

## Convergence

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### What's all this hype about convergence?

Everyone these days remotely associated with Telecommunications, IT, Media or manufacturing of devices seems to be talking about "convergence". Manufacturers, service providers and analysts appear to be talking about convergence of business models and value chains, but end users seem perfectly content with their current service offering – so what is all this hype about?

The reality is that we are at a point in time where there is potential for disruption to the established business models and value chains in the communications market – this is likely to affect the way customers are served and who serves them. This convergence is largely driven by advances in technology which is making the distinction between the telecommunications networks, information technology and the entertainment sector more and more blurred.

There are essentially two dimensions to convergence:

- Internally focused – "cost side" i.e. Next Generation Networks enabling services to be carried over one network.
- Externally focused – "demand side" i.e. customers' desire for bundled services.

### Internally focused convergence

Despite coping admirably with the communication demands of the modern world, the "traditional network" is now on the verge of a major revision – the Converged or Next Generation Network. The underlying ethos of the NGN is to carry all traffic – voice, video and data – on a common infrastructure, rather than having specialist equipment to deliver each different type of service. Most of those looking at convergence from an internal focus concentrate upon the NGN Core: the replacement of legacy transmission and switching equipment by Internet Protocol (IP) technology.

### Externally focused convergence

Externally focused convergence players view the NGN as a way of providing consumers with a wide range of services and features. Most of those looking at convergence from an external focus concentrate on NGN Access. NGN Access refers to the deployment of fibre into the local loop, either to the street cabinet or all the way to customer premises (typically apartment blocks rather than individual houses). However, it's not just about speed – the real focus is on enabling connectivity

anywhere and multi-service delivery along with the expected attributes of reliability, security and quality of service.

### Business Models and Value Chains

The creation of a network capable of carrying all types of traffic will inevitably lead to consolidation in the marketplace. Hence the term 'convergence' is never distant from NGN. At the same time as operators install infrastructure that widens their ability to deliver service (fixed, mobile, voice, internet etc), that same infrastructure is inviting competition:

**From IT companies**, who see the network as a "cloud" that can be used to deliver services defined by applications created using their established development toolset – dotNet, SOAP, UDDI etc. From the customer perspective, the application provider, not the network operator, is the primary supplier of service.

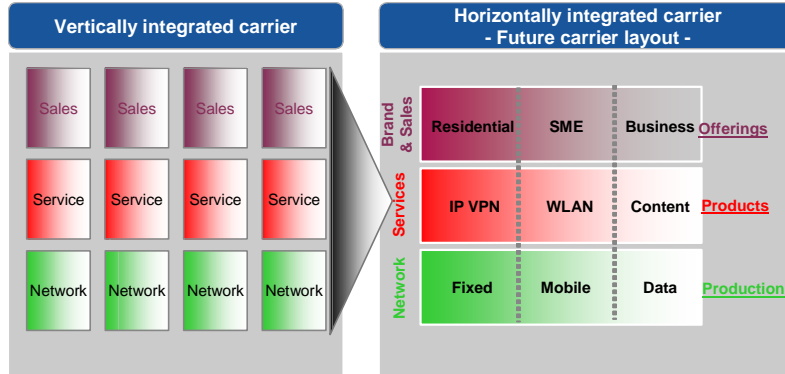
**From content providers** who see the network as a means of delivering their product to end users. Again, the network operator is secondary in the customer's perception.

**From device manufacturers** who aim to put as much intelligence in their products as

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possible, the network role being no more than a commodity delivery mechanism. Much the same model as has evolved for the Internet.

There is little doubt that the next generation network, at least in part, will herald the end of



the classical (vertically integrated) telecom value chain.

## The power play between Fixed and Mobile players

For all that is hyped about 2.5G and 3G, the killer application for cellular operators has been and is likely to continue for a while to be basic telephony services. The hype surrounding 3G with the plethora of applications did not materialise. It seems the real value of the cellular network is not the range of application but the mobility it offers for basic telephony services.

## The role of WiMax in the war

With a growing appetite for bandwidth hungry services being pushed by the media and entertainment sector, it is likely that cellular operators will find it hard to compete with the traditional, and what was for some time now,

seen as a legacy old fashioned network – the fixed network. The value of the fixed network appears to be gaining at the expense of the cellular networks as convergence materialises.

The gel between these two worlds appears to be WiMax. Although unlikely to be a replacement for either, (apart from niche markets), it serves as a useful intermediary,

bringing the gap between highly valued telephone mobility offered by the cellular world and the bandwidth savvy fixed network – especially in developing markets.

As intelligence is being moved to the edge and into devices, with services provided by multiple application and service provision entities, the fixed, cellular and WiMax networks are increasingly seen as mere “access” paths to the customer.

Clearly where we have a changing nature of competition and new value propositions being introduced, there will be value squeeze and value gains for different players.

## Changing nature of market, likely to drive players into new positions

This therefore raises complex questions over how the various players in the next generation telecom market will position themselves. Illustrated below are some of the generic strategies that seem likely.

## No pain no gain?

It is widely believed that convergence represents tremendous opportunities for both businesses and users, but it also entails risks and requires significant investment. Some are likely to lose out in the war for the customer and his money.