



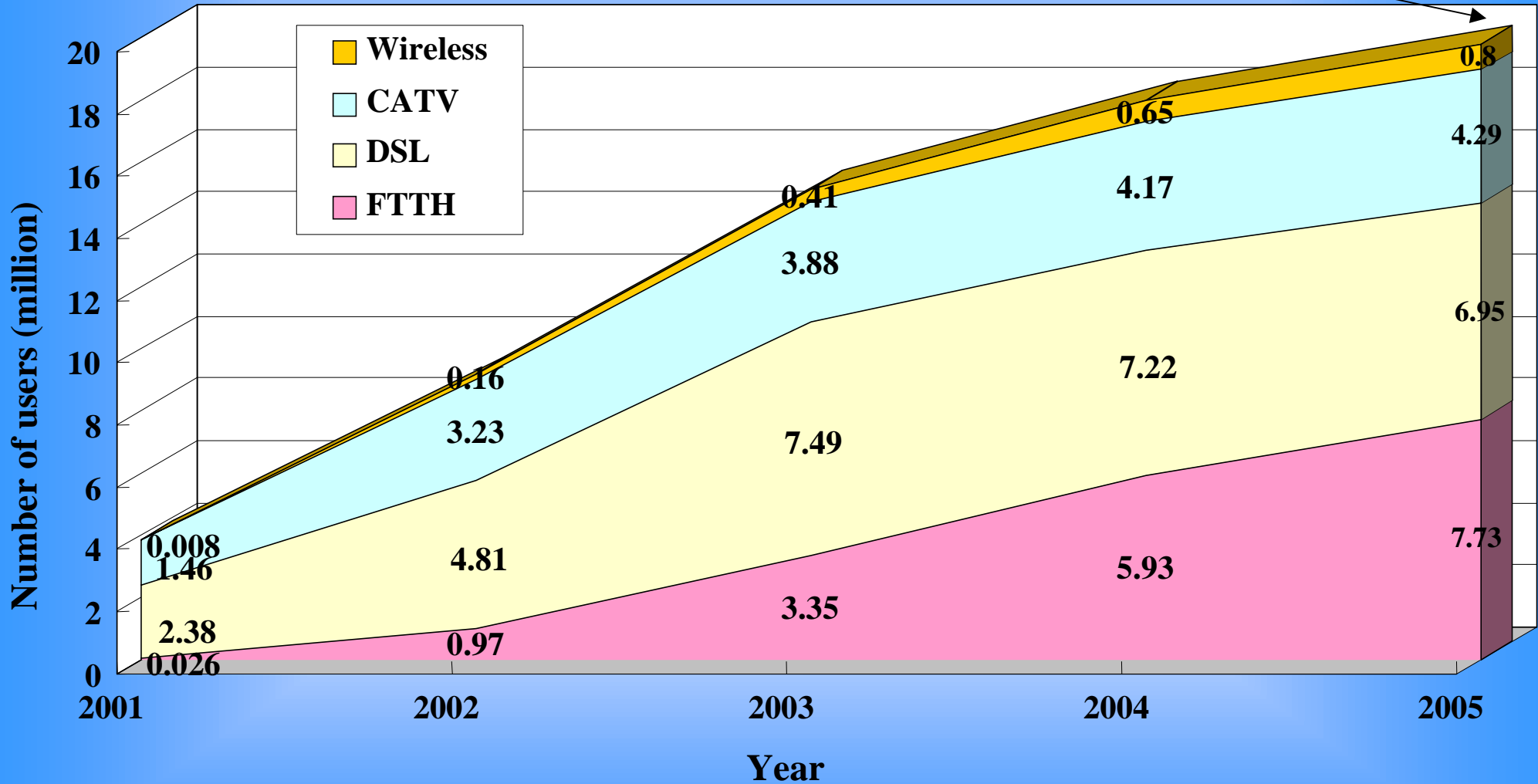
# **“Broadband & Ubiquitous” Success for Hotspot<sup>®</sup> Business**

