

Untethering the End-User: The power of communications

WHITE PAPER
DECEMBER 2008

Under the current convergence cycle, the communications industry is taking a long, hard look at the true power of communications services, of the supporting network, and of the driving forces.

BY MAKING FREEDOM OF CHOICE AND USER EXPERIENCE COMPETITIVE WEAPONS, SERVICE PROVIDERS CAN LEVERAGE THE POWER OF THEIR CONSTITUENTS TO CREATE AN UNSTOPPABLE VIRTUOUS CYCLE FOR SERVICE DELIVERY, DRIVING INCREASED VALUE TO ALL STAKEHOLDERS

Introduction

The communications industry is embarking upon a comprehensive technology evolution without fully considering the impact on its main constituents – the end-users. More importantly, industry members are failing to recognize the power these constituents possess. The industry is in a state of flux as it grapples with network evolution and the topics of the day: Convergence and Converged Communications. Numerous forms of convergence have emerged from all corners. The Promise: eliminate barriers and boundaries, leading to a brighter and richer future for communications. The Focus: Technology and IP (Internet Protocol) Systems. That it will achieve this promise under the current initiatives is debatable. That the competitive landscape will be forever altered along the journey is undeniable. The question is: “which service providers will transform their businesses to harness the true power of convergence?”

To the average person – the world’s major economic force – life has enough challenges without worrying about network evolution, convergence, or the complexities of communications. These include (but are not limited to): picking the best route to work and getting around the imminent traffic jam; finishing the big report before the 11:00 am deadline; selecting the proper wine to accompany lunch; taking the kids to soccer practice; downloading a movie to watch before bed; and finally getting a good night’s sleep. At no time does the average person wish to add “understanding communications technology” to that list.

The communications industry has asked users to do just that: to deal with the technological complexity of communicating and living their lives. No matter if it’s “legacy” or new services delivered over IP, the answer is the same: the technology of communications is overwhelming to implement and to use. This has become a critical issue as the industry attempts to convince the average user that convergence is good and worth increasing their monthly spend.

Under the current convergence cycle, the communications industry is taking a long, hard look at the true power of communications services, of the supporting network, and of the driving forces. Telecom providers at one time made all of the service decisions. Now, with the introduction of viable substitutes (e.g. FaceBook, Google, MSOs, etc.), we see the balance of power shifting toward the end-user. The new norm driven by end-users is simple and time-relevant communication services on their terms.

CGI has worked extensively with a wide array of Communication Service Providers (CSPs) as they evolve to better serve their customers. Through these engagements we've developed an approach to assist our clients in delivering next generation services that meets the demands of today's consumers and businesses, establishing an adaptable roadmap to future success. This approach – IPCentricITY™ – delivers flexible services and solutions driving enhanced business and communications results. And through it we've recognized the true power of convergence: it's the end-user.

Communications

*technology is there to
be used, not noticed
or celebrated.*

Convergence: Myths, Reality & Delivery

Communications convergence is in full hype mode. In general, most vendors have some new approach that promises a converged something-or-other, lower costs and/or higher revenues. The bulk of these approaches tend to focus on technology without addressing the evolution of today's stakeholders' needs. This highlights more serious flaws in today's thinking, identified by the following myths.

The most common MYTH-takes are:

