

TELECOM BUZZ

"expanding telecom world horizon"

VoIP v/s VoLTE:

The Saga Continues



A Peek into Mobile
World Congress 2013
Hits



Canada to Kick Off
Wireless Spectrum
Auction in November



China to issue 4G
Licenses in 2013

VoIP



VoLTE



Editorial

In last few years we've seen 4G creating loads of buzz in the telecom ecosystem. Few players have already ventured into this space while few are gearing up to try their hands on it. There is no denying the fact that fourth generation of Telecom Technology is known for its high data speeds that is said to give users a seamless and high-quality data experience. However, support for voice service and SMS services over LTE remains a challenge. There is therefore a need to support voice over LTE to at least the same standard as operators do in 2G/3G networks.

VoLTE combat this issue by using IP Multimedia system and new radio access network allowing operators to carry voice over mature LTE networks. This will help mobile operators compete against Over the top players or OTT service providers such as Google and Skype and offer the two most lucrative applications – voice and SMS across LTE Networks.

Voice over LTE (VoLTE) users are expected to expand to over 60 million by 2016 from roughly 300,000 in 2012 according to firm Infonetics. This means the future is indeed bright for LTE!

In case of any queries or suggestions, dash us a note at newsletters@mcpsinc.com

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- **MobileComm 'ELearning Solutions' receives tremendous response**
Banking on its vast experience in Competence Delivery Services, MobileComm launched telecom ELearning in 2012 and since then it has received tremendous response from all across the globe particularly Middle East, Africa and America.
MobileComm's ELearning suite serves as a comprehensive knowledge repository providing access to a huge amount of up-to-date learning resources. Know more at <http://www.mcpsinc.com/>
- **MobileComm inks pact with Airtel** for Pan India Network Planning Services
- **Multi Operator, Multi-technology Network Benchmarking** continues to be one of the key focus area of MobileComm in 2013
- Mobilecomm is now a **competence delivery partner of Tata Teleservices.**



VoLTE v/s VoIP: The Saga Continues

While collaboration between the two seems to be the most feasible solution today, clashes over consumer ownership is something which is taking time to settle

The technologies have become incredibly complex over the years. LTE networks are being launched in some countries, while others are gearing up to plunge into the 4G arena. One of the critical questions facing operators today is how to offer voice services to their LTE Customers since LTE has been seen as completely IP cellular system for carrying data and do not include support for circuit switched voice calls. Undoubtedly Mobile Broadband has created a world of opportunities and opened up new revenue streams but voice still accounts for around 70% of operator annual revenue – about USD 650 billion globally – reports Ericsson.

Over the years, countless conferences and articles have focused on the ongoing tug-of-war between Telecom operators and so called over the top players (OTT players) that are eating up the precious revenues of Telecom players (as operators claim). While collaboration between the two seems to be the most feasible solution today, clashes over consumer ownership is something which is taking time to settle. Although few of the operators have already taken the plunge to collaborate with the potential OTT players; few are planning to launch their own Internet-type services.

Telecom commission's recent nod to offer voice services over 4G or BWA seems to have given a sigh of relief to the operators as they can now cash upon their 4G networks to offer high quality, and clear voice services just like normal voice calls over 2G or 3G network. Companies like Reliance, Bharti Airtel, Aircel and Tikona Digital are expected to be the biggest gainers from this development. This certainly does not lower the worry of telcos from the free messaging services offered by Whatsapp, viber, FB messenger that are constantly threatening the telcos traditional SMS revenues. A closer look at the traffic generated by the OTT players reveal that YouTube accounts for 24% global mobile traffic, Facebook chat consumes 22% of all instant-message-related mobile bandwidth and WhatsApp carries 5% of global messaging traffic

AREAS WHERE OTT PLAYERS POSE A THREAT TO OPERATORS :

- Voice services
- Messaging
- Cloud Services
- Media

VOICE SERVICES : Life was simpler for the operators when

their services were the only way to carry voice over fixed or wireless networks. However evolution of internet, affordable data plans has been changed the game. Advent of Voice over Internet protocol (VoIP) services such as Google and Skype that offers free voice services has lead subscribers to choose from either OTT VoIP or traditional operator voice services.