**November 21, 2002**

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**NTT Communications Corporations**

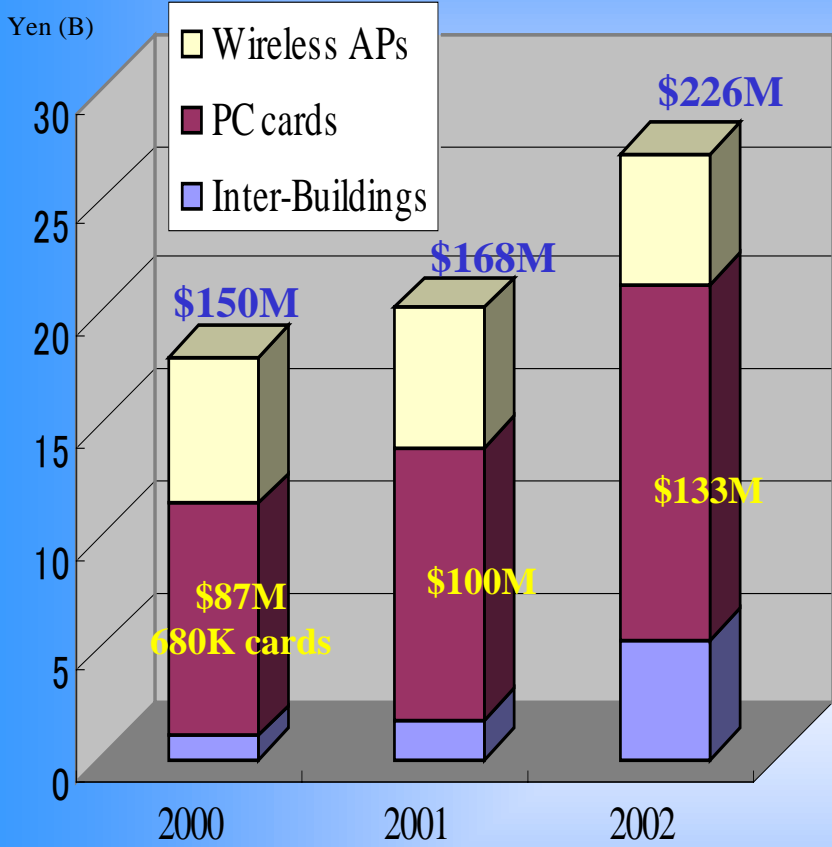
# Home Broadband Usage Growth

N. of users will reach **24.94M in 2005**



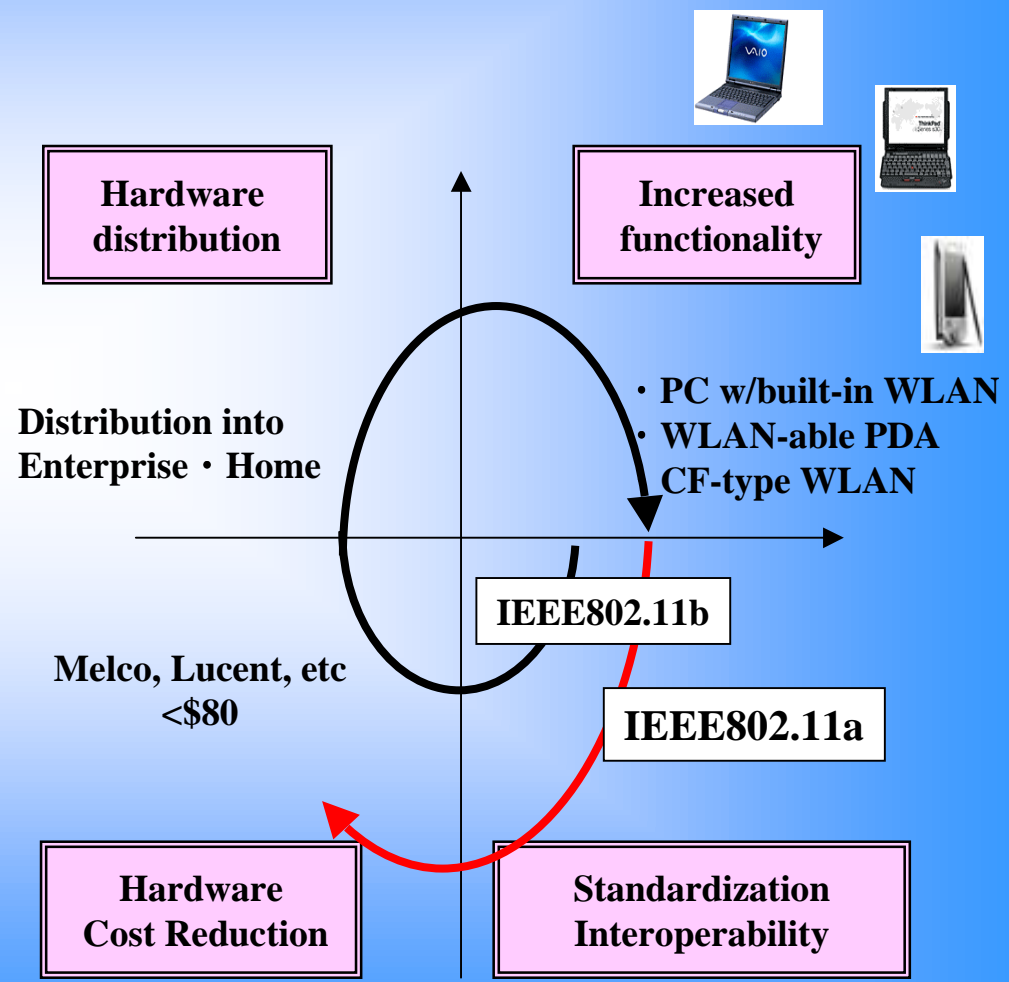
Ref. White paper; "Information and Communications in Japan," Ministry of