



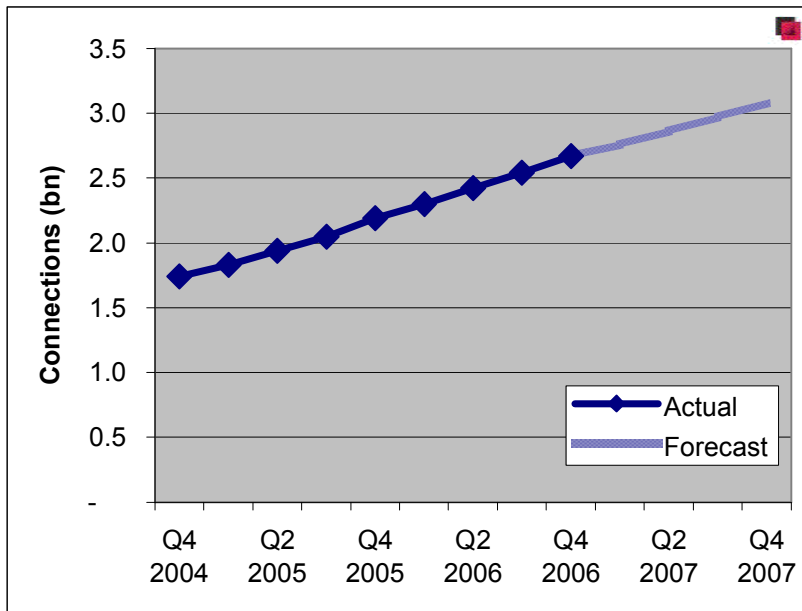
2007 connections predictions

26 January 2007

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By the end of 2007, cellular connections will reach 3 billion, having passed through 2.5 billion during September 2006. The majority of the world's cellular growth will continue to come from Asia-Pacific, but the fastest rate of growth there will shift from China to India, Pakistan and Bangladesh. Three-quarters of countries in Western Europe will end 2007 with a market penetration over 100%. High-speed networks will again be the fastest growing technologies in the market, gaining around 3% of world market share during the year.

Figure 1 **World total cellular connections**



Source: Wireless Intelligence, January 2007

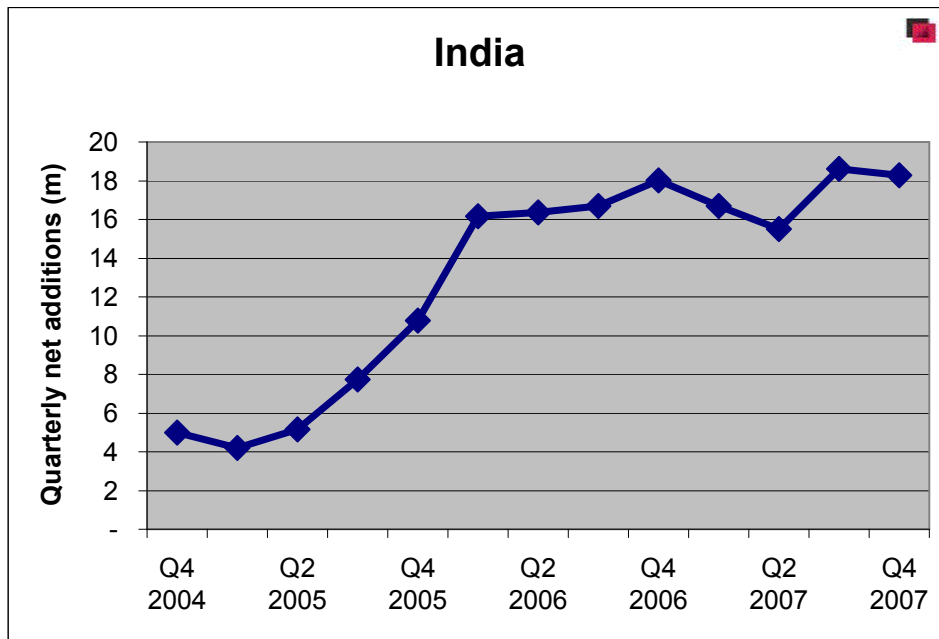


Global connections will reach 3 billion

During September 2006 total world cellular connections passed through 2.5 billion, having recorded the fastest ever addition of 0.5 billion subscribers, which came up in just 12 months.

