Broadband Market Trends in Korea

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Broadband Markets in Korea

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I. Broadband Markets in Korea

❑ **Worldwide Leader in Internet Usage (Jan 2004, MIC)**

- **Total Users: 28.6M (62% of Total Population)**
- **Users of Broadband: 11.3M (24.5% of Population, 78% of Households)**
- **Broadband Penetration (% of population): Highest**

|	Korea	Sweden	Denmark	Germany	France	UK	Source
Broadband Penetration (%)	**23.17**	**9.16**	**11.11**	**4.84**	**4.13**	**3.63**	**OECD June 2003**

❑ **Competitive Market Structure (Jan 2004, MIC)**

- **Many Suppliers**
  - ➢ **KT 50.2%, Hanaro 24.2%, Thrunet 11.5%, Others 14.1%**
  - ➢ **KT's Subscribers: 5,656K**
- **Internet Café: Over 20,000**
- **Typical Price: U.S. $25 (30,000 Won)**

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Growth of Broadband Subscribers

○ **The market has been exploring over the last 4 years (2000-2003).**

○ **DSL and Cables are sharing the market. (Cable M/S increasing)**

(Unit : Thousand Subscribers)

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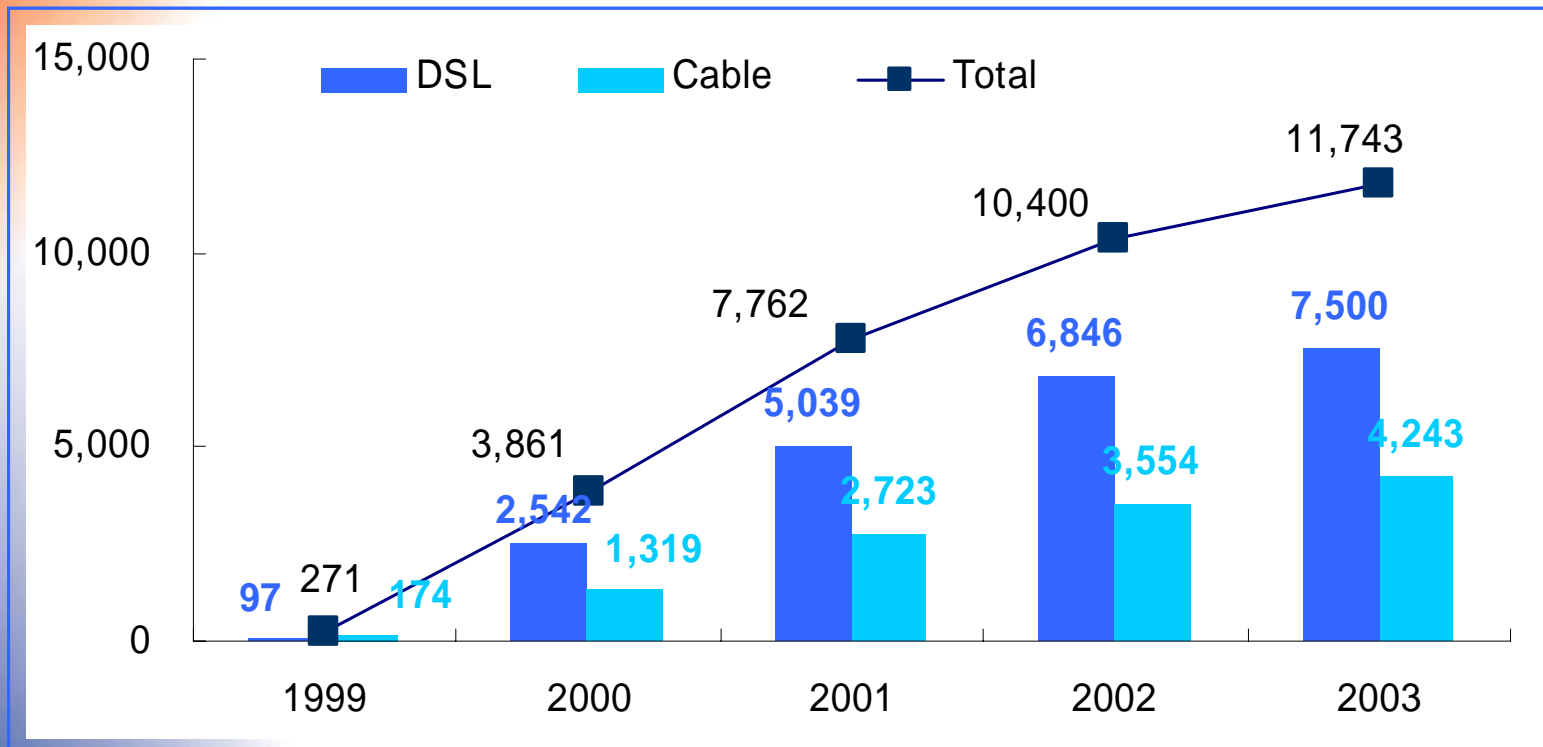
Market Shares in the BB Market

○ **KT has been successful in increasing its market leadership so far.**

- **2.7% increase in market share in 2003**

○**Others (cable companies) gained their higher market shares (1.4%),**

while Hanaro and Thrunet lost 3.2% and 0.9% respectively.

