World Broadband Statistics:

Q2 2009

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September 2009

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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 Q2 2009, GBS country coverage has been extended to 112 countries and over 440 operators.

This report begins with an examination of the growth in broadband subscribers for Q2 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.

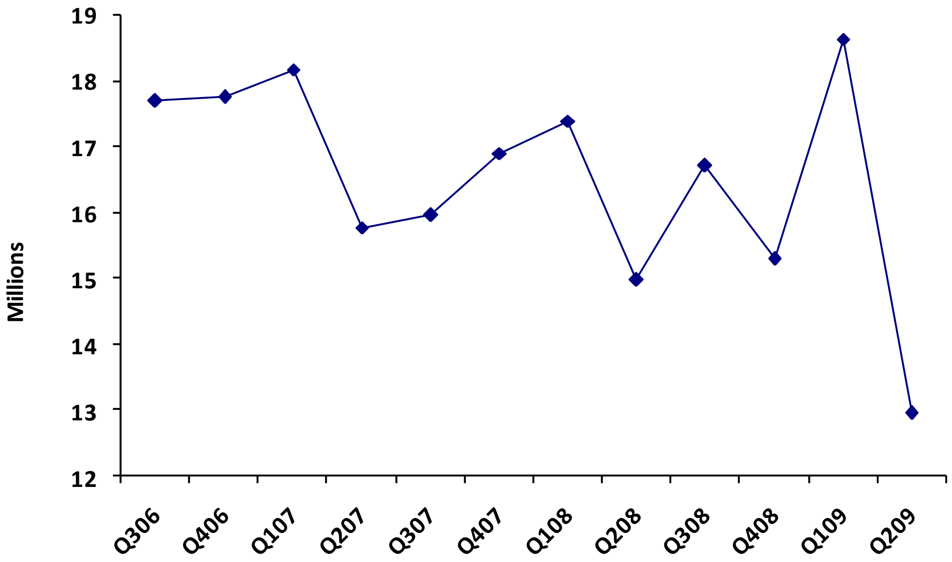
The focus of the report then shifts to the "top ten" broadband countries for Q2 2009. Here we examine the total number of broadband subscribers, the net additions for the quarter, quarterly and annual percentage growth, technologies adopted as well as population and household penetration. The last section 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

There were 444.33 million broadband subscribers globally by the end of Q2 2009. This represented a 3 per cent increase on the previous quarter from 431.4 million. The quarterly net additions from Q3 2006 to Q2 2009 are shown in figure 1. At 12.96 million in Q2 2009 the net additions were the lowest since Q1 2005. The largest amount of net additions of those shown were acquired during Q1 2009 and totalled 18.65 million.

Figure 1: World Broadband Subscriber Net Additions (Q3 2006 – Q2 2009)



Despite the current economic climate, total broadband subscribers are still increasing. However, the number of net additions has fallen, which could be the first indication that some potential subscribers are reluctant to make the long term financial commitment to broadband services due to the recession.

Over the 12 months to end Q2 2009, 63.63 million new broadband subscribers were added worldwide. This represents 14.3 per cent of total subscribers by end Q2 2009. Global population penetration was 7.7 per cent by the end of Q2 2009, up from 7.5 per cent in the previous quarter and up from 6.6 per cent a year ago. Global household penetration was 28.2 per cent, up from 27.4 per cent in the previous quarter and up from 24.2 per cent a year ago.

2.2 Regional Trends

The global broadband subscribers by region are shown in figure 2 and quarterly growth by region and population is shown in figure 3. Figure 2 shows that the largest shares of the world broadband market are held by Western Europe (24.68 per cent) and South and East Asia (23.72 per cent). North America followed with a 21.57 per cent market share and Asia Pacific with a 14.85 per cent market share. The three smallest market shares are held by Latin America (6.59 per cent), Eastern Europe (5.65 per cent) and Middle East and Africa (2.94 per cent).

Figure 2: Share of World Broadband Subscribers by Region in Q2 2009

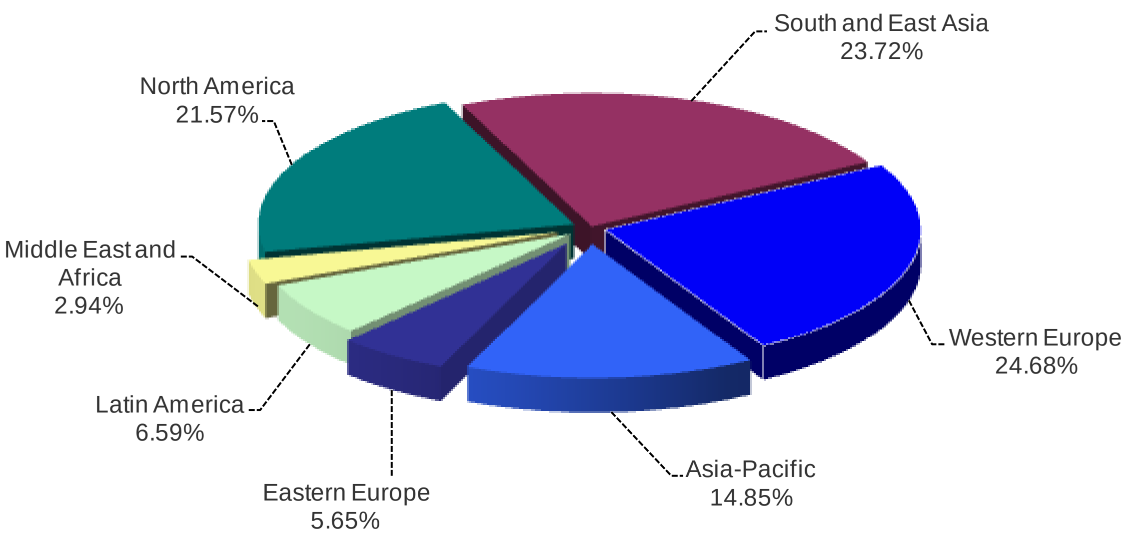


Figure 3: Penetration & Quarterly Growth by Region in Q2 2009

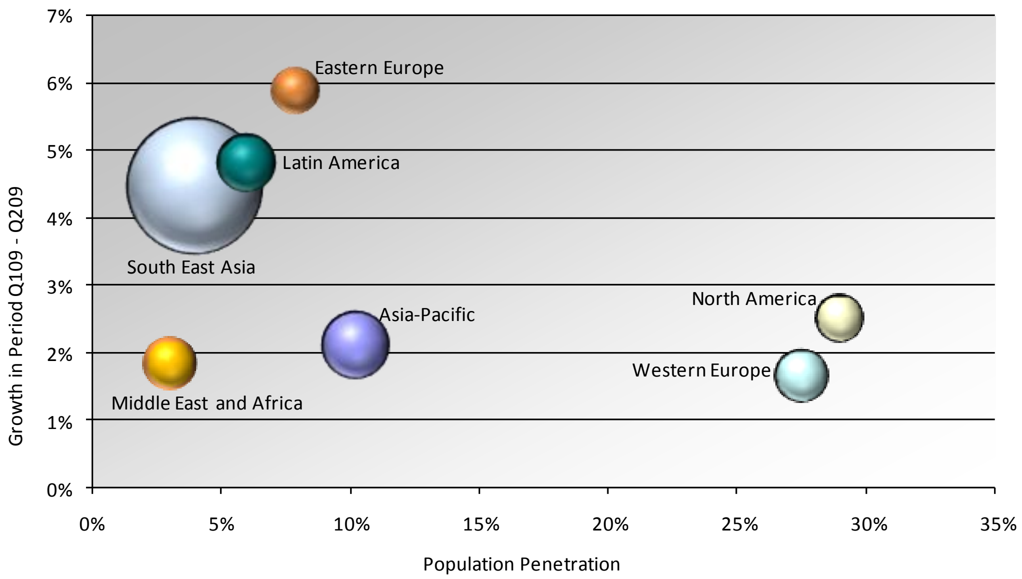


Figure 3 conveys three types of information. Firstly the regional populations are indicated by the size of each globe. As shown, South and East Asia has the largest population since this region includes the two countries with the largest populations in the world, China and India. As a result, its globe is much larger than the others.

