

Stimulating growth in innovative applications and devices towards connecting the unconnected - The 3rd Generation Auction in Brazil

1. Introduction

Mobile telephony is no longer seen as a mere voice communication service and data applications have started showing their importance. In this sense, technology once more leaped towards 3G standards (or IMT), that is, standards with broadband transmission capacities (theoretical speeds of up to 2 Mbps) and with characteristics that were formerly impossible.

2. 3rd Generation Auction

To supply the demand for these new services in Brazil, Anatel launched an auction for the F, G, I and J radiofrequency sub-bands (1,900 and 2,100 MHz) during a period of 15 years, renewable once for the same period.

This process stipulated geographical coverage commitments with the following objectives:

- a. to guarantee that 100% of the Brazilian municipalities should be provided with mobile services, in reason of the extreme social and economical importance of this service; and
- b. to guarantee that the most advanced technologies (3G) should be sufficiently spread out along the entire Brazilian territory, not only in the commercially attractive areas for the providers.

We can summarize the geographical coverage commitments assumed by the successful bidders in the following manner:

- a. **In municipalities where mobile service is currently not available:** to roll out the service in these municipalities, in any of the authorized sub-bands, within 24 months after the publication of the license –(Authorization Term);
- b. **In municipalities with population under 30 thousand inhabitants:** to provide the service in the J, F, G or I radio-frequency sub-bands, to 60% of the municipality - 15% per year, in 5th, 6th, 7th and 8th year, respectively, after the publication of the license. These municipalities were divided between the 4 successful bidders in each Area of Installment, each one being responsible for 15% mentioned above;
- c. **In municipalities with population above 30 thousand and below 100 thousand inhabitants:** to provide the service, in the J, F, G or I radio-frequency sub-bands, to 50% of the municipalities, within 60 months after the publication of the license;
- d. **In municipalities with population above 100 thousand inhabitants:** to provide the service, in the J, F, G or I radio-frequency sub-bands, to 100% of the municipalities, within 60 months after the publication of the license.

The auction's Notice to Bid opted for a new model of competitive bidding, determining higher geographical coverage commitments, to be compensated by a lower price to be paid. Consequently, there was a large risk of having no interested parties for all

the 4 sub-bands in the North and Northeastern Regions, with lower incomes and less commercial viability.

The adopted strategy, then, linked such areas to the economically most attractive areas (in the State of Sao Paulo). Therefore, the bidder who acquired spectrum in the city of Sao Paulo (and metropolitan region) would also have to acquire spectrum in the North of Brazil. On the other hand, the bidder who acquired spectrum in the interior of Sao Paulo (the remainder of the state) would also have to acquire it in the Northeast Region. In practice, those who were interested in buying frequencies in Sao Paulo would pay a lower price for this area, but would have to cope with the geographical coverage commitments in the North and Northeast of the Country.

As a result of the auction, all 36 spectrum lots were sold and almost US\$ 3.4 billion were collected, which represents a premium of 86.67 %. Therefore, in two years counted from the publication of the extracts of the Authorization Terms, all the 1,836 Brazilian municipalities without mobile service at the time the auction was concluded would have cellular telephony.

As of September 2009, the obligations established on the auction of 3G sub-bands are ahead of schedule. All the capitals of the states, the Federal District and most of the cities with more than 500 thousand inhabitants already have mobile broadband services, this totals 43 cities. About 341 cities with more than 30 thousand inhabitants and less than 500 thousand inhabitants, also have mobile broadband services, this represents around one-third of all these cities, remembering that all cities above 30 thousand inhabitants already have mobile services. Out of the 1836 cities that did not have any mobile service by the end of 2007, 920 of them were supposed to have this service by the end of 2009, however, more than 1000 cities are already attended, and 12 of them have mobile broadband services as well.

By the end of 2010, all cities in Brazil, this represents 5.564 cities, will have mobile services, and many of them will have mobile broadband as well.

3. Conclusion

Brazil expects to have contributed to the developing countries with ideas and models to stimulate the expansion of mobile broadband services. It is our understanding that the auction model developed for the 3rd generation in Brazil made it possible to make mobile service effectively available in all the Brazilian cities, thus responding to the demands of society. Although this model is efficient as far as coverage expansion is concerned, permanent supervision is necessary to guarantee the fulfillment of all the assumed commitments.