	Dec-02	1Q-03	2Q-03	3Q-03	Dec-03
KT	47.3%	48.3%	48.6%	48.8%	50.0%
Hanaro	27.6%	27.3%	26.7%	26.3%	24.4%
Thrunet	12.5%	11.8%	11.6%	11.4%	11.6%
Others	12.6%	12.6%	13.1%	13.5%	14.0%

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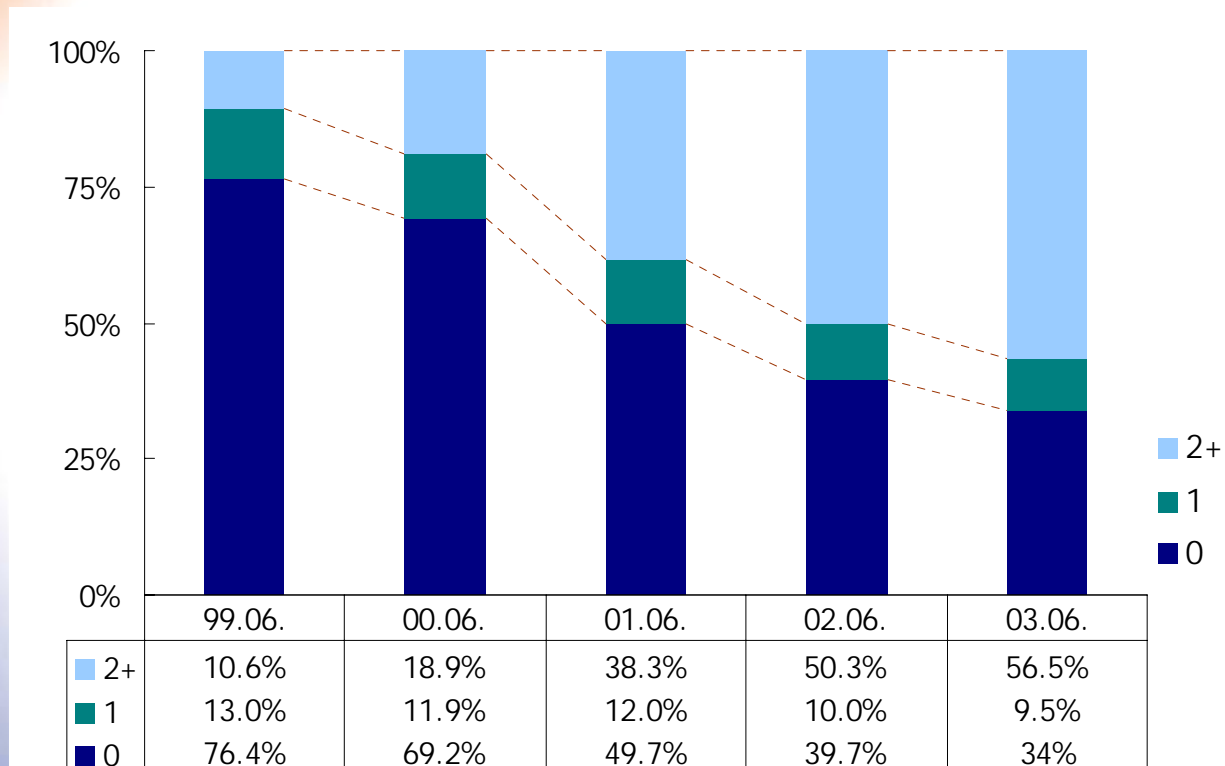
KT's Growth in BB Markets

○ **KT provided more than one million of DSL until 2002 per year.**

○ **From 2003, KT has been replacing ADSL with VDSL in bulk.**

Subscribers	2000	2001	2002	2003
Net Increments	1,034,378	2,128,874	1,064,341	666,523
Total Broadband	1,729,320	3,858,194	4,922,535	5,589,058
- ADSL	1,729,320	3,858,194	4,775,535	4,213,555
- VDSL			147,000	1,375,503

Number of Internet Users in HH

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○ **The majority of HH's has 2 or more internet users in Korea.**

