

8 Regulatory/Legal considerations -(.)

-(.8.1. Overall

For a legal classification of Voice over IP, several aspects have to be taken into consideration. Where regulation focuses on technology - and there on the regulation of voice telephony - the definition of voice telephony is the starting point for all further legal and practical considerations. But when it comes to Voice over IP, terminology is used quite inconsistently. The lack of a clear definition often leads to misunderstandings and also problems in the exact legal classification.

Internet telephony (or Voice over IP, VoIP) can be defined as a collection of Internet applications for real-time voice traffic over data networks using the Internet protocol (IP) whereby the quality of the transmitted voice depends on various factors such as available network capacity, gateways, audio codecs used, etc.

For Oftel, "Voice over Internet Protocol (VoIP) is the generic name for the transport of voice traffic using Internet Protocol (IP) technology. The VoIP traffic can be carried on a private managed network or the public Internet or a combination of both. A wide range of applications and services could use VoIP technology, from traditional telephone services to interactive games." 'Internet telephony' (also referred to as Voice over the Internet) - according to Oftel - "is a specific type of VoIP service that uses the public Internet to carry the IP traffic."⁴

The ITU ⁵ uses different definitions depending on the nature of the principle underlying the means of transmission. Therefore, Internet Protocol (IP) telephony is the transmission of voice, fax and related services over packet-switched IP-based networks. Internet telephony and VoIP are - according to the ITU - specific sub-sets of IP Telephony. Internet telephony is therefore IP Telephony in which the principal transmission network is the public Internet. Internet telephony is also commonly referred to as 'Voice-on-the-Net' (VON), 'Internet Phone,' and 'Net telephony' - with appropriate modifications to refer to fax as well, such as 'Internet Fax'. Voice-over-IP (VoIP) IP Telephony is then telephony in which the principal transmission network or networks are private, managed IP-based networks (of any type).

-(.8.2 What does regulation mean for Voice over IP?

Regulation in telecommunications intends to transfer a monopolistic market into a competitive one. Therefore, especially in the beginning of the opening of the market, former monopolists face strong obligations e.g., concerning access rights to their networks or price regulation. The target is to give new entrant operators the chance to gain market share. For incumbent operators (the former monopolists), regulation is therefore interfering with their business models and is a considerable cost factor.

4. <http://www.ofcom.org.uk/static/archive/oftel/publications/internet/2003/voip1103.pdf>

5. See ITU Internet Reports 2001: IP Telephony, <http://www.itu.int/ITU-D/ict/publications/inet/2000/index.html>.

Furthermore, regulation is based on public (provision of basic services to everybody) and state interest (license fees).

Where Voice over IP services are exempted from regulation, Voice over IP faces some benefits in comparison to classical voice services. In Asia and America, classical voice telephony is substituted more and more by Voice over IP whereby positive cost factors of Voice over IP are partly supported by regulation of classical voice telephony. To balance this – and to further uphold public and state interests – a trend can be recognised that tends to also impose regulatory measurements on Voice over IP services, the more mature and the more common those services become.

- (8.3 Regulation of Voice over IP in the European Union

Looking at regulatory measures in the European Union relating to Voice over IP, there have been different approaches for quite a long time. On the one hand, there was the well-regulated PSTN world and, on the other, the parallel world of the Internet or more generally of IP, where there has been hardly any regulation perceived. In other words, telecommunications regulators were used to concentrating regulatory interventions on traditional switched networks whilst packet-oriented networks have been out of the telecom's legal focus.

- (8.3.1 Looking back into Europe's recent history in regulation

In the old regulatory framework, Voice over IP was exempted from regulation. The European Commission stated in a Communication dating back to 1998 that Voice over IP services do not face the common regulation set forth for voice telephony. The reason for that was the definition of voice telephony in article 1 of the 1998 Voice Telephony and Universal Service Directive.

According to Article 1 of the ONP Voice Telephony and Universal Service Directive ⁶ “*voice telephony service*” means a service available to the public for the commercial provision of direct transport of real-time speech via the public switched network or networks such that any user can use equipment connected to a network termination point at a fixed location to communicate with another user of equipment connected to another termination point⁷. In other words, commercially, directly transported and switched Internet telephony provided for the public in real time is considered as being voice telephony, if the quality of service can be compared to ordinary fixed or mobile telephony and if it is enabling any user to communicate with every other user in fixed or mobile networks.

