

NTT DOCOMO – JOINT VENTURE WITH TATA IN INDIAN MOBILE TELECOM¹

R. Chandrasekhar wrote this case under the supervision of Professor Shih-Fen Chen solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.

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On November 17, 2008, senior executives of NTT DoCoMo, the largest mobile telecom company in Japan, held a conference call with analysts from the global financial community. The objective was to provide details of the accord the company had signed, during the previous week, for a joint venture (JV) with Tata Tele Services Ltd. (TTSL), the fifth largest Indian mobile telecom company.² The briefing was being made within the terms of a non-disclosure agreement two companies signed as part of the JV accord.

NTT DoCoMo was a subsidiary of Nippon Telegraph and Telephone Corporation (NTT), one of the world's leading telecom operators. TTSL was a subsidiary of the Tata Group, one of India's leading business conglomerates.

A major highlight of the accord was TTSL's offer of 26 per cent of its stake to NTT DoCoMo for a sum of ¥260 billion (US\$2.7 billion).³ In return, NTT DoCoMo would gain entry into the Indian mobile telecom industry, which was at the beginning of a growth curve. NTT DoCoMo would have TTSL as a local player to help navigate its way in a competitive market. TTSL would, in turn, gain access to telecom technologies that NTT DoCoMo had pioneered worldwide. TTSL would also receive capital, which was needed to fund its expansion plans.

MOBILE TELECOM INDUSTRY

For many decades since the invention of telephone by Alexander Graham Bell in 1872, telecommunications worldwide had required overhead wires and underground cables. Fixed telephony, as it was known, was regulated by national governments, which also owned large portions of this industry. The decade of the 1970s marked the beginning of the breakdown of the telephone behemoths into

¹ This case has been written on the basis of published sources only. Consequently, the interpretation and perspectives presented in this case are not necessarily those of NTT DoCoMo or any of its employees or of the Tata Group or any of its employees.

² "NTT_DoCoMo_Capital_Alliance_with_Tata_Teleservices_Announcement_Presentation_Webcast_English-T2027149 accessed December 11, 2010.

³ In March 2008, US\$1 = ¥99.86.

autonomous divisions. Some segments of the industry had been spun off, such as telephone manufacturing, equipment manufacturing, local call networking and overseas call networking and services. The wire line industry had also been deregulated to make it competitive in a market that was now allowing new, niche players.

Global Mobile Telecom Industry

The mobile phone had its origin in 1910, when Lars Magnus Ericsson, a Swedish engineer and entrepreneur, built a telephone into his car and connected it to overhead telephone lines. The transmission required radio spectrum, which was a scarce resource. Ericsson's invention spurred further research but no new developments occurred until 1947, when engineers at Bell Laboratories in the United States devised a system by which a territory was divided into a number of cells, each serving as a base station, with its own transmitter and receiver. The latter helped limit the use of spectrum and marked the beginnings of what has come to be known as cellular telephony.

The basic premise of the technology of a mobile phone is conversion of the speaker's voice into radio waves that travel through the air until they reached a receiver at a nearby base station, which, in turn, transmits the call to the recipient through the telephone network. In 1973, Motorola in the United States demonstrated the first portable phone. In 1979, NTT launched, as a pilot project, the world's first car phone.

The technology platform of the mobile phone progressed through development over three phases. The first phase, known as 1G (first generation), was marked by analog transmission of voice communication. This mobile phone was formally launched by Nordic Mobile Telephone (NMT) in 1981, simultaneously in Denmark, Finland, Norway and Sweden. Although 1G marked a new beginning in telecom, it was characterized by low transmission capacity and poor quality voice flow.⁴

The second phase, known as 2G (second generation), was marked by digital transmission of voice communication. During the early 1990s, 2G was available in several countries. This medium of communication was clearer than 1G, had fewer interruptions and higher capacity.

The third phase, known as 3G (third generation), was marked by digital transmission of both voice and data through the medium of the Internet. This phase was pioneered by NTT DoCoMo in 2001 and supported applications such as video conferencing, which required higher bandwidth capacity.

Simultaneously, the worldwide mobile telecom industry was being segmented into three sharply differentiated businesses — network carriers, phone manufacturers and chipset providers. These segments wielded power over one another but were also interdependent. Carriers, for example, influenced the choice of handsets by customers. Chip makers were crucial to the quality of transmission. Phone manufacturers, unlike the other two, were interacting with customers and were highly focused on brand building.

The growing convergence of broadband services with mobile telecom was leading to a new generation of phones called smart phones. These devices had greater computing ability, larger screens and more features than previous mobile phones. They were, in essence, handheld computers doubling up as phones. BlackBerry, one of the first smart phones, was released by Research In Motion of Canada in 2002. HTC of Taiwan, which had been making phones for network operators such as British Telecom for more than a

⁴ Westlake Communications Ltd., "Mobile Phone Glossary," available at http://www.westlake.co.uk/Mobile_Phone_Glossary.htm, accessed October 26, 2010.

decade, launched its own smart phone, called HTC, in 2006. Apple Inc., the U.S. computer manufacturer, launched its iPhone in 2007.

Japanese Mobile Telecom Industry

Japan was the first country to launch car phones for commercial applications in 1979. Car phones were introduced by the mobile communications division of NTT and were initially limited to the city of Tokyo. These first car phones were owned by NTT and leased to customers on an annual basis. The preliminary demand was confined to cab companies, which required the convenience of on-the-go communication. As the car phone spread to the United States and Europe, new customer segments developed, such as ambulance services, utility services and fire services.

In 1992, the first retail mobile phones were made available in Japan. They were based on 2G technology. The ease of purchasing these mobile phones increased customer convenience and led to the growth of the mobile telecom market in Japan in the next 15 years. Very quickly, by March 2008, the mobile telecom industry in Japan was saturated. The number of mobile subscribers in the country stood at 102.7 million, out of a population of 127.8 million. The room for growth in the number of new subscriptions was limited because the rate of growth of population was almost stagnant (see Exhibit 1).

In addition to NTT, Japan had two other telephone companies with mobile telecom divisions — KDDI Corp. (formed in 1984) and Softbank Mobile Corp. (formed in 1986). Both companies had gone through phases of mergers and acquisitions. By 2005, a new player called EMobile entered the Japanese mobile telecom industry. The mobile telecom division of NTT had taken a lead over its peers by building from scratch a new infrastructure for mobile phones across the country. The ownership of networks gave NTT a competitive advantage in terms of quality and cost.

