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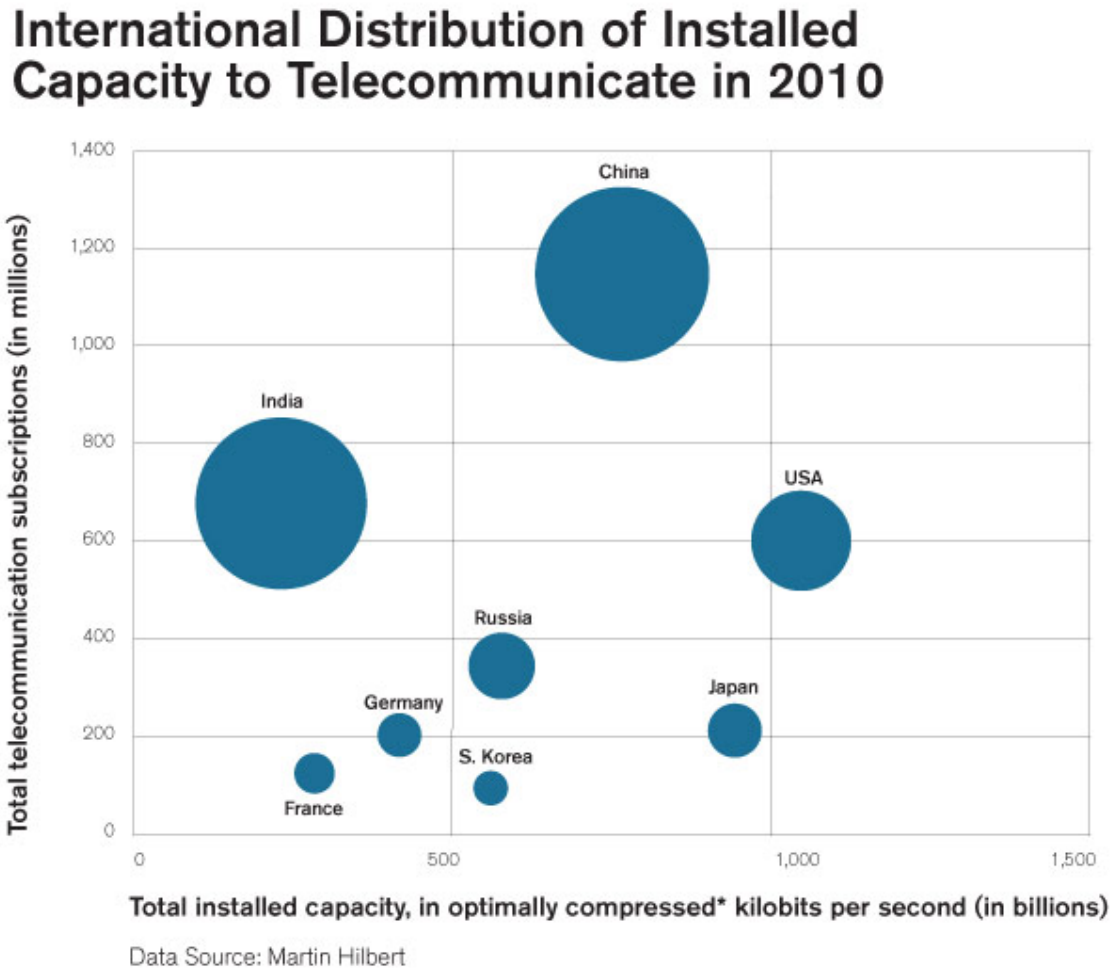
Data Shows a Digital Divide in Global Bandwidth

Access to the Internet may be going global, but a "bandwidth divide" persists.



The number of devices capable of connecting to the Internet has exploded in the past few years, giving millions of new people access to the Internet. But does this mean the end of the "digital divide" – the gulf between wealthy people with easy access to information and communications technologies, and poor people without such access?

Not exactly, according to new research by Martin Hilbert, a professor of communications at the University of Southern California. Although the disparity between the rich and poor in devices per person shrank during the past decade, the world's total installed *capacity* to send and receive data over

the Internet remains concentrated in wealthier nations, his work shows.

Drawing from many data sources, and using a detailed process he describes in a paper published last April in the journal *Science*, Hilbert developed a metric to compare countries according to the average amount of installed bandwidth, in kilobits per second (kbps), available per person. He presented the results of this analysis recently at the World Telecommunication/ICT Indicators Meeting.

According to Hilbert, in 2001, the average per capita bandwidth via fixed lines in richer countries (members of the Organization for Economic Cooperation and Development (OECD)) was 32 kbps, compared with three kbps in nonmember countries. By 2010, an average person in an OECD nation had access to 3,200 kpbs, compared to just 275 for the average person in a non-OECD nation. The mobile-bandwidth divide grew as well, from around 18 kbps in 2001 to 300 kbps in 2010.

Hilbert went a step further and made what he calls a “first approximation” of the way the world’s installed capacity to telecommunicate is distributed internationally. The chart above is based on this data, and compares the distribution of bandwidth to total telecommunication subscriptions. The size of the solid circles indicates population. The chart represents two-thirds of the world’s total capacity, according to Hilbert’s analysis.

*Optimally compressed refers to the method Hilbert used to adjust for varying rates of information compression among telecommunications.

Tagged: Communications, Internet, mobile devices, digital divide