



## Universal Access

### *How Mobile Can Bring Communications to All (A study by Intelcom - November 2007)*

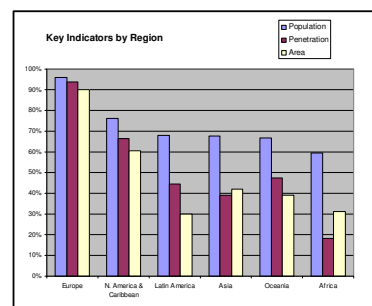
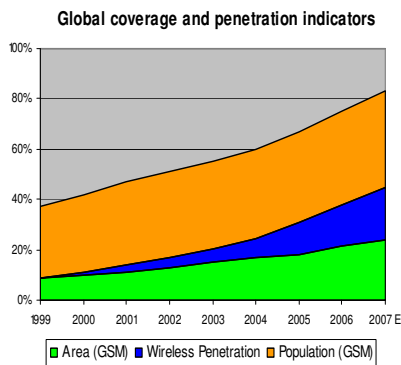
#### Introduction

Mobile communication has the potential to deliver affordable voice, data and Internet services to more than 5 billion subscribers by 2015 – double the number connected today. The GSM Association (GSMA) believes that the cost of mobile networks and devices will continue to fall, enabling affordable mobile services to be offered to people on low incomes.

In many developing countries, mobile penetration strongly correlates to economic growth and social benefits<sup>1</sup>. Governments and other stakeholders should therefore encourage the mobile industry to provide communications for all by lowering mobile specific consumer taxes<sup>2</sup> and removing regulatory bottlenecks<sup>3</sup>.

Universal service funds<sup>4</sup> are being adopted by governments in many developing countries, with the aim of improving access to telecommunications. The GSMA commissioned Intelcon Research to study and evaluate the success of universal service funds, by analysing key metrics in 92 developing countries. This analysis is supported by in-depth case studies, country comparisons and expert interviews, making it one of the most complete and authoritative studies conducted to date on the issue of universal service funds.<sup>5</sup>

The full report can be downloaded on:  
<http://www.gsmworld.com/universalaccess/index.shtml>



<sup>1</sup> “The Impact of Telecoms on Economic Growth in Developing Countries”, Leonard Waverman, Meloria Meschi, Melvyn Fuss; Vodafone Policy Paper Series, No. 2, March 2005.

<sup>2</sup> See “Tax and the Digital Divide” a GSM Association report, 2005. Download at [www.gsmworld.com/tax](http://www.gsmworld.com/tax)

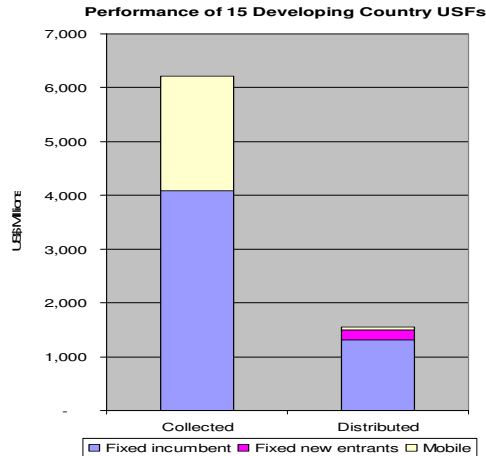
<sup>3</sup> See “Regulation and the Digital Divide” a GSM Association report, 2006. Download at [www.gsmworld.com/regulation](http://www.gsmworld.com/regulation)

<sup>4</sup> The majority of universal service funds (USFs) have been set up governments in developing countries. They typically provide financial assistance for meeting targets for telephony and Internet services, and support ‘vanguard’ users such as school, libraries, and commercial start-ups. The earliest funds concentrated on subsidising fixed network expansion in remote, high-cost areas, however this was before mobile networks offered lower cost and commercial solutions for such regions.

<sup>5</sup> Countries with longstanding universal service funds, such as the United States and Australia are not included in this report.

