

A Review on True 4G Network Strategy with Reference To Reliance Jio

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ABSTRACT

With impressive network capabilities, 4G enhancement promise to bring the wireless experience to an entirely new level with impressive user applications, such as sophisticated graphical user interfaces, high-end gaming, high-definition video and high-performance imaging. Consumer expectations for mobile handsets and similar products are becoming more and more sophisticated. Consumers are demanding a better user experience along with more advanced and useful applications on a more ergonomic device. This paper describes the different generations of wireless networks, how 4G networks evolved and how Reliance Jio is proving itself as true 4G network. Reliance Jio evolved out in India with a drastic change that is eating up the shares of all the existing networks provider in India.

Key words: Reliance Jio, True 4G Network, VOLTE, LTE vs VOLTE, Jio Preview Offers, Jio Bundle Offers, Jio India, Digital India Initiative, Mukesh Ambani's Jio, Free Voice calls

INTRODUCTION

The "G" in wireless networks refers to the "generation" of the underlying wireless network technology. The fourth generation of wireless standards for cellular systems is 4G, the planned successor to the 3G standard. The 4G service is set to offer a fast and secure all-IP, roaming mobile broadband solution to devices such as laptops with wireless 4G modems, 4G Smartphone mobile phones and other 4G mobile devices that require internet access with speed intensive facilities being made available, including on-demand HD television, IP telephony, on-demand gaming and, of course, high speed internet access. This paper describes the claim of Reliance Jio to be a true 4G network, their features, marketing strategies, how it is beating up all its competitors. Reliance Jio Infocomm Limited (RJIL), is an upcoming provider of mobile telephony, broadband services, and digital services in India. Formerly known as Infotel Broadband Services Limited, Jio is providing 4G services on a pan-India level using LTE technology. The telecom leg of Reliance Industries Limited, it was incorporated in 2007 and is based in Mumbai, India.

Evolution of 4G network

Let us see how 4G network bulged out in the world. Technically generations are defined as follows:

1G network (NMT, C-Nets, AMPS, TACS) are considered to be the first analog cellular systems, which started early 1980s. There were radio telephone systems even before that. 1G network were conceived and designed purely for voice calls with almost no consideration of data services (with the possible exception of built-in modems in some headsets).

2G networks (GSM, CDMAOne, D-AMPS) are the first digital cellular systems launched early 1990s, offering improved sound quality, better security and higher total capacity. GSM supports circuit-switched data (CSD), allowing users to place dial-up data calls digitally, so that the network's switching station receives actual ones and zeroes rather than the screech of an analog modem.

2.5G networks (GPRS, CDMA2000 1x) are the enhanced versions of 2G networks with theoretical data rates upto about 144 kbit/s. GPRS offered the first always-on data service.

3G networks (UMTS FDD and TDD, CDMA2000 1x EVDO, CDMA2000 3x, TD-SCDMA, Arrib WCDMA, EDGE, IMT-2000 DECT) are cellular networks that have data rates of 384 kbit/s and more. The UN's International Telecommunications Union IMT-2000 standard requires stationary speeds of 2 Mbps and mobile speeds of 384 kbps for a "true" 3G.

4G technology refers to the fourth generation of mobile phone communication standards. LTE and WiMAX are

marketed as parts of this generation, even though they fall short of the actual standard. The ITI has taken ownership of 4G, bundling into a specification known as IMT-Advanced. The document calls for 4G technologies to deliver downlink speeds of 1Gbps when stationary and 100Mbps when mobile, roughly 500-fold and 250-fold increase over IMT-2000 respectively. Unfortunately, those specs are so aggressive that no commercialized standard currently meets them.

Historically, WiMAX and Long-Term Evolution (LTE), the standard generally accepted to succeed both CDMA2000 and GSM, have been marketed and labeled as "4G technologies," but that's only partially true: they both make use of a newer, extremely efficient multiplexing scheme, however, WiMAX tops at around 40Mbps and LTE at around 100Mbps theoretical speed. Practical, real-world commercial networks using WiMAX and LTE range between 4Mbps and 30Mbps. Even though the speed of WiMAX and LTE is well short of IMT-Advanced' standard, they're very different than 3G networks and carriers around the world refer to them as "4G".

