

PINHEIRO NETO ADVOGADOS

VOIP IN BRAZIL TECHNOLOGY vs. TELECOMMUNICATION SERVICES

WRITTEN BY

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I. - Introduction

Universal use of the Internet as an efficient communication means coupled with the swift development of data transmission technologies have contributed to substantial changes in the regulatory and trade paradigms of the Brazilian telecommunications sector.

The market no longer focuses on providing users with a gamut of services through isolated infrastructures and incompatible technologies, but rather on offering different products and services within a single infrastructure that can compete on a par with traditional telecommunication services such as the switched fixed telephone service (PSTN), the personal mobile service (PCS), and pay TV services.

We are at the dawn of the much-heralded convergence of telecommunication services, which targets at increased efficiency in communications networks by rationalizing their use, *i.e.* by enhancing the quality and availability of existing services while reducing costs and promoting competition.

Within the context of such convergence, extensive discussions have emerged on the use of the Internet infrastructure, especially the Internet Protocol (IP) for sending voice signals in digital format (Voice over the Internet).

II. - Voice Over the Internet (“VOIP”)

VOIP is a voice transmission technology based on the use of the Internet Protocol (IP). It allows voice signals to be digitized, coded and divided into different packets of independent data – as if they were envelopes of distinct letters. The data packets with the voice information are sent over a network that is compatible with the IP, in distinct and disordered form, so that each packet seeks the best route for arriving at its destination.

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Every computer is assigned an exclusive set of numbers called an IP address, which is carried by each data packet. The data packets identify the message's final recipient by means of this IP address.

When associated with telephony services, VOIP is provided under the name of IP telephony.

2.1. - VOIP vs. Switched Circuit Systems

VOIP is an evolution of voice transmission systems, especially when compared with the switched circuit technique,¹ a traditional technology widely used by telephone companies. The transmission of voice signals in the switched circuit system is based on the "blocking" or "reserving" of space within the transmission band throughout the time of the call, thus establishing temporary channels. Although this mechanism provides dynamic, efficient and high-quality communication levels, it hinders simultaneous or shared traffic of voice, data or other signals over the same telecommunication network. This is not the case with networks that use IP.

2.2. - Development of VOIP Applications

The first VOIP applications showed many deficiencies, especially regarding the quality of the voice signal received by the final recipient. As a result, VOIP was initially considered a voice-signal transmission technology that was only efficient in the corporate market. VOIP did not meet the minimum requirement levels established for the residential market.

However, little by little, VOIP networks have been receiving additional protocols for call signaling and voice signal transportation. It is believed that, within a short time, the quality of VOIP services will be compatible with traditional telephony.

2.3. - Specific VOIP Applications

VOIP can be especially used for communication between computers connected to the Internet, between systems connected to the public telecommunication network and VOIP systems, or simply for transporting segments of telephone calls made via the traditional telecommunication services.

2.4. - Specific Discussion about VOIP

In Brazil, the telecommunications sector is founded on a plurality of services defined in terms of signal transmission techniques and on the principle of full, fair and free competition. We will see below the treatment given to VOIP by Brazilian regulations, in view of the basic concepts applicable to telecommunication services and established in Brazilian law.

¹ *Switched Circuit is the commutation technique in which the established circuit is maintained until the end of the communication. Switching is the temporary establishment of circuits or channels with the purpose of ensuring communication between two points. (ANATEL glossary).*

III. - Brazilian Regulatory Scenario

3.1. - Telecommunication Services

Under Brazilian law, telecommunication services stand for the transmission, emission or reception by wire, radio electricity, optical means or any other electromagnetic process of symbols, characters, signals, texts, images, sounds or information of any kind.

It is different from the concept of Value-Added Service, which is defined as the “*activity that adds, to a telecommunication service that supports it and with which it should not be confused, new capabilities related to access, storage, presentation, movement or retrieval of information.*”², such as the Internet³. Providers of value-added services will be labeled as users of the telecommunication service that supports them, with all rights and duties inherent to such status.

