Based on Comarch's whitepaper, “Key Issues to Consider Before Switching to Convergent Billing”

With a move towards 3G and broadband wireless access, the Indian telecom sector is steadily shifting to a regime where communication goes far beyond voice and SMS. With mobile devices offering applications like video streaming, navigation and email, the share of traditional voice and SMS in the total time of handset usage will decrease rapidly. The expansion of operators’ service offerings into data services has had a significant impact on the underlying business support system (BSS) platform.

Offering data services not only entails additional network capacity investments, but also requires additional capabilities for the BSS platform. Operators should be able to charge for new services and adapt quickly to competition, while maintaining the customer experience.

Rationale for convergent billing

In the coming years, increasing affordability and choice of smartphones, their higher and wider capabilities and decreasing prices of mobile data offerings would lead to growing data usage. This presents a new challenge for operators as data tariffs would be more complex to handle than those for voice services. Also, various services would be rated and charged differently. A key issue in this regard is the compatibility of the currently used billing systems with the new charging models.

The increasing complexity of charging models means that an operator has to undertake frequent tariff revisions. The underlying BSS platform must have the ability to process the growing number of event data records. It must be able to differentiate the amount of data and the service types that the customer is using, so that the operator can charge appropriately for service usage. As mobile data services are witnessing increasing uptake, the existing BSS platform, which has been capable of simple data session charging, is facing major challenges.

Then there is the issue of another level of differentiation among the pricing models – prepaid versus post-paid. Offering both prepaid and post-paid services can pose challenges for operators. When products are rated and charged on different systems, the maintenance of both systems becomes more complex and expensive as compared to a single, convergent platform for both prepaid and post-paid services. This also applies to different service types. An ideal billing solution should be able to charge all services, regardless of the underlying network technology. The complexity of charging and pricing models is, however, just one of the key issues. Due to high competition, telecom operators are compelled to shorten the time-to-market for new services. Delayed service not only results in additional work, but also loss of revenues.

These challenges are driving operators to transform the billing platform into a more convergent one. The benefits of this convergence include business and revenue growth as well as the ability to react faster to market changes, an improved customer experience and lower operating costs.

Shift towards customer-centric BSS

The relationship between operators and customers favours the latter. More stakeholders have entered the market and a service purchased by a customer from an operator acts as the channel for additional content. Today, operators also have more business partners such as content providers, interconnect partners and resellers, and they must be managed efficiently.

The operator’s billing platform should support a customer-centric approach by enabling the development of convergent offerings and personalised services. The operator should be able to provide any combination of services in a bundle and constantly improve the customer experience. Customer data is a valuable asset, which should be leveraged through upselling and cross-selling.

Certain criteria should be considered while selecting a convergent billing platform. These include:

Support for multiple business models

Operators that have been present in the market for a long time may have either modified their business models or added new ones. This is why they need a single, convergent BSS platform to support multiple business models. The existing BSS platform should be able to support each change in the business model.

A truly convergent billing system should be service-agnostic, and have the capability of being used in any business model with rating, charging, billing and invoicing for all services. This platform should be versatile, which means the system can operate in a range of configurations with different service providers.

Ability to reduce time-to-market

If an operator's products are defined in multiple systems, these systems can be used to launch new products and charge for their usage. But the constraints will become too severe for long-term sustainability. Operators may find that their current BSS platform does not support modern products or the configuration of individual products is time consuming or system maintenance is very expensive. The process of product and offer introduction may lead to issues such as the duplication product information, difficulties in keeping the fragmented data consistent and maintaining integrated legacy systems. These issues can be significantly reduced by using a single convergent billing platform.

Legacy systems used in many telecom businesses may limit product and offer definitions or rating and charging scenario definitions. By transforming the billing system into a convergent platform, product managers will gain an opportunity to define and apply several permutations and combinations to products and tariffs, which will make their operations much more efficient.

A truly convergent billing system has a modular and object-oriented structure, which enables fast and simple rollout of new services.

Single platform for prepaid and post-paid services

In legacy billing solutions, the operator often maintains separate systems for post-paid and prepaid services. If similar products are offered under the post-paid and prepaid models, there can be a high level of duplication. Therefore, having one solution for both offerings presents advantages (such as low cost of ownership and flexibility). In addition, this will enable the charging and billing of distinct services like voice, data and SMS by the same convergent billing system. Also, the operational complexity resulting from the duplicated product catalogue and customer data records as well as all issues associated with mixed prepaid/ post-paid offerings can be eliminated by a single convergent platform.

An ideal convergent billing system enables post-paid events to be rated in real time if needed, thereby reducing the configuration-related differences between prepaid and post-paid tariff plans. Consequently, only the core of the billing system should be aware of the differences between post-paid and prepaid events. All other elements of an operator's IT systems and the operator network can be completely unaware of these differences. This results in a very clean implementation of logic for these systems.

Easy integration with other IT systems

To support the shift to a convergent billing platform, it is necessary to integrate existing IT systems with the BSS platform. This can be supported by deploying service-oriented architecture with the use of open interfaces, which can limit the total complexity of the solution. A convergent billing system can support innovation by operators through an open architecture, a customer-centric approach, centralised product management, a built-in business process manager and rule-based configuration at various levels.

Multiple levels of convergence

Convergence can happen at multiple levels – prepaid and post-paid, multiple underlying network technologies within a single platform, different customer types, etc. Having a separate platform for each of these categories would significantly complicate an operator's daily operations.

A convergent billing system allows operators to price and invoice distinctly different services together, with new combinations created quickly to reflect market changes. A unified customer

account enables the operator to view the big picture easily, spotting cross-service relationships and buying patterns that represent new business opportunities.

Easy introduction of new charging models

As mentioned earlier, network capacity investments and maintenance costs are increasing at a faster pace as compared to revenues from data services. In addition, a small percentage of subscribers are using most of the network capacity, thereby causing network problems for other customers and influencing their user experience. This is why policy management has become a popular concept. It was used for network throttling earlier, but is now becoming more common as a tool for providing value-added services and segmenting data services. For example, the use of Facebook via smartphones can be offered at a cheaper tariff than the use of YouTube.

Operators should have policy management capabilities in their billing platform so that they can offer personalised services and tariffs to customers while removing unlimited data consumption plans and differentiating service types. A convergent billing system enables operators to control and charge services based on their type, instead of general data consumption only. This provides operators new business opportunities, reduces network investments and maintenance costs, and improves the user experience.

Conclusion

The telecom business has become more customer centric than ever before. User experience is the strongest focus area in the hypercompetitive market. Despite the challenges of falling revenues from voice services, operators have additional business opportunities in terms of providing new personalised services to customers. Subscribers also appreciate the smooth operation of services and pricing transparency – they must know what they are paying for.

To capitalise on the business opportunities, the billing system of operators must be capable of handling new types of services and bundling solutions, and ensure a short time-to-market for services.

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