MESSAGING: Over the past few years, Telcos are losing out big time to free massaging apps like BBM and whatsapp. UK-based Research Organization, Ovum reported that last year alone, telecom operators lost a whopping \$13.9 billion in SMS revenue to social networks and free web-based applications. However the good news is that Vodafone and other top telecom operators in Europe and Korea launched a new instant messaging platform called "Joyn" at Mobile World Congress (MWC) in Barcelona to overcome their revenue loss to free messaging application.

CLOUD SERVICES: Though it is still in the nascent stage, Apple, Google, Microsoft and Amazon are some of the key players in the ecosystem. Telecom players can very well leverage their customer base and networks to foray in cloud services.

MEDIA: Slowly and steadily OTT players are seen venturing into the media ecosystem which consists of videos, gaming, music, advertising, and entertainment. With the digital services OTT players pulls the precious data traffic threatening the data traffic over operator's network. Undoubtedly content is considered to be the king but customer experience is still what matters the most to users. Users today are ready to shell out considerable amount of money for the good quality services and experience.

South Korean firm CJ Hellovision TVing app allows users to view programme on computers, tablets, smartphones etc.

As the telecom operators versus OTT players' saga continues and shows no sign of abating, executives from both the sectors were found sharing their views on it in the ongoing Mobile World Congress 2013, Barcelona.

"Telco's And OTT Players Need to Work Together, But Commercial Negotiations Are Important ~ (Manoj Kohli, CEO International and Joint MD, Bharti Airtel (as said to Medianama))"

With the nod by telecom commission the LTE spectrum holders can now offer voice services over LTE known as

VoLTE or over their existing IP networks i.e. VoIP. Before concluding on how operators can cash this opportunity let's discuss the major diff between the two available options.

OPTIONS AVAILABLE TO PROVIDE VOICE OVER LTE

A) CSFB (Circuit Switched Fall Back) : Circuit-Switch Fallback (CSFB) enables circuit-switched voice and SMS services to be delivered to Long Term Evolution (LTE) devices. When an LTE handset makes or receives voice calls, the device "falls back" to the 3G or 2G network either the operator's own or someone else's if an LTE-only operator has an MVNO-type arrangement on a 3rd party's 2G/3G network. Supporting CSFB requires a handset software client and network switch upgrades and may also cause the LTE data connection to drop/downgrade.

B) VoLGA (Voice over LTE via Generic access): VoLGA enable mobile operators to deliver voice and messaging services over upcoming LTE radio access networks using GSM Signaling over IP, connected to an existing legacy 2G/3G circuit code and Mobile Switching Centre (MSC). VoLGA Forum was formed in March 2009 by a group of companies in the wireless industry in an effort to define a set of specifications for enabling delivery of voice services over 3GPP LTE access networks.

C) Gateway Solutions: These solutions are proposed by NSN and Mavenir systems in collaboration with Acme packet by which an MSC can act as an "application server" for full-VoIP voice, without the need for an IMS deployment

D) VoLTE: The Voice over LTE, VoLTE scheme was devised as a result of operators seeking a standardized system for transferring voice traffic over LTE. VoLTE uses the IP Multimedia System (IMS) and new radio access network. It is only useful when there's a mature LTE network at place.

HOW OTT PLAYERS ARE THREAT TO OPERATOR'S REVENUE?

OTT players such as skype, Gtalk, WatsApp and Viber are trying to lure the subscribers by offering allowing subscribers to make a voice call and messages from and to anywhere in the world for free. Roll out of LTE has further intensified the threat since with better mobile broadband; OTT providers will be able to offer a better service quality. Subscribers just need to have a data connection at place, to make calls anywhere in the world for free. ARCchart forecasts that OTT services will account for 8% of all voice traffic carried over mobile networks by 2016

OPERATORS STILL RULE NATIONALLY

OTT players may have managed to gain a foothold in the

international market but they have not yet become the preferred choice for making day-to-day voice calls. Till today, the vast majority of voice calls are still the mobile operator's voice calls.

