

CLOUD COMPUTING WILL ENABLE CARRIER AND SERVICE PROVIDERS TO CONTROL THE VALUE CHAIN TO OFFER NEW PERVASIVE, PROACTIVE AND PERSONALIZED SERVICES ON SMARTER DEVICES, DELIVERED OVER MORE INTELLIGENT NETWORKS

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# CALLING THE CLOUD:

Within the next few years, experts say you could be using your mobile device to pay for lunch. It could become your photo ID, your passport, your library card and pretty much everything else that is currently stored in your wallet. It might also function as a tracking device, a connector to technology in our everyday life – like a controller for your lights and heater – as well as a mini-computer, connecting you to people and products and services in your neighborhood and around the world. And it will probably not even be called a “phone” anymore.

These ideas might sound like something from a science fiction movie, but all are being developed right now – and many are implemented in several European and Asian countries. It is already quite commonplace to have a mobile that combines voice, texting and data exchange capabilities, allowing the user to access the internet, share information and communicate with friends and colleagues through one electronic device.

After many years of unfulfilled hopes, mobile services beyond simple voice calls are now taking off. Consumer expectations can drive incredible innovation and convergence in the telecommunications industry, really changing the way we do business.

Information technology is everywhere. It permeates our work, our social life, our home environment. And it has noticeably shifted from a convenient tool to a very central and vital part of our everyday life. This has had a very profound impact on the telecommunications industry.

This is an industry that has delivered a single service since the 19th Century. We provided telephone service... the equipment

and the technology that connected one telephone to another telephone at the other end of the line. Within the last few years, our entire business has shifted from being the provider of that one service to being the access point for other entities' services. We're the 'means by which' our customers get to the services they want or need.

Examples of services include streaming videos, video on demand, internet or mobile TV and radio, social networks, user-generated content and the increasing popularity of smartphones with features like music or mobile applications. These new forms of usage are enabled by a series of technology advances including new multifunction converged devices, advanced compression and streaming technologies, next generation networks and deployment of broadband technologies like Fiber to the Home (FTTH) and Long Term Evolution (LTE) in mobile.

The business model is changing from a provider-of-technology driven services to a demand driven enabler. It will not be enough – like in the old days – to wait for some bright innovator to come up with the key operated phone to replace the dial plate and then force the locked-in consumer to switch. What we are seeing in the telecom market is a new value chain connecting application and content developers to consumers and business customers. Information flow is evolving from what we call 'programmed unidirectional multicasting' – that is, sending pre-determined information to many users at one point in time – to a multidirectional, on-demand, highly personalized model, providing access and interactivity regardless of time or location.



# THE CONVERGENCE OF TELECOM AND EDGE TECHNOLOGY

For the industry, this means a radical change of focus, emphasizing the importance of customer experience management for creation of real value. It gives rise to a new playing field for grabbing a share in managing the customer experience.

In the traditional telecommunications business, the main focus was on planning, deploying and operating the infrastructure, both network and compute, as well as delivering the service, including service provisioning, service assurance and billing. We cared about the customer, but within the confines of these activities. Now, as we shift to an implicitly service-oriented structure, the customer experience becomes the business.

The options for the service provider are three-fold:

- Enabling the delivery of a seamless customer experience across all networks, channels and services
- Allowing customers to consume an intentional experience anywhere, anytime and through any device at a compelling price point
- Acting as a customer aggregator for applications developers, content providers and advertisers

Given the vast subscriber base of many of today's service providers, becoming a customer aggregator is a natural evolution. With cloud computing as an enabler, the Communications Service Provider (CSP) is well positioned to become the experience provider, orchestrating the elements of the entire value chain to create competitive advantage, opening new revenue opportunities, and offering pervasive, proactive and personalized cloud services on

smarter devices, delivered over more intelligent networks.

For example, the provider might keep track of the consumer's habits to recommend services that match their interests, connect advertisers based on their search variables and up sell applications that support their experience. This opens additional revenue streams from the consumer, who pays not only for access but for additional applications and services, and supplementary income from advertisers and other content providers looking to access this targeted audience. It opens up new challenges, too, as CSPs will be competing hard for ownership of the paths to "Digital Me" against new entrants like Facebook and Google.

This shift in the revenue portfolio is a much-needed pressure valve for the industry. It provides a new outlet for enterprises that have been backed into a corner by market saturation, increased competition, industry consolidation and convergence.

It also dramatically changes the IT needs of communications providers who will now depend more heavily on their technology services partner to develop a planned hybrid approach of in-house, cloud, and hosted/outsourced services designed for the long run. This provides a solid foundation for the provider to source, deliver and govern highly scalable and flexible information and communications technology (ICT) services.

It's an exciting new chapter for the communications industry. There are significant challenges, but also a wealth of new opportunity. And there is no doubt that this will completely reshape the market and the industry. Overall, though, it is a very positive thing, redefining the way we do business, now and in the future. ●