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PLENARY

Venezuela

CURRENT STATUS OF MOBILE MARKET IN VENEZUELA

EXTENSION OF THE SPECTRUM ASSIGNMENT FOR ONE GSM OPERATOR

1 Introduction: current status of mobile market in Venezuela

Venezuela is among the countries where there are now more mobile than fixed telephony subscribers. The mobile penetration have increased progressively in our country, achieving 29.98% up to the first half 2004 (see figure 1), being one of the countries with the highest mobile penetration in Latin America.

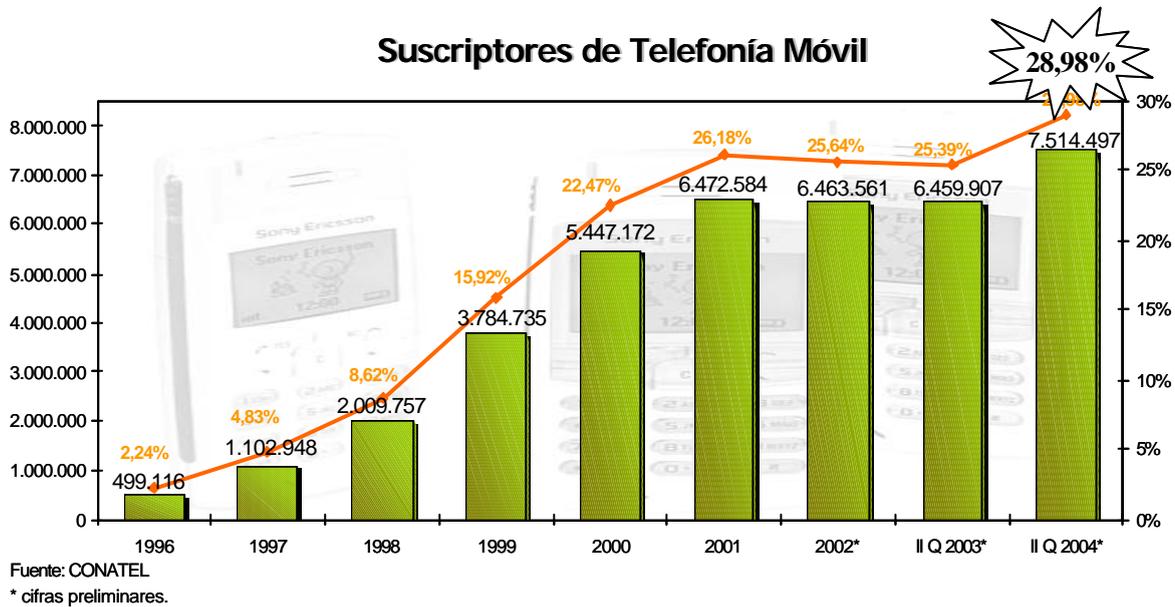


FIGURE 1

Evolution of Mobile subscribers in Venezuela

There are now five mobile operators in Venezuela, two of which (Telcel and Movilnet) have licenses to operate nationally, and three (Digitel TIM, Infonet, and Digicel) with regional licenses for the regions central-north, west and east of the country respectively. All operators have

substantial foreign capital participation. The national carriers operate in the 800 MHz band (824-849 MHz /869-894 MHz), and the three regional mobile carriers operate in the 900 MHz with GSM technology (Global System for Mobile Communications).

With respect to the GSM operators in Venezuela, the original band assigned by CONATEL was the **908-915/953-960 MHz ranges (2x7 MHz)**, which is a portion of the total GSM 900 MHz band used worldwide **880-915 MHz/925-960 MHz**, representing a **2x35 MHz** bandwidth. The regional GSM operators have operated successfully with the 2x7 MHz bandwidth assigned by CONATEL.

Regarding the growth of the mobile market in Venezuela, the applications and services have been well received by the people, as can be seen in figure 1, with the evolution of the mobile penetration. Based on the high demand, some operators have expressed the need to get more frequency spectrum, taking into account the new applications for voice and data transmission to higher speeds, as a consequence of natural evolution of the different technologies and mobile air interfaces.

