World Broadband Statistics: Q2 2004

23 September 2004

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Commentary

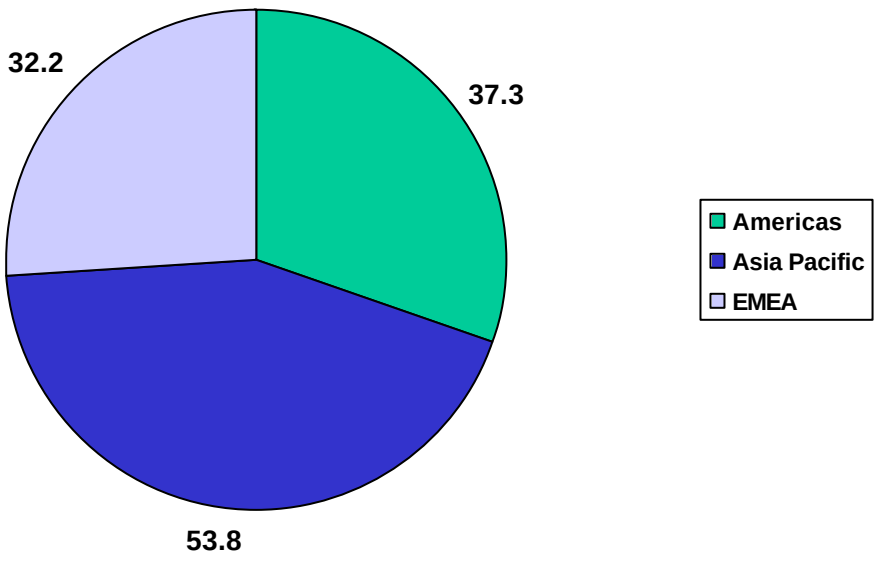
1 Introduction

This report continues the series of DSL reports started with June 2002 (Q2 2002). The coverage of the report was extended in Q2 2003 to include cable modems as well as DSL lines, in order to provide an overview of World broadband growth as a whole.

This edition of the report continues to cover fibre and other forms of broadband internet access as well as cable modems under the general heading "Cable modems etc." Fibre in this context means anything from fibre to the kerb to fibre to the individual home, often described as "FTTx". Bringing these additional broadband services into the picture makes a significant difference in countries such as Italy, Sweden, Japan, South Korea and, most of all, China which achieved a 2.7m increase in FTTx connections in the first half of 2004.

This report now covers broadband lines in 70 countries, and reflects the universal appeal of broadband services. We have made less re-statements than in previous quarters, which reflects the growing accuracy of our numbers in general. However, we continue to maintain close correspondence with broadband operators, national regulators, and industry organisations in order to avoid ambiguities. Some of the historical statistics will be different from those published in earlier reports, but overall preference should be given to the numbers in this report.

Figure 1 Share of broadband lines by region (millions of lines) as of 30 June 2004



2 Global trends

The worldwide total of broadband lines grew to 123m during the first half of 2004 (H1 2004), an increase of 23% from 100m lines at 31 December 2003, and 54% from 79m lines in June 2003 last year. Figure 1 shows how the total was distributed between the three major World regions as of 30 June 2004.

The total number of broadband lines added in the first half of 2004 was over 23m, maintaining the momentum established in the second half of 2003 where 21m lines were added. Asia Pacific dominated this total once again adding over 11m lines since end-2003, and maintaining overall share of World broadband lines at 44%. China was again a key factor in the growth of this region, adding almost 7m lines in H1 2004 alone. DSL lines grew by 27%, while cable modem and other technologies achieved 19% growth in the H1 period.

H1 2004 realised an acceleration of growth in competing broadband technologies such as FTTx in some of the major broadband countries. The most important example is China, where there were an impressive 2.7m FTTx connections added at the end H1 2004. This number has even surprised local regulatory authorities in China.

In the Americas, DSL continued the race to capture broadband market share from cable modem operators in Canada and USA. In The USA for example, DSL subscriptions grew by 22% in H1 compared to a modest 13% increase in cable modem subscriptions. Similarly in Canada, DSL grew by 12% in the same period, but cable modems grew even more slowly, adding only 8%.

Figure 2 provides a quarterly breakdown of DSL and cable modem numbers for the 30 countries with most broadband lines, with their percentage growth between Q1 and Q2 2004.

