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# THE SECOND WAVE

The question telecom experts are debating today is at what speed will the Indian consumer move from voice to data

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All telecom experts today agree that Indians will increasingly start using mobile broadband services — on their smart phones, their netbooks, and their tablets. The question to which the telecom titans do not have any answer is which technological route the majority of Indian consumers will take to access mobile broadband. Will it be the 3G services being offered by the big GSM boys like Bharti Airtel, Vodafone or Idea? Or will they adopt evolution video data only (EVDO), the high speed data be-

ing offered by CDMA networks like MTS or Tata Teleservices? Or will they completely switch over to long-term evolution (LTE) technology — the 4G technology through which Mukesh Ambani wants to re-enter telecom.

That is the multi-billion dollar question. Multi-billion dollar because different players in the Indian telecom arena are betting those amounts on their chosen technologies — and hoping that they will be able to persuade the Indian consumer to choose their technology over the ones

their rivals are offering.

This story actually started a good 15 years ago. In July 1995, when the first mobile phone call was made in the country from Kolkata, no one had dreamt that this would alter the communication landscape in the country forever.

At over \$40,000 for a handset and equally expensive talk time, mobile communication was a privilege that only a select few enjoyed and many aspired to. But as service tariffs crashed and phones became affordable within a few years, a wave of

consumers, tired of waiting in queues to get a fixed line phone connection, embraced mobile communication with great alacrity. And a communication revolution was well on its way.

Eight years on, in 2003 to be precise, Mukesh Ambani tried to change the rules of the game by urging customers to shift from just making voice calls on the mobile

phone to using data and internet on his CDMA platform. And he tried to do so through aggressive pricing. As part of his much vaunted "Monsoon Hungama" scheme, customers had to pay \$500 to lay their hands on a mobile phone bundled with data freebies like streaming television programmes, downloads of movie video clips and music and games to name a few.

The magic worked, but in part, Ambani did manage to rope in millions of customers. But his strategy to bring about a data revolution on the CDMA mobile plat-

form, which would give him 30-40 per cent of his revenues, failed to take off as he gave away his telecom venture to his brother Anil after a bitter family battle.

As it turned out, for the bulk of the customers it was video that reigned supreme. And despite over a dozen-odd mobile players in the market, real data services (excluding SMSs and caller tunes) currently contribute a mere 3 per cent to a telecom company's revenue.

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IMAGING: ALBY MOHANTY

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# The second wave

## Game for more

So did Mukesh Ambani misread the market? Or was he ahead of his times? In 2011, no one is asking those questions or doubting that a second revolution in telecom is well under way — with mobile broadband data ready to sweep customers off their feet. Telecom companies realize that voice is just a commodity in which margins will be under pressure. In such a scenario, the only way to arrest the decline in average revenue per user (ARPU) is to hook consumers on to data. Given that, the debate today is largely about the speed at which Indian customers will move from voice to using data on the mobile.

The change could be dramatic. Customers will soon be spoiled for choice with as many as eight operators offering them an array of technological options — 3G, 4G, LTE or EVDO — to get high speed broadband on their laptops and phones. At average speeds well above 2 mbps — nearly four times faster than what you are used to — consumers can watch live TV, make video calls, download music, make bank transactions and commercial deals, get online education lessons or discuss their problems with doctors sitting in another part of the country. Says Karwalinder Singh, president of Qualcomm India, a key player offering technology for mobile broadband, "A data revolution, just like the voice revolution some years ago, is set to take us in India."

More importantly, for the first time the gap in mobile technology offered by Indian companies and those abroad will be bridged completely. While customers in the country are at least four to five years behind in availing 3G services, Indian telcos are expected to roll out 4G operations within a year of the global launch.

There are worries nonetheless. One, that the 3G services would be expensive as operators have paid staggering amounts for this spectrum — a total of 867,000 crore. But if the tariffs offered by BSNL, communications and Tata DoCoMo — players that have started offering services — are anything to go by, the fear seems misplaced. In fact, data tariffs that have been bundled with voice are highly affordable and even cheaper than 2G offerings for those who have higher ARPU. The two operators have been able to rope in over two and a half lakh 3G customers in the first month of their operations despite that some like the services like video calling had not been activated for weeks due to security issues.

