

Unofficial translation

**APPLICATION OF
COMMUNICATIONS LEGISLATION TO
VOIP SERVICES IN FINLAND**

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1 INTRODUCTION

VoIP (Voice over Internet Protocol) is both a technology used for the transmission of voice and voice services implemented by means of IP networks and related additional services. If VoIP is examined as a technology used for the transmission of voice, the most essential change involves the transmission of voice in data packets in the IP network instead of the circuit-switched transfer used in the fixed telephone network. Later in this document, the first will be referred to as VoIP technology and the second as VoIP service. VoIP alone means mainly VoIP service for the purposes of this document.

VoIP services can be implemented without significant network investments. Therefore, VoIP technology offers new and minor players, too, increasingly better opportunities to enter the market. VoIP services are not either tied to a specific access network and it is possible to provide the service internationally over the internet in various access networks. Especially several large international players such as Ebay (Skype), Microsoft and Google have made use of this opportunity.

To the user, VoIP service can seem very similar to the so-called traditional telephone service, but the horizontality of the IP network architecture enables that even individual service components, such as voice, video and reachability information can more easily be combined into various service entities. IP technology enables that new, innovative services can be provided, in which case voice is only one characteristic of the provided service. In some contexts, services containing a wide range of service components are called as CoIP (Communication over IP).

National regulation on communications services is based on the EU directives on electronic communications. The directives are founded on technology neutrality, among other things, i.e. similar services are treated in the same manner regardless of the technology used for the implementation of the services.

Even the national legislation on communications markets in Finland is technology-neutral and various networks and services provided in them are treated equally in legislation. FICORA's technical regulations can also be technology-specific or service-specific. However, the Series of Regulations issued by FICORA does not currently contain special regulations on specifically VoIP technology or services. Due to the special characteristics of VoIP technology and VoIP services, it is necessary to clarify how communications market legislation and FICORA's technical regulations are applied to them.

This memorandum gives FICORA's view on how the current legislation is applied to VoIP services. The memorandum covers the general principles on the application of national regulation to the provision of VoIP services and user rights, in particular. Instead, regulation related to the economic surveillance of the market or competition monitoring is examined at general level only. The memorandum aims at covering different regulation sections rather shortly. If necessary, a reference will be made to the legislation or regulation where the subject in question has been dealt with in more detail. The memorandum will not, in general, examine technical regulations and quality requirements related to IP networks in detail. However, the memorandum may briefly refer to the technical requirements or characteristics of the network to the extent that they are relevant to the implementation of a VoIP service.

FICORA monitors the development of the communications markets actively. If necessary, the memorandum will be updated due to the development of VoIP services and the amendments made to legislation or FICORA's regulations. In addition, some of FICORA's regulations will be specified in order to implement the definitions of policy presented in this memorandum.

2 SCOPE OF APPLICATION

For the purposes of this memorandum, VoIP services mean publicly available voice services implemented by IP technology and provided by telecommunications operators. The memorandum's scope of application excludes such VoIP implementations described in detail in section 3.3 where the service provider provides the user with a software enabling VoIP calls instead of a communications service. With regard to the regulation of VoIP services and this memorandum, the most relevant services are commercial VoIP services that are independent from the internet service provider, and VoIP services provided by broadband operators and also by mobile operators, in the future.

This examination excludes the use of IP technology in companies' internal telephone systems and backbone networks of telecommunications operators. Within client organisations, the use of VoIP is subject to provisions regarding corporate subscribers only, except for the fact that services must not cause disturbance to the public communications network. If a telecommunications operator uses IP technology only for transferring calls in the backbone network, it does not affect the legislative treatment of telephone services provided for customers.

3 GENERAL ON THE REGULATION OF VOIP SERVICES IN FINLAND

3.1 Communications market legislation and scope of application

Among the special enactments regarding the communications markets, the Communications Market Act (393/2003) [1] and the Act on the Protection of Privacy in Electronic Communications (516/2004) [2] are relevant to this memorandum.

The objective of the Communications Market Act is to promote the provision and use of services within communications networks and to ensure that communications networks and communications services are available under reasonable conditions to all telecommunications operators and users throughout the country. A further objective of the Act is to ensure that the opportunities available for telecommunications in Finland accord with the reasonable needs of users and that they are competitive, technologically advanced, of high quality, reliable and safe, and inexpensive. The Communications Market Act is applied to communications markets unless otherwise provided by the law. Communications markets mean providing network services and communications services, and related services.

The objective of the Act on the Protection of Privacy in Electronic Communications is to ensure confidentiality and privacy protection in electronic communications and to promote information security in electronic communications and the balanced development of a wide range of electronic communications services. The Act on the Protection of Privacy in Electronic Communications applies to network services, communications services, value added services and services where data describing the use of the service is handled, which are provided in public communications networks. This Act also applies to direct marketing in public communications networks and to subscriber directory services and telephone directory services. The restrictions of the scope of application are laid down in section 3(2-7).

3.2 Determination of terminology used in the legislation

The following definitions are documented in section 2 of the Communications Market Act. The terms and their definitions used in the Act on the Protection of Privacy in Electronic Communications mainly correspond to the equivalent definitions in the Communications Market Act.

According to section 2(17) of the Communications Market Act, a *network operator* means an operator that provides a communications network in its ownership or for other reasons in its possession for the purposes of transmitting, distributing or providing messages. According to section 18, a *network service* means a service provided by the network operator.

According to section 2(19) of the Communications Market Act, *a service operator* means an operator that transmits messages over a communications network in its possession or obtained for use from a network operator or distributes or provides messages in a mass communications network; According to paragraph 20, *a communications service* is service provided by a service operator.

According to section 2 paragraph 3, *a mobile network* means communications network primarily used for targeted communications in which the terminal equipment is connected to the communications network by means of freely propagating radio waves.

According to paragraph 4, *a fixed telephone network* means communications network primarily used for targeted communications in which the terminal equipment is connected to the communications network by a cable or other leased line. According to the preamble to the Government bill (112/2002) [3] relating to the Communications Market Act, a fixed telephone network means land line network in colloquial language.

Telephone network means *a mobile network* or *a fixed telephone network*. Telephone network is a superordinate concept, which can refer to both types of networks.

In addition to the above-mentioned terms, the Communications Market Act generally uses the concept of a telephone network subscriber connection connection, which is not specifically defined in the Act.

3.3 Communications services

With regard to the definition of the communications service, it is essential that the operator providing the service transmits messages over a communications network in its possession or obtained for use from a network operator. The EC Framework Directive [4] defines electronic communications service to be a service which is normally provided for remuneration and which consists wholly or mainly in the conveyance of signals on electronic communications networks.¹

Traditional circuit-switched telephone services clearly comply with the definition of the communications service, as they unambiguously deal with transmission of messages. VoIP service also fulfils the characteristics of a communications service, if it has a connection to or from the public telephone network.

VoIP services provided only on the Internet differ from the above-mentioned services in such a way that the operator providing a telephone service does not necessarily participate in the transmission of voice or voice signalling. Voice service over the Internet is possible in several ways. The telephone service provider may:

1. only provide a directory service such as reachability service
2. participate in the transmission of call signalling on the internet
3. participate both in the transmission of signalling and in the transmission of voice data on the Internet by means of one or several own servers
4. provide quality guarantees to the transmission of telephone traffic either within the area of its own broadband network and/or agreement partner's network.

