

amdocs

BILLING FOUNDATIONS FOR SUCCESSFUL
NEXT-GENERATION SERVICE STRATEGIES

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EXECUTIVE SUMMARY

Next-generation services are fundamentally changing the way communication and media service providers are doing business. Network, standards and even basic definitions of next-generation services are loose at best. But there are clear implications for the operational - and business-support systems, and in particular the billing systems, that power them. In this paper, we examine the emergence of next-generation services and explore the requirements for turning next-generation services into powerful sources of new revenue and service differentiation.

INTRODUCTION

In the communication and media industry, dramatic developments are leading service providers to seek new differentiation strategies in their respective competitive environments. These developments affect both the demand and supply sides of the market, and include:

DEMAND SIDE

- > New lifestyle users require a unified service experience across devices and locations (mobility)
- > Proliferation of web (and web 2.0) tools and services for communication, social interaction and infotainment
- > New needs of business and corporate users
- > Increased bandwidth, fixed and mobile

SUPPLY SIDE

- > Cost pressures from traditional and non-traditional competitors (e.g., media companies, web portals, and content providers and aggregators)
- > Steady decline of core service revenues
- > Network transformations
- > Shareholder expectations for new growth engines
- > Operational efficiency requirements as a result of mergers and acquisitions and market consolidations

Next-generation (NG) services play a major role in the future of service providers, as powerful service differentiators. Thus, wherever NG service strategies are considered, strategists must also carefully address the operational - and business-support systems (OSS/BSS) that enable them. Specifically, billing systems merit careful consideration, as they are located at the heart of the business processes that underly NG service scenarios and act as the chief enablers of revenue generation. The changing landscape has led to new and modified requirements for billing systems.

1.1. WHAT ARE NEXT-GENERATION SERVICES?

Presently, the industry lacks a consensual definition of the term “next-generation service.” In their work, Ben Yahia, Bertin, Deschrevel and Crespi of the IEEE¹ refer to NG services not as “basic networking services that provide connectivity to a network...” but as “added value services such as voice/video communication, community tools, presence, conferencing, gaming, TV broadcasting.” Following their work, we define NG services in this paper as either:

- > Something other than voice or messaging (SMS or MMS), or
- > A combination of voice and/or messaging service with multimedia and/or other service such as presence or location
- > The service is delivered over an IP-based network (all-IP or IMS)
- > The service can interoperate with other services delivered on either NG or traditional (e.g., PSTN) networks

In addition, NG services are often considered under the broad umbrella of convergence, and are also known as “convergent services.”

¹ Grida Ben Yahia, E. Bertin, J.P. Deschrevel, N. Crespi, "Service Definition for Next Generation Networks," Networking, International Conference on Systems and International Conference on Mobile Communications and Learning Technologies, April 23-29, 2006

1.1.1. IMS PLATFORMS FOR NEXT-GENERATION SERVICES

IP multimedia subsystem (IMS) is a new network abstraction layer based on a 3GPP standard. It aims to enable service providers to roll out a “killer environment” of ubiquitous, network- and device-agnostic access to blended voice-data-content services, such as video-sharing calls, presence services, push-to-talk over cellular and more. With newly ratified standards, it is accepted by the wireless, wireline and cable industries as the prominent service layer for NG networks, and by extension, for NG services delivery as well. Nevertheless, IMS is arguably not the sole choice for launching NG service initiatives, and as a network technology it has yet to reach the level of maturity required to make it the de facto standard for NG networks and services.

1.2. PROPERTIES OF NEXT-GENERATION SERVICES

In order to properly point out the necessary elements of billing required to support NG service delivery, it is useful to indicate the common properties of such services, properties which could potentially be translated to billing requirements. To follow on the supply-demand theme above, NG service properties are split into two categories:

- > Service delivery enablement: the processes of enabling and delivering the service.
- > Service experience: processes at the heart of the customer experience.