### The study's main findings:

- Mobile networks now cover 80% of the world's population, double the level in 2000. This can be attributed, almost exclusively to investment by mobile operators and the liberalization of telecom markets by governments. By 2010, 90% of the world will be covered by mobile networks.
- 32 of the 92 developing countries surveyed have set up universal service funds, which levy contributions from mobile and fixed operators, to subsidize the rollout of telecommunications networks in rural areas. The level of the levy is typically 1-2% of gross or net revenues, though a minority of funds collect a considerably higher amount, with the highest being 5% of gross revenues.
- To date, 15 of the 32 universal service funds have collected more than US\$6 billion from the telecommunications industry, of which US\$2 billion has come from the mobile industry. The remaining 17 funds are expected to levy fees soon, or have only recently begun to do so.
- Only 27% (US\$1.62 billion) of the US\$6 billion that has been collected to date has been redistributed to the telecommunications industry to aid in network expansion. The remaining 73% remains unallocated and unspent.



- Universal service fund disbursements have had little impact on improving market penetration, primarily because 93% of the US\$1.62 billion has been spent on extending fixed-line networks, which are relatively expensive. In comparison, only 4.6% or US\$75 million has been allocated to mobile networks<sup>6</sup>, which are far more cost efficient to deploy than fixed line networks.

Comment [d1]:

<sup>6</sup> The relative capital cost ratio between fixed and mobile connections, estimated by the World Bank, is 10 to 1, i.e. a mobile line can be deployed at 1/10<sup>th</sup> the cost of a fixed line.

### **Implications:**

- **Mobile operators could have extended coverage to around an additional 450 million people or 7% of the world's population living in rural areas, if the unallocated US\$4.4 billion universal service fund levies had been invested into mobile network rollout.**
- **Universal service funds will extract a further US\$3.8 billion from the telecoms industry by the end of the decade. If 100% of these funds were spent on increasing mobile network reach, an additional 382 million people, or 6% of the world's population would have mobile coverage.<sup>7</sup>**
- **If the unspent US\$4.4 billion universal service fund levies were invested in mobile networks, this, combined with spending the further US\$3.8 billion that will be collected between now and the end of the decade, it is possible that mobile could achieve near 100% population coverage.**
- **Countries that collect universal service fund levies from the mobile industry and use them inefficiently are preventing the mobile industry from being able to serve less well-off consumers through the delivery of sustainable and affordable mobile services.**

### **Specific Recommendations:**

- Governments should regard market forces as the primary means to extend access and connections to mobile communications. Universal service funds should play a secondary, 'last resort' role in the provision of access to communications and should only be adopted to extend coverage to relatively remote and high cost areas, where it is not commercially viable to build networks without subsidies.
- The US\$4.4 billion that has been accrued by universal service funds and has not yet been disbursed should be invested in mobile coverage rollout. This should be complimented by the reduction of other barriers to mobile usage, such as tax, as a matter of priority. Such activity, together with the amounts to be levied in the next few years, could achieve close to 100% universal coverage by mobile networks to the world's population by 2010.
- Universal service funds should only be used as a short to medium term policy tool, which should be phased out over time. There is no justification to continue using this funding mechanism in markets where universal service goals have been achieved either through market provision or through government subsidies.<sup>8</sup>
- Universal service funds should be spent on the lowest cost access technology, typically mobile networks, which have been demonstrated to be the most efficient way to extend access to telecommunications.<sup>9</sup>
- Governments should make public their policies towards universal access and review progress regularly.

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<sup>7</sup> The estimates are based on an average effective universal access coverage radius of 20 km and population density at 15% of each country's average rural population density (assuming that extensions would be to sparsely populated, as-yet un-reached areas).

<sup>8</sup> The USA, for example, levies 10.5% of interstate end user revenues and amassed US\$31 billion between 1999-2004. Mobile operators contributed 53% or US\$16.4 billion but only received 2.6% or US\$800 million,

<sup>9</sup> "By their very nature, mobile networks are far easier, faster and cheaper to deploy than fixed-line networks" The Economist September 23<sup>rd</sup>-29<sup>th</sup> 2006.