OTT gatecrashers are exploiting the reliable and versatile mobile networks of operators by offering innovative and less-expensive services that operators simply cannot match if as that takes into account their heavy network investment

Let's take a sneak peek at the shortcomings of OTT VoIP services:

- a) For now at least, mobile broadband is inadequate for reliable voice with an acceptable quality, thus QoS can't be assured with VoIP.
- b) Despite the attraction of free calls, the operator's mobile voice services have distinguishing features like call divert, multi-party calling, voice mail that consumers find appealing.
- c) Most of the Operator's network are still voice optimized networks.

Mobile voice over LTE, or VoLTE, and other wireless spending is expected to contribute to annual growth in the carrier VoIP and IMS equipment market for the first time in four years, according to Infonetics Research

MARKET ADVANCEMENT POST TELECOM COMISSION ANNOUNCEMENT

Data-only Tikona to Offer Voice



After the government allowed 4G spectrum holders to provide voice, Tikona Digital Networks is looking to provide voice over internet protocol and voice over long-term evolution. Tikona is a data services-only company which provides broadband using Wi-Fi utilizing free spectrum.

Airtel To Offer Voice Services To LTE Customers



Following the telecom commission's approval allowing telecom operators to offer voice services over 4G networks earlier this month, Bharti Airtel has announced its plans to offer voice services for its 4G, TD-LTE customers in Pune, through its existing GSM network. has selected Nokia Siemens Networks to deploy its Circuit Switched FallBack (CSFB) voice solution in the operator's live TD-LTE network in Pune.

Reliance to launch VoLTE in Metro Cities by mid of the year



RIL, the only owner of pan-India BWA spectrum, is expected to start 4G services in the top 40 cities, starting with the metros by June-July this year.



A Peek into Mobile World Congress 2013 Hits

More than 72,000 people from 200 countries were treated to a wealth of learning and networking opportunities at Mobile World Congress 2013

As Mobile World Congress (MWC) 2013 wraps up in Barcelona, we look at some of the product showcases and announcements that made the biggest splash.

A) HANDSETS & DEVICES

In terms of Phone Hardware, MWC seemed to be 100 percent an Android show. Here's a rundown of the best phones launched at MWC 2013:

HTC One

Being Awarded as the best mobile device showcased at the recently-concluded Mobile World Congress (MWC) in Barcelona, 'One' is expected to go on sale at AT&T, Sprint and T-Mobile customers in the U.S. by mid-March.



LG Optimus G Pro



ZTE Grand Memo



NFC Powered Huawei Ascend P2

The Ascend P2 is easily the best phone Huawei has ever produced, and it's at least in the running for top-tier Android devices. Huawei claims it to be one of the fastest smartphones in the world, with download speeds of 150Mbps

B) LTE/4G

Huawei Releases the SDN-based Mobile Backhaul Solution – LTEHaul!

The SDN-based mobile backhaul solution release by Huawei

at MWC 2013 provides end-to-end support for the planning, construction, maintenance, and optimization of mobile backhaul networks. The solution helps operators resolve network issues during the evolution to LTE networks.

UK Operator EE reported that one quarter of its customers within range of its 4G LTE network have upgraded to 4G Plan

Australia's Telstra predicts that LTE demand is exploding and one in five Australian smartphone owners will buy a 4G device in the next 12 months.

Verizon wireless plans to launch 4G LTE global roaming services in 2014

With the LTE standard spreading worldwide, Verizon Communication Inc.– the largest 4G LTE operator in the U.S. made news in Barcelona by revealing plans to launch 4G LTE global roaming overseas in 2014 in several countries, including Canada. Roaming agreements with overseas operators will allow customers to enjoy the 4G LTE experience when they travel overseas and also will open the Verizon Wireless 4G LTE network to travelers from other countries. (source: Verizon wireless news centre)

Huawei and China mobile jointly demonstrate LTE TDD End-to-End Solution for Mobile HD Video

Huawei along with with China Mobile and other partners jointly demonstrated an LTE TDD end-to-end solution for mobile HD video at the Mobile World Congress 2013. The next-generation mobile HD video solution utilizes HEVC (High Efficiency Video Coding), DASH (Dynamic Adaptive Streaming over HTTP) technologies and eMBMS (Evolved Multimedia Broadcast/Multicast Service).

