

Evolution of SoftBank Corp. from Railway Telecommunication Co., Ltd.

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Background to Establishment

(Preface to Telecommunications Business Advisory Report submitted to JNR President on 17 June 1985)

Telecommunication services in Japan are currently experiencing a period of considerable change and progress both in terms of quantity and quality due to the rapid development being made in electronics as well as increasing and diversifying demand. Japan is aiming to use electronics technology as far as possible to aggressively transform its industrial structure and dramatically enhance social infrastructure, thereby creating an advanced information-based society. The same initiatives are also being taken in industrialized nations around the world. Against such a backdrop, the Telecommunications Business Law came into effect on 1 April 1985. This new law liberalizes the telecommunications industry in Japan, which had been monopolized by NTT (*domestic communications) and KDD (*international communications), to allow other companies to enter the sector and enable service providers to offer a variety of services to meet customers' needs.

In consideration of such circumstances, JNR has:

- Striven to provide transportation services covering all Japan for many years and fully appreciates the importance of maintaining the public nature of the service.
- Obtained land throughout Japan for laying fiber optic cables, which can transmit a large amount of information, and so is thus able to connect cities using the shortest route.
- Constructed, maintained and managed one of the largest self-operated communications networks in Japan and, as well as having accumulated a vast amount of know-how, employs many telecommunications engineers.

It is therefore believed that if JNR enters the telecommunication industry and enlists cooperation from the private sector using their ideas and proposals, it will have a significant effect on the Japanese economy and society.

This advisory board was established in June last year (*1984) to advise on matters raised by the JNR President about JNR's entry into the telecommunications market.

The board is chaired by Professor Hiroshi Inose of Tokyo University and comprises 9 people from JNR and 5 external key figures, including representatives from academic societies and the Japan Business Federation, as well as individuals with experience in the telecommunications industry. The board has studied the main topics of discussion from a wide range of standpoints for 1 year. The main issue is how to assist development of the telecommunications industry in Japan through competition and how to realize benefits for telecommunications users. To achieve these objectives, the board has discussed the important issues, such as the best way to commercialize the venture by fully exploiting the potential of JNR and its assets and technology and drawing on the ingenuity and vitality of various parts of the private sector. We have also discussed how to enhance external conditions to promote fair competition. The board has evaluated commercialization of research conducted by JNR from such a standpoint. (In June 1984, 3 project teams were established under the JNR President to discuss the commercialization of communications, cable TV and Value Added Networks (VANs) and make the necessary preparations.) It was deemed that the details of these operations were suitable and that JNR's entry into Japan's telecommunications market would bring considerable benefits to users. Consequently, the advisory board submitted an interim report in autumn last year (*1984), giving approval for entry into the telecommunications sector and expressing its expectations for the effort to be made.

Thankfully, JNR's management has begun to put plans to enter the telecommunications market into action along the lines suggested by the board. On 11 October last year (*1984), former Japan Telecom Co., Ltd. was established as a telecommunications industry research company in collaboration with leading private corporations. Kazumasa Mawatari, the former Vice President of JNR and a member of the telecommunications advisory board, assumed the role of President. Former Japan Telecom Co., Ltd. was subsequently reorganized into a telecommunications

company upon enactment of the Telecommunication Ltd. Business Law with JNR investing in the venture. Steady progress toward commercialization was made on 8 April 1985, when licensing as a Type 1 telecommunications carrier (*owns and operates own telecommunications equipment) was applied for. (*At that time, permission was required from the Minister of Posts and Telecommunications.) The board has continued to deliberate the details of what services a Type 1 telecommunications carrier (New Common Carrier or NCC) just entering the market should offer, the pricing system, and the issue of connection with NTT based on the above events.

History of Present Circumstances

The Telecommunications Business Advisory Board Report submitted to the JNR President on 17 June 1985 proposed specific policies to achieve business success in a field where failure was not an option. It discussed the rationality of the new venture against the backdrop of strict government regulations preventing JNR's entry into business fields other than those directly related to railways and the massive JNR debts at the time.

What particularly strikes us from the specific proposals is that they were adopted as fundamental management tenets to achieve 'construction of a network that can adapt flexibly to meet increasingly sophisticated, diversified and integrated needs by making full use of a variety of characteristics provided by digital technology, such as enhanced quality and simpler processing of information, and offer various high quality, sophisticated services... ' and 'to own access lines ourselves wherever possible.' I believe these points contributed greatly to the development of former Japan Telecom.