The big surprise during 2006, which helped push the growth upwards so strongly, was the very steep rise in net additions in India, as shown in *Figure 2*. Quarterly net additions tripled from mid-2005 to the end of 2006, overtaking China in the process.

Figure 2 **Quarterly net additions in India**



Source: *Wireless Intelligence, January 2007*

According to *Wireless Intelligence* forecasts, the rate of market growth will slow down slightly from here on so that the next half billion connections will take 16 months to build and the market will cross the 3 billion threshold in December 2007.

During the calendar year 2007, we will see growth of 409 million connections, which represents an annual market growth rate of 15%.

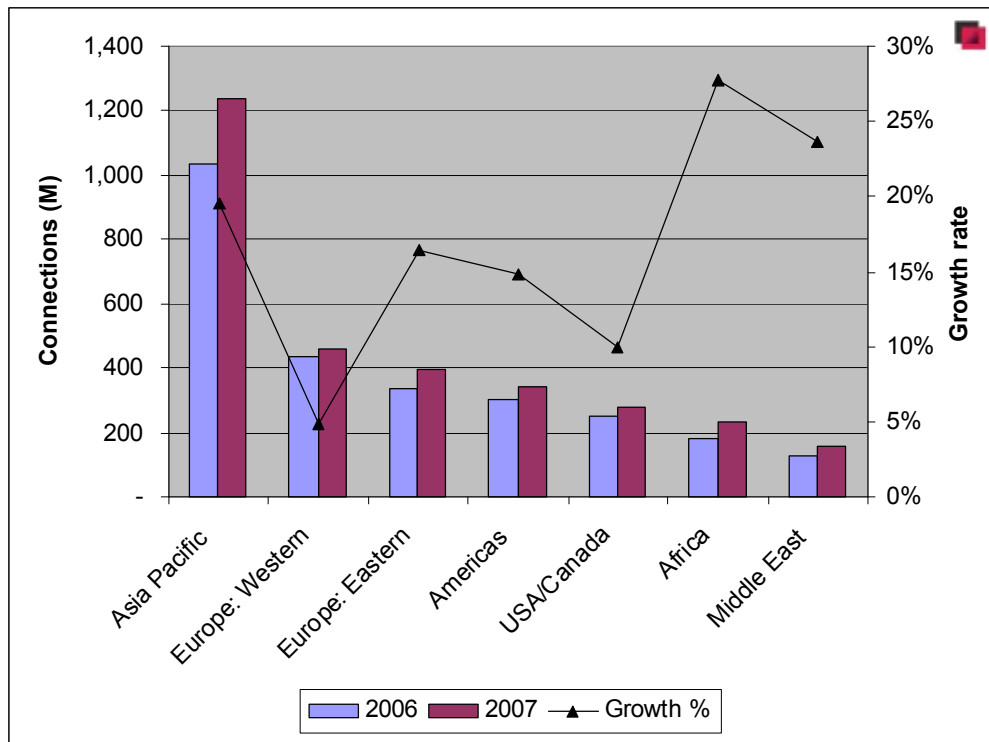
The biggest region will remain Asia-Pacific, accounting for over 1.2 billion connections by the end of the year. This is a growth rate of 20% and it also accounts for 40% of the world's growth for the year.

The slowing of growth rates is clearly shown in *Figure 3*. Africa will remain the fastest growing region, although its growth rate is predicted to fall to 28% for