3.1.1. - Authority to Exploit and Organize Telecommunication Services

The Federal Government, as per the Brazilian Federal Constitution⁴, has the authority to exploit telecommunication services in Brazil, acting directly or indirectly, under authorizations⁵, concessions⁶ or permissions.⁷

The organization and regulation of such telecom services, however, were assigned by the General Telecommunications Law (“GTL”)⁸, to the National Telecommunications Agency (ANATEL), an entity of the indirect Federal Public Administration that is subject to a special independent system and reports to the Ministry of Communications.

3.1.2. - Principles underlying the Organization of Telecommunication Services

The GTL imposes on the public authorities the duty to ensure that the entire population has access to telecommunications on suitable conditions, at reasonable tariffs and prices. It shall take actions to promote competition and offer a variety of services, with quality standards that are compatible with users’ requirements. Also, it is incumbent on the government to curb anticompetitive practices and acts in restraint of trade in order to promote free, ample and fair competition among all telecom service providers.

² Article 61 of Law No. 9472/97

³ The set of networks, transmission and switching means, routers, equipment and protocols necessary for communication between computers, as well as the software and data existing in such equipment. From a Brazilian legal perspective, the Internet does not qualify as a telecom service, since it entails no transmission, emission or reception of data or information of any kind through electromagnetic processes, which is a requisite to characterize a telecommunication service for whatever purposes. To achieve its major objective (i.e., communication between computers), the Internet should be supported by a telecommunication service that will carry data and information from one point to another.

⁴ Article 21, XI.

⁵ “Telecommunication service authorization is the related administrative act that permits the exploitation of a mode of telecommunication services under the private system, provided that the necessary objective and subjective conditions have been met.” (Article 131, first paragraph of Law 9472/97).

⁶ “Concession of telecommunication services is the granting of the provision of such services by means of an agreement for a determinate period of time, under the public system. Concessionaires shall be subject to business risks, shall be remunerated by collecting tariffs from users or through other alternative income, and shall answer directly for their obligations and for any losses they may cause.” (Article 83, sole paragraph of Law 9472/97)

⁷ “Telecommunication service permission is the administrative act whereby a person is ascribed the duty to provide telecommunication services under the public system and on a provisional basis until the exceptional situation that gave rise to such license is resolved.” (Article 118, sole paragraph of Law 9472/97).

⁸ Law No. 9472 of July 16, 1997.

As the regulatory agency for the telecommunications sector, ANATEL is responsible for defining the types of telecommunication services, considering primarily their purpose for users, regardless of the technology employed.

Thus, in theory companies authorized by ANATEL to provide telecommunication services in Brazil could use any technology (such as VOIP) to transmit information, since the definition of the telecommunications services according to the GTL does not have any relation with the technology to be employed. However, in this case, the limits set out in each concession or authorization instrument (such as voice transmission in the case of PSTS or data transmission in the case of the Specialized Limited Services) should be observed.

As regards, the Value-Added Service since it is not considered a telecommunication service under Brazilian regulation, its performance is not subject to ANATEL rules.

IV. - VOIP vs. THE BRAZILIAN TELECOMMUNICATIONS SCENARIO

ANATEL itself has many times stated that it has no intention of regulating technologies such as VOIP, but only the telecommunication service that supports it. This affirmative, however, is not accurate *vis-à-vis* the elements used by ANATEL to differ the various types of telecommunications services in the regulation.

When defining the various types of telecommunication services, ANATEL established that the manner in which the signal is transmitted through the network as the key element to distinguishes the different types of services, *i.e.* switched system in the case of PSTS, coaxial cable in the case of cable television service, satellite in the case of DTH service, cell phone in the case of PCS, and dispatch in the case of trunking.

Consequently, there is a risk that VOIP will not be viewed in Brazil as a simple technology supporting or applied to a telecommunication service, but rather as a new type of telecommunication service that introduces a new technique for the transmission of information, *i.e.* the IP.

4.1. - VOIP and Telecommunication Services in Brazil

To date, despite of the controversies, companies authorized to provide PSTS⁹ and Multimedia Communications Services – SCM¹⁰ use VOIP and ANATEL has not objected to it. However, the limits and conditions established by ANATEL for each service license shall be observe by the operators.

