



Worldwide Mobility Report: 2003



*Mobile Voice, Mobile Data,
Subscriber, Revenue, and Penetration Rate Forecasts
5 World Regions, 165 Countries*

2002-2010

Worldwide Mobility Report: 2003

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The Telecompetition forecast methodology used in this report represents a powerful and consistent approach to developing a bounded forecast. Country-level forecasts are based on known or published demographic, firmographic, technological, economic and other factors built into the *ATIVA Research Tool*[®] model

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1. Executive Summary

The Worldwide Mobility Report 2003 is the mobile industry's pre-eminent desktop reference tool for global mobile forecasts. This report provides a comprehensive source of reasonable and consistent revenue and unit forecasts for nearly every country in the world, using Telecompetition's rigorous methodology and patented forecasting tools.

The analysis and forecast output in this report clarifies some of the lingering market uncertainties regarding market opportunity for mobile services:

- Subscriber growth in many developed countries has all but evaporated, with most countries in Western Europe growing voice subscribers by less than 5% in 2003 and some countries at less than 1%. The US will see growth rates averaging 10% for just a few more years.
- Asia Pacific, already leading in Mobile Data subscribers, will continue to dominate new subscriber growth in both voice and data services through the end of the decade.
- Globally, revenue from Mobile Data services is critical to grow ARPU levels, and is expected to comprise almost 40% of all worldwide mobile revenues by 2010.
- Mobile Data services will be adopted by users a little at a time, and are likely to be a combination of several relatively simple, modestly priced services provided over a variety of network technologies, rather than any single, high priced "killer application".

Developed countries will only contribute 15% of the total worldwide new Mobile Voice subscribers through 2010. Voice subscriber growth in most developed countries is now below 5%. New growth will depend primarily on increasing market share from other mobile or fixed operators. There is a minimal revenue growth potential from untapped market segments such as the very young, very poor, or elderly individuals. Even the US, with 10% growth and 50% penetration at EOY 2002, will see voice subscriber growth leveling off around 2006. Subscribers may be enticed to buy additional terminals for travel or business or as fashion accessories, but practically speaking, people can only "talk" (and therefore generate service revenue) with one terminal at a time. Clearly, mobile operators in developed countries will need aggressive new service introduction to ensure future growth.

In contrast, the Asia Pacific region will add new Mobile Voice subscribers at a compound annual growth rate of 18% through 2005. In the last 12 months, China has surpassed the US as the single largest mobile market, ending 2002 with over 200M voice subscribers and only 16% penetration rate - which mean a great deal more room still to grow. India, roughly 80% the same population size of China, currently has about a 1% mobile penetration and so also has high growth potential. Together, China and India will account for almost 60% of the total new worldwide Mobile Voice subscriber from now through 2010, adding over 400 million new subscribers. As a region, Asia Pacific will account for 85% of new voice subscribers through 2010.

The distinctions between Mobile Data services can no longer be made strictly on the basis of technology. Technical advanced in handsets, software, and content presentation can compensate for network technology. Therefore, two broad categories of subscribers are forecast in this report based on subscriber definitions. "Advanced Mobile Data" subscribers paying a higher average price for more complex services and "Other Mobile Data" who will limit usage to lower priced, mostly messaging services.

Current user success with simple messaging services will expand to include other more complex multimedia services over time. Therefore, in all regions, revenue from Other Mobile Services is generally expected to become an increasingly smaller percentage of total mobile revenue through the forecast period. In Europe and North America, Advanced Mobile Data services are

forecast to be more significant percentage of the service mix than in other regions. By 2010, in North America and Europe, 45% of Mobile revenue will come from these "Advanced Mobile Data" and only 7% from "Other Mobile Data". In the Rest of World region, Mobile Voice will still comprise almost 75% of revenue with only 18% coming from Advanced Mobile Data subscribers.

This 2003 report incorporates some important changes in forecast assumptions from our 2002 report:

- Mobile Voice subscriber penetration rates in Eastern Europe and in other Developing and Emerging Economies are faster and reach higher levels by 2010 than forecast in the 2002 report.
- Mobile Data penetration rates in many countries in Asia Pacific and in many Developing and Emerging Economies is generally higher than forecast in 2002 due to more rapid deployment of 2.5G / 1x networks.
- The average monthly revenue assumptions for Mobile Voice and Mobile Data have been adjusted from the 2002 report to reflect slower price declines for Mobile Voice and a more gradual introduction of Mobile Data services over the forecast period.
- Voice subscriber growth in the US has been reduced to reach 69% penetration in 2007.

In conclusion, we continue to hold cautious optimism for the industry as a whole, based on our analysis and forecast of demand-side dynamics and current trends, including:

- Worldwide, end-user demand for mobile services is moderately strong, relative to many mature industries. Worldwide Mobile Voice subscribers grew by 21% in 2002 and are expected to grow an additional 13% in 2003.
- Mobile Data services, even though still largely text-based SMS, have already made a noticeable contribution to ARPU levels of many mobile operators.
- GPRS has finally surpassed the 1% penetration level in Western Europe.

Overall, mobile communications continue to be popular in all regions of the world. Consumers, although expressing disappointment in the general adequacy of Mobile Data services so far, appear to truly value the promise of "anytime anywhere" access to information and are still willing to try new services. End-user interest is still strong.