3 "Top Ten" broadband countries

Number of lines

The country rankings shown in Figure 3 for total broadband lines, continue to show significant differences between those for DSL alone or cable modem numbers alone. The USA remains by far the largest broadband market with over 29m broadband lines, with China ten million lines behind on 19m. Japan is now in third place with 16m lines, having been overtaken by China in Q1 2004. South Korea remains in fourth place with over 11m lines, with France (seventh place) passing 5m lines and looking to overtake Canada and Germany which are in sixth and fifth place respectively.

Despite the wide range in country totals and growth rates, Figure 3 shows that the world's major economies are now established in the broadband 'top ten' - including Italy which has now overtaken Taiwan and is behind the UK in ninth place.

Lines added

Figure 7 shows the number of lines added in H1 2004. China remains the most impressive, adding almost 7m lines in the first half of 2004 alone. USA kept up the momentum adding 4m lines - the second highest number behind China. Absolute growth in Western Europe has also been strong in 2004 so far with France, UK and Italy all adding over 1m lines.

Percentage growth

Figure 8 ranks the most rapidly growing countries in percentage terms, considering only those countries with more than 100,000 broadband lines in December 2003.

Eastern European countries are continuing to experience high growth, as Poland led the table registering an 80% increase and passed 300,000 broadband lines by 30 June 2004. Mexico upholds the Latin American presence in the 'top 5' with 78% growth, almost doubling its DSL lines to reach 339,000, with the country's total broadband lines standing at 369,000. Argentina also achieved healthy growth of 45% in H1.

In Asia Pacific, China and Australia were most impressive. China achieved 58% growth, and was in third place overall. The market in Australia grew by 50% and in doing so passed a landmark of 1m broadband lines.

The remainder of this 'top 10' consists mainly of Western European countries. France is continuing to dominate this region, achieving almost 50% growth to pass 5m lines and is catching up with Germany for the top spot amongst European countries. Other countries achieving good growth include Italy, Denmark and UK, which have grown by at least 37% so far in 2004.

Penetration

There remains plenty of scope for increasing broadband penetration, as is evident from Figure 9. South Korea is still the leading country in 2004 so far, with a saturating penetration of around 24 broadband lines per 100 people. Point Topic refers to this as the "broadband density" or BB density, which is similar by analogy to the familiar "teledenisty", the number of telephone lines per 100 people.

Other countries, in all regions of the world, are continuing to catch up with South Korea. The leading example is Hong Kong which has achieved 20 broadband lines per 100 population, only the second country to do this.

Outside Asia Pacific Western European countries continue to gain ground. Denmark is the clear example, having overtaken both Canada and Taiwan to take third place with a BBdensity of 17. Netherlands has also moved up well in the rankings during the first half of 2004, overtaking Taiwan and Belgium for fifth place with 15 lines per 100 population.

4 Technology choices

Comparative growth rates

Figure 10 shows a general market share of broadband technologies, whilst Figure 11 shows how the market share of cable modems continues to vary widely between countries. Of all the Top Ten broadband countries the USA and Canada are still the only two that have clearly more cable modems than DSL lines. The numbers in South Korea favour DSL, although there is a substantial 42% of lines that consist of cable modems and other technologies.

China and the UK have a substantial number of 'cable modem etc.' lines. The growth of FTTx in China has given a 33% market share to non-DSL technologies. Meanwhile in the UK cable operators NTL and Telewest have added over 300,000 lines between them in Q2 2004 to give 38% market share.

DSL is well ahead in all the other major countries, with cable modems and other technologies still accounting for less than 20% of the total broadband market in France, Germany, Italy and Taiwan. The exception is Japan, which recorded 4m lines consisting mainly of cable modem and FTTx to give 25% share of total broadband. Japan is one of the handful if countries where fibre connections have been successfully deployed and adopted on a significant scale.

DSL leaders

Looking at the technology markets separately, China has now become the world's largest DSL market, overtaking Japan and USA to reach 12.7m lines. This is despite a downward re-statement of the DSL total in China for Q1 2004 to 10.3m lines, in light of new data from the local regulator. Despite this re-assessment, China was still the world's most dynamic DSL market in absolute terms adding over 4m lines in H1 2004. USA added 2.1m, whilst Japan added 1.8m lines but neither came close to the growth achieved by China.

Cable modem leaders

The USA remains the leading market for cable modems, with over 17.7m subscriptions by the end of June 2004. China is a distant second, despite adding over 4m FTTx connections to give it over 6.4m subscriptions at the end of the same period. South Korea and Japan also lag behind in third and fourth place with 4.9m and 4.1m subscriptions respectively. The UK maintains its position in sixth place with 1.6m lines.

