2011 BROADBAND GROWTH FASTEST IN FIVE YEARS

More than 597 million subscribers now have broadband while IPTV records strongest growth quarter

News Highlights:

- 12.3% annual Broadband growth is largest increase in the last five years
- Russia is showing fastest advancement in both Broadband and IPTV, as part of an Eastern European surge, along with strong showings by Poland and the Ukraine
- IPTV has its strongest ever quarter in Q42011 - the number of China’s IPTV subscribers passed France to give China the top country spot for both Broadband and IPTV

21 March 2012, London, England - Broadband and IPTV growth spiked to a high in 2011 with rates higher than at any time in the last five years, according to year-end figures published by the Broadband Forum. Overall, broadband growth is estimated at 65,493,596 lines, bringing the global total to 597,322,636, a quarterly increase of 2.6% - and an annual growth rate of 12.3%. The figures, prepared for the Broadband Forum by broadband industry analysts Point Topic, also highlight the strongest ever quarter of growth in IPTV which is today’s most demanding application for high speed broadband.

“This is an exciting return to higher growth figures and points to a strengthening in the broadband market,” commented Robin Mersh, CEO of the Broadband Forum. “With a number of active new markets coming online and standards based deployments becoming common - we are seeing broadband move into the daily lives of more and more people the world over. A great example of this is the exceptional growth in some key Eastern European markets, such as Russia, Poland and the Ukraine.”

Russia proved to be a peak performer in 2011 in both Broadband and IPTV figures, with over 36% growth in Broadband and more than doubling its IPTV subscribers from 495,500 to 1,145,000 in just one year.
<table>
<thead>
<tr>
<th>Region</th>
<th>2010Q4 Total Lines</th>
<th>2011Q3 Total Lines</th>
<th>2011Q4 Total Lines</th>
<th>% growth in quarter</th>
<th>% growth in year</th>
<th>Quarter net additions (q311-q411)</th>
<th>Year net additions (q410-q411)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>218,825,136</td>
<td>246,838,921</td>
<td>254,721,342</td>
<td>3.19%</td>
<td>16.4%</td>
<td>7,882,421</td>
<td>35,896,206</td>
</tr>
<tr>
<td>Europe</td>
<td>160,169,881</td>
<td>172,580,392</td>
<td>176,689,884</td>
<td>2.38%</td>
<td>10.31%</td>
<td>4,109,492</td>
<td>16,520,003</td>
</tr>
<tr>
<td>Americas</td>
<td>136,099,030</td>
<td>144,530,608</td>
<td>147,156,521</td>
<td>1.82%</td>
<td>8.12%</td>
<td>2,625,913</td>
<td>11,057,491</td>
</tr>
<tr>
<td>Middle East and Africa</td>
<td>16,685,793</td>
<td>18,171,082</td>
<td>18,685,889</td>
<td>2.83%</td>
<td>11.99%</td>
<td>514,807</td>
<td>2,000,096</td>
</tr>
<tr>
<td>TOTAL</td>
<td>531,779,840</td>
<td>582,121,003</td>
<td>597,253,636</td>
<td>2.6%</td>
<td>12.3%</td>
<td>15,132,633</td>
<td>65,473,796</td>
</tr>
</tbody>
</table>

Table 1: Regional Broadband Growth

With 254,721,342 broadband subscriber lines at the end of 2011, Asia is by far the biggest region overall, though its growth was slower in percentage terms during the last quarter than earlier in the year. The sheer size of the market means that it continues to take market share even when growth is lower. The region added 7,882,421 subscribers in Q4 of 2011, a rate of 3.2% in the quarter, representing annual growth of 16.4%.

**Top 20 Country Broadband Rankings - double digit growth in BRIC and Ukraine**

Significant changes in the Top 20 broadband rankings are appearing as Brazil, Russia, India and China (BRIC), plus the Ukraine all show double-digit growth. Russia showed the highest growth rate with 36.85% over the year, and India is also moving up the rankings with an annual growth of 24.46%.
<table>
<thead>
<tr>
<th>Country</th>
<th>Total (Inhab)</th>
<th>Subscribers (Inhab)</th>
<th>Growth Rate (%)</th>
<th>Revenue Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td>10,557,849</td>
<td>10,940,720</td>
<td>1.78</td>
<td>5.47%</td>
</tr>
<tr>
<td>Canada</td>
<td>10,547,239</td>
<td>10,920,540</td>
<td>1.11</td>
<td>4.69%</td>
</tr>
<tr>
<td>Turkey</td>
<td>7,074,867</td>
<td>7,437,829</td>
<td>0.94</td>
<td>6.12%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>6,207,200</td>
<td>6,503,100</td>
<td>1.83</td>
<td>6.69%</td>
</tr>
<tr>
<td>Australia</td>
<td>5,539,500</td>
<td>5,702,600</td>
<td>0.94</td>
<td>3.91%</td>
</tr>
<tr>
<td>Poland</td>
<td>5,303,881</td>
<td>5,708,229</td>
<td>1.98</td>
<td>7.62%</td>
</tr>
<tr>
<td>Taiwan</td>
<td>5,209,000</td>
<td>5,472,000</td>
<td>2.14</td>
<td>7.30%</td>
</tr>
<tr>
<td>Ukraine</td>
<td>3,950,000</td>
<td>4,920,000</td>
<td>5.65</td>
<td>31.59%</td>
</tr>
</tbody>
</table>

