World Broadband Statistics:

Q3 2009

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Contents

Figures

Tables

1. Introduction

This report continues the series of Point Topic's quarterly *World Broadband Statistics* publications. The series originated as several DSL reports, first published in Q2 2002, which were eventually expanded to include cable modem and other technologies in Q2 2003.

Other technologies covered include optical fibre and different forms of broadband Internet such as, for example, Fixed Wireless Access (FWA), Satellite and Powerline. Fibre in this context means anything from Fibre-to-the-kerb to Fibre-to-the-home and is often generalised as "FTTx."

Mobile broadband is undoubtedly taking off in many countries where 3G or WiFi/WiMAX networks are used as an alternative or complementary to fixed-line broadband access. To address the importance of this new development, Point Topic embarked on a special wireless broadband project in Q3 2006 with the aim of including more comprehensive coverage of wireless subscriber numbers in our quarterly broadband statistics report. Throughout this data collation process, we found that the figures are still very much restricted to certain geographical regions.

Consequently, it remains too early for wireless subscriber data to be examined in depth within the world broadband statistics analysis. However, as far as available, WiFi and WiMAX broadband subscriber data is being entered into GBS and clients to this Point Topic service are welcome to conduct their own in-depth analysis. For Q3 2009, GBS coverage has been extended to 112 countries and over 440 operators.

This report begins with an examination of the growth in broadband subscribers for Q3 2009 at both a global and a regional level. The next section of the report addresses technology trends and choices, looking firstly at general trends in uptake followed by an analysis of regional market shares in a variety of broadband technologies.

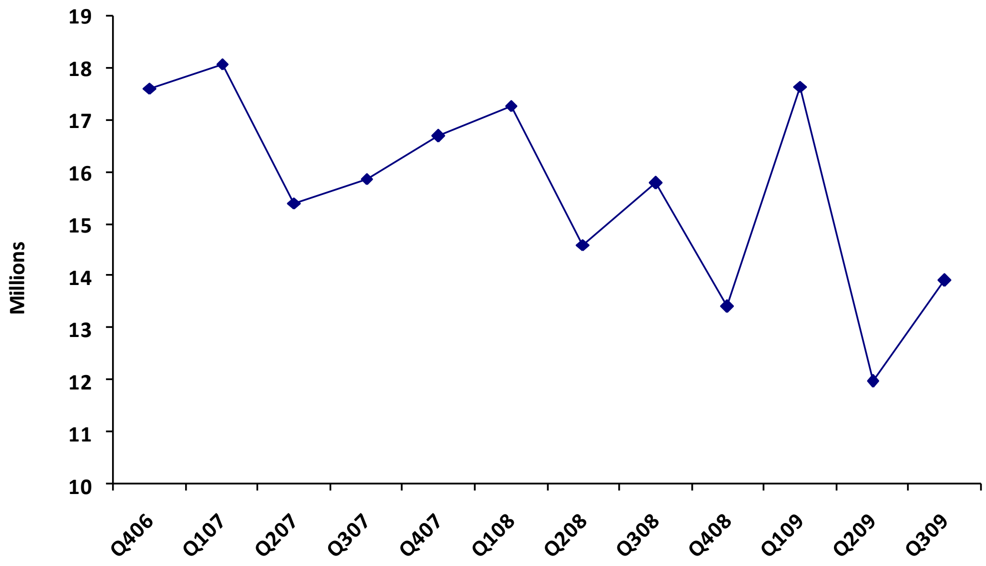
The focus of the report then shifts to the "top ten" broadband countries for Q3 2009. Here we examine the total number of broadband subscribers, the net additions for the quarter, quarterly and annual percentage growth, technologies adopted as well as population and household penetration. The last section of the report offers a selection of tables highlighting both, quarterly and annual changes in total broadband, DSL and Non-DSL subscriber figures.

2. Global and Regional Perspectives

2.1 Overall Growth

By the end of Q3 2009 there were 451.94 million broadband subscribers globally. This was up 3.18 per cent on the previous quarter from 438 million. Figure 1 shows the quarterly net additions from Q4 2006 to Q3 2009. The lowest net additions during this period were reported in Q2 2009 totalling 11.98 million. The largest number of net additions was acquired in Q1 2007 and totalled 18 million.

Figure 1: World Broadband Subscriber Net Additions (Q4 2006 – Q3 2009)



The number of net additions has picked up since Q2 2009 when the lowest number of net additions in figure 1 was recorded. With the changes in working practices, such as more people working from home, broadband is becoming an essential household service. This is reflected by the net additions, which have not fallen below 10 million in the last 6 years.

Over the 12 months to end Q3 2009, 56.97 million new broadband subscribers were added worldwide. This represents 12.6 per cent of total subscribers reported by the end of Q3 2009. Global population penetration was 7.8 per cent by the end of Q3 2009, up from 7.6 per cent at the end of Q2 2009 and up from 6.8 per cent a year ago. Global household penetration was 28.7 per cent, up from 27.8 per cent in Q2 2009 and up from 25.1 per cent a year ago.

2.2 Regional Trends

The broadband subscribers divided by region are shown in figure 2. The quarterly growth by region with population is shown in figure 3. South and East Asia (24.81 per cent) and Western Europe (24.71 per cent) have the largest shares of the world broadband market. North America had the third largest share at 20.72 per cent and Asia Pacific followed with a 14.27 per cent share. The three smallest market shares were held by Latin America (6.75 per cent), Eastern Europe (5.79 per cent) and Middle East and Africa (2.95 per cent).

Figure 2: Share of World Broadband Subscribers by Region in Q3 2009

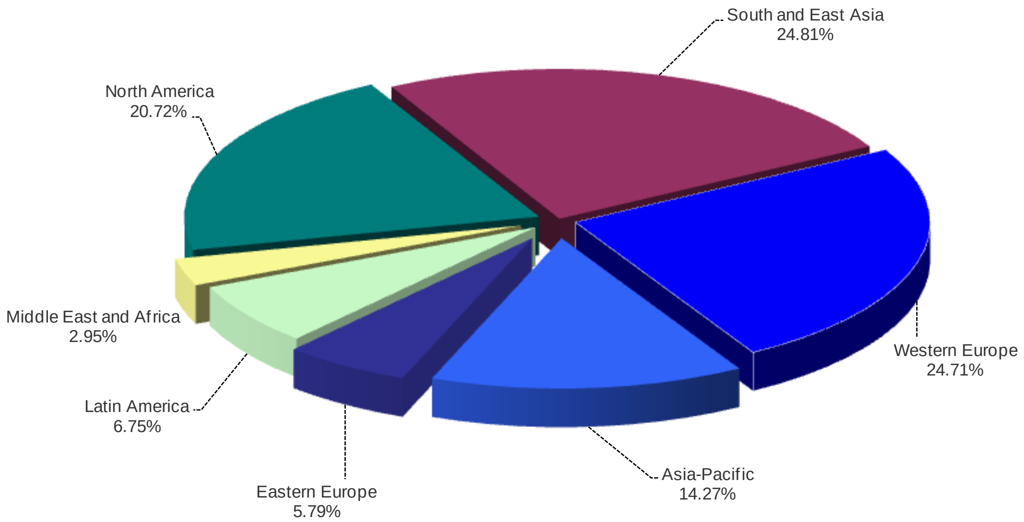
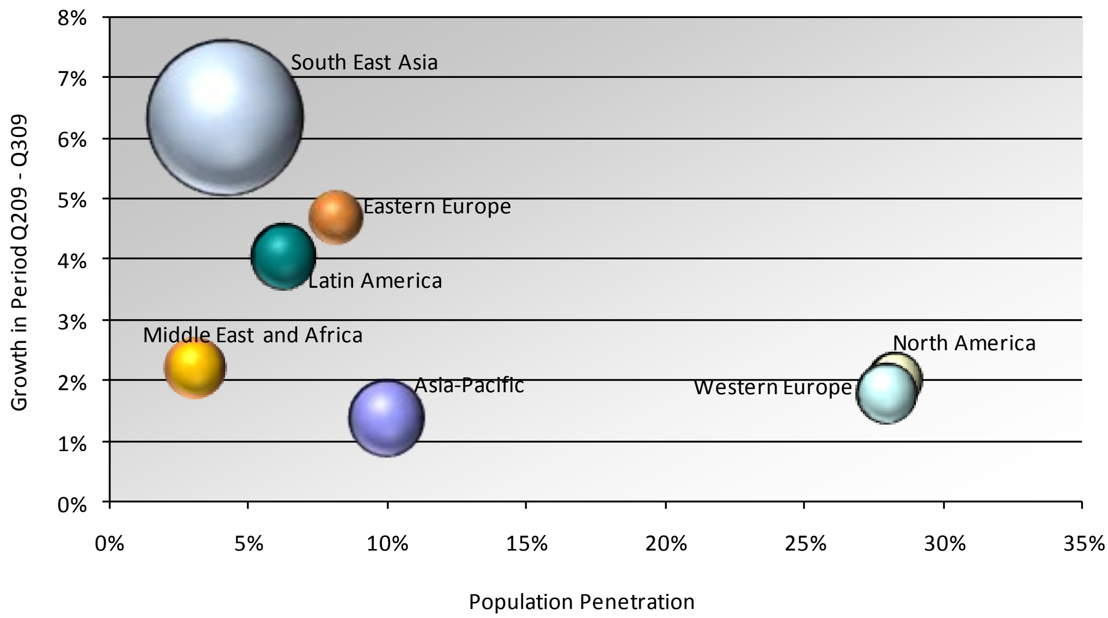