Next is the position of the globes with respect to the horizontal axis. This is an indication of broadband population penetration. Regions with larger mature broadband markets, such as North America and Western Europe, have much higher population penetration rates at 29 and 27.5 per cent respectively. As such they are positioned to the right of the axis.

Regions that include countries with smaller, younger markets tend to have lower penetration rates and therefore appear to the left of the axis. Such regions include Asia Pacific (10.2 per cent), Eastern Europe (7.9 per cent), Latin America (6 per cent), South and East Asia at 4 per cent and Middle East and Africa at 3 per cent.

The position of the globes with respect to the vertical axis is an indication of quarterly growth. As shown in figure 3, the regions with smaller younger markets such as Eastern Europe and Latin America experienced higher quarterly growth at 5.88 per cent and 4.81 per cent respectively. South and East Asia closely followed at 4.46 per cent while growth in Asia Pacific was at 2.11 per cent. Growth in the Middle East and Africa, at 1.83 per cent was the second lowest overall. This may be an indication that the broadband market in this region has been hit badly by the current economic climate.

Western Europe and North America experienced relatively low quarterly growth at 1.64 per cent and 2.51 per cent respectively. Both regions have mature broadband markets as shown by their high penetration rates. Therefore there is not as much room for potential growth.

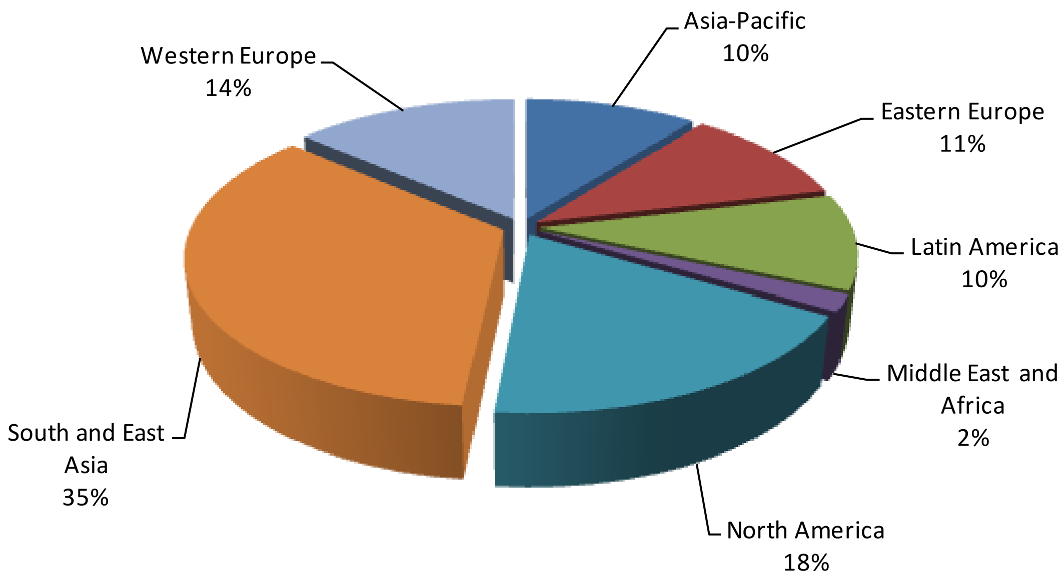
Quarterly growth was positive in all regions, but was down from that in Q1 2009 in all but one region, namely Asia Pacific. This continues an ongoing trend whereby the number of broadband subscribers is growing but the rate of growth in most regions is slowing down. Growth in Asia Pacific was 30 per cent up on the previous quarter from 1.62 per cent in Q1 2009 to 2.11 per cent in Q2 2009.

The largest fall in quarterly growth was experienced in the Middle East and Africa. This was down by over 60 per cent from 4.59 per cent to 1.83 per cent in Q2 2009. The next largest fall was in South and East Asia, down by 44.25 per cent from 8 per cent to 4.46 per cent, closely followed by Western Europe whose quarterly growth was down by 42 per cent from 2.85 per cent to 1.64 per cent.

Quarterly growth in North America was down by 35.23 per cent from 3.87 per cent to 2.51 per cent and down by over 26 per cent in Latin America from 6.52 per cent to 4.81 per cent. Eastern Europe experienced the smallest fall in quarterly growth at 5 per cent from 6.2 per cent to 5.9 per cent, and also had the highest quarterly growth for Q2 2009.

The net additions acquired by region are shown during Q2 2009 are shown in figure 4. As shown, South and East Asia acquired the largest share of net additions at 35 per cent, representing 4.5 million new subscribers. This total represented 81 per cent of the total in the region and 28 per cent globally. North America followed with an 18 per cent market share or 2.3 million new subscribers. Therefore, South and East Asia acquired almost twice as many new broadband subscribers as North America.

Figure 4: Regional Share of World Broadband Net Additions in Q2 2009



Western Europe followed North America with a 14 per cent market share, or 1.77 million subscribers. The next three regions acquired similar proportions of new broadband subscribers. They were Eastern Europe with an 11 per cent market share (1.39 million new subscribers), Asia Pacific with a 10 per cent share (1.36 million subscribers) and Latin America with a 10 per cent share (1.35 million subscribers). The Middle East and Africa acquired 2 per cent of all net additions during the quarter (234,557 subscribers).

The largest increase in net additions compared to the previous quarter (Q1 2009) was experienced in Asia Pacific. It increased net additions from 1 million to 1.36 million, representing a 32.43 per cent improvement. Three of the top four countries in Asia Pacific improved their net additions quarter-on-quarter. They were Japan (418,600 new subscribers or 38 per cent more), Australia (343,000 new subscribers or 20 per cent more) and the Philippines (133,202 or 47 per cent more). South Korea acquired 170,526 new subscribers, the third largest number of new subscribers in Asia Pacific. However, this was down by 26 per cent on the previous quarter.

Operators in this region that acquired the most new subscribers included Australian operator Telstra (304,000 new subscribers), Japanese operator NTT (502,000 new subscribers between NTT East and West), Philippines operator PLDT (131,202 new subscribers) and Indonesian incumbent PT Telkom (100,000 new subscribers).

The largest fall in net additions by proportion was experienced in the Middle East and Africa. Net additions fell by 58.3 per cent from 562,700 to 234,500. The top performing countries in this region were South Africa with 49,250 net additions (up 44 per cent), Egypt with 44,727 net additions (down 41 per cent), Algeria with 30,000 net additions (unchanged) and Saudi Arabia with 26,000 net additions (down 18.75 per cent).

The largest fall in net additions by amount was experienced in South and East Asia. In this region, net additions fell by almost 3 million from 7.5 million in Q1 2009 to 4.5 million in Q2 2009 (a 39.84 per cent fall). China was the top country in South and East Asia and worldwide with 3.66 million net additions during the quarter, but they were 43.9 per cent down on the previous quarter from 6.5 million. Two companies in China were responsible for the majority of net additions in this region. They were China Telecom with 1.79 million new subscribers and China Unicom (Hong Kong) Ltd with 1.4 million new subscribers.