| Total Market Share | 1,185,307   |

Table 2: Top 20 Broadband Countries

Source: Point Topic

**Hybrid Fiber/DSL solutions grabbing market share**

In terms of technology developments, DSL - with 60.8% of the overall market share - continues to be the dominant broadband technology, although it is beginning to lose ground to other access technologies. The expectation is for hybrid fiber/DSL deployment solutions to continue to grow, delivering broadband for more and more subscribers. These hybrid fiber/DSL deployments have been able to deliver significantly more bandwidth to consumers while allowing efficient re-use of existing infrastructure. Fiber to the Home (FTTH) is increasing in appeal and this is likely to accelerate as availability increases, but Point Topic reports that their expectation is that the hybrid fiber access solution will be the fastest growing for the next five years. The combined market share for FTTH and FTTx/hybrid technologies has again grown from 16% in Q3 to 16.7% at the end of 2011, encroaching on cable’s market share, which has dropped to 19.4%.

![Broadband Line Market Shares - Q4 2011](chart.png)

Source: Point Topic
**IPTV - China outstrips France to take top ranking in IPTV**

IPTV’s best quarter ever saw net additions of 3.68 million to finish the year strong with more than 58.2 million IPTV subscribers worldwide. Though Europe still holds the top regional spot - China is the fastest growing country and now has over 12 million subscribers, outstripping France for the top spot in the Top Ten IPTV countries world-wide.

![IPTV Subscribers - Top 10 Countries](image)

“China will continue to dominate the top of the charts from now on. This is a market with greater headroom, more demand and overall more potential than anywhere else,” commented Oliver Johnson, CEO of Point Topic. “Outside the top 10, the prime movers are Malaysia, Vietnam and Belarus. There are a number of conditions that have to be in place for IPTV adoption to be significant. The availability of enough consistent bandwidth tops the list but pricing needs to be right for the consumer as well. Once those metrics are at certain levels you start to see real growth.”

To drive costs down, standards based deployments are a must and that is where the Broadband Forum comes in to help service providers worldwide engineer smarter and faster broadband networks.

**Broadband Forum - forging ahead in 2012**

To speed deployments and reduce testing overload on the industry, there are some significant areas of Broadband Forum work on the roadmap:

- The global Broadband Forum Certification Program will grow with -
  - G-PON certification options including additional modules for ONUs, interoperability test suite, as well as XG-PON1 test requirements
- MMBI certification option for Ethernet Service emulation over MPLS
- TR-069 CWMP Device Conformance Program

- End-to-End Multi-service Network Architecture work will progress
- Network interworking and convergence work in collaboration with 3GPP will continue
- Work on MPLS in Carrier Ethernet Networks, as well as new MPLS in Mobile Backhaul Initiative (MMBI) developments, including energy efficient mobile backhaul
- DSL testing including VDSL2, bonding, vectoring, G.fast requirements and DQM measures will continue
- Home networking support will continue with test suite development for G.hn, and new splitter and IPTV home wiring best practices released
- New access node management models and interface specifications
- New access work is beginning around business services; cloud, data center interconnection and machine-to-machine (M2M) requirements as well.

Robin Mersh commented, “The work of the Broadband Forum provides the industry with the tools needed to expedite rollouts, improve the quality of service delivery and to take advantage of the cost benefits of deploying a standards based network. We will continue to assist providers with new ways to engineer smarter and faster connections.”

For further information about the Broadband Forum, to join the work or to access the latest free white papers and technical reports, please visit www.broadband-forum.org.

- ENDS -

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About the Broadband Forum
Broadband Forum, a non-profit industry organization, is focused on engineering smarter and faster broadband connections. Our work defines best practices for global networks, enables service and content delivery, establishes technology migration strategies, engineers critical device & service management tools, and is key to redefining broadband. Our technical reports and free white papers can be found at www.broadband-forum.org.