Public Management, Home Affairs, Post and Telecommunications, Japan.

# Wireless LAN Market in Japan



**Estimated Domestic Wireless LAN Market**  
 (Source : Nikkei Communication 2001.12.17)

## Spiral of Wireless LAN equipment distribution



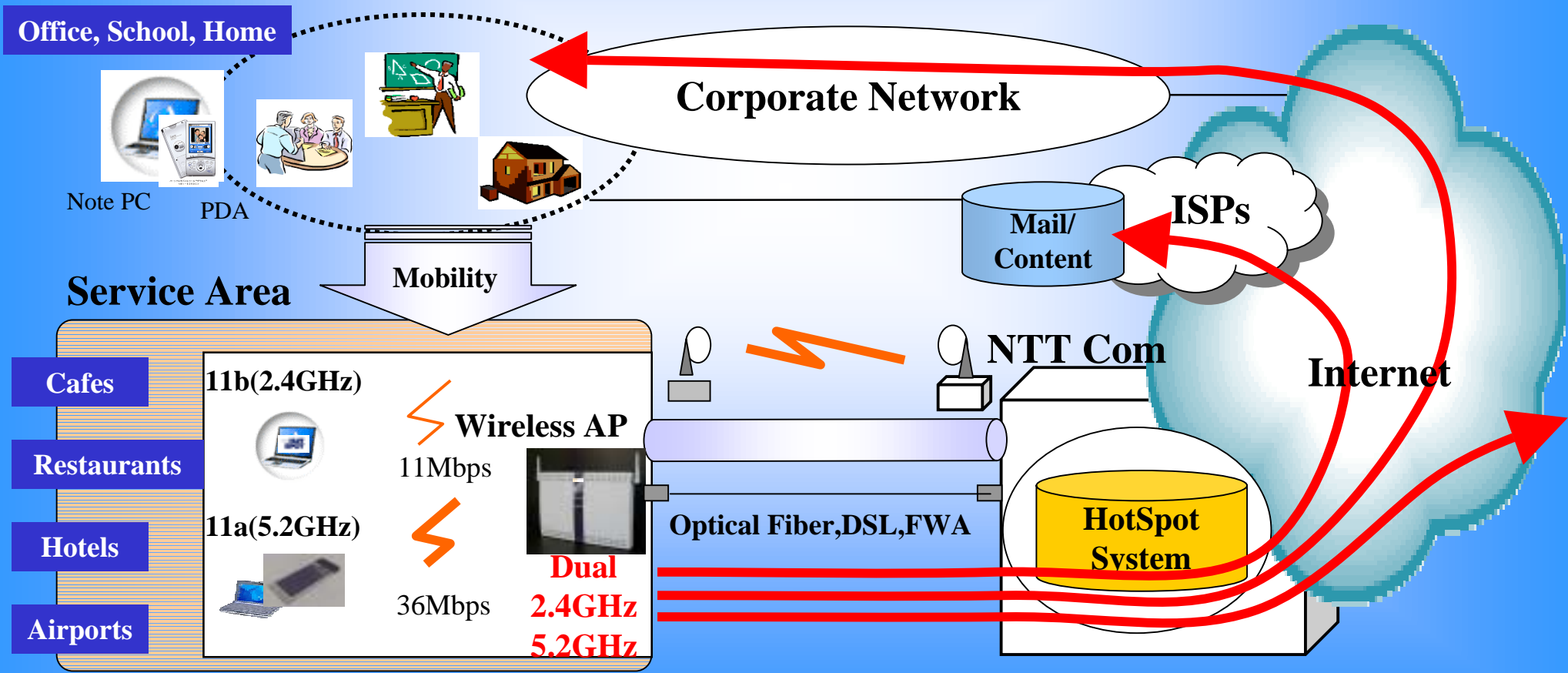
# Field Trial and Commercial Service of Hotspot in Japan