1. **Convergence is about technology.** Most of today's press is about the latest technologies driving the convergent world. Whether it is IMS, FMC, SDP or some other technological advance, the general approach is to describe the underlying technologies, their independent virtues and how they "converge" a piece of the communications puzzle. There's only one place in the service chain where everything comes together: the end-user. Technology is there to be used, not noticed or celebrated. It is only a facilitator in transforming businesses to accommodate end-users' evolving life and work styles.
2. **Simplicity is easy to deliver.** Actually, simplicity is a subjective reference point – a perception - that's always moving and therefore very complex to achieve. What's simple to one person may be challenging to another. And simplicity is even time-oriented: what's simple at one moment may be difficult at another for the same person. Compounding the problem is that, despite best efforts with standards and new architectures, services cannot be delivered without changing the backend support systems. With all of the systems involved to deliver services, end-user simplicity is one of the toughest challenges facing the communications industry, requiring fresh perspectives to overcome.
3. **We know what end-users want.** The industry is actively seeking the next "killer app". Its definition is elusive, despite countless hours in focus groups and research forums. But what if there really isn't a next "killer app"? What if the next "killer app" isn't an app at all, but instead, it's an experience? The next "killer app" will most likely be the platform that delivers remarkable experiences end-users will flock to, unleashing end-users in unique environments to explore and be creative. Empowered, they will show us what they *really* want.
4. **New service introduction takes a long time.** Today's service environments are purpose-built, either delivering IT or Telecom capabilities. Working directly with

_experience the commitment™

*The intent of
“Communication” is not
to use technology or
even to communicate,
but instead to share an
experience, outcome or
information*

Telecom providers, CGI has developed a new approach to delivering advanced services using existing and new assets combined with Web 2.0 concepts. It requires rethinking the target of the services, the desired outcome and giving end-users control over their contexts and user experience. through this it's possible to deliver rich, user-oriented services in drastically reduced time frames.

Convergence Defined

Another common misconception is that convergence is new. Far from it. Convergence is a natural part of normal business cycles. In general, convergence occurs as business and/or social barriers are removed and opportunities are created or recognized. Technology evolution has been instrumental in removing barriers, but has rarely been the driver of the convergent force. Instead, the drivers have been changes in social and business circles as pain points are addressed and opportunities seized.

Converged Communications

To understand what we mean by Converged Communications, we need to add a definition – communication. Consistent with common dictionaries¹, we define communication as “*a deliberate interaction between two or more entities for the purpose of delivering or exchanging information*”. The intent is not to use technology or even to communicate, but instead to share an experience, outcome or information. The act of communicating should be thoughtless with technology facilitating, not being the event itself.

Converged Communications then is the ability for end-users to seamlessly and without intense thought interact with their chosen communities in any manner deemed appropriate to deliver or exchange information in support of a personal or community objective. It is at the end-users' discretion as to how the interaction is carried out. This discretion involves the device, the time, the mode (synchronous vs. asynchronous), and the medium (voice, data, video, picture, etc). Converged Communication to the end-user is simply a means of completing a task in line with daily activities and norms. It should be no more difficult to connect and exchange information with an individual across the country than it is with someone across the room.

For Converged Communications we suggest there are three primary areas that must be addressed: the **User**; the **Business**; and the **Infrastructure**. None of these is a defined technical reference or architecture. Instead, they are points in the service delivery chain driving economic outcomes. Convergence at these levels cannot succeed without evolution of the underlying technology: for example, advances in device design supporting ease of use and ever more powerful applications are a

¹ Wikipedia: The Free Encyclopedia (Wikipedia.com); Oxford English Dictionary (AskOxford.com); Dictionary.com; Merriam-Webster Dictionary (Merriam-Webster.com)

must for the end goal to be realized. But this evolution is strictly an enabler, not the goal of convergence.

The End-User

The average end-user plays the pre-eminent role in the communications value chain. End-users consume service offers from providers to achieve life's goals, "paying"² for the services as they're used. This drives the revenue chain that fuels the communications industry. Without users there is no money and therefore no need for the CSPs.

Twenty years ago the communications' value chain was definitively structured with single providers deciding which services to offer to subscribers. CSPs enjoyed monopolies and strong brands (largely due to the monopoly). Terms of service were dictated to subscribers with service configurations tightly controlled. Prices were high; ultimate value was low. Users were assets; CSPs "owned" subscribers.