In its considerations, the Commission concluded that for the time being (which meant the time of publishing the Communication) VoIP was not in commercial use and direct transport of real-time speech via the public switched networks enabling any user to use equipment connected to a fixed network termination point to communicate with another user of equipment connected to another termination point was not available. The Communication was put under examination by the Commission in 2000. The results were published in summer 2000 stating that, despite technological developments and market trends, Voice over IP still does not underlie the regulation for voice telephony. The reasons were low quality and reliability compared to traditional voice

6. Directive 98/10/EC of the European Parliament and of the Council of 26 February 1998 on the application of open network provision (ONP) to voice telephony and on universal service for telecommunications in a competitive environment, OJ L 101/24 as of 1st of April 1998.

services and a lack of a distinct market for VoIP services (given the fact that VoIP services are not offered as such, but – according to the Commission – always in combination with e.g., data transmission).

Between 2000 and 2003 (when the New Regulatory Framework was published), the European Commission did not publish any document on VoIP. A Communication is, as such, ‘soft law’, meaning that it does not have the same legal consequences than a Directive or a Regulation (e.g., there is no need for the Member States to transfer it into national law), even though it is a means that it is often used to clarify things. Regarding Voice over IP there was legal uncertainty whether VoIP could be considered as voice telephony and therefore being held as voice service with all legal and practical consequences such as licensing and interconnection. With its Communication the European Commission clarified that point for the time being and stated that VoIP was not seen as voice service and therefore did not face voice telephony regulation.

In the New Regulatory Framework – which aims to be technologically neutral – the chance that the European Commission will work on another Communication to clarify the legal status of VoIP has been decreased. Electronic communications networks and electronic communications services are facing the same regulation no matter which technology they are using. Therefore, the basic answer to the question whether VoIP-services are facing the same regulation than PSTN-voice telephony, will be yes provided that the service is offered to the public.

-(8.3.2 The New Regulatory Framework - Technological Neutrality

With the European Union’s New Regulatory Framework things have been changing. The Framework states the principle of technological neutrality, meaning that there is no longer a distinction in the regulations made based upon technology between switched- or packet-based networks and/or services. The new rules are applied to all electronic communication services and networks. In other words, regulators today neither impose, nor discriminate in favour of the use of a particular type of technology except where necessary.

At first glance, it seems that technological neutrality leads to less regulation. It seems as though there were only generic rules and the market, as such, is developing according to market principles. Looking more closely, a technology-independent approach might lead to even more regulation, as potentially every network and every service then faces regulation in one form or another.

Voice over IP is a good example of the convergence between the well-regulated world of switch-fixed and mobile telephony and the Internet world, which has traditionally claimed independence from any regulation. If regulation is applied in a technologically-dependent manner and Voice over IP is not seen as voice telephony that falls under regulation (as it has been the case in the European Union up till now), we are in a grey area where Voice over IP operators do not face the same rights and obligations as traditional operators. This means, for example, that they do not have to apply for licenses, do not get access to the numbering resources, are not permitted to interconnection with others, etc. Where regulation is technology-neutral there is no differentiation made. In such a system (lately introduced in the European), Voice over IP might be considered as just another (voice) service facing the same rules as any other service based on

another technology. Where the absence of regulation in the past seemed to foster the deployment of Voice over IP, it is likely that the application of regulation now will slow down that process. But in the long run, it seems to be almost certain that Voice over IP will win against traditional, switched fixed and mobile telephony as sole voice communication service.

- (8.3.3 New Regulatory Framework - an overview

The above mentioned New Electronic Communications Regulatory Framework consists of one general Directive, Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive)⁷ and four specific Directives:

- Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services (Authorisation Directive)⁸;
- Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive)⁹;
- Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive)¹⁰;
- Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications (Directive on privacy and electronic communications)¹¹ sector.