Methodology and supporting material

1 Data collection

Point Topic aims to provide the most complete, up-to-date and accurate source for broadband statistics and estimates. To do this we collect quarterly statistics from all the major primary suppliers of DSL lines and cable modems worldwide. We also collect data from many service providers which resell DSL products provided by primary suppliers. Many DSL and cable modem suppliers now quote quarterly numbers as part of their regular reporting cycle. Many others provide the numbers we are seeking via private email and other communications. On the other hand, some operators do not yet provide regular reports or disguise the totals in various ways. In these cases, Point Topic aims to provide the best possible estimates.

The most important sources for estimated totals are partial or earlier reports by the operators themselves. The national regulatory authorities (NRAs) also frequently provide DSL and other broadband statistics, although generally with a bigger time-lag. Where these sources are not available, DSL and cable vendors may provide useful indicators, as do estimates quoted by the trade press. Where we do have secondary estimates we try as far as possible to track them back to the original source.

Data collected per operator is then summed to provide country totals for the purposes of this report. Full details at the operator level are provided in the spreadsheets which are available to subscribers of the Point Topic website. Operator and country level data for smaller countries are also available to subscribers.

2 Variations in coverage and definitions

In principle, the DSL statistics include all lines which are described by their suppliers as "DSL". In practice the great majority of these are ADSL, variants of ADSL 2+ or other proprietary versions of ADSL. The main exceptions are:

- VDSL lines, of which Korea Telecom and Hanaro are the biggest reporting suppliers.
- Symmetrical DSL lines offered mainly by CLECs such as Covad in the USA and their counterparts in other countries

In some cases 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 provides further breakdown with 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 classification of these A-LAN subscriptions varies 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 provided by different types of technology. If a number combines major groups, such as DSL and cable modems, we usually estimate the numbers for each category and state them separately. In other cases where there is just a small number using a different technology we assign the whole number to the larger group. These cases are usually noted with a comment in the detailed spreadsheets available to subscribers.

3 Resources for subscribers

Subscribers to Point Topic who want to carry out their own analyses of broadband developments can use the workbooks of current and historical DSL and cable modem data on the website. The workbooks include operator-level statistics for end-2001, mid and end-2002, all of 2003 and the first half of 2004 in regional format, plus demographic and telephone data.

A production of this kind is bound to have errors and omissions and we would be grateful if readers would notify us of any they discover, for example by emailing info@point-topic.com.

Haroon Butt
23 September 2004

Figure 2 DSL lines, cable modems etc., and total broadband lines in major countries: World and Americas

	Thousands of lines at 31 March 2004			**Thousands of lines at 30 June 2004**			**Growth in Q2 2004**		
Country	**DSL**	**Cable modems etc**	**Total**	**DSL**	**Cable modems etc**	**Total**	**DSL**	**Cable modems etc**	**Total**
World total	**69810**	**42035**	**111846**	**77725**	**45598**	**123323**	**11.3%**	**8.5%**	**10.3%**
Americas	14849	20152	35001	16248	21099	37347	9.4%	4.7%	6.7%
Argentina	136	122	258	202	122	324	49.0%	0.0%	25.8%
Brazil	1160	161	1321	1366	161	1527	17.7%	0.1%	15.6%
Canada	2341	2622	4962	2436	2690	5126	4.1%	2.6%	3.3%
Chile	217	160	377	243	172	415	12.0%	7.7%	10.2%
Mexico	229	30	259	339	30	369	48.1%	0.0%	42.5%
USA	10584	16883	27468	11434	17752	29186	8.0%	5.1%	6.3%
Other Americas	183	174	357	228	172	400	24.5%	-1.2%	12.0%

Figure 2 (continued) DSL lines, cable modems etc., and total broadband lines in major countries: Asia-Pacific

	Thousands of lines at 31 March 2004			**Thousands of lines at 30 June 2004**			**Growth in Q2 2004**		
Country	**DSL**	**Cable modems etc**	**Total**	**DSL**	**Cable modems etc**	**Total**	**DSL**	**Cable modems etc**	**Total**
Asia-Pacific	**32496**	**15208**	**47704**	**36440**	**17369**	**53808**	**12.1%**	**14.2%**	**12.8%**
Australia	528	322	850	710	338	1048	34.5%	4.7%	23.2%
China	10300	4870	15170	12710	6420	19130	23.4%	31.8%	26.1%
Hong Kong	620	650	1270	753	667	1420	21.5%	2.6%	11.8%
India	49	38	87	98	91	189	99.0%	139.6%	116.8%
Japan	11197	3720	14917	12069	4119	16188	7.8%	10.7%	8.5%
Singapore	258	143	401	268	143	411	3.9%	0.0%	2.5%
South Korea	6581	4847	11428	6666	4952	11618	1.3%	2.2%	1.7%
Taiwan	2590	603	3193	2720	625	3345	5.0%	3.6%	4.8%
Other Asia-Pacific	374	14	388	446	14	460	19.3%	0.0%	18.6%

