

Cooperation with Japanese ICT-Partners: Rationale and Successful Cases of Deutsche Telekom

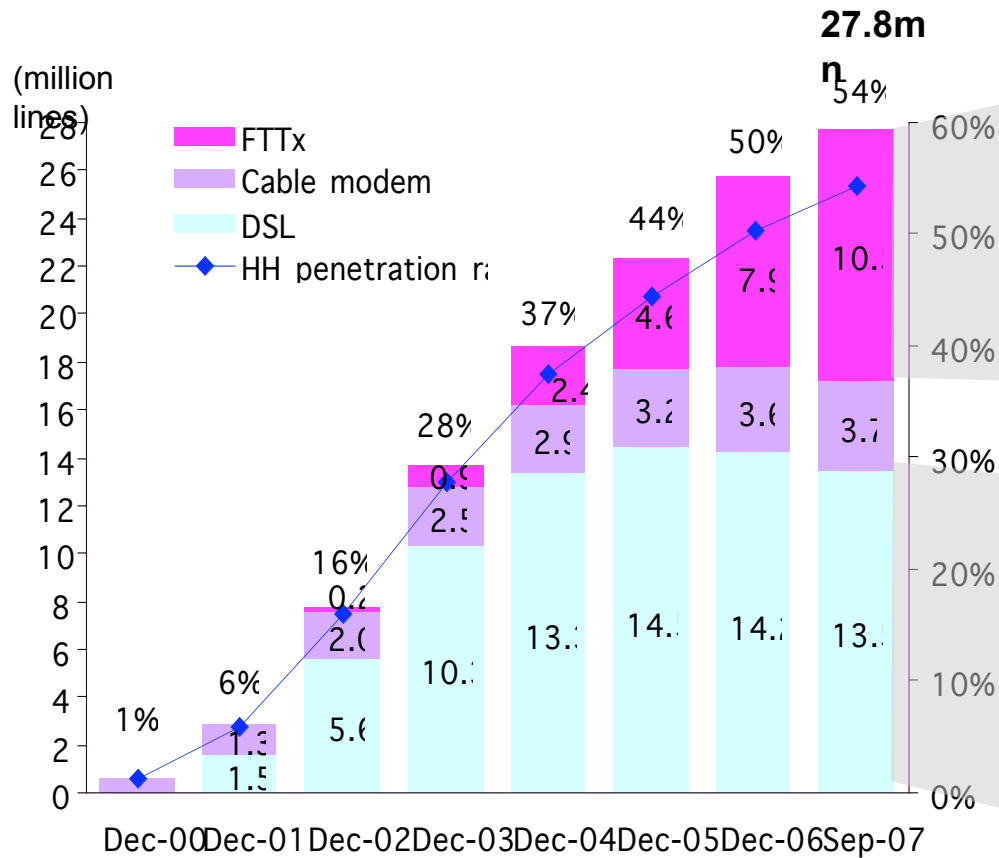
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Dr. Horst Melcher, Deutsche Telekom K.K. / Japan