FIGURE 1:
NEXT-GENERATION SERVICE PROPERTIES:
SERVICE DELIVERY ENABLEMENT AND SERVICE
EXPERIENCE

SERVICE DELIVERY ENABLEMENT

- > CHARGING MODEL FLEXIBILITY
- > FLAT RATES VS. COMPLEX CHARGING
- > SYSTEM VARIANCE
- > CROSS-SERVICE INTERACTION
- > BUSINESS MODEL AGILITY
- > DIGITAL ADS
- > PARTNERSHIPS

SERVICE EXPERIENCE

- > REAL-TIME INTERACTIVITY
- > ACTIVE PARTICIPATION
- > PERSONALIZE SERVICE
- > HIEARCHIES & COMMUNITIES
- > PAYMENT CHANNEL SELECTION
- > BILLING CLARITY/SIMPLICITY
- > THE MULTI DEVICE EXPERIENCE

1.2.1. SERVICE DELIVERY ENABLEMENT

1.2.1.1. CHARGING MODEL FLEXIBILITY

Traditional charging mechanisms emphasize setting call parameters (see Figure 2 below). Basic charging parameters include time of call, duration of call, identity of called party, data volume transferred, etc. NG service scenarios extend beyond standard requirements to include such parameters as event type (data, voice, video), bandwidth, quality of service, quality of experience, billing identities and more.

In addition, the spheres impacted by and impacting the NG charging domain extend beyond the provider-subscriber-service triangle to include partner settlement, advertising sponsorship models, on-deck versus off-deck servicing, third-party service monitoring (e.g., extra charges for using third-party services) and more.

1.2.1.2. FLAT RATES VERSUS COMPLEX CHARGING

In the global telecommunications arena, service providers in major markets are displaying a perceptible move toward flat-rate charging for core services in response to increased customer demand for such rate plans and competitive cost pressure. With these plans, customers can pay a flat rate for a fixed amount of data volume per period, and are charged per usage only after caps are reached. Flat-rate plans also include detailed fair usage guidelines and policies that place reasonable limits on subscribers' ability to exploit these flat rates and hog network bandwidth. To support these plans, charging systems must carefully track usage, perform the necessary service and subscriber correlation activities, account for any discounts and benefits, accumulate and aggregate charges, and apply new and creative sets of business rules (e.g., increase rate when volume is exceeded per a specific type of service). In summary, flat rates make billing simple for subscribers by hiding the complexities of charging "under the hood."

1.2.1.3. SYSTEM VARIANCE

NG services must coexist in heterogeneous environments, where a multiplicity of end-user devices, network technologies and business systems incrementally add to the complexity of service delivery. The challenge in such environments is to properly and accurately track events originating in many systems and service elements, associate these with the correct identities, and perform the full set of business logic necessary to produce a bill.

1.2.1.4. CROSS-SERVICE INTERACTION

As the promise of convergence shines brighter than ever, value is clearly shifting to multi-product interaction. The new "mash-up" culture of the web proves that one plus one often equals more than two, as hybrid services use application programming interfaces (APIs) of existing services to deliver innovative value to users. In the context of communications services, such convergent services will require billing systems that have the ability to identify the full subscriber-service interaction scenario and know what, when and whom to charge for it.

1.2.1.5. BUSINESS MODEL AGILITY

New business and revenue models, such as digital advertising, carry the promise of breaking the glass ceiling of consumer-based service revenues, as for the first time, revenues can be generated from a source other than subscribers. Service providers can gain significant profit by leveraging ad views/clicks or searches towards credit for on/off deck services, using aggregated billing knowledge of customers toward campaign management, and in offering advertising sponsorship charging models. By leveraging their ability to aggregate usage data and customer profile information, and by interacting with such versatile environments as advertising systems, business intelligence mechanisms and partner settlement solutions, NG billing systems can support a much needed business model agility.

