



# Communication Convergence in the Enterprise Space

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Today converging technologies are changing the nature of communications in the enterprise space. Communication managers are challenged as never before as digital and rich media assets are combined with existing and emerging technologies to create new ways to share information. But what exactly is convergence, how does it impact communications in the enterprise space, and what are the benefits?

In this article, we will provide a brief definition of convergence and address three categories of convergence that are driving change in the communications marketplace: Services Convergence; Device Convergence; and Network Convergence.

Please keep in mind that convergence can represent different things to different people in different roles and with different responsibilities. Hopefully, we will provide insight that can be of value to you and your organization during this time of change...and yes, convergence.

## Convergence

*Convergence - the ability to provide uniform and ubiquitous services or applications across multiple technologies and access devices. Convergence in the communications marketplace is a multi-step evolutionary process driven by technology advances.*

The earliest phases of communication convergence were shaped (in the early 1990s) by bundling services that were not technically integrated and Fixed Mobile Substitution, the replacement of wire line telephony with wireless use. By the way, today over 80% of wireless communication occurs within reach of a landline phone.

Companies started diversifying and encroaching into each other's business as the convergence of wire line and wireless service became the core driver. Cable companies and satellite service providers offered voice and data (Internet) services via their existing connectivity into homes. The telephone companies (including the large telecommunications companies such as AT&T, Verizon, and Sprint, as well as regional and local operating phone companies) began providing Internet access in addition to traditional voice and cellular phone services.

As a consumer, you are probably well aware of the competing bundled services offered by your telephone company and cable operator. Quite frankly, any of these companies that have access into your home want to sell you more services. As a result, you may benefit by having the ability to purchase the bundled services at an agreeably reduced price, which is the "win-win" strategy.

The environment became more competitive in the late 1990s as telephone companies (telcos) began to leverage their network infrastructure to compete with cable and satellite operators by offering video services to tap into the rapidly evolving \$1.1 trillion worldwide video entertainment marketplace. This is commonly referred to as the "Triple Play" and includes voice, data, and video service. Not to be

confusing, but to go one step further, the video services provided by the telcos, referred to as “IPTV,” employ the terminology of the IP (Internet Protocol) platform over which the signals are delivered to your TVs (televisions). AT&T’s IPTV branded service is called U-Verse and Verizon’s is FIOS.

The consumer-based playing field is extensive and gaining clarity as the telcos and cable operators compete in their respective cities and metropolitan areas with their bundled services. If the FCC is correct, the competition will result in improved services at competitive prices.

Further, many of the competing companies, led by the large telcos and cable operators, started purchasing or investing in wireless carriers (especially as the spectrum became available as a result of the Federal Communication Commission (FCC) mandate for digital transmission migration). This FCC action requires local television stations to upgrade their transmission systems from analog to digital to free up frequency spectrum for mobileTV and other mobile rich media applications. Refer to the article on “Between a Rock and White Space,” posted on the Enliten web site or go to the government website (which is listed/linked below) for more details.

## **Services Convergence**

Services Convergence is the combining of multiple services to create a single service offering. In many cases, this is referred to as “*bundling*.”

For example, as mentioned earlier, telecommunication companies (telcos) and cable operators are aggressively building infrastructure and developing enhanced service offerings to protect existing (longstanding) business and garner additional services traditionally provided by competitors. They are combining voice, video, data and wireless access into what is commonly referred to as the Quad Play, to garner a larger share of the over \$400 billion marketplace for communications and entertainment in the U.S.

Bundling of services is not exclusive to the consumer market. It also applies to the enterprise market where organizations are creating and implementing more efficient ways of managing multiple services through one vendor.

## **Device Convergence**

Device Convergence merges multiple access technologies onto a single device. For instance, iPhone and Blackberry devices give users the ability to talk, exchange messages, check email, download, store, and play music and video as well as access the internet from one device.