The practice of tethering the end-user to service subscriptions with limited choices of fee schedules, usage flexibility and overall service capability was in full swing. Users were tethered because of the industry's limited choice and inability to move: it was more painful to switch services to a new provider than to carry on with the existing limited service. Even if end-users could find new service offerings, the technical complexity was daunting, leading to resigned adoption of plans poorly suited for the end-users' purposes.

But the service delivery & usage tables have started to turn. New entrants from IT and Web 2.0 (e.g. Google, Skype, Facebook, Myspace, ...) are breaking new ground, introducing service models that have tremendous user appeal. The user in these new models is no longer an asset. Instead, the user is a member or partner, often participating in the creation of new value for the CSP. This is fragmenting the communication services value chain as users leave the established, recognized brands to experience freedom. Users are leading the charge to higher value. This power shift will accelerate in the next three to four years as new service models solidify.

*New entrants from IT
and Web 2.0 are
breaking new ground,
introducing service
models that have
tremendous user
appeal*

² Paying here is a virtual term referring to any agreed method (including free service, advertising supported, or other) as compensation for use of the service

_experience the commitment™

Businesses of all scales in all sectors and all geographic regions are opening their infrastructures to drive better economic outcomes on both the bottom and top lines.

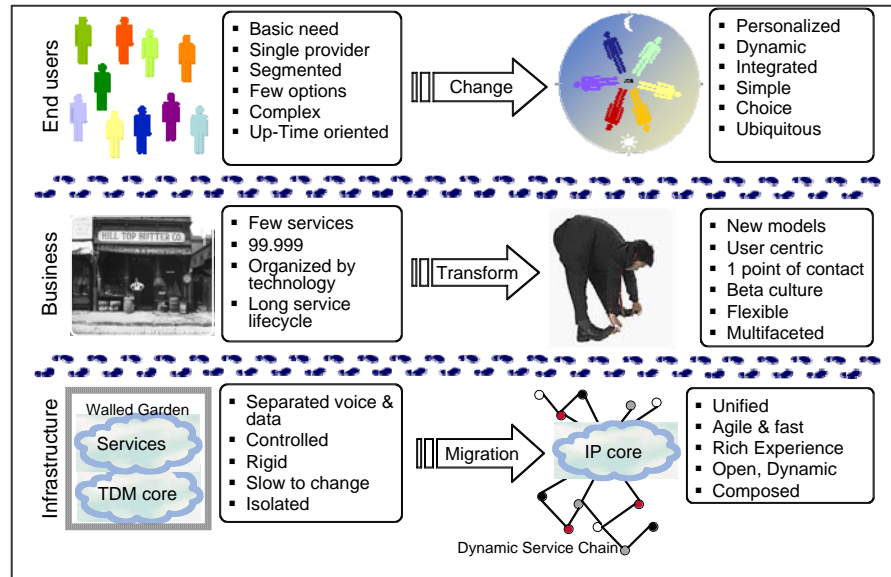


Figure 1: Convergence Levels

The Business

The changing and diversified need of the end-user calls for an evolution in the way business is conducted and services delivered. Customers now expect to have rich and integrated service offers and single points of contact to simplify their lives. As the Web2.0 (Everything 2.0?) movement progresses, many small services, while not necessarily perfect (Beta), are better than one-size-fits-all monoliths. This Beta culture is becoming pervasive, meaning that “good enough” is trumping “perfection”, leading to entirely new economic models.

The CSP of the future must evolve business practices to provide a unified front and not expose the complexities of its business structure, its business support system (BSS), or its operational technologies. Just as with communications technologies, end-users desire simplicity and freedom in dealing with their service providers. This goes beyond providing a single bill or a single support number backed by an IVR portal. While implementation of a comprehensive CRM system is a good start, it must be viewed as only a start, with transformation of business processes to support customers being a primary evolutionary driver. All emphasis of the business must be in understanding the behaviours of current and future customers and organizing the business process and BSS to support the diverse nature of users,

The Infrastructure

Most of the convergence work today centers on the communications infrastructure. There is no denying this requires a great deal of effort to evolve as diverse and distinct service environments – Telecom and IT - struggle to co-exist and to offer value. The industry has adopted IP as the common core network protocol. With it

comes the promise of new services. Contrary to popular notions, an all-IP infrastructure is neither required for nor guarantees effective converged service delivery. It alone will not address today's changing business models and evolved user expectations to drive better business results.