In Western Europe, new subscribers fell from 2.99 million to 1.77 million (representing a 40.7 per cent fall). The top four countries in terms of net additions all reported a fall quarter-on-quarter. They were Germany (356,900 subscribers or 59.3 per cent less), France (314,800 subscribers or 39 per cent less), Italy (259.930 subscribers or 39 per cent less) and the UK (177,100 subscribers or 34 per cent less).

The three top performing operators in this region were all from Germany. They include United Internet, which increased its net additions from 30,000 in Q1 2009 to 650,000 in Q2 2009. This was due to United Internet’s acquisition of Freenet’s DSL operations in May 2009. The other two operators were Deutsche Telecom with 200,000 new subscribers and Arcor with 172,400 new subscribers.

In North America, quarterly net additions were down by 32.73 per cent from 3.5 million to 2.34 million. This was largely due to the US whose net additions fell by 35.6 per cent from 3.34 million to 2.25 million. The three top performing operators were all US-based. They were Verizon (186,000 subscribers down by 26 per cent), Cox Communications (156,000 subscribers, up by 4 per cent) and AT&T (112,000 subscribers, down by 69 per cent).

In Latin America, net additions were down by 20.6 per cent on the previous quarter from 1.7 million to 1.35 million. The countries that acquired the most new subscribers during the quarter were Mexico with 564,000 new subscribers (down 25 per cent), Brazil with over 404,000 new subscribers (down 27 per cent), Colombia with over 92,000 new subscribers (down 25 per cent) and Argentina with 83,400 new subscribers (up 4 per cent).

The top performing operators in this region all reported net additions down on the previous quarter. They include Mexican operator Telmex with 378,000 net additions (down by 26.2 per cent), Brazilian operator NET Servicos with 153,000 net additions (down by 35 per cent) and Telefonica Peru with 81,100 net additions (down by 27 per cent).

Brazilian operator Telemar acquired 128,000 new subscribers but its net additions were down by over 93 per cent on the previous quarter. However, this was due to an unusually high number of net additions totalling almost 2 million in Q1 2009 when Telemar acquired Brazil Telecom.

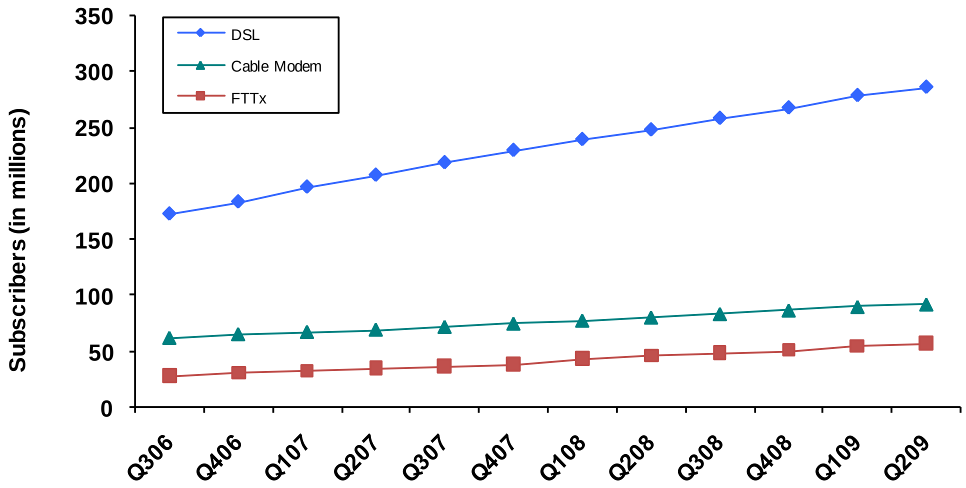
Net additions in Eastern Europe remained relatively unchanged quarter-on-quarter, increasing by less than 1 per cent from 1.38 million to 1.39 million. Two out of the top five performing countries improved their net additions over the quarter while net additions for the remaining three were down on the previous quarter.

The top countries were Russia with 750,400 net additions (up 36 per cent), Poland with 134,490 net additions (down 24.6 per cent), Romania with 106,880 net additions (up 27.7 per cent), Ukraine with 95,500 net additions (down 31 per cent) and Czech Republic with 71,800 net additions (down 53 per cent).

The operators with the highest numbers of net additions included Russian operators Northwest Telecom (150,000 new subscribers), Vimpelcom (100,000 new subscribers), and CenTel (75,000 new subscribers) and Ukrainian operator UKR Telecom (89,000 new subscribers.

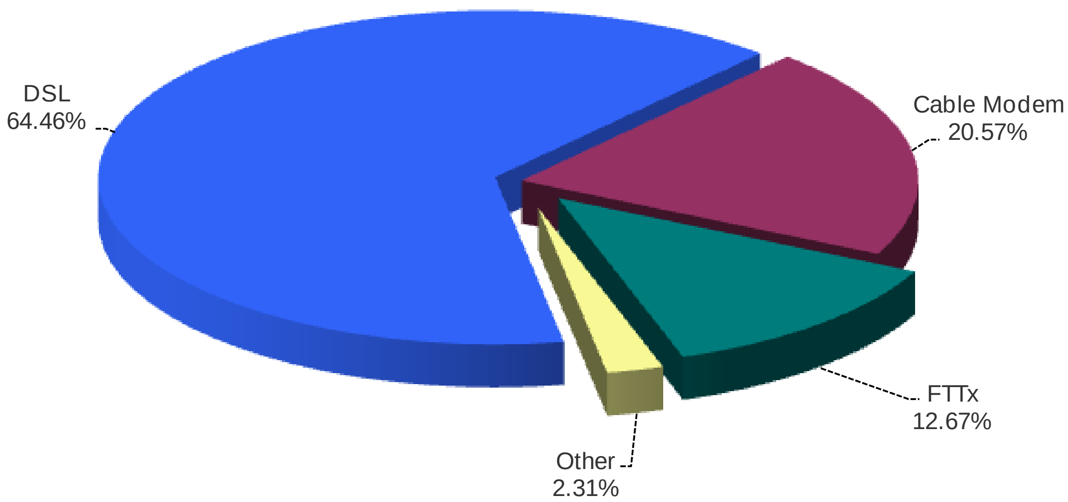
3. Technology Trends and Choices

Figure 5: Technology Trends in Q2 2009



The breakdown of broadband subscribers by technology is shown in figures 5 and 6. Broadband usage increased in all three technologies shown in figure 5. The majority of broadband lines used DSL technology representing 64.5 per cent of the total or 286.39 million lines. The next most popular technology was cable modem with a 20.57 per cent market share (91.38 million lines) followed by FTTx with a 12.67 per cent market share (56.3 million lines).

Figure 6: Total Broadband by Technology in Q2 2009



The quarterly growth of FTTx connections was the highest of the three at 4.77 per cent. This represented an increase by 2.56 million lines from 53.73 million connections. DSL and cable modem subscribers grew by a similar amount at 2.67 per cent (from 278.94 million connections) and 2.55 per cent (from 89.12 million connections) respectively.

Quarterly growth compared to that in the previous quarter was down for all three technologies. The largest fall was amongst FTTx connections where growth was down by 36 per cent from 7.44 per cent to 4.77 per cent. DSL showed a similar fall in quarterly growth by almost 36 per cent from 4.15 per cent to 2.67 per cent, while cable modem growth fell by 32 per cent from 3.77 per cent to 2.55 per cent.