Figure 3: Penetration & Quarterly Growth by Region in Q3 2009



In figure 3, the population of each region is indicated by the size of each globe. As shown, South and East Asia is represented by a much large globe than any of the other regions. This is because it includes China and India - the most populated countries in the world.

The position of each globe with respect to the horizontal axis is an indication of broadband population penetration. In figure 3, both North America and Western Europe have the highest penetration rates at 28.3 per cent and 28 per cent respectively. As a result they are positioned to the right of the axis.

Regions such as Middle East and Africa and Latin America have less developed broadband markets than those found in North America and Western Europe. Therefore broadband take up is lower, reflected by lower penetration. Middle East and Africa has the lowest penetration at 3.1 per cent followed by South and East Asia at 4.2 per cent and Latin America at 6.3 per cent. Penetration in Asia Pacific stood at 10 per cent.

The position of the globes relative to the vertical axis indicates quarterly growth. The highest growth was experienced in the regions with smaller immature broadband markets with a higher potential for growth. These include South and East Asia (6.32 per cent), Eastern Europe (4.67 per cent) and Latin America (4.03 per cent). Quarterly growth in Middle East and Africa stood at 2.19 per cent.

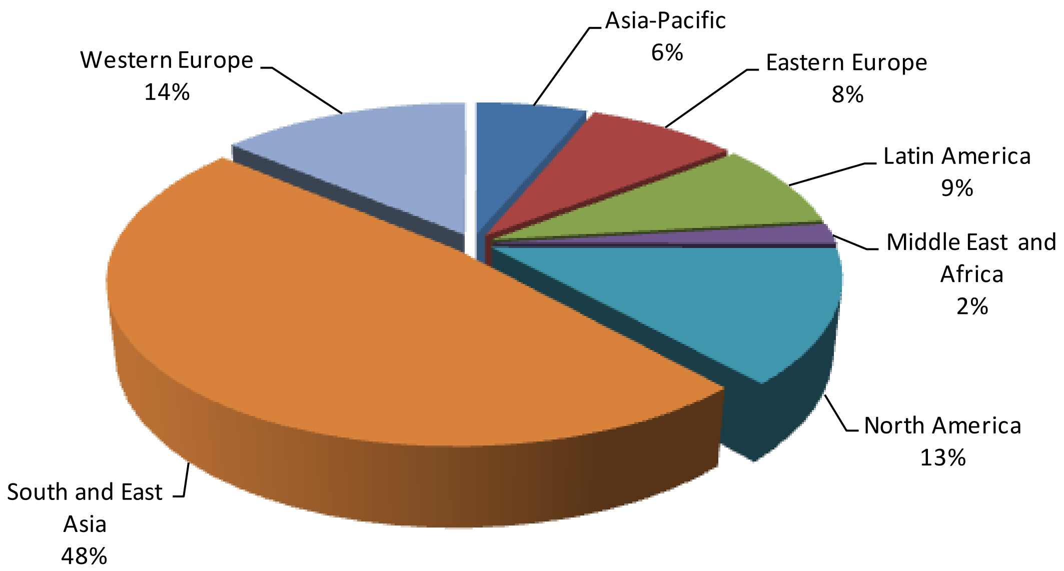
The lowest quarterly growth was in North America (1.99 per cent) and Asia Pacific (1.35 per cent). Both regions have well developed mature broadband markets with high penetration rates. These markets tend to experience high churn rather than high quarterly growth.

Quarterly growth in all regions was positive. It was down from that in Q2 2009 in three regions. This is an improvement on Q2 2009 when quarterly growth in all but one region was down on the previous quarter. The three regions were Asia Pacific which experienced the largest fall (down 18.22 per cent from 1.65 per cent), Eastern Europe (down 16.26 per cent from 5.57 per cent) and Latin America (down 15.41 per cent from 4.77 per cent).

Growth in the remaining four regions was up on the previous quarters. South and East Asia experienced the highest increase in quarterly growth, up 41.68 per cent from 4.46 per cent. The other regions were Middle East and Africa (up 12.6 per cent from 1.94 per cent), North America (up 5.88 per cent from 1.88 per cent) and Western Europe (up 2.96 per cent from 1.71 per cent).

The net additions by region during Q3 2009 are shown in figure 4. South and East Asia acquired the largest share of net additions at 48 per cent, or 6.7 million new subscribers. For the first time in 2009, Western Europe acquired the second highest share of quarterly net additions. At 14 per cent this was 1.9 million subscribers. North America was third with a 13 per cent share, representing 1.83 million subscribers.

Figure 4: Regional Share of World Broadband Net Additions in Q3 2009



Latin America and Eastern Europe had similar shares of new subscribers at 1.18 million and 1.16 million respectively. Asia Pacific was next with a 6 per cent share representing 860,000 new subscribers and Middle East and Africa had the smallest share at 2 per cent or 285,000 subscribers.

South and East Asia had the largest increase in net additions compared with the previous quarter (Q2 2009). Net additions in this region increased from 4.5 million to 6.7 million, representing a 48 per cent improvement quarter-on-quarter. The country with the largest number of net additions in this region was China. Totalling 5.79 million this represented a 58 per cent increase from 3.6 million in Q2 2009. In addition, the Chinese net additions represented 86 per cent of the regional total and 41.7 per cent of the global total.

Two Chinese operators were responsible for the majority of net additions, they were China Telecom and China Unicom (Hong Kong) Ltd. China Telecom added 2.89 million new subscribers in Q3 2009, up 61.5 per cent on the previous quarter from 1.79 million. China Unicom (Hong Kong) Ltd added 2.33 million new subscribers in Q3 2009, up 66.7 per cent from 1.4 million.

The Middle East and Africa experienced the largest increase in net additions by proportion. They increased by 14.78 per cent from 248,900 to 285,700. Only one country significantly improved its net additions quarter-on-quarter. This was Egypt, which increased its net additions by 132.6 per cent from 44,727 to 104,050. These new subscribers were acquired by Telecom Egypt.

The next largest increase by absolute figures was in North America. Net additions increased by 133,700 (7.88 per cent) from 1.7 million to 1.83 million. Both Canada and the USA improved their quarterly net additions. In Canada this was by 84 per cent from 90,600 to 166,500 and in the USA this was by 3.6 per cent from 1.6 million to 1.66 million. The top performing operators in this region were all US-based, and include CenturyLink (1.51 million net adds), Comcast (735,450 net adds) and Time Warner Cable (121,000 net adds).

Western Europe had the smallest increase by proportion at 4.72 per cent but the third highest by absolute figures. Net additions increased by over 86,800 from 1.84 million to 1.92 million. The top four countries in this region in terms of net additions were Germany (360,900 net additions or 7 25 per cent increase), France (339,700 net additions or 12 per cent increase), UK (209,000 net additions or 18 per cent increase), Spain (186,717 net additions or 76.3 per cent increase) and Italy (184,187 net additions or 29.14 per cent decrease.

The four top performing operators in Western Europe were the only ones to acquire at least 100,000 new subscribers. They were UK-based incumbent BT (169,000 net adds), French operator SFR (129,000 net adds), French incumbent Orange (126,000 net adds) and German incumbent Deutsche Telecom (100,000 net adds).

Latin America, Eastern Europe and Asia Pacific all had a reduced number of net additions quarter-on-quarter. The largest fall in net additions was experienced in Asia Pacific, down by 16.87 per cent, or 174,749 net additions, from 1.036 million to 861,300.

