

Japan's Telecommunications Industry

Table of Contents

- **Executive Summary, Agenda (List of Contents)**
- **Japans telecom industry - Introduction**
 - Key trends for 2007
 - How did Japan's telecom industry become one of the world's most competitive? (historic overview)
 - Overview of Japan's telecom industry, and the major industrial groups and their affiliation (Graphics: industry structure and recent transactions, status of August 4, 2006)
 - Size (sales in 2003/2004) of top five Japanese telecom groups (Graphics: sales of the major Japanese telecom groups, data for fiscal 2003/2004)
- **The main players**
 - Overview of main players
 - Comparing the NTT Group, KDDI and SoftBank (Graphics for NTT, NTT-DoCoMo, NTT-Data, KDDI incl. PoweredCom, Softbank, sales for fiscal 2006)
 - Market Capitalization (2004 - Dec 28, 2006) for Vodafone, DoCoMo, NOKIA, NTT, Qualcomm, Motorola, KDDI and SoftBank
- **Financials of the top players**
 - Revenue of Japan's top mobile operators (DoCoMo, KDDI, SoftBank/Vodafone/J-Phone (data for 2000 - 2007)
 - Net after tax income of Japan's top mobile operators (DoCoMo, KDDI, SoftBank/Vodafone/J-Phone (data for 2000 - 2007)
 - Capital investments of Japan's top mobile operators (DoCoMo, KDDI, SoftBank/Vodafone/J-Phone (data for 2000 - 2007)
 - ARPU (average revenue per user) of Japan's top mobile operators (DoCoMo, KDDI, SoftBank/Vodafone/J-Phone (data for 2000 - 2006)
- **NTT**
- **KDDI**
 - KDDI's main business areas
 - KDDI's main business areas: fixed and mobile (graphics, sales data for fiscal 2007 (estimation))
 - KDDI's history, major mergers and acquisitions between foundation in 1953 and 2006
 - History of KDDI's service
 - KDDI's revenue (graphics: KDDI total revenue, mobile communications revenue, data for 2000-2007)
 - KDDI's investment capital expenditure (graphics: for different business areas, data for 2004-2007)
- **SoftBank Group**
 - Masayoshi Son
 - SoftBank overview
 - Main business areas
 - Group structure
 - Demonstrating SoftBank's corporate size: comparing Revenue, Net Profits, and stock capitalization between APPLE Computer and SoftBank (data for 2004-2005)
 - Japan Telecom
 - Media, TV business
- **SoftBank Mobile Overview**
 - Japan Telecom and J-Phone
 - J-Phone's success story
 - Vodafone's acquisition and sale of Japan Telecom including J-Phone
 - From J-Phone to Vodafone
 - Vodafone's turnround plans
- **The Acquisition of Vodafone KK by the SoftBank Group**
 - SoftBak acquires Vodafone KK - the Acquisition
 - SoftBank's targets
 - Risks and opportunities of SoftBank-Mobile's turn-round
 - SoftBank's post-merger actions
 - 3G base stations and coverage
 - Rebranding campaigns
 - Rebranding the shops
 - Yahoo-Keitai replaces Vodafone-Live
- **eAccess and eMobile**
 - AOL
- **IPmobile**
- **Fixed line markets**
 - Fixed line markets, overview, and trends
 - Fixed line market shares of the four top carriers (data for March 2004)
- **Basic Phone Service (POTS -> VOIP)**
 - Market shares of the local and medium distance fixed line phone markets for top 5 carriers (data for Sept 2004)
 - Competition for basic subscription voice telephony (data: major competing groups and pricing competition overview)

Unbundling of fixed line services
KDDI: IP telephone over dry copper, KDDI Metal Plus
Competition for basic voice telephony (main competitors)