FIGURE 2:
SIMPLISTIC VIEW OF A TRADITIONAL VOICE CHARGING ENVIRONMENT

CALL DURATION (HOW LONG?)
CALL GUIDANCE (WHO TO CHARGE?)
CALL TIMING (WHEN WAS IT MADE?)
CALL LOCATION (FROM WHERE? TO WHERE?)
CALL MODIFICATIONS (WHICH BUSINESS RULES TO APPLY?)



1.2.2. SERVICE EXPERIENCE

1.2.2.1. REAL-TIME INTERACTIVITY

Traditional services are characterized by limited interactivity. Next-Generation services open the door for much richer interactions between the subscriber, the service, the provider's customer service representatives and even other subscribers – all in real time. A user watching a streaming video could get an advice of charge prior to viewing the content itself, with options to pay using his account, a credit card or sponsoring the video by watching an advertisement. New video-share services enable users to add a real-time video element to their voice calls, while multiplayer gaming is wholly premised on real-time interactivity. Such services require not only the proper network environments, but also an ability of the business support layer to track activity and apply business rules in real time.

1.2.2.2. ACTIVE USER PARTICIPATION

The term “prosumer”² has recently gained significant traction, as the Internet has spawned a new user profile, one who is actively involved in the dual processes of producing and consuming content. NG services will leverage these new “prosumption” patterns, with built in systems that generate smart recommendations for users, or promoting downloads of subscriber generated content by other paying subscribers. The latter is already a reality, as in a Latvian service that offers subscribers credits when their uploaded content is viewed by other subscribers. See also the next-generation service scenario described below.

1.2.2.3. PERSONALIZED SERVICE EXPERIENCE

Customers are increasingly looking for a service relevant to their personality, their usage patterns and needs. For example, in the context of digital advertisements, consumers often will agree to receive ads as long as they perceive them as valuable and contributing to their total service experience. Parents will look for services that support their parental responsibilities, such as a mobile location tracking service for their pre-teen kids, while young professionals will prefer a combination of business and entertainment service features. In short, NG services create more possibilities for personalizing the service experience.

² See wikipedia:

http://en.wikipedia.org/wiki/Prosumer#Prosumer_as_Producer_and_Consumer

1.2.2.4. HIERARCHIES AND COMMUNITIES

As mentioned above, there is no doubt that tomorrow's customers will demand more and different things from their communications and media providers than they do now. For example, Yankee Group has coined the term “Anywhere Consumer” to describe the new communications and media consumer profile, and is calling its emergence “the most significant technological, societal and commercial global trends in the next decade.”³

New consumer habits and expectations mean that service providers will need to manage an increasing level of complexity in customer hierarchies. Focus will evolve beyond single subscriber management toward subscriber group management. Such groups could be families in the consumer sector, or corporations in the business sector. However there are also communities: heterogeneous groups with similar needs to families or businesses. For example, the Gadget Lovers association in Scandinavia could decide to offer special communication service plans to its members with one of the mobile carriers, who will then require the mechanisms in place to cater to the special needs of such “non-organic” subscriber groups.

³ <http://www.yankeegroup.com/AnywhereConsumer.do>

1.2.2.5. PAYMENT CHANNEL SELECTION

In the current state, the choice of payment channel (prepaid or postpaid) defines the way a subscriber is represented and managed in the service provider's systems. In the context of NG services, the question of which payment channel to use when charging a customer is driven to the background, as elements more critical to the total service experience receive priority. NG service subscribers expect to have a choice of which channel to use – prepaid or postpaid – as well as the ability to seamlessly switch between channels as context or needs dictate. As an example, a service provider may launch a personalized music service for both prepaid and postpaid subscribers, offering special benefits for the latter to encourage contract sign up.