VoIP services based on peer-to-peer technology and provided only on the Internet as in example 1 do not comply with the definition of the communications service as in such services the service provider does not participate in the transmission of messages as referred to in the Communications Market Act. According to the example, the service provider's VoIP service is composed of not only the software installed on the computer but also of a directory service providing the necessary IP addresses to route the calls to the recipient. In this case, the provider of the communications

¹ According to Article 2(c) the *electronic communications service* means 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 in 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.

service is the provider of the user's Internet connection. The Communications Market Act does not apply to such VoIP service, and FICORA's opinion is that, depending on the implementation method of the provided directory service, it may be some other information society service referred to in the Act on the Provision of Information Society Services [5].

Traditional circuit-switched service corresponds to a case where quality guarantees of the transmission of telephone traffic cover the entire transmission path. The definition, according to the Communications Market Act, however, does not require provision of quality guarantees to message transmission, and, in e-mail services, for example, the messages are transmitted to customer mainly along with other Internet traffic. FICORA regards that items 3 and 4 above are clearly communications services.

From the point of view of the customer's usage experiences it does not matter whether the VoIP service working only on the Internet is implemented according to example 2 or 3. In practice, the only difference between the models is that routing voice data through service provider's server or servers enables the service provider more possibilities to manage the use of the service. With regard to service function or service characteristics, the quality guarantees provided to voice data and voice signalling may though in certain cases have more significance. It is also worthwhile to remember that these quality guarantees may also be part of the customer's Internet connection service, and the customer's VoIP service does not necessarily have anything to do with quality guarantees.

3.4 Communications services provided in the telephone network

There are certain obligations imposed on *telecommunications operators in a telephone network*² in Chapters 6 and 7 of the Communications Market Act.

A telecommunications operator works in a public telephone network in a way referred to in the Communications Market Act, if it provides a network service or a communications service in a telephone network. The operator does not have to provide telephone network subscriber connections to end customers so as to be an operator in a telephone network.

The scope of some of the obligations imposed on telecommunications operators in a telephone network has been further restricted so that such operator must *for its part* see to that the imposed obligations are fulfilled. This means that the nature and characteristics of the provided service have an impact on which of the obligations are applicable and how the operator must comply with the obligations.

Also an operator providing VoIP services operates in a telephone network, if the service is connected to the telephone network, i.e. it is possible to make calls to the telephone network *or* to receive calls from the telephone network. The VoIP service provider in the telephone network must, for the provided service, see to that the telecommunications operators in the telephone network comply with the imposed obligations. If, for example, the provided service enables calls to abroad, the service provider must ensure that the user may use the universal international access code 00 (section 54). If it is possible to make calls, the service provider must ensure that users are able to access the universal emergency call number (section 55) and to a generally available directory inquiry service (section 56). If the provided service only covers receipt of calls, the service provider does not have to provide these characteristics to users.

3.5 Telephone network subscriber connection

A telephone service or a subscriber connection for a telephone network are not defined specifically in the Communications Market Act, although chapter 7, which deals with rights of the user, imposes obligations on operators providing subscriber connections for a telephone network.

² Section 51 Obligations concerning telephone number portability, section 53 Telecommunications in the European Economic Area, section 54 Universal international access code, section 55 Universal emergency call number, section 56 Publicly available directory inquiry service, section 64 User's right to tone dialling and calling line identification, section 65 Obligation of telecommunication operator to transmit calls in the European telephone numbering space

In its decision of 29 October 2003 to TeliaSonera Finland Oyj [6], FICORA stated that the subscriber connection for a telephone network referred to in the Communications Market Act has the same meaning as publicly available telephone service of the Universal Service Directive. Therefore, a subscriber connection for a telephone network is regarded to be a publicly available service that enables users to make and receive national and international calls and to use emergency services with a number or numbers included in the national or international numbering plan³.

FICORA regards that in order to fulfil the definition of a publicly available telephone service and the definition of a subscriber connection for a telephone network, the VoIP service must enable users both to make and to receive national and international calls with a number included in the national or international numbering plan, as stated in the Universal Service Directive. This has also been stated in FICORA's decision on Saunalahti Lanka service of 24 February 2005 [7]. A VoIP service enabling merely one-way call establishment does therefore not fulfil the characteristics of a telephone service or subscriber connection for a telephone network. With regard to the Communications Market Act, it is a matter of other communications service and not a subscriber connection for a telephone network.

Whether or not the provided VoIP service enables two-way call establishment as defined above or whether or not the service otherwise complies with the definition of the telephone network, is always regarded case by case. Generally, it can be stated that for a two-way call establishment it is possible to call the subscriber connection with the number that is transferred in the network as the calling line number for outgoing calls. On the other hand, if services enabling a user to make and to receive calls were regarded as two different services, it must be possible, de facto, to buy them as two different services and to use them as separate services.

The service must also accord with what is agreed. If the service is sold as a subscriber connection for a telephone network, it must fulfil the prerequisites for a subscriber connection and the requirements for a telephone network. If, again, it is a matter of other communications service, which does not fulfil the requirements set for the subscriber connection for a telephone network, the user must be told about it clearly in the service descriptions and agreement conditions.

International conversations have focused greatly on possibility to use emergency services as part of the definition of the publicly available telephone service. From the viewpoint of the Finnish Communications Market Act, the question is not relevant as the obligation to provide emergency services is imposed on all *telecommunications operators in the telephone network* and not only on operators providing subscriber connections. Hence, the operator can not avoid the provision of emergency services with regard to the definition of the subscriber connection, if the service otherwise fulfils the prerequisites for the communications service provided in the telephone network.

3.6 Rights and obligations of a telecommunications operator

A telecommunications operator is regarded to practice public telecommunications when it provides a network service or a communications service to a set of users that is not subject to any prior restriction. The public telecommunications operator must observe the Communications Market Act and the Act on the Protection of Privacy in Electronic Communications and the provisions issued under them.

The rights and obligations of a telecommunications operator providing a VoIP service depend greatly on the type of the service. If the provided service is a communications service, it must fulfil the requirements set for all communications services. If the service provider operates in the telephone network, provisions on operators in the telephone network become also applicable. A VoIP service that complies with the definition of the subscriber connection for a telephone network

³ Directive 2002/22/EC of the European Parliament and of the Council on universal service and users' rights relating to electronic communications networks and services. According to Article 2(c) *publicly available telephone service* means 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 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 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 given in the Universal Service Directive is used as a basis for defining a telephone service in FICORA's regulations.

must, for its part, comply with the provisions on a subscriber connection for a telephone network and publicly available telephone services.

Below is a short description of the most important obligations relating to the provision of communications services. This document does not give an exhaustive list of the operator's rights and obligations or describe the contents of the obligations in detail. Instead, it contains references to the Act and FICORA's regulations issued under it.

4 TELECOMMUNICATIONS NOTIFICATION AND FEES

4.1 Telecommunications notification

According to section 13 of the Communications Market Act, a written notification of the intention to operate public telecommunications must be submitted to FICORA before the operations begin (telecommunications notification). FICORA must also be notified of any change in the information entered in a telecommunications notification or of the termination of the operations. Further information about submitting the notification is available in FICORA's guidelines [8].