Particularly dealing with the regional GSM operators, the one with coverage in the central-north region (covering the states: Aragua, Carabobo, Distrito Capital, Falcón, Guárico, Cojedes, Miranda, Vargas and Yaracuy), has experienced a great demand and growth in its evolution from GSM towards GPRS (General Packet Radio Service), needing additional frequency band to cover the requirements for higher packets transmission rates, which is a common characteristic of 2.5G and 3G technologies. Figure 2, shows mobiles subscribers per operators in Venezuela, with a total of 7.514.497 subscribers up to second half of 2004.

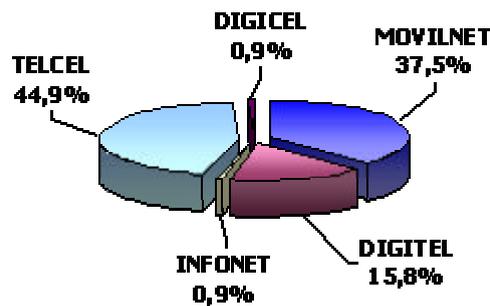


Figure 2: Distribution (percentage) of mobile subscribers per operator in Venezuela.¹

2 Spectrum demand submitted by the operator to CONATEL

In February 2003, the operator submitted to CONATEL, requirements for “extension of radio spectrum” in the 900 MHz band, indicating the existence of some technical problems to perform the improvement of its network, presenting currently some network congestion and little problems with respect to the Quality of Service, indicating that in addition, there have been some interferences due to the excessive frequency reuse in the ranges already assigned by CONATEL (**908-915/953-960 MHz**).

3 CONATEL and the technical and regulatory evaluation

Pursuant the expressed in the Article 69 of the Organic Telecommunications Law, The National Telecommunications Commission (CONATEL) shall be in charge of the administration, regulation, planning and control of the radio spectrum as established in this Law and in the obligatory

¹ Source: CONATEL

regulations pursuant International Telecommunications Union (ITU) and shall also endeavor to harmonize its activities with the ITU recommendations.

CONATEL, jointly with the operator representatives performed an initial study to diagnose the current status of the DIGITEL Access Network, with a view to guarantee the best management and spectrum planning of the 900 MHz band used in Venezuela for mobile cellular operations.

Based on these studies and analysis, the network congestion was verified, showing that the originals and current assignments of frequency bands, made by CONATEL, became insufficient to apply an appropriate reuse factor, inside the coverage area, and to handle the traffic appropriately without congestion.

With respect to the Quality of Service, the current technical parameters measured, indicate that the operator was still working within the values considered to have a good QoS.

Regarding the international situation, research was done by CONATEL in order to know the use of the 900 MHz band in other countries, finding out as a result that the most extensively used frequency band for GSM standard in 900 MHz is the one that includes the complete 880-915 MHz/925-960 MHz ranges.

4 CONATEL conclusions on the extension of radiospectrum in the 900 MHz band for the GSM operator

To make a decision on the licensing of additional spectrum for the mentioned GSM operator, CONATEL considered the following technical and regulatory elements:

- the current uses and allocations of the GSM 900 MHz band worldwide;
- the outstanding growth of subscribers of the Venezuelan operator;
- the technologic upgrade of the network operator, in order to permit the introduction of new services and applications with higher voice and data rates;
- implications foreseen since the Quality of Service (QoS) point of view to the subscribers of the GSM operator;
- the studies on the occupation of the possible candidate bands to be assigned to the operator;
- commitment of the operator to assume the costs of the migration of some of the existing systems in the candidate frequency bands considered for the extension;

The National Telecommunications Commission, evaluated and analyzed all the above mentioned elements, considering the current allocation of the frequency band in Venezuela ², and further considering the needs explained by the mobile GSM operator, concluded that the feasible frequency bands to be assigned for the extension required by the operator, is the range **903-908 MHz** paired with **948-953 MHz**, which means an additional bandwidth of two blocks of **5 MHz** each. In this sense, CONATEL assigned the mentioned range of frequency to the GSM operator, complying with the commitments of promoting the development of new services, networks and technologies, making possible the efficient use of radio spectrum and cooperating to the growth of the telecommunication sector in Venezuela.

² Information on the Allocations of the different frequency bands for the Telecommunications services in Venezuela, are detailed in the National Frequency Allocation Chart of Venezuela (CUNABAF).