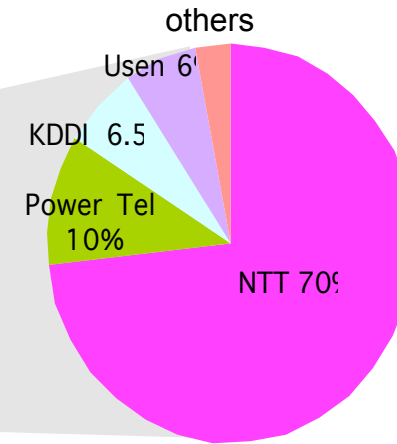


Broadband market in Japan

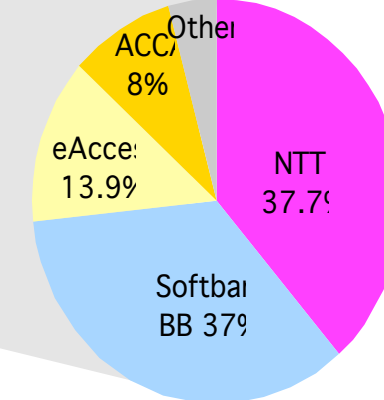
Broadband users in Japan



FTTH market share



DSL market share



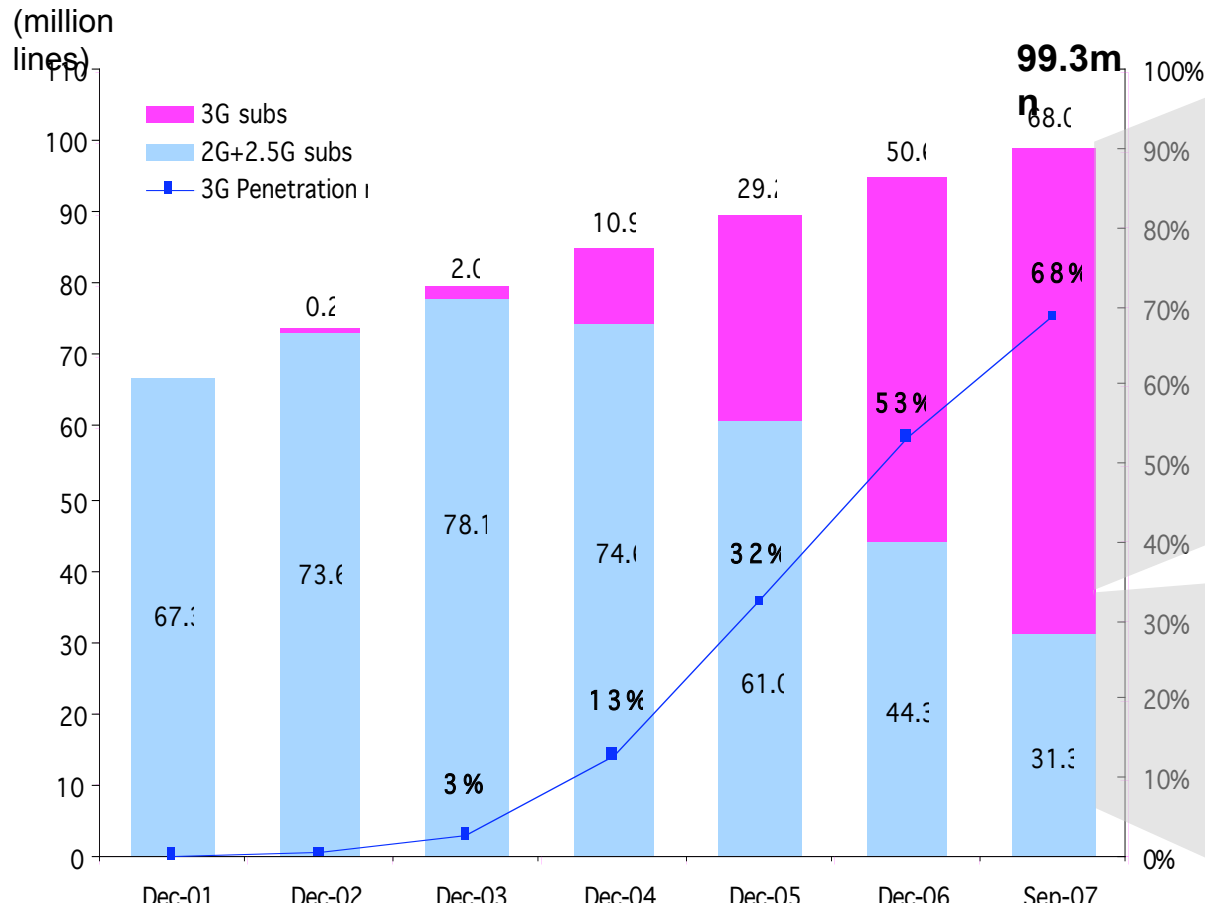
(As of Jun-07)

Source: Ministry of Internal Affairs and Communications



Mobile 3G market in Japan

Mobile users in Japan

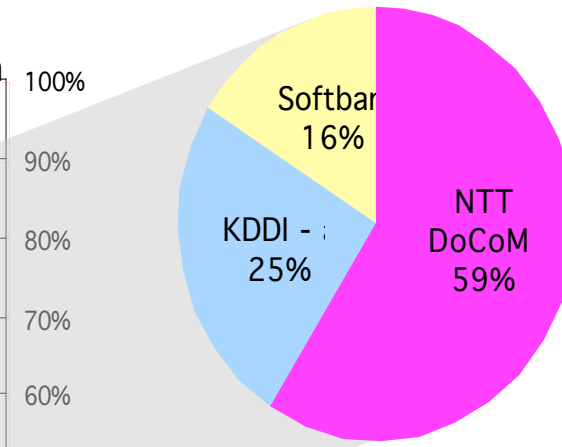


Note : DoCoMo launched W-CDMA in Oct-01, Softbank launched W-CDMA in Dec-02, KDDI launched EV-DO in Nov-03

