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Telecom Boom in India

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Abstract: India is the world's second-largest telecommunications market in the world. The telecom infrastructure in India is likely to grow at a compound annual growth rate (CAGR) of 20 per cent during the period 2008–2015 to reach 571,000 towers in 2015. The mobile phone industry in India is likely to generate US$ 400 billion to the country's gross domestic product (GDP) and has the potential to generate about 4.1 million additional jobs by 2020.

Key words: Telecommunications · Operations · Operators · Telephone · Consumers

INTRODUCTION

India's telecommunication network is the third largest in the world on the basis of its consumer base and it has one of the bottommost tariffs in the world enabled by the hyper-competition in its market. Major sectors of the Indian telecommunication industry are telephony, internet and broadcasting.

Telephonic network in the country, which is in an continuing process of congregating to next generation network, engages an extensive system of network elements such as digital telephone exchanges, mobile switching centers, media gateways and signalling gateways at the core, interconnected by a wide variety of transmission systems using media, such as or Microwave radio relay. The access network, which connects the subscriber to the core, is highly diversified with different copper-pair, optic-fibre and wireless technologies. DTH, a relatively new broadcasting technology has attained significant popularity in the Television segment. The introduction of private FM has given a fillip to the radio broadcasting in India. Telecommunication in India has greatly been supported by the INSAT system of the country, one of the largest domestic satellite systems in the world. India possesses a diversified communications system, which links all parts of the country by telephone, Internet, radio, television and satellite.

Indian telecom industry underwent a high pace of marketplace liberalization and growth since 1990s and now has become the world's most competitive and one of the fastest growing telecom markets. The Industry has grown over twenty times in over just ten years, from under 37 million subscribers in the year 2001 to over 846 million subscribers in the year 2011. India has the world's second-largest mobile phone user base with over 929.37 million users as of May 2012. It has the world's third-largest Internet user-base with over 137 million as of June 2012.

The entire revenue of the Indian telecom sector grew by 7% to ₹ 283,207 crore (US$51.26 billion) for 2010-11 financial year, while revenues from telecom equipment segment stood at ₹117,039 crore (US$21.18 billion)

Telecommunication has supported the socioeconomic development of India and has played a noteworthy role to thin down the rural-urban digital divide to a greater extent. It also has helped to increase the transparency of governance with the introduction of e-governance in India. The government has logically used modern telecommunication facilities to deliver mass education programmes for the rural folk of India.

Further Developments and Milestones

- Pre-1902- Cable telegraph
- 1902- First wireless telegraph station established between Sagar Island and Sandhead.
- 1907- First Central Battery of telephones introduced in Kanpur.
- 1913-1914- First Automatic Exchange installed in Shimla.

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- 1927- Radio-telegraph system between the India and UK, with Imperial Wireless Chain beam stations at Khadki and Daund.
- 1933- Radiotelephone system inaugurated between the UK and India.
- 1953- 12 channel carrier system introduced.
- 1960-First subscriber trunk dialling route commissioned between Lucknow and Kanpur.
- 1975-First PCM system commissioned between Mumbai City and Andheri telephone exchanges.
- 1976- First digital microwave junction.
- 1979-First optical fibre system for local junction commissioned at Pune.
- 1980-First satellite earth station for national communications established at Sikandarabad, U.P..
- 1983-First analogue Stored Program Control exchange for trunk lines commissioned at Mumbai.
- 1984- C-DOT established for indigenous development and production of digital exchanges.
- 1995- First mobile telephone service started on non-commercial basis on 15 August 1995 in Delhi.
- 1995- Internet Introduced in India starting with Delhi, Mumbai, Chennai, Kolkatta and Pune on 15 August 1995

Development of Broadcasting: Radio broadcasting was introduced in the year 1927 but became state responsibility only in 1930. In 1937 it was given the name All India Radio and since 1957 it has been called *Akashvani*. Partial duration of television programming was initiated in 1959 and complete broadcasting followed in 1965. The Ministry of Information and Broadcasting owned and maintained the audio-visual apparatusincluding the television channel Doordarshanin the country prior to the economic reforms of 1991. In 1997, an independent body was established in the name of Prasar Bharti to take care of the public service broadcasting under the Prasar Bharti Act. All India Radio and Doordarshan, which earlier were working as media units were brought under the Ministry of I andB and they became constituents of the body.

Pre-liberalization statistics: While all the major cities and towns in the country were linked with telephones during the British period, the total number of telephones in 1948 totaled only around 80,000. Post independence, growth remained sluggish because the telephone was seen more as a status symbol rather than being an tool of utility. The number of telephones raised leisurely to 980,000 in 1971, 2.15 million in 1981 and 5.07 million in 1991, the year economic reforms were initiated in the country.

Major sectors of telecommunication industry in India are telephony, internet and broadcasting. The main regulator of telecommunications in India is the Telecom Regulatory Authority of India (TRAI). It regulates all of the segments.

