Marketplace Update

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Some Latin America indicators end 2009

- Wireless users: 509 million
- Mobile penetration: 86%
- Prepaid market share: 83%
- Average ARPU: US $ 14
- Data as % of service revenues in Q3 2009: 17% (28% in US)
**Latin American Wireless Technology Market Shares**

**December 2008**

- **GSM-UMTS-HSPA**: 400 M (88%)
- **CDMA**: 42 M (9%)
- **iDEN**
- **TDMA**: 6 M (1%)

**December 2009**

- **GSM-UMTS-HSPA**: 465 M (91%)
- **CDMA**: 35 M (7%)
- **iDEN**: 7 M (1%)
- **TDMA**: 2 M (0%)

Source: Informa Telecoms & Media, WCIS+, December 2009

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Latin American Wireless Technology Growth

Subscriptions (Millions)

Dec-2008

Dec-2009

455 Million Total Subscriptions

509 Million Total Subscriptions

400 M

465 M

16% Annual Growth

17% Annual Loss

GSM

42 M

12 M

OTHER*

35 M

9 M

*Other includes iDEN and TDMA

Source: Informa Telecoms & Media, WCIS+, December 2009

Mobile Broadband Outlook for the Americas, Rio de Janeiro, 26 April 2010

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Top Ten Wireless Markets in Latin America
End 2009

<table>
<thead>
<tr>
<th>Country</th>
<th>Subscriptions (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>176</td>
</tr>
<tr>
<td>Mexico</td>
<td>83</td>
</tr>
<tr>
<td>Argentina</td>
<td>48</td>
</tr>
<tr>
<td>Colombia</td>
<td>41</td>
</tr>
<tr>
<td>Venezuela</td>
<td>31</td>
</tr>
<tr>
<td>Peru</td>
<td>21</td>
</tr>
<tr>
<td>Chile</td>
<td>18</td>
</tr>
<tr>
<td>Ecuador</td>
<td>13</td>
</tr>
<tr>
<td>Guatemala</td>
<td>12</td>
</tr>
<tr>
<td>Dom. Rep</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: Informa Telecoms & Media, WCIS+ April 2010
52 networks in service in 24 countries
Voice vs Data in Select Latin Markets

% = HSPA of total wireless subscriptions

Subscriptions (Millions)

Argentina  Brazil  Chile  Colombia  Ecuador  Mexico  Peru  Venezuela

4%  7.7%*  4%  2.5%  7%  2%  1%  0.7%

Source: Regulators and Public Information: *: as per latest results from ANATEL

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Smartphone Penetration Forecast

Source: Deutsche Bank Securities, 29 March 2010

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## Smartphone Unit Growth Forecast

<table>
<thead>
<tr>
<th>Year</th>
<th>North America</th>
<th>Latin America (Except Brazil)</th>
<th>Brazil</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009E</td>
<td>45</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>2010E</td>
<td>65</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>2011E</td>
<td>85</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>2012E</td>
<td>105</td>
<td>25</td>
<td>5</td>
</tr>
<tr>
<td>2013E</td>
<td>120</td>
<td>30</td>
<td>6</td>
</tr>
<tr>
<td>2014E</td>
<td>140</td>
<td>35</td>
<td>7</td>
</tr>
<tr>
<td>2015E</td>
<td>160</td>
<td>40</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: Deutsche Bank Securities, 29 March 2010

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3G Device Growth in Brazil

Sources: Anatel (regulator) and Teleco (Consultant)
3G Devices in Argentina 2007-2010

Source: Carrier and Associates
Global ARPU Trends

Source: GSMA, December 2009

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Mobile Traffic will keep Growing

Voice services will continue growing but information-based services will grow much more

Gigabytes per year

Other information-based services
Downloads
TV/Streaming
Messages
Mobile PC
Video
Voice

Source: 3GPP

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Embedded Mobile Broadband

Consumer Electronics

Healthcare

Government

Automotive

Utilities

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2014 Global 3G Subscription Forecast

3GPP technologies (UMTS+HSPA+LTE): 87%, CDMA: 10%, Mobile WiMAX: 3%

HSPA: 1.86 Billion (56%)
LTE: 128 M (4%)
EV-DO: 340 M (10%)
UMTS: 908 Million (27%)
Mobile WiMAX: 89 M (3%)

Source: Informa Telecoms & Media, WCIS+, Mar 2010

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Latin America Challenges

- No spectrum made available for advanced mobile broadband services
- Governments are promoting new entrants by using spectrum caps
- High taxes for wireless services and equipment
- No spectrum auction for 4G; likely bands are 2,5 GHz, 1.7/2.1 GHz and 700 MHz
- Low broadband penetration (less than 10%)
Obrigado!

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