Rather than a forced cutover to all-IP, a smoother, more pragmatic step-by-step evolution is a better fit for most service providers. Reusing existing network functions and elements allows hidden value in today's networks to be exposed to new revenue generating possibilities. Being able to provide users with a first taste of advanced services on their existing devices sets the stage for loyalty and continued success in a fully transformed environment down the road.

Untethering End-Users

A tethered user is one that is trapped in the technology complexities and limited choices of today's communication systems. To be fair, choice does exist in today's market space. Bundles of capabilities are available from most providers: triple play, quad play, small business packages, family plans, and so on. These choices relate more to methods of packaging and selling technology than in delivering real value to consumers. They need to better facilitate the average user and remove the shackles of techno-speak and rigidity. They need to adopt a language using terms the average end-user could follow and work with.

Take as an example the evolution of the Wi-Fi industry. A decade ago residential Wi-Fi systems came out with complicated terminology that generally scared away the average user. Terms such as 802.11b, 802.1x, cat-5, SSID, DSL and so on have largely been replaced with more end-user friendly terms such as "internet router", "wireless-N", and "password". While there is still room to improve, the Wi-Fi community has embraced average end-users making solutions accommodate them, enriching the experience of Wi-Fi communications. Today the technology is all but hidden. Take for example Wi-Fi routers from Apple Inc. The end-user needs to know nothing about wireless, networking or communication technologies. The Average Joe simply plugs a wireless router into the Internet router, types in a password, gives the router a name, and lets the computer find the service and connect. It's this type of evolution the communications industry is in need of.

Serving Average Joe

Meet Average Joe: an emerging prosumer. As defined by Dan Tapscott in his groundbreaking book "Wikinomics", a prosumer is one that both consumes and produces services to meet his/her needs. If the service is available under acceptable terms, it will be consumed. If not, it will be developed for personal use, and if appropriate, published for a wider audience's benefit.

Today Joe is tethered to the current service environment. The constraints applied to Joe are numerous: pricing models, selection, availability, technical complexity, device incompatibility, service terms, and so on. At times it's harder to envision using the

*The future of
communications
markets relies on the
necessity to build for
change*

_experience the commitment™

The approach is simple: unleash the creativity and expertise of consumers to generate greater power in the service offering.

available services than to live without them. While the thought of switching to a new service provider is daunting, it's becoming clear that the service suite Joe desires is not soon to come from a traditional source. Joe's desire is to mix-n-match business and personal services for use around the clock to facilitate a flexible and unpredictable lifestyle. For Joe is a good parent that occasionally travels for business, family sports and vacations, and is also an active member of a diverse work team in a highly competitive industry.

