The Mobile Phone ‘R’evolution: Who Will Pay the Bill for Universal Access?
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Abstract
It is estimated that by 2007 the milestone of two billion mobile users will be achieved, with the three million mark being claimed as a realistic target for 2010. Whether these figures are totally accurate or not, the World Bank supports the belief that mobile is closing the ‘digital divide’ faster than anyone had previously anticipated. This is turn bodes well for the goal target of 50% access to telecommunications (in some form or another) by 2015, set by the UN backed WSIS initiative.

However, this picture omits key data and significant considerations that may very well curb the anticipated growth outlined above. The World Bank suggests that 77% of the world’s population, (approximately 5 billion people), already lives within range of a mobile network. The barrier appears to be a workable model for connecting these people to the network. In other words, it is a matter of cost, or rather the ability of certain sections of the global population to afford access to the network. Most wealthy economic states have already been targeted and serviced, resulting in the rapid spurt towards two billion mobile users in recent years. However, for the next stage to be accomplished, (the three billion mark), growth must take place in other markets. These key growth areas have already been identified, but the problem of affordability remains a stumbling block. This relates not only to the cost of the handsets but also to the accompanying service packages.

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2 Henrik Brogaard, GM of New Growth Markets, Asia-Pacific for Nokia Networks
3 Reported in February 2005
4 According to analysts such as Michelle de Lussanet (Forrester Research), the per capita GDP in emerging markets such as the Philippines is barely 1/40 of that in most Western states such as the UK or US.
5 Consisting of high-end users that are in a position to afford technologically advanced (and as such expensive) handsets.
6 In other words, the cost of the service packages used by many high-end users amounts to the average income earnt by this group in a 6-month period.
7 One solution is to develop basic service plans which omit all but the most essential services.
It is true to say that in recent years several equipment vendors and handset makers have been focused on the development of low cost hardware.\textsuperscript{8} In this respect, it appears that Motorola are leading the way with their sub-$40 handset. Whilst this figure appears to be achievable, there are necessarily associated costs – design and functionality being the most prominent of these.\textsuperscript{9} Nevertheless, it is believed that the introduction of such an ‘emerging markets handset’ would enable up to another 1.5 billion people, (predominantly in Africa and India) to buy into the mobile network.

However, as noted above, this is only a part of the picture. The move from two billion users to that of three billion requires more than the supply of cheaper handsets to this emerging market. Such initiatives need to be supported by low-cost service plans as well as low-cost and efficient mobile network infrastructures. This in turn depends upon government (state) cooperation.

It is claimed that service tariffs are already beginning to fall in emerging markets, such as India, which have embraced competition. However, the question remains as to how such a competitive environment may be achieved and subsequently maintained so as to support the aims outlined above. This is perhaps where most people connected with the telecommunications industry will adopt either one standpoint or another.

The basic economic dilemma facing most states is the method by which they may promote the highest value\textsuperscript{10} in the industry for the scarce spectrum which is to be allocated, as this will have a significant impact on both the development of telecommunications and society as a whole. There is a growing trend towards deregulation and a greater reliance on market forces in spectrum management. Indeed, many states have started to introduce some form of market-based mechanism in managing spectrum. At one extreme, a few countries such as the US and Australia have deregulated spectrum management by permitting the market-based allocation of spectrum use. By contrast, many states have retained some degree of centralised control over functions such as spectrum allocation while introducing market-based mechanisms, such as auctions, to assign spectrum. Should the concept of “highest value” include factors other than economic concerns such as addressing shortcomings with respect to universal access, bridging the digital divide and expanding to the provision of service in developing markets to supplement economic growth and the elimination of poverty?

The paper will bring together academics from the US, UK and Brazil who will examine these considerations and offer their thoughts and experiences on this increasingly important issue of spectrum regulation. Can spectrum regulation be used as a tool for furtherance of social policy? While it is undeniable that competition must be encouraged and that service provision must be as efficient and cost-effective as possible, do other concerns inform the regulation of spectrum. In other words, can spectrum policy engender universal access so as to reach the next one-billion mobile users?

\textsuperscript{8} Note the ‘emerging market handset’ tender to Motorola in February 2005 by the GSM Association. In addition, China Unicorn has recently adopted a low cost handset mission which is aimed at boosting its CDMA business – though price still appears to be a problem.
\textsuperscript{9} Allen Burnes (Motorola’s high growth markets VP) states that applications such as WAP and MP3 will be omitted from such handsets so as to keep costs to a bare minimum.
\textsuperscript{10} The meaning of this term will be examined later on in this paper.
Is this achievable through simple competition, or will the next one billion users only be provided with access through government intervention? Or will governments impose operating costs on mobile phone network providers to bear the cost of universal access for the poorest in society? Should governments impose a universal right to mobile phone access? What is the role of the ITU in this controversy? Is the mobile phone no longer a luxury item but rather an essential component to link individuals who live in places where no fixed line services are available?

Thus, this paper will balance both technical and societal issues with regulatory and economic questions.