

World Broadband Statistics: Q4 2004

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Contents

Commentary

Methodology

Figures

- 1 Share of broadband lines by region (millions of lines) as of 31 Dec 2004
- 2 DSL, cable modems etc and total broadband lines in major countries
- 3 'Top ten' broadband countries by number of lines: 30 Jun 2004 - 31 Dec 2004
- 4 'Top ten' broadband countries by lines added: 30 Jun 2004 - 31 Dec 2004
- 5 'Top ten' broadband countries by percentage growth: 30 Jun 2004 - 31 Dec 2004
- 6 'Top ten' broadband countries by penetration: 30 Jun 2004 - 31 Dec 2004
- 7 Broadband technologies in 'top ten' countries: 31 Dec 2004
- 8 Share of broadband lines by technology: 2001-2004

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Point Topic Ltd
Cardinal Tower
12 Farringdon Road
London EC1M 3HS, UK
Tel +44 (0) 20 7551 9260
Fax +44 (20) 7551 9090
Email info@point-topic.com

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Commentary

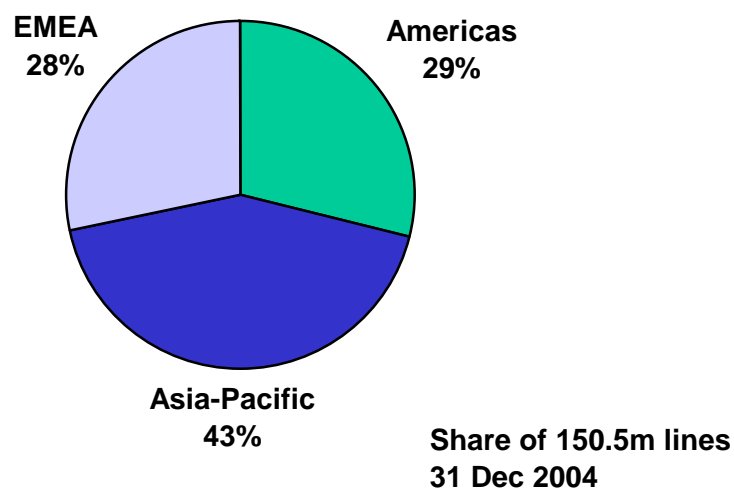
1 Introduction

This report continues the series of DSL reports started with June 2002 (Q2 2002), which has included cable modems and other technologies since Q2 2003, in order to provide an overview of World broadband growth as a whole.

This report also continues to cover fibre and other forms of broadband internet, which are named 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.

This report now covers broadband lines in 72 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 31 December 2004



2 Global trends

The worldwide total of broadband lines grew to 150.5m lines during the second half of 2004 (H2 2004), an increase of 21% from 124.0m lines at 30 June 2004. Figure 1 shows how the total was distributed between the three major World regions as of 31 December 2004.

The total number of broadband lines added in 2004 was over 50m, with good momentum in the second half of 2004 where 26.5m lines were added, nearly 2m more than in the first half of the year. This is the biggest half-year ever and an agreeable contrast with 2003 when the world total of broadband adds was lower in the second half of the year

Asia Pacific alone added 10.1m lines in H2 2004, and held its overall share of world broadband lines at 43% - China and Japan added over 8.5m lines in H2 between them.

EMEA kept up with the pace, adding over 9.9m lines during the same period with a 28% share of world broadband lines - less than 1m lines behind the Americas which has a marginally higher 29% share of the market.

DSL lines grew by 24.2%, while cable modem and other technologies achieved comparatively lower 16.5% growth in H2 2004. The DSL share of world broadband lines has also grown to 64% compared to 36% of lines consisting of cable modem and other technologies.

In the Americas DSL was the dominant technology in terms of growth, as 5 out of the 7 major countries experiencing higher growth in DSL compared to cable modem subscribers. In the USA DSL subscriptions grew by 20.1% in H2 to reach 13.7m lines compared to a modest 13.8% increase in cable modem subscriptions.

Having said that cable modems are still the dominant means of broadband access in the USA - now with 20.2m lines. Canada went against the common trend in the Americas, as cable modem subscribers grew by 9.5% compared to 8.5% growth in DSL during H2 2004.

Figure 2 provides a half-yearly breakdown of DSL and cable modem numbers for the 30 countries with most broadband lines, with their percentage growth between Q2 and Q4 2004.