Meanwhile, in July 1982, the Ad Hoc Commission on Administrative Reform submitted its third report on administrative reforms to the prime minister. The report included concrete plans to privatize and split up JNR, which had immense debts and was losing ¥6.3 billion every day. This led to the establishment of a telecommunications company (Railway Telecommunication Co., Ltd.) and a systems company (Railway Information Systems Co., Ltd.) to oversee passenger ticketing. With the six JR passenger companies and JR Freight resulting from the JNR privatization and division as shareholders, these two companies acquired the necessary infrastructure and manpower from JNR and were given the responsibility of providing the optimum information and telecommunications systems for the seven rail companies to ensure smooth operations. It was necessary for the newly formed Railway Telecommunication to acquire a license to operate as a Type 1 telecommunications carrier and for the division of infrastructure and assets to be

completed so that service could commence without disruption on 1 April 1987 when the JNR privatization and division would be completed. A company tasked with preparing for this was established in December 1986 led by Koichi Sakata, JNR Vice President (Engineering) and member of the Telecommunications Business Advisory Board, as President.

The business plan for the first year of operations included laying super-high-frequency (SHF) radio equipment throughout Japan, fiber optic cables and coaxial cables along shinkansen lines and building over 200 railway telephone relay stations all over the country with local subscriber exchange functions at such stations. The main services included switched telephone services, shinkansen train control, data transmission for various types of information systems and leased line services for use as trunk lines between subscriber exchanges. A great deal of effort was required to keep operations running smoothly because government restrictions limited services to those for rail transport. Under the first year business plan, operating revenue was forecast to be ¥15.7 billion with ordinary income of ¥16 billion. However, ¥38 billion in long-term debts inherited from JNR had to be repaid. Additionally, most of the equipment was old and out-of-date due to JNR's poor financial condition and rapid pace of technical innovation in the telecommunications sector. With 580 employees, significant costs were incurred in maintaining a high level of service directly related to rail transport for equipment and users throughout Japan. Also, to reduce expenses, some railway operators had decreased the number of subscriber telephones, cut down on use of leased lines and some had even started using NTT lines instead. We made concerted efforts to increase business and develop new technology. For example, from an early stage, many employees were temporarily transferred to the former Japan Telecom and commissioned to lay fiber cables and other jobs. We worked to expand sales to non-railway users by offering flat-rate telephone services—which was unique at that time—and started selling telecommunications equipment in the general market and providing installation and related work for such equipment. We also developed digital exchanges and began using fiber cable for transmission lines in an effort to digitize network equipment as soon as possible. Despite the restricted nature of operations, through sound management we repaid our inherited long-term debts on time. This was due in part to the high morale and caliber of the telecommunications engineers who had come from JNR. They conducted the first telecommunications R&D in Japan and were the first to commercialize these new technologies in the JNR era. (To keep costs down, JNR developed its own coding schemes and terminal specifications for data communications, and telephone

* Indicates contemporary additions for clarity

exchanges and other equipment were also developed in-house until the early 1970s). These engineers also commercialized Japan's first online sales system (the MARS passenger seat reservation system used in the 1960s). They knew about the success achieved by the communications business started by Southern Pacific Railroad in the USA (now Sprint Nextel) and worked especially hard to emulate it.

Merger of Companies

In line with the recommendations of the Telecommunications Business Advisory Board, a significant proportion of the engineers at the former Japan Telecom came from JNR. (Current and former NTT employees were hired for some positions, such as work related to connection with NTT and laying cables under roads.) The management team and various departments were strengthened by personnel from leading companies situated between Tokyo and Kobe that had invested in the company, with many of the sales and finance staff and some planning staff at the former Japan Telecom coming from such corporations. Assistance was also received from these sources in procuring funds for capital investment.

Drawing on the technical abilities developed in the JNR era, on 8 August 1986, former Japan Telecom became the first NCC to start a telecommunications service (leased line) between Tokyo and Osaka. In September 1987, the company began domestic long-distance telephone services—a market we had just entered—in the same regions as DDI Corporation and Teleway Japan Corporation (now both KDDI Corporation) on exactly the same day. To prevent problems with connecting to the NTT network, exchanges used equipment from the same manufacturer used by NTT. However, the specifications were designed so that an advanced computer (manufactured by DEC) could be attached to the exchange in readiness for a service upgrade. Competition remained fierce, especially with DDI Corporation, as the service area was expanded to cover the whole of Japan. The former Japan Telecom also entered the promising pager market—a new business area. Although this business was soon in the black, it was killed by expanding mobile phone and 'personal handyphone system' (PHS) services.