○ **Non-internet users are decreasing in number rapidly.**

	99.06.	00.06.	01.06.	02.06.	03.06.
2+	10.6%	18.9%	38.3%	50.3%	56.5%
1	13.0%	11.9%	12.0%	10.0%	9.5%
0	76.4%	69.2%	49.7%	39.7%	34%

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Internet Usage by Contents

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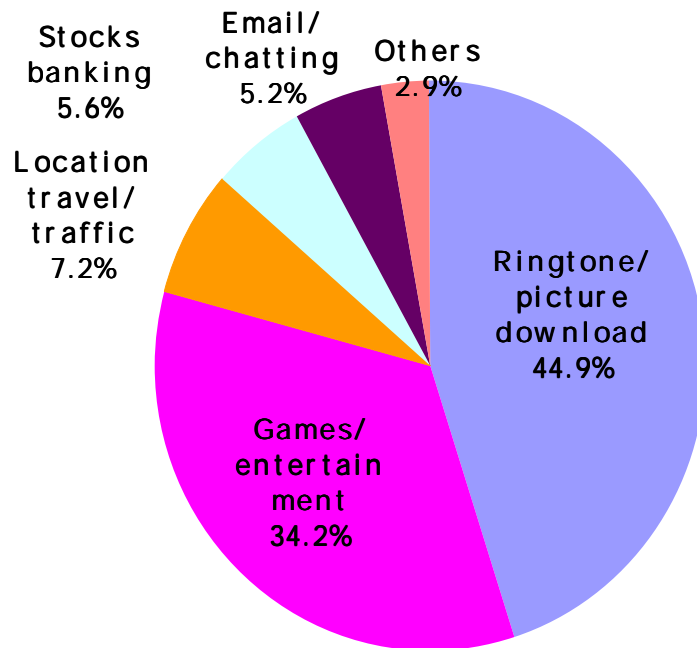
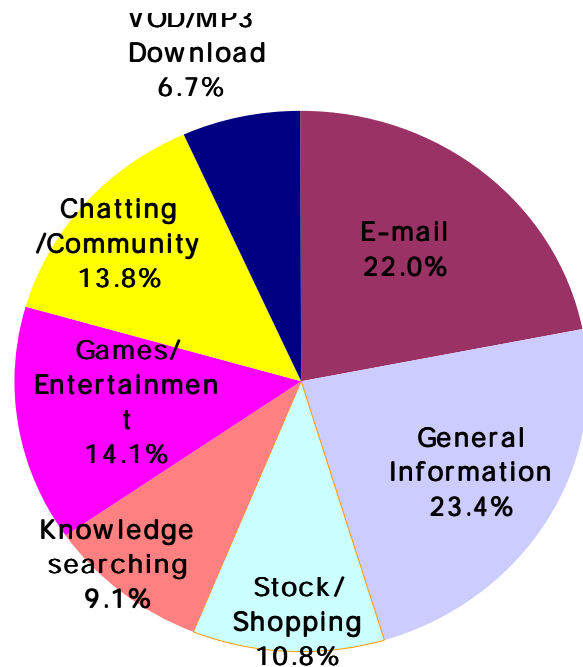- ⭘ **Subscribers get ringtones and pictures & enjoy with mobile phones.**

- ⭘ **Their usage of contents are more variegated and voluminous through BB.**

Mobile Phone Contents : Dec, 2001 (SK Telecom)

Stocks banking 5.6%
Email/chatting 5.2%
Others 2.9%
Location travel/traffic 7.2%
Ringtone/picture download 44.9%
Games/entertainment 34.2%

Broadband Contents : Dec, 2002 (KT)

VOD/MP3 Download 6.7%
Chatting/Community 13.8%
E-mail 22.0%
Games/Entertainment 14.1%
General Information 23.4%
Knowledge searching 9.1%
Stock/Shopping 10.8%