Market shares by region and technology are shown in figure 7. The majority of DSL subscribers are found in Western Europe and South East Asia with market shares of 31.79 per cent (91 million lines) and 28.35 per cent (81.2 million lines) respectively. The countries with the greatest influence on the DSL market in these regions include Germany (21.97 million), France (17.16 million), the UK (14.1 million) and Italy (12.47 million). With 71.8 million DSL subscribers, China has the largest DSL subscriber base in the world. This represents 25 per cent of all DSL subscribers globally.

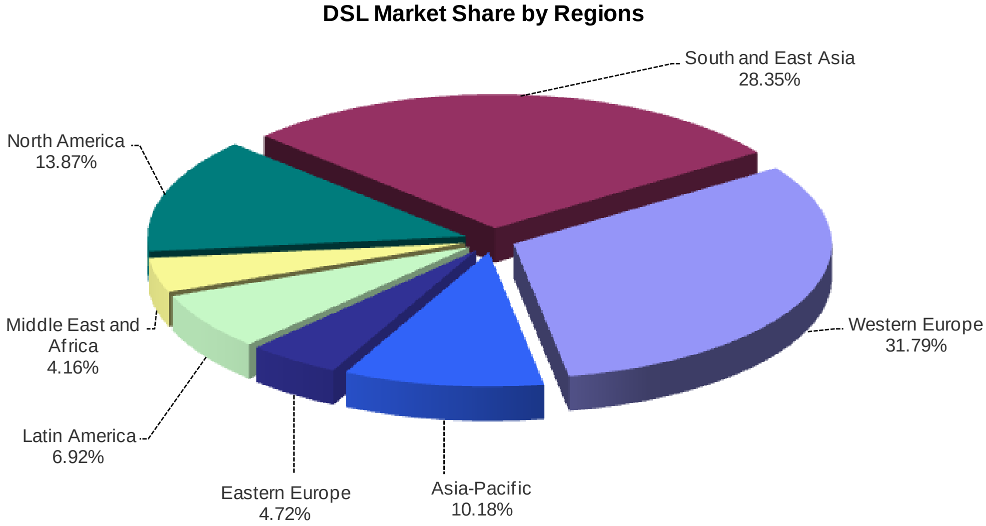
With a 13.87 per cent share, North America had the third largest share of the DSL market with 39.7 million subscribers. With 35.35 million subscribers, the USA had the most DSL subscribers in this region. Representing over 12 per cent of DSL connections globally this is the second largest DSL subscriber base in the world after China. The number of DSL connections in Canada totalled 4.4 million.

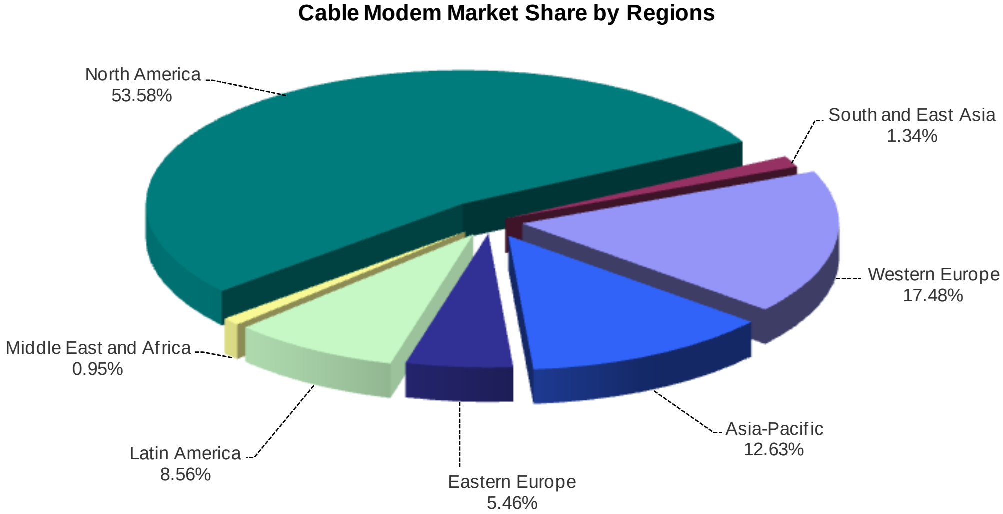
As shown in figure 7, North America has the largest cable modem subscriber base with a 53.58 per cent share of the market, representing 48.96 million connections. USA has 43.7 million cable modem subscribers, making this the largest cable modem subscriber base in the world representing 47.8 per cent of the total. Canada is in second place with 5.26 million subscribers representing 5.7 per cent of worldwide cable modem subscribers. The most influential cable modem operators are all based in the US. They are Comcast with 15.3 million subscribers, Time Warner Cable with 9 million subscribers and Cox Communications with 4.4 million subscribers.

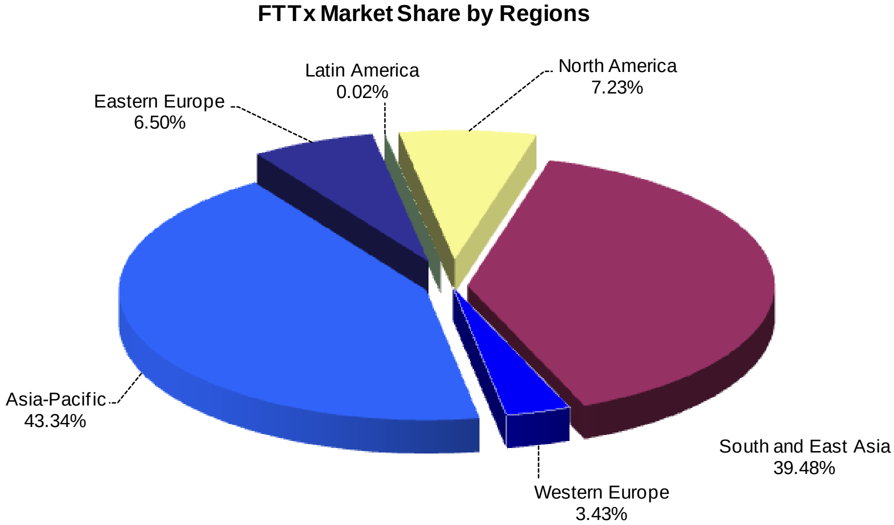
Western Europe also has a sizable portion of the cable modem market at 17.48 per cent or almost 16 million connections. The UK has the largest cable modem subscriber base in Western Europe totalling 3.75 million subscribers, followed by the Netherlands (2.29 million subscribers), Germany (2.08 million subscribers), Spain (1.77 million) and Belgium (1.18 million).

Key countries in Asia have been offering broadband services with very high downstream speeds characteristic of FTTx technology for some time. Asian countries collectively control over 82 per cent of the FTTx market with 46.63 million subscribers. The top countries include Japan with 15.8 million subscribers, South Korea with 7.2 million subscribers, Taiwan with 1.34 million subscribers and Hong Kong with 600,000 subscribers. China has the largest FTTx subscriber base in the world, totalling over 21.6 million subscribers. This represents a 38.36 per cent share of the FTTx market.

Figure 7: World DSL, Cable Modem & FTTx Market Share by Region in Q2 2009







The DSL markets in all regions experienced positive growth. The highest growth was in Eastern Europe, at 6.44 per cent from 12.7 million in Q1 2009 to 13.5 million in Q2 2009. DSL growth in this region has either been the highest or second highest over the last year together with South and East Asia. Eastern European countries with the largest numbers of DSL subscribers all showed positive quarterly growth. They were Russia (11.28 per cent), Poland (2 per cent), Hungary (4.15 per cent), Czech Republic (2.47 per cent) and the Ukraine (13.8 per cent).