The telephony segment is conquered by private-sector and two state-run businesses. Most companies were formed by a recent revolution and restructuring launched within a decade, directed by Ministry of Communications and Information Technology, Department of Telecommunications and Minister of Finance. Since then, most companies gained 2G, 3G and 4G licenses and engaged fixed-line, mobile and internet business in India. Foreign Direct Investment policy which increased the foreign ownership limit from 49% to 74%. For long distance calls, the area code prefixed with a zero is dialled first which is then followed by the number (i.e. To call Chennai, 044 would be dialled first followed by the phone number). For international calls, "00" must be dialled first followed by the country code, area code and local phone number. The country code for India is 91. Several international fibre-optic links include those to Japan, South Korea, Russia, Hong Kong and Germany. Some major telecom operators in India include Bharthi's Airtel, Vodafone, Aditya Birla's Idea, Aircel, BSNL, MTNL, Reliance Communications, TATA Teleservices, Infotel, MTS, Uninor, TATA DoCoMo, Videocon.

Fixed Telephony: Until the New Telecom Policy was introduced in 1999, the Government-owned BSNL and MTNL were allowed to offer land-line phone services using copper wire in India with MTNL operating in Delhi and Mumbai and BSNL servicing all other areas of the country. Due to the swift growth of the cellular phone industry in India, landlines are facing stiff competition from cellular operators. This has forced land-line service providers to become more well-organized and improve their quality of service. Land-line connections are now also available on demand, even in high density urban areas. India has over 31 million main line customers.

In August 1995, the then Chief Minister of West Bengal, Shri Jyoti Basu ushered in the cellphone revolution in India by making the first call to Union Telecom Minister Sukhram. Sixteen years later 4th generation services were launched in Kolkata in West Bengal.

With a subscriber base of more than 929 million, the Mobile telecommunications system in India is the second largest in the world and it was thrown open to private players in the 1990s. GSM was comfortably maintaining its position as the dominant mobile technology with 80% of

the mobile subscriber market, but CDMA seemed to have stabilised its market share at 20% for the time being. By May 2012 the country had 929 million mobile subscribers, up from 350 million just 40 months earlier. The mobile market was continuing to develop at an annual rate in excess of 40% coming into 2010.

The country is distributed into several sectors, called circles (roughly along state boundaries). Government and several private players run local and long distance telephone services. Competition has caused prices of the calls to drop and calls across India are inexpensive in the world. The rates are supposed to go down further with new measures to be taken by the Information Ministry. In September 2004, the number of mobile phone connections crossed the number of fixed-line connections and presently dwarfs the wireline segment by a ratio of around 20:1. The mobile subscriber base has grown-up by a factor of over a hundred and thirty, from 5 million subscribers in 2001 to over 929 million subscribers as of May 2012. India primarily follows the GSM mobile system, in the 900 MHz band. Recent operators also operate in the 1800 MHz band. The dominant players are Reliance Communications, Airtel, Vodafone, Aditya Birla's Idea cellular and BSNL/MTNL. There are many smaller players, with operations in only a few states. The government allowed Mobile number portability (MNP) which enables mobile users to retain their mobile telephone numbers when changing from one mobile network operator to another. India is divided into 22 telecom circles: Andhra Pradesh, Assam, Bihar and Jharkand, Delhi, Gujarat and Daman, Haryana, Himachal Pradesh, J andK, Karnataka, Kerala and Lakshadweep, Kolkata, Madhya Pradesh, Maharashtra and Goa, Mumbai, North East, Orissa, Punjab, Rajasthan, Tamil nadu, Uttar Pradesh –West and East, West Bengal. North east circle includes Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura. West Bengal circle includes Andaman-Nicobar and Sikkim.

CONCLUSION

Telecommunication has become a vital part of our life; maintain social contact, emergency relief, health and education. In India, increasing demand for mobile phones and the availability of high speed networks, such as 2G, 3G and 4G services, has resulted in the swift growth of the Indian telecomm market, besides offering immense opportunities to players involved in the telecomm sector business. The RNCOS' research study, 'Indian Mobile Gaming Market Forecast to 2017' estimated the marketplace to reach Rs 18.5 billion (US$ 302.28 million) in 2017 providing ample opportunities in employment and grow at a CAGR of nearly 24 per cent during the period 2013-2017.

REFERENCES

1. Bhatnagar, S., 2000. Enhancing Telecom options in rural India: some options, paper presented at India Telecomm conference, Stanford.
2. Dua, T.R, 2008. Providing Connectivity to the Unconnected, Conference paper, COAI, New Delhi.
3. Madaswamy, M., 2008. Rural India Different Meaning to Different People, Changing face of rural India, IUP Publication, pp: 4-10.
4. Pentland, A., R. Fletcher and A.D. Hasson, 2006. Rethinking Connectivity in Developing Nations Silver Spring.
5. The Telecommunication (Broadcasting) Interconnection (Third Amendment) Regulation, 2006. (10 of 2006) dated 04.09.2006 http://wwwen.wikipedia.org.