1.2.2.6. BILLING CLARITY AND SIMPLICITY

Lack of clarity around service charges is a major inhibitor for service consumption. A myriad of research points to this conclusion, but this brief anecdote from a mobile content conference that took place in June 2007 speaks volumes: When asked why they didn't use a particular service, several people responded, "I don't know what I'm getting into and don't know the costs."⁴ Clearly, billing systems for NG services must make billing simple and clear – from rendering an easy-to-understand bill to providing users the ability to pay their bills when and how they prefer.

1.2.2.7. THE MULTI-DEVICE EXPERIENCE

NG services expand the range of devices for consuming communications and media services. The new digital home environment introduces multi-purpose devices, such as the online TV, the game console, media center, alongside the veteran PC. The challenge for service providers is accurately associating device usage with subscriber identities and correctly aggregating relevant billing data, while minimizing revenue leakage and keeping the customer experience seamless.

1.3. SECTION SUMMARY: NEXT-GENERATION SERVICES PRESENT NEW COMPLEXITIES FOR BILLING SYSTEMS

In summary, this section introduced next-generation services and explored some of the system considerations and challenges around delivering them. It demonstrated the rationalization for such services from both supply and demand sides of the market, and analyzed their underlying properties and implications on billing system requirements. The bottom line is, NG services present ample opportunity to generate new revenue, so long as the OSS/BSS – particularly the billing systems – underlying them serve to enable service innovation and marketing creativity, not inhibit them.

⁴Mobile Content World: User Panel—Want To Use Content But Don't Know How, And Cost Is Unknown". James Quintana Pearce. MocoNews.net, June 2007.
<http://feeds.mocoworld.net/~r/mocoworld/~3/124740579/>

2. BILLING FOR NEXT-GENERATION SERVICES

Ideally, service providers' product and marketing managers should be liberated from any IT and system limitations and be able to creatively, quickly and cost-effectively define, test, launch, modify and retire service offerings at will. For many service providers, the reality is still far from this ideal. It becomes critical, then, that their billing systems provide as much flexibility and agility as possible to allow them to profitably execute NG service strategies.

This section will describe, assess and demonstrate, by using a hypothetical scenario, the requirements service providers should consider when reviewing billing systems for NG services.

2.1. NEXT GENERATION SERVICE DELIVERY CHALLENGES TO SERVICE PROVIDERS

What creates the gap between the above-mentioned ideal situation and reality? For service providers, the challenges associated to NG service delivery include:

- > **Limitations of legacy OSS/BSS layer to support the new and innovative needs around NG service delivery.** To creatively price, package and launch NG services, service providers must rely on the features and flexibility of their OSS and BSS. In many cases, the legacy systems in place, or the inadequacy of BSS products installed prior to the conception of NG service strategies, inhibit service providers from quickly executing them.
- > **Immaturity of technological and conceptual frameworks designed to enable service creation, delivery and orchestration.** Examples include IMS and service delivery platforms (SDPs), the latter being a relatively new concept that is gaining popularity in the industry but is yet to be standardized or even consensually agreed upon in terms of scope and components.
- > **Limitations of customer resources.** Even the sleekest NG service will not win the hearts of customers who have inadequate devices, bandwidth or coverage, or face other issues that inhibit usability. Such customers will fail to perceive the value of the service being offered.
- > **Billing-related barriers to adoption.** Issues such as bill shock and charge confusion consistently inhibit wide consumer adoption of NG services. Even early adopters will shun a service for which they don't know how much they're being charged, or how.
- > **Rigidity of traditional business and pricing models.** In a world quickly growing used to web 2.0 services and the radical openness, interactivity and interoperability they offer, and their low or no cost for use, rigid communication business models are quickly falling behind. Walled gardens (services, often web-based, such as WAP portals, accessible only to the service provider's subscribers) are still the norm for many service providers, and thus wide opportunities for long tail marketing (myriad offerings that appeal to a few, but represent a large, often otherwise untapped market) are being missed.

