WCDMA 시장 전망과
KTF 전략 방향

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박 원 진 상무

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1. Why WCDMA (HSDPA)?
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1. Why WCDMA (HSDPA)?

Main Stream in Global Mobile Network... WCDMA
- WCDMA Commercial : 164 networks, 73 countries
- HSDPA Commercial : 117 networks, 58 countries

W-CDMA launch date

※ Source: Informa Telecoms & Media (2007.1)
1. Why WCDMA (HSDPA)?

- 34 CDMA Operators decided to switch their network to GSM, WCDMA

- ‘Economy of Scale’ in Network appliances and handset

- Overcome Global roaming Disadvantage in CDMA NW

- Well-defined evolution road map

- No.1 Operator in Australia Shutdown CDMA in 2008
- No.1 Operator in Brazil Will Adopt WCDMA after Switching to GSM
- No.2 Operator in India Operating Dual Network (Add-up GSM to CDMA)
- No.2 Operator in Mexico Switched to GSM in 2002

*Source: GSA ‘07.6*
1. Why WCDMA (HSDPA)?

- WCDMA will be main stream in handset market

- Price of handset will go downward through Economy of scale of WCDMA

### 3.5G Handset sales

![Graph showing 3.5G Handset sales from 2006 to 2011 with different technologies.

- EV-DO rB
- EV-DO rA
- HSUPA
- HSDPA

[Source: Informa Telecoms & Media (2007.1)]

### Average price of handset

![Graph showing average price of handset from 2003 to 2008 (expected).

- CDMA / EVDO
- GSM / WCDMA

[Source: Forward Concepts, Global Cellular Handset & Chip Markets (2005)]
1. Why WCDMA (HSDPA)?

What’s New and Better?

1. **Video Call & Video related VAS**
   - ‘Hear & Talk’ only ➔ See & Enjoy

2. **Wide Coverage of Global Roaming**
   - 18 countries in CDMA ➔ More than 100 countries in WCDMA

3. **High Speed & Low Price of Data Service**
   - 9 times greater than CDMA in Network Efficiency

4. **Various kinds of Cheaper Handsets**
   - Achieving ‘Economy of Scale’ by Global Standard

What’s New and Better?
2. WCDMA business Plans

Brand Vision

**Life Fun Enabler**: Various kinds of Joyful events at anytime, any place with new 3G technology and services.

Core Target: age 20~34
- Mass Customer

Visual Communication & High Speed Data

Functional: Ubiquitous
Emotional: Fun

Target
Brand Competence
Brand Benefit
Core Identity
Innovative
2. WCDMA business Plans

Line-up of WCDMA Handset

<table>
<thead>
<tr>
<th>Handset</th>
<th>Model</th>
<th>Features</th>
<th>Handset</th>
<th>Model</th>
<th>Features</th>
<th>Handset</th>
<th>Model</th>
<th>Features</th>
<th>Handset</th>
<th>Model</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPH-W2400</td>
<td>HSDPA, T-DMB</td>
<td>1.8M</td>
<td>LG-KH1300</td>
<td>HSDPA</td>
<td>1.8M</td>
<td>EV-W100</td>
<td>HSDPA</td>
<td>1.8M</td>
<td>SPH-W2700</td>
<td>HSDPA</td>
<td>1.8M</td>
</tr>
<tr>
<td>SPH-W2500</td>
<td>HSDPA</td>
<td>3.6M</td>
<td>EV-W200</td>
<td>HSDPA</td>
<td>3.6M</td>
<td>LG-KH1200</td>
<td>WCDMA</td>
<td>364K</td>
<td>U-5000</td>
<td>WCDMA</td>
<td>364K</td>
</tr>
</tbody>
</table>

- **High End**: SPH-W2400, LG-KH1300
- **Mid End**: SPH-W2500, EV-W100, SPH-W2700
- **Low End**: EV-W200, LG-KH1200, U-5000

- SHOW
- Competitor (Korea)

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Handset Models</th>
<th>'07.1Q</th>
<th>'07.2Q</th>
<th>'07.3Q</th>
<th>'07.4Q</th>
</tr>
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<tbody>
<tr>
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<td></td>
<td></td>
<td>2</td>
<td>3</td>
<td>10</td>
<td>20</td>
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<tr>
<td>'07.1Q</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>'07.2Q</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>'07.3Q</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>'07.4Q</td>
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</tbody>
</table>

*DBDM
“SHOW (KTF’s WCDMA)” users can enjoy global roaming in 103 nations.

- **Europe**: Total: 39 nations
  - GSM: 35 nations
  - WCDMA: 20 nations
- **Africa**: GSM: 5 nations
  - WCDMA: 1 nation
- **Asia**: GSM: 27 nations
  - WCDMA: 6 nations
- **N. America**: GSM: 4 nations
  - WCDMA: -
- **S. America**: GSM: 23 nations
  - WCDMA: -
2. WCDMA business Plans

Service Categories

High-Quality Visual Comm.
- Visual Ring-To-You & Visual Catch-call
- Visual Chatting, Visual Lettering, Visual Broadcasting
- MMS Plus

High-Quality Multimedia
- High quality data
- Visual taro / Visual Karaoke

USIM Service
- Membership, transportation card, Credit Card, Banking, Securities

M – Learning

Voice roaming
Video telephony roaming
Data roaming
LBS roaming

Differentiated Services over CDMA

Life Convenience Services

Global Roaming Services

- 10 -
HSDPA Network quality

HSDPA voice quality (as of dec.’06)

<table>
<thead>
<tr>
<th></th>
<th>Success rate</th>
<th>Voice quality (MOS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Over 99%</td>
<td>Over 99%</td>
</tr>
<tr>
<td>CDMA</td>
<td>3.4</td>
<td>3.6</td>
</tr>
<tr>
<td>HSDPA</td>
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</tr>
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</table>

HSDPA data quality

<table>
<thead>
<tr>
<th>Download Speed</th>
<th>0.8Mbps</th>
<th>1.8Mbps (E)</th>
<th>3.6Mbps (E)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EVDO 1R</td>
<td>HSDPA (3.9)</td>
<td>HSDPA (7.2)</td>
</tr>
<tr>
<td></td>
<td>’02.2Q</td>
<td>’06.2Q</td>
<td>’07.3Q~4Q</td>
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</tbody>
</table>

Coverage Map

HSDPA nation-wide full coverage
KTF WCDMA Alliances

1. KT Group
   Cooperation with KT group via TF
   - Convergence service development
   - Fixed/mobile bundling services

2. NTT DoCoMo
   BTCC (Business and Technology Cooperation Committee between KTF and NTT DoCoMo)
   - LBS Roaming
   - M-Payment business cooperation based on RF
   - New service item search

3. Conexus
   Support global roaming service Among Conexsus and new roaming service development
   - Planning and development new roaming services

4. MicroSoft
   General cooperative alliance
   - Premium Messaging service study
   - Windows Live study
3. Status & Future

KTF in the future

Number One WCDMA Operator

Doubling Service Revenue

Threefold Firm Value

KTF in 2015

Revenue Size: 5.2 trillion KRW

Number One WCDMA Operator

Doubling Service Revenue

Threefold Firm Value

Revenue Size: 13 trillion KRW

Global Roaming: 600 billion KRW (4.6%)

Transaction: 2.3 trillion KRW (19%)

Information: 0.8 trillion KRW (6%)

Communication: 8.6 trillion KRW (65%)

Global Roaming: 12 billion KRW (0.2%)

Contents Sales: 20 billion KRW (0.4%)

FY2015

Revenue Size: 5.2 trillion KRW

FY2006
Thank You