Wireless Technology	2001	2002	Wireless Transmission Standard
2.4GHz	<p><b>7/3 NTT Communications</b> (Moss Burger, Shinagawa Prince hotel, MiniStop, Plains Coffee) <b>Commercial Service (5/15)</b></p> <p>End of June IBM (Narita Airport, Keio Plaza, Century Hyatt, New Otani, etc.)</p> <p><b>8/13 MIS</b> (Sangenjaya area, Century Hyatt, Daiichi Hotel, Ark Hills, etc.) <b>Commercial Service (4/1)</b></p> <p><b>9/26 JT, JR East</b> (in Tokyo Station) <b>12/20</b> (In Tokyo, Shinjuku, Shibuya, Ueno and Shinagawa Stations)</p> <p><b>10/20 NTT West</b> <b>1/31</b> (Lotteria, Kinko's, Hanshin Terminal lobby, Hotel, Kansai Airport, etc.) <b>Commercial Service (7/1)</b></p> <p><b>2/4 ampm, Tokyo Denryoku</b> (Shibuya) <b>20 minutes ¥80</b></p> <p><b>12/4 Pronto, Linux Café</b> Akihabara</p> <p><b>11/22 Excelsior Café</b> (Dotour), Kansai Denryoku (Osaka Umeda)</p> <p><b>12/10 Rikei</b> (Hilton Tokyo) <b>\$4/time</b></p> <p><b>12/17 @Mark Venture, IBM, Sisco</b> (Tully's Coffee, etc.)</p> <p><b>2/1 NOKIA</b>, Odakyu, Keikyu, Mori Bldg→IPv6</p> <p><b>4/14~6/30</b> 8 locations in Tokyo <b>Commercial Service (7/1)</b></p> <p><b>6/6~</b> Approx. 6 months Tokyo &amp; Hokkaido area</p> <p>From June: Select McDonalds and Starbucks</p> <p><b>Commercial Service (7/1)</b></p>	<p><b>IEEE802.11b</b></p>	
5GHz	<p><b>3/21/00 NTT East</b> (Mainly Shibuya) <b>8/31</b> <b>NTT東日本</b></p>	<p>July <b>NTT BP</b> Established</p>	<p><b>HiSWANa</b></p>
Bluetooth	<p><b>8/27</b> <b>ERICSSON</b> <b>12/20</b></p>	<p>Marubeni, Shinkan-sen</p>	<p><b>Bluetooth</b></p>

