

The Future Is In Services, Not Boxes

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Service providers are paying close attention to value added, enhanced communications services like unified messaging, Web-enabled conferencing and speech-based products of all flavours. It is increasingly clear to many carriers that while these innovative services will clearly serve to boost profits and bring the industry back into profitability, they will also help to shift the industry out of the current charge-for-minutes paradigm, and the resulting “death spiral” it has caused.

The services, then, will serve to boost margins for carriers, but more importantly, will be a key means of survival in one of the harshest climates the industry has ever faced. Carriers are coming to the realization that tapping into the immense value of these new services will not only be a matter of choice in the near future, but one of necessity. Without a competitive portfolio of nifty new services, what would prevent customers from changing carriers? With these new services in place, carriers will be able to turn a profit for the first time in years, and will actually have the ability to expand their customer base.

Carriers globally have begun exploring services that they can deploy on their existing infrastructure that embody next-generation functionality. These services include Web-enabled conferencing, automatic speech recognition and unified messaging. There have been a number of smaller deployments of these services by competitive local exchange carriers (CLECs), and their success has led to action by adventurous incumbents in the industry, if for no other reason than to try out the technology. More than simply trying out the technology, these same incumbent local exchange carriers (ILECs) will be forced to adopt the services, and provide them to their customer bases, just to survive. They too, are coming to this same realization, and are moving quickly to adopt these services, as well as the infrastructure to support their implementation, over both legacy, IP-based and blended network environments. We have reached a point in telecommunications technology where innovative services like speech-responsive applications, interactive gaming and instant video Web conferencing are a deployable reality, and this paper discusses this new paradigm, where billing on minutes becomes a thing of the past, and *billing for services* is the norm.

IT WON'T HAPPEN OVERNIGHT

How are service providers going to introduce nifty new services when they're strapped for cash, and are worried about any expenditures that can't be justified in terms of immediate return on investment? Well, over the past three to five years there has been a new architecture developing that lets carriers create and introduce news services for end users at an extremely cost-effective rate. The architecture is extremely dense and scalable, with one unit handling from 100 to nearly 20,000 concurrent channels of communication, i.e. simultaneous users, and providing the “five-nines” reliability that carriers and large enterprises require. This new framework for providing enhanced services is commonly called a media server platform, and it essentially is a separation and specialization of brains and brawn in the processing of complex multimedia signals, whether voice, data or video based. The platform consists of a media server (“the brawn”) and an application server (“the brain”) that work as a powerful duo to cost-effectively manage traditional and next-generation communications services that will bring the telecom industry back from the edge. Over the next few years, we can expect the media server platform's functionality and scalability to increase ten-fold, allowing service providers to create more services, and to provide them to more customers at once, over any

network type or medium, whether standard telephone, cell phone, PDA, computer or television. The standards and technology are still in a state of flux, but today's media server platforms are already enabling telephony services over telephones, computers, and in limited trials, television sets. Expect to see more telephone service providers, as well as wireless and cable TV companies come up with innovative new interfaces to take advantage of the support architecture being deployed on an increasing basis.

One might think that the value of these new services could be measured by the number of new components the carrier has placed into its network. However, the value of these new network components -- softswitches, gateways, media and application servers -- is measured only in the value of the services they help to enable. *The value is in the services, and not in the boxes.*

Taking the media server platform as an example -- and to be honest, each of the elements in the network -- network components will need to be extremely flexible, scalable and compatible, working in or with any type of protocol, application or network that exists today, and anything else that may come along in the future. The media server platform needs to be transparent in whatever environment it is placed. It also needs to scale from niche size to nearly nationwide in just a few steps, so that carriers can try out new services, then deploy them instantly, everywhere. Finally, the last thing that carriers want to be bothered with is the issue of technology standards. The ideal platform to launch innovative new services on should be 100 percent compatible with all standards and protocols, so that carriers can focus on providing the services, and not on getting the boxes to "talk" to one another.