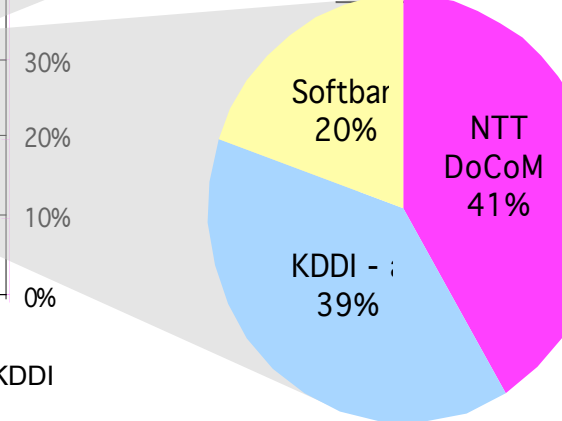
Source: Telecommunications Carriers Association , Company data

3G market share

(3G include W-CDMA, EV-DO)



2G+2.5G market share

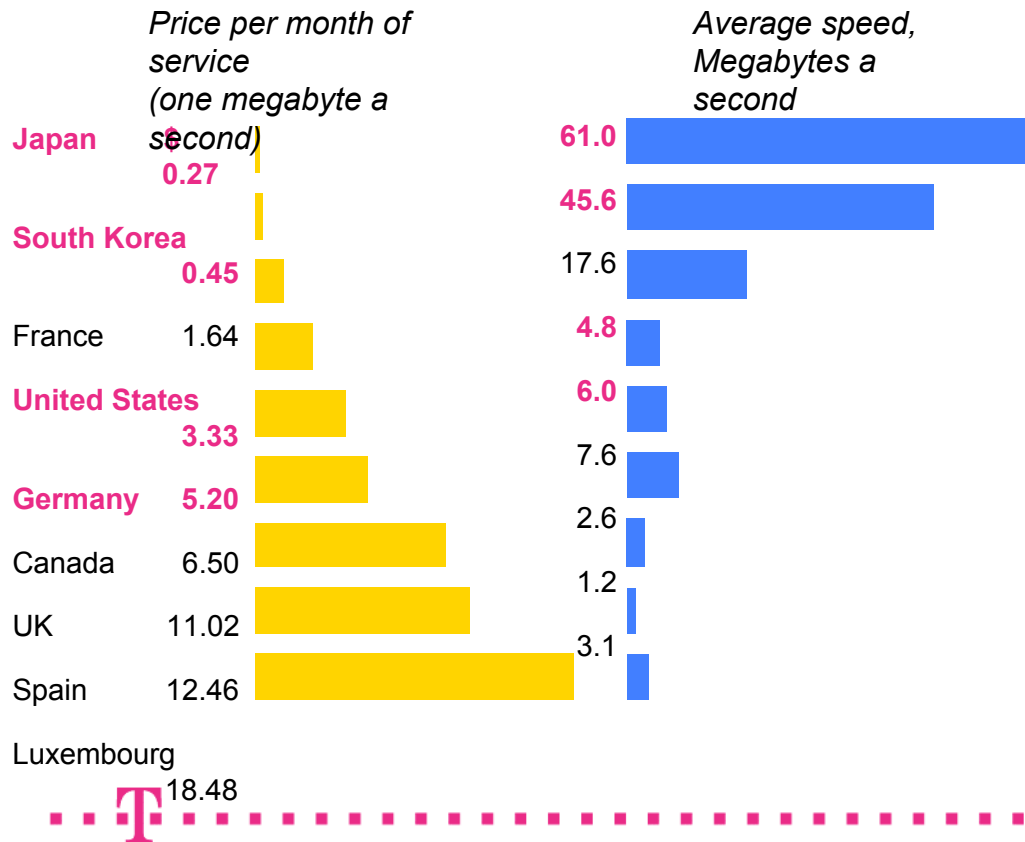


(As of Sep-07)