RELIANCE JIO NETWORK

In June 2010, Reliance Industries (RIL) bought a 95% stake in Infotel Broadband Services Limited (IBSL) for Rs 4,800cr. Although unlisted, IBBL was the only firm to win broadband spectrum in all 22 zones in India in the 4G auction that took place earlier that year. Later continuing as RIL's telecom subsidiary, Infotel Broadband Services Limited was renamed as Reliance Jio Infocomm Limited (RJIL) in January 2013

Reliance Jio Agreements

- An agreement with Ascend Telecom for their more than 4,500 towers across India. (June 2014)
- An agreement with Tower Vision for their 8,400 towers across India. (May 2014)
- An agreement with ATC India for their 11,000 towers across India. (April 2014)
- An agreement with Viom Networks for their 42,000 telecom towers. (March 2014)
- Agreement with Bharti Airtel for a comprehensive telecom infrastructure sharing agreement to share infrastructure created by both parties to avoid duplication of infrastructure wherever possible. (December 2013)
- A key agreement for international data connectivity with Bharti to utilise dedicated fiber pair of Bharti's i2i submarine cable that connects India and Singapore. (April 2013)
- Agreements with Reliance Communications Limited for sharing of RCOM's extensive inter-city and intra-city optic fiber infrastructure of nearly 1,20,000 fiber-pair kilometers of optic fiber and 500,000 fiber pair kilometers respectively (April 2013 / April 2014) ,and 45,000 towers (June 2013)

Reliance Jio plans

1. Reliance Jio started providing its services for those using 4G Handsets. It is providing Jio Preview Offer with Jio sim free of cost till December 31st 2016.
2. Reliance Jio will have 100 per cent national coverage in three years. The RIL's telecom arm has achieved wireless coverage far in excess of the rollout obligation as per its licence conditions, Mukesh Ambani said. As per the licensing agreement, August 31, 2015 is the deadline for all companies which won BWA spectrum in 2010, including RJio, to roll out the services in at least 90 percent of the service areas, failing which the Department of Telecom will have the right to withdraw the radio waves.
3. Reliance Industries is working "aggressively" to launch its 4G services in 800 cities, with offerings such as Jio-branded devices, gaming, e-payment through mobiles, video conferencing, TV programmes and video-on-demand. "Our effort to provide 4G services across the country is gathering momentum. During the year, based on our acquisition of additional spectrum, we have emerged as the largest holder of liberalised spectrum in India," Mukesh Ambani had said.
4. 4G LTE smart phones will be brought to India at a price less than Rs 4,000 by December. These phones will beam HD television, video on demand, music, news and magazines. pan-India cable television multi-system operator (MSO) license and plans to enter into broadcast TV distribution. Reliance Jio has signed a pact with Chinese firm Huawei for sourcing various 4G devices.
5. On May 7, RJio had raised a \$750 million (nearly Rs 4,500 crore) loan to procure goods and services from South Korean firms Samsung Electronics and Ace Technologies. "We have made significant progress including physical network infrastructure, systems and processes, sales and distribution network, applications, services and content. We are currently working with several strategic partners in deployment and testing activities currently underway," RIL's annual report said.

Reliance Jio 4G Broadband

The company will launch its 4G broadband services throughout India in the first quarter of 2016-2017 financial year. It was slated to release in December 2015 after some reports said that the company was waiting to receive final permits

from the government. Mukesh Ambani, owner of Reliance Industries Limited (RIL) whose Reliance Jio is the telecom subsidiary, had unveiled details of Jio's fourth-generation (4G) services on 12 June 2015 at RIL's 41st annual general meeting. It will offer data and voice services with peripheral services like instant messaging, live TV, movies on demand, news, streaming music, and a digital payments platform.

The company has a network of more than 250,000 km of fiber optic cables in the country, over which it will be partnering with local cable operators to get broader connectivity for its broadband services. With its multi-service operator (MSO) license, Jio will also serve as a TV channel distributor and will offer television-on-demand on its network.

Pan-India Spectrum

Jio owns spectrum in 800 MHz and 1800 MHz bands in 10 and 6 circles, respectively, of the total 22 circles in the country, and also owns pan-India licensed 2,300 MHz spectrum. The spectrum is valid till 2035. Ahead of its digital services launch, Mukesh Ambani-led Reliance Jio entered into a spectrum sharing deal with younger brother Anil Ambani backed Reliance Communications. The sharing deal is for 800 MHz band across seven circles other than the 10 circles for which Jio already owns.

Jionet WiFi

Prior to its pan-India launch of 4G data and telephony services, Jio has started providing free Wi-Fi hotspot services in cities throughout India including Ahmedabad and Surat in Gujarat, Indore, Jabalpur and Ujjain in Madhya Pradesh, select locations of Mumbai in Maharashtra, Kolkata in West Bengal, Lucknow in Uttar Pradesh, Bhubaneswar in Odisha, Mussoorie in Uttarakhand, Collectorate's Office in Meerut, Visakhapatnam and at MG Road in Vijayawada among others. Reliance Jio rolls out wi-fi service at IP sigra Mall in Varanasi among others.