# NTT Com's Hotspot Service

- Expand to 1000 locations (cafes, restaurants, hotels, airports, etc.)
- Provide service to individuals and enterprise for ¥1,600(\$13.3)/month
- Provide high speed WLAN(IEEE802.11a) connectivity environment



# *Key Issues for “Hotspot” Business*

- *Broad Coverage vs. Investment ?*
- *Easy to use vs. Security ?*
- *New Value with Key Technologies vs. Simple Access*

# *Broad Coverage vs. Investment ?*

## *Key to success : Broad Coverage with Low Investment*

### *☆ Increase “Hotspot”*

*by Roaming Service with other WISPs*

*- NTT Com’s Hotspot has offered roaming on trial  
with NTT-BP and Wicom*

### *☆ Expand “Hotspot” as Spot Business*

*with Area-oriented Contents, Advertisements, etc.*

*with Local Community Information*

*- NTT Com’s Hotspot can manage location information*

### *☆ Cover other Area*

*by Seamless Service with PHS, 2G/3G, FTTH, DSL, etc.*

## *Key to success : Security Policy suited to Usage*

*☆ For General Use : Easy to use > Security*

*Use with any OS (OS, Platform independent)*

*Free from Extra Function*

*Enable Roaming with other WISPs*

*☆ For Business Use : Easy to use < Security*

*Require High Security beyond Security Level of Internet*

*Require End to End Security*

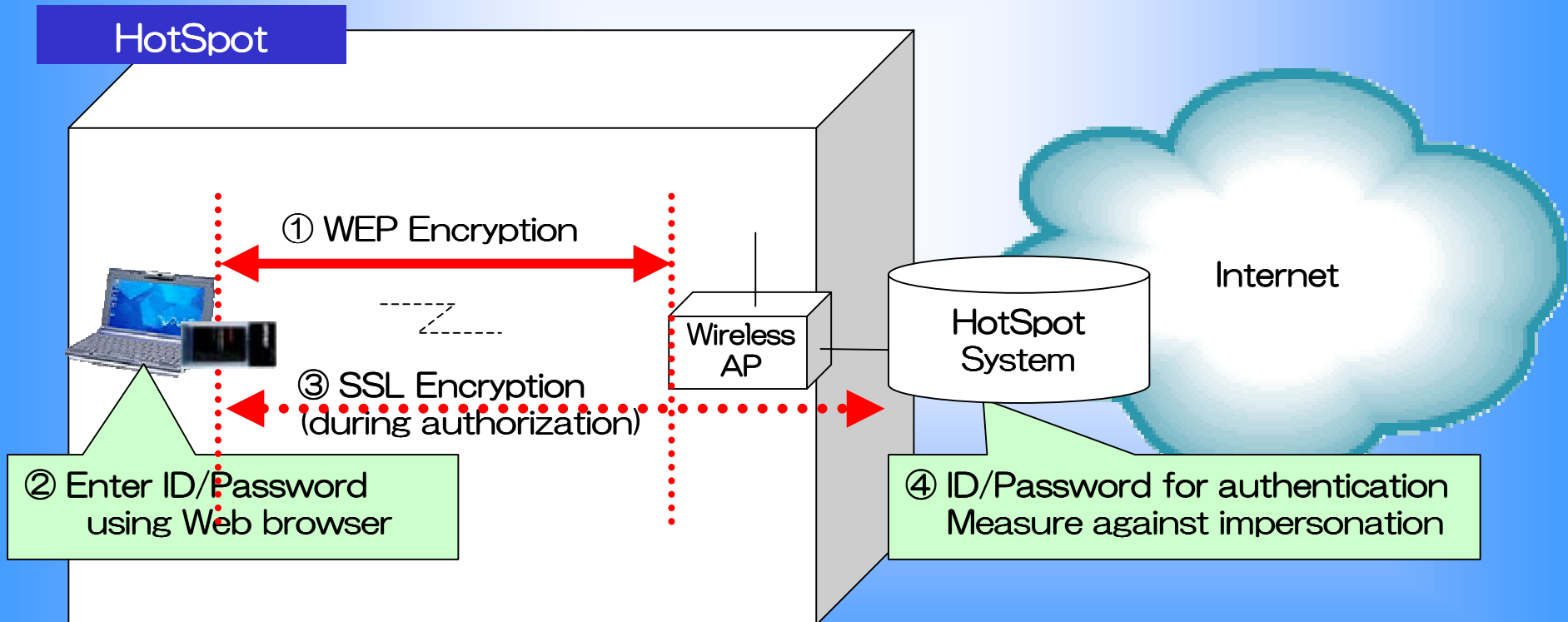
*(Both in the Wireless Segment and across the Internet)*