C) CONNECTING THE UNCONNECTED

The Connected Home by AT&T

The Razorfish Emerging Experiences team worked with AT&T to create a cross-platform tablet app which allows users to control lighting, adjust thermostats, manage energy usage and even feed pets or water plants remotely. AT&T Digital life, a connected home service is expected to launch in 8 markets by March and 50 markets by year-end.

D) Mobile Payments and Commerce



Visa & Samsung in Global NFC Alliance

Visa and Samsung announced

a global alliance at MWC that combines Visa’s expertise in payments with Samsung’s leadership in mobile device technology – an alliance that has the potential to significantly accelerate the availability of mobile payments globally.

MasterCard and VimpelCom Partner to Offer Mobile Money Globally

At MWC, MasterCard and VimpelCom announced a strategic partnership combining MasterCard’s best in class mobile payments technology and solutions with VimpelCom’s globally integrated telecommunications services.

The partnership will provide innovative payment solutions to a new generation of customers, both banked and underserved, to VimpelCom’s 212 million customers in 18 countries.

Samsung Previews Wallet Mobile Payment Platform

Samsung took the wraps off of its own, Google Android-based platform called Wallet at MWC. Wallet offers time- and location-based push notifications as well as the ability to store event tickets, boarding passes, membership cards and coupons in one central location.

E) OPERATORS VERSUS OTT PLAYERS

“OTT vendors are sucking resources away from wireless operators”, Franco Bernabe, CEO of Telecom Italia

Franco Bernabe, the CEO of Telecom Italia, was having a go at the OTT players at Mobile World Congress who, he claims, are little more than leeches clinging to the veins and arteries of the world’s telcos, sucking the blood out of them without even having the courtesy to offer to pay for the bandwidth transfusions that they are unable to live without.

(source: TelecomTV)

Airtel’s Manoj Kohli Says Telco’s And OTT Players Need To Work Together, But Commercial Negotiations Are Important

Manoj Kohli, CEO International and Joint MD at Bharti Airtel, when asked (by Medianama) what he thinks about their relationship with OTT players, said that telecom operators and OTT Players “need to work together, and learn to live together. I believe we (telecom operators) can lift the level of usage of all these services, and customers propensity to use more and more, rather than continue this unnecessary tension. Of course, there are commercial negotiations that are important, and we do commercial negotiations all the time.”

F) Mobile OS War

Firefox OS

Mozilla officially launched their Firefox OS for mobile phones and even inked deals with 18 carriers, a partnership with Qualcomm to use their Snapdragon chipsets and four manufacturers - ZTE, Alcatel, LG and Huawei.



Firefox OS is based completely around a browser and Web standards, such as HTML5, CSS, and JavaScript.

Ubuntu Touch

Ubuntu Touch is a brand new tablet and smartphone OS. The Ubuntu Touch preview showcased features like intuitive, multi-edge swiping for easy application and screen navigation, a growing list of native and third-party applications, a reinvented inbox for messaging, and a unique photo gallery.

CNET Team found Canonical's new mobile OS to be the most exciting thing at Mobile World Congress, with Mozilla's software as runner-up.

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■ Videocon and Nokia Siemens Network to Roll out 4G LTE

Videocon Mobile Services, from the \$4 Billion worth Videocon Group, intends to rollout 4G LTE in the country. As reported by Times of India, Videocon and Nokia Siemens Network reached an in principle agreement recently in Barcelona, on the sidelines of this year's Mobile World Congress. The two tech giants have officially announced their 4G plans and work on the roll out of the network should ideally start soon. "We intend to engage Nokia Siemens Networks as our technology partner for our 4G network rollout in the country. 4G Network is capable of providing comprehensive IP based telecom solutions that allows voice, data and streamed multimedia services in a seamless manner at much higher data speed than the existing generation network including 2G and 3G." said Arvind Bali, Director and CEO, Videocon Mobile Services .