3 "Top Ten" broadband countries

Number of lines

The country rankings in Figure 3 show that the USA remains the largest broadband market with over 33.9m broadband lines, with China covering good ground to reach 25.8m lines. Japan remains in third place with 18.1m lines. South Korea in fourth place with over 11.9m lines, and Germany is fifth with 6.9m lines. France and UK passed 6m lines to overtake Canada for sixth and seventh place respectively. Figure 3 confirms that all the world's major economies are well established in the broadband 'top ten'.

Lines added

Figure 4 shows the number of lines added in H2 2004. China remains the most impressive, adding 6.7 lines in the second half of 2004 alone. USA maintained its H1 2004 momentum by adding 4.7m lines. Absolute growth in Western Europe has remained strong with France and UK adding over 1.5m lines, and Germany and Italy both adding over 1m lines.

Percentage growth

Figure 5 ranks the most rapidly growing countries in percentage terms, considering only those countries with more than 100,000 broadband lines as of 30 June 2004. Turkey has been the

most impressive country in terms of growth in the second half of 2004, achieving 155% growth to reach 487,000 lines by the end of 2004.

Eastern European countries have continued to experience high growth throughout 2004. Poland led the pack, achieving 122% growth in H2 2004 to reach 689,000 lines, and looks set to become the first Eastern European country to pass 1m lines in 2005.

Mexico continues to uphold the Latin American presence in the 'top 5' with 60% growth, to reach 593,000 lines. Peru also features with 51% growth to reach 209,000 lines, with Argentina maintaining its 45% H1 2004 growth rate to reach 474,000 lines.

New Zealand, Australia and Malaysia all achieved growth of around 50% in H2 2004. New Zealand is approaching 200,000 lines with Malaysia having passed 250,000 lines during this period. Australia has passed 1.5m lines and was, alongside the UK - which achieved 52% growth to reach 6.1m lines, the only country with over 1m broadband lines to feature in the 'top ten' in terms of growth.

Penetration

There remains plenty of scope for increasing broadband penetration, as is evident from Figure 6. South Korea was again the leading country in 2004, with a saturating penetration of around 24.8 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 "teledensity", 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 21.9 broadband lines per 100 population. Outside Asia Pacific Western European countries are continue to gain ground. Denmark and Netherlands are the two clear examples, having passed Canada to reach 19 broadband lines per 100 population and are now in 3rd and 4th place respectively.

4 Technology choices

Comparative growth rates

Figure 7 shows a general market share of broadband technologies in the 'top ten 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 still a substantial 43% 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 contributed to give a 34% market share to non-DSL technologies. Meanwhile in the UK cable operators NTL and Telewest have added over 316,000 lines between them in H2 2004 to give 32% 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 4.7m lines consisting mainly of cable modem and FTTx to give 26% share of total broadband. Japan is one of the handful of countries where fibre connections have been successfully deployed and adopted on a significant scale.

DSL leaders

Looking at the technology markets separately, China is clearly the world's largest DSL market, and consolidated its lead to reach 16.9m lines by the end of 2004. China was still the

world's most dynamic DSL market in absolute terms adding 4.2m lines in H2 2004. USA added 2.3m, whilst France added 1.6m and UK added an impressive 1.4m lines to take 4th place in this particular ranking.

Cable modem leaders

The USA remains the leading market for cable modems, with over 20m subscriptions by the end of December 2004. China is a distant second with 8.8m lines. South Korea and Japan also lag behind in third and fourth place with 5.1m and 4.7m subscriptions respectively. The UK maintains its position in sixth place with 1.9m lines.

Two of the countries listed in Figure 2, Taiwan and Italy, actually saw a fall in the number of cable modems and other broadband accesses in the second half of 2004. In the case of Taiwan this seems to be due simply to fierce DSL competition from Chunghwa Telecom in a market nearing saturation. In Italy, where there is no traditional cable network, the main contributors to the "cable modems etc." category are FastWeb's FTTx services and satellite broadband. FastWeb's FTTx numbers have increased only modestly, as the company puts increasing emphasis on unbundled DSL as its delivery medium, while the declared satellite numbers have fallen, leading to a small overall reduction.

Hungary, on the other hand, shows a very high growth rate in cable modems in Figure 2, but much of this is due to the inclusion of operators which had not been identified before, although the underlying rate of growth is quite high as well.

5 Broadband in summary

Finally Figure 8 summarises the worldwide growth of broadband over the three years since the end of 2001. The number of broadband lines is more than four times as great as it was three years ago, and the DSL share has grown steadily from 55% to 64%. Growth peaked in the first half of 2003, when the broadband installed base increased by 39%, levelled off at 25% in the following two halves and then fell to 21% for the second half of 2004.