NTT DOCOMO

NTT DoCoMo had been formed in July 1992, as a sequel to the demerger of NTT Mobile Communications Network, the mobile telecom business of NTT.⁵ Established in 1952 by the Japanese government's ministry of communications, NTT had the mandate to rebuild the country's war-ravaged phone system. In 1985, NTT had been privatized to promote competition in the telecom market.⁶

One of the objectives of the demerger of mobile business was to further reduce the monopoly of NTT in Japanese telecom. NTT DoCoMo had become a subsidiary of NTT, in which the parent held the majority stake of 61.6 per cent. In Japanese, *dokomo* meant "everywhere." The launch promos for DoCoMo suggested that the name was an acronym for "Doing Communications More."

It took four years for NTT DoCoMo to reach, by April 1996, a subscriber base of five million. By February 2002, the number had leaped to 40 million. By March 2008, NTT DoCoMo was leading the Japanese mobile telecom market with 52 per cent share (see Exhibit 2). It had revenue of ¥4,711.8 billion (US\$47.18 billion) for the year ending March 2008 (see Exhibit 3) and a subscriber base of 53.42 million.⁷

⁵ NT DoCoMo Inc., "Company History," available at <http://www.nttdocomo.com/about/company/history/index.html>, accessed October 18, 2010.

⁶ NTT Communications, "History: Brief History of NTT Corporation," available at http://www.ntt.com/aboutus_e/history/, accessed October 18, 2010.

⁷ http://www.nttdocomo.com/about_us/facts_and_figures NTT DoCoMo Fact Book December 2009, accessed June 10, 2010.

NTT DoCoMo ranked 17th among global mobile network operators in terms of number of subscriptions (see Exhibit 4). The company was listed on the Tokyo, London and New York stock exchanges. It had a total of 22,100 employees in March 2008.

Launching I-mode

The growth of NTT DoCoMo was primarily due to the company's progressive deployment of cutting-edge technologies, which were focused on the customer.

In February 1999, after extensive customer feedback, NTT DoCoMo launched a mobile phone with Internet connection and data transfer facility, which it called I-mode. The product was initially targeted at a specific customer segment — women in their 20s. NTT DoCoMo ensured that I-mode had features that women in their 20s sought — shopping sites, horoscopes, ring-tone downloads and easy email capability. The company also pegged the maximum price for subscription sites low enough — at ¥300 (US\$2.67) a month — to encourage customers to sign up, which they often did on an impulse.⁸

Before I-mode was launched, the mobile community in Japan, and the rest of the world, consisted of operators and telecom vendors. I-mode expanded this community to include a vast body of content providers and information technology (IT) vendors. I-mode was a mobile Internet whose service menu was a mix of information, entertainment, database and transactions. The menu was easy to navigate and user-friendly.

Launching 3G

In October 2001, NTT DoCoMo further expanded its I-mode by launching the world's first fully commercialized 3G service, which it called FOMA, an acronym for "Freedom Of Mobile multimedia Access."⁹ FOMA allowed mobile subscribers to speak to each other visually — face to face — while also accessing data from several sources.

For example, in a typical business setting, field sales people could talk to their customers while tapping into a corporate database on their mobile telephones. While on the phone, they could email video clips, taken either with the built-in camera or downloaded from designated I-mode websites. The quality of display was as sharp as the display on a personal computer. NTT DoCoMo took FOMA to the mass market in Japan. By 2005, 3G had become a common channel of communication in Japan.

Fad Brand

How did NTT DoCoMo become an iconic brand in Japan? This question was often asked, not only in the West but even within Japan.¹⁰ There were four reasons for NTT DoCoMo's success.

⁸ Frank Rose, "Pocket Monster," *Wired*, September 2001, available at <http://www.wired.com/wired/archive/9.09/docomo.html>, accessed October 19, 2010.

⁹ John Beck and Mitchell Wade, *DoCoMo – Japan's Wireless Tsunami: How One Mobile Telecom Created a New Market and Became a Global Force*, AMACOM, New York, 2003, page 216.

¹⁰ John Beck and Mitchell Wade, *DoCoMo – Japan's Wireless Tsunami: How One Mobile Telecom Created a New Market and Became a Global Force*, AMACOM, New York, 2003, page 76.

1. NTT DoCoMo's executive cadre was skilled at managing growth so that the company was always on an ascending path. The managerial mindset in the company was such that when a product or service reached maturity, it could instinctively create an entirely new market, triggering a new growth phase.

For example, as the mobile subscriber base in Japan was peaking in 1998, marking the summit of the company's first growth curve, the company's top management realized that volume growth, as a basis of revenue, was unsustainable in the long run. Management then shifted its focus from volume-led growth to value-led growth, by coupling the company's prevailing voice communications business (which was subscriber-driven) with its data communications business (which was fees-driven). The latter enlarged the size of the revenue basket. In managing the next growth curve in 2001, the company followed the same logic. It focused on content as a new service offering that could reinforce voice and data traffic.¹¹

2. DoCoMo became a fad brand in Japan for reasons that related to the Japanese psyche. The people of Japan had a natural liking for small, simple, clean, convenient gadgets that were also clinical and robotic in their efficiency. Miniaturization was a trait that had become an art form in Japan.

Thus, a device that not only trebled up as cell phone cum Internet device cum mini-computer but could be folded up and slipped unobtrusively into one's pocket was bound to be an instant hit in Japan. The closest parallel of a *keitai* (portable) was Sony's Walkman.¹²

3. The DoCoMo brand succeeded in Japan because it tapped into the deepest needs, desires, drivers and aspirations of consumers, such as love, a desire for equality, a tendency towards impatient behavior and a yearning for fun and enjoyment.¹³

The cellular phone helped subscribers stay connected with people who mattered to them, friends and family in particular. It was a great social leveler because it was affordable. Its communication process was real time, well suited to the fast pace of the Internet generation, which had little patience for delays. The DoCoMo cell phone helped Japanese of all ages to recapture the fun of their childhood by enabling them to play with the full panoply of not only web-based goodies, such as games, chats, email and calendars but also online horoscopes, which the average Japanese fancied.

4. NTT DoCoMo marched over its peers in Japan because it was the first mover. The company had reinforced this natural advantage with a sound service infrastructure. The quality of its good network coverage in Japan, backed by strong research and development (R&D), was better than that of its peers. The network had no blind spots or call drops.

The company had built a network of alliances in Japan — with vendors, customers, franchisees, banks, retailers and content providers. The company's core competence, which it could replicate globally, was its ability to forge relationships, manage them and sustain them.

¹¹ Dan Steinbock, *The Mobile Revolution: The Making of Mobile Services Worldwide*, Kogan Page, Philadelphia, 2005, p. 65.