# NTT Com's Security Policy for General Use

**Require ONLY Browser(SSL) and WLAN capability**

- Equivalent security level to the Internet is ensured
- Anyone can operate without extra software

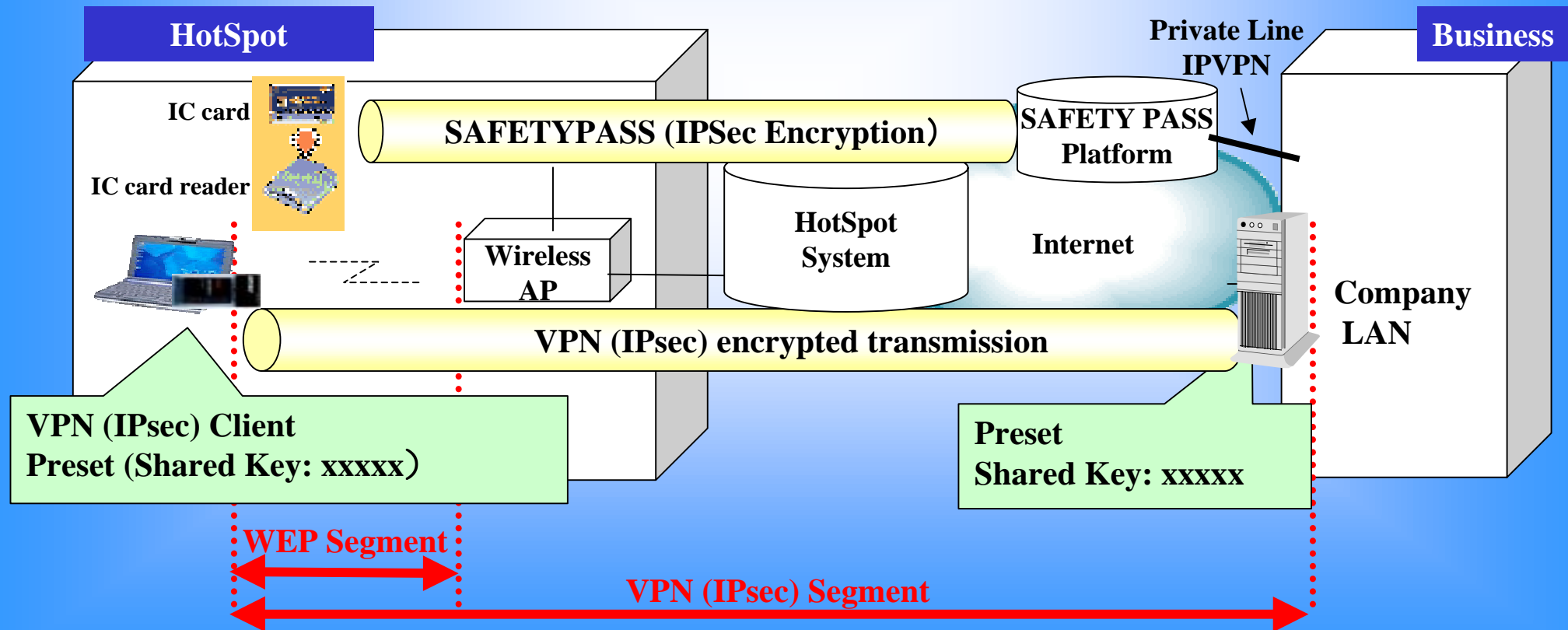


# NTT Com's Security Policy for Business Use

*Offer global addresses to enable VPN setup*

- *Easy configuration for various OS*
- *End to end security assurance for crucial data not only in the Wireless segment but also across the Internet*

*Offer SAFETYPASS service as an Internet Verification using an IC card*

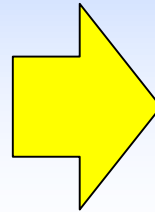
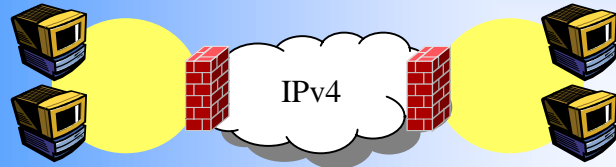