The top four countries in Asia Pacific in terms of net additions were Japan (down by 46.25 per cent to 225,000 net additions), South Korea (down by 27.35 per cent to 168,599 net additions) and Indonesia (up by 63 per cent to 63,000 net additions). Indonesia acquired the largest number of net additions in the region, followed by Australia which acquired 44,000 net additions (183.33 per cent improvement).

Operators in Asia Pacific that acquired the most new subscribers included Japanese operator NTT with 345,000 net additions (194,000 in the east and 151,000 in the west), Indonesian operator PT Telkom (163,000), Philippines-based PLDT (150,858) and South Korean operator Powercom (91,002).

Net additions in Latin America were down by 11.38 per cent on the previous quarter from 1.33 million to 1.18 million. Since Q3 2008 the net additions in this region have fallen steadily from over 2 million. The countries with the highest number of net additions included Mexico with 109,801 net additions (up 19.45 per cent), Brazil with 198,100 net additions (down 51.27 per cent), Argentina with 60,000 net additions (up 72 per cent) and Chile with 42,300 net additions (down 14 per cent).

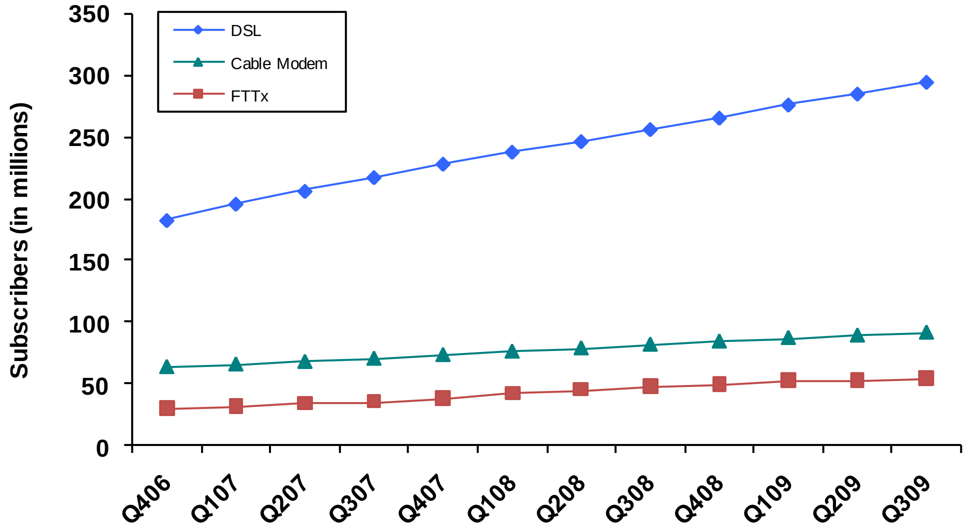
The operators that made the greatest impact on net additions were Mexican operator Telmex with 403,000 net additions (up 6.6 per cent), Brazilian operators NET Servicos with 185,000 net additions (up 21 per cent) and Telemar with 76,000 net additions (down 40.63 per cent) and Telecom Argentina with 69,000 net additions (up 64.29 per cent).

Eastern Europe net additions were down 11.59 per cent quarter-on-quarter from 1.32 million to 1.165 million. The top five performing countries in terms of net additions had less net additions compared with the previous quarter. They were Russia with 698,100 net additions (down 1.93 per cent), Poland with 115,256 net additions (down 18.43 per cent), Romania with 76,940 net additions (down 28 per cent), Hungary with 45,044 net additions (down 31.46 per cent) and Ukraine with 44,000 net additions (down 9.28 per cent).

The four operators that made the most significant impact on quarterly net additions were all based in Russia. They were Vimpelcom with 107,000 net additions (up 7 per cent), Dalsvyaz with 44,945 net additions (up 150 per cent), Northwest Telecom with 70,000 net additions (down 53 per cent) and Centel with 62,000 net additions (down 17 per cent).

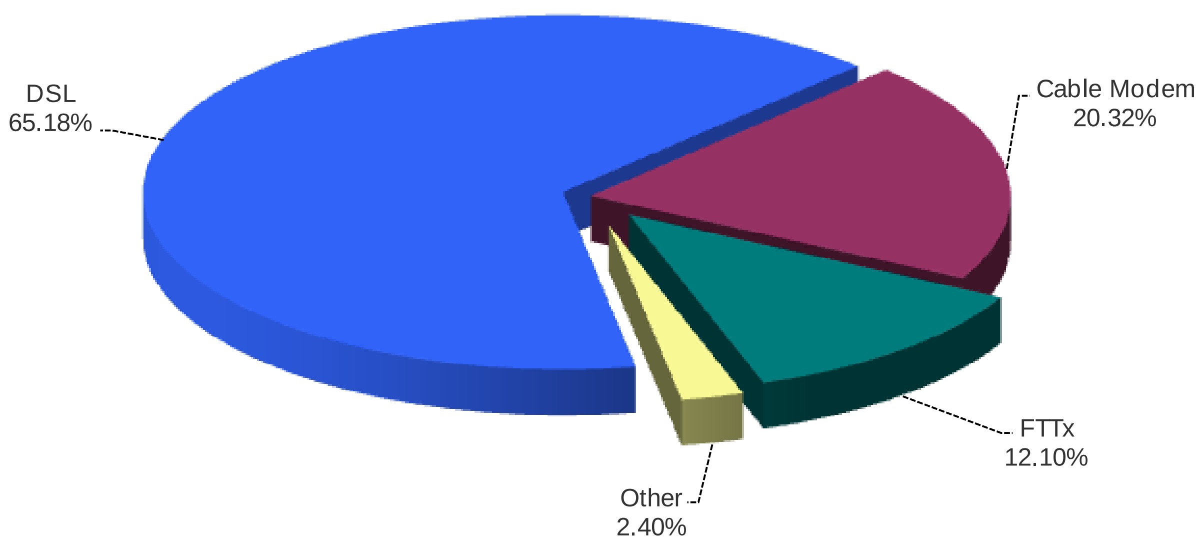
3. Technology Trends and Choices

Figure 5: Technology Trends in Q3 2009



The breakdown of broadband subscribers by technology is shown in figures 5 and 6. Figure 5 shows that the take-up of broadband services using all three technologies continues to increase. DSL remains the most popular technology with over 65 per cent of subscribers using it for broadband connection (representing 294.58 million lines). Cable modem was in second place with 20.32 per cent of the total (91.81 million lines), followed by FTTx with over 12 per cent (54.7 million lines).

Figure 6: Total Broadband by Technology in Q3 2009



Quarterly growth of DSL connections was the highest of the three at 3.33 per cent, representing an increase by 9.49 million lines from 285.09 million. FTTx growth was next at 2.89 per cent, or an increase by 1.54 million lines from 53.16 million. Cable modem growth followed at 2.57 per cent. This represented an increase by almost 2.3 million lines from 89.5 million.

Quarterly growth improved with respect to all three technologies compared with growth in the previous quarter. FTTx showed the greatest improvement, up 1.91 from 0.98 per cent in Q2 2009. This was followed by cable modem, up 0.34 per cent from 2.23 and DSL, up 0.13 per cent from 3.2 per cent.

Figure 7 shows the market shares by region and technology. Over 60 per cent of DSL subscribers are found in Western Europe and South and East Asia. Their market shares are 31.34 per cent (92.3 million lines) and 30.92 per cent (91.09 million lines) respectively. The countries with the highest number of DSL subscribers are Germany (22.2 million lines), France (17.45 million lines), UK (14.24 million lines) and Italy (12.65 million lines). The largest DSL market in the world is in China with over 81 million lines. This represents 27.5 per cent of the global DSL total.