By October-November some of the broadband wireless access services (BWA) licenses are expected to offer 4G services through LTE technology which promises even faster data speed to many more consumers.

With Mukesh Ambani back in the game with a pan-India license and spectrum for BWA, observers say he just might kick off another price war in the mobile data space like he did in voice in 2003. He will be at an advantage over 3G rivals — he has got more spectrum (20 MHz) than his GSM 3G rivals (10 MHz) just at a cost that is a fraction of what his rivals have paid. But he has a problem as well: The technology that he proposes to use is still under commercial deployment in some parts of the globe and its efficacy is yet to be tested unlike 3G, which is well established and has a larger consumer base.

Still, in add to the good news for the consumer, if the telecom regulator and the government are able to push through things, there will be more spectrum available for auction next year for 4G services and another three to four operators can easily jump on to the speed bandwagon. Last but not the least, CDMA players like MTS are dramatically shifting their strategies by moving out of mobile voice services and pushing the data by offering EVDO dongles at high speeds that match those of the 3G players.

To make the data revolution a reality companies are together investing over ₹1,50,000 crore. And they are doing so because they are sure there is a large market waiting to be tapped. Says Telecom India Vice-president P Balaji, "In the next three to five years there will be a data market of 300 to 350 million subscribers. And we will see revenues from value-added ser-



vices, which stand at 10 per cent currently, go up to between 25 and 30 per cent."

Supporting the effort, device makers are offering larger screens to push mobile data at affordable prices. So as Apple's iPad made an official launch in the country last week, Samsung dropped the price of its Galaxy Tab to an attractive ₹28,000 from a steep ₹38,000 earlier.

## Falling prices

Will broadband wireless be dominated by GSM players like Itharti, Vodafone, Idea or Tata? Televisions that already have a large subscriber base? Or will the market be led by Mukesh Ambani who has no legacy issues or subscribers but a new tech-

PLATFORM	SPEED
GSM	9.6 Kbits/sec
GPRS	40 kbits/sec
3G	1.8-14.4 Mbps
EVDO	3.1 Mbps
LTE	50-300 Mbps

Note: Actual speed could be much less depending on network and number of customers.

**CUSTOMERS WILL SOON BE SPOILED FOR CHOICE WITH AS MANY AS EIGHT OPERATORS OFFERING THEM AN ARRAY OF TECHNOLOGICAL OPTIONS TO GET HIGH SPEED BROADBAND ON THEIR LAPTOPS AND PHONES**

nology that offers more speed than 3G but needs to be tested across the world? Or will be won by incumbent CDMA players like MTS, which have the advantage of a pan-India network that others would take years to build?

LTE players have one key advantage — more spectrum at less price compared to their 3G rivals which helps keep costs lower. Says Karwalinder Singh, "What this (more spectrum) means is that you can offer broadband to a larger number of people at a speed similar to that of 3G but at a more affordable price because of the bigger volume of customers. Also it is possible for LTE players to roll out a pan-India network with nearly half as many towers as would be required for 3G. And one can do that quickly by just leasing capacity from large tower companies that

have spare capacity rather than build it from the scratch. But they also have many disadvantages — mobile devices on LTE are still not available around the world and most telcos are offering only dongles. Also consumers looking to use the device for voice won't be able to do so. Until, of course, government changes policy and allows voice over internet protocol telephony between a PSTN (public switched telephone network) network and a LTE device. Currently, only device to device internet calls are allowed.

More importantly, prices of LTE devices, unlike 3G phones, will be steep — as high as ₹25,000 which would be out of reach for most customers. In contrast, prices of 3G devices are falling. Qualcomm, which makes 3G chips, is already working on smart phones below ₹5,000. The sub-₹5,000 3G feature phones with speed of 3.2 mbps. Qualcomm has joined hands with companies like Micromax and Spice Mobile that offer such products.

