FROM LEFT TO RIGHT: Prashant Singhal, Vimal Wakhlu, Shivani Muthanna, Arvind Bali, and Ashwani K. Khillan

E-empowerment:

The Promise & Potential of 4G

Mass wireless connectivity brings with it the potential for connecting and empowering millions of Indians, especially across rural India but there are challenges in the adoption of 4G

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Telecommunications in India has evolved rapidly and consistently over the last decade or two. And in the process has transformed the landscape of India in many obvious and not so obvious ways. In turn the growing consumer utilisation of telecom services across platforms and functions - from social media to gaming, from e-commerce and e-healthcare to everyday needs such as utilising cab services via apps - is consistently driving the demand for increasing amounts of high speed internet access. In recent years the proliferation of low cost smartphones and devices has only increased the pace at which consumer demand for high speed internet access, especially on the go, is increasing. Equally, the consumers are also focusing on quality of services being offered; thus the telecom sector is facing simultaneously a surge in quantitative and qualitative demand. This in turn means that the telecom operators need to continuously upgrade their network infrastructure and introduce newer technologies like 4G to enable faster data networks. The challenge for the service providers, on the other hand, is with regards to business models that will enable them to grow and monetize the new opportunities. The initial growth of the telecom sector was predicated upon the growth of voice based services with messages, ring tones, etc., being offered as value add ons. But with the development of apps that offer many of these services free of cost that model no longer offers any significant growth. Data services are the next, imperative evolutionary step for the telecom services in terms of business growth. Thus the rollout of 4G services becomes important for both consumers and the service providers. Some telecom operators have already announced their rollout of the 4G services and others are set to follow suit in the near future.

With the rollout of 4G services imminent the question many ask is what will be the impact on both, the telecom services on offer to the consumer and the virtual landscape of India. And this is a conversation that is taking place against the backdrop of the Prime Minister's avowed aim of making a 'Digital India' a functional reality within the foreseeable near future. Keeping in mind the business growth potential for the telecom sector; the potential for a virtual, e-governance format and technological evolution as an imperative; **The Economic Times** in association with the Global Group organised a panel discussion via the ET Knowledge Forum to discuss these issues and more with a focus on "LTE/4G: The Next Wave of Telecom Growth In India". Here stakeholders and industry experts came together to discuss many of the issues and concerns centred around 4G. Moderated by Shivani Muthanna, Anchor, ET Now, the distinguished panel consisted of Vimal Wakhlu, CMD, Telecommunications Consultants India Limited (a Government of India enterprise); Arvind Bali, Director & CEO, Videocon Telecom; Ashwani K. Khillan, Chief Technology Officer, MTS India; and Prashant Singhal, Partner, Assurance Telecom Sector Leader - EY (India).

DETERRENTS & DRIVERS

The session began with a welcome note, delivered by T.K. Arun, Editor-Opinion, that focused on the nature of the need for mass availability of wireless broadband services in India. Contrary to lazy perception, wireless broadband is not an elitist luxury. In fact its mass availability can serve as a tool of empowerment for millions across India, especially in the rural sector. Widespread wireless connectivity also has the potential to revolutionise sectors such as health care and governance. It has already begun to change the commercial landscape with the rapid growth of e-commerce in India. Of course the mass availability of wireless broadband in India has to contend with a couple of factors; with infrastructure and pricing being the two most important. Ultimately, the widespread availability of seamless connectivity is perhaps dependant upon a business model that allows for thin margins but a very high volume. But how do we get there? What are obstacles? What are the drivers?

According to Arvind Bali, "the first and foremost deterrent is the quantum of Spectrum which is required. Spectrum in India is very expensive and ability is also an issue. The three key elements for launching 4G service are Spectrum, Infrastructure and device eco-system." The Device eco-system in India is already well developed and while pricing might be an issue the forthcoming availability of devices priced in the 100 dollars segment should be a game changers.