Broadband and Mobile *Key Indicators* - Int'l Comparison

Broadband

Faster, and cheaper, connections in Japan



Mobile

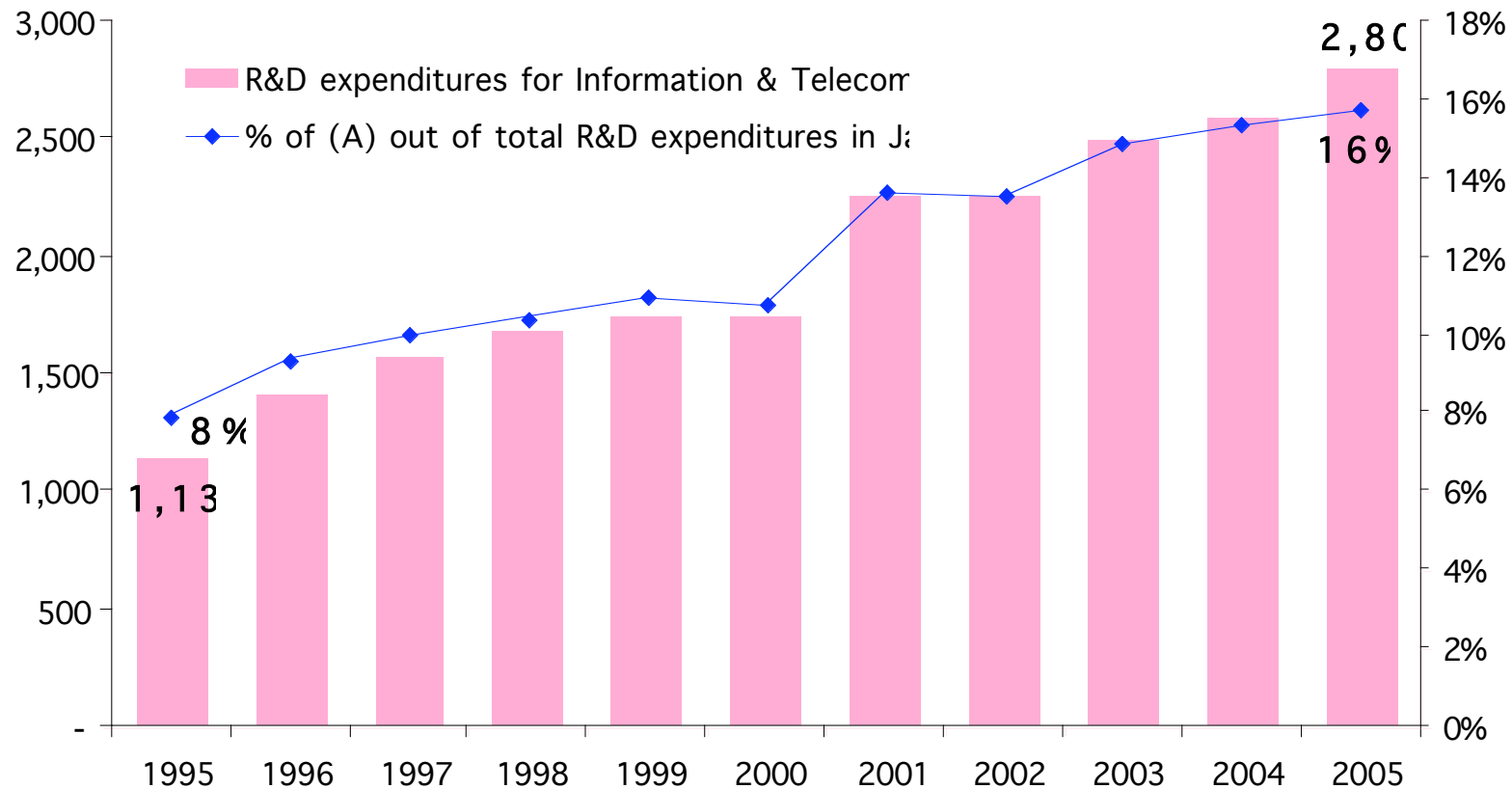
- **Total number of subscriber: No. 3 (behind China and USA)**
- **Mobile Internet users: 94% -> No. 1**
- **Data ARPU 33% of total ARPU -> No. 1**
- **Digital mobile TV integrated into mobile phone: 20 % (Mar.-08) -> No.1**
- **3G mobile phone Penetration: 68% ->No.1**

ARPU: Average Revenue Per User per month
 Source: The Information Technology & Innovation Found:

Japan's R&D expenditures for ICT

R&D expenditures for Information and Telecommunications

(JPY billion)



Source: Ministry of Internal Affairs and Communications



Assessment and Initial Conclusions

- Advanced Broadband + Mobile/3G technologies are first developed and brought to market in Japan (“pioneer”-market) by telecom **Operators, Device Manufacturers** + (related) **Services & Applications Developers**.
- The telecom **Operators** of Japan are strongly competing in Japan, but not outside Japan (“Galapagos-syndrome”), which in principal allows for friendly cooperation with international telecom operators.
- The telecom **Device Manufacturers** + (related) **Services & Applications Developers** must seek additional markets outside Japan for “Economies of Scale”, which requires cooperation + commercial relationships with international telecom operators.
- Based on this rationale, following are three *examples* of DT’s cooperation with high-performing Japanese firms.