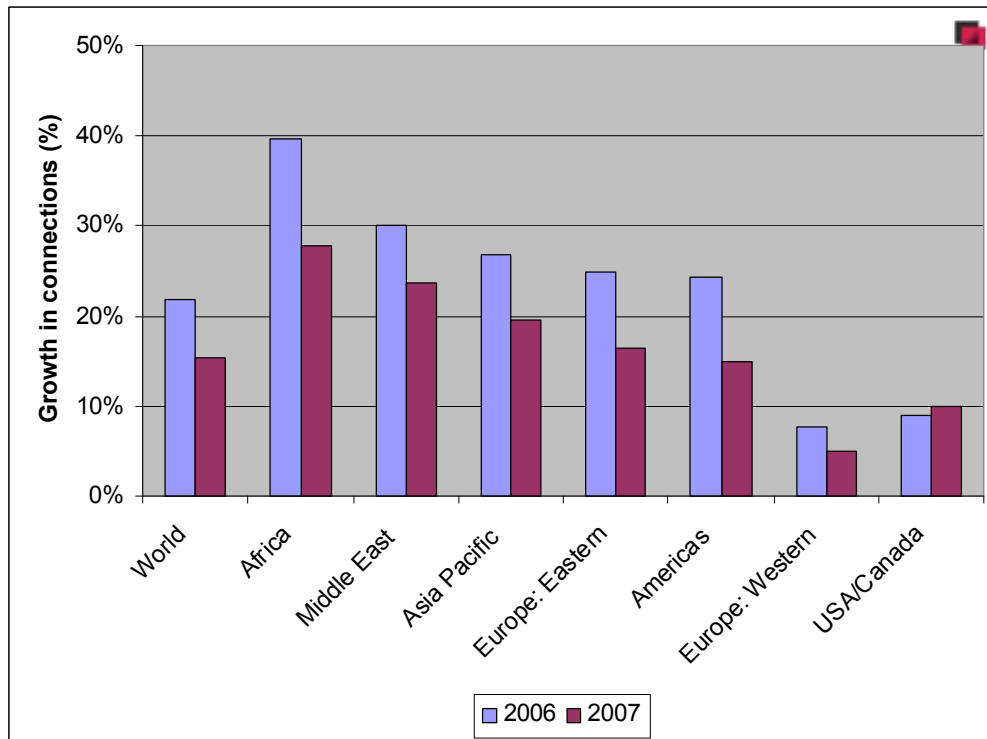
2007. The successful introduction of cheap handsets and the continued expansion of pan-regional players have the potential to give the 2007 growth rate a boost.

Figure 3 Cellular connections by region (2006 and 2007)



Source: Wireless Intelligence, January 2007

The other three very high growth regions of Eastern Europe, Latin America and Asia-Pacific will all decelerate as the larger markets within those regions start to mature, as shown in Figure 4.

Figure 4 **Growth in cellular connections by region (2006 and 2007)**

Source: Wireless Intelligence, January 2007

Among the larger countries, China has slipped from being the biggest source of growth and has been overtaken by India. During 2006 we have also seen net additions growing strongly in Bangladesh, Indonesia and Pakistan, so that they move up the top 10, as shown in Figure 5.

Figure 5 **Top 10 markets for 2007: net additions and % growth**

Rank	Country	Net additions (m)	Growth rate 2007 (%)
1	India	69	48.3
2	China	63	14.2
3	Russia	24	15.3
4	USA	23	9.9
5	Pakistan	19	42.1
6	Indonesia	16	25.6
7	Brazil	14	13.7
8	Ukraine	13	28.9
9	Nigeria	11	32.8
10	Bangladesh	9	45.3

Source: Wireless Intelligence, January 2007



Market penetration approaches 50%

During 2007, world market penetration will rise from an estimated 41% at the end of 2006 to 47%.

As we have said before, this does not mean that nearly half of the world's population will own a phone.

This is for two reasons: SIMs that are no longer used because of churn (but which have not been cleaned out of the operators' database yet) and multiple device ownership.

In the most developed cellular markets market penetration is well over 100% – Italy, for example, is currently very close to 140%. Clearly this means that there are multiple connections per real user and some statistics are becoming available to measure this phenomenon. In Italy, the number of SIMs per real user is around 1.7. We have analysed the impact of this in previous *Wireless Intelligence* reports.

Interestingly, recent data shows that multiple device ownership is also a feature of less mature, high growth markets such as South Africa, Egypt and Turkey. In those countries the number of SIMs per real user is typically 1.2.

Overall, this means that the world market penetration overstates the number of real users in the world by up to 20%, so the real penetration for the world market may be as low as 33%.