Figure 2 (continued) DSL lines, cable modems etc., and total broadband lines in major countries: Europe, Middle East and Africa

	Thousands of lines at 31 March 2004			**Thousands of lines at 30 June 2004**			**Growth in Q2 2004**		
Country	**DSL**	**Cable modems etc**	**Total**	**DSL**	**Cable modems etc**	**Total**	**DSL**	**Cable modems etc**	**Total**
EMEA	**22465**	**6675**	**29140**	**25037**	**7130**	**32167**	**11.5%**	**6.8%**	**10.4%**
Austria	319	327	646	348	330	678	9.1%	1.0%	5.0%
Belgium	869	522	1390	918	537	1455	5.7%	2.9%	4.6%
Denmark	524	274	798	562	355	917	7.3%	29.6%	15.0%
Finland	377	89	466	389	92	481	3.1%	3.9%	3.2%
France	4116	420	4536	4687	424	5111	13.9%	0.9%	12.7%
Germany	4950	149	5099	5000	150	5150	1.0%	0.6%	1.0%
Hungary	137	47	184	155	53	208	13.1%	12.8%	13.0%
Israel	480	240	720	530	240	770	10.4%	0.0%	6.9%
Italy	2865	183	3048	3333	190	3523	16.3%	3.5%	15.6%
Netherlands	1195	1004	2198	1387	1096	2483	16.1%	9.2%	12.9%
Norway	380	68	448	429	77	506	12.9%	13.8%	13.0%
Portugal	238	340	579	295	360	655	23.9%	5.8%	13.3%
Spain	1871	472	2343	2067	500	2567	10.5%	5.9%	9.6%
Sweden	631	423	1054	657	442	1099	4.1%	4.4%	4.2%
Switzerland	596	380	976	656	410	1066	10.1%	7.9%	9.2%
UK	2272	1503	3775	2725	1635	4360	19.9%	8.8%	15.5%
Other EMEA	645	236	882	900	240	1140	39.4%	1.6%	29.3%

Figure 3 'Top ten' broadband countries by number of lines: 30 June 2003 - 30 June 2004