⁹ *As per applicable regulations, PSTS is a telecommunication service that enables transmission of voice and other signals for establishing communication between determined fixed points by means of telephony processes. (Sole Paragraph of Article 1st of Decree No. 2534/98). Telephony processes allow the communication through a technique for signal's transmission in the 3.1 kHz-voice or 7 kHz-audio modes or up to 64 kbit/s unrestricted mode, by means of wire, radio electricity, optical means or any other electromagnetic process. (Article 3, XV of the PSTS Regulation, approved by ANATEL Resolution No. 85 of December 30,1998).*

It is characterized by communication between two fixed points in the call-to-call mode, and is considered a collective interest service. (Article 9 of the PSTS Regulation, approved by ANATEL Resolution No. 85 of December 30,1998)

¹⁰ *Multimedia Communications Network is a fixed telecom service in the collective interest provided at the domestic and international levels under the private system, offering capabilities for transmission, emission and reception of multimedia information, by any means, to subscribers within a service area. (Article 3 of Resolution No. 272, issued by ANATEL on August 9, 2001).*

Multimedia information stands for the signals of audio, video, data, voice and other sounds, images, texts and other information of any kind. (Article 4, item I of Resolution No. 272, issued by ANATEL on August 9, 2001)

It differs from the PSTS and the electronic mass communications services, such as radio broadcasting services, cable television services, multipoint multichannel distribution services (MMDS) and DTH services.

For instance, calls using VOIP technology that begin and end in the public telecommunications network and aimed at the public at large should, in principle, be processed exclusively by companies holding an ANATEL concession or authorization to provide PSTS. In this case, the PSTS provider using VOIP will be subject to the obligations of continuity, interconnection and quality targets set out in the regulations in force.

The use of VOIP in calls that begin and end in a private network or begin in a public telecommunications network and end in a private network, in turn, is conditioned to issuance of an SCM license. In other words, only companies authorized by ANATEL to provide SCM are allowed to use VOIP to process calls in a private network.

4.2. - Major Issues

The subject, however, is highly controversial and there being different understandings regarding the regulatory treatment that should be given to VOIP, particularly the use of this technology to provide PSTS, *i.e.* IP telephony.

The use of VOIP under a PSTS license has been questioned on the grounds that the PSTS regulations themselves are tied to the concept of use of telephony processes as well as to the switched circuit system, which are techniques that are incompatible with VOIP.

Moreover, because VOIP is based on the Internet, its use provides for communication between people, regardless of their location, including overseas, through a local connection. This allows local PSTS operators to offer voice transmission services, defined by the regulations as international long-distance calls, thus circumventing their respective service concessions and causing losses to international long-distance operators, which is harmful to full and free competition.

It is important to note that use of IP in Brazil for calls placed over the Internet has been questioned in several judicial disputes, especially in mid-2000 and 2002, when such technology began to be commercially implemented in Brazil.

ANATEL closed down several companies providing Specialized Limited Service and pay TV services, among others, that were using IP to process telephone calls over the Internet.

ANATEL alleged at the time that offering of voice signal transmission services to the general public is the exclusive prerogative of companies holding a PSTS concession. Offering such services without a proper concession is illegal and constitutes a crime under GTL. In addition, providing telecommunication services without the proper concession is a form of unfair competition, tax evasion and encouragement to noncompliance with local legislation.

The companies that were using IP technology to offer voice transmission services to the general public argued in court that their business was perfectly in line with regulations, as these services consisted of an value added service rather than a telecommunication service; consequently, they were not subject to ANATEL rules and monitoring.

Several court decisions were rendered on the matter. However, because of the specific and technical nature of the issue, there has been no consensus in the decisions. Some of them were favorable to ANATEL or the PSTS providers, while others were favorable to the companies offering VOIP services.

V. - Conclusion

The discussions regarding the use of VOIP in Brazil are still at an early stage. ANATEL's trend has been to forbid the use of VOIP without a telecommunication service concession (currently, PSTS and SCM).

ANATEL is not expected to change its stand and consider VOIP an independent telecommunication service.

In view of the great penetration of VOIP technology in the telecommunications sector, ANATEL representatives have on several occasions discussed in the International Telecommunications Union – ITU the best regulatory treatment to be given to VOIP, as well as the development of an action plan for the matter. However, no position has been adopted to date.

Thus, although VOIP favors the convergence of telecommunication services because of its technical aspects, its application in Brazil is still hindered by the Brazilian regulatory environment.

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