VoIP in the European Telecommunications Law

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Abstract — This paper will engage in the analysis of the evolving regulatory treatment of VoIP services in the European Union. The objective of the research is to make an effort to define types of VoIP services relevant for National Regulatory Authorities, VoIP providers and VoIP users.

I. INTRODUCTION

Voice over Internet Protocol is one of the most important topics discussed among national telecommunications regulators, operators and consumers in European Union, as well as in most of the other countries at the moment, including Serbia. The Internet Protocol (IP) can be used in different ways for the transmission of voice and hence there are several terms that have various meanings, for example: Voice over Internet Protocol (VoIP), IP Telephony, Internet Telephony and Voice over the Internet. There is no consent between engineers and policy makers on the proper definition of each term and their treatment vary among jurisdiction. The most common meaning of VoIP is that it refers to all types of voice communications using IP technology instead of traditional circuit switched technology. On the other hand, Internet Telephony is a service that end users decide to use through the public Internet, thus bypassing all or part of the public switched telephone network (hereinafter referred as PSTN)2. This paper will use term Voice over Internet Protocol (hereinafter called VoIP) as a generic term for the transport of voice traffic using IP technology where traffic is carried over the public Internet.

II. THE HISTORICAL BACKGROUND OF VOIP REGULATORY TREATMENT IN THE EUROPEAN TELECOMMUNICATIONS LAW

The present regulatory practice related to telephone services has been traditionally created and focused on the circuit-switched, as a governing technology used for the telephony3. When VoIP has become a regulatory issue in the European Union, the main question was whether it falls under “voice telephony” regime or not. Voice telephone was firstly defined in Commission Directive 90/388/EEC4 as “the commercial provision for the public of the direct transport and switching of speech in real-time between public switched network termination points, enabling any user to use equipment connected to such a network termination point in order to communicate with another termination point”5. Therefore, the main requirements were that the voice service was commercial, directly transported in real-time between public switched network termination points and available to any user to use the equipment already connected to the public switched network termination points to communicate one with another. The Directive did not apply to telex, mobile radiotelephony, paging or satellite services6, but it demanded from the Member States to remove all special or exclusive rights for the supply of telecommunications services other than voice telephony and to take the appropriate actions to ensure that any operator was entitled to supply such telecommunications services7.

In January 1998, the European Commission issued the first Notice on Status of voice communications on Internet under Community law and, in particular, pursuant to Directive 90/388/EEC8. There were two main regulatory issues regarding voice communications on the Internet: Firstly, whether these services were already accumulated to the full liberalization of voice telephony services and telecommunications infrastructure from 1998, as a consequence already in the liberalized area, following an assessment under the voice telephony definition in Directive 90/388/EEC; and secondly to what extent should the factors of the regulatory framework for 1998, applicable to the voice telephony services definition, be applied to voice communications services provided over the Internet9. The Notice made a distinction between three categories of voice communications over the Internet from the users’ point of view. These categories were the following10:

1. Computer to computer voice services;
2. Computer to phone/ phone to computer voice services;
3. Phone to phone voice services;

The Notice evaluated the voice communication on Internet under the voice telephony definition in Directive

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3 Common Statement for VoIP regulatory approaches, European Regulatory Group (ERG), Brussels, 10 February 2004; p.4.
5 Ibid; Article 1, Point 1, Para 8.
6 Ibid; Article 1, Point 2.
7 Ibid; Article 2, Para 1.
8 Status of voice communications on Internet under Community law and, in particular, pursuant to Directive 90/388/EEC; Official Journal C 6, 10 January 1998; p 4-8.
9 Ibid; Para 4.
10 Ibid, Para 5.
90/388/EEC\textsuperscript{11}. It recalled four conditions from the Directive 90/388/EEC to be simultaneously fulfilled for the voice communications over the Internet to be considered as voice telephony and these were the following:
1. The communication had to be offered commercially;
2. It had to be offered to the public;
3. The communication had to connect two network termination points on the PSTN;
4. The speech had to be directly transported and switched in real time.

The 1998 Notice launched the possible regulatory concerns regarding licensing and universal service towards the voice communications via Internet. Internet service providers, at that time, worked under the general data transmission or value-added service authorization\textsuperscript{12} satisfying objective, non-discriminatory, proportionate and transparent conditions. Furthermore, as far as communications via Internet was not considered a voice telephony (if not satisfying all four above mentioned conditions), there was no universal service obligation for the VoIP providers.

As for the reference in the future, the Notice concluded that when an Internet service provider fulfills all the above mentioned criteria for providing voice telephony services, than may this provider be considered as voice telephony provider under the Community law, which would have impact on the licensing of such a provider as a provider of voice telephony as well as on its possible contribution to the universal service obligation. But, the Commission had to be notified about every change as well as to make sure that the proportionality, non-discrimination and transparency principles would apply to these new voice telephony providers.