Since their establishment, both former Japan Telecom and Railway Telecommunication had been mostly capitalized by the six JR passenger companies and JR Freight formed by the JNR privatization and division (100% capitalization for Railway Telecommunication and the vast majority of shares for the former Japan Telecom). Additionally, both companies had installed fiber cables along railway lines. Railway Telecommunication had a sound financial standing and enough telecommunications engineers, while the former

Japan Telecom had just come into existence. Clearly, a merger of the two would streamline capital investment and bolster the financial situation of both, allowing them to compete on a more equal footing with the NTT giant and other companies. As a result, the two companies were merged on 1 May 1989. The company name was changed from Railway Telecommunication Co., Ltd. to Japan Telecom Co., Ltd. and a new logo was designed. With a strengthened technical system, the new company set about business with a range of initiatives. Significant resources were devoted to extending the service area to cover all of Japan, to develop and introduce new technologies, and provide new services. Based on the fundamental tenet of 'owning access lines ourselves wherever possible,' we made it our responsibility to provide an end-to-end service reaching users in cities far from train lines. With the aim of providing low-cost, convenient and reliable services as soon as possible, the company also actively developed new technologies with a focus on the digital and computer fields, where progress is rapid. It became the first new entrant in the long-distance telephone market by extending the service area to cover all Japan (completed in November 1992) using its own fiber cables and wireless access. Japan Telecom was also the world's first carrier to switch all services to IP (called PRISM) and provide services such as IP-VPN. These achievements resulted in very good business results discussed later. To achieve our fundamental tenet of owning our access lines, we appealed to regulatory authorities to relax rules and lift restrictions. We entered the mobile phone market and participated in other group ventures including PHS phones and cable TV. (We invested in cable TV at that time because we were firmly focused on future telecommunications—not because we were interested in broadcasting, about which we have no management know-how.)

To prepare for the transition from competition in local telecommunications services to global competition in the industry, we established subsidiaries in countries such as the USA and UK, starting services in some areas. The aim was to construct a global system quickly, despite our lack of experience. In October 1997, the company merged with the international carrier International Telecom Japan Inc. (ITJ). This was the first merger in the Japanese telecommunications industry between domestic and international carriers. It gave us human resources we did not have previously and allowed us to construct a global service network. To further enhance our global telecommunications services, in April 1999, we entered a strategic alliance with CONCERT, a joint venture with AT&T and British Telecom (BT).

In December 1996, Japan Telecom established a 'virtual laboratory' research institute to strengthen the company's R&D system. The aim was to achieve results quickly by focusing on essential fields and using minimum resources. This institute contributed to development of many new

services, including IP-VPN, uncompressed image transmission, and the world's fastest super-high-speed network for research networks, which uses photonic switching. It also contributed to efforts to standardize and commercialize 3G W-CDMA mobile phones discussed later (currently operated by SoftBank Mobile). Our technologies, especially the uncompressed image transmission, were highly praised, resulting in Japan Telecom being chosen as the carrier for transmitting the games in Japan of the 2002 World Cup and for transmitting pictures from the 2004 Athens Olympics to Japan. We were also selected to transmit high-definition TV from the South Pole region to Japan by NHK.

Mobile Phone Business

After Japan Telecom launched its first foray in mobile communications in the pager market, it decided to enter the mobile phone market by establishing Tokyo Digital Phone Co., Ltd. in July 1991. At the time, mobile phones were actually called car phones and two companies provided mobile phone service: NTT covering all Japan, and IDO covering only the Kanto (Tokyo, Kanagawa, Saitama, etc.) and Tokai (Aichi, Shizuoka, Gifu and Mie) regions. Each of the other eight regions had its mobile phone company, the main shareholders of which were DDI Corporation and local electric power companies. Someone of the existing operators advised that the waves of the newly assigned 1.5-GHz band had stronger orthogonal propagation compared to the conventional 800-MHz band and commented that it would present difficulties as the first digital system. However, we decided to meet this new challenge because we had already evaluated the 1.5-GHz band and conducted some tests on using it to replace the LCX train radio on the Tokaido Shinkansen during the JNR era. New entrants to the mobile phone market suddenly increased the number of companies competing in each area from two to four. It seemed like new companies entering the market would experience severe difficulties. The start of service by these companies came many years after the two already operating carriers and it was predicted that the number of mobile phone subscribers across Japan in 2000 would be only 7 to 10 million. Although it seemed we would face technical difficulties, we chose digital right from the outset, while existing carriers used analogue. Despite being a late entrant, we took every possible measure to overcome our handicap. First, we formed a partnership with international carriers with a wealth of experience in mobile operations in overseas countries. Specifically, we entered tie-ups with Pacific Telesys, an American local telephone carrier with mobile phone operations that was established as a result of the breakup of AT&T, and the British company Cable & Wireless. Japan Telecom also purchased exchanges, base station equipment and other parts of its telecommunications

network from Ericsson, a Swedish company and global leader in this field.