¹² Frank Rose, "Pocket Monster," *Wired*, September 2001, available at <http://www.wired.com/wired/archive/9.09/docomo.html>, accessed October 19, 2010.

¹³ John Beck and Mitchell Wade, *DoCoMo – Japan's Wireless Tsunami: How One Mobile Telecom Created a New Market and Became a Global Force*, AMACOM, New York, 2003, p. vii.

INTERNATIONAL EXPANSION

NTT DoCoMo differed from its parent NTT in some ways. Notwithstanding the privatization and the spinoffs, NTT remained a monopoly, whereas NTT DoCoMo had been, since its inception, competitive and market-driven. NTT sought conformity in a regulated environment, whereas NTT DoCoMo charted its own course while working within that framework. NTT was inward-looking and focused on the domestic market. NTT DoCoMo was wired for globalization.¹⁴

First Phase

The launch of I-mode in Japan in February 1999 provided the basic platform for NTT DoCoMo to go beyond the domestic market. Driven by the goal of establishing a world of seamless communications, its international expansion had two short-term objectives — to ensure that domestic customers would be able to use their I-mode phones when they went abroad, and to ensure that people around the world would be able to use I-mode services delivered by the company's local franchisees. The need to go global was also motivated by the larger strategic goal of securing revenue growth and improving the firm's global competitiveness.¹⁵

NTT DoCoMo's international foray began when the company started taking minority positions, meant to be portfolio investments, in the equity holdings of mobile operators in global telecom markets. Between 1999 and 2001, NTT DoCoMo spent ¥1.9 trillion in acquiring minority stakes in such companies as AT&T Wireless of the United States (¥1,143 billion), KPN Mobile of the Netherlands (¥407 billion), Hutchison 3G of the United Kingdom (¥185 billion), KG Telecom of Taiwan (¥61 billion), Hutchison Telephone of Hong Kong (¥42 billion) and America Online Inc. (¥15 billion).¹⁶

Many of these companies had embarked on large investments in new networks. Their growing debt burden was beginning to erode shareholder value. Unable to influence the course of these companies because of its minority holding, NTT DoCoMo booked, by 2002, a loss of half the value of its investments and “scuttled home.”¹⁷

When NTT DoCoMo started expanding outside Japan in 1999, the company had identified three sources of global revenue — international roaming fees (collected from Japanese customers using NTT DoCoMo services overseas), technology licensing fees (collected from the local franchisees) and dividends (accrued from investments made in mobile operators outside Japan).¹⁸ The company had taken the equity route to start with, but this strategy had not panned out according to expectations, largely because of slump in the equity markets over which NTT DoCoMo had no control.

A major learning from the experience of 1999–2001 was that minority shareholding was an obstacle to shaping the course of local business. In its 2001 annual filings before the Securities and Exchange Commission of the United States, the company had stated:

¹⁴ Dan Steinbock, *Wireless Horizon: Strategy and Competition in the Worldwide Mobile Marketplace*, AMACOM, New York, 2003, pp. 143–169.

¹⁵ “International Roaming: Japan's Biggest Mobile Operator Heads Abroad Once More,” *Economist*, November 20, 2008, p. 77.

¹⁶ [http://www.nttdocomo.co.jp/english/corporate/ir/library/USSEC filings Form 20-F/2001](http://www.nttdocomo.co.jp/english/corporate/ir/library/USSEC%20filings%20Form%2020-F/2001), page 9 of Securities and Exchange Commission (SEC) (Form 20-F) Filings for the year ending March 2001, accessed September 25, 2010.

¹⁷ “International Roaming: Japan's Biggest Mobile Operator Heads Abroad Once More,” *Economist*, November 20, 2008, p. 77.

¹⁸ *Ibid.*

Our strategy of acquiring only minority equity stakes gives us substantially less influence over our partner overseas carriers than if we established or acquired subsidiaries in those markets.¹⁹

Post-2001, NTT DoCoMo had also put a cap on individual investment. It had limited its financial outlay in new ventures outside Japan to less than \$90 million apiece.²⁰ The objective was to pre-empt a repetition of the huge investments of the late 1990s. The limit was applicable only to strategic investments and not to joint ventures.

Second Phase

It was not until 2008 that NTT DoCoMo considered international expansion, once again.²¹ Companies in the burgeoning telecom markets of the Asia-Pacific region were planning to introduce advanced mobile networks, which provided NTT DoCoMo with an opportunity to deploy beyond the home market its pioneering technologies, which had been tried and tested in Japan. Going global had become a compelling proposition for NTT DoCoMo for reasons that were both external and internal to the company.

Externally, the scope for regular increases in new subscriptions was limited in the domestic market, which had achieved a penetration rate of more than 80 per cent. The yen was gaining ground. It had moved up progressively from 132.02 to a U.S. dollar in January 2002 to 119.02 in January 2006, to 90.79 on December 31, 2008,²² giving NTT DoCoMo — and Japanese companies in general — a competitive advantage in pursuing overseas mergers and acquisitions. The equity markets in the Asia-Pacific region were also in a slump, although stock prices of telecom companies were volatile.

Internally, revenues from cellular services had declined for the year ending March 2008, due to discount programs newly introduced to retain subscribers.²³ The company had built up cash reserves of approximately 10 per cent of annual revenues, which could be used to finance acquisitions without raising debt.

Strategy for Global Acquisitions

For international expansion, NTT DoCoMo had a four-pronged strategy. The target country should have evidence of a strong gross domestic product (GDP) growth, current and future. The target country should also provide opportunities for rolling out 3G. The acquisition price should not be high but consistent with industry norms. The company was also clear that it would not pursue hostile takeovers but would woo the Asian operators the old-fashioned way, with capital and technology.²⁴

¹⁹ [http://www.nttdocomo.co.jp/english/corporate/ir/library/USSEC_filings_Form_20-F/2001_page_10_of_SEC_\(Form_20-F\)_Filings_for_the_year_ending_March_2001](http://www.nttdocomo.co.jp/english/corporate/ir/library/USSEC_filings_Form_20-F/2001_page_10_of_SEC_(Form_20-F)_Filings_for_the_year_ending_March_2001), accessed September 25, 2010.

²⁰ http://www.businessweek.com/bwdaily/dnflash/jan2006/nf20060117_6411.htm?campaign_id=search Kenji Hall, "DoCoMo Is Looking Abroad, Once Again," January 17, 2006, accessed December 12, 2010.