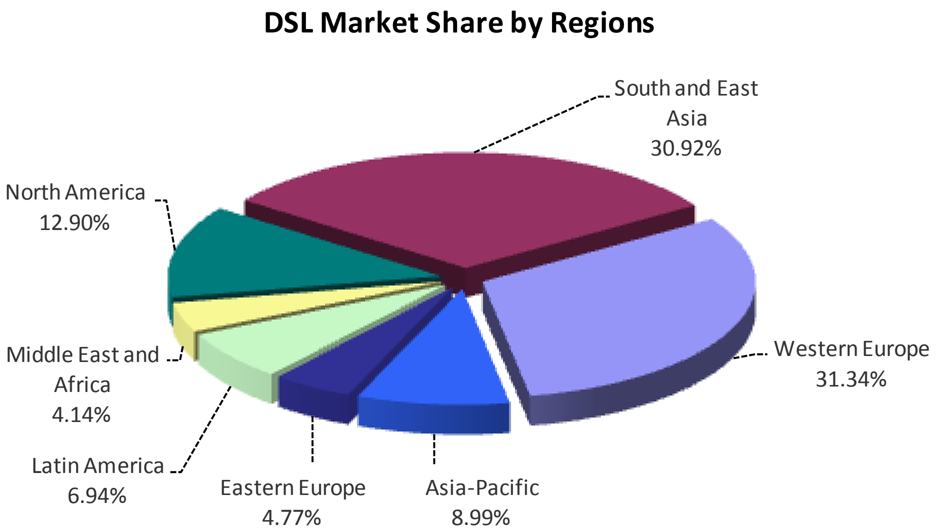
North America had the third largest share of the global DSL market at 12.9 per cent, representing 37.98 million lines. With 33.57 million DSL subscribers, the USA had the most DSL subscribers in the region and the second largest DSL subscriber market in the world. Canada had 4.4 million DSL subscribers.

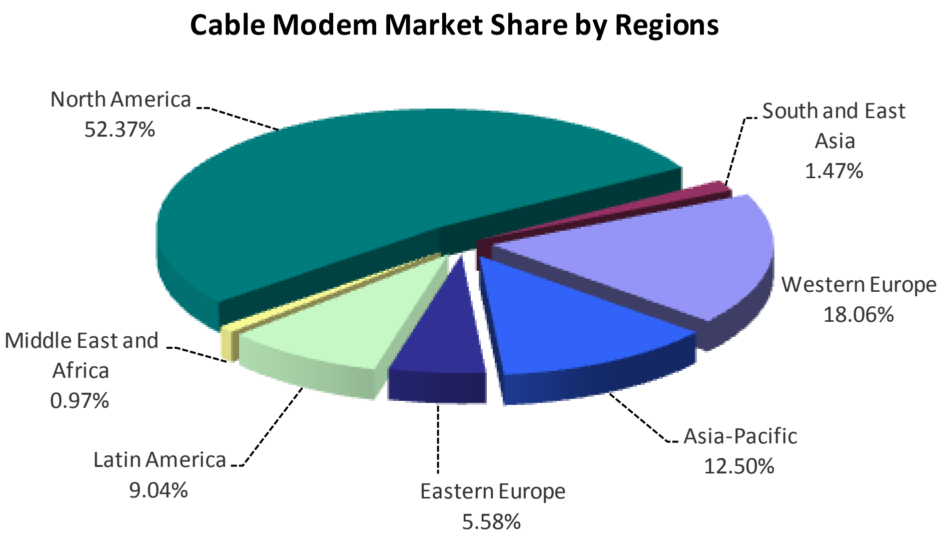
The USA had the largest cable modem subscriber base in the world with 42.7 million lines or 46.5 per cent of the global cable modem total. This is reflected in figure 7 which shows that cable modem subscribers in North America represent 52.37 per cent of the global cable modem total. Canada has 5.37 million cable modem subscribers representing 5.85 per cent of the global total. Unsurprisingly, the most influential cable modem operators are based in the US. They include Comcast with 15.68 million subscribers, Time Warner Cable with 9.17 million subscribers and Cox Communications with 4.4 million subscribers.

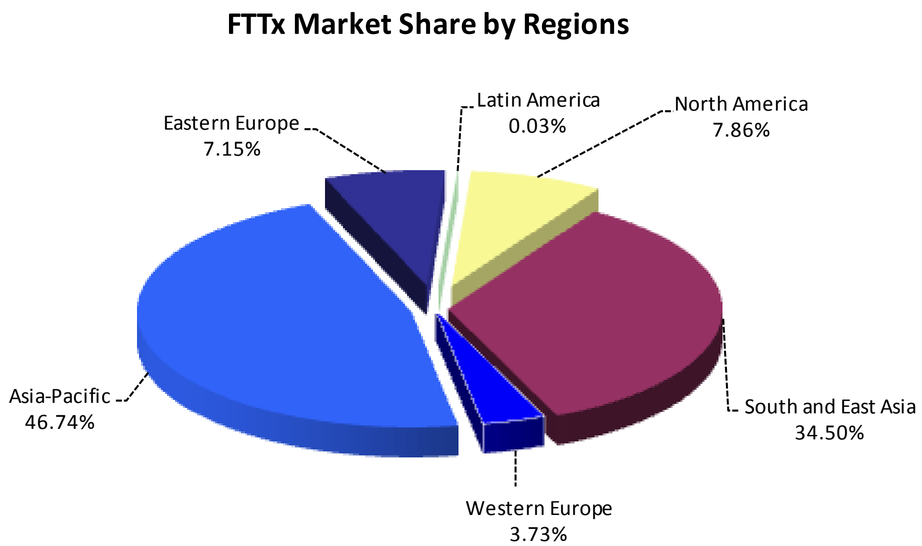
Western Europe has the next largest portion of the cable modem market at 18 per cent or 16.6 million connections. The UK had the largest cable modem market in Western Europe, totalling 3.79 million connections. This was followed by the Netherlands with 2.32 million connections, Germany with 2.25 million connections, Spain with 1.84 million and Belgium with 1.22 million.

When it comes to broadband using FTTx technology, Asia has some of the largest and most established FTTx markets globally. Asia (Asia Pacific and South and East Asia) controls over 80 per cent of the FTTx market, representing 44.44 million subscribers. The largest FTTx subscriber base in the world is in China, with 18.25 million subscribers representing a 33.36 per cent share of the global FTTx market. This was followed by Japan with 16.5 million subscribers, South Korea with 7.5 million subscribers and Taiwan with 1.51 million subscribers.

Figure 7: World DSL, Cable Modem & FTTx Market Share by Region in Q3 2009







The DSL markets in all regions except one experienced positive growth. The DSL market in Asia Pacific was down by 0.96 per cent from 26.75 million in Q2 2009 to 26.49 million in Q3 2009. The next lowest quarterly growth rates were in Western Europe and North America at 1.46 per cent and 0.99 per cent respectively.

South and East Asia had the highest quarterly growth at 7.77 per cent from 84.5 million to 91.1 million. South and East Asian countries with the highest quarterly growth were Vietnam at 9.68 per cent (from 2.48 million to 2.72 million), Pakistan at 8.65 per cent (from 173,500 to 188,500), India at 7.83 per cent (from 5.25 million to 5.66 million) and China at 7.81 per cent (from 75.14 million to 81 million).

The next highest growth rate was in Eastern Europe at 4.65 per cent from 13.43 million to 14 million. Most of the countries in this region experienced positive quarterly growth of their DSL markets. They include Moldova at 18.17 per cent (from 140,900 to 166,500 subscribers), Belarus at 9.05 per cent (from 243,000 to 265,000), Russia at 8.31 per cent (from 4.66 million to 5.05 million) and Montenegro at 8.06 per cent (from 45,829 to 49,524).

The growth rates in Latin America and the Middle East and Africa were similar at 2.99 per cent and 2.16 per cent respectively. Significant DSL markets in Latin America that experienced positive quarterly growth include Mexico at 6.99 per cent (from 5.98 million to 6.4 million), Argentina at 5.71 per cent (from 2.24 million to 2.38 million) and Colombia at 1.46 per cent (from 1.3 million to 1.32 million). Equivalent markets in the Middle East and Africa include Saudi Arabia at 1.87 per cent (from 1.07 million to 1.09 million), Israel at 1.38 per cent (from 1.02 million to 1.03 million) and Egypt at 12.39 per cent (from 839,727 to 943,777).

The regional cable modem markets all experienced positive growth over the quarter. Once again, South and East Asia had the highest growth at 7.8 per cent from 1.28 million to 1.35 million. The country in this region with the largest cable modem market was India with 851,000 subscribers by end Q3 2009. Its subscriber base grew by 7.86 per cent over the quarter from 789,000 in Q2 2009. Hong Kong had the next largest cable modem market in this region. Growth in this country was down 1.81 per cent from 260,000 to 255,300. The third largest cable modem market in this region was in Pakistan which grew by 11.86 per cent from 118,000 to 132,000.

Quarterly growth in Latin America was the second largest at 5.2 per cent from 7.8 million to 8.3 million. Countries with significant cable modem markets include Brazil with 6.65 per cent growth from 2.7 million to 2.92 million, Mexico with 10 per cent growth from 2.4 million to 2.65 million and Argentina with 1.49 per cent growth from 1.01 million to 1.025 million.