In the law public telecommunications means the provision of services to a set of users that is not subject to any prior restriction. Operators regulated by the Communications Market Act are network and service operators in various communications networks. Pure retail and further provision of communications services are not, according to the definition, regarded as public telecommunications and are thus not subject to notification to FICORA.⁴

The notification duty does not apply to public telecommunications that is temporary in nature, aimed at a small audience or otherwise of minor significance. Government Decree on telecommunications of minor significance [9] states that public telecommunications is regarded to be of minor significance if it regards provision of a network service or a communications service in a communications network where the number of connections is less than 500, or telecommunications with a turnover that is less than EUR 300,000 per year.

A telecommunications notification does not itself create any rights or obligations. It is only a method to help the regulatory authority to supervise operators in the market. Each operator practising public telecommunications has thus the rights and obligations of an operator as referred to in the Communications Market Act, regardless of whether or not it submits the telecommunications notification.

4.2 Communications market fee and information security fee

A telecommunications operator subject to a telecommunications notification must pay an annual communications market fee and annual information security fee to FICORA. The fees cover the costs incurred by FICORA for carrying out the duties concerning telecommunications operators.

The amount of the fees is determined according to the tables given in section 15 a of the Communications Market Act and section 39 of the Act on the Protection of Privacy in Electronic Communications. The telecommunications operators are assigned to twelve payment categories according to their turnover. The payment category for each operator is determined by the turnover that the operator has for telecommunications activities in Finland during the period that precedes the determination of the fee. An operator whose telecommunications operations are of minor significance, as referred to in 4.1, is not liable to pay either of the fees.

⁴ Neither retail seller nor retail is defined in the current Communications Market Act or Act on the Protection of Privacy in Electronic Communications. According to section 4 paragraph 17 of the old Communications Market Act (396/1997), *re-selling* meant the sale of telecommunications network services and telecommunications services further acquired from a telecommunications operator as such or as part of another service. According to the motivation to the section, re-selling was not an activity where the entrepreneur had, by own technical measures, the right and factual possibility to prevent the user from using telecommunications services. This kind of activity was regarded to be operation of telecommunications.

5 INTERCONNECTION AND NUMBERING

5.1 Interconnection

According to section 39 of the Communications Market Act [1], all telecommunications operators have an obligation to negotiate on interconnection with another telecommunications operator. Telecommunications operators in a telephone network must also comply with the provision of section 43 concerning the charge for the use of a telephone network. In addition, the provision of section 44 on prohibition on bulk discounts concerns those telecommunications operators on which FICORA has imposed an interconnection obligation.

The eventual further interconnection obligations are defined in FICORA's decisions on significant market power concerning call origination on the public telephone network provided at a fixed location, call termination on individual public telephone networks provided at a fixed location or individual mobile networks, and transit services in the fixed public telephone network.⁵

All telecommunications operators with significant market power on the above-mentioned markets have an obligation to connect a communications network or communications service to the communications network or communications service of another telecommunications operator. Interconnection must be established at the point specified by the telecommunications operator requesting the interconnection unless this is technically inappropriate or unreasonable from the perspective of the telecommunications operator with the obligation to establish the interconnection.

Technical appropriateness has so far meant interconnection in the circuit-switched telephone network. Thus, the operator providing VoIP services has had to transfer its voice services from the IP network to the circuit-switched network in order to establish interconnection. After this, it has been technologically possible to interconnect a VoIP service with the telephone service provided in the telephone network, in accordance with the defined SMP obligations. In spite of this, a SMP operator has been able to provide interconnection via the IP interface. Whether the provided VoIP service has been regarded as a telephone network subscriber connection or other communications service, has not been relevant with regard to the interconnection obligation.

However, the development of communications networks and services may even in the near future lead to the fact that the IP interface can become a technologically functional way to establish interconnection. In these cases, the interconnection obligation can concern the interconnection of voice call services directly over the IP interface, too. Since there can be a myriad of technological standards and implementation methods, these cases will face case-specific examination in the future. Then, other interpretations concerning the interconnection obligations of call termination, e.g. the pricing of call termination, will be solved case-specifically.

The SMP operators must comply with the provisions of section 40-42 unless the interconnection parties agree otherwise.

5.2 Numbering

In accordance with section 47 of the Communications Market Act [1], FICORA has issued a regulation on numbering in a public telephone network [10], which states which kinds of numbers or identifiers are allowed in telecommunications and the purposes for their use. Provisions on how numbers and identifiers are issued and on the contents of the numbering decision are included in section 48 of the Communications Market Act. By issuing a numbering decision, FICORA gives user rights to numbers and can order that the number be used to provide a specified service and it may impose other conditions on the use of the number necessary to ensure the clarity and efficiency of numbering or the benefits of users.

⁵ The SMP decisions are available on FICORA's website at <http://www.ficora.fi/suomi/tele/HMV.htm> (in English at <http://www.ficora.fi/englanti/tele/smp.htm>). Obligations imposed on each SMP operator can be read from the operator-specific SMP decision.

This section examines the main points in the numbering of VoIP services. Additional information is available from FICORA's opinion on the use of telephone numbers in VoIP services of 15 June 2006 [11].

Number ranges for VoIP services

VoIP services have not been allocated numbering spaces of their own. Neither are there any specific provisions on the number series to be used for VoIP services. VoIP services can be granted subscriber numbers of the same number series as telephone services in general, e.g. number series specific for a numbering area, nationwide subscriber number series for the national fixed network or number series for the mobile network considering the requirements to be presented below.

Fixed network telephone numbers

Number series specific for a telecommunications area can be allocated to VoIP services. The provisions do not require that terminal equipment receiving calls to a subscriber number must be physically located in the numbering area in question, so subscriber numbers of all numbering areas can be used for VoIP services, even though the service was nomadic. The subscriber number to which the person is calling must, however, seem to her or him like any number in the numbering area. If a telecommunications area specific subscriber number is used in other telecommunications areas, too, the provider of the subscriber connection or service will have to ensure that interconnection is carried out in such a manner that incoming calls can be handled in the same way as other calls terminating on the telecommunications area addressed by the number with regard to call traffic management and interconnection.

Nationwide subscriber number series for the *national fixed network* can also be used in the VoIP service. Examples of these number series are nationwide subscriber numbers beginning with 010-, 020-, 029-, 030-, 071-, 073-, 075- and 076.

Mobile network telephone numbers

Section 13 of the Numbering Regulation lays down provisions on the numbering of mobile networks. According to it, a mobile area code directs traffic to mobile networks. In addition, the provision lays down requirements for the length of subscriber numbers in the mobile network.

In accordance with FICORA's regulation, subscriber numbers in mobile networks are used together with the network area code. Therefore, section 13 applies to the use of them in that the purpose of use of mobile numbers is to direct traffic to specifically mobile networks. Thus, it is not yet possible to use mobile network numbers for internet access services provided via wireless broadband technology (WLAN, WLL, WiMAX) and other communications services, such as VoIP services, provided via it. Thus, FICORA considers that the use of mobile network numbers in VoIP services should be restricted to concern mobile network subscriber connections for the time being. Due to the convergence of communications networks, it is possible to use services (e.g. phone calls) pertaining to a mobile network subscriber connection via other access networks than mobile networks alone.