The regulatory treatment of voice over the Internet was reexamined in 2000 in the Communication from the Commission – Status of voice on the Internet under Community law, and in particular, under Directive 90/388/EEC\textsuperscript{13}. The Commission recalled the conclusion of the 1998 Notice that the voice communication via Internet could not be considered as voice telephony, because they failed to meet all of the four conditions of the definition of voice telephony, namely that the service is offered commercially, for the public, to and from PSTN and that the voice is to be delivered in the real time\textsuperscript{14}.

The Supplement to the Commission made the necessary clarifications after the public consultations held following the 1998 Notice that refer to the difference between Voice over the Internet Protocol and Voice over the Internet. It also presented categories of Internet telephony and quality and reliability of these services.

The first explanation refers to difference between “Voice over the Internet protocol” (VoIP), that comprises all types of transport of voice using the Internet Protocol as a routing and transmission technology and “Voice over the Internet” that is narrowly defined than the VoIP and encompasses only voice services that are provided over the public Internet\textsuperscript{15}. Regarding the categories of Internet telephony, the Supplement to the Commission repeated the three types of voice communications from 1998 Notice (PC-to-PC, PC-to-phone and phone-to-phone) but put it in a legal and not descriptive context\textsuperscript{16}, important for determination of the regulatory regime that should apply to each of them. Finally, as the 1998 Notice concluded that for the Voice over the public Internet service was hard or impossible to guarantee the same level of reliability and quality of voice as created by the PSTN which was one of the reason for VoIP not been considered as voice telephony, the Supplement proposed that the public Internet, which still had difficulties in excluding the obstruction risk affecting the transmission of voice signal, still remains outside the definition of voice telephony\textsuperscript{17}. On the other hand, due to the enormous technological development in two years, the consumers were often offered the Voice over the Internet as substitute for voice services over a circuit-switched PSTN with the level of quality and reliability almost the same as the circuit-switched PSTN real-time voice services. In this case, the real-time condition should be considered as satisfied, but as the service not provided via the public Internet, it falls out of the scope of this paper.

The general review of the Communication from the Commission in 2000 was that no substantial changes were necessary to the 1998 Notice\textsuperscript{18} and the Commission concluded that in general Internet telephony continued to fall outside the definition of voice telephony under the Directive 90/388/EEC\textsuperscript{19}, except where it meets all four conditions. As a consequence, the Member States were advised to continue to issue the data transmission general authorization to Internet access/service providers that offer voice on Internet and Member States should also not impose any mandatory requirement of an individual license\textsuperscript{20}. On the other hand, when voice over the Internet service fulfill all four requirements and as a result become a substitute for traditional voice telephony services, the relevant regulatory regime should apply to that access/service provider\textsuperscript{21}.

### III. VoIP in the New European Regulatory Framework

The European Commission decided that voice via the Internet should be treated differently from voice telephony, except when fulfilling all four conditions specified in the Notice\textsuperscript{22} and the Directive\textsuperscript{23}, thus VoIP providers needed

\textsuperscript{11} Supra note 4.
\textsuperscript{12} In accordance with the Directive 90/388/ECC, Supra note 4.
\textsuperscript{14} Ibid, Para 3.
\textsuperscript{15} Ibid, Para 11.
\textsuperscript{16} Ibid, Para 15.
\textsuperscript{17} Ibid, Para 18.
\textsuperscript{18} Ibid, Para 7.
\textsuperscript{19} Ibid, Para 8.
\textsuperscript{20} Ibid, Para 9.
\textsuperscript{21} Ibid.
\textsuperscript{22} Supra note 8.
only general authorization for data transmission and did not have any universal service obligation.


The Framework Directive identifies the scope of this single regulatory framework that should cover all transmission networks and services. The new regulatory framework does not cover the content of services delivered over electronic communications networks using electronic communications services, such as broadcasting content, financial services and, what is the most important for this paper, the certain information society services. This exclusion is stressed in the Access Directive saying that “services providing content, such as the offer for sale of a package of sound or television broadcasting content are not covered by the common regulatory framework for electronic communications networks and services”. The Framework Directive deals with voice telephony and electronic mail conveyance services.

