Contents

• High-speed mobile market evolution
• Factors impacting take-up
• Conclusion
Mobile = ubiquitous

“computer in your pocket”

% households with mobile phone, ‘03

<table>
<thead>
<tr>
<th>Country</th>
<th>Mobile:Fixed</th>
<th>Mobile:PC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taiwan</td>
<td></td>
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<tr>
<td>Korea</td>
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</tbody>
</table>

“In the coming years, the mobile handset will be the hub of all other devices, enabling people to access information and technology anywhere at any time….” — Samsung

“It is relatively small, you don't need a desk, you don't need to be in a particular place. And you don't have to be literate to use them or speak English. These are all constraints when it comes to operating a computer.” — Intel ethnographer Genevieve Bell

Source: TMG.
Even at slow speeds, mobile used for Internet access

“Non” dial-up Internet subscribers in the Maldives

Source: TMG adapted from Dhiraagu data.
High-speed mobile networks

Performance with compression software (Kbps)
Typical performance (Kbps)

<table>
<thead>
<tr>
<th>Technology</th>
<th>Performance with Compression Software (Kbps)</th>
<th>Typical Performance (Kbps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDMA EV-DO</td>
<td>550+</td>
<td>2+</td>
</tr>
<tr>
<td>WCDMA</td>
<td>800+</td>
<td>200</td>
</tr>
<tr>
<td>EDGE</td>
<td>350+</td>
<td>100</td>
</tr>
<tr>
<td>CDMA 1X</td>
<td>170+</td>
<td>60</td>
</tr>
<tr>
<td>GPRS</td>
<td>75+</td>
<td>30</td>
</tr>
</tbody>
</table>

Source: Venturi Networks.
It really works!

Express Network (1XRTT)

Speed: 230.4 Kbps

Verizon Wireless VZACCESS with Venturi software
Status of high-speed mobile networks, Asia-Pacific, 2003

Asia-Pacific high-speed mobile subscribers by technology, millions, 2003

- S. Korea: 84.5%
- India: 22.9%
- Japan: 17.2%
- N. Z'land: 13.5%
- AP: 11.4%
- Taiwan: 10.7%
- H. Kong: 10.1%
- Singapore: 10.1%
- Thailand: 5.8%
- Malaysia: 4.5%
- Australia: 3.2%
- China: 2.2%
- Philippines: 1.7%
- Indonesia: 0.5%

High-speed mobile subscribers as % of total mobile subscribers, 2003
Handsets

- Appropriate handset essential for high-speed use
- Higher cost of Internet-enabled handsets
- Large used market in developing nations is barrier
Pricing

- With high-speed mobile, introduction of volume-based pricing
- Consumers prefer flat rate
- Now shifting to unlimited usage tariff in some markets
- In some cases, competitive with fixed broadband

### Pricing preference of mobile Internet users, Taiwan, 2003

- **Volume**: 33%
- **Time**: 16%
- **Monthly fee**: 51%

**Source**: III-ACI-FIND

### Flat rate broadband Internet & DSL prices, Japan, 2004

<table>
<thead>
<tr>
<th>Speed (Mbps)</th>
<th>Price per month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>¥4,058</td>
</tr>
<tr>
<td>2.4</td>
<td>¥4,200</td>
</tr>
</tbody>
</table>

**Time**: 16%

**Monthly fee**: 51%

**Volume**: 33%
## Conclusions

<table>
<thead>
<tr>
<th>PLUS</th>
<th>MINUS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ubiquitous</strong> - mobile widely available relative to other ICT devices</td>
<td><strong>Pricing</strong> - although price structures are becoming more attractive in some economies, tariffs are still high (relative to other options)</td>
</tr>
<tr>
<td><strong>High-speed</strong> - now available</td>
<td><strong>Coverage</strong> - high-speed is not yet widespread in most developing nations and sometimes limited to post-paid</td>
</tr>
</tbody>
</table>

**Solutions:**

1. Regulators encourage take-up of high speed networks (e.g., max licenses for available frequency, write high-speed requirements into licenses, enact MNP, provide incentives to mobile network operators to meet national broadband goals, etc.)
2. Operators adopt attractive pricing and encourage attractive content
3. Manufacturers develop affordable Internet-enabled phones/PC cards
Thank you!

This presentation is based on:

*Asia-Pacific Mobile Multimedia Outlook 2004*

Featuring an overview of mobile multimedia trends in 13 key Asia-Pacific markets covering 98% of subscribers in the region.

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