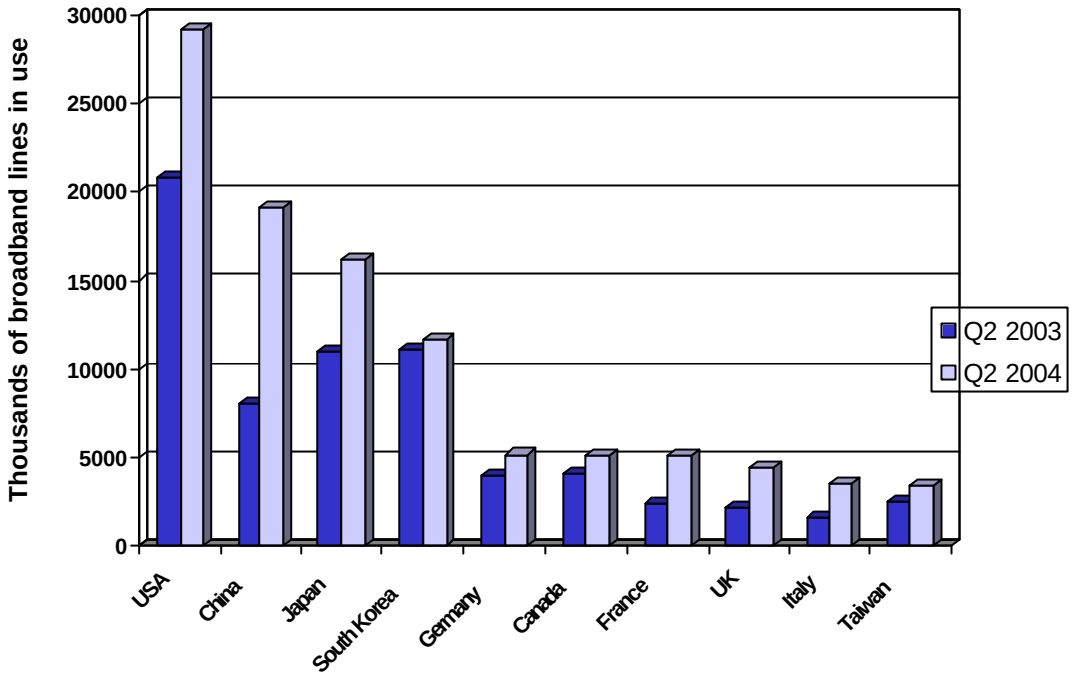


Figure 4 'Top ten' broadband by number of lines: 31 Dec 2003 - 30 Jun 2004

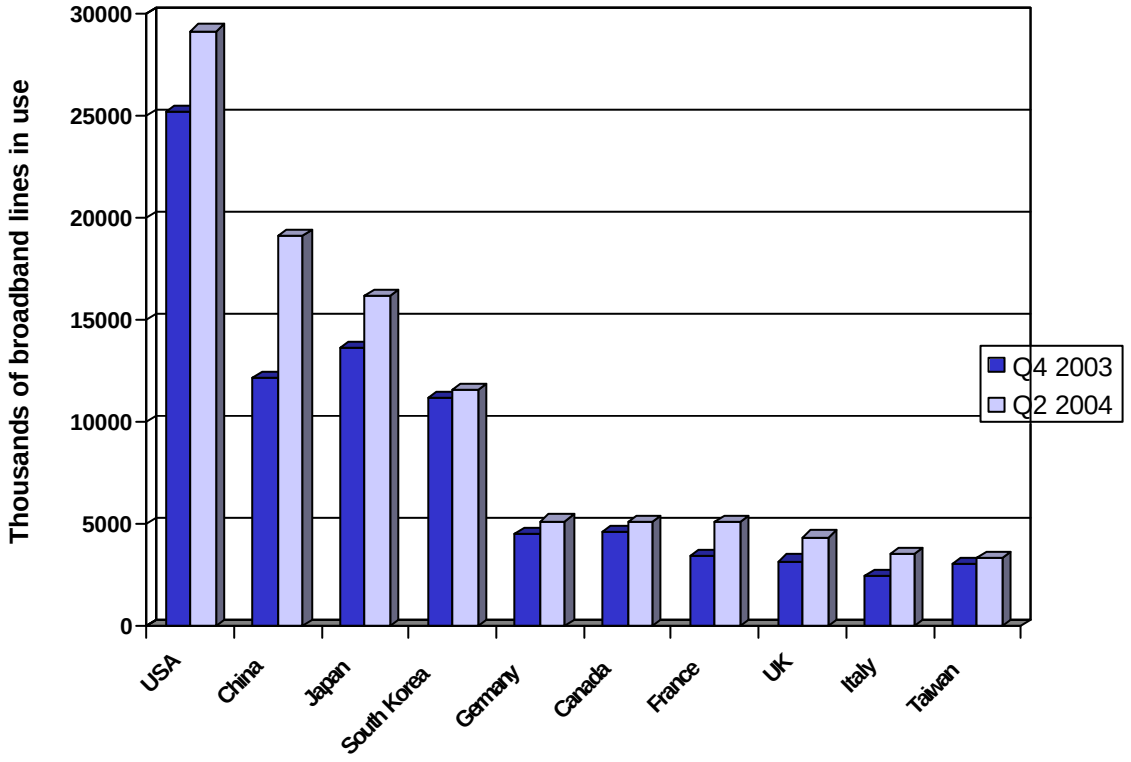


Figure 5 'Top ten' broadband countries by number of lines: 31 Mar 2004 - 30 Jun 2004