Higher speed networks will continue to build

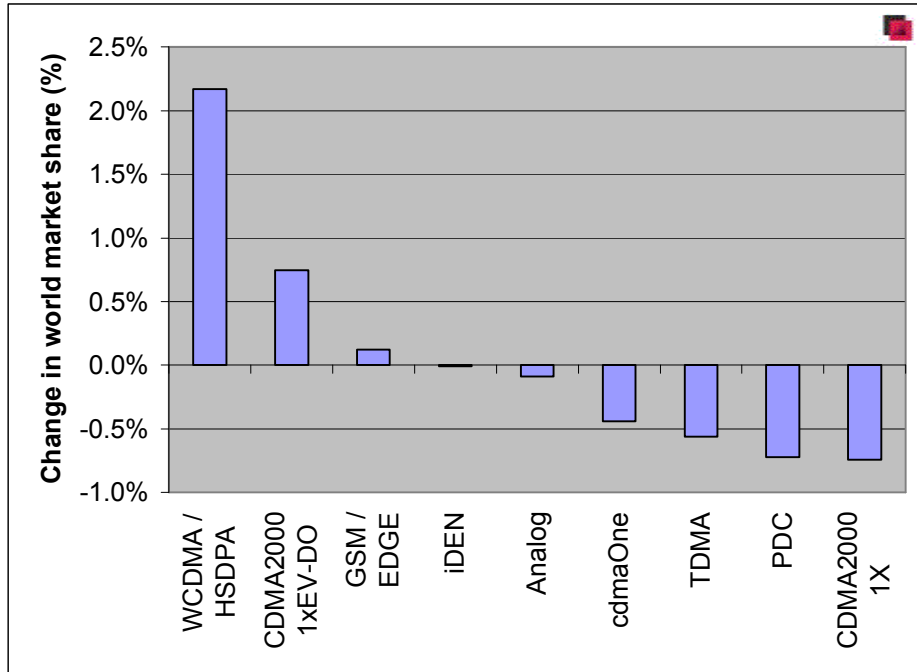
This time last year we forecast that W-CDMA would double its user base to 96 million. We currently estimate that it closed 2006 just short of 100 million. Similarly, cdma2000 1X EV-DO increased its user base by 88% in 2006 to end the year on 50.5 million.

The high-speed networks will continue to be the fastest growing technologies in the market during 2007, with W-CDMA showing the greatest share gains. We forecast an 83% rise for W-CDMA and 61% for cdma2000 1X EV-DO.

As a result they will increase their share of the world market by 3% jointly, as shown in *Figure 6*, up to 8.5% of the installed base.



Figure 6 **Change in technology market share during 2007**



Source: *Wireless Intelligence, January 2007*

GSM will grow from 2.14 billion connections at the end of 2006 to 2.47 billion by the end of 2007. Meanwhile, earlier digital technologies – cdmaOne, TDMA and PDC – will lose share. TDMA, PDC and analogue technologies will have just 0.7% of the world market between them. cdma2000 1X will also lose share, but this is because of migration to cdma2000 1X EV-DO, and the gain of one will cancel out the loss for the other.

Please note that our high-speed networks forecasts do not yet include connections for China or India. We are aware that licensing may happen during 2007, but currently do not have enough information to prepare a set of forecasts for them.

Risk factors in these forecasts

There are a few factors that may change cellular markets in ways that are not reflected in our forecasts.

Higher growth in some countries

In many countries we have seen a kick in the adoption curve of cellular. While we have tried to reflect this in our forecasts, the timing and extent of the kick are hard to predict. Indeed, in India during 2006 there was a second kick in the curve which



accelerated adoption beyond what we had anticipated, meaning that our world market forecasts undershot during 2006.

The main markets where this effect may be significant in 2007 are Iran, Pakistan, Bangladesh, Indonesia and Nigeria.

Lower growth in other countries

It is also possible that some countries will grow more slowly than we forecast. This would mainly be for macro-economic reasons. We highlight two areas where this sort of effect may come through in 2007.

- China, where there is an acknowledged risk of a stock market correction. If it happens, this could lead to growth slowing faster than we predict. At present the economy is buoyed by very high levels of inward investment, and provided these continue they will provide something of a cushion. But, as we have seen in the last five years in Europe and the US, major downturns in the stock market can cause investors to become very nervous.
- Western Europe and the US, where consumer debt, together with rises in inflation and interest rates, could lead to a reduction in consumer spending. At present, it looks as if reductions in oil and gas prices over the last few months will feed through to give lower inflation during 2007. But if interest rates are pushed significantly higher, we would expect to see an impact on cellular markets.



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