Compared to the numbering of the fixed network, the regulation of the numbering of the mobile network is not only affected by the users' needs to get information on the call type and call tariff, but also how *interconnection pricing* between operators can be managed. Since the use of numbers is overlapped and converged, it may therefore cause need for change with regard to agreement relations between operators in order that operators would not charge one another groundless call termination prices, which are cost-oriented in accordance with the Communications Market Act and SMP regulation, in situations where, in fact, a corresponding service is unobtainable or needless.

Management of the right to use a number

The right to use a number or code is granted directly to the operator.

Operators relinquish the numbers to their customers as part of a subscriber connection agreement or service agreement for the purpose of identifying the subscriber connection or service they provide. Operators can forward the right to use the number to another operator, too. Thus, the relinquishing operator must, in accordance with section 3.4 of the numbering regulation, inform FICORA of the relinquished numbering space.

The right to use a number granted to the operator by FICORA is exclusive in that other players cannot take the number into use without agreement with the holder of the right of use. Therefore, operators do not have the right to use one another's numbers for the services or subscriber connections they provide, unless an agreement is made. The operators' freedom to make agreements is restricted by provisions on the use of numbers and supply of services. In other words, an operator cannot, by agreement, relinquish a broader right of use than what it has received under FICORA's decision and provisions.

Shared use of numbers

With the consent of the holder of the right to use (operator), parallel fixed or mobile numbers can be used for VoIP services. Then, the service must, however, fulfil the conditions presented in the provisions on number portability, management of emergency traffic, positioning and telecommunications interception.

5.3 Numbering fees

According to section 49 of the Communications Market Act, a telecommunications operator or any other person obtaining a number or identifier must pay FICORA a fee to cover the costs incurred for the use of the number or identifier. Further provisions on the amount of the fee are issued by decree of the Ministry of Transport and Communications.

The Statute of the Ministry of Transport and Communications on the fees of the Finnish Communications Regulatory Authority [12] determines the numbering fee in the telephone networks. According to section 16 of the Statute, the subscriber number fee is charged on the basis of the number of subscriber connections in the network of the telecommunications operator on the first day of the year for which the fee is charged. Information about the subscriber numbers in use is collected through an enquiry at the beginning of each year.

If the VoIP service provider uses E.164 subscriber numbers, a subscriber number fee is collected on the basis of subscriber numbers in use. The VoIP service provider must inform the necessary contact information for the annual number enquiry and for the invoicing of the subscriber number fee.

5.4 Number portability

Provisions on obligations related to number portability are included in section 51 of the Communications Market Act and in FICORA's regulation on telephone number portability [13].

According to the provision, a *telecommunications operator in a telephone network* must ensure without delay that *a user who has entered into a subscriber connection agreement* with it may, if he or she wishes, retain his or her telephone number when changing his or her *fixed-connection* telecommunications operator in the same telecommunications area or his or her *mobile-connection* telecommunications operator.

The scope of the provision on telephone number portability has been restricted so that the law-based right to number portability only concerns users that have entered into a subscriber connection agreement. Therefore, the operator does not have an obligation to port a number from or to such communications services that do not comply with the definition of the subscriber connection for a telephone network. Neither is number portability an obligation from prepaid subscriber connections for which no subscriber connection agreement is made. On the other hand, the provision of the Communications Market Act does not place an obstacle to number portability in these cases.

If the VoIP service fulfils the requirements for the definition of a telephone network subscriber connection, and it uses telecommunications area specific numbers of a fixed network, the number of the service or subscriber connection pertains to the portability of fixed network numbers specific for a telecommunications area. If a mobile number is used for a VoIP service, the number pertains to the portability of mobile numbers. VoIP services provided in the mobile network can then pertain either to the portability of fixed network numbers or mobile network number depending on the type of number.

If numbers are ported to or from a VoIP service not complying with the definition of the telephone network to another service provider, also other obligations relating to portability (such as direct routing and information service) become applicable.

5.5 Transfer of directory information and number presentation

According to section 64 of the Communications Market Act, *a telecommunications operator in a telephone network* has an obligation to provide a user with a service with which the call recipient can see the calling number before answering the call. FICORA's regulation on transfer of subscriber's number information in communications networks [14] prescribes e.g. the form in which the number must be expressed to the subscriber.

The regulation also prescribes that the calling line number must be transferred between telecommunications operators in a telephone service provided in public communications networks. The telecommunications operator must ensure that the transferred calling line number is correct and unambiguous. In addition, the calling line number transferred by the telecommunications operator must within technical limitations be such that it is possible to call back to this access using the number.

The above-mentioned requirements concern all VoIP services which meet the conditions for a telephone subscriber connection and which enable the user to make and receive calls by means of subscriber numbers in a traditional telephone network (E.164 numbers). The requirement also concerns VoIP services which enable unidirectional call establishment and where the user has been given an E.164 number.

Should the calling line number for technical reasons regularly be incorrect, the outgoing national traffic exchange or the incoming international traffic exchange may set the calling line identification restricted in the outgoing signalling irrespective of the default setting received by the exchange. Also in this case the calling line number is transferred to the address exchange but the address exchange will not send the number to the subscriber access, unless a special situation specified in statutes requires such efforts.

A telecommunications operator must, according to section 22 of the Act on the Protection of Privacy in Electronic Communications, offer subscribers a convenient way to bar identification of the caller's subscriber connection. This identification barring service must be offered to the user separately for each outgoing call, at no charge. The subscriber must also be offered a convenient way to bar the identification of the subscriber connection of incoming calls and reception of calls whose subscriber connection identification is barred (the latter demand must be fulfilled if it is technically possible without undue cost).

The obligation to offer calling line identification barring only concerns telephone services, not for example text message services, WAP services or data transfer services. The operator must, however, present the calling line number when disclosing data to emergency service authorities or when complying with the right of the police to access information.

6 UNIVERSAL SERVICE

The Communications Market Act has been amended regarding universal service on 15 February 2007 (70/2007). The amendment brought together the provisions on universal service in the new section 6a.

6.1 Designation of an operator with universal service

According to section 59 of the Communications Market Act, FICORA must issue a decision on the designation of one or several telecommunications operators or operator providing directory inquiry services or telephone directory services with universal service, if it is necessary for ensuring public services in a specific geographic area.

The designation procedures must be efficient, impartial, open and non-discriminatory. The operator in the best position to fulfil the objectives of universal service referred to in section 1 of the Act must be designated an operator with universal service.

FICORA examines the need for designating operators with universal service and issues the eventual designation decisions during 2007.

6.2 Universal service obligation in general telephone services

The content of the universal service obligation is prescribed in section 60c of the Communications Market Act. According to the section, a telecommunications operator whom FICORA has designated as a provider of universal service in general telephone services referred to in section 59, is obliged to provide a subscriber connection to a public telecommunications network at the user's permanent place of residence or location at a reasonable price regardless of geographical position. The telecommunications operator must supply a telephone subscriber connection within a reasonable time after an order.

