Google : The Next Generation Telco

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Executive Summary

Telecom is evolving into All IP networks. The dominant GSM and CDMA networks are converged in their road-maps to LTE (Long Term Evolution) into All IP based network.

Google on the other hand, have evolved from being a search engine provider, to an email provider, then graduated to User Generated Content host. It then inorganically grew into online document hosting, Blogging and social networking. Now, it has released a browser (Chrome) and a mobile OS (Android). Its working on Netbook OS also called Chrome. It has also launched a Cloud Computing platform, Google Apps. Most of their platforms work on Mobiles as well. They have a payment gateway, (checkout.google.com) and a location based search with Mapping service. Google will be soon launching a next generation communication system called Google Wave.

Google has a great developer community strategy with many open source projects as well as platform to develop and host open source projects. Thus Google already has a VAS (Value Added Service) delivery platform.

Sam Petroda, the father of the Indian first wave telecom revolution, once said that 3G is nothing but a high speed mobile broadband.

Google at first joked about free broadband service as a April Fool spoof. But, it does have a serious mobile wireless strategy in place. Three years ago, in 2006, Google launched a free Wifi service, in Mountain View California USA. The coverage is available here. Google has stated plans to Wifi other cities in near future, see wifi.google.com for details. Wifi or 802.11g is a recognized 3G protocol, see my End-to-End Open Source Telecom presentation.

Google will slowly and surely emerge as a de-facto next generation Mobile Operator. And, to do so, it will not even have to pay the hefty 3G licensing fee to the various world governments.

At present, Google is partnering with existing Telecom operators, to provide emails, maps, location based search, social networking, instant messaging (IM) and blogging services to GPRS, EVDO and EDGE customers. The dominant business model is that of co-branding and advertisement revenue sharing partnership.

Telecom Operators have been moving away from all Capex (Capital Expenditure) to Opex (Operational Expenditure) and converging towards Revshare (Revenue Share) model with core technology providers. Thus, from the Telecom Operator's perspective, it works well in short term. In the long term, the Telcos must have a strategy to compete while co-operating with Google, that is they must have a cooptition strategy in place.

As for the VAS (Value Added Service) providers, they are the natural allies of Google. Google, being a developer friendly open source giant, can help the small and independent VAS operator a good deal. The current revshare model of 30-70 (70% is retained by the Telco) will get inverted to 70-30, as the trend is already been set by NTT DOCOMO and iPhone stores.

Its good for India too! Our Rural Telecom coverage is less than 20% and given the expensive nature of 3G equipment technology, its unfeasible for the Telecos to provide a coverage to Bharat (Rural India). However, slowly and silently Bharat is being Wified (again, see slide 26 of my end-to-end open source Telecom presentation). Just as India skipped the wire-line Telecom era and jump-started with GSM, Bharat will skip the 3G and jumpstart with Next Generation Network (NGN).

Telecom Evolution to All IP Network

Telecom is evolving into All IP networks. The dominant GSM and CDMA network standards are converged in their road-maps to LTE (Long Term Evolution) into All IP based network.

Brief History of Google's Telco Evolution

Google's corporate history can be found at : http://www.google.com/corporate/history.html In a nutshell, Google was founded in 1998 with a seed capital of $100K, by Sun's co-founder Andy Bechtolsheim. It was at first a search engine. Then in 2003, it aquired Pyra Labs to enter the Blogging space. The same year it aquired Applied Semantics to create its AdSense targeted advertisement delivery platform. In 2004, Google launched its Social Networking platform as well as localized search and Maps platform, Google Earth, by acquiring a startup called Keyhole; same year it launched its SMS (Short Message Service) platform for text search. By 2005 it enhanced its mobile search and also introduced driving directions on mobiles, further leveraging its SMS platform. It also introduced mobile Blogging, many moons before Twitter became popular. It also launched Google Talk.

Year 2006 was a milestone, where Google launched Chat, enhanced Google Talk and introduced mobile news service. Same year, Google also launched a free Wifi service, in Mountain View California USA. The coverage region is available here. Google has stated plans to Wifi other cities in near future, see wifi.google.com for details. Wifi or 802.11g is a recognized 3G protocol, see my End-to-End Open Source Telecom presentation.

Incidentally, the same year (2006) they inorganically grew into Office Document space by acquiring a startup called Writely.

By the year 2007, Google had partnered with China mobile for mobile VAS (Value Added Services). Map service was incorporated on Apple's iPhone. It also optimized its advertisement platform for mobile targeted content delivery.

Google bid for 700 MHz spectrum in 2008 in USA. Though it lost the bid, but it does establishes that Google is a serious about becoming a core Telecom player.

It launched Android, an open Source Mobile OS (Operating System), based on Linux kernel and Java. T-Mobile was first to launch it in its network, now Airtel (June 2009) in India has launched HTC Magic, the Andoid phone. Google has plans to launch an Open Source Linux

based Netbook OS (also called Chrome), earlier it had launched an Internet browser called Chrome .

Google's Telecom Strategy

Google has stated its commitment to Open Broadband, that is accessible to everyone in this planet. It envisions same open platform strategy that has made Internet pervasive comodity. It has demonstrated its willingness to invest billions of Dollars to make its strategic vision a reality.

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Indian Telco's Response

Telecom Operators have been moving away from all Capex (Capital Expenditure) to Opex (Operational Expenditure) and converging towards Revshare (Revenue Share) model with core technology providers. Thus, from the Telecom Operator's perspective, it works well in short term. In the long term, the Telcos must have a strategy to compete while co-operating with Google, that is, they must have a cooptition strategy in place.

In near future, by 2015, Telecom landscape will change from "Walled Garden" to "Blue Ocean" Strategic marketplace. The IP based NGN (Next Generation Network) will become pervasive.
Most mobiles including low cost ones will have Wifi along with SIP calling capability. There will not be any distinction between an ISP and a Telco.

The much hyped 3G technology will soon be obsolete, and thus the Indian Telcos, should avoid spending their monies on either buying the 3G spectrum or buying expensive 3G network upgrades. Instead they should pool their resources and invest in India specific end-to-end open source Telecom platform development. Such an initiative already exists, see TCOE.in, the telcos need just to speed it up.

VAS Providers strategy

The VAS (Value Added Service) providers, are the natural allies of Google. Google, being a developer friendly open source giant, can help the small and independent VAS operator to get a good deal. The current revshare model of 30-70 (70% is retained by the Telco) will get inverted to 70-30, as the trend is already been set by NTT DOCOMO and iPhone stores.

VAS providers should look into Java based platforms including Android platform as well as use SOA (Service Oriented Architecture) like JBI (Java Business Integration) and BPEL at the server side.
VAS providers should also look seriously into acquiring Cloud Computing expertise. Having independent Cloud capabilities will enable VAS players to deploy and maintain private clouds within a Telecom operator's network, thus providing them with a competitive advantage.

How India can benefit

Indigenous Telecom technology incubated and developed with the help of Govt. initiatives like STEP and TCOE.in along with participation of the industry and academia, will create a Telecom industry that will not only cater to India specific needs but also can be export oriented. A critical mass of such core telecom technology companies will help develop Rural Telecom market.
Rural Telecom, in turn, will foster inclusive growth to Indian markets and also boost the Indian economy.

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Conclusion

Google becoming a Next Generation Network operator is a reality. Also, 3G technology is fast approaching its end-of-life. Thus Telecom Operators should skip 3G and invest in NGN All IP Network. The Government and the industry should invest into developing end-to-end Open Source Telecom Technology.

Jai Ho!