Point Topic expects growth to continue falling in percentage terms, while still increasing in the absolute number of lines added. As a growing number of the leading countries seem to be approaching broadband saturation - Hong Kong, Taiwan and Canada for example - the growth rate is bound to reduce. Meanwhile some major new country markets, such as Russia and India, have not yet established rapid take-off. As the net result, Point Topic expects there will be about 140m DSL lines and 75m cable modems etc.worldwide by the end of 2005.

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, 2003 and 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
31 March 2005

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

Country	Thousands of lines at 30 June 2004			Thousands of lines at 31 December 2004			Growth in H2 2004		
	DSL	Cable modems etc	Total	DSL	Cable modems etc	Total	DSL	Cable modems etc	Total
World total	78140	45899	124039	97035	53461	150496	24.2%	16.5%	21.3%
Americas	16248	21099	37347	19764	23908	43672	21.6%	13.3%	16.9%
Argentina	202	122	324	316	158	474	56.2%	29.4%	46.1%
Brazil	1366	161	1527	1891	161	2052	38.4%	0.1%	34.4%
Canada	2436	2690	5126	2643	2946	5589	8.5%	9.5%	9.0%
Chile	243	172	415	264	221	486	9.0%	28.4%	17.1%
Mexico	339	30	369	560	33	593	65.3%	10.0%	60.8%
USA	11434	17752	29186	13734	20199	33933	20.1%	13.8%	16.3%
Other Americas	228	172	400	355	190	545	55.8%	10.6%	36.3%

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

Country	Thousands of lines at 30 June 2004			Thousands of lines at 31 December 2004			Growth in H2 2004		
	DSL	Cable modems etc	Total	DSL	Cable modems etc	Total	DSL	Cable modems etc	Total
Asia-Pacific	36440	17369	53808	43232	20762	63993	18.6%	19.5%	18.9%
Australia	710	338	1048	1130	418	1548	59.1%	23.8%	47.8%
China	12710	6420	19130	16936	8850	25786	33.2%	37.9%	34.8%
Hong Kong	753	667	1420	795	695	1490	5.6%	4.2%	4.9%
India	98	91	189	125	134	259	28.2%	47.2%	37.3%
Japan	12069	4119	16188	13352	4701	18053	10.6%	14.1%	11.5%
Singapore	268	143	411	287	215	502	7.1%	50.3%	22.1%
South Korea	6666	4952	11618	6777	5144	11921	1.7%	3.9%	2.6%
Taiwan	2720	625	3345	3112	588	3700	14.4%	-5.9%	10.6%
Other Asia-Pacific	446	14	460	717	16	733	60.9%	14.1%	59.4%

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

Country	Thousands of lines at 30 June 2004			Thousands of lines at 31 December 2004			Growth in H2 2004		
	DSL	Cable modems etc	Total	DSL	Cable modems etc	Total	DSL	Cable modems etc	Total
EMEA	25453	7431	32883	34040	8791	42830	33.7%	18.3%	30.2%
Austria	356	330	686	442	380	822	24.3%	15.0%	19.8%
Belgium	918	537	1455	1032	630	1662	12.4%	17.4%	14.2%
Denmark	562	355	917	646	394	1040	14.9%	11.0%	13.4%
Finland	400	192	592	459	208	667	14.9%	8.1%	12.7%
France	4687	424	5111	6293	461	6754	34.3%	8.7%	32.1%
Germany	5350	150	5500	6700	164	6864	25.2%	9.1%	24.8%
Hungary	155	53	208	240	186	426	54.7%	253.7%	105.2%
Israel	530	270	800	650	290	940	22.6%	7.4%	17.5%
Italy	3312	305	3617	4464	304	4768	34.8%	-0.3%	31.8%
Netherlands	1387	1096	2483	1843	1308	3151	32.9%	19.3%	26.9%
Norway	429	104	533	562	120	682	31.0%	15.5%	28.0%
Portugal	297	360	657	428	429	857	43.9%	19.2%	30.4%
Spain	2086	500	2586	2583	615	3198	23.8%	23.0%	23.7%
Sweden	683	417	1099	880	465	1345	28.9%	11.6%	22.3%
Switzerland	656	410	1066	785	435	1220	19.7%	6.1%	14.4%
UK	2728	1635	4363	4147	1953	6100	52.0%	19.4%	39.8%
Other EMEA	916	294	1210	1886	450	2336	105.9%	53.2%	93.1%