In March 2016, Jio started providing free Wi-Fi internet to spectators at six cricket stadiums hosting the 2016 ICC World Twenty20 matches. Jionet was made available in Wankhede Stadium (Mumbai), Punjab Cricket Association IS Bindra Stadium (Mohali), Himachal Pradesh Cricket Association Stadium (Dharamshala), Chinnaswamy Stadium (Bengaluru), Feroz Shah Kotla (Delhi), and Eden Gardens (Kolkata) in India.

Marketing Strategies

LYF is a brand under Reliance Jio Infocomm and is aiming to capture as much market share as possible in order to expand its 4G Services (that are yet to be launched). These phones are sold through the company's Reliance Digital, Digital Express stores and the phone's official website myLYF.com. The company currently has 3,245 stores, including 1,748 stores under Reliance Digital, Digital Express and Digital Express Mini brands. The brand is aggressively marketing these products across all platforms. The brand is aggressively marketing these products across all platforms. Interestingly, the brand is optimized to offer all the services Jio can provide. It claims to be a personal and individual statement of style and choice. As a result, the same is reflected by packaging where it looks more like a perfume bottle, jeweler or accessory box.

The LYF was launched with Shahrukh Khan and the entire Ambani family. It was no less than a national event. Later, Bollywood actor Nargis Fakhri tweeted about the unique packaging of LYF Mobile and introduced it on the digital domain. In order to reach out to its consumers, the brand partnered with Film fare Awards 2016.

Loving this! Design in India is surely standing out and making its mark! Way to go #LYF — Nargis (@NargisFakhri) January 12, 2016

It also kick started #Capture Your LYF contests for LYF Earth 1 on social media. The campaign got good responses. Next, it partnered with Lakme Fashion Week Summer Resort 2016. The brand took over at Lakme Fashion Week 2016 with the opening show by Manish Malhotra inspired by the brand's elements collection of Earth, Water, Wind and Flame.

In one such association, the brand also partnered with GQ Best Dressed Men 2016.

In order to gather more eyeballs, the brand associated with three IPL teams Mumbai Indians, RCP and RPS. They also launched a campaign 'LYF Dikhe LYF Jaisii' which featured Bollywood actor Kangana Ranaut and a host of Indian Cricket Team players such as Mahendra Singh Dhoni, Virat Kohli, and R Ashwin. The film was hugely successful among the audiences. It also took a large number of outdoor sites in order to reach out to more number of people. On the digital front, it launched an Unboxing Video not by a pure tech geek, but an employee. They even promoted several employee conversations during the Film fare awards that trended and the hash tag was believed to be the official one. Over a period of time, the brand has positioned itself as more than a Smartphone and is seen as Smartphone+. It claims that the users can do more with LYF than with most other smart phones. So, as per the brand, it brings the latest technologies - VoLTE - soon to be introduced by Jio; ideal for video on the go; and a thrilling video experience with a

combination of best technical specifications. In order to expand the reach, Reliance LYF also launched an employee referral scheme that was further extended to the retailers. It created a lot of word of mouth publicity for the brand. As the date of Reliance Jio's commercial launch draws closer, the world's biggest start-up is finalizing its game plan to effectively penetrate the smart phone industry in India. Jio aims at serving over 100 million users within one year of its launch.

Competitive pricing

Jio 4G data services are not intended to lure only the high-end customers but also focus on the low to mid range segments. These sections of the market are being targeted by offering all services at reasonable prices. LYF smart phones are priced between Rs. 3,000 to Rs 19,000 which provides maximum off take, therefore helping Jio derive high returns.

Bundle offers

Jio is also offering Jio sim free on purchase of its LYF handsets with bundle offers. Those offers are:

- 3 months unlimited std and local calls to any network(May extend until launch)
- 3 months unlimited 4G data (May extend until launch)
- 3 months unlimited SMS
- Rs 15000 worth bonus on Jio Money which can be used to avail discount on food, travel, shopping, etc
- 5 paid Jio apps for free
- Free TV channels subscription on JioPlay.

Single-device country

The prices of LYF handsets have been determined considering that India is soon becoming a country where smart phone users prefer to perform most tasks on their cellular devices. Recently, Reliance Jio launched LYF WIND 1 which is one of the best mobile under 10000 under the LYF brand. From keeping a track of the latest news, watching movies, playing games, to reading books, the smart phone is becoming an all-encompassing device. This very reason is the motivation behind Reliance Jio's attempt at creating affordable handsets and services that meet high-quality standards.

Jio services

Jio aims at creating an entire digital ecosystem, offering broadband services, applications, smart devices, and mobile telephony facilities. Its offerings range from a wide library of recorded and live music programs, television shows, sports programs to movies. Jio Money and JioPlay are among the most popular Jio applications. The Jio Play content streaming service allows users to conveniently catch up on their favorite TV shows. It allows uninterrupted entertainment without buffering videos and also provides a seven-day back-up of shows.