II. Success Factors

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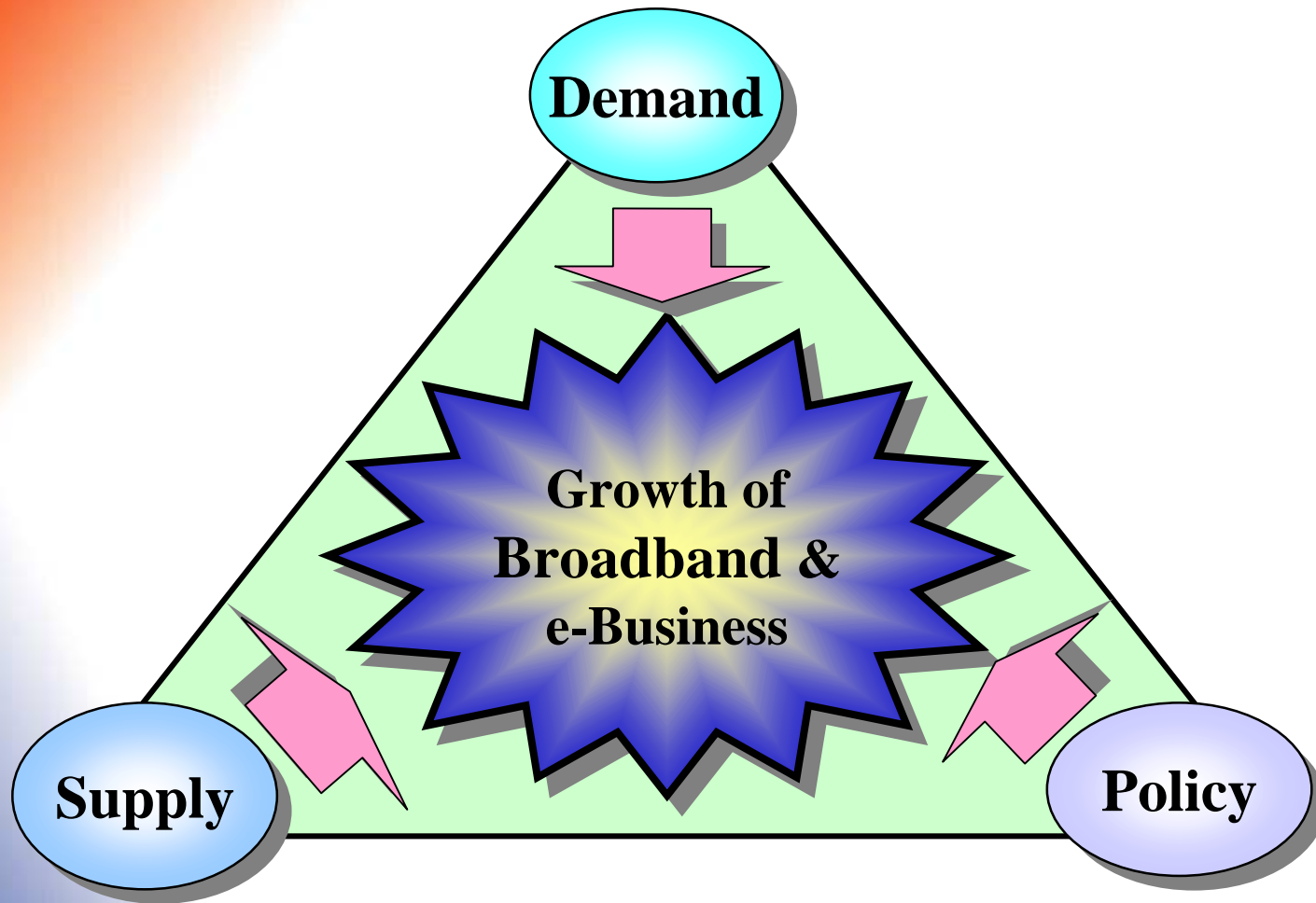
Success Factors

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❑ Demand Side

- **Market Driven Structure : Demand & Contents Existed**
  - ➢ **On-Line Games: Many Korean Games**
  - ➢ **Cyber Stock Trading: 65.9% of Total Trading (Dec. 2001)**
  - ➢ **Over 1,200 Internet Broadcasting Stations**
  - ➢ **e-Bookstore, etc**

- **Variety of Contents and Usage**
  - ➢ **Portal Services: Search, Games, Banking, Financing, News**
  - ➢ **Venture Boom & Dot.Com Business**
  - ➢ **Video Streaming: VOD, EOD, MOD**

- **Korean Nationality: Bandwagon, Hurry-Hurry, etc**

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Success Factors

□ **Supply Side**

- **Geographical Position**
  - ➢ **More than 93% Residences within 4km from End-Offices**
  - ➢ **More than 50% Residences in Apartments**

- **Strong Infrastructure**
  - ➢ **Connect all Cities by 2.5G, up to 20G between Major Nodes**

- **Supply Capability & Productivity: Low cost**

- **New Solutions provided for Broadband**
  - ➢ **Ntopia upto 100M, all IP-based xDSL (ADSL/VDSL)**
  - ➢ **Metro-Ethernet for SMEs: 65% of Internet Café**
  - ➢ **Nespot, Bizmeka, …**