²¹ "International Roaming: Japan's Biggest Mobile Operator Heads Abroad Once More," *Economist*, November 20, 2008, p. 77.

²² "Historic Exchange Rates," available at <http://www.x-rates.com/cgi-bin/hlookup.cgi>, accessed October 19, 2010.

²³ [http://www.nttdocomo.co.jp/english/corporate/ir/library/USSEC_filings_Form_20-F/2001_page_53_of_SEC_\(Form_20-F\)_Filings_for_the_year_ending_March_2001](http://www.nttdocomo.co.jp/english/corporate/ir/library/USSEC_filings_Form_20-F/2001_page_53_of_SEC_(Form_20-F)_Filings_for_the_year_ending_March_2001), accessed September 25, 2010.

²⁴ Irene M. Kunii et al, "Japan's Mobile Marvel: DoCoMo's Net Phone Service May Become a Global Force," *Business Week*, January 17, 2000, pp. 88–92.

As part of the second phase of international expansion, NTT DoCoMo was soon building up equity positions in companies in eight different countries of the Asia-Pacific region — Hong Kong (Macau), Taiwan, Singapore, South Korea, Philippines, Guam, Malaysia and Bangladesh. The equity stake was a precursor to greater involvement in those geographies (see Exhibit 5).²⁵

NTT DoCoMo had come up with an innovation in its international expansion called Business and Technology Cooperation Committee (BTCC). Formed jointly by NTT DoCoMo and its overseas partner, BTCC was the “go to” committee in an alliance. Its mandate was to ensure the realization of synergies from a JV. Headed by a vice president at either partner, BTCC would meet twice a year. It had four sub-committees for dealing with enterprise business marketing, research and development, handset development and procurement, and value added services (VAS). The sub-committees would meet seven to eight times a year.²⁶

JOINT VENTURE OPPORTUNITY IN INDIA

Expanding into India had begun to interest NTT DoCoMo in April 2006, soon after the formation of Conexus Mobile Alliance (Conexus), a coalition of Asian mobile operators aimed at developing and enhancing international roaming and corporate mobile services among their customers. With a combined customer base of 240 million, Conexus was meant to generate geographical synergy to its members and provide seamless mobile service to its customers while roaming.²⁷

NTT DoCoMo and Tata Group had initially met, as was common industry practice, at various telecom conferences where the top brass had established personal contacts. The idea of an equity joint venture emerged naturally, as both parties realized they could enjoy synergies from a collaborative relationship. As was common industry practice, both companies had given mandates to intermediaries to conduct due diligence before proceeding further.

The talks for an alliance had formally begun in mid-2006. A year of negotiations was common in international telecom deals — three to six months for business negotiations, three months to prepare the legal documents and three months to get government clearances and regulatory approvals. In August 2008, NTT DoCoMo and Tata Tele Services Ltd. (TTSL), a subsidiary of the Tata Group, were both attending to the fine print.

TTSL was looking for an overseas partner for reasons of technology and capital. On the technology front, the company held a pan-India license for global system for mobile communications (GSM) operations, for which it needed a collaborator with core competence in GSM.²⁸ On the capital front, TTSL was planning to bid for 3G spectrum scheduled to be auctioned by the federal government in early 2009, for which it needed a financial partner.²⁹

²⁵ [http://www.nttdocomo.com/ir/index.html/IRLibrary /Presentation materials/archives/ “Investment in India’s Tata Tele Services Ltd.”](http://www.nttdocomo.com/ir/index.html/IRLibrary/Presentation%20materials/archives/Investment%20in%20India's%20Tata%20Tele%20Services%20Ltd.), November 17, 2008, accessed January 10, 2010.

²⁶ NTT DoCoMo, “Investment in India’s Tata Tele Services Ltd,” available at [http://www.nttdocomo.com/ir/index.html/IRLibrary /Presentation materials archives/FY2008/November 17, 2008](http://www.nttdocomo.com/ir/index.html/IRLibrary/Presentation%20materials%20archives/FY2008/November%2017,%202008), accessed January 10, 2010.

²⁷ Conexus Mobile Alliance, “About Us,” available at <http://www.conexusmobile.com/aboutus.html>, accessed March 25, 2010.

²⁸ NTT DoCoMo, “Investment in India’s Tata Tele Services Ltd.,” available at [http://www.nttdocomo.com/ir/index.html/IRLibrary /Presentation materials archives/FY2008/November 17, 2008](http://www.nttdocomo.com/ir/index.html/IRLibrary/Presentation%20materials%20archives/FY2008/November%2017,%202008), accessed January 10, 2010.

²⁹ Deutsche Bank Equity Research Report on NTT DoCoMo, dated November 12, 2008.

On its part, NTT DoCoMo was seeking a foothold in the India because India was a growing market. The company could secure a larger base of subscribers, which would not be possible in Japan. It could also find new applications for 3G technology, which it had pioneered in Japan

In addition, NTT DoCoMo could not enter the Indian market on its own to set up a greenfield venture because entry to the industry was restricted to holders of a telecom license. The federal government would issue the license only to an Indian company which, in turn, could bring in an overseas partner. A foreign company was not eligible to apply for a license in its own name.

Foreign firms could thus enter the Indian market only through the JV route; however, they were free to acquire majority holdings of more than 50 per cent in Indian cellular companies. In July 2004, the government had increased the limit on foreign direct investment (FDI) in the Indian telecom sector from 49 per cent to 74 per cent.

Although a foreign partner could own up to 74 per cent of the equity, the appointment of the chairman, managing director and chief executive officer (CEO) of the JV could be made only in consultation with its Indian partner. A majority of directors and board members, including the chairman, managing director (MD) and CEO, needed to be residents of India.

INDIAN MOBILE TELECOM INDUSTRY

As of March 2008, India had 261.07 million wireless subscribers who were serviced by a total of 12 mobile telecom companies. Bharti Airtel was the market leader in wireless with 61.98 million subscribers. TTSL ranked fifth with 24.33 million (see Exhibit 7).

The other major players were Reliance Communications (part of the Reliance Anil Dhirubhai Ambani group), Vodafone Essar (an Indian subsidiary of the Vodafone group), Bharat Sanchar Nigam Ltd. (a government-owned telecom enterprise), Idea Cellular (part of the Aditya Birla group), Aircel (a joint venture between Maxis Communications Berhad of Malaysia and Apollo Hospitals Group of India) and Mahanagar Telephone Nigam Ltd. (a government-owned telecom enterprise operating in Mumbai and New Delhi).

A public auction of radio spectrum, under the aegis of the federal government, was scheduled for early 2010. A capital investment of more than \$73 billion was forecast in the Indian telecom sector in the next five years.