The following will examine the position of the VoIP services under the new regulatory regime, whether it is still excluded as an information society service or, if not, under which conditions it falls under the new regime. The electronic communications service is defined by the Framework Directive as “a service normally provided for remuneration which consists wholly or mainly in the conveyance of signals on electronic communications networks, including telecommunications services and transmission services on networks used for broadcasting, but exclude services providing, or exercising editorial control over, content transmitted using electronic communications networks and services; it does not include information society services, as defined in Article 1 of Directive 98/34/EC, which do not consist wholly or mainly in the conveyance of signals on electronic communications networks”. Apparently, there are two major requirements for this type of service under this definition: it has to be provided for remuneration (“commercially” was the word used for the voice telephony definition by the 90/388/EEC Directive) and it has to be contained in conveyance of signals on electronic communications networks, including telecommunications and transmission services, but excluding content and information society services. Information society service is defined by the Directive 98/34/EC as “any service normally provided for remuneration, at a distance, by electronic means and at the individual request of a recipient of services”. For the purposes of this definition “at a distance” means that the service is provided without the parties being simultaneously present; “by electronic means” stands for the service that is sent initially and received at its destination by means of electronic equipment for the processing (including digital compression) and storage of data, and entirely transmitted, conveyed and received by wire, by radio, by optical means or by other electromagnetic means and finally “at the individual request of a recipient of services” means that the service is provided through the transmission of data on individual request.

Electronic communications network means “transmission systems and switching or routing equipment and other resources which permit the conveyance of signals by wire, by radio, by optical or by other electromagnetic means, including satellite networks, fixed (circuit- and packet-switched, including Internet) and mobile terrestrial networks, electricity cable systems, to the extent that they are used for the purpose of transmitting signals, networks used for radio and television broadcasting, and cable television networks, irrespective of the type of information conveyed”. This definition clearly shows that VoIP services are conveyed through the electronic communications network, even when not being defined as electronic communications services.

The publicly available telephone service (hereinafter referred as PATS) is defined by the Universal Service Directive as “a service available to the public for originating and receiving national and international calls and access to emergency services through a number or numbers in a national or international telephone numbering plan, and in addition may, where relevant, include one or more of the following services: the provision of operator assistance, directory enquiry services, directories, provision of public pay phones, provision of service under

References:
23 Supra note 4.
29 Point 5 of the Framework Directive
30 Point 5 of the Framework Directive
31 Point 2 of the Access Directive
32 Point 10 of the Framework Directive, giving example of the ISP offering both an electronic communications service covered by the Directive, such as access to the Internet, as well as services that are not covered by the Directive, such as the web-based content.
33 Ibid, Article 2 (c).
35 Article 1, Para 1 of the Directive 98/34/EC.
36 Ibid; Article 1, Para 2.
37 Article 2 (a) of the Framework Directive
special terms, provision of special facilities for customers with disabilities or with special social needs and/or the provision of non-geographic services. The definition of PATS introduces the third principle of the voice telephony service definition from 90/388/EEC Directive that the service has to be “available to the public”. However, the requirement for reliability and speech quality is excluded, while the new emergency services obligation is introduced. “Member States shall ensure that, in addition to any other national emergency call numbers specified by the national regulatory authorities, all end-users of publicly available telephone services, including users of public pay telephones, are able to call the emergency services free of charge, by using the single European emergency call number 112”. The nonexistence of the real-time condition may lead to more VoIP categories being categorized as PATS, but it may apply only to phone-to-phone or phone-to-PC types of VoIP hence one of the PATS requirements is that the service is received through a “number or numbers in a national or international telephone numbering plan”. “Member States shall ensure that national regulatory authorities control the assignment of all national numbering resources and the management of the national numbering plans and that adequate numbers and numbering ranges are provided for all publicly available electronic communications services. National Regulatory Authorities shall establish objective, transparent and non-discriminatory assigning procedures for national numbering resources. “National Regulatory Authorities shall ensure that numbering plans and procedures are applied in a manner that gives equal treatment to all providers of publicly available electronic communications services”. PC-to-PC voice over the Internet would not use such numbers.

IV. CONCLUSION

As a result of this research, it may be concluded that prior to the new 2003 regulatory regime in the European Union, Voice over Internet Protocol services were mostly treated as information society services except when fulfilling four conditions stated in the 90/388/EEC Directive, recalled by 1998 Notice and by 2000 Communications from the Commission simultaneously. If offering their service commercially, to the public, through connecting two network termination points on the PSTN and transporting voice in real time, VoIP services were treated as voice telephony services. At that point, only phone-to-phone type of the VoIP was able to fulfill these four conditions at the same time.

Under the new 2003 regulatory regime, information society services still remain outside the electronic communications service definition. Therefore, it seems that PC-to-PC VoIP services will mostly be treated as Information society services, but may also fall under the electronic communications service definition, usually not as publicly available telephone services (PATS). With the technology development, more VoIP providers are capable to provide a substitute to circuit-switched phone services, but mainly phone-to-phone VoIP may be treated as PATS if providing emergency services. However, National Regulatory Authorities in most of the European Union Member states still hold public consultations on regulatory treatment of VoIP services in their national legislation.

REFERENCES:

5. Common Statement for VoIP regulatory approaches, European Regulatory Group (ERG), 10 February 2004