Qualcomm's Singh says that with more operators going in for LTE, the price of such devices should fall to say, ₹13,000. Also companies like Qualcomm are working on chips for mobile phones in which you can move seamlessly from 3G to 4G and LTE. The expectation is that the 5 MHz spectrum with 3G operators is not enough and there will be competition in such networks within a few years if not months. So 3G operators might have no option but to tie up with LTE operators especially in larger cities so that they can offer their customers high speed data services without a glitch.

## Winners & losers

That CDMA operators say they have at least a two-year head start over the BWA players. Says Samarash Parida, strategy director at Vodafone-Essar, "BWA on LTE is still some distance away." More importantly, they also believe that with more spectrum expected to be available in 2012 for auctioning in 4G, BWA players will cease to enjoy any special advantage.

3G operators are already honing their strategies to woo customers. Parida says that one large market which they will tap for 3G comprises PC users — over 35 million who use either laptops or desktops. It is also the market which Tata Telecommunications is planning to concentrate on in the belief that at least 60-70 per cent of the initial revenue in 3G will come from dongles. Most of the dongle market is currently in the grip of CDMA players as GSM was not able to offer high speeds in 2G. But with 3G that has changed. To top it all, prices for dongles are falling — it has crashed from ₹5,000 to ₹2,000 already.

Vodafone-Essar's Parida says new markets will open up — one such comprises customers who want to use 3G devices but communicate in their regional language. With phone devices now available with virtual key boards on the screen, it is easy to create key boards in different languages.

But 3G players are already facing a tough challenge from CDMA players who are increasingly shifting to data. Sistema Shyam which sells under the MTS brand, for instance, has dedicated half its spectrum to data and is pushing sales of EV-

DO dongles rather than just go for voice. The strategy is clear, says Vivek Reddy Rozanov, president and CEO of company. "Currently 10 per cent of our revenues come from data, we expect that to go up to 25 per cent by the year end. We have 4.5 lakh dongle customers already."

Can he take on 3G operators? Rozanov says that he might not have the 3G spec-

trum but that does not bother customers because he ensures he offers them similar average speed. He also points out that he is well ahead of his 3G competitors in terms of network roll out. "We have four times the number of BTSs (base transceiver station or cell sites) that 3G operators have. It will take competitors time to build a similar pan-India network." Plus

he is now coming up with MTS-branded smart phones which will be within ₹5,000 for customers to data on the move.

Surely, for mobile operators facing margin pressures, data revenues could change the game in 2011. And for Indian consumers the mobile data revolution could fundamentally alter the way they live and work. ■

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### ఐదు పట్టణాల్లో సిస్టెమాప్యామ్ మొబైల్ సేవలు

రాజమండ్రి కోటగుమ్మం, న్యూస్‌లైన్ : తిరుపతి, కాకినాడ, వరంగల్, గుంటూరు, రాజమండ్రిలో తమ హై స్పీడ్ మొబైల్ బ్రాడ్‌బాండ్ సేవలు అందిస్తున్నట్లు సిస్టెమాప్యామ్ టెలి సర్వీస్ ఆంధ్ర, కర్ణాటక సర్కిల్ చీఫ్ ఆపరేటింగ్ ఆఫీసర్ సురేష్‌కుమార్ గురువారం తెలిపారు. రాష్ట్రంలో ఐదు కీలక పట్టణాల్లో తమ ఎంబ్లెక్స్ నెట్‌వర్క్‌ను ప్రారంభించడం ఆనందంగా ఉందన్నారు. ఆంధ్రప్రదేశ్, కేరళ, కర్ణాటక, తమిళనాడుల్లో 60 పట్టణాల్లో తమ ఎంబ్లెక్స్ నెట్‌వర్క్ అందుబాటులోకి వచ్చిందన్నారు. ఎక్కువ మంది వినియోగదారులకు అతి తక్కువ సమయంలో మొబైల్ బ్రాడ్‌బాండ్ సేవలను అందించడమే తమ లక్ష్యమన్నారు.