2.2. REQUIREMENTS FOR NEXT-GENERATION SERVICE BILLING

To support NG service properties listed in the previous section, and to address the challenges described above, billing systems will need to provide several critical elements, without which NG service strategies will face an increased threat to their success. These elements should include:

1) *Product catalog*

Services should be easy to configure, launch and retire, and so should their related pricing schemes, including bundles. Service providers need a flexible and comprehensive catalog of product pricing options, covering all service combinations and scenarios, seamlessly integrated to other billing components, and easily configurable by both IT and non-IT personnel.

2) *Real-time services*

NG services thrive in real-time environments, where interactivity and personalization are best served. Billing systems should offer real-time support and address performance requirements for immediate, anytime services.

3) *Convergent offline and online charging*

To support payment channel transparency and make it easy for service providers to sign up and serve customers with varying payment options, billing systems should include prepaid and postpaid channels and a well-designed architecture that handles online and offline process routing.

4) *Rich customer hierarchies and communities management*

To accommodate complex customer hierarchies (e.g., consumer, business and ad hoc subscriber groups) billing systems should support management of flexible customer models.

5) *Bundling within and across lines of business*

Billing systems must account for a growing number and variety of product bundling options, as well as for dependencies between products of different lines of business.

6) *Integration to multiple OSS/BSS components, such as ordering, mediation, customer relationship management, and more.*

Billing occupies a distinct space in the overall BSS landscape, yet to make sense in the broader business process picture, billing must interact and integrate with other OSS and BSS components. Systems that are integration-ready or come pre-integrated with other systems offer clear advantages to service providers.

7) *Interfaces to external business systems such as business intelligence and advertising*

The introduction of alternative revenue channels such as digital advertising and the need for service providers to “externalize” the value inherent in their core IT assets – consider usage and billing data accumulated by the billing and mediation systems – lead to a requirement for billing systems to facilitate interaction with third-party systems through standardized interfaces.

The following fictitious NG service scenario illustrates how several of the requirements above are actualized in a charging environment.

2.3. A NEXT-GENERATION SERVICE SIMULATION

AcmeCom is a communications and media service provider that offers voice, data, internet, TV and mobile services to several markets. Recently, AcmeCom’s marketing managers have devised a new and innovative service called “Life Share.”

At the heart of this service is a mechanism that credits subscribers when the content they generate and upload to the network is downloaded by other subscribers. Figure 3 below illustrates the concept of this simple mechanism.

Layered upon this basic service concept are multiple offer elements with which the service provider can “play” in order to create myriad charging scenarios. Figure 4 below shows a few possible offering elements.

In the service process described above, two aspects merit special focus:

- > The creation and configuration of the offer in a product catalog
- > A convergent process flow of service charging once it’s activated and used

2.4. SUPPORTING THE ‘LIFE SHARE’ SCENARIO

2.4.1. DEFINING THE SERVICE OFFERING IN A PRODUCT CATALOG

The product catalog is a critical component of the BSS, especially in a NG service environment. This central repository of product data enables the service provider to implement a broad range of marketing strategies by enabling a wide variety of services and pricing schemes. Product catalogs deliver the following key functionalities:

- > Dynamic support of pricing definitions for different elements of service plans, all of which can be influenced by multiple variables.
- > Flexibility to seamlessly support current and NG services and networks.
- > Support for multiple products and product bundles: voice, data, content and multimedia services.
- > Easy access and configuration by both IT and non-IT (e.g., business and marketing) personnel.

Once the product or marketing manager has come up with a design for the Life Share billing scenario described above, the product catalog is used to configure pricing plans and their respective parameters.