This was a time of great changes in Japan's mobile phone business. From autumn 1993, new subscribers were no longer required to pay a one-time charge of ¥100,000. Japan Telecom started mobile phone service in the Kanto region on 1 April 1994 under the name Tokyo Digital Phone Co., Ltd. Previously, mobile phones were rented from carriers, but they soon became commodities for sale and many home appliance manufacturers started manufacturing mobile phones. The turning point came with lower prices and improved design and functionality. Subsequently, we expanded our service area to cover all of Japan by February 1997, developing services that were either the first of their kind in Japan or in the world. For example, we introduced all-LCD phones in November 1996 and launched text mail in November 1997. In October 2000, we launched a service allowing users to send photos taken with a mobile phone camera as message attachments. The number of subscribers rose as a result of these investments and we had the second largest share of the Japanese mobile phone market after NTT DoCoMo by March 2002. Thankfully, the Japanese mobile market has grown far larger than the initial prediction of 7 to 10 million subscribers in 2000. In fact, the number reached 60 million in July 2000 and has continued to increase.

Business Data

The company faced difficulties due to the dominance of NTT in the domestic market and KDD in the international market. We also entered the mobile phone market way behind the other carriers. Nevertheless, we successfully expanded operations for two main reasons: the trust we earned by providing the safest and most on-time shinkansen and regular railway services in the world; and the support we received from our major shareholders, the railway companies. As a result, the company was listed on the Tokyo and Osaka stock exchanges on 6 September 1994. We have also raised over ¥170 billion in capital at very low cost. This was the key to developing our mainstay fixed-line telecommunication operations, group company mobile phone operations and the merger with ITJ, which required ¥70 billion. We received a total of ¥220 billion in investment from the alliance with BT and AT&T in April 1998, which was very important for the purchase of Internet service providers (ISPs) and other companies and for mobile phone operations, which required an enormous amount of capital.

As a result, the market capitalization of Japan Telecom stood at ¥3.3 trillion in May 2000, making it the 25th largest company listed on the TSE and the third largest company in the telecommunications sector after NTT DoCoMo and NTT.

Changes in Shareholders

The three main JR passenger companies were the early major shareholders in Japan Telecom. There were few real merits for these companies to keep holding Japan Telecom shares, which had substantial unrealized profits. Meanwhile, the financial condition of BT and AT&T worsened due to large changes in the global telecommunications environment. AirTouch, our partner in mobile phone operations, merged with Vodafone of the UK, the largest company in the industry. Our major shareholders in Japan Telecom—the railway companies (also shareholders in the mobile phone company), BT and AT&T—then transferred their shares in Japan Telecom and the mobile phone company to Vodafone, the largest mobile phone company in the world, which through its merger with AirTouch had previously been the largest shareholder in the Japan Telecom Group mobile phone companies after Japan Telecom. (Although the transfers happened at different times, ultimately, Japan Telecom's shares were delisted in October 2004 at the conclusion of the friendly takeover.)

Japan Telecom (fixed-line telecommunication operations) was subsequently transferred to SoftBank Corp. via the American private equity firm Ripplewood Holdings, and in May 2005, Vodafone mobile phone operations in Japan, operating under the company name Vodafone were transferred to SoftBank. Using the names SoftBank Telecom and SoftBank Mobile (SoftBank brand name), these companies are important members of the SoftBank Group, which provides a broad range of services including content and portal sites.

The main financial indicators (consolidated) for the fiscal year ended 31 March 2001 (15th period), the year immediately before the ownership transfer are included opposite for reference. (Table 1)

Table 1 FY2001 Financial Indicators

Operating revenue.....	¥1,465 trillion
Ordinary income.....	¥89,477 million
Net income.....	¥17,546 million
Net assets.....	¥528,471 million
Total assets.....	¥2,489 trillion
Net assets per share.....	¥826,972
Net income per share.....	¥27,456
Equity ratio.....	21.23%
ROE.....	3.36%
PER.....	81.58
Cash flow from operating activities.....	¥158,789 million
Cash flow from investment activities.....	-¥435,676 million
Cash flow from financing activities.....	¥553,154 million
Cash and cash equivalents at end of fiscal year.....	¥470,326 million
Number of employees.....	7,076

* English reference material:
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Mr Murakami is Executive Advisor to SoftBank Telecom Corp. He graduated in Electrical Engineering from Keio University in 1961. Joined JNR where he was Superintendent of the Morioka Railway Operating Division. Following JNR privatization and division in 1987, he joined Railway Telecommunication Co., Ltd. and held various senior positions, including Director of the Company and President and Chairman of Japan Telecom Co., Ltd. before appointment to his present post in July 2006.

The SoftBank Business Group