- **Broad Band**
Broadband internet access costs (international comparison)
Development of Japans broad band markets (history, present market situation, trends)
Market shares for ADSL subscriptions for the top five carriers (data for Sept 2004)
Market shares for Broad-band internet subscriptions for the top six ISPs (data for March 2004)
Internet access in Japan, subscriber numbers for FTTH, cable TV, DSL, Dial-up (ISDN), and mobile internet (logarithmic graphics, data for 2001-2004, projection for 2005)
Internet access in Japan, subscriber numbers for FTTH, cable TV, DSL, Dial-up (ISDN), and mobile internet (cumulative graphics: data for 2001-2004, projection for 2005)
Fixed line internet access in Japan, subscriber numbers for FTTH, CATV, DSL, Dial-up (ISDN) (cumulative graphics: data for 2001-2004)
Broad band internet access in Japan, subscriber numbers for FTTH, CATV, DSL (cumulative graphics: data for 2001-2004, projection to 2005)
- **NTTs national optical IP Network**
Outline, investment size, strategy
Projected numbers for FTTH lines provided by NTT (data for 2002-2010 (plan by NTT))
FTTH subscription numbers (comparing Japan and European Union - EU, data for 2000-2005 and projections to 2010)
- **KDDIs broad band business and strategy**
KDDIs broad band services
Triple play, Metal-Plus, Hikari-One
- **Softbank/YAHOO-BBs fixed line business and strategy**
Softbank/YAHOO-BBs strategy
Softbank/YAHOO-BBs entering the FTTH market
- **Wireless communication markets**
Overview
Most important recent trends
- **Wireless communications, Mobile phones, 3G, PHS...**
Wireless market reality in Tokyo
Japans mobile phone companies (2006/2007)
Comparing 3G and 2G subscriber numbers for DoCoMo, Vodafone, KDDI, TuKa for different radio transmission technologies (PHS, PDC, 3G, CDMA2000-1x, CDMAone etc.) (data for 2002-2006)
Competition on Japans mobile phone market, total subscriber contract statistics for the major carriers, also showing the historic consolidation of the mobile communications industry (companies: Digital Phone Group, Digital TuKa, J-Phone, Vodafone, DDI-Pocket, DoCoMo-PHS, ASTEL, Cellular Group, IDO, KDDI/AU, DoCoMo) (subscriber numbers for the period 1998 to 2006, including historic data of merged operators)
Market shares (in terms of subscriber contracts) of the four major operators: DoCoMo, KDDI/AU, J-Phone/Vodafone, TuKa (Graphics: data for 1998-2006)
Mobile internet subscriber numbers (i-Mode, EZweb, Yahoo-Keitai / J-Sky / Vodafone-Live, data for 1999 - 2006)
Monthly subscriber number growth (net growth, net loss) for DoCoMo, KDDI/AU, SoftBank, Willcom (graph showing data 2004-2006)
Monthly subscriber number growth (net growth, net loss) for DoCoMo, KDDI/AU, SoftBank, Willcom (graph showing data June 2006 - November 2006)
- **Radio spectrum allocation for mobile communications in Japan**
Policy and trends
Details of the spectrum allocation for the 800MHz, 1.5GHz and the 2GHz bands (data of Summer 2004, for the major carriers: DoCoMo, KDDI/AU, Vodafone, TuKa, and PHS and for the different radio transmission technologies: PDC, PHS, wCDMA, and CDMA2000 and TDD for testing, also shown are the bands allocated to MCA transmissions and MT2000 satellite transmissions)
- **3G and 3.5G in Japan**
Overview
Waves of disruptive innovation
Overview of mobile 3G internet services including potential new market entrants from 2005 and beyond
3G introduction in Japan (subscriber numbers for KDDI, DoCoMo-FOMA and Vodafone VGS, projection for new market entries for second wave, data: subscriber contract statistics for 2001-2006)
3G subscriber data total and for FOMA, SoftBank 3G, KDDI-AU CDMA (data for 2002 - 2006)
DoCoMos "FOMA chasm" (mobile subscriber statistics for 2001-2004 with focus and discussion of the temporary plateau in DoCoMos FOMA roll-out)
The first wave of Japans 3G roll-out (2001-2005) (Graphics: conversion rate from 2G to 3G and 2.5G for the 3G carriers in Japan, data for 2001-2004, plus indication of potential new entrants from 2005 and beyond)
Market shares of Japans 3G market (Graphics: market shares in terms of 3G subscription numbers, data for 2002-2004, logarithmic scale)
Market shares of Japans 3G market (Graphics: market shares in terms of 3G subscription numbers, data for 2002-2004, linear scale)
The first wave of Japans 3G roll-out (2001-2005) (table showing the 3G and planned or deployed 3.5G systems and upgrade path, and data transmission speeds for different carriers)
3G imaging and video
3G vs WiFi (hotspots)
Picture mail and GPS
- **Mobile Phone Handset Markets**
Japans mobile handset markets: key points
Japans handset market versus GSM markets - key differences

i-mode handsets, typical characteristics

Evolution of i-Mode phone displays 2000-2004

Example: DoCoMo 3G FOMA 900i series (2004)

Japans market for mobile phone (Graphics: handset sales per month, sales data for 2001-2004)

Market shares of camera phone makers (data for 2001 and 2002)

DoCoMo FOMA P2102V

Demonstration of GPS integration (KDDI/AU)

Biometric sensor integration, fingerprint sensor (DoCoMo F505i by Fujitsu)

- **The "AU design project" Design as Value**

Significance of the "AU design project"

Summary of "AU design project" 2001-2006 (table showing major design models: talby, info.bar, ishicoro, GRAPPA 002, rotary, wearable, apollo and apollo02, etc)

Details: Infobar, Infobar 2, cypres, kaos, vols, talby, PENCK

The KDDI Designing Studio

- **Sweets for the teenage and subteen market**

As an example of targeting segments

- **Phones for the silver market**

DoCoMo's RakuRaku series

TuKa-S TK50-S

- **DoCoMo's 3G Phones**

DoCoMo's 900i series, 700i series, Concept Phone series

- **Mobile phone sales in Japan**

Overview

Promoting the 900i series

Carriers competing face-to-face (images from a typical mobile phone store, demonstrating the competition of carriers via handset presentation)

Focus on the KDDI/AU (3G and 3.5G handsets) vs Vodafone handset competition (2G handsets)

Demonstration of a typical suburban KDDI/AU store, showing 3G and 3.5G handsets on display

Vodafone global standard 3G phones

Why did the October 2004 re-launch of 3G fail?