With a population of 1.2 billion, India was the second largest market in the world for a variety of goods and services. In March 2008, India had overtaken the United States as the second largest wireless market in the world, after China.³⁰ Research firm Gartner had forecast that India's mobile user pool would comprise 737 million by 2012 (see Exhibit 6). The size of the market and the promise of growth were the main attractions for an overseas mobile operator to get into the Indian market.

The Indian government had been pursuing liberal economic policies since July 1991. It was providing an enabling environment for business entrepreneurs, in particular, in sectors such as IT and telecom, which were portrayed to the outside world as showpieces of economic reforms. The government had set up Telecom Regulatory Authority of India (TRAI) with a mandate to "create and nurture conditions for

³⁰ "NTT DoCoMo's Tata Deal: Why Global Telecom Firms Want to Dial India," November 27, 2008, available at <http://knowledge.wharton.upenn.edu/india/article.cfm?articleid=4335>, accessed March 10, 2010.

growth of telecommunications in the country in a manner and at a pace which will enable India to play a leading role in emerging global information society.”³¹ The role of TRAI was to provide a transparent policy environment promoting a level playing field and facilitating fair competition. The presence of an official regulator was a source of confidence for a potential overseas investor.

Areas of Contrast

The Indian telecom market differed from the Japanese telecom market in three ways.

1. In Japan, subscribers talked first and paid later. In India, most mobile calls were prepaid. Customers would purchase a subscriber identity module (SIM) card at a convenience store, load up their phone with prepaid minutes and then talk until their credit ran out. This arrangement saved operators the costs of sending out bills and chasing debts and enabled many low-income consumers to make calls at prices they could afford. The flipside was that prepaid customers were disloyal. They would switch from one operator to the other by purchasing a different SIM card.
2. Since the mobile subscription had reached a saturation point in Japan, Japanese telecom companies were not pursuing a growth in subscriptions as a target per se. In India, however, companies were using aggressive advertising and promotional campaigns to secure growth in subscriptions. This emphasis on subscription growth had led to relatively low average revenue per user (ARPU), a popular industry metric for gauging a mobile telecom company's earnings per subscriber. The ARPU was \$7 in India as compared with \$50-plus in Japan.³²
3. The service offerings in Japan were value-added, including visual communication and data transfer, making the mobile phone a lifestyle accessory. Used as Internet-on-the-go, the mobile phone was also a popular medium for conducting online banking transactions. In India, however, a mobile phone was largely a functional tool. The service provided by the Indian telecom companies was basic, limited to voice communication.

Consolidation

The Indian telecom market had undergone several rounds of consolidation during the previous decade, leading to the demise of many, and leaving a pool of five large private operators. The most recent acquisition in Indian telecom was in February 2007, when Vodafone plc of the United Kingdom purchased a 67 per cent stake in Hutchison Essar for \$11.1 billion. It was the largest deal to date in Indian telecom, both in terms of enterprise value and acquisition cost per subscriber (see Exhibit 8).

Usually, the basis of valuation of an enterprise was the future cash flows discounted to its present value, but this valuation basis was undergoing change. The earnings before interest, taxes, depreciation and amortization (EBITDA) of Indian telecom players were largely in the negative. Therefore, in the early years, the subscriber base had been used as the basis of valuation. Then, EBITDA margins had become the new basis. But, of late, earning per share (EPS) was being considered as the basis for valuing a listed telecom company.

³¹ Telecom Regulatory Authority of India, "About Us," available at <http://www.trai.gov.in/aboutus.asp>, accessed January 6, 2010.

³² NTT DoCoMo, "Investment in India's Tata Tele Services Ltd.," available at [http://www.nttdocomo.com/ir/index.html/IRLibrary/Presentation materials archives/FY2008/](http://www.nttdocomo.com/ir/index.html/IRLibrary/Presentation%20materials%20archives/FY2008/), November 17, 2008, accessed January 10, 2010.

Some of the global benchmarks included the acquisition by AT&T, a U.S. company, of BellSouth, also a U.S. company, for \$67 billion in March 2006. BellSouth had 54 million customers and earned a net profit of \$3.3 billion. Spain's Telefonica had acquired the United Kingdom's O2 for \$31 billion in October 2005. O2 had a pre-tax profit of \$614 million and 27 million customers globally.³³

TATA TELE SERVICES LTD.

Incorporated in 1996, TTSL was part the Tata Group, a diversified conglomerate headquartered in Mumbai, India. It was through TTSL that the Tata Group had first made its foray into Indian telecom.

Founded in 1868 as a trading enterprise by Jamsedji Tata, the Tata Group was operating in seven broad business segments: Chemicals, Consumer Products, Energy, Engineering, Information Systems & Communications, Materials and Services. It had 98 companies of which 28 were listed on Bombay Stock Exchange, the country's premier bourse.³⁴ The group had five companies in the telecom sector (see Exhibit 9: Tata Group's Telecom Ventures).

Employing 357,000 people, the Tata Group had more than 3.5 million shareholders. It had revenues of INR 2.52 trillion (US\$58 billion) for the year ending March 2008. Nearly 65 per cent of the revenues of the group, which was present in over 80 countries, came from global operations.³⁵

The Tata trademark was owned by Tata Sons Ltd., the holding company of the Tata Group. Tata Sons Ltd. charged an annual fee to the group companies for use of the Tata trademark, which carried an emotional appeal among consumers, evoking leadership through trust. Few Indian brands matched the aura around the Tata brand. The Tata brand had a monetary value of INR 470.82 billion (US\$11.8 billion) as of December 2007.

The Tata Group held 80 per cent of TTSL's capital.³⁶ The group had divested minority stakes to a few private equity (PE) investors, among them Temasek Holdings (Temasek), the investment arm of Singapore government, which had purchased the single largest PE stake of 9.9 per cent at a price, unconfirmed by both parties, of INR 20 billion (US\$450 million).³⁷ Temasek was a strategic investor and had a nominee on the board of TTSL.

TTSL began its operations in the area of fixed wireless telephony of enabling transmission of both voice and data between two fixed locations (or buildings) through the medium of radio link, which was less expensive than the medium of cables. The customers were large industrial houses. In 2002, TTSL acquired Hughes Telecom (India) Ltd., a broadband satellite network solutions company promoted by Hughes Network Systems of the United States. Hughes was providing satellite broadband services to 39 of India's top 50 corporate houses.

³³ Krishna Gopalan, "Dial V for Valuation," *Business Today*, June 17, 2007, www.india-today.business-today.com/archives/2007/June_17_2007, accessed March 2010.