The next highest growth rates were in South and East Asia and Latin America at 4.64 per cent and 4.13 per cent respectively. The top countries in these regions all experienced positive growth with respect to their DSL subscribers. In South and East Asia they were China (4.3 per cent), India (7.86 per cent) and Vietnam (10.12 per cent), while in Latin America they were Brazil (2.76 per cent), Mexico (6.98 per cent) and Argentina (2.9 per cent).

The next two regions had quarterly growth rates which were very similar. They were North America at 1.85 per cent and the Middle East and Africa at 1.82 per cent. Some countries in the Middle East and Africa with significant numbers of DSL subscribers experienced impressively high quarterly growth. They include Tunisia (10.32 per cent), Jordan (9.17 per cent) and South Africa (7.58 per cent).

Cable modem markets globally all increased over the quarter. The highest growth was experienced in South and East Asia at 8.26 per cent (from 1.13 million to 1.23 million). The countries with positive growth in this region were India with 11.76 per cent growth, Vietnam with 5.5 per cent growth and Pakistan with 4.8 per cent growth.

Latin America had the next highest quarterly growth at 5.75 per cent (from 7.4 million to 7.8 million). Countries with significant subscriber figures all experienced positive growth. They include Brazil with 5.76 per cent growth, Mexico (7.3 per cent), Argentina (2 per cent) and Colombia (8.72 per cent).

The remaining regions had cable modem markets which grew by less than 5 per cent. They were Eastern Europe (4.17 per cent), North America (2.28 per cent), Western Europe (2.25 per cent), Middle East and Africa (1.52 per cent) and Asia Pacific (0.84 per cent).

As with DSL and cable modem, the FTTx markets in all regions had positive growth in Q2 2009. The highest growth was in North America, which has been consistently high over the last 12 months. The subscriber base in this region grew by 9.35 per cent from 3.7 million to 4.07 million. This growth was mainly due to US operator Verizon, which increased its FTTx customer base by 10.9 per cent from 2.79 million to 3.1 million.

Quarterly growth in Western Europe was also high at 7.95 per cent (from 1.8 million to 1.9 million). The countries mainly responsible for this growth include Sweden (2.71 per cent growth), Italy (2 per cent), France (15.3 per cent) and Norway (16.48 per cent).

FTTx is viewed by many operators as the next step in broadband technology evolution. The high growth rate is an indication that 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 a small change in net additions will make a relatively large difference to the quarterly growth.

The quarterly growth of FTTx subscribers in Eastern Europe was 6.85 per cent, followed by Asia Pacific at 4.81 per cent and South and East Asia at 3.33 per cent. All three regions had over 3 million FTTx subscribers. Quarterly growth in Latin America was 7.69 per cent, but it is important to note that the FTTx subscribers in this region increased from 13,000 to 14,000.

4. "Top Ten" Broadband Countries

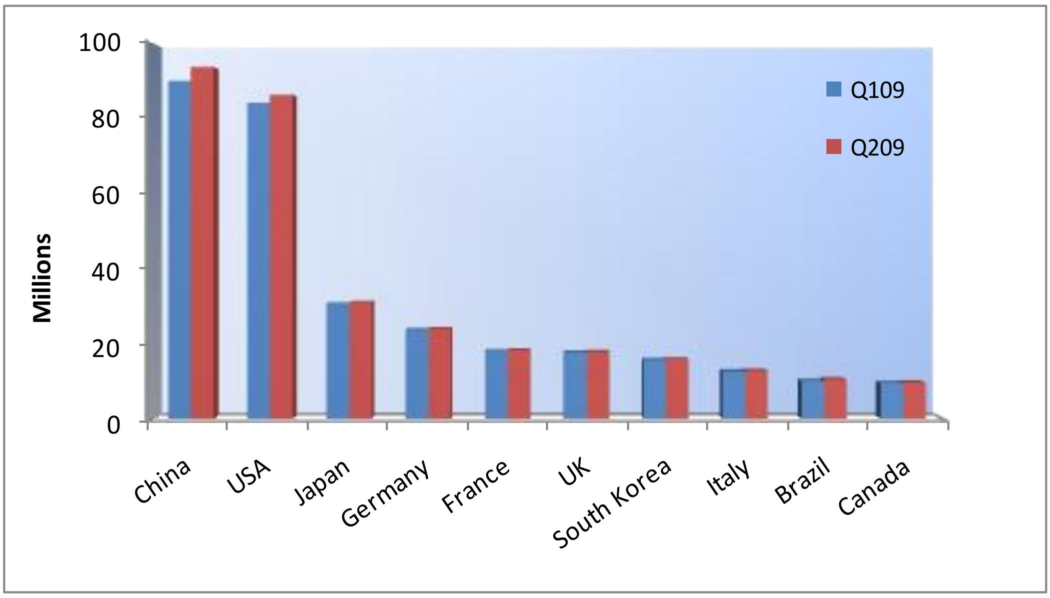
4.1 Number of Subscribers

The 'top ten' countries in terms of total broadband subscribers as of Q1 2009 and Q2 2009 are shown in figure 8. Since displacing the USA in Q2 2008 China has maintained its number one position, while the USA has remained in second place during this time.

There were 93.55 million subscribers in China, up 4 per cent on the previous quarter from 89.89 million. In the USA there were 86.23 million subscribers, up by 2.7 per cent from 83.97 million. Subscribers in China and the USA represent over 40 per cent of the worldwide broadband market.

The difference between China and the USA in terms of broadband subscribers in Q2 2009 was 7.3 million compared with 5.9 million in Q1 2009 and 2.7 million in Q4 2008. It appears that the broadband subscriber base in China is growing at a faster rate than that in the US. We continue to monitor both markets over the coming quarters to confirm this with more data points.

Figure 8: Total Number of Subscribers in Q1 2009 and Q2 2009



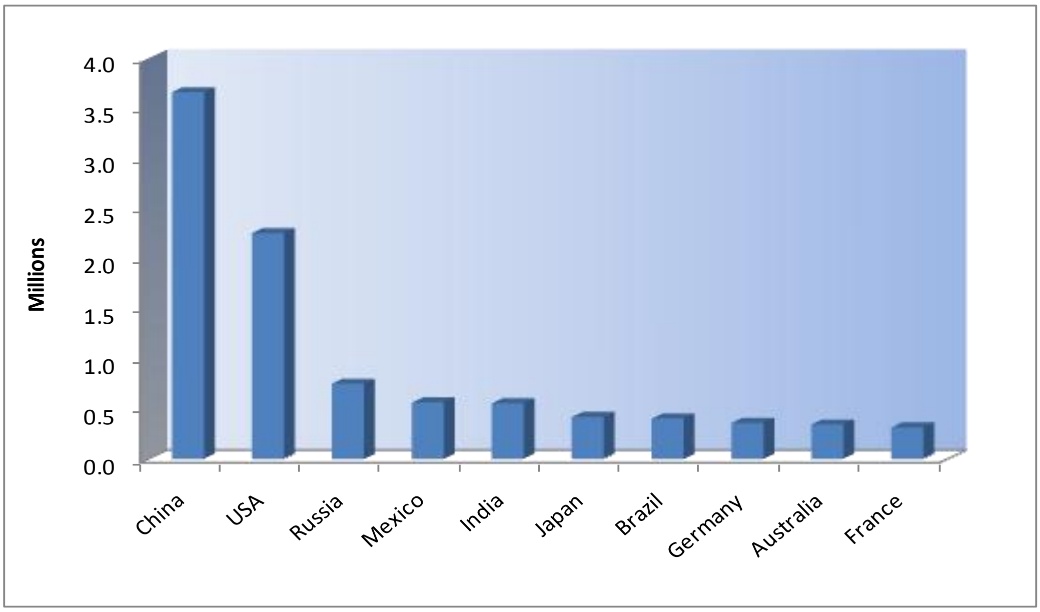
4.2 Broadband Subscribers Added

The 'top ten' ranked countries in terms of net additions during Q2 2009 are shown in figure 9. China added the most new subscribers totalling 3.66 million with the USA in second place with 2.25 million new subscribers. They were the only two countries to attract over 1 million new subscribers during the quarter. Third place was Russia with 750,400 new subscribers, up by over 35 per cent on the previous quarter from 552,500 net additions. The top three countries combined added over 51 per cent of all net additions for the quarter.