From Vodafone to SoftBank

Nokia mobile phone sales in Japan

- **Mobile internet and i-mode**

Why was i-mode born in Japan, not in Europe or USA

The i-mode eco-system (graphics showing the interplay of the integrated i-Mode value chain orchestrated by DoCoMo)

i-mode in a nutshell

Market shares in Japan's mobile internet (data for i-Mode, EZweb, YAHOO-Keitai for 2001-2006)

Cumulative total subscriber numbers in Japan's mobile internet (data for i-Mode, EZweb, YAHOO-Keitai for 2001-2006)

Total subscriber numbers in Japan's mobile internet (data for i-Mode, EZweb, YAHOO-Keitai for 2001-2006)

Month-to-month growth in Japan's mobile internet (data for i-Mode, EZweb, YAHOO-Keitai for 2004-2006)

- **EZweb - the official menu**

Evolution of the official menu (top) 2005 and 2006 (including GOOGLE mobile search)

English menu, global site

AU m-commerce portal portfolio

AU auctions

- **SoftBank and YAHOO-Keitai**

Leveraging YAHOO for the SoftBank brand

YAHOO-Keitai replaces Vodafone Live

+ YAHOO-Keitai = SoftBank campaign

- **m-Commerce, mobile payments and m-Transactions**

M-commerce and M-transactions (data and extrapolation for 2000-2010)

m-Commerce, m-Content and m-Advertising in Japan to reach US\$ 10 billion by 2005 (data for 2001-2005)

i-Mode supports a range of m-Commerce and m-Transactions (overview of transaction classes)

i-mode premium sites - a billion dollar market, figure of combined revenue of i-mode premium pay sites (data for 1999-2003)

Around 50% of i-mode users subscribe to at least one pay site, figure with subscription data (data for 1999-2003)

- **Music, Mobile Music**

Characteristics and trends

comulative total of downloaded music (comparing chaku uta, chaku uta full and iTunes)

Mobile music compared to total music market

Mobile music market size in Japan

Poke Melo Joysound

Full songs - chaku uta full

- **AU Listen Mobile service LISMO**

Characteristics and trends

AU mUsic port

LISMO music store

Mobile music market size in Japan

- **Location based services and GPS**

Characteristics and trends

EZnaviwalk

3D navi

i-Area

- **Mobile payments and keitai credit**
 - Overview and trends
 - Overview of e-money, and electronic transaction and credit systems
 - DoCoMo's investments in banks and credit card companies
 - Japan's credit card and cash payment markets (data for 1990 - 2010 projection)
 - Japan's credit card market
 - Details, graphics, and implications of DoCoMo's investments
- **iD - DoCoMo's credit brand**
 - DoCoMo's iD mobile credit platform
 - DCMX - DoCoMo as a credit card operator
 - QuicPay contactless offline payments
- **FeliCa Wallet phones**
 - Wallet phone introduction, introductory models (data July 2004)
 - Initial transaction partners for i-Mode/FeliCa (data July 2004)
 - What are wallet phones? Overview
 - Multi-application smartcards integrated into mobile phones (graphics showing the system overview)
 - Cash register POS with Edy reader / writer
 - Edy in Felica wallet phones
- **Mobile-TV**
 - Phones for mobile-TV (examples by SHARP and SONY-Ericsson)
 - Overview, 1-seg broadcast vs streaming over IP
 - Three alternative screens
 - Mobile digital TV and internet
- **Prepaid Mobile phones**
 - Prepaid mobile phones in Japan (statistics for Sept 2004, graphics for DoCoMo, AU, Vodafone/SoftBank, and TuKa)
- **PHS**
 - Japans competing three PHS services and networks (overview discussion)
 - Image: wireless reality in Tokyo, showing PHS data card in actual daily use
 - Overview, products and services
 - Recent transactions and trends
 - Sample products: DDI-Pocket Air-H data PC cards and USB connectors
 - DDI-Pocket data connection products samples
 - Data transmission units
 - Base station: example - SANYO station for 256kbps data
 - PHS data charges in comparison with 3G data charges (Graphics: PHS fees in comparison with 3G fees as a function of consumption for 0-700Mbyte/month)
 - PHS: competitive features and trends
 - Wristomo a mobile phone on your wrist, with data access (photographs)
 - Carlyle / Willcom
 - EDGE
- **Fixed-mobile integration and mobile wireless LAN integration and wireless VOIP**
 - 3G - wireless LAN and 3G - fixed line integration
 - DoCoMo "Passage Duple", combining FOMA 3G and wireless LAN, N900iL handset including photograph
 - Wireless VOIP, discussion
- **Summary**