Figure 3 'Top ten' broadband countries by number of lines: 30 Jun 2004 - 31 Dec 2004

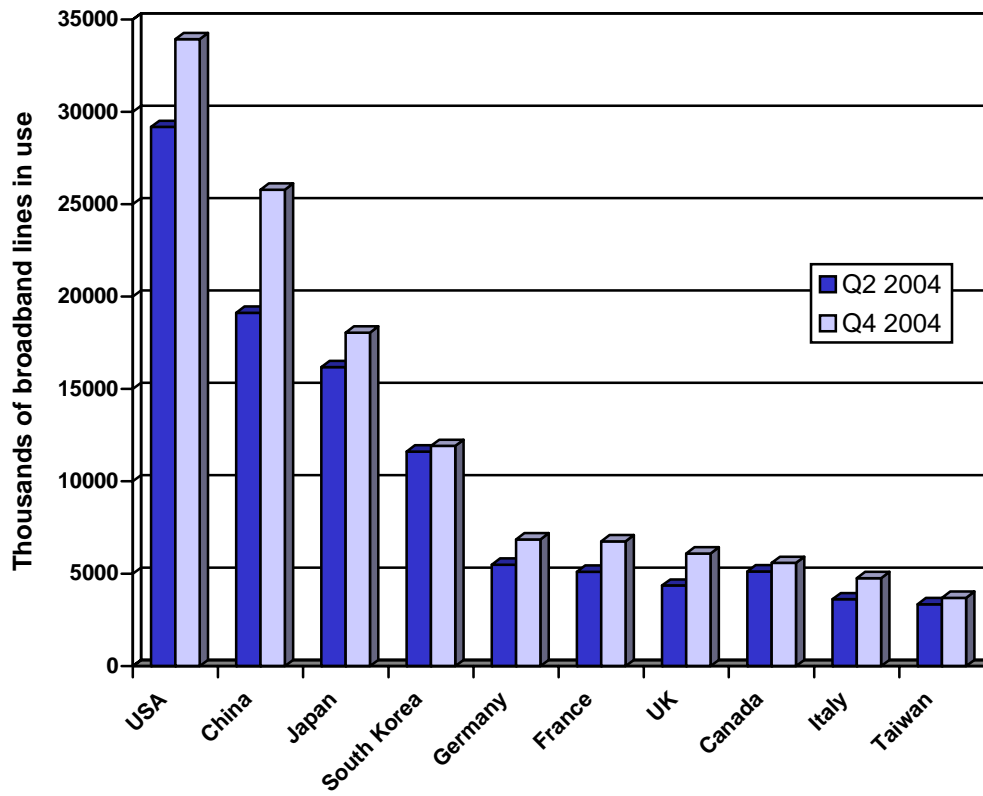


Figure 4 'Top ten' broadband countries by lines added: 30 June 2004 - 31 Dec 2004