From the perspective of service providers there is, however, an important reality to be pointed out. Ashwani K. Khillan summed the situation concisely in stating that the rollout of 4G would be a part of the continuum. Again it is important to realise that what really changes is the speed of the services not the fundamentals of the tasks performed with those services. The important point that he stressed was that firstly, the adoption of 4G is a slow evolution, not an overnight revolution. And most importantly that it did not mean a disruption of the 3G eco-system. In any case, as he pertinently pointed out; the quantum of the eco-system today is geared for 3G. With the introduction of 4G the eco-system will also have to adapt to 4G requirements and potential. Prashant Singhal agreed with the assessment of 4G as a natural evolution. "You have to," he pointed out, "go through the stages of evolution, 4G is nothing but faster data access. The speeds are bigger and better than 3G but there is no market in the world where 3G has been overtaken by 4G or scaled down with the introduction of 4G."

DIGITISING INDIA

The achievement of the Prime Minister's vision of a digital India is predicated upon the availability of wireless broadband services across the approximately six lakh villages across India. That poses a significant infrastructural challenge for the telecom sector. The first and foremost challenge is backhaul. The second, of course, is course power. With many villages not on the power grid and others enjoying a very patchy and meagre supply of power, providing broadband connectivity seems a huge challenge. It is here that government has a vital role to play. Without active government participation the infrastructural inadequacies are a significant obstacle. But Vimal Wakhlu points to the government initiatives that promise to help overcome these obstacles. These include helping with Backhaul and also becoming a major client of the services themselves through the adoption of various e-governance initiatives and the development of initiatives in sectors such as healthcare where there huge potential.

The key takeaway at the end of the discussion was that ultimately the rollout of 4G services is a natural progression but at the same time is does pose significant challenges that can be overcome in two ways. The first is the potential offered by the co-operation between the telecom sector and the government objectives of achieving e-governance and e-empowerment. The second challenge is for the telecom service providers to evolve new business models that allow them to provide mass connectivity while remaining financially viable. And it seems that both are possible pointing towards a better, more e-empowered India.

ET NOW
Catch the coverage of the ETIG Knowledge Forum on ET NOW on November 1, 2014 at 11:00 a.m. and repeat telecast on November 2, 2014 at 6:30 p.m.

QUOTE UNQUOTE

Arvind Bali
Director & CEO, Videocon Telecom

Backhaul, laying fibre in India, the cost, the break-downs, etc., are challenges that impact the 4G rollout. The most important factor, however, is the ROI. From that perspective it is perhaps too early for most companies to really commit to invest. Experience shows that it takes approximately three years for services to become mass usable like in the case of 3G. The challenge then for companies is to keep investing their resources during this gestation period.

Ashwani K. Khillan
Chief Technology Officer, MTS India

We should see the arrival of 4G not as a disconnect but as the evolution of the network. Just as we moved from 2G to 3G similarly we are now adopting 4G. Certainly, the quality of services being offered by 4G may increase.

Prashant Singhal
Partner, Assurance Telecom Sector Leader - EY (India)

If we believe that we are going to get 600 million subscribers or broadband connections by 2020 it is important and paramount that both technologies co-exist. 4G is going to provide broadband connectivity at home, nomadic use is going to replace dongles. 3G is going to be more like wireless, smartphone, handset, on the mobile, on the go service. So both 3G and 4G will co-exist.

Vimal Wakhlu
CMD, Telecommunications Consultants India Limited (a Government of India enterprise)

The major challenges in the telecom sector is the backhaul but the government has already initiated the National Optical Fibre Network which ensures a minimum bandwidth of 100mbps to 2.5 lakh villages in the first phase and subsequently to the remaining 4 lakh villages. The second is the initiation of GUN - Government User Network. Both of these initiatives will make the 4G deployment commercially viable.