FIGURE 3:
HIGH LEVEL DIAGRAM OF “LIFE SHARE” SERVICE CONCEPT

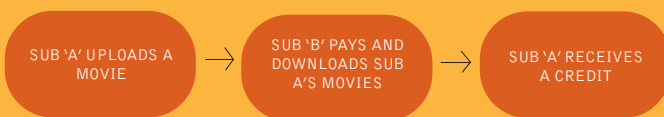
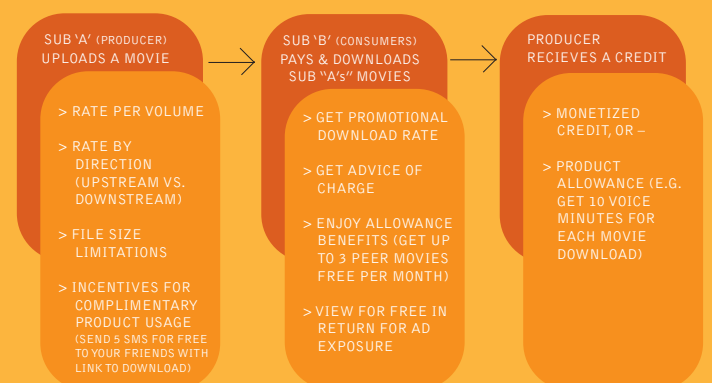


FIGURE 4:
ILLUSTRATION OF SERVICE PRICING PLAN OPTIONS FOR THE LIFE SHARE SERVICE



2.4.2. CHARGING SUBSCRIBERS FOR 'LIFE SHARE' SERVICE USAGE

The following diagram illustrates how subscriber activity, in this case the download of content by subscriber B (“consumer”) that credits subscriber A (“producer”), results in charging events managed by the charging domain.

The service flow represented in the Figure 5 can be described as follows:

1) The content management domain

In our scenario, the consuming subscriber, who is enrolled as a prepaid customer, interacts with the service provider’s mobile content portal and downloads the movie created by another subscriber. The content management system handles the various aspects of the customer-service interaction, including the provision of an event data record (EDR) to the charging system, which includes information about the event itself, as well as IDs of both the consumer and producer.

The convergent charging system manages the dual processes of charging the consumer’s balance and crediting the producer’s account, as well as applying other benefits as defined in the subscribers’ pricing plans (originally configured in the product catalog).

2) The online charging domain: charging the consumer

A. Formatting and routing elements receive the EDR from the content management system.

B. The content consumer’s subscriber ID is matched, using the charging system customer guiding database, to his billing ID.

C. The enriched EDR reaches the rating and balancing function that refers to the consumer’s price plan as defined in the product catalog, applies the charge and performs other balance operations.

D. An instance of the record is then stored in the usage database, which stores all post-rating events (later to be used by other billing components such as invoicing), and another instance is sent to the offline stream in order to initiate the producer credit process.

3) The offline charging domain: crediting the producer

Since the producer is a postpaid subscriber, there is no compelling reason for handling his account activity in real time (although it is certainly feasible). To credit the producer, an offline process is launched as a batch process in regular intervals as preferred by the service provider, e.g., once a day or once per billing cycle.

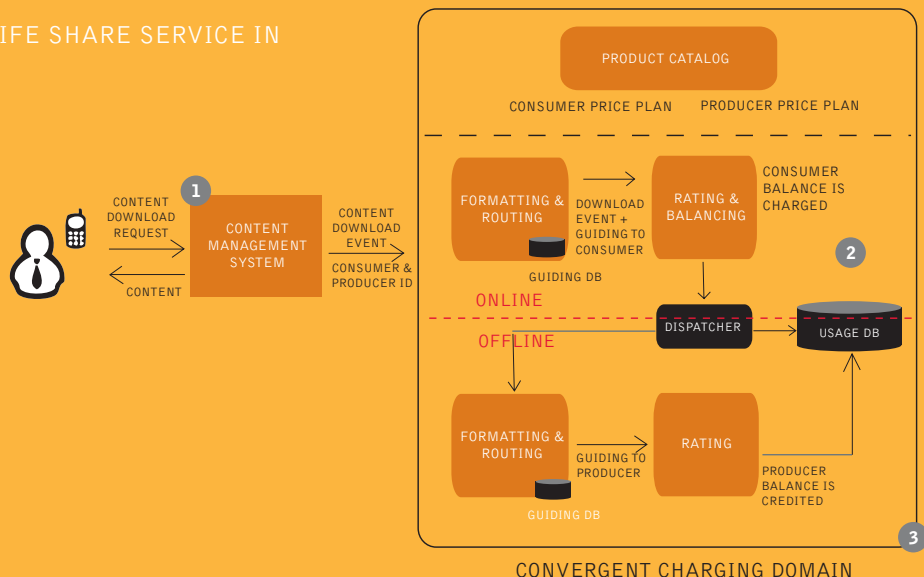
A. The event record is matched with the producer’s billing ID.