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Success Factors

- ❑ **Government Policy Side**
  - ● **Government Project for Information Society**
    - ➢ **Global Leader, e-Korea & e-Government Initiative**
    - ➢ **Korea Information Infrastructure – Government**
      - – **Operation by KT (PUBnet)**
      - – **10,400 Schools; 20,732 Government Agencies**

  - ● **Pro-Competitive Policy**
    - ➢ **Many Players in the Marketplace**
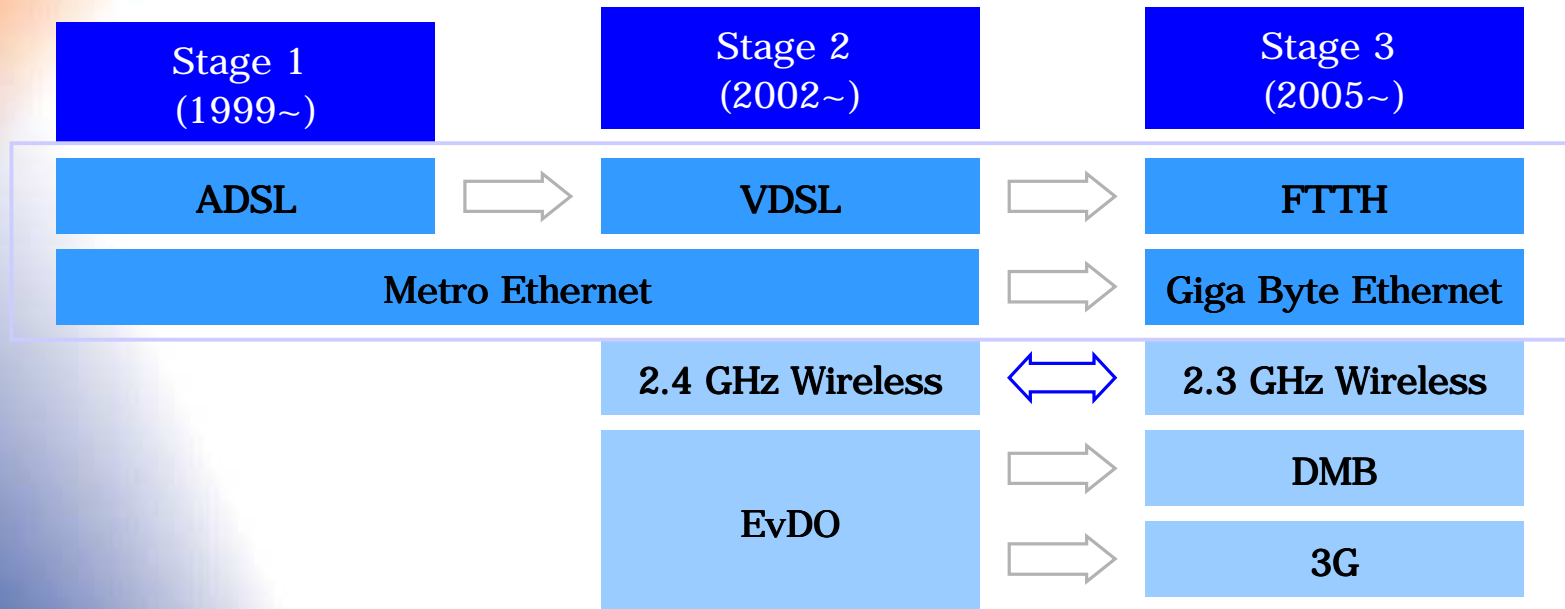   - ➢ **Deregulation for ISP Business**

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Success Factors

- ❑ **KT's Solutions for Broadband: Megapass**
  - ● **ADSL**
    - ➢ **Using Legacy Cables, up to 4 km from End-Office**
    - ➢ **Fiber Solutions: FLC, Small & Medium Size ADSL, Remote**
  - ● **Cable Modem**
    - ➢ **Sold Cable Network for Business Restructuring**
  - ● **LAN (Fiber Solution)**
  - ● **Wireless**
    - ➢ **Satellite: Remote Area**
    - ➢ **Nespot (Wireless LAN)**

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III. Evolution of BB Markets (KT)