The Framework Directive provides the overall structure for the new regulatory regime and sets out the policy objectives and regulatory principles that National Regulatory Authorities must follow. It also requires that market analyses be carried out before regulation is imposed. The Authorisation Directive establishes a new system whereby persons do not require prior authorisation before providing electronic networks and services. It includes provisions relating to enforcement of conditions and the specific obligations which can be imposed. The Universal Service Directive deals with the obligation to provide a basic set of services to end-users. The Access Directive sets out the terms on which providers may access each others' networks and services with a view to providing publicly available electronic communications services. Finally, the Privacy Directive establishes users' rights with regard to the privacy of personal data.¹² The New Framework for the regulation of electronic communications came into force in April 2002 and had to be transferred into national law by the EU Member States by 25 July 2003. Only six Member States (Finland, Denmark, Sweden, United Kingdom, Ireland and Italy) made it in time.¹³ The EU launched infringement proceedings against the other Member States. Germany said it will transpose the Directives by May 2004, Belgium by January 2004, Greece has still no timetable, the law in France is still discussed in the Parliament, Luxemburg does not foresee a date, and the Netherlands expect the new law in the spring and Portugal just approved the law in December.

7. http://europa.eu.int/information_society/topics/telecoms/regulatory/new_rf/documents/L_10820020424en00330050.pdf

8. http://europa.eu.int/information_society/topics/telecoms/regulatory/new_rf/documents/L_10820020424en00210032.pdf

9. http://europa.eu.int/information_society/topics/telecoms/regulatory/new_rf/documents/L_10820020424en00070020.pdf

10. http://europa.eu.int/information_society/topics/telecoms/regulatory/new_rf/documents/L_10820020424en00510077.pdf

11. http://europa.eu.int/information_society/topics/telecoms/regulatory/new_rf/documents/L_20120020731en00370047.pdf

12. http://www.ofiel.gov.uk/ind_info/eu_directives/index.htm

13. See: http://europa.eu.int/information_society/topics/ecomms/all_about/implementation_enforcement/country_by_country/index_en.htm

- (8.3.4 Authorisation system instead of licensing system

Under the new regime, communications providers can offer (electronic) services and networks without first having to seek permission or authorisation in terms of a license (exceptions are possible for the allocation of scarce resources). The new system is based on the principle of a general authorisation containing general conditions outlining the minimum obligations for providers. This means that companies can offer electronic communication networks and services (including Voice over IP) to end users without first having to notify or to seek permission of the regulator.

With the new framework, it has generally become easier for network and service operators to start off with the provision of their services. Especially for Voice over IP operators, this change means a simplification compared to the previous situation where they had to take a decision whether to provide a service that is not considered as voice service or whether to go through the hassle of the (voice telephony) licensing process. Under the new regime, Voice over IP providers and other (voice) providers have equal rights and duties e.g., concerning interconnection, numbering, directory entries or emergency calls.

With the introduction of the new general authorisation regime on 25 July 2003, all classes of telecommunications licenses were revoked. There are no different licenses e.g., for voice telephony provided over fixed networks, for voice telephony provided over mobile networks or for offering of leased lines. The differentiation between regional and national licenses also ceased to exist as well as different terms and conditions in these licenses. Existing licenses, expired at the end of July 2003, and were replaced by general authorisations. General authorisations, by definition, (see Annex to the Authorisation Directive¹⁴) contain just general conditions. General conditions may be financial contributions to the funding of universal service, administrative charges, rules concerning Interoperability of services and interconnection of networks and environmental and town and country planning requirements. Other specific conditions, such as effective and efficient use of frequencies, can be imposed on individual communications providers if they are using scarce resources.

- (8.3.4.1 Example: VoIP in the New Framework in the United Kingdom

The United Kingdom's regulator, Ofcom¹⁵, recently took a closer look at the regulation of VoIP in the new framework and published its findings. In summary, Ofcom states that it is regulating VoIP. The reason given for regulating VoIP services is that those services are 'electronic communication services' for the purposes of the British Communications Act 2003 ('the Act'). The Act regulates, amongst other things, the provision of 'electronic communications networks', 'electronic communications services' and 'associated facilities'.¹⁶ Ofcom also concludes that interconnection is likely to be relevant for electronic communication networks and services irrespective of the underlying technology (e.g., circuit-switched networks or IP networks). It is still (just as in the previous legal framework) possible to make a regulatory distinction between publicly available

14. http://europa.eu.int/information_society/topics/telecoms/regulatory/new_tf/documents/l_10820020424en00210032.pdf

15. *Ofcom is now part of Ofcom. Ofcom began its regulatory duties on 29 December 2003. It replaces UK's five previous regulators - the Broadcasting Standards Commission, the Independent Television Commission, Office of Telecommunications (Ofcom), the Radio Authority and the Radio Communications Agency.*

16. <http://www.ofcom.org.uk/static/archive/ofcom/publications/internet/2003/voip1103.pdf>

telephone services and services that are not publicly available. Oftel says that specific requirements for publicly available telephone services can be set forth in general authorisations. Where VoIP services are not considered to be publicly available telephone services, those conditions will not apply.