The subscriber connection provided to the user must allow emergency calls, incoming and outgoing local, long-distance and international calls and other ordinary call services. The subscriber connection must also allow an appropriate Internet connection. A telecommunications operator can provide the above-mentioned services via several subscriber connections if no unreasonable additional costs are incurred to the user.

The content of the universal service obligation is laid down in the Act in a technology-neutrality manner. The provision merely lays down the services the subscriber connection must allow. A detailed determination of the technology to be used for linking the subscriber connection to the public communications network is lacking. The subscriber connection must always function faultlessly at the permanent place of residence or location under the agreement. With the technological advancement, it will be possible to use VoIP service for the purpose of connecting to the public telephone network. The requirements for the reliability of the service are given greater emphasis in these cases.

The determination of a subscriber connection referred to in section 60 c of the Communications Market Act corresponds to the definition of a publicly available telephone service in accordance with Article 2 of the EC Universal Service Directive. It has been maintained above that FICORA has stated that a telephone network referred to in the Communications Market Act has the same meaning as publicly available telephone service of the Universal Service Directive. Correspondingly, a user of universal services can only be provided such VoIP service that complies with the requirements set for a telephone subscriber connection in the Communications Market Act.

6.3 Monitoring of universal service

According to section 60 of the Communications Market Act, FICORA must monitor the pricing of universal services provided by operators it has designated operators with universal service and compare it with the price level of other communications services.

In addition, FICORA must monitor the eventual development of grounds on which the designation of an operator with universal service is based on. If any major changes take place, FICORA must amend its decisions on universal service, if necessary.

7 RIGHTS OF THE USER

Provisions on the rights of the user are included in chapters 6 and 7 of the Communications Market Act and, for some parts, in chapter 6 of the Act on the Protection of Privacy in Electronic Communications.

Provisions on the rights of the user can be divided in three main categories on the basis of their scope as referred to in chapter 3:

- provisions applied to all communications services;
- provisions applied to communications services provided in a telephone network;
and
- provisions applied to subscriber connections for a telephone network.

In some cases, the scope of the provision is further restricted to only apply to subscriber connections for a fixed telephone network or a mobile network or to telecommunications operators providing subscriber connections for a telephone network, who, by FICORA's decision, have a significant market power.

Below is an overall description of the provisions concerning the rights of the user referred to in the Communications Market Act and in the Act on the Protection of Privacy in Electronic Communications. The scope of the provision is written in italics. The Communications Market Act has been amended regarding the rights of the user on 1 March 2007 (759/2006). In context of the amendment, the scope of many provisions of the chapter was extended to concern all communications services.

The provisions of the Communications Market Act regarding the rights of the user must not, in accordance with section 83 a of Act, be deviated by making agreements that are harmful to the consumer. Sections 67 a-67i, 71-75, 78, 79, 79 a and 80 of the chapter apply to other agreements than agreements with consumers only if not otherwise agreed.

7.1 Public standard agreement terms and tariff information

A telecommunications operator must, according to section 66 of the Communications Market Act, draw up standard agreement terms for *agreements on communications services* and use them when making agreements with consumers. The agreements must not include conditions or restrictions which are unreasonable for consumers.

A telecommunications operator must publish standard terms of communications service agreements made with consumers, other standard agreement terms and tariff information on communications services and ensure that they are easily available to users without charge. The standard agreement terms and tariff information must be submitted to FICORA and to the Consumer Ombudsman for information.

7.2 Agreement on VoIP services

Provisions of the Communications Market Act concerning entering into agreements and agreement terms do not depend on the technology used to implement the service but the provisions are applicable as such also to VoIP services. Some of the agreement term provisions are applicable not only to telephone network subscriber connections but also to receiving any other communications service. For consumer users, requirements of the consumer protection legislation are also applicable, but these provisions are not dealt with here.

Entering into agreement

Agreements on *telephone network subscriber connections* and *other agreements on communications services* must be made in writing according to section 67 of the Communications Market Act. The agreement can also be made electronically, provided that the content of the electronic agreement cannot be amended without the consent of the other party and that the agreement remains available to both parties.

Provisions on the minimum requirements of the contents of the agreement are included in section 67(2)-(4).

Deposit, security and limit of use

A telecommunications operator can require from a consumer a deposit or security under the telephone network subscriber connection agreement only at the time of making the agreement and only for special reasons due to foreseeable insolvency or some other comparable circumstance. A deposit or security cannot exceed the total amount of the fees estimated for the provided services before the operator can block the use of the subscriber connection due to neglected payments. A telecommunications operator and consumer can during the agreement period also agree on setting a reasonable limit of use in euros for *a subscriber connection*.

Amending an agreement

A telecommunications operator may amend the fees and other agreement terms referred to in the *communications service agreement* to the detriment of the consumer only:

- 1) on grounds specified in the agreement terms, assuming that the content of the agreement does not essentially change as a whole;
- 2) on the basis of a change in legislation or a consequent decision by the authorities;
- 3) for any other special reason due to an important change in circumstances.

A telecommunications operator also has the right to make minor amendments to the agreement terms, provided they have no effect on the main content of the agreement.

The user has the right to give notice of termination, with immediate effect, of agreement on a communications service if the telecommunications operator gives notification that it is amending the agreement terms. A telecommunications operator must notify the user of any change in the agreement terms and their content no later than one month before the amended terms enter into force.

7.3 Errors, delays in VoIP services and unauthorized use of VoIP services

In context of the reform of regulation regarding the rights of the user in the Communications Market Act, provisions on the telecommunications operator's responsibility for errors or delays in communications services were added to the Act. Also, a provision regarding the shared responsibility between a consumer and a telecommunications operator when the use of communications service has been unauthorised was added to the Act. The provisions correspond to a great extent to the principles followed in general consumer rights and their application is not dependent on the technology used for the implementation of the service.

Delay in the delivery of communication services and the right to refrain from paying

According to section 67 a of the Communications Market Act, there has been a delay in the delivery of *communications services* if the service has not been delivered at the agreed time and this is not a result of the user's actions or attributable to the user. If no agreement has been reached upon the time of delivery, the delivery is delayed if the communications service has not been delivered within a reasonable time after the agreement was made.

The user is obliged to make the payments based on the communications service agreement only after the connection is made available to him or her. After the service has been connected, the user has the right to refrain from paying such part of the payment which is needed as a security of the payment based on the delay.

Standard compensation for the delay of the delivery

According to section 67 b of the Communications Market Act, the user has the right to a standard compensation due to a delay in the communications service. It amounts to at least 15 euros for each week or part of week the service was late but not to more than 120 euros.

However, the user does not have the right to a compensation, if the telecommunications operator proves that the delay has been due to factors beyond the operator's control which the operator could not reasonably have been expected to take into consideration when drawing up the agreement and whose consequences it could not reasonably have been expected to avoid or overcome.

If the delay is caused by a person who has helped or supplemented the telecommunications operator to fulfil the agreement, the telecommunications operator is released from the responsibility only if this person, too, would be free of responsibility in accordance with the section of the Act.