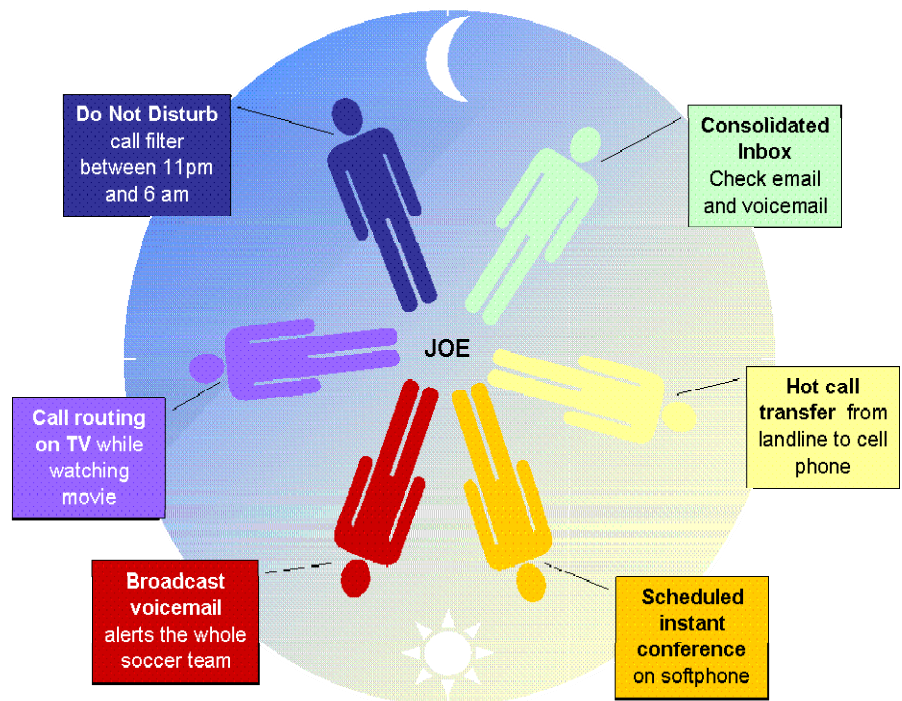


Figure 2: Personal Services Clock

The problem: *Joe's service suite was made for someone else.* The choices no more meet Joe's needs than a skateboard does a piano delivery shop. Joe is a person 24 hours a day with a variety of activities to pursue and a variety of personas to manage. As life gets faster and busier, these activities increasingly encroach upon each other. Joe is at any given time a parent, manager, team member, coach, friend, or volunteer. He doesn't stop to think of the persona he's adopting as he moves from one to the other. The boundaries of Joe's time around the clock are blurred. There should be no constraints stopping Joe from seamlessly and effortlessly interacting with others in his chosen roles.

Average Joe is unique, dynamic and flexible. The average service suite should be as well, adapting to Joe's Personal Service Clock. Whether waking to unified communications in the morning, using rich television in the evening, or dynamic call filtering at night, the Personal Service Clock is an all-encompassing reflection of the

interaction activity Joe engages in over a 24-hour cycle. It utilizes two different constructs: Active and Passive Services. An Active Service requires direct and conscious interaction – example: Video on Demand (VoD). A Passive Service is one that takes care of the interaction without direct knowledge – example: call redirect service while on a conference call or while sleeping. All services – Active and Passive – are available to Joe during the 24-hour period.

Joe is recognizing and resisting the tethers of the traditional service suite. Today Joe can have a business plan, or a family plan, or even a personal consumer plan. Joe can even have a “bundle” comprised of CDMA wireless, Satellite TV and DSL internet, or GPRS wireless, CaTV, and Cable internet access – whatever those terms mean, and whatever the difference is. But what Joe cannot have today is a Personal Services Plan. To today’s CSP Joe is still an asset, not a partner. As daunting as it may seem, Joe will soon have to switch to a new type of provider that understands personal services and communities.

Personal and Community Services

Communities, goals and interactions are unpredictable and require different sets of tools. Traditional methods of meeting community needs would be to establish a Target Market reference and to sell existing services into that market. This target would lump together multiple communities, eventually getting to a generic definition of the service suite with the belief the needs of the very large target market are being met. But this approach, as can be seen in the current environment, does not deliver customer satisfaction or drive an end-user led virtuous cycle. The traditional concepts of the target market must be redefined: Average Joe is the market.

Joe is not a traditional market, though. Joe is part of a community. In fact, Average Joe (the person) is part of multiple communities, each with their own goals and styles. They share information and interact to achieve community outcomes. Strong overlaps between communities and their members exist on many levels, including the methods of communication. Converged communication solutions must respect and, more pointedly, promote the similarities and distinctions of the different communities as they progress. It is impossible to tether all communities to singular definitions of service offerings: as witnessed in the expansion of social networking in today’s internet environments, the energy of the communities will burst through the barriers to find or develop the services supporting the desired outcomes.

