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It's a new world:
Three Tectonic Shifts are
reshaping our industry and
driving convergence

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As the market moves to an always connected existence, service providers need to change and transform to meet the demands of a connected-world where communications, entertainment and the internet will act as the primary tools in our daily lives to deliver the applications and information that we need.

The communications industry is changing and at a rapid pace. And, the pressure is on for service providers to keep pace and meet the tough demands of an always connected lifestyle where communications, entertainment and leisure converge and are accessible across any device.

In the past, changes in the telecommunications market occurred less frequently and were mostly non-transformational, leaving service providers on solid ground. Today, however, the industry is experiencing substantial and dramatic tectonic shifts, which are seemingly as powerful as the natural ones that can literally trigger earthquakes and volcanic eruptions.

The three notable shifts that are coming towards service providers from several directions and require them to adjust are:

- The massive demand for data does not correlate to the revenue it generates for service providers. Today's service providers don't have the ability to monetize data consumption optimally and efficiently. They must find new and creative ways to monetize data services
- Over the top (OTT) service and content providers, such as Facebook and Google, continue to successfully penetrate the market and are challenging the traditional consumer-service provider relationship. These players will grow in number and diversify, presenting new challenges to the relationship between service providers and their consumers. Service providers are threatened with the prospect of merely becoming an "access provider" and losing the content market share
- Real time is now the only time. Real time has become the expected standard for all types of customers, services and payment methods. Once associated only with prepaid, real time has evolved to become the foundation for all customer interactions

These momentous shifts create new challenges, but also provide service providers with interesting opportunities (just as natural tectonic shifts broke up continents, but also formed new ones). In order to successfully take advantage of these opportunities, service providers will need more than just new services and devices to compete in this quickly-evolving terra firma. They must introduce innovative business and monetization models, and new customer offerings.

The ground is already shifting. Service providers should begin preparing immediately by developing flexible, integrated and converged platform capabilities to maintain their competitive edge. Convergence is no longer a buzzword. It has become the bedrock in this new telecommunications era. An optimal solution can be formed only by converging multiple elements into one platform. This whitepaper will detail the three key tectonic shifts influencing the market today and explain why service providers must embrace agility and convergence to be ready for the new era.

The first shift: Data demand exploded the old monetization models

The insatiable demand for data services, coupled with flat rate data pricing models, paved the way for the monetization challenges service providers are currently facing. In order to ensure their network capacity, service providers are investing in network expansion, or deploying new network technologies, such as Long Term Evolution (LTE). These efforts have mostly resulted in serious hits to service providers' bottom lines and impeded their future ability to profit from data. In order to move away from flat rates and offer more advanced data pricing models, new monetization models that will require integration between policy management and charging capabilities are needed.

The policy management evolution, which started with network optimization capabilities, such as quota tracking, congestion management and traffic optimization, is used for optimizing the routing of traffic. This evolution is transforming into a subscriber-oriented approach involving both network and subscriber-based information. This convergence of policy management and charging has enabled the emergence of tiered pricing, data bundles and data transparency offers.

Today's tiered pricing offers are all based on two main parameters: quality of service (speed and latency, etc.) and quota/usage (time, credit and volume). If we integrate policy control elements to the charging system, we can add "multi-dimensional parameters" that enable the creation of new types of offers. These multi-dimensional parameters could include:

- Device type – which type of device is consuming the data? (iPhone, iPad, laptop or eReader)
- Service location – where is the subscriber currently located? (Home\office zone or roaming)
- Network status – what is the level of network congestion at that location?
- Traffic/service type – what is the nature of the data session in progress? (Video, VoIP, tethering, P2P or Facebook)
- Hierarchies and priorities set according to the customer's information – what is the customer's designation? (Business, VIP, family or government)

The various combinations create multiple possibilities for new pricing schemes and business models. All possibilities depend solely on the tight integration between the charging engine that will rate these schemes and the policy management element that will execute them on the network level. Achieving these goals requires a converged charging system that will optimize service providers' abilities to monetize their assets.