○ **KT introduced VDSL in 2002 and plans to introduce FTTH in 2005.**

○ **Other complementary mobile services will be introduced to the market.**

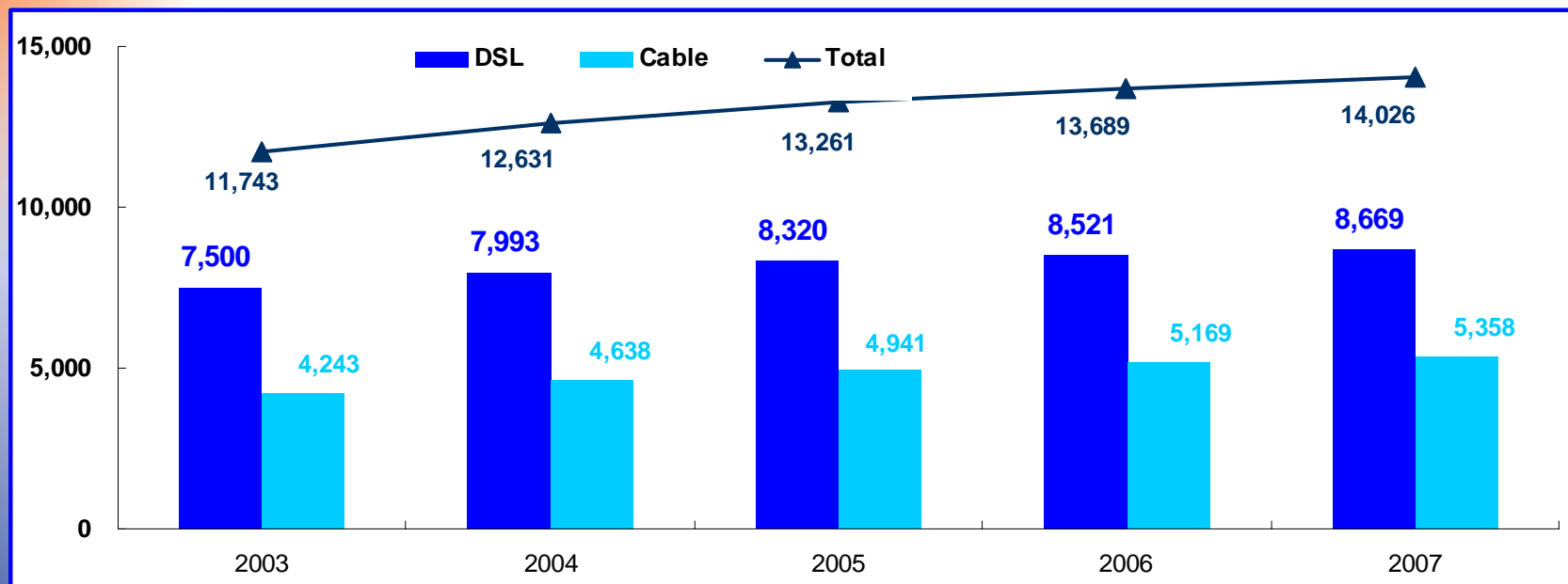| Stage 1 (1999~)		Stage 2 (2002~)		Stage 3 (2005~)
ADSL	⇒	VDSL	⇒	FTTH
Metro Ethernet			⇒	Giga Byte Ethernet
		2.4 GHz Wireless	⇔	2.3 GHz Wireless
		EvDO	⇒	DMB
			⇒	3G

Sources: KT, KISDI

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Expected Growth of BB Markets

○ **While cable companies get somewhat higher market shares mainly through lower prices and bundling in the nearly saturated market,**

○ **DSL companies, especially KT, might keep their market leadership for some years to come.**

Legend: DSL | Cable | Total

Year	DSL	Cable	Total
2003	7,500	4,243	11,743
2004	7,993	4,638	12,631
2005	8,320	4,941	13,261
2006	8,521	5,169	13,689
2007	8,669	5,358	14,026

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KT's Growth in WLAN Markets

O **KT leads the WLAN market in Korea with NESPOT service.**

 - **Nespot is a mobile internet service mostly for Megapass users, for a typical monthly flat fee of 10,000 won (about US $ 8).**

➢**Nespot Commercialized on March 1, 2002**

  ➢**11,580 Nespot Zone; 358K Subscribers (Dec, 2003)**

Subscribers	Dec-02	1Q-03	2Q-03	3Q-03	Dec-03
Total WLAN	112,530	148,748	264,098	305,956	358,012
Megapass Nespot (Residential)	47,768	105,651	169,871	199,771	236,416
Kornet Nespot (Corporates)	2,591	2,338	5,743	2,907	8,170
Nespot ID Only	62,171	40,759	88,484	96,984	106,075