The real target of Converged Communications and CSP Business Transformation then is the promotion and support of evolved end-users and their communities. By focusing on the End-User (Average Joe) the goals of Business Transformation will become well defined and meaningful. Adoption of technologies in support of new end-user oriented services and service environments will become more focused. Better payback and end-user loyalty will result: free but supported users will develop a vested stake in the success of the CSP, attempting to further contribute to its ongoing success. Focus on end-user success will create a virtuous cycle for the CSP leading to new levels of business and stakeholder success.

*Joe needs a
service suite capable
of supporting a fluid
lifestyle and a mobile
workstyle.*

_experience the commitment™

The Personal Service

Suite of the future is

aimed at meeting

Joe's sophisticated,

unpredictable and

fluid needs.

Delivering Personal Services

Clearly the game is changing, along with the rules of competition. Service delivery used to be about size, reach and brand. These no longer represent the winning attributes in the new world. Personal, community-oriented, virtual, flexible and easy-to-use are updated terms to describe the winning play. New entrants into this space have a clear advantage: some are definers of the new era, while others were born of it; they do not have past success and existing footprint to manage; and they do not have to fight against entrenched business models or structures. Once again the prime example here is Google, with a definition of success built around end-users and a completely new business model to achieve that success.

CSPs can play an active role in the coming era, but the path ahead is not clear and the challenges are broad and deep. A few of the major hurdles facing incumbent CSPs as they attempt to move into the new game are:

1. Market definition: there are now millions of markets to pursue versus today's dozens – CSPs' past success will hinder needed system evolution to accommodate the new service realities.
2. Service delivery/business model: end-user partnership is imperative
3. Service delivery environment: light-weight, mass customization services in virtualized environments are required to deliver the services to meet the new market dynamics
4. End-user experience evolution: deliver freedom; untether the user
5. Open systems: ecosystems of applications and enablers; flexibility

These challenges have little to do with driving technologies together (traditional definition of Convergence) and more to do with reshaping the communications market space. Today's CSPs do not have to be relegated to the ignominious title of "Bit-pipe Provider". They **can** play a role in the service value chain, but they must overcome the above challenges to play meaningful roles in a brand new environment.

What it takes

In many cases the ingredients for delivering Personal Services are in place today. CSPs have invested countless billions to develop their infrastructures and businesses. The revolutionary step that must be taken is to invest in the end-user and related communities. The power of convergence lies with the end-user as the spark of the virtuous cycle that will generate increasing value for the service provider.

Three critical tasks are required to let loose today's tethers and begin the momentum to the future. These are:

1. **Promote the end-user as the primary driver of converged communications – User Convergence.** Average Joe is the key to success in the convergence game. As the single point in the service chain where convergence really occurs, Joe has all the power to decide the communities and the services that will be important and those that won't. Joe will not be tethered: he will seek out environments that promote freedom and personalized service delivery. The successful CSP of the future will have an open environment and business model that rewards Joe for service, recognizing his status as a prosumer with individual and dynamic needs.
2. **Transform businesses and business models in support of the end-user – Business Convergence.** The business model must evolve to attract millions of Average Joes to deliver services on their terms. The end-user sees only one entity: Company X. The successful CSP of the future will provide a single, unified business face to Joe and related communities. Business values reflect that Joe is not only a customer, but a trusted partner in the overall service value chain. The CSP's brand will anchor a strong, resilient and comprehensive ecosystem of content and service delivery aimed at achieving one outcome – business success through customer success. This will be underpinned by a revolutionary BSS that is open and adapting to the dynamic needs of end-users and communities.
3. **Build a foundation for the end-user and communities to realize their desired outcomes – Infrastructure Convergence.** A critical element in achieving the above tasks is the realization that advanced technologies alone will not deliver the required outcomes. Service delivery involves significantly more than placing Telecom services on an IP backbone, incorporating video into laptop clients or putting IM on desktop terminals. The successful CSP will evolve the back-office (OSS) systems to accommodate the new business environment: to loosen the controls on the subscriber and the service environment. Further, service delivery will be a blend of the old and the new – unleashing the hidden value of existing network elements, extending reach of service delivery to non-IP access forms, and focusing on end-user experience and richness. This will combine Web2.0, Enterprise 2.0, and traditional Telco into an engine designed to achieve the most important level of convergence: the end-user. New system configurations will support exponential growth of end-user services and will associate as many services to users or communities as possible. The emphasis will be on openness, agility, and mass customization.