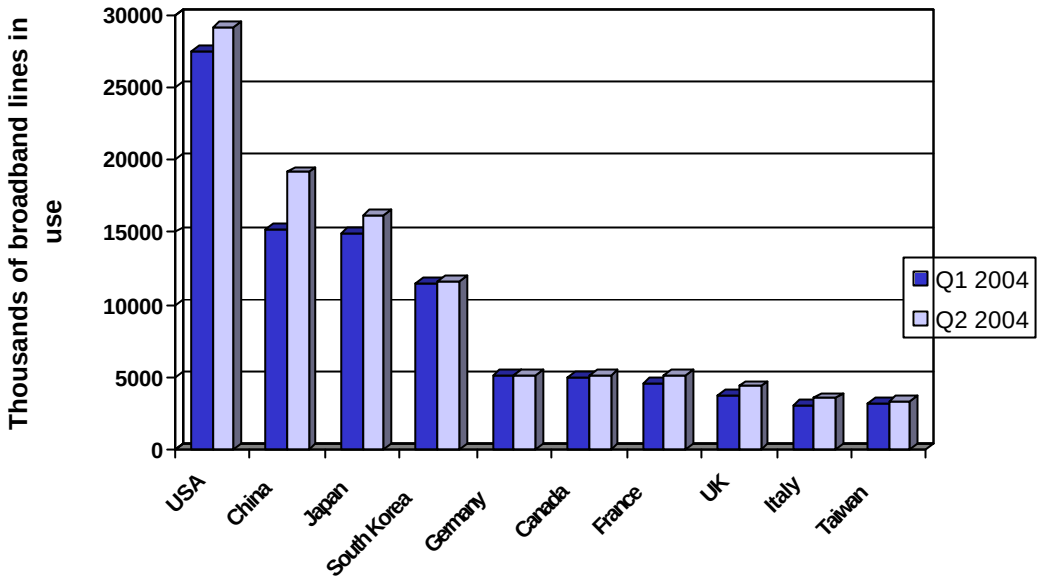


Figure 6 'Top ten' broadband countries by lines added: 30 June 2003 - 30 June 2004