Today, users have the ability to create and send video messages and even watch entertainment and educational programming transmitted from their TVs and DVRs onto mobile devices. The potential of this technology for large geographically dispersed organizations is enormous. 2009 promises to be an exciting year for the maturing of the communications industry as mobile devices, personal digital assistants (PDA), and smart phones become more widely accepted; the spectrum becomes available for wireless applications and service providers package (maybe even bundle) their mobile and mobileTV services.

Over time, consumers will embrace the devices and service offerings that meet their personal needs. At the same time, communicators and media managers in the enterprise space will identify which devices and services are relevant to their respective organizations. Time will tell which products best address the rich media requirements of the enterprise space and which organizations will embrace new technologies

to send and receive video and rich media over cell phones or PDAs, access information via the Internet, and/or continue to limit text messaging and e-mail communications on mobile devices.

It will be interesting to see how quickly people adapt to using their mobile devices for other activities, such as remotely recording programs at home on a cable driven DVR or telco based IPTV media system; issuing commands to a media devices, like Slingbox or Monsoon, to forward live or playback content to the mobile device; or control thermostats or kitchen appliances. All of these actions are equally applicable to the enterprise environment.

## **Network Convergence**

Network Convergence brings together separate networks to create a common infrastructure, enabling service providers to offer integrated (blended) services to their existing customer base. The core driver is the convergence of wire line and wireless services that create the foundation to control a seamless customer service experience.

In the enterprise and consumer spaces, the combining of fixed and mobile communications gives users the ability to seamlessly roam between a wide-area network, a wireless local area network, and a fixed broadband network, while giving carriers the ability to more efficiently design and manage their multi-purpose networks.

As operators and service providers complete their network upgrades to IP, they will be able to offer advanced converged services. For example, many enterprise organizations use existing terrestrial infrastructure for the Triple Play applications: audio service, data (information) distribution, and video applications such as two-way videoconferencing and telepresence; webcasting and streaming of video and digital media content; accessing the public Internet; and providing other information, video, and rich media content on-demand....when convenient for the interested employee.

Many organizations complement or supplement their terrestrial capabilities with satellite-based networks, which are ideal for video and rich media applications (such as training, communications and information, and digital signage), business continuity services, transactions, crisis management and disaster recovery overlays.

Enterprises are also using and/or researching wireless applications: the fourth component of the Quad Play. It is very common for executives, store managers, and IT personnel (to mention a few) to have Blackberrys or alternative cell phone devices for e-mail and messaging. Executives, media, communications managers and training personnel are switching to iPhones, Blackberrys and other smart devices for digital media applications. Be assured that in the end, content will determine where, how, and what devices will gain traction in the enterprise.

## **Convergence in the Enterprise**

The upcoming conversion to all digital video communications will open up the bandwidth to allow the United States to catch up to the rest of the world in IP (internet protocol) networking. Those of us in the enterprise space will benefit from the converged communication world as bandwidth increases and more products and services are introduced into the marketplace. Enterprise users will experience improved efficiency in communication and increased mobility of the workforce at a lower cost. This will be of particular value to organizations with large employee bases working in the field or traveling. Enterprises

will be able to reach these employees (as well as clients, vendors, and strategic partners) with video, audio and text messages anywhere at any time.

Bottom line, multi-service converged IP-based networks, devices, and applications will improve the ability for organizations to meet their communications needs. The challenge will be for us to figure out how to leverage them to derive the maximum benefit. It will be an exciting challenge....no, opportunity.

### **Additional information:**

Following are links to articles or websites that provide information and/or good reading on the respective topics.

For information on the communications convergence:

[http://telephonyonline.com/access/technology/convergence\\_crm\\_telcos\\_071505/](http://telephonyonline.com/access/technology/convergence_crm_telcos_071505/)

For detailed explanation of the Digital TV Transition, go to the government's site:

[www.dtv.gov/index.html](http://www.dtv.gov/index.html)

TELECOM COMPANIES VS. CABLE: Scrapping for Turf

Customers win as both sides roll out new services

<http://www.ajc.com/search/content/business/stories/2008/03/05/telecom0305.html>