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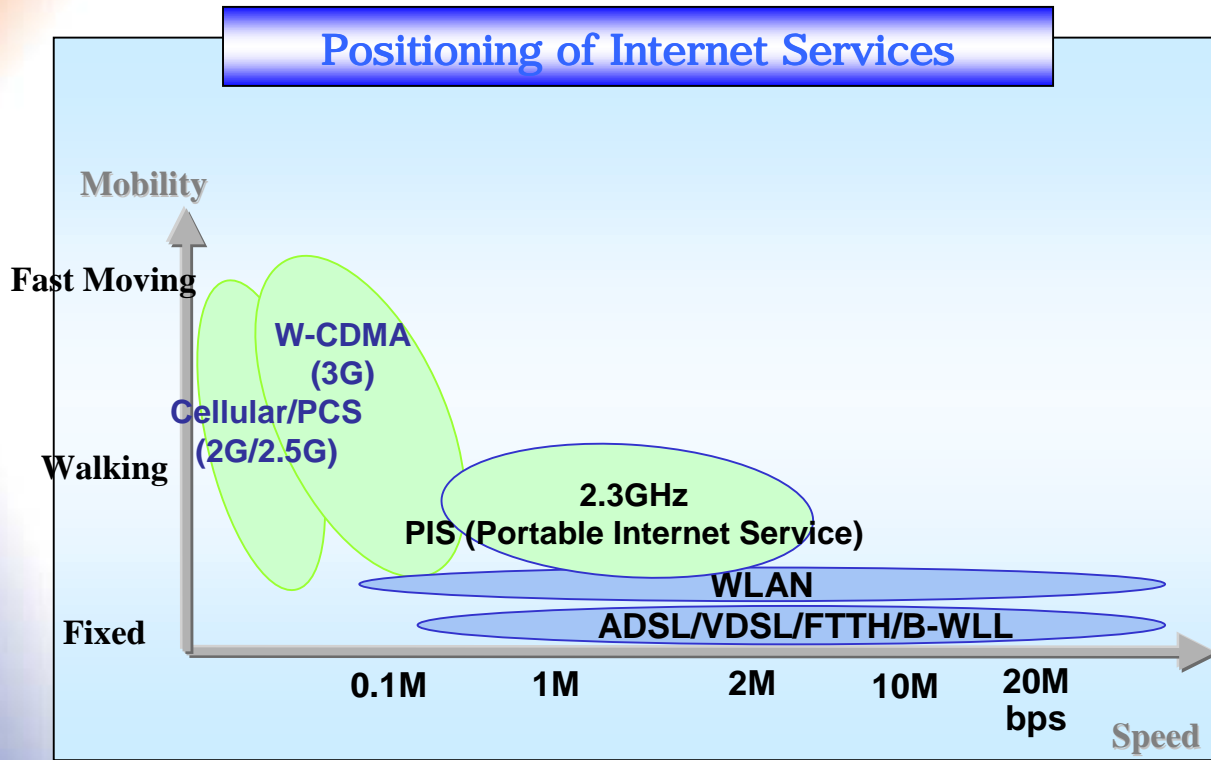
Widespread WLAN (Nespot) Hotspots

Megapass

○ **About 12,000 hotspots are available at the end of 2003**

○ **Detailed distributions of hotspots are provided.**

	Number	Percentage(%)
Banks / Insurance	2,751	23.8
Shopping Mall	1,129	9.7
Administrative Office	1,179	10.2
Fast food/Caféteria	1,606	13.9
Univ. campus/Library	503	4.3
Hotels	412	3.6
Post office	269	2.3
Terminal/Airport	139	1.2
Exhibition center	82	0.7
Hospital	112	1.0
Others	3,398	29.3
Total	11,580	100.0

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Portable Internet Service (PIS)

○ **PIS is expected to be provided in the near future for customers requiring both mobility and speed in internet usage.**

○ **Hopefully, KT will become a major service provider in the area.**

Positioning of Internet Services

Mobility

Fast Moving

W-CDMA (3G)

Cellular/PCS (2G/2.5G)

Walking

2.3GHz PIS (Portable Internet Service)

WLAN

Fixed

ADSL/VDSL/FTTH/B-WLL

0.1M   1M   2M   10M   20M bps

Speed

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IV. New Challenges

- ❑ **Digital Divide to Digital Integration**
  - ● **Urban Area**
    - ➢ **Bundang Area: More than 4~5km from End-Office**
      - – **Build New Remote Center, Provide LAN using SDSL / VDSL**
      - – **3,146 Subscribers among 6,095 Residences (Aug. 2002)**
  - ● **Rural Area**
    - ➢ **HwangDun Village: 100 Residences, 2 Schools**
      - – **Internet Sales of Cucumber (30% Revenue Increase after TV CF)**
        Mr. Shim, Jae Kun (http://home.kwcv.or.kr/yangji)

- ❑ **Wire & Wireless Integration : NESPOT (WLAN)**
  - ● **BB and WLAN : Hot Spot Areas within Walking Distance**