Of the countries shown in figure 9, only three added more new subscribers in Q2 2009 than they did in Q1 2009. These countries were Russia, Japan (up 38.15 per cent from 303,000 subscribers) and Australia (up 20.39 per cent from 284,900 subscribers).

The remaining seven countries added less new subscribers quarter-on-quarter. They were China (down 43.87 per cent from 6.5 million), USA (down 32 per cent from 3.34 million), Mexico (down 25 per cent from 754,500), India (down 23.29 per cent from 724,750), Brazil (down 26.77 per cent from 552,430), Germany (down 59.33 per cent from 877,600) and France (down 39 per cent from 515,980)

Figure 9: Broadband Subscribers Added in Q2 2009

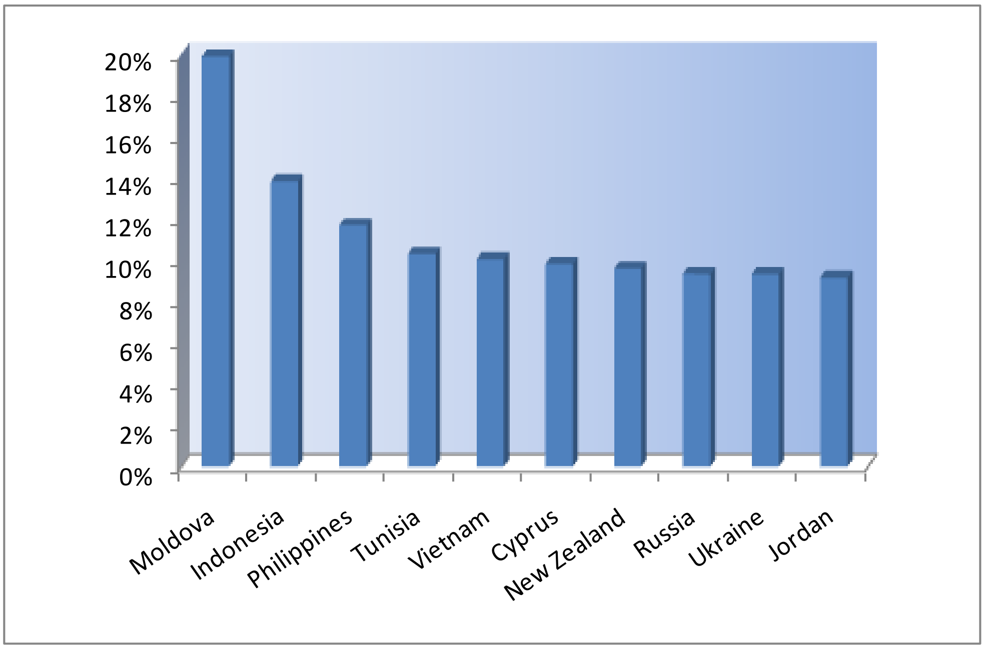


4.3 Percentage Growth

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

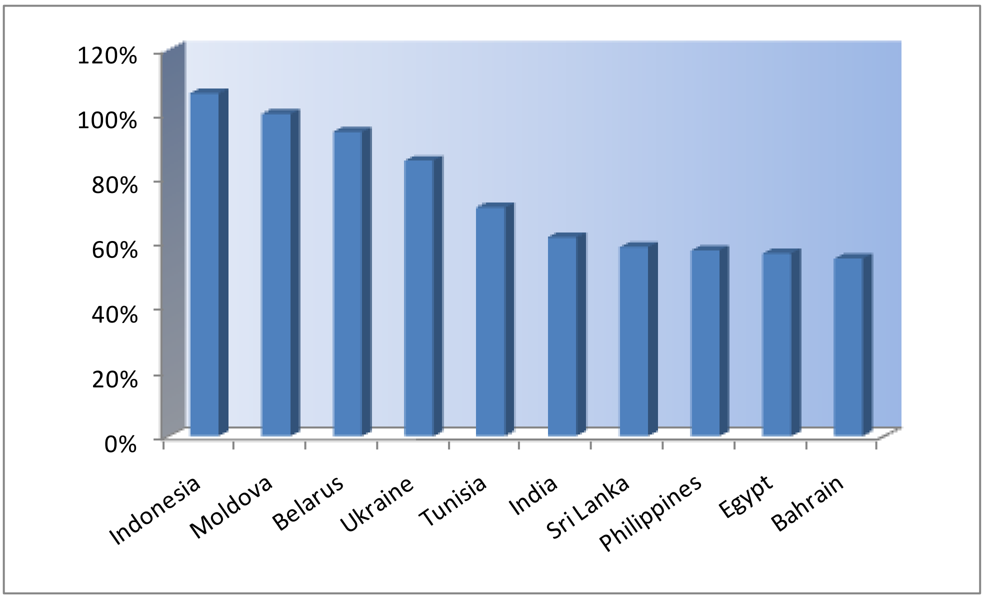
The highest quarterly growth was seen in Moldova at 19.9 per cent. This represented 24,800 net additions, an improvement on the previous quarter when net additions in this country totalled 19,000. Indonesia was in second place with 13.84 per cent quarterly growth. Net additions totalled 100,000, which was also an improvement on the previous quarter when the country lost 34,000 subscribers. Third was the Philippines with 11.72 per cent growth or 133,202 new subscribers during the quarter. The Philippines also increased its net additions from over 90,000.

Figure 10: Top Ten Countries by Quarterly Growth in Q2 2009



The next two countries had similar quarterly growth rates. They were Tunisia (10.32 per cent) and Vietnam (10.06 per cent). Tunisia's net additions fell from 32,000 to 26,000 acquired in Q2 2009 while Vietnam's increased from 205,900 to 229,600.

Figure 11: Top 10 Countries by Annual Growth from Q2 2008 to Q2 2009



Of the countries shown in figure 10, Russia added the largest number of new subscribers over the quarter at 750,418. Vietnam was in second place with 229,600 new subscribers and the Philippines was third with net additions totalling 133,202. With 100,000 net additions, Indonesia was the only other country in the top ten to acquire at least 100,000 new subscribers. Jordan added the smallest number of new broadband subscribers at 10,000, up on the previous quarter when net additions totalled 7,000.

There were eight new entrants when compared with the previous quarter. They were Russia, Vietnam, Philippines, Indonesia, New Zealand, Moldova, Cyprus and Jordan. The countries no longer in the top ten are Sri Lanka, Belarus, Bahrain, Malta, India, Luxembourg, Egypt and Mexico.

Over the 12 months to end Q2 2009, Indonesia has maintained the number one spot in our ranking for annual growth shown in figure 11. With annual growth at 106.4 per cent, Indonesia acquired over 400,000 new subscribers over the year. Moldova was in second place with 100 per cent annual growth, or 74,700 net additions. Belarus acquired 153,000 new subscribers over the year with annual growth at almost 95 per cent.