ALL IN THE BUNDLE

Service providers of the wireless, wireline and cable TV variety all offer consumers different bundles of services -- different combinations of essentially the same commodity items, the most basic of which is airtime minutes. The last bundled set of telecom services introduced included things like call waiting, call forwarding, voice mail and other services--all things that we take for granted now. The new paradigm of billing for services, not minutes, will be ushered in by a completely new set of bundled services. We can divide these new service bundles into four distinct pillars, or silos, and further separate them into three specific service tiers. New service bundles will be organized around the following four pillars, or categories of services:

1. **Conferencing** – including audio conferencing, Web-enabled conferencing and related services
2. **Messaging** – including voice mail, e-mail, unified communications, and related services
3. **Speech-enabled services** – including IVR, ASR, voice portals, automated call centers and related services
4. **Security-related services** – including call monitoring and recording, caller ID and related services

Cutting across these categories are three tiers of services that we can expect to see. We'll call them **Tier 1**, **Tier 2** and **Tier 3**. These tiers will correspond to the level of service that a particular enterprise or individual has purchased, with the cutting-edge, premier services deployed for Tier 1 customers. A limited number of the same services would be available for Tier 2 customers, and Tier 1 customers would have the standard bundle, with only a very light sprinkling of these new communication services.

So what would some of these service bundles at different levels look like? A Tier 1 subscriber might have unlimited access to interactive audio, video conferencing, document collaboration and interactive gaming over the web and phone, a complete unified communications solution (two-way interactive communication, connectivity and access to personal files over any device, anywhere), speech-enabled services like web browsing, e-commerce and total e-mail and datebook management, and an active security blanket over all personal information and interactions. This robust type of solution is clearly for cutting-edge enterprises, businesspeople or high tech gurus needing to stay ahead of the crowd. To satisfy the tech-savvy interests of Tier 1 customers, carriers will need to constantly develop and deploy new communications services, so their infrastructure needs to be flexible enough to always keep jumping to the next level, continually adding new, advanced services for the most demanding customers. Eventually, these new services will trickle down to Tier 3 users, when they will become part of a slowly evolving “base bundle” of services.

As explained above, those subscribing to Tier 2 would have access to many of these new services, on a limited basis or with limited functionality. The Tier 3 subscribers would have basic connectivity solutions very similar to what many of us have today—basic voice and e-mail, Internet connectivity and the possibility of setting up audio or web-enabled conferences in advance.

THE FOUR PILLARS ARE COMING

Enhanced services will energize the telecommunications industry. When carriers begin to deploy bundles of services that include unified messaging, web-based conferencing speech recognition and interactive voice response, all things we can expect to see, the movement will have begun. Made possible by a platform that lets carriers create and roll out new services to specific customer sets cost-effectively, the creation and deployment of services in the Four Pillars and Three Tiers is inevitable. Once in place, the re-useable resources at the carrier’s central office will help them boost revenue, as well as hold the bottom line on costs. Carriers will finally be in a position to distinguish themselves on truly unique and original services, something only possible to a limited extent with the current “minutes” paradigm. Speaking broadly, this will be a return to profitability and a new, more collaborative relationship with end users.

End users, for their part, will also be in a new position. They will have clear bundles of services to choose from, ranging from the current connectivity to the ultimate “road warrior” bundle, where any type of business or communication can be done from anywhere, on any device. This deployment and division of services into the Four Pillars and Three Tiers will permeate the telecommunications services industry by 2004, when more than 10 percent of all households in the US will subscribe to at least one bundle of these services.

Over the course of the next year, and with 2003 as a kick-off year of sorts, service providers will begin to introduce value-added, enhanced communications services on a broad scale. Their embrace of these new, enhanced services will allow more than 25 percent of the US population to have access to the bundles outlined here, before the end of 2003 alone. From there, the scale of deployments will expand to fill the remaining gaps around the country. The services will benefit both carriers and end users, blurring the line between telephone and cable TV companies, and help broader “Communications Service Providers” to emerge. Enhanced services are coming to computers and devices near you over the next year, and they’re going to profoundly change the way you interact with the world -- service providers of every size are going to see to that.