Error in the delivery of a communications service

According to section 67 d of the Communications Market Act, there has been an error in the delivery of communication services if the quality or the method of delivery does not correspond to what has been agreed. Unless otherwise agreed, there is an error in the delivery of a communications service, if:

- 1) the quality of the communications service does not meet the requirements of law or the requirements laid down in a regulation of the Finnish Communications Regulatory Authority issued under it
- 2) the delivery of the communication service has been continuously or repeatedly interrupted for a reason other than that referred to in section 72 and, considering the reason for the interruption and the circumstances, the interruption cannot be regarded minor; or
- 3) the communication service does not correspond to the marketing information about it or differs in other respects from what the user ordinarily may expect in the purchase of such services.

Rectification of error

According to section 67 e of the Communications Market Act, the user has the right to demand that the telecommunications operator rectify the error in the *communications service* or renews the faulty service without any additional cost to the user. However, the telecommunications operator is not obliged to rectify the error if it would incur unreasonable costs or unreasonable inconvenience to the operator.

Although the user would not demand that the error be rectified or the service renewed, the telecommunications operator can rectify the error at its own cost, if it offers to do so immediately when the user notifies of the error. *The user can refuse the rectification, if considerable inconvenience or danger was caused to him due to the unpaid costs or other special reason.*

The telecommunications operator cannot invoke to the fact that it is not given an opportunity to rectify the error, if the user has rectified the error and, considering the circumstances, it is not reasonable to expect that the user would have waited the rectification by the operator.

Price reduction and standard compensation

Unless the rectification of an error in a communications service or a new service is out of the question, or such rectification is not made within reasonable time after the user has notified of the er-

ror, the user has the right to a price reduction equalling the error under 67 e(1) of the Communications Market Act.

Under paragraph 2 of the same section, the user has the right to a standard compensation, if the error in the communications service is based on an interruption to the service. The standard compensation amounts to at least 15 euros for each week or part of week the service was interrupted, but not to more than 120 euros. If standard compensation is paid to the user, she or he is not entitled to a price reduction due to the same interruption referred to in paragraph 1.

Liability for damages resulting from a delay or error

According to section 67 c of the Communications Market Act, the user has the right to receive compensation for damage caused by a delay of *a communications service* that exceeds the amount of the standard compensation referred to in section 67 b of the Act. However, the user does not have the right to a compensation, if the telecommunications operator proves that the delay has been due to factors beyond the operator's control which the operator could not reasonably have been expected to take into consideration when drawing up the agreement and whose consequences it could not reasonably have been expected to avoid or overcome.

According to section 67 f of the Communications Market Act, the user is entitled to compensation for damage that he or she suffers because of an error in *communication services*.

However, the telecommunications operator is responsible for an indirect damage caused by a delay or error only if the damage is due to negligence attributable to the operator. An indirect damage is:

- 1) loss of income caused to the user due to delay or related measures;
- 2) damage caused by an obligation based on another agreement;
- 3) essential loss of the benefit of use of a communications service not causing direct financial or coordinated damage of essential nature.

User's obligation to notify a delay or an error and right to cancel an agreement due to an error or delay

According to section 67 h of the Communications Market Act, the user has the right to cancel a *communication service agreement* due to a delay or an error by the telecommunications operator, if the breach of agreement is fundamental.

Provisions on the user's obligation to notify the telecommunications operator of a delay or error in the *communications service* is included in section 67 i of the Communications Market Act. According to the section, the user must not invoke a delay or an error unless he or she notifies the telecommunications operator of them within a reasonable time after the delivery of the service or after he or she detected or ought to have detected the delay or the error.

Communications services: illegal or unauthorised use

Provisions on the shared responsibility of a consumer and telecommunications operator when the use of a communications service is unauthorised is included in section 79 a of the Communications Market Act. According to the section, the consumer is responsible for the unauthorised use of a communications service only if the unauthorised use is due to the negligence of the consumer, and is not lenient in nature.

The consumer is responsible for the unauthorised use of a communications service to the extent that the communications service is used after the consumer has notified the telecommunications operator of the loss of subscriber connection or other device used for managing the communications service or it being in unauthorised possession of another person.

7.4 Restriction of use of VoIP services and termination of agreement on VoIP services

Measures related to the construction and maintenance of a communications network and information security

Provisions on the interruption or restriction of use of the provision of a *communications service* due to measures related to the construction and maintenance of a communications network and information security are included in section 72 of the Communications Market Act. According to the section, a telecommunications operator can temporarily interrupt the provision of a communications service or restrict the use of a *communications service* without the consent of the user if this is necessary for network construction or maintenance work, or information security. The interruption must be made in a way that causes as little inconvenience to the user as possible and it must be announced well in advance wherever possible.

If the service is interrupted for a reason referred to in paragraph 1 for more than 48 hours in a calendar month, the telecommunications operator must refund the user, on request, the service rate for one month or pay an equivalent reasonable refund. The refund obligation does not apply if the fault is caused by:

- 1) a natural phenomenon or other force majeure, and if the operator also demonstrates that using reasonable measures it has not been able to repair the fault within 48 hours;
- 2) neglect on the part of the user or another person that has used the subscriber connection;
or
- 3) the poor operating condition of terminal equipment or the wiring in the premises.

The obligation to refund the user the subscriber connection rate for one month does not apply to cases where the telephone service operates in the way agreed, but where the customer's Internet connection for some reason is closed or faulty.

Closure of a subscriber connection or restriction on its use for reasons attributable to the user

A telecommunications operator has the right to restrict the use of a *telephone network subscriber connection* or to close it if the user has not paid the matured payment regarding the subscriber connection. The closure right does not apply, if:

- 1) the matured payment is less than 50 euros;
- 2) the matured payment is for receipt of a service other than a communications service;
- 3) the matured payment is paid within two weeks of the date on which the request for payment is sent;
- 4) the consumer proves that the neglect to pay is due to illness, unemployment or other comparable reason beyond his control, and the matured payment is paid within one month from the date on which a request for payment is sent;
- 5) the user submits a complaint about the bill before the due date and pays the undisputed part of the bill by the due date.

An operator also has the right to close a subscriber connection or restrict its use if:

- 1) the user is declared bankrupt or a public authority has found him or her to be otherwise insolvent and the user does not set a reasonable security;
- 2) the user does not comply with the other agreement terms, despite a request to do so; or
- 3) the user has been charged with a disruption of communications using a subscriber connection.

The telecommunications operator has the right to restrict the use of a telephone subscriber connection also if the user exceeds the limit of use referred to in section 61(2). The telecommunicatio-

ns operator must inform the user in advance of the restriction of use and give the user advice on how the restriction of use can be prevented.

The right of the telecommunications operator to close a communications service is included in section 79 a concerning the unauthorised use of a communications service. According to the section, the telecommunications operator has the right to close a service immediately after it has received the notification of loss referred to in the paragraph.

In some cases, the telecommunications operator has the obligation to restrict the use of a communications service. If the communications network or equipment causes danger or interference to the communications network, equipment, user of the communications network or some other person, the operator must take measures to fix the situation and, where necessary, to disconnect the network or equipment from the public communications network. The operators also have the right to take measures immediately to eliminate information security violations and disturbances related to information security.

