KT’s Broadband Strategy

xDSSL & NGN

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Contents

Global Leader: KT

Converged Services

KT Vision & Strategy

"The Value Networking Company"
Global Leader: KT
Where Korea Stands

Korea’s Information Society Ranking

Source: IDC (Int’l Data Corporation)

Broadband Penetration Level by Country

Broadband penetration in OECD countries

Source: OECD
Traffic of Major KT Services

![Graph showing traffic trends for Local call, International call, Long distance call, LM call, and ML call from 1998 to 2001.](chart.png)
Broadband Market Share in Korea

Source: MIC

2002:
- KT: 47.3%
- Hanaro: 27.6%
- Thrunet: 12.5%
- Dreamline: 1.6%
- Dacom: 4.3%
- SKT: 1.4%
- Onse: 0.4%

2001:
- KT: 49.1%
- Hanaro: 26.5%
- Thrunet: 16.8%
- Dreamline: 2.3%
- Dacom: 3.1%
- SKT: 1.6%
- Onse: 0.4%

(%)
History of KT Broadband Business

1997 - First Trial Service

Sep. 1998 - Second Trial Service

Jun. 1998 - Competitor Thrunet Launched Its Commercial Service

Apr. 1999 - Competitor Hanaro Launched Its ADSL Service

Jun. 1999 - Commercial Service Launched

Jun. 2000 - Biggest Market Share in the Nation

May. 2002 - VDSL Service Launched

Sep. 2000 - Number of Subscriber Exceed 1 million

Jan. 2002 - Wireless LAN “Nespot” Launched

Jan. 2003 - Number of Subscriber Exceed 5 million
Key Success Factors

External Factors
- Urban Geography
- Competition
- Government Support
- Equipment
- Mentality

Internal Factors
- Aggressive Marketing Strategy
- Stable Network
- Systematic Management Support System

"The Value Networking Company"
Converged Services
**Convergence is Inevitable Phenomenon**

**IT products**
- Home Theater
- Play Station2
- X box

**Financial products**
- Total Asset Mgmt
- Private Banking
- Integrated Financial Product

**Package products**
- Package
  - PC+Printer+Scanner...
- Converged Service
  - New car Sales+
  - Old car scrapping

"The Value Networking Company"
What Triggers Convergence?

Customer Needs
- Multi-Function
- Convenience
- Affordable Price

Development of Technology: Digitalization

Product Convergence
Marketing Convergence
Network Convergence
Device Convergence
Content Convergence
Media Convergence
**KT's Service Evolution Phases**

- **ADSL**
  - Sep. 2000: Number of Subscriber Exceed 1 Million
  - Jun. 1999: Commercial Service Launched
- **VDSL**
  - Jan. 2002: Service Launched
- **NESPOT**
  - May. 2002: Service Launched
  - Jan. 2003: Number of Subscriber Exceed 5 Million
- **xDSL**
  - May. 1997: The Number of Telephone Subscribers Exceed 20 Million
  - Oct. 1988: The Number of Telephone Subscribers Exceed 10 Million

**NGN**
- 2.3GHz
- **DMB**
- **Home Digital Service**

**Telephone**
- May. 2000: Number of Subscriber Exceed 1 Million
- Jun. 1999: Commercial Service Launched

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**KT WLAN: NESPOT**

**Business Objective**
- To Meet an Ever-growing Needs for Mobile Internet Service
- To Develop ‘front-end service’ by Combining Widespread Broadband and Wireless Solutions

**Hot Spot**
- About 18,000 Hot Spots is available in Korea
- 25,000 Hot Spots accessible through the global roaming by the end of 2003

**Service Launch**
- March, 2002

**No. of Subscribers**
- 293,000 as of Aug. 2003

**Target Market**
- Residential Customer, Enterprise Customers, Travelers

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Public WLAN Positioning

<table>
<thead>
<tr>
<th>Speed</th>
<th>Megapass PC</th>
<th>W-LAN PDA</th>
<th>CDMA/Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>10Mbps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2Mbps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stationary</td>
<td>Quasi- Mobile</td>
<td>Mobility</td>
<td></td>
</tr>
</tbody>
</table>

- **Coverage**: Megapass - Home, Office; Wireless LAN - Hot spots; CDMA - Wide area
- **Throughput**: Megapass - high; Wireless LAN - high; CDMA - slow
- **Terminals**: Megapass - PC; Wireless LAN - PDA, Notebook; CDMA - Phone, PDA
- **Application**: Megapass - WEB; Wireless LAN - E-book, VOD, AOD, POP3 Mail, Messenger; CDMA - Voice, Short Message
- **Customers**: Megapass - Students at home; Wireless LAN - Students on Campus; CDMA - Businessman at Hotel, etc

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Digital Life - Home Digital Service

Partners
- Application Service Partners
- Commerce Partners
- Advertising Partners

HDS Platform
- Total Solution
- Brand Collaboration
- Customized H-CRM
- Interactive Platform

Customer
- Application Service
- Broadcasting
- Commerce
- Communications
- Electric application
- Security
- Vehicle
- Gateway
- PCS

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Digital Multimedia Broadcasting

Contents
(Audio, Video, data)

Internet
Call Center
distribution channel

DMB Transmission center
(Digital Multimedia Broadcasting)

Log-in/Registration

DMB Center

Mobile IP

Cellular/Portable
internet network

Seeing & hearing
By portable handsets

Seeing & hearing by
vehicle mounted
terminals

Repeater for
poor reception
(Gap Filler)

Ku-Band
13.824 ~ 13.880GHz

S-Band
12.21 ~ 12.23GHz

KT 2.630 ~ 2.655GHz

*SKT 2.605 ~ 2.630GHz

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KTVision & Strategy
Strategic Direction of KT

Wired/Wireless
4G Network

Coverage

Convergence

Content & Solution

Multi Functional Device

Fixed-Mobile Content

NOW

Future

"The Value Networking Company"
Next Generation Network

Today
Single-service Network
Services

- PLMN
- PSTN/ISDN
- Data/IP Networks
- CATV

Access Transport & Switching Networks

NGN
Multi-service NW/client-server

Servers
Content
Communication

Content
Control

Backbone Network

Media Gateways

Access
Clients

"The Value Networking Company"
# KT’s NGN Evolution Roadmap

<table>
<thead>
<tr>
<th>Stage</th>
<th>Preliminary Stage</th>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>~ 2002</td>
<td>2003</td>
<td>2004</td>
<td>2005</td>
</tr>
</tbody>
</table>

### Major Action Item

**Stage 1**
- Introduce Access G/W
- VoIP (H.323/SIP)
- Access G/W (v5.2)

**Stage 2**
- Introduce trunk G/W
- Softswitch (Class 4, 5)
- VoIP (MEGACO)
- Open IN Service

**Stage 3**
- Expand VoP
- IP-based IN Service
- Expand application service base
- NGN Completion

- Provide QoS IP-based VoP service

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"The Value Networking Company"
Ubiquitous World

Anytime
Anywhere
Any device
Any Service
Anyone

"The Value Networking Company"
Converged Broadband Services on NGN Will Guarantee KT’s Continuous Lead in Global IT Industry

Thank you!