The remaining regions had cable modem markets which grew by less than 5 per cent. They were Eastern Europe (3.87 per cent), Western Europe (3.15 per cent), North America (1.61 per cent), Middle East and Africa (1.52 per cent) and Asia Pacific (0.36 per cent).

The quarterly growth of FTTx markets in all regions except one was positive. In South and East Asia, the FTTx market was down by 0.3 per cent from 18.9 million to 18.87

million. The highest growth was experienced in Latin America at 10.71 per cent. However, the FTTx market in this region was the smallest, growing from 14,000 to 15,500.

The next highest growth was in Eastern Europe. At 6.51 per cent, the FTTx market in this region grew from 3.67 million to 3.9 million. Countries with significant subscribers to FTTx services all experienced positive growth. They include Russia with 7 per cent growth (from 2.96 million to 3.17 million), Lithuania with 5 per cent growth (from 209,822 to 220,384), Slovakia with 8.49 per cent growth (from 135,500 to 147,000) and Romania with growth at 4.55 per cent (from 110,000 to 115,000).

North America and Western Europe experienced similar growth at 5.63 per cent and 5.8 per cent respectively. In North America, this growth was solely due to the FTTx market in the USA which grew from 4.07 million to 4.3 million. Western European countries with significant FTTx subscribers included Sweden with 2.99 per cent growth (from 568,000 to 585,000), France with 8.73 per cent growth (from 277,300 to 301,500), Norway with 9.65 per cent growth (from 244,800 to 246,500) and Switzerland with 12.73 per cent growth (from 165,000 to 186,000.

Asia Pacific had the lowest positive growth at 4.13 per cent from 24.55 million to 25.57 million. Taiwan had the highest FTTx growth at 12.3 per cent, from 1.34 million to 1.5 million. This was followed by Japan at 4 per cent growth from 15.89 million to 16.5 million.

FTTx is viewed by many operators as the next step in broadband technology evolution. Many operators are aggressively marketing this technology to new broadband customers. However, it is also important to note that this market is still relatively small and as such small changes in net additions will make a relatively large difference to the quarterly growth. This is shown by FTTx growth in Latin America.

4. "Top Ten" Broadband Countries

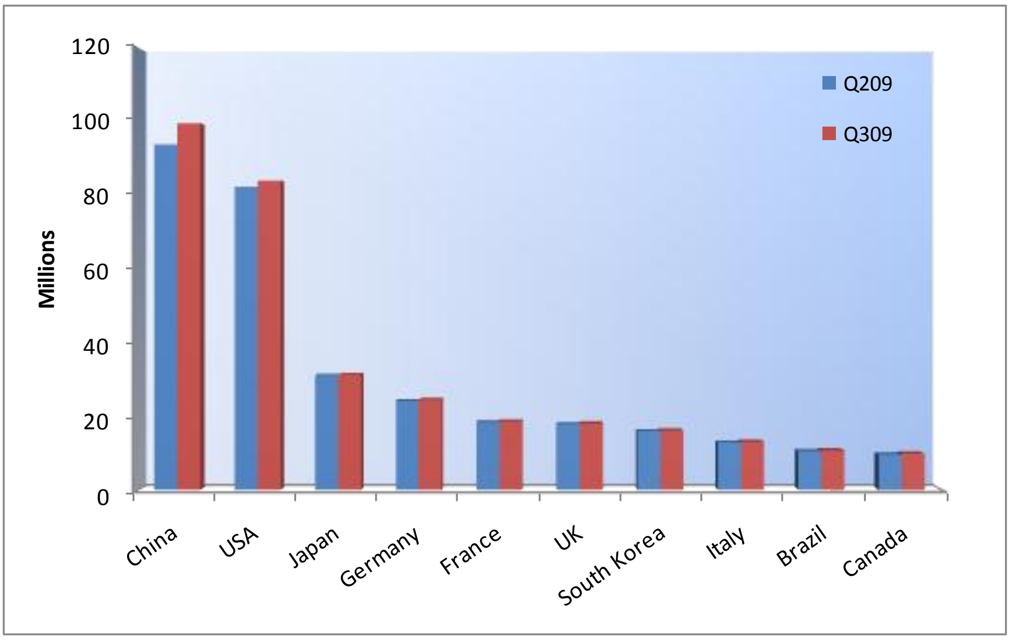
4.1 Number of Subscribers

The 'top ten' countries in terms of total broadband subscribers as of Q2 2009 and Q3 2009 are shown in figure 8. Since displacing the USA in Q2 2008 China has maintained its number one position, while the USA is in second place.

China had 99.34 million subscribers, up 6.19 per cent on the previous quarter from 93.55 million. The US reported 83.85 million subscribers, up 2 per cent on the previous quarter from 82.18 million. Collectively, China and the US control over 40 per cent of the worldwide broadband market.

The difference in broadband subscribers between China and the USA was 15.49 million in Q3 2009 up 36.28 per cent on Q2 2009 when the difference was 11.37 million. The subscriber base in China continues to grow at a faster rate than that in the USA.

Figure 8: Total Number of Subscribers in Q2 2009 and Q3 2009



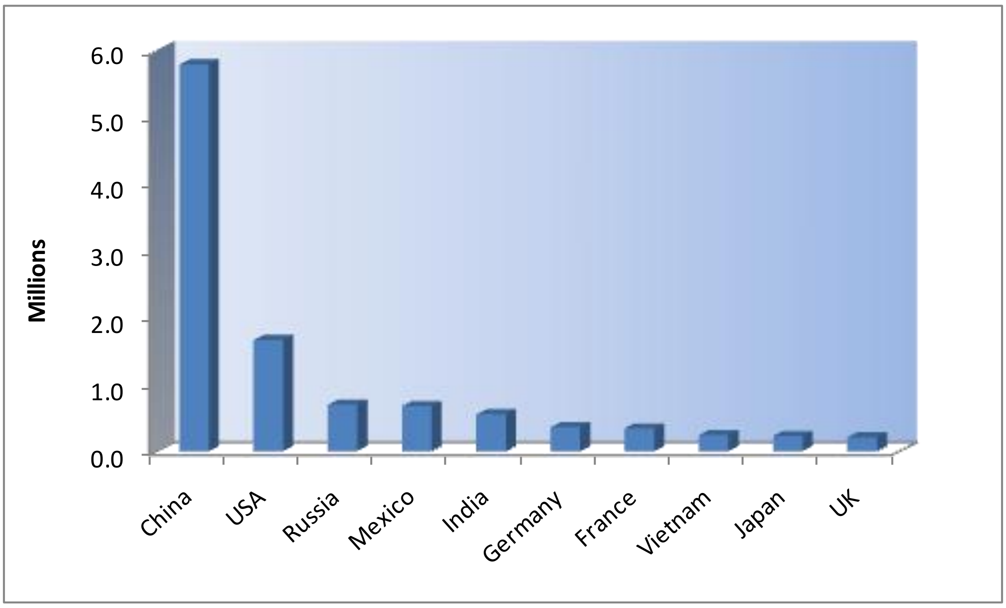
4.2 Broadband Subscribers Added

In figure 9, the 'top ten' countries are ranked in terms of net additions during Q3 2009 and Q2 2009. China added the most new subscribers during Q3 2009 at 5.78 million, while the USA was next, adding 1.66 million new subscribers over the same period. China and the USA were the only two countries to add over 1 million new subscribers during the quarter. Between them they added over 53 per cent of total net additions for the quarter. Russia was third, adding 698,100 new subscribers, closely followed by Mexico with 674,440 new subscribers.

Of the countries shown in figure 9, seven improved their net additions total compared with the previous quarter. They were China (up 58.13 per cent from 3.66 million), Mexico (up 19.45 per cent from 109,800), USA (up 3.6 per cent from 57,814), France (up 12 per cent from 36,400), UK (up 18 per cent from 177,100), Germany (up 7.25 per cent from 336,500) and Vietnam (up 5.18 per cent from 229,600).

The remaining three countries added less new subscribers quarter-on-quarter. They were India (down 0.5 per cent from 555,982), Russia (down 1.93 per cent from 13,755) and Japan (down 46.25 per cent from 418,600).