According to section 77, a telecommunications operator with a telephone network subscriber connection used by another operator to provide a communications service or which collects fees on behalf of another operator must bar the use of the other operator's communications service, on request, if the requirements under section 73 are met and the telecommunications operator requesting the barring is not itself able to bar the use of its communications service.

The telecommunications operator must, under section 73, open the closed telephone network subscriber connection or remove the barring on request immediately after there are no longer grounds for restriction. The telecommunications operator has the right to charge a reasonable fee for re-opening a subscriber connection or removing a restriction on use.

The restrictions of section 73 relating to closure of a subscriber connection or restriction on its use only concern the telephone network subscriber connection. Restrictions set for closure, however, apply also to VoIP services provided in connection with a broadband service.

Cancellation and giving notice of termination of a subscriber connection agreement

Under section 75 of the Communications Market Act, a telecommunications operator has the right to cancel an *agreement on a telephone network subscriber connection* if:

- 1) the subscriber connection has been closed under section 73 for at least one month and the reasons for closure still apply; or
- 2) the user has been sentenced for disrupting communications using a subscriber connection.

A telecommunications operator must cancel an agreement on a telephone network subscriber connection in writing. The operator must also warn the user in advance of the cancellation of the subscriber connection agreement.

The telephone network subscriber connection agreement must include provisions on the validity of the agreement, on the procedure of giving notice of termination of the agreement and on the grounds for giving notice of termination. The user has the right to give notice of termination of a subscriber connection agreement that is valid until further notice to terminate two weeks from the notice. The user may give notice of termination of a subscriber connection agreement orally, but the operator must send the user a written confirmation of the termination notice.

7.5 User's right to select a telephone service provider

According to section 54 of the Communications Market Act, a *telecommunications operator in a telephone network* must, for its part, ensure that users are able to make international calls using the universal international access code 00. This means that users must be able to make international calls using 00 also from VoIP services from which there is access to the telephone network and which provide international call services.

According to section 62 of the Communications Market Act, a *telecommunications operator in a fixed telephone network which FICORA has defined as an operator with significant market power* has an obligation to offer the user the possibility to access the services of a telephone service provider available in the telecommunications area via both an access code per call and a pre-selection that may be bypassed with an access code, if necessary. VoIP services are currently not included in SMP decisions concerning residential customers' or business customers' access to fixed telephone network or national or international telephone services. Therefore, the operator does not have to offer the user the right to select the telephone service provider for VoIP services with a pre-selection agreement or per call access code as referred to in section 62.

7.6 Call barring services

According to section 79 of the Communications Market Act, the telecommunications operator must, on the request of the user, without compensation bar the use of a *telephone network subscriber connection* for purposes other than a communications service and any outgoing traffic of a specific type from the subscriber connection if the barring is technically easy to implement. If the barring is later removed on the request of the user, the telecommunications operator may charge a fee for doing so. FICORA has, under section 79(2) issued a regulation on barring categories in telecommunications 35 [15], which gives further regulations on the minimum call-barring categories for outgoing traffic from the subscriber connection that must be provided to the user.

In VoIP services that meet the requirements of a telephone network subscriber connection the operator must provide barring services referred to in section 79 of the Communications Market Act and FICORA's regulation no. 35. The scope of the regulation on barring categories complies with the scope of the numbering regulation [10], as barring implementation is based on telecommunications which is routed according to E.164 numbers and short message service numbers assigned in the numbering regulation. The regulation concerns traffic that the user selects with these numbers regardless of the addresses (such as SIP or IP addresses) or the technology used for rerouting of the messages. This means that rerouting implemented with ENUM does not eliminate the obligation to provide barring. The regulation does not concern telecommunications selected by other means, for instance, by IP or SIP addresses.

The user may, if he or she so desires, use the prepaid subscriber connection, which is paid in advance, entirely anonymously when the user is not identified when he or she acquires the subscriber connection. If the prepaid subscriber connection agreement is not made in writing, the user may not be identified in a reliable way. Therefore, the regulation does not apply to a public telephone network prepaid service subscriber connection, which is paid in advance, unless there is a subscriber connection agreement in writing. The agreement unambiguously defines the user who has the power to decide on the features to be acquired to the subscriber connection.

7.7 Itemized invoice

According to section 80 of the Communications Market Act, a telecommunications operator must, without charge, provide itemized bills on the use of the *telephone network subscriber connection*, and, if the bill is more than 50 euros, without being separately requested to do so. The bill must without difficulty indicate at least the following billing items:

- 1) local calls and network charges collected for calls referred to in paragraphs 2-4;
- 2) long-distance calls;
- 3) international calls;
- 4) mobile calls;
- 5) subscriber connection rates;
- 6) text messages, picture messages and other messages;
- 7) data transfer services.

Irrespective of the amount of the bill, the telecommunications operator must itemize the fees for services other than communications services without being requested to do so and without charge. Calls to freephone numbers must not be indicated in an itemized bill. The user has the right to obtain a non-itemized bill on request.

Provisions on call itemization of a bill are included in section 24 of the Act on the Protection of Privacy in Electronic Communications. A telecommunications operator may release the call itemization of a bill only in cases provided in the relevant section. An operator must release the call itemization of a bill if the subscriber so requests. Such an itemization must be provided in a form where the last three digits of the phone number are obscured or the itemization otherwise rendered such that the other party of the communication cannot be identified. The operator may, if the user so requests, release the complete call itemization of a bill. A call itemization for a subscriber connection may not contain identification data for services for which no fee is charged.

A bill incurred for a VoIP service that meets the requirements for a telephone network subscriber connection must be itemized according to section 80 of the Communications Market Act for those parts the billing is based on the usage volume of the subscriber connection. Call itemization of a bill as referred to in the Act on the Protection of Privacy in Electronic Communications must be released if the made connections are relevant with regard to the bill. If the volume or duration of the made connections is not relevant with regard to billing, no call itemization must be released.

7.8 Providing directory inquiry and telephone directory services

According to section 57(1) of the Communications Market Act, a telecommunications operator with which a user *has made an agreement on the use of a subscriber connection for a fixed telephone network or a mobile network* must ensure that the contact information on the user's name, address and telephone number is collected and published in a generally available, comprehensive and reasonably priced telephone directory that is updated at least once a year. The telephone directory may be in printed or electronic form. According to subsection 3, separate provisions are issued on the right of a user to forbid the publication of his or her contact information in a telephone directory.

As referred to in section 25 of the Act on the Protection of Privacy in Electronic Communications, a telecommunications operator must give any subscriber who is a natural person the opportunity to prohibit, at no charge, the inclusion of any part or all of his or her contact information in a telephone directory, other subscriber directory or directory inquiry service. Any subscriber who is a natural person also has the right to prohibit, at no charge, the disclosure of his or her contact information to a third party. The telecommunications operator and any company providing a subscriber directory service and directory inquiry service that has received such contact information under section 58 of the Communications Market Act must, if any subscriber who is a natural person so requests, remove and amend incorrect information at no charge. An operator must also allow companies and other organizations entered in the telephone directory, other subscriber directory or directory inquiry service the right to have their contact information inspected and removed, and incorrect contact information amended.