*CSPs must place a
priority on business
transformation versus
technology
integration.*

The transformed CSP has a different look and feel and a distinct advantage over today's providers. Customer service is the hallmark of the new world: rich, multi-media experiences where the end-user is treated as a partner in resolving issues and growing the business. Beyond mere CRM, Customer Service interactions strengthen the CSP's brand by tapping into multiple open systems and resources to continually demonstrate the value of the end-user in the service chain. This value is reinforced daily as the end-users and communities are supported with dynamic, open services meeting the growing demands of their Personal Service Clocks.

_experience the commitment™

The transformed service provider has a different look and feel and a distinct advantage over today's CSP.

About CGI

At CGI, we're in the business of satisfying clients. For more than 30 years, we've operated upon the principles of sharing in clients' challenges and delivering quality services to address them.

A leading IT and business process services provider, CGI has approximately 25,500 professionals operating in 100+ offices worldwide, giving us close proximity to our clients. Through these offices, we offer local partnerships and a balanced blend of global delivery options to ensure clients receive the combination of value and expertise they require.

CGI defines success by exceeding clients' expectations and helping them achieve superior performance.

The advantage of this transformation is the transition from subscribers to communities of partners. Users become stakeholders in the development and evolution of services and therefore the business as a whole. This new model gives end-users a vested interest in the outcome of the business, creating greater loyalty, brand strength and longer term value to the service provider.

The Future of Communications

One day, not too far in the future, an article will be written about the current state of communications (at that time). It will reflect upon a significant transformation that began in 2008 stirring the beginning of Personal Services. It will talk about the transition from delivering slowly evolving canned services for large target markets to the servicing of rapidly evolving end-users and their associated communities.

Most significantly this article will compare the old-world form of service delivery and management to the new-world. It will demonstrate how the new system of community-oriented service offerings, managed and tailored by communities themselves, was more attractive as a business model than the previous CSP-defined and managed static service sets. Technology evolution was not the driver of the transformation, but instead a supporting player as average users became more accustomed to their freedom, and more assertive in how it was exercised. Once the average user understood what was available, the mass migration was unstoppable.

In the future ubiquitous access to all services, in a personalized, consistent manner will be table stakes. The next generation of services will interact for and with us, freeing up our time to concentrate on other aspects of our lives. Communications will be virtual and asynchronous, relying upon automata or avatars to interact on our behalf. End-users and communities will interact in inter-connected Community Area Networks (CANs) connecting like-minded people in overlapping collaboration rings. True personal productivity delivered.

The Message

In order to achieve the future we as an industry must overcome the myths concerning convergence and its current direction. A bright future does lie ahead for the communications industry. It is currently being defined by new entrants and untethered end-users. The Telco industry must rethink its current thrust – not only CSPs, but all those in the value chain(s). Technology evolution is a must: Web 2.0 will have a role to play, just as past technologies have. Technology, however, is only an enabler.

The power of Convergence lies not in the hands of the technologist or CSP, but with the end-users. Convergence is about end-users, and Average Joe holds the key to future success.