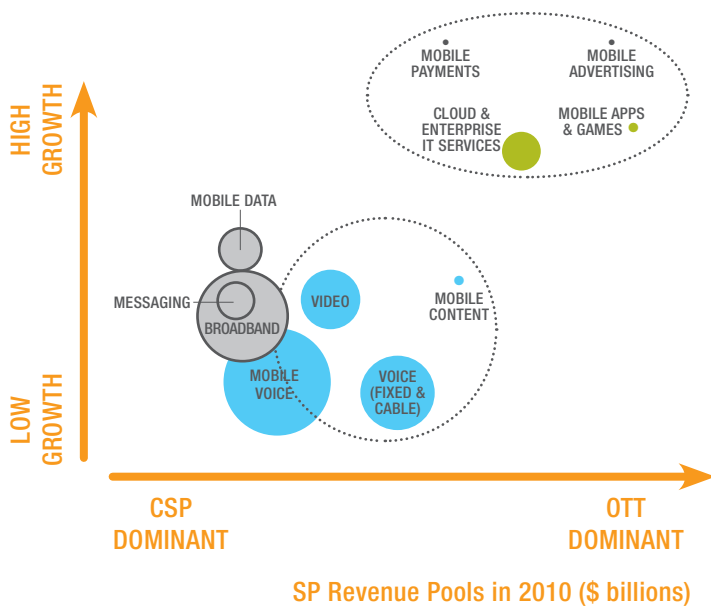
A quality service monetization and control solution provides charging functionality, coupled with network control features, and a holistic customer view – across any network or device type, user segments (enterprise, SMB and consumer) and payment methods (whether postpaid or prepaid). These components will provide a comprehensive view of the overall account status, packages and hierarchical customer structure, so that service providers can flexibly and efficiently manage the new monetization capabilities.

The second shift: New entrants are cutting core revenue streams

Over the top players are flooding into the market and providing various types of content, services that are cutting into service providers' core revenue streams. Netflix, for example, says its customers can, "Instantly watch as many TV episodes and movies as (they) want for only \$7.99 a month." Consumers can of course purchase Netflix's streaming, on-demand movies directly from Netflix.

Contracting with OTT players like Netflix for data bandwidth bulk will cause service providers to lose their direct relationship with consumers and weaken their marketing efforts.

OTT players are increasingly "dis-intermediating" service providers (Sources: Yankee Group, Strategy Analytics and Gartner)



The above diagram illustrates how service providers' dominant offerings are suffering from low revenue growth while OTTs' dominant services, on the other hand, are enjoying increased revenue growth. The significant high-growth market is no longer a dependable part of service providers' repertoire and they are leaving money on the table because of the OTT players' exciting new products.

How can service providers effectively compete given this reality?

Offering quad-play services and bundling them was a good start toward leveraging service providers' offerings and several analyses (including analyses from Pricewaterhouse

Coopers and IDC U.S.) have found that even shallow quad-play penetration can contribute significant revenue and reduce churn dramatically. These days this approach won't be enough, however, especially considering that quad-play is almost always used to compete against other service providers. Service providers will survive this shift only by providing enhanced content products and offerings that will grow revenue, while continuing to offer their traditional services.

Service providers must offer creative business models and differentiate themselves from OTT players by combining bundled offers of quad-play services together with interesting content services, all coupled with attractive pricing schemes in order to add more value to the package. For example:

- A global operator in Europe is offering end users a 3G data stick coupled with a cloud storage service. Users can share the content of the storage folder with their contact list and are able to watch streaming videos and listen to music
- Another innovative operator offers customers a Skype mobile phone with only VoIP calls. This service potentially reduces voice revenues, but at the same time increases data usage, creating marketing buzz and reducing churn

In order to create attractive bundles, service providers must break-out of the traditional silo systems to establish an "anywhere, anytime" experience. They can offer that type of experience by utilizing a synergic platform that stores all service offers in the same repository, with a common view of rating schemes. The platform should be agnostic to network technology and provide an experience that is beyond bill consolidation, offering flexibility for cross-product rating and cross-network services. We are talking about one converged system – with a single product catalog and no duplication across lines of business – across all networks, products and customers.

Service providers who possess these convergence capabilities will enjoy an important competitive advantage. By providing the networking and access capabilities in all quad-play modes, together with value-added services related to each mode, one compelling, highly appealing package can be bundled to satisfy consumers' desires.

The third shift: Real Time is the only time

Prepaid is the most popular payment method worldwide. Today, three out of four mobile subscribers are prepaid and that statistic is still rising, even in countries that have traditionally been mostly postpaid.

All consumers strive for visibility and control. They want to bring the immediate satisfaction they experience on the Web to their mobile devices. The here-and-now approach is desired across all user types:

- Prepaid subscribers want to have a “postpaid-like” experience in terms of advance devices and services, attractive and creative pricing packages and flexible recharge options
- Postpaid subscribers want greater visibility and control. Often they do not intuitively know how much data they are consuming and how much it will cost them. This confusion creates dissatisfaction and potentially bill shock, which prevents them from consuming new services

Service providers can solve these problems by introducing a hybrid model.

Postpaid subscribers looking for better cost control for certain services (data and content, for example) don't need to switch to a prepaid plan. With the availability of the hybrid model, they can choose to mix-and-match payment methods for their subscribed services to best suit their needs. They can still have their voice plans on postpaid and sign-up for prepaid data packages as add-ons to their accounts. It's the best of both worlds.