Figure 9: Broadband Subscribers Added in Q3 2009



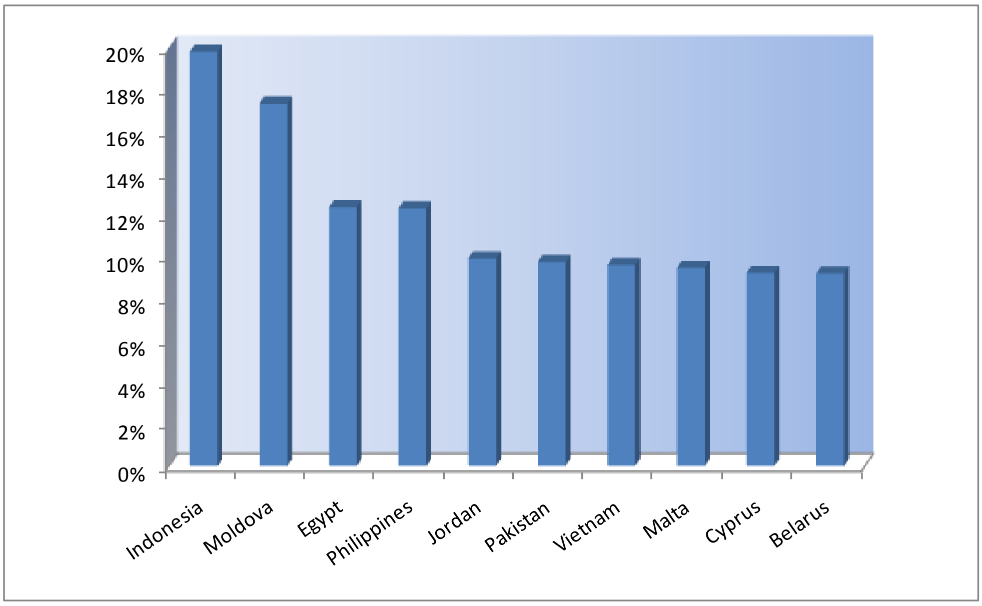
4.3 Percentage Growth

The ‘top ten’ countries in terms of quarterly and annual growth are shown in figures 10 and 11 respectively. Only countries with at least 100,000 broadband subscribers were included. This reduced the effect of disproportionately high growth rates exhibited by countries with very small subscriber bases.

The highest quarterly growth was experienced in Indonesia at 19.82 per cent. Net additions over the quarter totalled 163,000, up on the previous quarter from 100,000 net additions. Previously at the top of this ranking, Moldova is now in second place with 17.34 per cent growth. Net additions were 25,900, up from 24,800 during the previous quarter.

Egypt had the third highest quarterly growth at 12.39 per cent. Net additions were up from 44,727 to 104,050 during Q3 2009. The Philippines was the only other country that had quarterly growth higher than 10 per cent. Growth in this region was at 12.32 per cent and net additions increased from 143,202 to 160,858.

Figure 10: Top Ten Countries by Quarterly Growth in Q3 2009

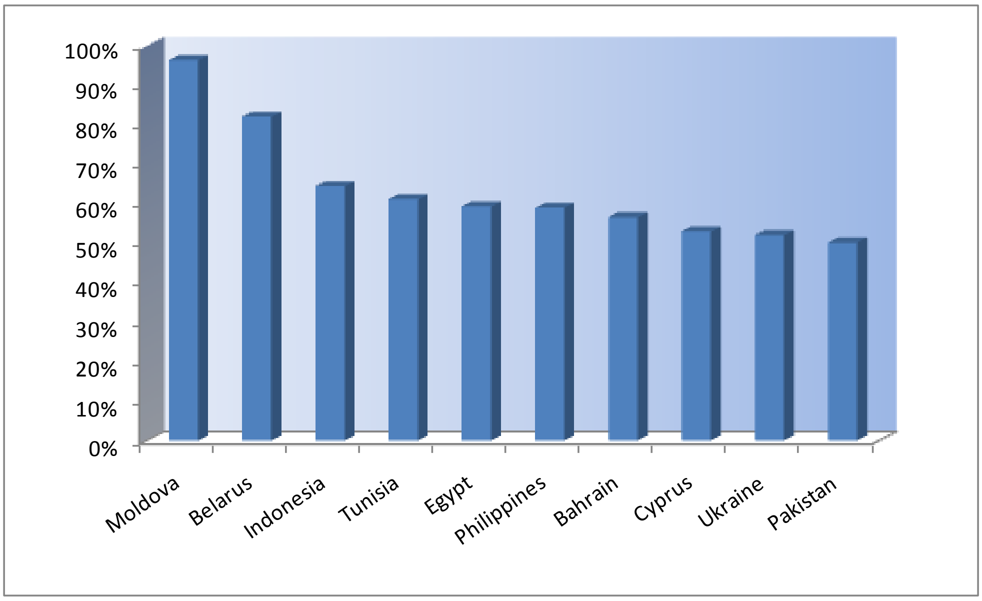


Of the countries shown in figure 10, Vietnam added the most new subscribers during the quarter at 241,500. Indonesia was next, adding 163,000 new subscribers, followed by the Philippines and Egypt. These four countries were the only ones out of the top ten to add at least 100,000 new subscribers. Once again, Jordan added the smallest number of new subscribers out of those in the top ten. Net additions during the quarter in Jordan totalled 11,800 compared with 10,000 acquired in the previous quarter.

There were four new entrants compared with the ranking in the previous quarter. They were Egypt, Pakistan, Malta and Belarus. The countries displaced by these new entrants were Tunisia, New Zealand, Russia and Ukraine.

After maintaining its number one position for the 12 months to end Q2 2009, Indonesia is no longer at the top spot in terms of annual growth as shown in figure 11. It has been displaced by Moldova with 96.36 per cent annual growth and 86,000 net additions. Belarus is in second place with 82 per cent annual growth (155,000 net additions) and Indonesia is third with 64.39 per cent annual growth (386,000 net additions).

Figure 11: Top 10 Countries by Annual Growth from Q3 2008 to Q3 2009



The Philippines added the highest number of new subscribers over the 12 months to Q3 2009 totalling 534,757. Indonesia was next, adding 386,000 new subscribers, followed by the Ukraine (382,000), Egypt (351,246), Belarus (155,000), Tunisia (113,000) and Pakistan (109,000). The remaining three countries all added less than 100,000 new subscribers. They include Moldova, Cyprus (68,857) and Bahrain (47,500).

There were two new entrants compared to the previous top ten. They were Pakistan and Cyprus. As a result India and Sri Lanka were both pushed out of the top ten.

4.4 Technologies Adopted

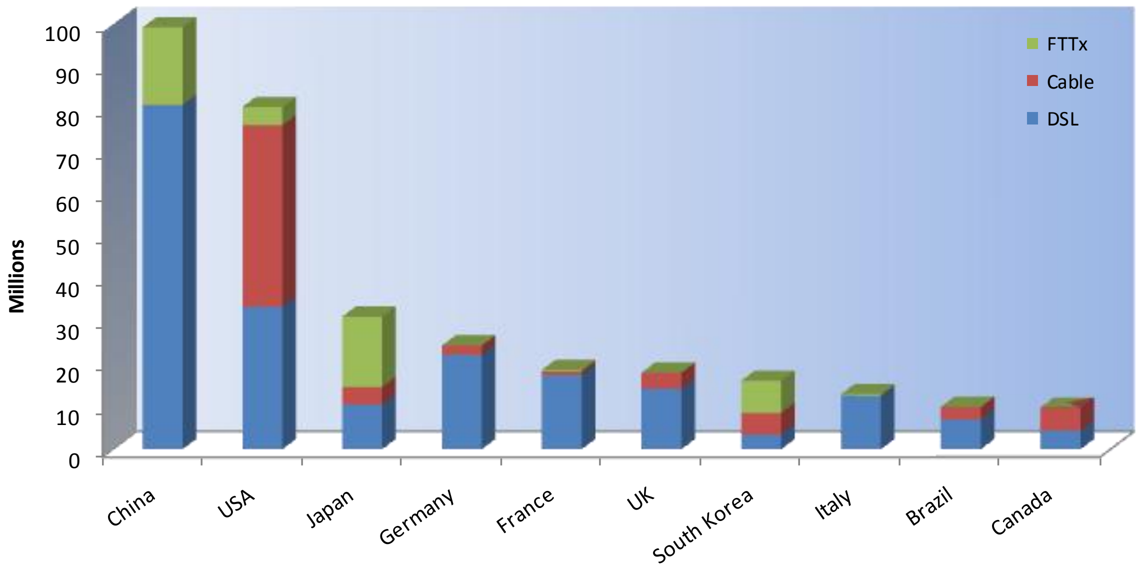
The 'top ten' countries featured in figure 8 in terms of the technologies used are shown in figure 12. Collectively these 10 countries represent almost 72 per cent of the worldwide broadband market, so the analysis of these countries gives a good indication of global technology trends.