# New Value with Key Technologies

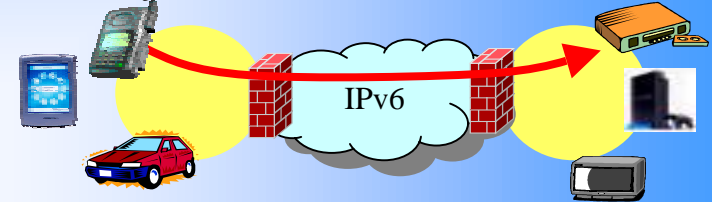
## IPv6 provides New Value to Hotspot

- NTT Com's Hotspot will implement IPv4/v6 Dual Stack in 2003

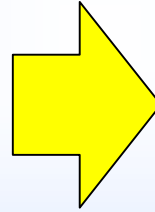
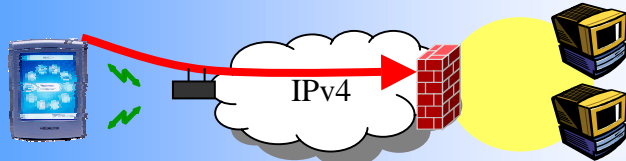
Network for computer  
(Complicated Setting)



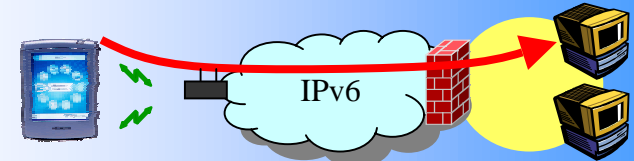
Ubiquitous network for every terminal  
(Plug and Play)



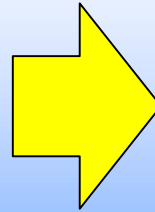
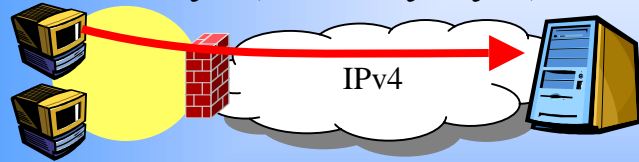
Access to the entrance of NW



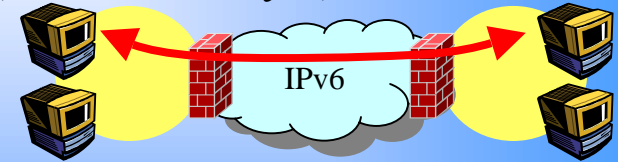
Direct access to the user's terminal



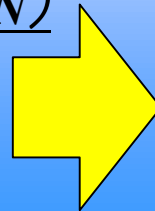
Client-Server style(one-way style)



P2P style(Interactive style)