THE BEST INTERNET SPEED CHART

HONG KONG - Global rank: 1
Internet Speed: 49.2 Mbps

SOUTH KOREA - Global rank: 2
Internet Speed: 46.9 Mbps

JAPAN - Global rank: 3
Internet Speed: 40.5 Mbps

ROMANIA - Global rank: 4
Internet Speed: 38.6 Mbps

LATVIA - Global rank: 5
Internet Speed: 33.5 Mbps

SWITZERLAND - Global rank: 6
Internet Speed: 29.9 Mbps

BELGIUM - Global rank: 7
Internet Speed: 29.5 Mbps

SINGAPORE - Global rank: 8
Internet Speed: 28.3 Mbps

HUNGARY - Global rank: 9
Internet Speed: 28.0 Mbps

BULGARIA - Global rank: 10
Internet Speed: 27.9 Mbps

UNITED STATES- Global rank: 11
Internet Speed: 27.1 Mbps

INDIA - Global rank: 116
Internet Speed: 6.9 Mbps

Did you know?

LTE, an acronym for Long Term Evolution, commonly marketed as 4G LTE, is a standard for wireless communication of high-speed data for mobile phones and data terminals

Get ready for the Fourth Generation

The higher internet speeds being promised by 4G are generating a lot of user interest and anticipation. But how much of that is reality and how much mere promise? Read on to get the 4G facts straight

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Noida resident Arvind no longer complains about his long commuting hours, as he can enjoy the high speed benefits of 4G on his mobile. Now he can watch movies, play games, download movies from torrent and have video calls, all this while on the move and commuting between his residence and Green Park office. "Now while in Metro I can have my 'Me Time' and do a lot of activities," says Arvind, who is one of many mobile users fast switching to 4G Internet, despite not so friendly price.

WHAT IS 4G: 4G wireless Internet service is four to ten times faster than 3G networks. The latter offers download speeds of 600 kilobits per second (kbps) up to 1.4 megabits per second (mbps), with bursts up to 3.1 mbps. Whereas 4G has average download speeds between 3 mbps and 6 mbps, with bursts up to 10 mbps. Oops! Confusing? Let me simplify it for you. If you are using Whatsapp on your 3G network then while receiving a picture you can see a circular which informs you of the download in terms of speed. But on 4G the download time will be reduced to zero. It will be like moving an image from one folder to another folder with no download time. When you are sending picture on mobile the speed of upload will be applied which is estimated at 5 MB or less than 20 seconds to upload the image. When the user receives the image on his phone, the download speed is expected to be 11 Mb or less than 10 seconds to download the image. Personally, the benefit I see is that the price of 3G will drop significantly as telecom companies try to promote 4G which means 3G speed will become as slow as 2G, so you will have no choice but to upgrade to 4G if you like speed. But for students it will be a treat who enjoy speed but at the price of 2G.

Simply put, the versions of technology 2G, 3G, etc., are labelled on the basis of the internet speed they offer on mobile devices

GOTCHA: 4G promises of speed up to 40 MB, but even in the USA the telecom providers have been providing 11 MB download and 5 MB upload, so India is a different story. The telecom promise of 4G is going to be huge but will they be able to deliver? I guess not. We have not achieved the maximum in 3G yet. 4G is still a dream. I guess when 4G happens then we will achieve our dream of full 3G. The benefit of 3G and 4G is primarily to users who prefer to work on mobiles, want to watch videos on the go and do conferencing on the go, in short, do all that you see in Samsung ads.

5G ON CARD: No country in the world has 5G technology while some companies claim to have tested 5G technology. There have been claims by companies that 5G technology will be in place by 2020. The versions of technology 2G, 3G, etc., are labelled on the basis of the internet speed they offer on mobile devices. Technology experts believe 5G technology will enable people to have a fibre network like user experience on a wireless connection. It can provide speed of 10 gigabit per second internet speed, which is 100 times faster than the mobile technology used these days. The Indian government has started process to "constitute joint working group" to work in the area of 4G and 5G.