DSL continues to be the most popular technology for broadband usage with 206.54 million connections amongst the top ten countries. This represents 63.5 per cent of all connections in the top ten countries. As shown in figure 12, DSL is the dominant technology in six out of the ten countries. They are China, Germany, France, the UK, Italy and Brazil.

Cable modem was the next most popular technology with 67.3 million connections. This represented 20.69 per cent of all connections within the top ten. FTTx remains the least popular of the three with 47.24 million connections or 14.52 per cent of the total. Cable modem has a significant presence in the USA, Brazil and Canada, while there are significant FTTx markets in China, Japan and South Korea.

China is home to the largest DSL and FTTx markets in the world with 81 million and 18.25 million connections respectively. The USA has the largest cable modem market with 42.7 million connections, representing 13.13 per cent of the top ten total and over 50 per cent of the country total.

Figure 12: Total Subscriber Numbers by Technology Adopted in Q3 2009



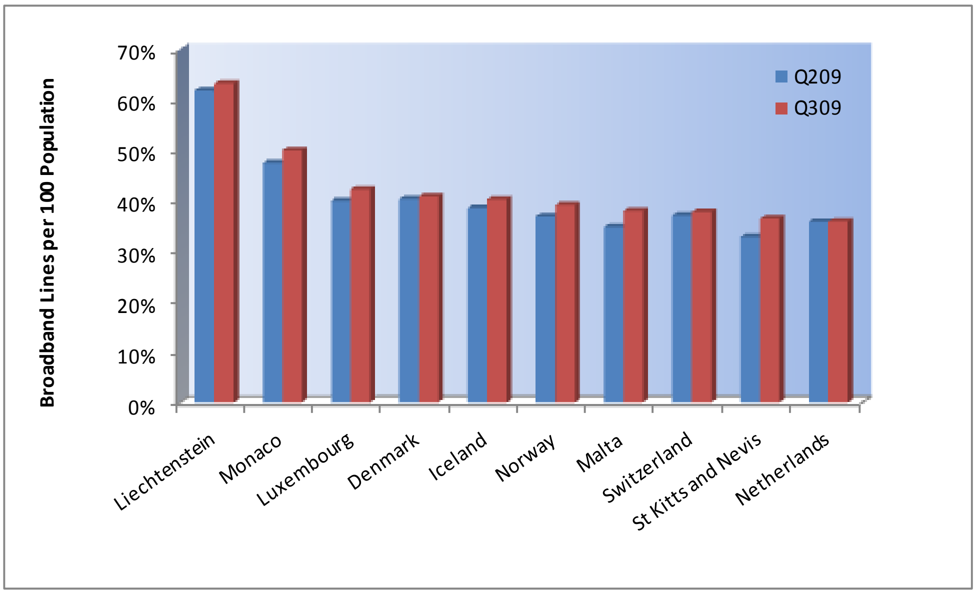
4.5 Population and Household Penetration

The ‘top ten’ countries ranked in terms of population penetration in Q2 2008 and Q3 2009 are shown in figure 13. The broadband subscriber total in Liechtenstein was recently updated due to recently acquired intelligence. As a result this country now has the highest population penetration at 63.2 per cent. Monaco has been pushed down to second place with 50 per cent penetration, followed by Luxembourg in third place with 42.3 per cent penetration.

In fourth place Denmark appeared just above Iceland in the ranking after previously appearing after Iceland in Q2 2009. Their population penetrations stood at 40.9 per cent and 40.3 per cent respectively in Q3 2009. Norway’s position in the ranking remained unchanged at sixth place with a penetration of 39.2 per cent. Malta was next with 38 per cent penetration followed by Switzerland (37.8 per cent), St Kitts and Nevis (36.5 per cent) and the Netherlands (35.9 per cent).

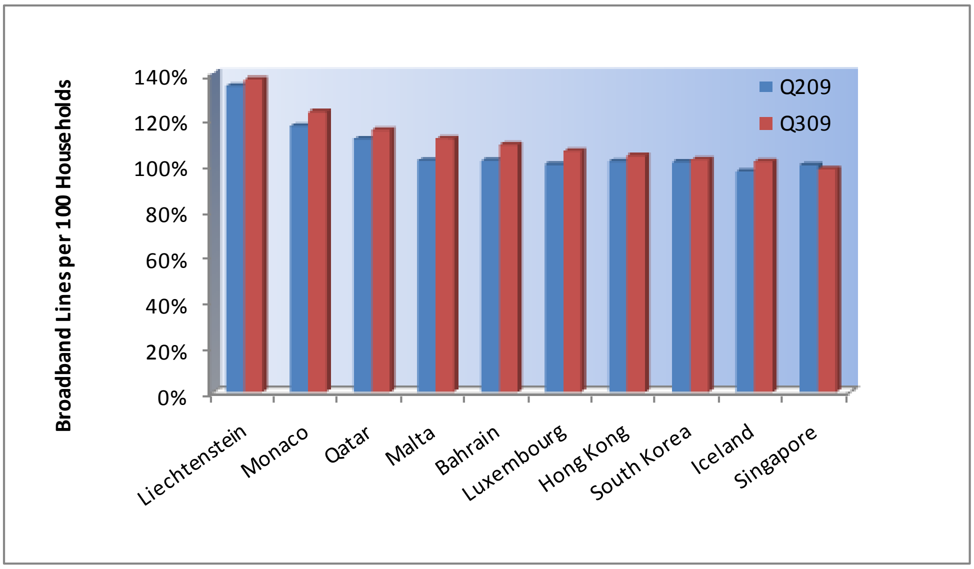
New entrants were Liechtenstein and St Kitts and Nevis. Countries no longer in the ranking were Australia and Sweden.

Figure 13: Broadband Penetration by Population in Q2 2009 and Q3 2009



The ‘top ten’ countries in terms of household penetration in Q2 2009 and Q3 2009 are shown in figure 14. As with population penetration, Liechtenstein entered the top ten straight in at number one with 117.2 per cent household penetration. This was followed by Monaco in second place with 123.19 per cent household penetration, while Qatar was third at 115.2 per cent. Liechtenstein was the only new entrant into the top ten, displacing Australia which is no longer in the top ten.

Figure 14: Broadband Penetration by Household in Q2 2009 and Q3 2009



5. Methodology and Supporting Material

5.1 Data Collection

Point Topic aims to offer the most complete, up-to-date and accurate source for world broadband statistics and estimates. In order to do this, we collect quarterly statistics from major primary suppliers of DSL lines, cable modems and FTTx services. We also collate data from service providers which resell products provided by these primary suppliers. Many operators now publish quarterly numbers as part of their regular reporting cycle. Numerous others provide us with their numbers via email and personal communication. We are, as always, most grateful to all of them for having taken the time to do so.

Many operators continue to release annual reports as opposed to quarterly ones. Some also choose to aggregate subscriber trends into overall totals, avoiding break-downs by technology. In these cases, Point Topic has continued conservatively estimating broadband up-take. Key sources for such estimated totals typically include prior and partial reports by the operators themselves. National Regulatory Authorities (NRAs) also frequently report DSL and other broadband statistics, although often with a greater time delay. Despite any difficulties that may arise as a consequence of this publication schedule, Point Topic will continue to provide the most up-to-date broadband statistics and estimates in our reports. In cases where these sources are unavailable, DSL and cable vendors often give useful indicators, as do estimates quoted by the trade press. Where we do have secondary estimates, we try as far as is possible to trace these to their original source.

During the research process for the latest quarterly statistics report, we often return to preceding quarters with the aim of synchronising earlier estimates with official sources. Some changes to the figures in Q2 2009 were necessary and deviation from earlier reports is possible. We shall continue to maintain close correspondence with broadband operators, national regulators and industry organisations in order to avoid ambiguities and also so as to minimise the number of restatements. Some of the historical statistics will be different from those published in earlier reports and contained within Excel spreadsheet datasets. Point Topic's *Global Broadband Statistics* service (GBS) contains the most up-to-date information and we endeavour to continuously update its data entries on an ongoing basis. Generally, precedence should be given to the figures contained within the most recent report (this report) and the figures in GBS.

Data collected for individual operators may be aggregated in GBS in order to derive country and region totals, growth and penetration rates, market shares of operators and net additions. Full details at the operator level are also contained in the GBS service, which is available to Point Topic subscribers.