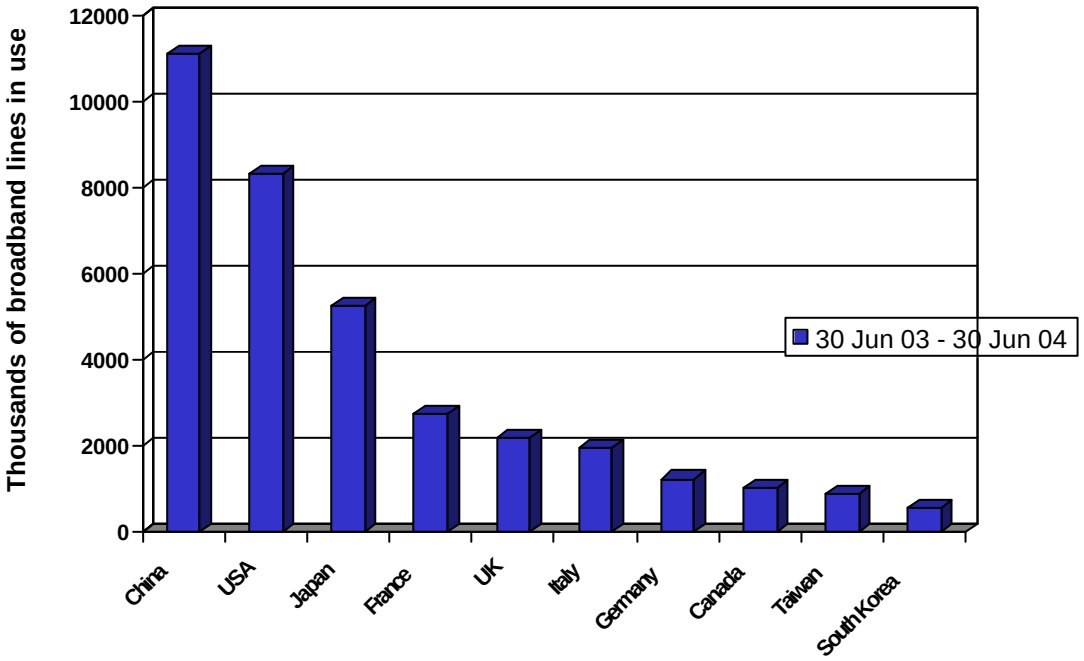


Figure 7 'Top ten' broadband countries by lines added: 31 Dec 2003 - 30 Jun 2004

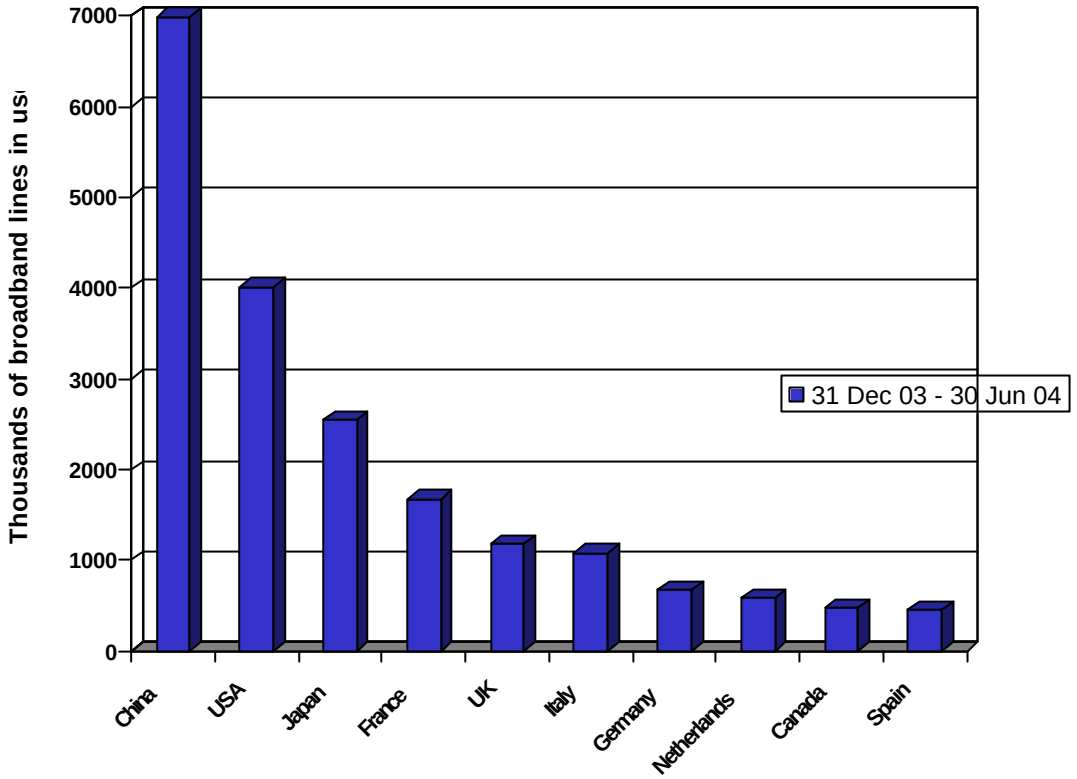


Figure 8 'Top ten' broadband countries by percentage growth: 31 Dec 2003 - 30 Jun 2004