Cooperation on Mobile Device Technology.....w/ Sharp Corporation

- Based on T-Mobile-specific design requirements and exclusive US-software, a cooperation w/ Sharp Corp. was started for the development and manufacture of the **Sidekick PDA**, first launched by T-Mobile USA in July 2004 (**Sidekick II**: GSM/GPRS, 2.6" VGA LCD, VGA Camera).
- Due to the successful US-market introduction, a next model version was launched in May 2006 (**Sidekick III**: GSM/GPRS/EDGE, 2.6" VGA, 1.3 M Camera, Bluetooth), line-extended by a low-cost-version in March 2007).
- A further developed **Sidekick LX** was launched in October 2007 (GSM/GPRS/EDGE, 3.0" LCD, Slim Body) with over 500.000 units shipped.
- Note: All the development + manufacturing is done in Japan.
- Interface between Sharp Corporation and T-Mobile is managed locally by DT KK.

Cooperation on Fiber-optic & NGN- Technology.....w/ *NTT Corporation*

- Former “incumbent operators” face similar challenges since their privatization (NTT in 1985, DT in 1995), with emerging new technologies providing new opportunities for revenue growth.
- Since government regulators opened the “incumbents”- networks to the new competitors (basically “at cost”), NTT and DT are pursuing similar options to use new technologies to differentiate from the competition - **“NGN” – Next Generation Networks**
- **NGN + Broadband Access** for consumers’ households is one such option, with NTT being the leader in the development and deployment of FTTH (Fiber to the Home), the fastest Broadband Access available (100+ Mbps), globally.
- **NTT and DT work in the framework of a “Joint Research Agreement”** on multiple topics of NGN.

Cooperation on “Location Based Services” - Technology.....w/ NAVITIME JAPAN K.K.

- Since introduction of GPS-based *Car Navigation* in the early 1990s, other GPS-based services became popular in Japan, mainly through integration into mobile phone handsets (pioneered by au/KDDI in 2003).
- *NAVITIME JAPAN K.K.* started in 2000 based on previous developments of path-finding engines for mobile, handheld devices by its co-founders. It is now the market leader for mobile “Total Navigation” services in Japan, covering all 3 mobile operators for “Location Based Services”/LBS, charging users with monthly subscription fees.
- With the planned introduction of “World Wide Total Navigation” *NAVITIME* wants to expand its reach to mobile operators internationally, i.e. T-Mobile USA and T-Mobile Europe. Such additional data-services shall provide T-Mobile also with competitive advantages - and added data-revenues

Some Conclusions.....

- Local presence is critical in an industry, that is not globally organized, for functioning interfaces w/ Japanese counterparts.
- Strong Champions needed on both sides, since Research & Development is “people-business”, to institutionalize will take longer, if ever. Champions need effective Top-Management support.
- Long term orientation is seen as integral part of the Japanese and European “corporate DNA”.
- Competitive issues must be managed to share common Research & Development benefits – in particular through joint efforts on international standardization of technologies developed.



Appendix: Japanese Operators

(Unit: JPY billion)	NTT		KDDI		Softbank	
		NTT DoCoMo		(mobile business)		(mobile business)
Revenues	¥10,761	¥4,788	¥3,335	¥2,677	¥2,544	¥1,442
EBITDA	¥3,341	¥1,575	¥692	¥598	¥525	¥321
EBITDA margin	31%	33%	21%	22%	21%	22%
Net debt	¥3,966	¥260	¥428	N.A.	¥2,008	N.A.
Capex	¥2,237	¥934	¥438	¥329	¥390	¥308
Major shareholder	Government (33.7%)	NTT (60%)	Kyocera (13%) Toyota Motor (11%)	N.A.	Mr. Son, CEO (31%)	N.A.
Market cap	¥8,259	¥7,937	¥3,556	N.A.	¥2,275	N.A.

Note: Financial data: last fiscal year ending in Mar-07

Market cap: as of 18-Jan-08