Only one country added over 1 million new subscribers over the 12 months to Q2 2009. This was India, with 61.7 per cent annual growth. The country added over 2.5 million new subscribers over the period. Second place in terms of net additions was Ukraine with 85.5 per cent growth (516,000 new subscribers) followed by the Philippines with 57.67 per cent growth (464,000 new subscribers). There were two new entrants compared to the previous top ten. They were Moldova and Bahrain. As a result, Malta and Mexico were 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 countries represent 72 per cent of the worldwide broadband market. As a result, the analysis of the technologies used in these countries gives a good indication of worldwide technology trends.

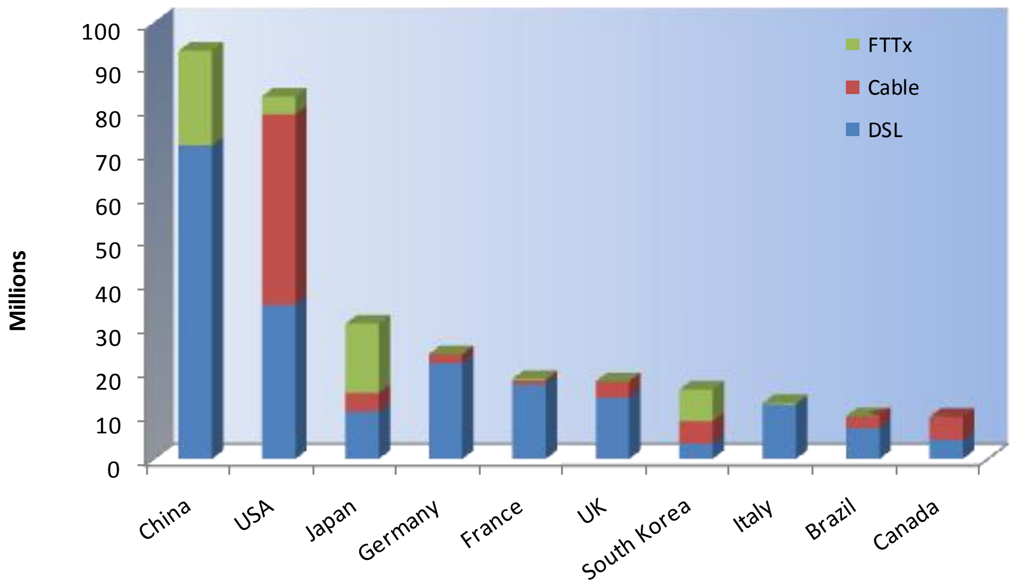
DSL remains the most popular technology for broadband connection with 198.76 million DSL connections in the top ten countries. This represents 62.13 per cent of the top ten connections. This is the dominant technology in six of the countries shown in figure 12. These countries are China, Germany, France, the UK, Italy and Brazil.

Cable modem was the next most popular technology with 67.84 million connections in the top ten (or 21.21 per cent of the top ten total), while FTTx is still the smallest market of the three with 49.36 million connections or 15.43 per cent of the total.

The largest DSL and FTTx markets are in China with 71.84 million subscribers and 21.62 million subscribers respectively. The largest cable modem market is in the USA with 43.7 million subscribers. This is 13.6 per cent of the top ten total and 50 per cent of the country total.

While cable modem dominates in the USA and Canada, FTTx has a notable presence in China (21.6 million subscribers), Japan (15.84 million subscribers), South Korea (7.2 million subscribers) and the USA (4.07 million subscribers).

Figure 12: Total Subscriber Numbers by Technology Adopted in Q1 2009

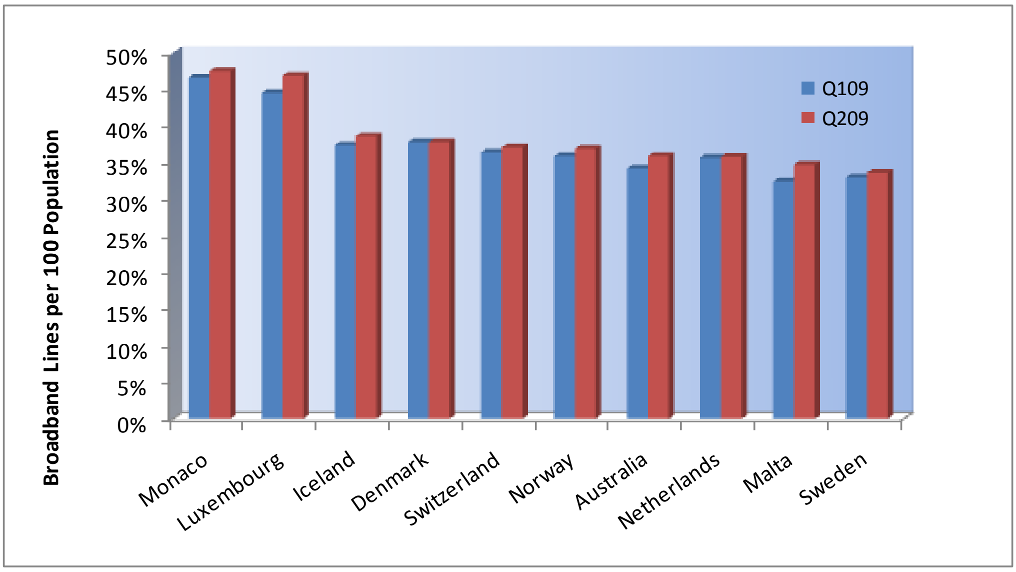


4.5 Population and Household Penetration

The 'top ten' countries ranked in terms of population penetration in Q1 2008 and Q2 2009 are shown in figure 13. Monaco remained the country with the highest population penetration at 47.5 per cent followed by Luxembourg (46.9 per cent). Iceland was in third place (38.6 per cent) displacing Denmark from its previous position in third place to fourth place (37.8 per cent).

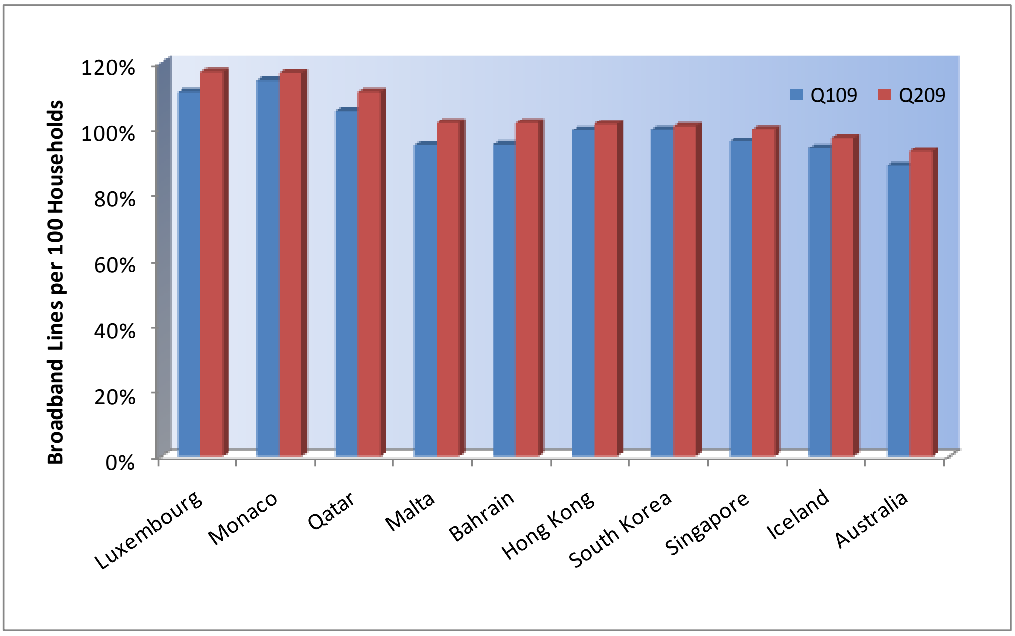
Switzerland was in fifth place with 37.1 per cent penetration, up from its previous seventh position, while Norway was unchanged in sixth position with 36.9 per cent penetration. The only new entrant was Malta with 34.7 per cent penetration in nineth place. South Korea did not appear in the top ten during Q2 2009.