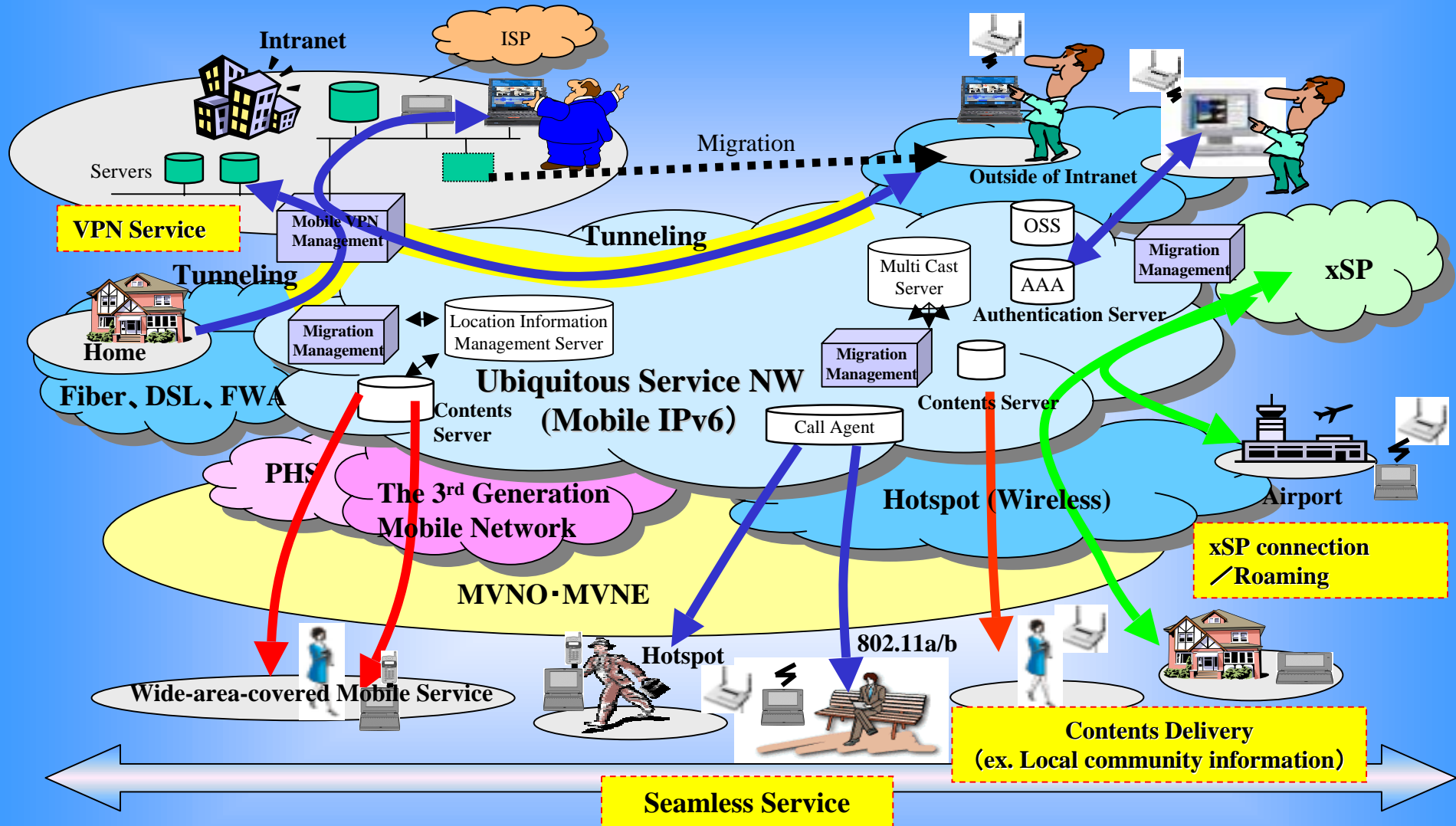
Site to site security (No security within LAN)



End to end security



# Key Tech Drive Ubiquitous World



**Synergy among Terminal, Software, and Highly developed NW will bring us new revolutionary information service**