Oftel states that a VoIP service should be regulated as, a publicly available telephone service if any of the following conditions apply:

- the service is marketed as a substitute for the traditional public telephone service, or
- the service appears to the customer to be a substitute for the traditional public telephone service over which they would expect to access emergency numbers, directory enquiries etc. without difficulty; or;
- the service provides the customer's sole means of access to the traditional circuit-switched public telephone network.

Where a VoIP service is clearly being offered as an adjunct to a traditional telephone service or as a secondary service it is, according to Oftel likely not to be considered as publicly available telephone service. Oftel would, however, expect VoIP providers selling secondary services to ensure that the customers and third parties using the VoIP service are fully aware of the nature and limitations of the service.¹⁷

-(. 8.3.5 Numbering

A full E.164 telephone number is a string of up to fifteen decimal digits that uniquely identifies a termination point in the global public telephone network. Every end-user connected to the public telephone network, fixed or mobile has an individual number and all these numbers are managed within the different national, regional or global numbering plans. The ITU deals with the overall management of the world's numbering resources and assigns country codes to individual countries (e.g., 49 for Germany, 33 for France, 44 for the UK, etc.), regional codes to regions who request them (e.g., '3883' for Europe) and global numbers for worldwide use (e.g., the 00800 worldwide free phone code).

Traditionally, fixed network telephone numbers were used to identify endpoints and to route calls to those endpoints.

For the deployment of Voice over IP services, numbering and access to numbering resources is important. It is highly unlikely that the addressing system will switch from E.164 numbers to URIs within a short time-period. Therefore it is important that VoIP services and endpoints can be addressed using E.164 numbers. For a worldwide Voice over IP service that allows the subscriber to connect from different points, it would be useful to have a worldwide service number. That would need a decision taken by the ITU to install such a number.¹⁸

One has to bear in mind that national numbering plans have historically been evolving. A sophisticated alignment of these numbering plans would cause major changes and problems to the existing numbering plans. Such changes would also involve enormous costs. Therefore, it is more likely that VoIP services will use numbers within the national numbering ranges than getting distinctive numbers out of a newly-defined numbering range.

17. <http://www.ofcom.org.uk/static/archive/oftel/publications/internet/2003/voip1103.pdf>

18. In the past ITU-T SG2 had assigned the Universal Personal Telephone code +878 878 to be used for test reasons until 22. October 2000.

The European Commission states that the availability of numbers for existing and new services is of crucial importance for competition and innovation. Member States should therefore design their numbering plans in such a way that they can cope with increased future demand and they should manage the existing numbering space to encourage efficient and effective use of numbers.¹⁹

With Voice over IP being treated as any other electronic communication service, Voice over IP providers are also entitled to get numbers from the national numbering range.

The European Commission says that numbers must be assigned to any undertaking providing or using electronic communications networks or services, within three weeks after receipt of a request. Procedures for assignment must be open, transparent and non-discriminatory. Short codes, e.g., carrier selection codes, and so-called golden numbers, e.g., numbers that are easy to remember, deserve special attention as they may represent a specific economic value. Member States may decide to assign such numbers or codes via competitive or comparative selection procedures, in which case, the assignment period may be extended until up to six weeks (Article 5 of the Authorisation Directive).²⁰

Oftel says that communication providers may apply for public numbers for VoIP services in accordance with the requirements set out in the General Conditions for the allocation, adoption and use of numbers. Oftel considers about an appropriate number range specifically allocated for VoIP services.²¹

-(. 8.3.6 Access

According to the Access-Directive (2002/19/EC), access means the making available of facilities and/or services, to another undertaking, under defined conditions, on either an exclusive or non-exclusive basis, for the purpose of providing electronic communications services. It covers access to network elements and associated facilities, which may involve the connection of equipment, by fixed or non-fixed means (in particular this includes access to the local loop and to facilities and services necessary to provide services over the local loop), access to physical infrastructure including buildings, ducts and masts; access to relevant software systems including operational support systems, access to number translation or systems offering equivalent functionality, access to fixed and mobile networks, in particular for roaming, access to conditional access systems for digital television services; access to virtual network services.