## Conclusions

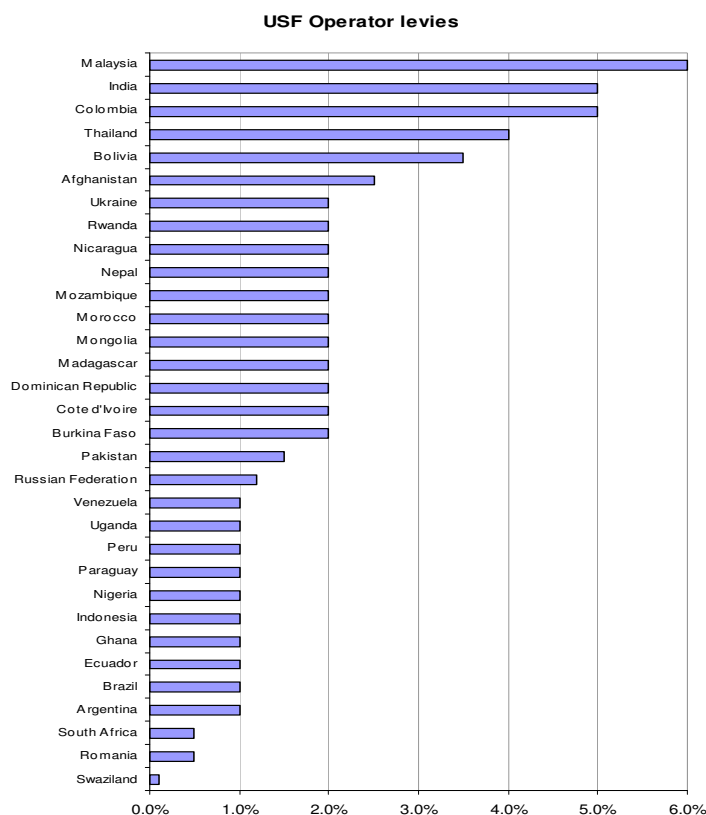
The study demonstrates that mobile communication already provides universal voice and data services in developed countries and is close to doing so in many developing countries too. The study also shows that mobile is the only viable solution for delivering rural communications.

## Reaching more than 90% of the population

According to the study, the mobile industry has already removed many of the barriers, both monetary and non-monetary, to providing accessible communications. Coverage will be extended to more than 90% of the global population by 2010, on a commercially viable basis. However, there will remain some areas where it will never be economically feasible to serve, as the cost will far outweigh the financial returns and possibly the social-economic benefits as well. In most countries, this gap may apply only to the last 2-5% of the population, which is equivalent to 20-30% of geographic area. Through the allocation of unspent and future universal service levies to mobile, it will be possible to reach close to 100% universal service coverage via mobile networks.

## Increasing penetration is the priority

Governments should focus their policies on connecting the 2.7 billion people who already live in areas covered by mobile networks, but don't currently use mobile services. By removing sales and customs taxes on mobile handsets and services, for example, governments could boost affordability for the poorest members of society and mobile penetration by as much as 20% in areas which are already covered by mobile networks.<sup>10</sup> Earlier studies<sup>11</sup> have shown that a 10% increase in mobile penetration can increase the annual economic growth rate of a developing country by 0.6%. Governments should prioritise their policy objectives to realize these gains, along with a focused programme of extending geographic coverage to sparsely populated areas.



<sup>10</sup> Tax and the Digital Divide, GSM Association 2005 ([www.gsmworld.com/tax](http://www.gsmworld.com/tax))

<sup>11</sup> "The Impact of Telecoms on Economic Growth in Developing Countries", Leonard Waverman, Meloria Meschi, Melvyn Fuss; Vodafone Policy Paper Series, No. 2, March 2005.