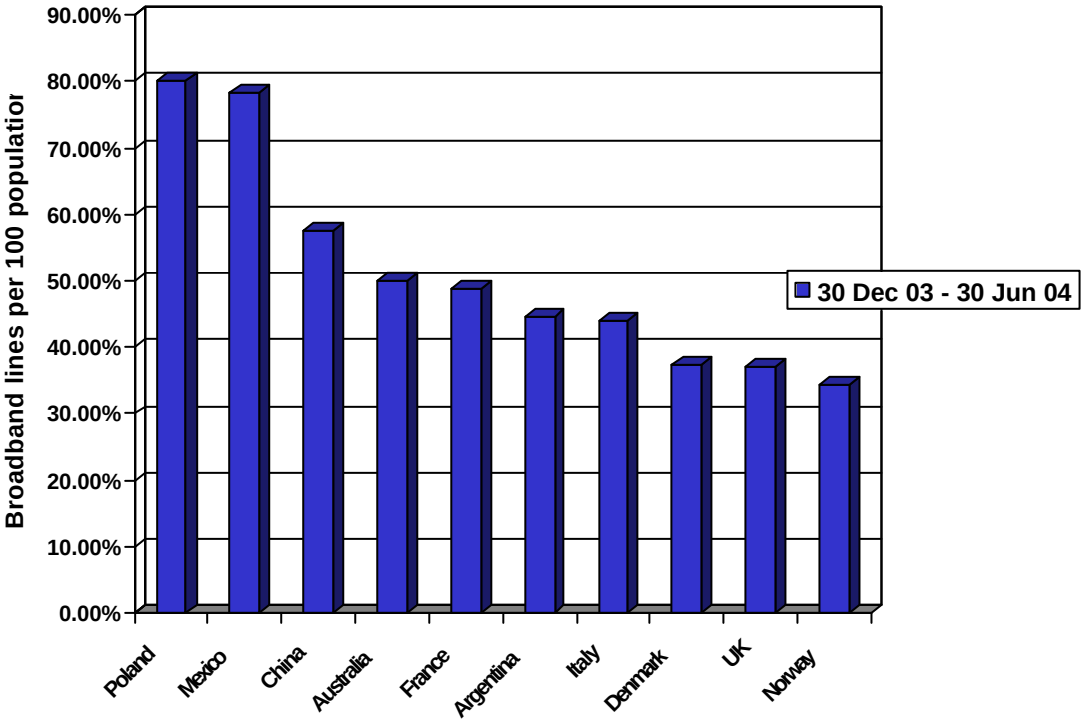


Figure 9 'Top ten' broadband countries by penetration: 31 Dec 2003 - 30 Jun 2004

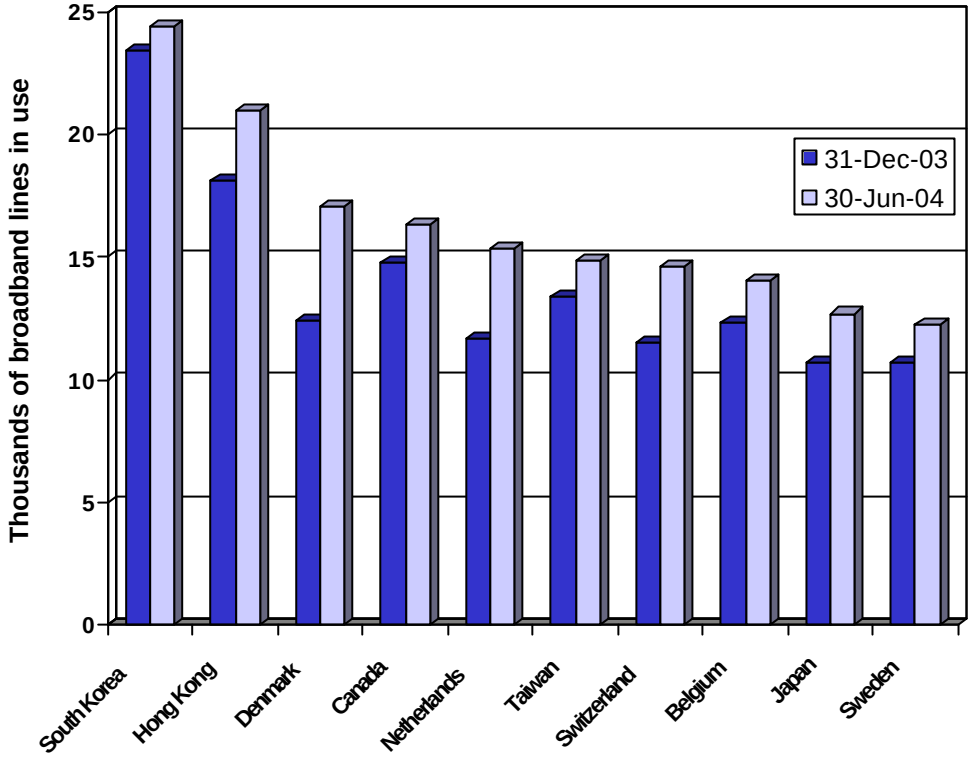


Figure 10 Share of broadband lines by technology: 30 Jun 2004

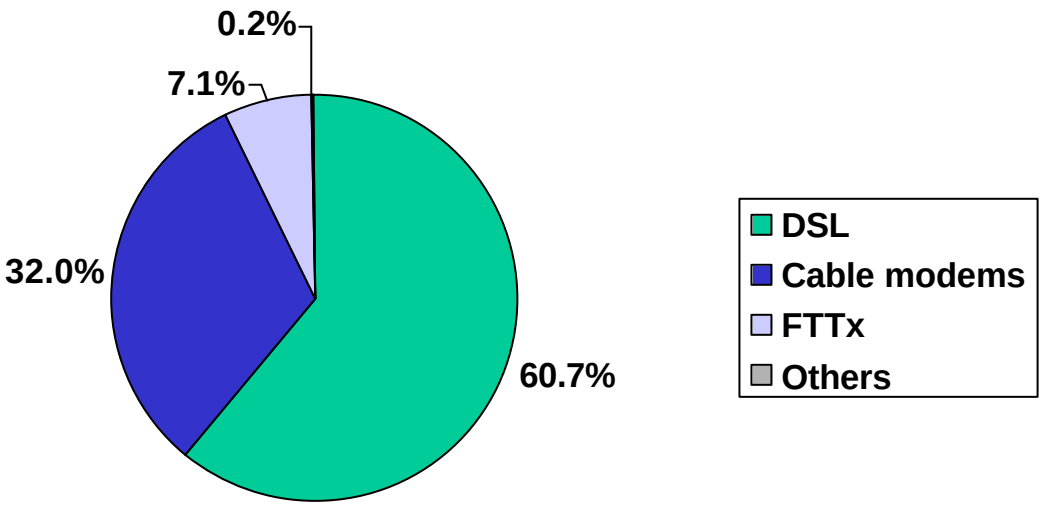


Figure 11 Broadband technologies in 'top ten' countries: 30 Jun 2004