■ Sistema bags spectrum in eight circles for Rs.3,639 crore

Russian conglomerate Sistema's Indian unit, on Monday, won telecom spectrum in eight circles or zones for Rs.3,639 crore in an auction shunned by all other companies. The company, which operates under the name MTS India, won blocks in Delhi, Gujarat, Karnataka, Kerala, Kolkata, Tamil Nadu, Uttar Pradesh West and West Bengal. Sistema Shyam TeleServices Ltd. (SSTL) bid to recover airwaves it lost when the Supreme Court last year scrapped 122 wireless mobile permits amid graft charges. Telecom Secretary R. Chandrasekhar said the auction ended in just three rounds with lone bidder SSTL putting in bids at the minimum bid price.

■ RIL teams up with Samsung to offer 4G Phones for Rs. 5,500

Mukesh Ambani's Reliance Industries (RIL), which has pan India license for 4G network, has joined hands with Samsung to bring LTE devices for as low as Rs 5,500 report Times Of India. RIL is planning a soft launch in Mumbai and Delhi by mid-2013 and a formal launch is set to be announced later this year, most likely on December 28, the birth anniversary of Reliance founder, late Dhirubhai Ambani. Sources in the know told TOI: "Samsung will not be just another vendor to RIL supplying handsets as it was when Reliance Infocomm was launched in 2002. They are seeking a much broader role. A possible joint venture could also be in the offering."

■ Aricent Enhances its LTE Portfolio by Adding End to End VoLTE Capabilities

At the recently held Mobile World Congress., the Aricent Group, a global innovation and technology services company, today announced the addition of end-to-end VoLTE capabilities to its comprehensive LTE offering comprising IMS client Application, eNodeB, EPC, and IMS Servers. According to a 2012 report published by ARCchart, the VoLTE market is expected to grow to 74 million users by 2016, reaching USD\$2 billion in revenues worldwide. There are various options available for carrying Voice over LTE and it has implications in terms of voice quality; seamless connectivity when moving from LTE to non LTE networks and vice versa; roaming; and battery life etc. Aricent's VoLTE solution is highly compatible with leading devices and platforms, and provides high definition voice quality and seamless connectivity.

■ Canada to Kick Off Wireless Spectrum Auction in November

The Canadian government said it will kick off auctions for 700-megahertz of wireless spectrum--key for operating the generation of LTE, or long-term evolution, high speed networks--on Nov. 19. Based on opening bid prices, the government estimates it will raise 897.3 million Canadian dollars (\$870 million) from the spectrum auction. The Conservative government is aiming to have at least four wireless players in every region of the country in a bid to help upstarts grab a piece of a market that has been dominated by big companies such as Rogers (TSX:RCI.B), Bell (TSX:BCE) and Telus (TSX:T).

■ China to issue 4G Licenses in 2013

China is likely to issue 4G licenses this year. *The Wall Street Journal* reported, citing a Xinhua News Agency report. China Mobile (CHL.NYSE, 0941.HKG) has already built out a trial network for the high-speed technology in several big Chinese cities but competition from China Telecom (CHA.NYSE, 0728.HKG) and China Unicom (CHU.NYSE, 0762.HKG) will intensify later in the year in the run up to licensing. The new networks are expected to translate into higher earnings for device makers and network builders.

■ Report : Smartphone phones to outpace feature phone for first time in 2013

According to a report by IDC , more smartphones are forecast to be shipped globally than feature phones in 2013, the first such occurrence in the mobile phone market on an annual basis. Smartphone prices have fallen globally, the smartphone strata are wider than ever, and the roll-out of data-centric fourth-generation (4G) wireless networks are three factors that have made these "do-it-all" devices an increasingly attractive option for users.