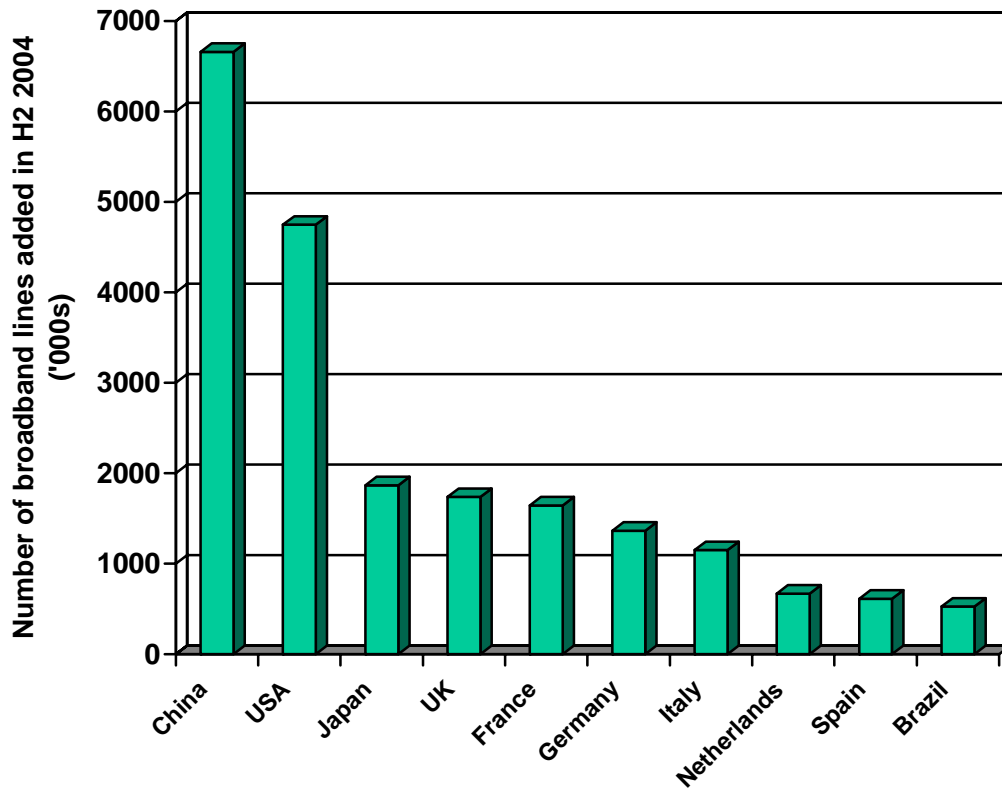


Figure 5 'Top ten' broadband countries by percentage growth: 30 Jun 2004 - 31 Dec 2004