B. The producer’s account is credited according to the rules specified in his pricing plan (previously defined in the product catalog).

C. The result of the activity is then stored in the usage database for use during the periodic billing cycle or by other systems.

In conclusion, the Life Share example illustrates how a convergent charging system supports the underlying, service – billing related requirements that can greatly enhance the attractiveness and success of a NG service. The following section discusses further, more general requirements for supporting NG services delivered over NG networks.

FIGURE 5:
PROCESS AND EVENT FLOW OF LIFE SHARE SERVICE IN
THE CHARGING DOMAIN



2.5. GENERAL REQUIREMENTS FOR AN IMS-BASED CHARGING ENVIRONMENT

As mentioned above, IMS provides a standard NG network environment for launching NG services. It is easy to conceive a service like Life Share delivered over an IMS network, possibly with modifications in order to leverage IMS advantages, such as the ability to run multiple sessions in parallel and coordinate several sub-services into a single service session. While the specific details of charging-related events and the charging process flow would be similar to those described in the previous section, there are more general requirements IT professionals should consider for IMS-based charging environments. An IMS charging solution should:

Comply to IMS standards – The charging solution should be based on IMS standard interfaces (3GPP-based Diameter Credit Control Application) to create an open and flexible environment and prevent vendor lock-in.

Function horizontally and modularly – Charging solutions for IMS must support the entire scope of service providers’ services, including both IMS and non-IMS (legacy) offerings and prevent the creation of an IMS silo.

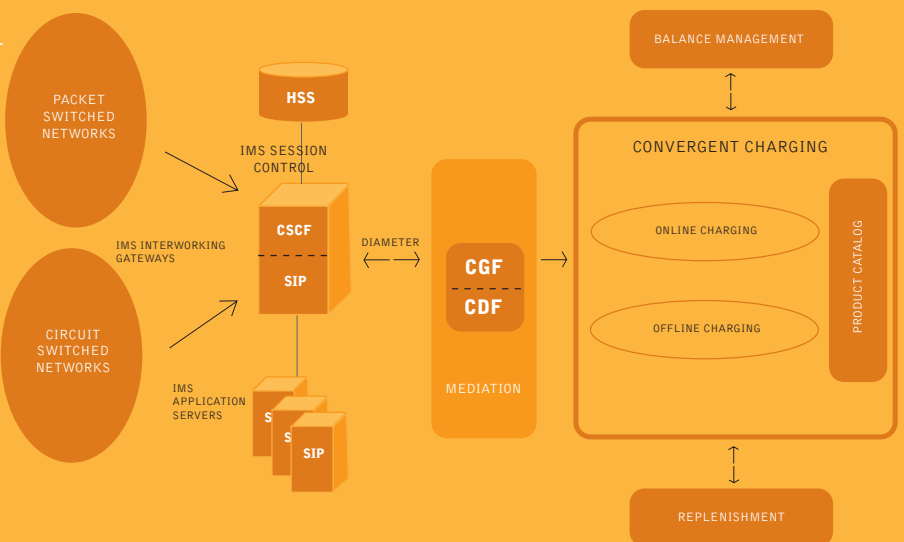
Support multi-dimensional convergence – In order to promote IMS service consumption, providers must market IMS offers to all subscribers regardless of payment method or access technology. Deploying a truly convergent charging environment across all types of services (voice-data-content), payment methods (prepaid-postpaid-hybrid) and lines of business (wireless-wireline-cable) will create a clear advantage.