Access is a generic concept covering any situation where one party is granted the right to use the network or facilities of another party, on either an exclusive or shared basis. As defined in the Access Directive, interconnection is a special form of access.²²

The basic question here is whether VoIP providers can demand access from other operators and if so, to what facilities and at what price.

19. http://europa.eu.int/information_society/topics/ecommm/all_about/todays_framework/public_resources/index_en.htm#Numbers

20. http://europa.eu.int/information_society/topics/ecommm/all_about/todays_framework/public_resources/index_en.htm#Numbers

21. <http://www.ofcom.org.uk/static/archive/oftel/publications/internet/2003/voip1103.pdf>

22. http://europa.eu.int/information_society/topics/ecommm/all_about/todays_framework/interconnection_interoperability/index_en.htm#access

The Access Directive lays down a procedural framework for regulators to follow, and identifies factors to be taken into account when granting access, but does not specify precise access obligations. In general, access obligations are only imposed on operators that have significant market power in specific markets. Taking into consideration the above, VoIP providers are offering electronic communication services. Therefore they are entitled to ask other operators for access and enter into negotiations. Only operators with significant market power are obliged to offer access in a transparent, non-discriminative and cost-oriented way, whereby the regulator has the rights to control prices.

-(8.3.7 Interconnection

Interconnection covers the physical and logical linking of networks, and is an essential element in any multi-network environment. It allows the users on one network to communicate with users on other networks, or to access services provided on other networks. In a newly liberalised market, terms and conditions for interconnection to the incumbent operators' network are critical for successful market opening.

All operators of public communications networks in the EU have both a right and a duty to negotiate interconnection with each other. In the event of a dispute, the national regulatory authority may intervene.²³

According to the Access Directive, interconnection is defined as the physical and logical linking of public communications networks used by the same or a different undertaking in order to allow the users of one undertaking to communicate with users of the same or another undertaking, or to access services provided by another undertaking. Services may be provided by the parties involved or other parties who have access to the network. Interconnection is a specific type of access implemented between public network operators: interconnection being defined as physical and logical linking between networks has to be understood technologically-neutral. In the past, interconnection was PSTN-to-PSTN interconnection, meaning connecting homogeneous networks based on SS7. In today's framework, interconnection can mean much more. Packet-oriented networks must be enabled to be interconnected with line-switched networks and vice versa. The basic questions to be answered in practical cases over the next months will be who is going to be obliged to pay eventually for additional equipment needed to make interconnection between heterogeneous networks possible. From a legal point of view, it will not be possible to reject a request for interconnection based upon technology. Between operators that do not have significant market power, interconnection pricing is a question of negotiation and insofar not restricted. There is also only limited power for regulators to intervene. As soon as one of the two operators involved in the case has significant market power, this one has to offer interconnection based on transparent, non-discriminative and cost-oriented criteria.

-(8.3.8 Quality of Service

In traditional telecommunication networks (PSTNs), Quality of Service was the key point and standardised quality requirements had to be fulfilled. In the PSTN, quality expectations

23. http://europa.eu.int/information_society/topics/ecom/all_about/todays_framework/interconnection_interoperability/index_en.htm

concerning services have traditionally been very high. There are a lot of features that are not regulated by law. Instead, features have been regulated by standardisation organisations. When it comes to voice, there are a lot of requirements to be fulfilled, e.g., answering times and priority routing for emergency calls.

Taking a closer look at the legal requirements, quality of service parameters, definitions and measurement methods can be found in Annex III of the Universal Service Directive (2002/22/EC). According to Article 11 of the same Directive, national regulatory authorities are entitled to specify additional quality of service standards. In the UK, for example, the regulator can impose technical interface standards to ensure end-to-end connectivity and interoperability. Annex III of the Directive sets forth quality of service parameters, definitions and measurement methods only. Operators are therefore obliged to measure the specific service-quality in their networks and provide that data to the respective regulator. There are no specific quality-requirements to be fulfilled by networks or services, nor threshold values that have to be met.

In other words, one could say that quality is not a regulatory obligation but a market request.