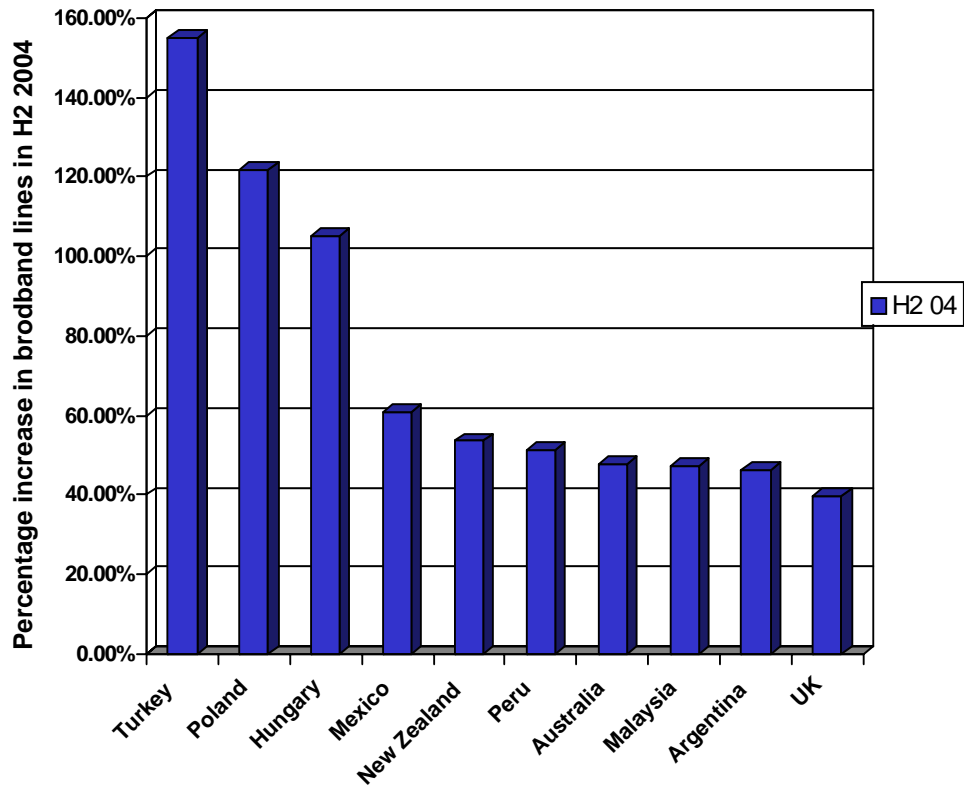


Figure 6 'Top ten' broadband countries by penetration: 30 Jun 2004 - 31 Dec 2004

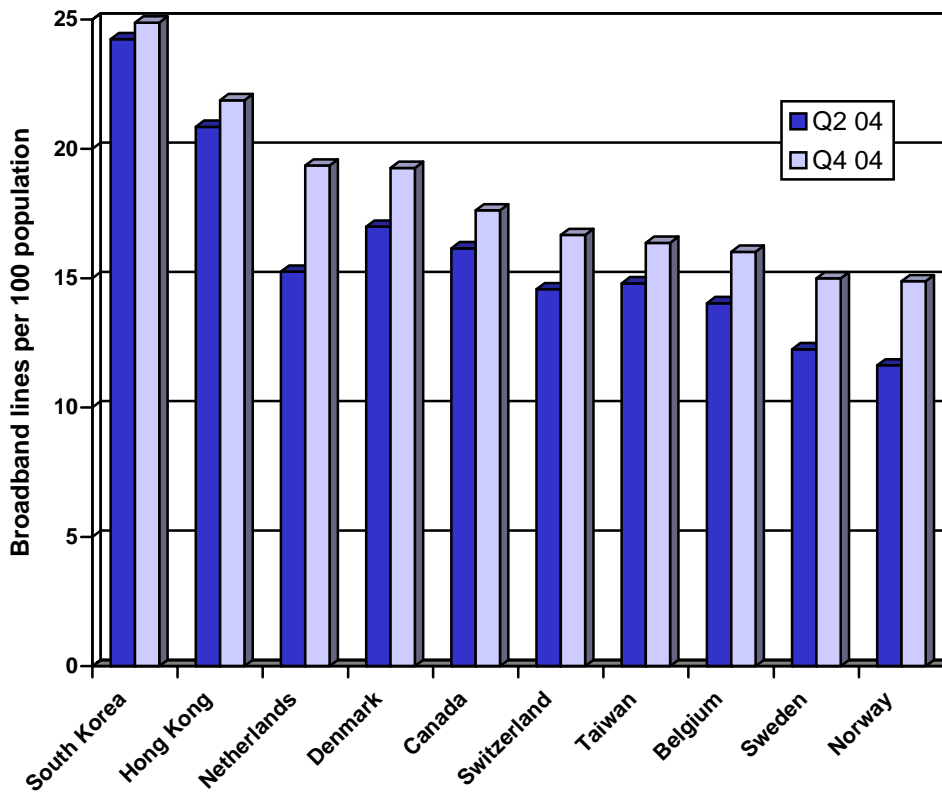


Figure 7 Broadband technologies in 'top ten' countries: 31 Dec 2004

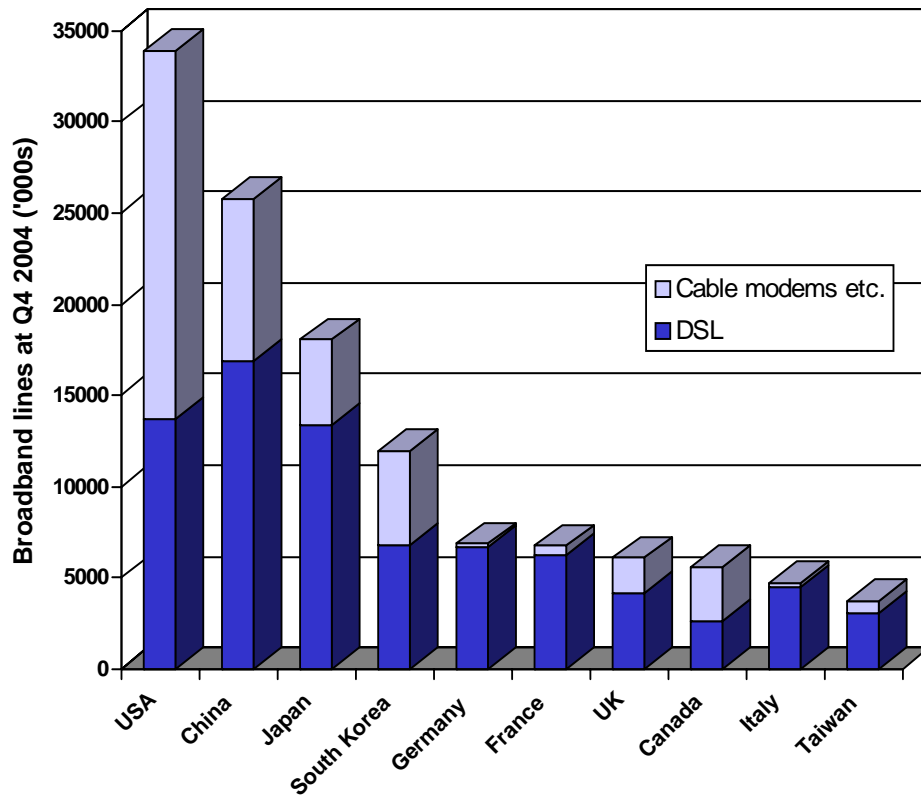


Figure 8 Share of broadband lines by technology: 2002-2004