5.2 Variations in Coverage and Definitions

In principle, the definition of broadband Internet refers to connections with speeds of no less than 256 Kbps. For DSL statistics, all lines which are described by their suppliers as "DSL" are included. In practice the great majority of these are ADSL, variants such as ADSL2+ or other such versions of ADSL. The main exceptions are:

- VDSL lines, of which Korea Telecom and Hanaro are the major reporting suppliers
- Symmetrical DSL lines, offered mainly by Competitive Local Exchange Carriers such as Covad in the USA and their counterparts in other countries

Occasionally, there are contradictions between operator and regulator reports. This happens in South Korea, for example, where the operators typically report broadband subscriptions as either DSL or cable modem, whereas the regulator chooses to break this down further down into an "apartment LAN" or "A-LAN" category. A-LAN is defined as using a shared fibre or broadband copper connection to the apartment block with Ethernet-based distribution within the apartment block. Operator classifications of these A-LAN subscriptions vary, but they are often included as DSL lines. We have classified all these A-LAN lines as FTTx, although a proportion of them do use copper rather than fibre backhaul.

Other reported statistics may combine broadband lines of different technology types. If a number is an aggregate of major broadband types, such as DSL and cable modem, we generally break up such an aggregate and state uptake for each category separately in GBS. In cases where there is only a marginal proportion using a different technology, the aggregate is kept and assigned to the larger group. These cases are usually noted with a comment in the source 'Notes' of (GBS v2).

5.3 Resources for Subscribers

In August 2006, Point Topic launched the full version of its *Global Broadband Statistics* database (GBS). Subscribers to Point Topic who wish to carry out their own analyses of broadband trends are welcome to query GBS and download data relevant to their own research.

Subscribers to the *Operator Source* service will also be granted direct online access to data in old workbooks collated up to December 2005. For further information, please refer to our website. This workbook series was discontinued in Q1 2006.

It is inevitable that a production of this nature will contain errors and omissions. We would be grateful if readers would notify us of any they may discover by sending an email to info@point-topic.com.

6. Tables

Table 1. DSL subscribers, Non-DSL, and total broadband subscribers in major countries (Top 30): Americas

	Total broadband subscribers			Non-DSL subscribers			DSL subscribers		
Country	**Q209**	**Q309**	**Q209-Q309, Growth**	**Q209**	**Q309**	**Q209-Q309, Growth**	**Q209**	**Q309**	**Q209-Q309, Growth**
World Total	438,019,768	451,943,764	3.18%	152,932,168	157,362,907	2.90%	285,087,600	294,580,857	3.33%
USA	82,181,232	83,845,731	2.03%	48,927,756	50,273,734	2.75%	33,253,476	33,571,997	0.96%
Brazil	10,471,700	10,669,800	1.89%	3,386,000	3,644,000	7.62%	7,085,700	7,025,800	-0.85%
Canada	9,618,107	9,784,615	1.73%	5,258,392	5,370,387	2.13%	4,359,715	4,414,228	1.25%
Mexico	8,615,962	9,290,402	7.83%	2,629,623	2,885,721	9.74%	5,986,339	6,404,681	6.99%
Argentina	3,256,900	3,400,300	4.40%	1,010,000	1,025,000	1.49%	2,246,900	2,375,300	5.71%
Other Americas	6,972,643	7,138,431	2.38%	2,439,916	2,499,053	2.42%	4,532,727	4,639,378	2.35%
Total Americas	121,116,544	124,129,279	2.49%	63,651,687	65,697,895	3.21%	57,464,857	58,431,384	1.68%

Table 1. (continued) DSL subscribers, Non-DSL, and total broadband subscribers in major countries: APSEA

	Total broadband subscribers			Non-DSL subscribers			DSL subscribers		
Country	**Q209**	**Q309**	**Q209-Q309, Growth**	**Q209**	**Q309**	**Q209-Q309, Growth**	**Q209**	**Q309**	**Q209-Q309, Growth**
China	93,549,000	99,338,000	6.19%	18,406,000	18,326,000	-0.43%	75,143,000	81,012,000	7.81%
Japan	31,085,500	31,310,500	0.72%	20,172,500	20,815,500	3.19%	10,913,000	10,495,000	-3.83%
South Korea	15,938,529	16,107,128	1.06%	12,427,698	12,621,515	1.56%	3,510,831	3,485,613	-0.72%
India	6,668,073	7,221,255	8.30%	1,414,600	1,556,600	10.04%	5,253,473	5,664,655	7.83%
Australia	5,206,500	5,274,500	1.31%	926,500	943,500	1.83%	4,280,000	4,331,000	1.19%
Taiwan	4,977,000	4,986,000	0.18%	2,017,000	2,187,000	8.43%	2,960,000	2,799,000	-5.44%
Vietnam	2,512,500	2,754,000	9.61%	32,500	34,000	4.62%	2,480,000	2,720,000	9.68%
Hong Kong	2,306,654	2,361,954	2.40%	968,654	991,954	2.41%	1,338,000	1,370,000	2.39%
Philippines	1,305,490	1,466,348	12.32%	705,803	818,035	15.90%	599,687	648,313	8.11%
Malaysia	1,370,000	1,401,000	2.26%	0	0	0.00%	1,370,000	1,401,000	2.26%
Other APSEA	4,187,497	4,417,158	5.48%	763,522	758,930	-0.60%	3,423,975	3,658,228	6.84%
Total APSEA	169,106,743	176,637,843	4.45%	57,834,777	59,053,034	2.11%	111,271,966	117,584,809	5.67%

Table 1. (continued) DSL subscribers, Non-DSL, and total broadband subscribers in major countries: EMEA

	Total broadband subscribers			Non-DSL subscribers			DSL subscribers		
Country	**Q209**	**Q309**	**Q209-Q309, Growth**	**Q209**	**Q309**	**Q209-Q309, Growth**	**Q209**	**Q309**	**Q209-Q309, Growth**
Germany	24,125,250	24,486,150	1.50%	2,118,850	2,283,450	7.77%	22,006,400	22,202,700	0.89%
France	18,312,800	18,652,500	1.85%	1,167,300	1,206,500	3.36%	17,145,500	17,446,000	1.75%
UK	17,838,200	18,047,200	1.17%	3,766,200	3,805,200	1.04%	14,072,000	14,242,000	1.21%
Italy	12,855,463	13,039,650	1.43%	388,463	394,650	1.59%	12,467,000	12,645,000	1.43%
Russia	8,776,896	9,475,000	7.95%	4,115,200	4,426,000	7.55%	4,661,696	5,049,000	8.31%
Spain	9,168,679	9,355,396	2.04%	1,821,407	1,887,596	3.63%	7,347,272	7,467,800	1.64%
Netherlands	5,828,800	5,859,100	0.52%	2,482,500	2,517,400	1.41%	3,346,300	3,341,700	-0.14%
Poland	4,510,823	4,626,079	2.56%	1,536,118	1,600,767	4.21%	2,974,705	3,025,312	1.70%
Belgium	3,088,500	3,157,500	2.23%	1,183,000	1,223,000	3.38%	1,905,500	1,934,500	1.52%
Sweden	3,033,602	3,086,602	1.75%	1,181,602	1,204,602	1.95%	1,852,000	1,882,000	1.62%
Romania	2,746,900	2,823,840	2.80%	2,019,700	2,075,400	2.76%	727,200	748,440	2.92%
Switzerland	2,769,900	2,819,100	1.78%	974,900	1,021,100	4.74%	1,795,000	1,798,000	0.17%
Denmark	2,196,097	2,222,797	1.22%	907,157	922,697	1.71%	1,288,940	1,300,100	0.87%
Greece	1,881,977	2,002,734	6.42%	3,916	3,916	0.00%	1,878,061	1,998,818	6.43%
Czech Republic	1,985,000	1,988,620	0.18%	1,250,800	1,237,920	-1.03%	734,200	750,700	2.25%
Austria	1,823,400	1,842,200	1.03%	573,400	571,900	-0.26%	1,250,000	1,270,300	1.62%
Portugal	1,783,784	1,840,614	3.19%	801,784	829,614	3.47%	982,000	1,011,000	2.95%
Norway	1,704,900	1,810,300	6.18%	633,900	680,300	7.32%	1,071,000	1,130,000	5.51%
Other EMEA	10,265,685	10,653,104	3.77%	3,356,951	3,527,506	5.08%	6,908,734	7,125,598	3.14%
EMEA Total	134,696,656	137,788,486	2.30%	30,283,148	31,419,518	3.75%	104,413,508	106,368,968	1.87%