³⁴ http://www.tata.com/aboutus/tatapofile/Leadership_with_Trust, accessed October 19, 2010.

³⁵ http://www.tata.com/media_room/media_kit/fastfacts.pdf, accessed April 5, 2010.

³⁶ "NTT DoCoMo Capital Alliance with Tata Teleservices Announcement Presentation-Webcast," http://www.alacrastore.com/research/thomson-streetevents-TT_DoCoMo_Capital_Alliance_with_Tata_Teleservices_Announcement_Presentation_Webcast_English-T2027149, accessed December 11, 2010.

³⁷ www.business-standard.com/temasek-buys...stake-in-tata-tele/233267 "Temasek buys 9.9% stake in Tata Tele," *Business Standard*, March 9, 2006, accessed June 15, 2010

TTSL had subsequently renamed the company Tata Teleservices (Maharashtra) Limited (TTML) with a mandate to meet the telephony market needs in the province of Maharashtra in western India. Together, the two companies were offering a bouquet of telephony services covering landline, wireless and mobile.

In March 2005, TTSL entered the mobile telecom business with the launch of a technology platform that was based on code division multiple access (CDMA) standards. In less than three years, TTSL was ranked as the fifth largest mobile operator in India, in terms of number of subscriptions.

TTSL had three brands: Tata Indicom (for CDMA services), Tata Walky (for fixed wireless phones) and Tata Photon (for wireless mobile broadband access). TTSL had also secured a pan-India license for the GSM platform. The company was in talks with NTT DoCoMo for launching its GSM offering as the fourth brand. It was preparing to bid for 3G licenses.³⁸

TTSL had a retail chain of more than 3,500 stores and service outlets, which were either directly owned by the company or exclusive to TTSL offerings. The company was focusing on providing “retail experience” to attract new subscribers. Customization was a major part of enhancing the retail experience at the store level. The distribution network was considered the company’s major strength from the point of view of an overseas investor seeking foothold in Indian telecom.

TTSL had a three-pronged growth strategy aimed at brand building, innovation and subscriber growth. The telecom brands were to be built on a “value-for-money” proposition, of which low price was only a part. The brands would be continuously “refreshed” to provide improved offerings to consumers. The company was also targeting youth as an important customer group in mobilizing new subscriptions.³⁹

TTSL had a total of 24.33 million mobile subscribers as of March 2008. It had set a goal of acquiring 100 million customers by 2011.⁴⁰ With a market share of 9.3 per cent, it was the fifth largest mobile telecom operator in India. The company employed more than 1,500 technological experts, primarily engineers. TTSL was an unlisted company whose shares were not freely traded. Its financials were not available in the public domain. The general understanding was that the company was not yet profitable.⁴¹

ISSUES IN THE PROPOSED JV

Before setting the ball rolling with its JV, NTT DoCoMo, which had found TTSL to be “a company with a very strong core, a very strong center,”⁴² had to address the following issues.

Equity Stake

Eighty per cent of the capital of TTSL was held by Tata Group companies. Temasek Holdings of Singapore held 9.9 per cent, and a few other private investors held the rest. It was the Tata Group, which

³⁸ http://www.tataindicom.com/tata_teleservices_ltd/aboutus-ttsl-organization, accessed December 12, 2010.

³⁹ “Tata Indicom Sticks to Three Pillar Marketing Strategy,” *Agencyfags*, October 26, 2007, available at <http://www.afaqs.com/news/story.html?sid=19492>, accessed June 15, 2010.

⁴⁰ Tata Teleservices, “Careers at TTSL,” available at <http://www.tatateleservices.com/careers.aspx>, accessed October 6, 2010.

⁴¹ NTT DoCoMo, “Investment in India’s Tata Tele Services Ltd,” available at [http://www.nttdocomo.com/ir/index.html/IRLibrary/Presentation materials archives/](http://www.nttdocomo.com/ir/index.html/IRLibrary/Presentation%20materials%20archives/), November 17, 2008, accessed December 12, 2010.

⁴² http://www.alacrastore.com/research/thomson-streetevents-TT_DoCoMo_Capital_Alliance_with_Tata_Teleservices_Announcement_Presentation_Webcast_English-T2027149, accessed December 11, 2010.

would be divesting 20 per cent of its stake in favor of NTT DoCoMo. The additional 6 per cent was being issued to NTT DoCoMo by TTSL as fresh stock. NTT DoCoMo could subscribe up to 74 per cent of the equity of TTSL, in future, depending on how the JV would evolve, how the business would grow in India and the consensus among various partners.

However, the issue before NTT DoCoMo in November 2008 was whether a stake of 26 per cent was appropriate for NTT DoCoMo. The larger issue was the appropriate level of stake.

Purchase Price

TTSL was not a listed company and therefore the details of the total value of its capital were not in the public domain. NTT DoCoMo was paying a sum of ¥260 billion (US\$2.7 billion) for a 26 per cent stake in TTSL,⁴³ which placed the enterprise value of TTSL at US\$10.38 billion. Given that TTSL had 24.33 million mobile subscribers as of March 2008, the acquisition cost per subscriber would be US\$427. The most recent acquisition deal in Indian telecom had placed the acquisition cost per subscriber at \$711.

The issue was whether the deal was fair for NTT DoCoMo. The element of fairness had to be evaluated with regard to three parameters — enterprise value of TTSL, price paid by NTT DoCoMo and the acquisition cost per subscriber.

Technology Transfer

The main technology that NTT DoCoMo would be transferring to TTSL was 3G. Indian companies had already upgraded to 2G. The country's telecom sector had also taken the first steps toward the 3G arena, when, in 2008, the federal government had granted 3G licenses to two government-owned telecom companies, BSNL and MSNL. The two companies were operating 3G services in 380 cities in India. The federal government was planning a nationwide auction of 3G spectrum for the private-sector players for early 2010, and TTSL would be a major participant.

The issues here pertained to not only the process of transfer of 3G technology to TTSL but the ability of TTSL to assimilate the technology. The larger issue was the need for knowledge management because India did not have a rigorous intellectual property (IP) regimen.

Licensing Fees

As members of Conexus, NTT DoCoMo and TTSL were already part of a network of Asian telecom companies enhancing each other's revenues by sharing their roaming facilities for customers travelling outside their home countries. The JV would now provide NTT DoCoMo with a more focused source of revenue from India in the form of what was called "business enterprises marketing." The growing volume of collaborations between Indian and Japanese corporations provided an opportunity for the JV to generate regular revenues from global accounts.