Figure 13: Broadband Penetration by Population in Q1 2009 and Q2 2009



The ‘top ten’ countries shown in terms of household penetration in Q1 2008 and Q2 2009 are shown in figure 14. For the first time since Q4 2007, Monaco is no longer in the number one spot. It has been displaced by Luxembourg with a household penetration at 117.2 per cent. Monaco is now in second place (116.9 per cent) followed by new entrant Qatar (111.1 per cent). Malta (101.7 per cent) improved its position from seventh place to joint fourth place as did Bahrain (101.7), moving from sixth place to joint fourth.

Figure 14: Broadband Penetration by Household in Q1 2009 and Q2 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 Q4 2008 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	**Q109**	**Q209**	**Q109-Q209, Growth**	**Q109**	**Q209**	**Q109-Q209, Growth**	**Q109**	**Q209**	**Q109-Q209, Growth**
World Total	**431,374,773**	**444,331,864**	**3.00%**	**152,429,822**	**157,936,039**	**3.61%**	**278,944,951**	**286,395,825**	**2.67%**
USA	83,974,547	86,227,582	2.68%	49,320,902	50,874,106	3.15%	34,653,645	35,353,476	2.02%
Brazil	10,065,200	10,469,755	4.02%	3,172,000	3,386,000	6.75%	6,893,200	7,083,755	2.76%
Canada	9,527,500	9,618,107	0.95%	5,188,828	5,258,392	1.34%	4,338,672	4,359,715	0.49%
Mexico	8,051,323	8,615,962	7.01%	2,455,811	2,629,623	7.08%	5,595,512	5,986,339	6.98%
Argentina	3,173,500	3,256,900	2.63%	990,000	1,010,000	2.02%	2,183,500	2,246,900	2.90%
Other Americas	6,657,359	6,949,791	4.39%	2,293,797	2,444,218	6.56%	4,363,562	4,505,573	3.25%
Total Americas	**121,449,429**	**125,138,097**	**3.04%**	**63,421,338**	**65,602,339**	**3.44%**	**58,028,091**	**59,535,758**	**2.60%**

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

	Total broadband subscribers			Non-DSL subscribers			DSL subscribers		
Country	**Q109**	**Q209**	**Q109-Q209, Growth**	**Q109**	**Q209**	**Q109-Q209, Growth**	**Q109**	**Q209**	**Q109-Q209, Growth**
China	89,888,000	93,549,000	4.07%	21,010,080	21,706,000	3.31%	68,877,920	71,843,000	4.30%
Japan	30,666,900	31,085,500	1.36%	19,395,900	20,172,500	4.00%	11,271,000	10,913,000	-3.18%
South Korea	15,706,466	15,876,992	1.09%	12,100,617	12,330,764	1.90%	3,605,849	3,546,228	-1.65%
Australia	6,887,500	7,230,500	4.98%	916,500	926,500	1.09%	5,971,000	6,304,000	5.58%
India	6,112,091	6,668,073	9.10%	1,241,600	1,414,600	13.93%	4,870,491	5,253,473	7.86%
Taiwan	4,969,000	4,977,000	0.16%	1,854,000	2,017,000	8.79%	3,115,000	2,960,000	-4.98%
Vietnam	2,282,900	2,512,500	10.06%	30,900	32,500	5.18%	2,252,000	2,480,000	10.12%
Hong Kong	2,262,654	2,306,654	1.94%	937,654	968,654	3.31%	1,325,000	1,338,000	0.98%
Malaysia	1,650,000	1,700,000	3.03%	0	0	0.00%	1,650,000	1,700,000	3.03%
Philippines	1,136,288	1,269,490	11.72%	613,423	705,803	15.06%	522,865	563,687	7.81%
Other APSEA	3,921,515	4,173,497	6.43%	670,765	710,522	5.93%	3,250,750	3,462,975	6.53%
Total APSEA	**165,483,314**	**171,349,206**	**3.54%**	**58,771,439**	**60,984,843**	**3.77%**	**106,711,875**	**110,364,363**	**3.42%**

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

	Total broadband subscribers			Non-DSL subscribers			DSL subscribers		
Country	**Q109**	**Q209**	**Q109-Q209, Growth**	**Q109**	**Q209**	**Q109-Q209, Growth**	**Q109**	**Q209**	**Q109-Q209, Growth**
Germany	23,729,350	24,086,250	1.50%	1,916,050	2,118,850	10.58%	21,813,300	21,967,400	0.71%
France	18,009,500	18,324,300	1.75%	1,105,500	1,167,300	5.59%	16,904,000	17,157,000	1.50%
UK	17,661,100	17,838,200	1.00%	3,761,100	3,766,200	0.14%	13,900,000	14,072,000	1.24%
Italy	12,595,533	12,855,463	2.06%	381,533	388,463	1.82%	12,214,000	12,467,000	2.07%
Spain	9,062,767	9,166,427	1.14%	1,775,848	1,821,407	2.57%	7,286,919	7,345,020	0.80%
Russia	8,023,082	8,773,500	9.35%	3,834,000	4,112,000	7.25%	4,189,082	4,661,500	11.28%
Netherlands	5,813,500	5,828,800	0.26%	2,455,600	2,482,500	1.10%	3,357,900	3,346,300	-0.35%
Poland	4,367,967	4,502,460	3.08%	1,475,069	1,551,166	5.16%	2,892,898	2,951,294	2.02%
Belgium	3,030,500	3,088,500	1.91%	1,144,000	1,183,000	3.41%	1,886,500	1,905,500	1.01%
Sweden	2,982,302	3,033,602	1.72%	1,155,302	1,181,602	2.28%	1,827,000	1,852,000	1.37%
Switzerland	2,712,200	2,769,900	2.13%	929,200	974,900	4.92%	1,783,000	1,795,000	0.67%
Romania	2,640,018	2,746,900	4.05%	1,964,300	2,019,700	2.82%	675,718	727,200	7.62%
Czech Republic	2,012,200	2,084,000	3.57%	1,234,200	1,286,800	4.26%	778,000	797,200	2.47%
Denmark	2,052,797	2,054,097	0.06%	848,017	765,157	-9.77%	1,204,780	1,288,940	6.99%
Austria	1,853,100	1,911,800	3.17%	575,400	573,400	-0.35%	1,277,700	1,338,400	4.75%
Greece	1,752,276	1,881,977	7.40%	3,916	3,916	0.00%	1,748,360	1,878,061	7.42%
Portugal	1,735,704	1,783,784	2.77%	773,704	801,784	3.63%	962,000	982,000	2.08%
Norway	1,660,300	1,706,900	2.81%	575,300	635,900	10.53%	1,085,000	1,071,000	-1.29%
Other EMEA	9,898,131	10,321,545	4.28%	3,189,896	3,352,556	5.10%	6,708,235	6,968,989	3.89%
EMEA Total	131,592,327	134,758,405	2.41%	29,097,935	30,186,601	3.74%	102,494,392	104,571,804	2.03%