One has to consider the fact that there may be demand for cheaper services that may be of a lower quality. Accordingly to that, Ofcom expressed an interesting thought regarding quality expectations. Communications providers should note that when VoIP services are provided using traditional E.164 telephone numbers, calling parties may not be aware, in advance, that they are calling a customer connected to a VoIP service. When providing a VoIP service that uses E.164 numbers, communications providers should take account of the quality of service that a calling party would normally expect when calling an E.164 telephone number.

- (8.4 Voice over IP in the United States

Just as in Europe, the legal status of voice over Internet protocol (VoIP) services depends on the decision whether to classify them as 'traditional telecommunications services' or 'information services'. Should the Federal Communication Commission (FCC) decide on the former classification, VoIP service providers will need to apply for licenses and to ensure that their operations comply with the same state and federal regulations as their counterparts in the traditional wire-line telephony arena.

On 1 December 2003, the FCC held a public forum on VoIP which was open to the public.²⁴

In his opening remarks, FCC Chairman Michael Powell stressed his belief that IP-based services such as VoIP should evolve in a regulation-free zone. Even though topics like availability of emergency services, contributions to the Universal Service Fund, full access for persons with disabilities, safety for consumers, law enforcement and national security must be targeted and discussed, nevertheless VoIP was already in the attention of regulators in some of the States. In August 2003, the Minnesota Public Utilities Commission (MPUC) became the first US state regulator to make a ruling on the issue, deciding that VoIP market leader Vonage should be classified as a telecoms service provider, thereby needing to apply for a concession to operate in the state.

Vonage provides a service that permits voice communications over the Internet. It sells a service called Vonage DigitalVoice that enables its customers to engage in voice communications, with

24. <http://www.fcc.gov/voip/>

broadband Internet connections, using voice over Internet protocol (VoIP). It has customers in the state of Minnesota.

In October 2003, the U.S. District Court (DMinn) overturned this decision and issued its Memorandum and Order in *Vonage v. Minnesota Public Utilities Commission*, holding that Vonage is an information service provider and that the MPUC cannot apply state laws that regulate telecommunications carriers to Vonage.²⁵

In Virginia, the State Corporation Commission has also taken notice of Vonage and is of the opinion that it is subject to its jurisdiction.

In Ohio, the State Public Utilities Commission started an inquiry into how telecommunications providers are using VoIP in Ohio to provide telecommunication services to Ohio consumers. It turns out that under Ohio law, companies that are, in fact, 'transmitting telephonic messages' are a common carriers subject to the State Public Utilities Commission's laws.

The Florida Public Service Commission is awaiting on answers to the pending AT&T petition to the FCC with regard to whether or not VoIP providers should be responsible for paying access charges to local phone companies when they offer similar services. There is a bill pending in Florida that will affect consumers living in Florida²⁶.

-(8.5 Conclusion and Summary

Regulation in telecommunications intends to transfer a monopolistic market into a competitive one. In the past, telecommunications regulators were used to concentrate regulatory interventions on traditional switched networks whilst packet-oriented networks have been out of the telecom's legal focus.

In Europe, Voice over IP was exempted from regulation up to mid-2003. The European Commission stated in a Communication dating back to 1998 that Voice over IP services do not face the same regulatory burden than other voice services because they were not in commercial use and direct transport of real-time speech was not possible.

With the European Union's New Regulatory Framework, things have been changing. The Framework states the principle of technological neutrality, meaning that there is no longer a distinction in regulation made based upon technology between switched-or packet-based networks and/or services. Under the new regime, Voice over IP providers and other (voice) providers have equal rights and duties concerning authorisation, interconnection, access, numbering, directory entries or emergency calls. In other words, publicly offered Voice over IP is now regulated in Europe.

In the US, the legal status of voice over Internet protocol (VoIP) services depends on the decision whether to classify them as 'traditional telecommunications services' or 'information services'. The US regulator, FCC, has not taken a decision on whether to classify it one or the other way. Should the FCC decide on the former classification, VoIP service providers will need to apply for licenses and to ensure that their operations comply with the same state and federal regulations as their counterparts in the traditional wire-line telephony arena.

25. <http://www.techlawjournal.com/topstories/2003/20031016.asp>

26. The Florida State Senate's VoIP Bill is available in the Internet, see <http://tinyurl.com/b5nb/>.