⁴³ In March 2008, US1\$ = ¥99.86.

In addition, opportunities were available for generating licensing fee from TTSL for providing NTT DoCoMo's value-added services (VAS) to mobile telecom customers in India,⁴⁴ which had been an important part of the market expansion plan before the JV.

On Tata's side, the Tata Group was charging an annual fee for all group companies for the use of its brand name. NTT DoCoMo would also be required to pay a certain amount since the brand would be marketed in India as Tata DoCoMo.

The fee would be a function of value. The perception of value would vary between partners. The issue for NTT DoCoMo was to determine the basis on which the licensing fees would be charged.

Veto Rights

NTT DoCoMo had a minority stake of 26 per cent, which would minimize its involvement in managing the JV. Notably, the sources of value creation in the JV, such as the 3G services, international clientele, technology and capital, would come from NTT DoCoMo. The provision of veto rights would be the balancing factor — a “defacto protection”⁴⁵ — safeguarding NTT DoCoMo's ability to influence key business decisions of the JV. Veto rights could be exercised in areas of strategic policy; however, it was important to identify those areas, based on mutual agreement.

NTT DoCoMo needed to provide cogent arguments on why it was seeking veto rights. Its arguments needed to be convincing enough for TTSL to concede the veto rights to NTT DoCoMo.

Executive Positions

NTT DoCoMo would need to negotiate for key executive positions in the JV. The new company would have managers from NTT DoCoMo deputed from Tokyo to occupy important staff and line positions.

The issue for NTT DoCoMo was to identify positions in the JV that would be filled by its own representatives with the ultimate objective of safeguarding its business interests in India. It also needed to convince TTSL of its assignment preferences.

⁴⁴ http://www.alacrastore.com/research/thomson-streetevents-TT_DoCoMo_Capital_Alliance_with_Tata_Teleservices_Announcement_Presentation_Webcast_English-T2027149, accessed December 11, 2010.

⁴⁵ *Ibid.*

Exhibit 1

JAPAN'S CELLULAR MARKET

	Unit	2004	2005	2006	2007	2008
Population of Japan	000s	127,736	127,791	127,723	127,750	127,767
Number of Cellular Subscribers	000s	81,921	86,998	91,792	96,718	102,725
Cellular Market Penetration	%	64.1	68.1	71.9	75.7	80.4
DoCoMo Cellular Subscriptions	000s	45,927	48,825	51,144	52,621	53,388
DoCoMo Market Share	%	56.3	56.1	55.7	54.4	52.0
DoCoMo Subscription Growth Rate	%	4.7	5.4	4.7	2.9	1.5

Source: <http://www.nttdocomo.co.jp/english/corporate/ir/library/sec/index.html> NTT DOCOMO SEC Filings 2008, p. 27 and NTT, p. 24.

Exhibit 2

JAPAN'S MOBILE TELECOM MARKET RANKINGS

#	Company	Number of Subscribers (in millions)	Market Share %
1	NTT DoCoMo	53.42	52.0
2	KDDI Corp	29.28	28.5
3	Softbank Mobile Corp	18.18	17.7
4	EMobile	1.85	1.8
	Total	102.73	

Note: As of March 2008.

Source: http://www.nttdocomo.com/about_us/facts_and_figures NTT DoCoMo Fact Book December 2009, accessed June 10, 2010.

Exhibit 3

NTT DOCOMO FINANCIALS, 2006–2008

Income Statement (in millions of ¥)	2006	2007	2008
Operating revenues			
Wireless services	4,295,856	4,314,140	4,165,234
Equipment sales	470,016	473,953	546,593
Total revenues	4,765,872	4,788,093	4,711,827
Operating expenses			
Cost of services	746,099	766,960	811,133
Cost of equipment sold	1,113,464	1,964,032	1,926,686
Depreciation and amortization	738,137	745,338	776,425
Selling, general and administration	1,335,533	1,283,577	1,165,696
Total operating expenses	3,933,233	4,014,569	3,903,515
Operating income	832,639	773,524	808,312
Other income	119,664	(581)	(7,624)
Income taxes	341,382	313,679	322,955
Equity in net income (loss) of affiliates (net of taxes)	(364)	(1,941)	13,553
Minority interests	(76)	(45)	(84)
Net income	610,481	457,278	491,202
Balance Sheet			
Current assets	1,926,758	1,731,913	1,767,780
Property, plant and equipment	2,777,454	2,900,653	2,834,607
Non-current assets	1,661,045	1,483,649	1,608,447
Total assets	6,365,257	6,116,215	6,210,834
Current liabilities	1,368,299	1,162,925	1,234,315
Long-term liabilities	943,821	790,823	1,933,050
Minority interests	1,120	1,164	1,288
Shareholders' equity	4,052,017	4,161,303	4,276,496
Total liabilities	6,365,257	6,116,215	6,210,834
Cash Flow Statement			
Cash flow from operating activities	1,610,941	980,598	1,560,140
Cash flow from investing activities	(951,077)	(947,651)	(758,849)
Cash flow from financing activities	(590,621)	(531,481)	(497,475)
Effect of exchange rates on cash and cash equivalents	1,529	872	27
Cash and cash equivalents at year-beginning	769,952	840,724	343,062
Cash and cash equivalent at year-end	840,724	343,062	646,905

Source: Form 20-F filed with SEC on June 26, 2008 pages 137, 138, 139 and 142.

Exhibit 4

RANKING OF MOBILE NETWORK OPERATORS BASED ON SUBSCRIPTIONS,
2007–08

#	Company	Country	Subscribers (in millions)
1	China Mobile	China	369.33
2	Vodafone plc	UK	252.3
3	Telefonica/Movistar/O2	Spain	171.0
4	China Unicom	China	160.1
5	American Movil	Mexico	153.4
6	T-Mobile	Germany	123.1
7	Orange Telecom	France	109.7
8	Telenor	Norway	90.0
9	MTS	Russia	83.8
10	AT&T Mobility	USA	71.4
11	Verizon Wireless	USA	67.2
12	Bharti Airtel	India	66.8
13	Singtel	Singapore	66.0
14	Telecom Iatlia	Italy	65.7
15	Vimpelcom	Russia	63.3
16	MTN Group	South Africa	61.4
17	NTT DoCoMo	Japan	53.5
18	Orascom Telecom	Egypt	53.0
19	Sprint Nextel	USA	52.8
20	Telekomsel	Indonesia	42.8

Source: "List of Mobile Network Operators," available at http://www.worldlingo.com/ma/enwiki/en/List_of_mobile_network_operators, accessed October 18, 2010.