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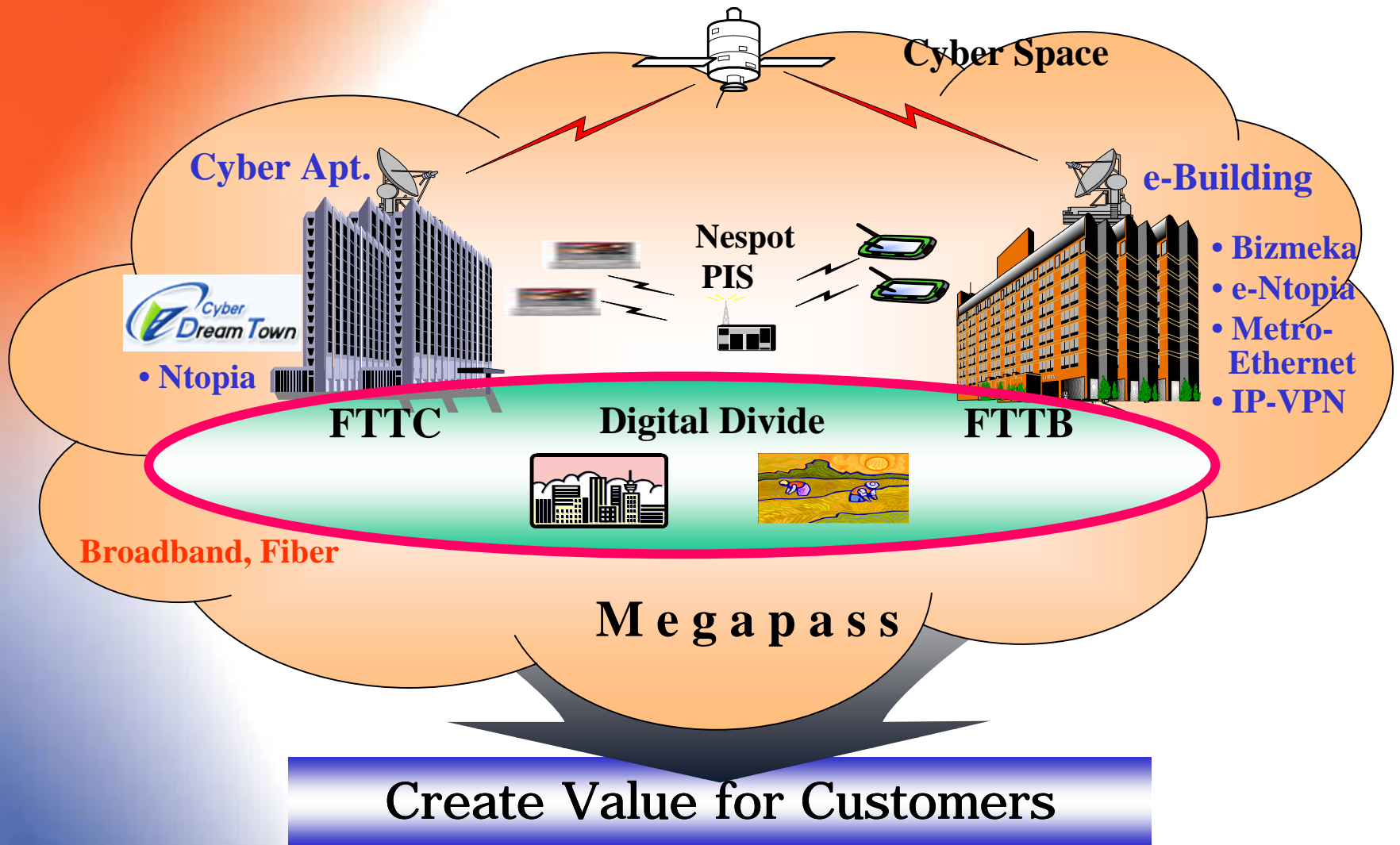**"The Value Networking Company"**

New Challenges

❑ **Value Networking with Broadband Infra: Last 1 Meter**

- **Broadband, IP, Wire &Wireless, e-Portal: Open Home Networking Arena**

- **Cyber Community for Residential Customers**

- **Broadband Solution for Business Customers**
  - ➢ **Bizmeka: B2B Portal & Application Solutions for 3M SMEs**
  - ➢ **e-Building (IBS: Integrated Building Solutions)**

❑ **New Concept of Universal Service: Broadband**

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V. KT: Value Networking Company

Cyber Space

Cyber Apt.

e-Building

Nespot PIS

- Bizmeka
- e-Ntopia
- Metro-Ethernet
- IP-VPN

- Ntopia

FTTC   Digital Divide   FTTB

Broadband, Fiber

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Create Value for Customers

Thank You!

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