The Mobile Economy 2013: GSMA Report

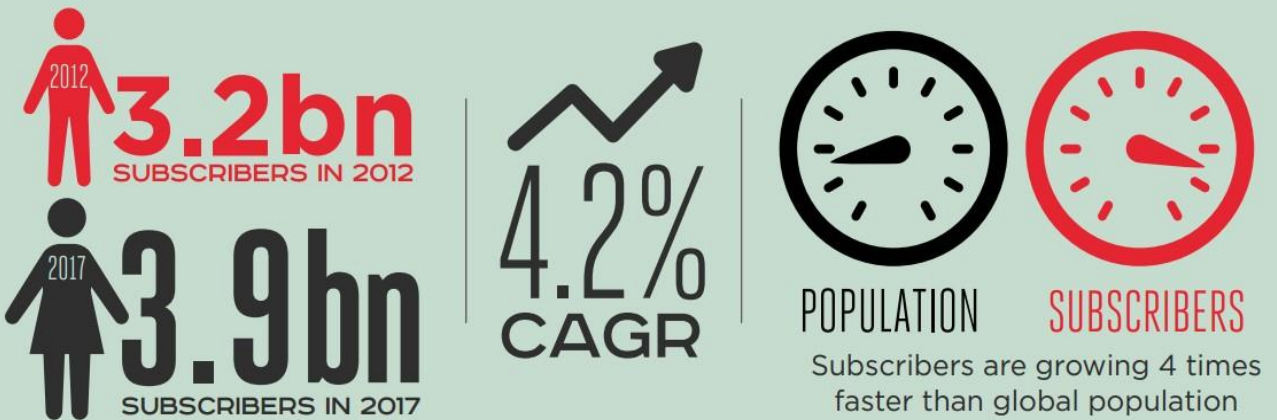
Global Connections



Mobile Broadband Growth



Global Subscribers



LTE Growth



How do you rate your current knowledge About LTE, IP and other wireless technologies?

Do you consider yourself a 4G/LTE Master or a newbie?

Considering the pace with which LTE is hitting the market (India & offshore), it is clear that mobile networks will go through a period of deep, lasting change in the coming years. At this juncture, being just a beginner in LTE won't suffice. Experts believe that this is a high time one should further their knowledge in 4G Technology. Few of the commonly encountered questions in the market, when it comes to LTE are:

- What is LTE.
- What speed LTE offers.
- Which organization is responsible for developing LTE standards.
- What is the minimum amount of RF spectrum needed for an FDD LTE radio channel.

The questions are many and the good news is that the answers to each are out there!

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Juggling Five Balls of Life

This was written by Brian G. Dyson the CEO of Coca-Cola (from 1988 until 1994).

Imagine life as a game in which you are juggling some five balls in the air. You name them – Work – Family – Health – Friends – Spirit, and you're keeping all of these in the air.

You will soon understand that work is a rubber ball. If you drop it, it will bounce back. But the other four balls – family, health, friends and spirit are made of glass. If you drop one of these, they will be irrevocably scuffed, marked, nicked, damaged or even shattered.

They will never be the same. You must understand that and strive for balance in your life.

How?

- Don't undermine your worth by comparing yourself with others. It is because we are different that each of us is special.
- Don't set your goals by what other people deem important. Only you know what is best for you.
- Don't take for granted the things closest to your heart. Cling to them as you would your life, for without them, life is meaningless.
- Don't let your life slip through your fingers by living in the past or for the future. By living your life one day at a time, you live ALL the days of your life.
- Don't give up when you still have something to give. Nothing is really over until the moment you stop trying.
- Don't be afraid to admit that you are less than perfect. It is this fragile thread that binds us together.
- Don't be afraid to encounter risks. It is by taking chances that we learn how to be brave.
- Don't shut love out of your life by saying it's impossible to find. The quickest way to receive love is to give; the fastest way to lose love is to hold it too tightly; and the best way to keep love is to give it wings.
- Don't run through life so fast that you forget not only where you've been, but also where you are going.
- Don't forget that a person's greatest emotional need is to feel appreciated.
- Don't be afraid to learn. Knowledge is weightless, a treasure you can always carry easily.
- Don't use time or words carelessly. Neither can be retrieved.

Your turn: How do **you** juggle your 5 balls? Do you let the rubber one bounce?



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