For prepaid subscribers, the hybrid model enables service providers to accustom subscribers to monthly allowances and a diversified set of services, helping to increase their stickiness. In this model, prepaid users will receive a pre-determined allowance every month that will be added to their prepaid balance. Once this allowance is consumed during the month, the subscriber will top-up and recharge as a regular prepaid subscriber for the remainder of the month.

There are a few flavors of the hybrid model:

- The **full hybrid subscriber** pays a fixed price every month and receives a monthly allowance, which includes voice data and SMS (for example). Once this allowance is consumed, the subscriber tops-up for the remainder of the month as a regular prepaid subscriber. The customer slowly but surely begins to pay a monthly fee, which produces a predictable revenue stream for the service provider
- The **hybrid mix subscriber** chooses different payment methods for different services. This means that she can choose to have her voice plan on postpaid and her data plan on prepaid, and she is still managed as one subscriber in the charging system
- The **hybrid family** consists of a postpaid model for parents while the children are prepaid. The parents' plan could allow a certain amount of prepaid top-ups for the children and benefits accrued on the postpaid plans could be distributed as prepaid benefits for the children (content and better rates, etc.)

A converged system will handle all subscriber types or payment methods in one operation and will enable the right mix of pre/post pricing schemes and hybrid business models. Such a system will provide immediate insight into data consumption and will enable real-time notifications, cross-selling and spending limits.

The single, converged system will provide real-time services for postpaid subscribers, advanced services for prepaid subscribers and the hybrid experience that is a combination of both. All events (online/real time or offline) will be charged and managed through a single, central charging and rating function, with: one product catalog, a spending limit, budget control and a customer management structure that supports hybrid models.

The era of omni-convergence

The three tectonic shifts described above are ushering service providers into a new era – the era of omni-convergence. People will give different answers when asked what convergence means in today's telecommunications market. The shifts reveal that convergence has multiple dimensions:

- The data explosion requires new ways of monetizing services. Service providers must integrate all charging and policy functions
- The entrance of new OTT players offering more than just access requires service providers to break traditional silos to establish a ubiquitous experience via the converged platform
- The movement towards real time requires service providers to enable a real-time customer experience across networks, services and payment methods

Service providers that are serious about their future in this complex, reshaped industry, need a single charging and billing system that's capable of keeping up with real-time demands. In addition, service providers need to be sure that their charging and billing capabilities can support all the dimensions described above.

Amdocs' proven track record, along with our solutions for multi-dimensional convergence, can lead service providers to success.

The Amdocs Convergent Billing solution is a real-time billing and charging system that enables service providers to generate revenue by facilitating purchase, consumption and payment for prepaid and postpaid customers across multi-play operations.

Based on Amdocs' ground-breaking turbo charging technology, with unmatched, benchmarked performance levels, the Amdocs Convergent Billing solution:

- Allows service providers to build-up a single, affordable charging and billing system that suits their specific needs
- Utilizes a single real-time charging architecture that allows service providers to support prepaid/postpaid and wireline/wireless convergence with a single set of integrated products

- Ensures charging and billing operational efficiencies and reduction of the total cost of ownership
- Increases revenue through innovative offerings and pricing differentiation
- Delivers a real-time charging performance and scalability in a single carrier-grade solution

For all lines of business, across all customers, payment channels and services, Amdocs Convergent Billing is a complete, end-to-end, convergent solution that will help service providers weather the tremors of today's market.

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Conclusion

Market trends and requirements are changing rapidly. New business models and monetization schemes need to be introduced to address growing monetization challenges in almost every aspect of the service providers' realm, whether they are data monetization, OTT competition, or prepaid and postpaid pricing schemes.

Choosing a convergent charging system will enable service providers to enjoy both flexibility and quicker time to market. More importantly, it will enable them to address current and future market trends not just from a technology aspect, but also from a business and customer experience approach. Service providers will be able to leverage a convergent charging system's capabilities to innovate and differentiate in an increasingly competitive market.



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About Amdocs

Amdocs has a 30-year track record of ensuring service providers' success by embracing their biggest challenges. Uniquely, the company combines business and operational support systems, service delivery platforms and proven services with deep industry expertise. In today's connected world, Amdocs helps service providers simplify the customer experience, harness the data explosion and stay ahead, while improving operational efficiency. A global company with revenue of \$3.2 billion in fiscal 2011, Amdocs has over 19,000 employees and serves customers in more than 60 countries worldwide. Amdocs: Embrace Challenge, Experience Success. For more information, visit Amdocs at www.amdocs.com.

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