Include convergent mediation – Billing for IMS services requires the smart correlation of records originated from diverse network elements. The charging environment must include an agile mediation platform that can quickly accommodate the changes in network architecture IMS brings.

Build on a strong, common foundation – In order to speed time to market, the charging solution should seamlessly integrate with a robust product catalog covering the full range of activities required to rapidly introduce IMS services.

Figure 6 below illustrates a convergent charging architecture for an IMS environment.

FIGURE 6:
A TYPICAL IMS CHARGING ENVIRONMENT



3. RECAP & CONCLUSIONS

3.1. NEXT-GENERATION: NOT NEXT, BUT NOW

The phrase “next-generation services” is almost a misnomer. NG services are already here. Whether it is a navigation and directions service such as the one displayed in the now-famous iPhone “calamari” ad, which shows a user who searches for a seafood restaurant, receives location and directions and clicks to call the restaurant for a reservation; or a user generated content download service such as Three UK’s SeeMeTV; or a GPS-driven location tracking service, such as “Family Locator” offered by Disney Mobile in its popular family package, NG services are already an integral part of the landscape. The logical path of their evolution leads in the direction of larger emphasis on service differentiation (between similar service offerings from different providers), stronger tie-ins with core voice and messaging services, more sophisticated charging schemes that operate behind the scenes of simple rate offers, and a widening of the traditional value chain to include new players such as content providers, aggregators and advertisers, and even consumers.

3.1.1. TO TURN NG SERVICES INTO REVENUE GENERATORS, BILLING IS KEY

Service providers cannot launch NG services for the sake of the services alone; they must achieve revenue and cost-reduction targets, too. The OSS and BSS supporting NG services must balance innovation with efficiency; this is a cornerstone of any successful service strategy. This paper emphasizes robust, integrated, flexible billing systems as a critical enabler of NG services and revenue.

3.2. RECOMMENDATIONS FOR SERVICE PROVIDERS CONSIDERING NG SERVICE INITIATIVES

As always: focus on the customer experience

Delivering customer experience innovation begins with deep knowledge of customer needs and an understanding of all layers of the customer experience. User interfaces and usability are important, but so are the foundational elements such as accessible, online and accurate billing data that’s consistent across the enterprise that can ultimately impact the customer experience.

Emphasize service differentiation and personalization

Customers will shun even the most imaginative service if they’re confused or frustrated with its pricing and billing, or if they don’t perceive it as tailored to their needs.

Look at the big picture: integrate across OSS/BSS

To efficiently and quickly manage multiple innovative services, a common foundation and integration framework across the BSS and OSS/BSS is required. The next-generation landscape outlined in this paper requires a comprehensive, integrated approach to revenue management that encompasses all revenue streams, such as content partners and advertisers.

Avoid creating silos

The stovepipe approach to creating and managing communications services is outdated and clearly unsuited to the needs of next-generation service providers, who must consider long-term cost structures. Consolidation of systems and business processes across all lines of business, services and payment channels is part and parcel of the next-generation service strategy.

Don’t invent the wheel for each service: adopt a standardized business process approach to reduce your risk

Look beyond the immediate need to deliver new technology. Know your business processes and identify the common denominators for multiple services. Use technological frameworks that are business-driven, rather than technology-driven. For example, a service-oriented architecture (SOA) is an advantage, but an aligned business process management-SOA system that’s focused on service provider-specific business needs increases the advantage tenfold.

To read more on IMS and its impact on charging, please visit our white papers section at <http://amdocs.com/Site/Vision/Insight/White+Papers.htm>

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