Exhibit 5**NTT DOCOMO: SECOND PHASE OF GLOBALIZATION**

#	Country	Company	Commencement of Equity Holding	NTT DoCoMo Stake (as of Aug. 2008) %
1	Hong Kong (Macau)	Hutchison Telecom	December 1999	24.1
2	Taiwan	Far Eas Tone	February 2001	4.7
3	Singapore	interTouch	December 2004	100.0
4	South Korea	KT Freetel Co.	December 2005	10.7
5	Philippines	PLDT	March 2006	14.1
6	Guam	Guam Cellular & Paging	December 2006	100.0
7	Malaysia	U Mobile	March 2008	14.1
8	Bangladesh	TM International	August 2008	30.0

Source: [http://www.nttdocomo.com/ir/index.html/IRLibrary/Presentation materials/archives/ "Investment in India's Tata Tele Services Ltd"](http://www.nttdocomo.com/ir/index.html/IRLibrary/Presentation%20materials/archives/Investment%20in%20India's%20Tata%20Tele%20Services%20Ltd) November 17, 2008, accessed January 10, 2010.

Exhibit 6**INDIA'S MOBILE TELECOM MARKET GROWTH TRAJECTORY**

(Year ending December)	Unit	2007	2008	2009	2010	2011	2012
Population	million	1,136	1,152	1,167	1,183	1,199	1,214
Number of Cellular Subscribers	million	224.9	342.1	466.8	565.5	657.0	736.9
Cellular Market Penetration	%	19.8	29.7	40.0	47.8	54.8	60.7

Source: Yashvendra Singh, "Calling Half a Billion," *Business India*, November 16, 2008, pp. 56–62.

Exhibit 7

INDIA'S MOBILE TELECOM MARKET RANKINGS

#	Company	Number of Subscribers (in millions)	Market Share %
1	Bharti Telecom Ltd.	61.98	23.74
2	Reliance Communications	45.79	17.54
3	Vodafone Essar Ltd.	44.13	16.90
4	Bharat Sanchar Nigam Ltd.	40.79	15.62
5	Tata Tele Services Ltd.	24.33	9.32
6	Idea Cellular Ltd.	24.00	9.19
7	Aircel	10.61	4.06
8	Spice Communications Ltd.	4.21	1.61
9	Mahanagar Telephone Nigam Ltd.	3.53	1.35
10	BPL Mobile	1.29	0.50
11	HFCL	0.30	0.12
12	Shyam Telelink	0.11	0.05
	Total	261.07	

Note: As of March 2008.

Source: Telecom Regulatory Authority of India annual report 2007-08, page 41, available at <http://www.trai.gov.in/annualreport/TRAIAR2007-08E.pdf>, accessed June 10, 2010.

Exhibit 8

VALUATIONS IN INDIAN TELECOM

Year	Buyer	Seller	% Stake	Sale Price (US\$ billions)	Enterprise Value (US\$ billions)	Number of Subscribers (in millions)	Acquisition Cost per Subscriber (US\$)
2005	Essar Teleholdings of India	BPL Com	100.0	1.10	1.10	2.63	418
2005	Vodafone of UK	Bharti Airtel	10.0	1.50	15.0	NA	NA
2005	Maxis Commns. of Malaysia	Aircel	100.0	1.10	1.10	NA	NA
2006	Aditya Birla Group Of India	Idea Cellular	48.1	1.10	2.29	NA	NA
2006	Temasek of Singapore	TTSL	9.9	0.45	4.54	NA	350
2007	Telekom Malaysia	Idea Cellular	15	NA	—	15.0	300
2007	Vodafone of UK	Hutchison Essar	67.0	11.10	16.57	23.3	711
2008	NTT DoCoMo	TTSL	26.0	2.7	10.38	24.33	427

Source: Krishna Gopalan, "Dial V for Valuation," Business Today, June 17, 2007, available at [www.india-today.com/archives/](http://www.india-today.com/business/india-today.com/archives/), accessed March 15, 2010 and "NTT DoCoMo's Tata Deal: Why Global Telecom Firms Want to Dial India," November 27, 2008, available at <http://knowledge.wharton.upenn.edu/india/article.cfm?articleid=4335>, accessed March 15, 2010.

Exhibit 9

TATA GROUP'S TELECOM VENTURES

	Tata Communications	Tata Sky	Tata Teleservices Ltd (TTSL)	Tata Teleservices (Maharashtra) Ltd. (TTML)	Tatanet
Year Established	2002	2004	1996	2002	1995
Shareholding (%)	Formed by the acquisition of VSNL, a state-owned telecom Tata companies: 50.1 Federal govt.: 26.1 Others: 23.8	- Unlisted company 80:20 JV of Tata Sons Ltd. and Star Group of UK	- Unlisted company - Shares held by Tata Group companies and private equity investors	- Formed by the acquisition of Hughes Telecom (India) by TTSL in 2002 - Renamed TTML in 2003 - Tata companies: 77.8 Public: 19.2 Others: 3.0	Unlisted company
Brand Identity	Ownership of territorial network fiber and subsea cable capacity	Satellite broadcasting	Pioneer of CDMA in India	High customer satisfaction	Networking solutions
Business Focus	- Serving voice and data needs - Telecommunications solutions	Direct-to-home delivery of 100-plus channels to Indian viewers	- Mobile services - Wireless desktop phones - Public booth telephony - Wireline services	- Wireline services in Mumbai city and in Maharashtra and Goa provinces - VSAT connectivity to Indian and global customers	
Location	Mumbai, Montreal, New Jersey, London and Singapore	Mumbai	Mumbai	Mumbai	Mumbai
Traditional Focus	Overseas communication services in India	Partner with global leaders in digital technology	Wireless telephony	Landline services	Wireless broad-band connectivity to Tata companies
Strategic Goals	- Go global - Move up the network - Deliver "managed" services to firms worldwide	- Connect every home - Empower every viewer - Redefine home entertainment	Provide value-added mobile services	- Digitize Mumbai city - Wireless services in Mumbai, Goa and Maharashtra	Enter the commercial market
(in INR million)	2009	2009	2009	2009	2009
Revenues	39,843	NA	NA	20,540	NA
Gross Profit	4,624	NA	NA	(1,584)	NA
	2008	2008	2008	2008	2008
	34,653	NA	NA	17,896	NA
	4,612	NA	NA	(1,248)	NA

Note: JV = joint venture; CDMA = code division multiple access; VSAT = very small aperture terminal; NA = not applicable

Source: www.tata.com/our_businesses/tata_companies accessed March 15, 2010.