel, says: “We have the mediation software, the bit that connects

all information in the networks and passes it on to the billing system.

“We have about 20 operators in the Middle East and Africa region that are using our software, and some of them will be using our mediation solution to feed their billing systems. Qtel is an example which uses this mediation solution, amongst others,” Suard says.

Ramez Younan, CEO, Orga Systems, says that operators in the MENA region are increasingly looking for a “unified method” of billing, particularly with so much consolidation occurring in the sector. “The event of consolidation in itself is posing the question of standardisation of the billing system,” he says.

PREPAID VS POSTPAID

The charging and rating for prepaid services work differently from postpaid. Comviva’s Mohapatra says: “An operator in a postpaid environment typically does not come back to the charging vendor for innovation in the product or solution on a daily basis. In prepaid, the direction in which the data is being pushed will determine the charging pattern.

“Definitely, premium content such as movies and multimedia games will be charged at different rates as compared to simple content

such as weather and directions, he adds.

“In a prepaid environment dealing with content, video and multimedia, we are working with operators almost on a daily basis as the marketing teams sometimes change their plans on a daily basis based on various aspects including overdrafts, negative balance and daily decrements. That is why the nature of the prepaid business is typically based on a revenue sharing model.”

Younan says that to increase profitability, operators need to decrease costs by remodeling their network tiers and rethinking about billing platforms in terms of customers.

He says that in the MEA region, 95%

AFRICA’S CLOUD

In 2011, many African operators may lack the critical mass required to move from an in-house billing system to an out-of-the-box billing system, according to Ramez Younan, CEO, Orga Systems. “Therefore, the growth is hindered by the ability of operators to invest in the capital,” he says. “We are talking to many operators there to serve them through cloud services, wherein there will be one platform serving multiple operators so that the cost can be divided among them.

“In the MEA region, in particular, we plan to roll out cloud services in the near future so as to minimise the capital for a lower subscriber number operator, and also due to the consolidation that is happening amongst operators, the ability for a group of companies to share their network on a single platform and share it amongst their subsidiaries makes it more cost-effective,” Younan says.



Olivier Suard: Prepaid business requires the right strategy.

of operators use prepaid billing systems, and 5% use postpaid. This presents an immediate opportunity to reduce the cost by bringing these two subscribers into a unified charging, rating and billing platform.

Suard adds that there is scope for losing money in the prepaid sector if operators fail to adopt the right billing strategy, potentially leading to difficulties in revenue assurance. "Billing now is not just about voice and data but also includes marketing promotions that need to be translated into the billing system," he says.

"For example, if you are downloading a video, some operators try to differentiate it if you are driving the web or are using

"The nature of the prepaid business is typically based on a revenue sharing model."
Manoranjan Mohapatra, Comviva

a pay-to-pay (P2P) communication where people are exchanging files online. Here, the biggest challenge for billing is the network element that mediates with various devices from vendors such as Nokia, Ericsson and Alcatel-Lucent," Suard adds.

REVENUE LEAKAGE

Suard adds that most of the billing systems are designed to collect data and post it through collection of call detail records (CDRs) in batches that go through a billing cycle. "The content-led traffic means that you have to be able to calculate the consumption in real-time because it is not about coding, but a video or music being

purchased, which needs to be rated in real-time," he says.

"The second major challenge on the billing side that operators face is that they are sitting with less time availability, and therefore you're restricting that sort of real-time, anytime multiple event handling capability, which causes revenue leakage in some operators to the tune of 30%."

Olivier says: "In some places, like Dubai, the mobile penetration rate is about 200%, but in growing markets, where people still have lots of customers, revenue leakage does not seem to be a priority.

"But once when the subscriber base reaches a saturation level, then revenue leakage turns out to be of high importance," he adds.

ASSURING REVENUES

According to Younan, billing and revenue assurance are like "two sides of a coin". Revenue assurance is a process across different functions of an operator's management portfolio, from financing, sales and marketing, to ordering, provisioning and logistics, customer care, rating and invoicing.

"These are the areas wherein an operator can control revenue assurance processes through a comprehensive solution offering billing, rating, policy management, and voucher management solutions. With our virtual voucher management system, we cut down not only the revenue assurance part of it, but also the freight, while increasing the profitability of operators," Younan says.



As mobile services grow in complexity, it is becoming increasingly important for operators to adopt charging and billing systems to cope.

“Operators in the MENA region are increasingly looking for a ‘unified method’ of billing, particularly with so much consolidation occurring in the telco sector.”

Ramez Younan, Orga Systems



Ramez Younan: M2M tech will demand complex billing systems.

Suard adds that pre-paid tariffs can also add a further lay of complexity, because of the need for ‘real time’ information. “One of the things that has been happening all round the world is ‘Bill Shock’.

“If you think of billing and revenue assurance in postpaid, it can be done at the end of the month. Whereas, in prepaid, the billing needs to be done while the event is happening in real-time, and most of the billing systems are unable to inform customers of their balance status in real-time,” he says.

“Operators come to us saying that they will use our billing system in conjunction with their traditional billing system so that we can make advice of charges to our customers. We are now seeing that increasingly, and the world of prepaid and postpaid is graying a little bit,” Suard adds.

CONVERGENCE IS KEY

Convergence is the term used to combine all prepaid and postpaid transactions and subscriptions to enable accurate, real-time customer billing and monitoring, according to Technology Partners’ Barzanji.

“A real-time charging engine has to keep track of all transactions up-to-the-minute so that billing and customer management systems can provide a continuous view of every account. A converged system delivers the most benefits in terms of improved profitability and better customer service,” he says.

Barzanji thinks that operators often do not have the necessary tools to effectively synchronise information available on their

network and on the billing system.

Difficulties in synchronisation, as well as the billing system’s inability to cope with the addition of new products, quickly leads to users not being billed for their real consumption of services, which can create significant revenue leakages.

“Although some discrepancies will always exist between systems, a dedicated operational audit of the billing system in comparison with the charging network can significantly help to resolve unbilled and overbilled subscribers,” he says.

“Adoption of full convergence promises to ultimately mitigate the problem, but the systems’ cut over can take some time. In practice, the commercial reality is that fixing legacy synchronisation errors can be a lengthy process.

“And in this region, we have noticed a tendency to keep with the legacy operational methods, which delay changing the business processes to be in line with the new technologies in the market,” Barzanji says.

CLOUD AND BEYOND

Orga Systems’ Younan says that with mobile penetration already over 100% in most developed markets, much of the growth in the sector will be driven by machine-to-machine (M2M) communication. “The growth is actually coming

from other areas such as M2M, which is the ability to use the mobility for use in cars, transportation, utilities and so on. I expect around 10 to 55 billion connections for M2M in the next five years,” he says.

“Therefore, you need a convergent system that is not necessarily based on voice or service, but on an event such as voice code and download, which can happen between M2M technologies.

“With the ever-increasing number of connections, you need a system that is not only reliable, but is also expandable,” Younan adds.

“In our convergent billing architecture, there is a unique feature which has multiple nodes, whereby if one node fails, the other node will take it up, therefore reducing revenue leakage and increasing liability. We have a customer who reduced its leakage from 30% to single digit revenue,” he adds.

BILLING STATISTICS

95%

The proportion of billing systems that are prepaid in the MEA region’s mobile sector. Just 5% are postpaid.

55 BN

The upper number of machine-to-machine connections that Ramez Younan of Orga Systems expects to see in the next five years.

10-30%

People who are denied access to mobile content due to lack of balance.