E-health services

Reliance Jio has recently entered into an association with a public health center in Punjab. The company's e-health services are currently being tested there. The goal is to create a platform wherein video calls can enable both medical examination and diagnosis of patients.

Reliance's stake

Titled as the biggest bet made in the telecom industry, the parent company - Reliance Industries Limited (RIL) has invested more than \$ 22 billion in Jio. This investment helps Jio provide high-quality services due to its extensive 4G spectrum, advanced technology, and the widest accession of optical fiber network in the country. A source stated that prior to the commercial launch, everything will be checked, and rechecked in order to eliminate all glitches and create a seamless experience.

Infrastructural support

Reliance Jio is equipped to offer data plans operating at speeds of 8 to 20 MBPS. The company has also invested in 500,000 sq.ft of data centers which are currently functioning in Noida, Nagpur, and Navi Mumbai. An additional 500,000 sq.ft of area will also become operational for the same prior to the commercial launch. These centers not only aid efficient storage of data but also act as servers for Jio applications. The fifth-largest smart phone provider in India (within the first quarter after its launch), according to data by Counterpoint Research, Reliance Jio's commercial launch is much awaited.

Jio 4G internet key points

1. Reliance holds the 2300 MHz spectrum across the country, 800 MHz spectrum in 10 circles and 1800 MHz spectrum in 6 circles. Reliance's total investment is nearly Rs 34,000 crores.

Airtel and Aircel also use the 2300 MHz spectrum for deploying their 4G services in India. Vodafone and Idea are on the 1 800 MHz spectrum. However Reliance has the largest spectrum bank in the country, compared to any other operator in India and this puts Jio at a considerable advantage compared to other players.

2. Reliance plans to offer its services through an all-LTE (Long Term Evolution) network. Voice services on Jio will be through VoLTE (voice over LTE), which allows for calls over the faster LTE network instead of regular voice networks. VoLTE promises higher call quality, along with faster video and multimedia services.
3. Reliance Jio won't just offer high-speed Internet with 4G LTE, but also look at 4G-enabled devices and creating an app ecosystem around its services. Smartphone-maker Intex and Huawei have tied-up with Reliance to launch Jio compatible devices. Reliance also launched, 'Jio Chat' that integrates chat, voice, video calling, conferencing, file sharing, photo sharing among others. The company claims to have 1 million users already for Jio Chat. In an earlier interview with Indian Express New Media Director and head, Anant Goenka, Reliance Industries' President (technology) Jyotindra Thacker, had also said that the company plans to create a whole ecosystem of apps, devices with Reliance Jio. He had said in the interview, "Devices will be at affordable prices. We did not want to just create a dump pipe for others to ride on it. We wanted to basically create some intelligence into the network, and apps and an economy around it. Apps and bandwidth typically go together and that's when it becomes a viable proposition for the end user also." Additionally PTI had reported that Jio plans to offer high speed data, digital commerce, media and payment services for about Rs 300 to Rs 500 per month.
4. Reliance Jio has also laid more than 2.5 lakh kilometres of fibre-optic cables, covering 18,000 cities and over one lakh villages. The service claims to have an initial end-to-end capacity to serve in excess of 100 million wireless broadband and 20 million Fibre-to-Home customers.
5. Reliance Jio will have also partner with State Bank of India to apply for the Payment Bank licence. The company is working on its digital money and digital payment business strategy and Jio Money will try and provide secure, digital payments in India.
6. According to a recent report by brokerage firm Credit Suisse, download speed on 4G network of Reliance Jio during its beta-test phase peaked at 70 MB per second but remained in 15-30 mbps range on most occasions. At 70 mbps speed, a full movie can be downloaded in about half a minute, while at 15-30 mbps the download time is about three minutes. The report said download speed of Reliance Jio 4G services was impressive and found urban coverage of RJio network at par with incumbents but remarked that rural coverage remains "poor". "We experienced peak download speed of 70 Mbps during our trials, and on most occasions in the 15-30 Mbps range, even on the move," a report by Credit Suisse Research Analysts Sunil Tirumalai and Chunky Shah said.

CONCLUSION

Reliance Jio is shaking up the industry with its free voice and cheaper data which top rivals Bharti Airtel, Vodafone and Idea will be forced to react to, draining their finances. Ambani launched a tariff war, by unveiling data plans which are the cheapest in the world. With the launch of Reliance Jio, India will transform from a high price data market to the lowest priced data market.

REFERENCES

- [1]. www.jio.com
- [2]. <https://reliancenews.wordpress.com/2016/07/04/reliance-jios-marketing-strategy-for-lyf/>
- [3]. <http://m.adageindia.in/marketing/cmo-strategy/how-reliance-is-building-lyf-a-new-homegrown-smartphone-brand/articleshow/53037031.cms>