A telecommunications operator providing a VoIP service which meets the requirements of a telephone network subscriber connection must, with regard to users that have made an agreement on the use of the subscriber connection, provide a telephone directory service as referred to in section 57 of the Communications Market Act, and, the user has the right to prohibit the disclosure of his or her contact information as referred to in the Act on the Protection of Privacy in Electronic Communications.

7.9 Tone (DTMF) dialling

According to section 64 of the Communications Market Act, a telecommunications operator in a telephone network must provide a user with tone dialling (DTMF, dual-tone multi-frequency operation). Tone dialling means not only number dialling but also the possibility to use tone dialling for other purposes (such as banking services).

VoIP services must provide tone dialling when the service is connected to the telephone network.

8 OBLIGATIONS TO ASSIST A PUBLIC AUTHORITY

A telecommunications operator providing VoIP services has the obligations to assist a public authority and a right to receive a compensation as referred to in chapter 9 of the Communications Market Act.

8.1 Preparedness in the event of emergency

According to section 90 of the Communications Market Act, a telecommunications operator must, by means of contingency planning and preparations for exceptional circumstances, ensure that its activities will continue with the minimum disruption even in the exceptional circumstances referred to in the Emergency Powers Act (1080/1991)[16] and in disruptive situations under normal circumstances.

8.2 Providing emergency services

Obligation to provide emergency services is imposed on *telecommunications operators in a telephone network* as referred to in section 55 of the Communications Market Act. According to the provision, the operators must, *for their part*, ensure that users are able to access the universal emergency call number 112 and the police emergency number 10022 assigned by FICORA free of charge. FICORA has also issued a regulation on routing and ensuring emergency traffic [17]. The regulation contains, among other things, provisions on routing of emergency calls to the correct emergency response centre, on ensuring emergency calls, and on priority of emergency calls.

The nature and characteristics of the offered VoIP service have an impact on whether or not the service must enable users to make emergency calls. If it is possible to make calls in the VoIP service, the user must also be able to call the universal emergency call number. Correspondingly, if the offered service only comprises receipt of calls, provision of emergency calls is not necessary. According to FICORA's regulation on emergency traffic, the operator must, however, inform its customers of possible telephone service-related restrictions concerning the requirements for emergency calls laid down in the regulation.

According to the regulation, calls from each geographic area to the general emergency number 112 and to the police emergency number 10022 must be routed to the emergency response centre specified for the relevant area also when the user dials an area code before the emergency number.

If it is impossible to locate the subscriber by means of network technology, the operator must offer the user a possibility to notify the position at each phase at least with the municipality's accuracy and route the emergency calls to the emergency response centre based on this notification. Location information given by the user is not necessarily correct, which means that the system is not as reliable as when location data is received from the network. A telecommunications operator in the telephone network should, within technical limits, try to construct the systems so that automatic location of the subscriber is possible.

The telecommunications operator must see to the eventual rerouting of emergency calls made from a corporate network (company's internal IP network, PABX network or other corresponding network), and the eventual number modification in the originating centre or equivalent so that the calls can be routed on the basis of the information received from the above-mentioned network to the emergency response centre determined for the geographical area of the user. FICORA has issued a recommendation on routing of emergency traffic from corporate networks_[18]. If it is impossible to locate the subscriber by means of network technology, it is recommended that the routing numbers are determined according to place of installation. The operator may also offer the user a possibility to notify of his or her position at each phase at least at the accuracy of municipality. The routing numbers are then composed according to the user's notification about the relevant municipality. In case the corporate network has been implemented by means of mobile stations, it is recommended that the mobile operator routed emergency calls from the corporate's mobile stations directly to the emergency response centre through the mobile network.

According to section 97 of the Communications Market Act, a telecommunications operator must without charge supply a public authority with any information *in its possession* necessary for the public authority to discharge duties prescribed to it for maintaining rescue activities as provided for separately. Provisions on disclosing information to emergency services authorities are provided in section 35 of the Act on the Protection of Privacy in Electronic Communications. Under this section, a telecommunications operator is obliged to disclose the following information to emergency services authorities: identification data and location data of the subscriber connection and terminal device from which an emergency call is placed, and information on the subscriber, user and installation address; and identification data and location data showing the location of the user terminal device and subscriber connection to which the emergency call applies if, in the considered opinion of the authority receiving the emergency call, the user is in obvious distress or immediate danger.

A telecommunications operator providing a VoIP service must disclose the location data of the user to emergency authorities within the limits of the used technology and the emergency authorities' systems. If the VoIP service enables that calls from a mobile network and fixed network by using the same calling party's mobile number, emergency calls must primarily be routed via mobile networks.

8.3 Telecommunications interception and monitoring

In section 95 of the Communications Market Act, *all telecommunications operators providing a network service and a communications service* are obliged to assist authorities to carry out telecommunications interception and monitoring referred to in the Coercive Criminal Investigation Means Act [19] and in the Police Act [20]. The operators must equip their communications networks and communications services with technical instruments and features that allow the interception of electronic communications and telecommunications monitoring.

According to section 96, a public authority performing interception of the content of communications or of intercept-related information (The National Bureau of Investigation) must submit to FICORA a proposal on the operational requirements that the communications network and communications services have to meet. In individual cases the Finnish Communications Regulatory Authority must decide on the technical requirements imposed on an instrument or feature used in interception of the content of communications or of intercept-related information after consulting the telecommunications operator and the public authority referred to in subsection 1. The telecommunications operator must make every effort to ensure that the technical instruments and features are installed in the communications network or communications service before the introduction of the communications network or communications service.

According to section 97, a telecommunications operator must without charge supply a public authority with any information in its possession necessary for the public authority to discharge duties prescribed to it for maintaining public order and security and rescue activities as provided for separately.

A telecommunications operator can provide a service whose VoIP service number is shared by a subscriber connection or service number provided in another network. To be prepared for these cases, the authority asking for telecommunications interception and monitoring ought to ask the operator whether the number in question is of such type. In these cases, the authority must also decide which subscriber connection type the licence is applied for, or perhaps for both types. The telecommunications operator must for its part support the smooth implementation of the necessary accounts.

8.4 Expense compensation

Preparedness in the event of emergency

According to section 94 of the Communications Market Act, a telecommunications operator has the right to receive a compensation for costs incurred in contingency preparation from the national emergency supply fund referred to in the Security of Supply Act [21] only if the costs are signifi-

cant with regard to the nature and extent of the activities of the telecommunications operator or if the costs are incurred from maintenance of the information system on priority subscribers and from technical items ordered at the request of the Ministry of Transport and Communications. The compensation for costs is decided by the National Emergency Supply Agency upon the proposal of the Ministry of Transport and Communications.

Emergency services and telecommunications interception and monitoring

According to section 98, a telecommunications operator's right to receive a compensation from State funds applies only to the direct costs of the investment, use and maintenance of systems, equipment and software acquired to meet the needs notified by a public authority. The telecommunications operator's right to receive a compensation from State funds also covers the direct costs incurred from any measures ordered by a public authority. Decisions on the compensation for costs incurred are made by the Finnish Communications Regulatory Authority. A telecommunications operator must not use any systems, equipment or software funded by a public authority for its commercial activities. The compensation referred to in section 98 for the provision of emergency services, and for the implementation of telecommunications interception and monitoring applies only to requirements of chapter 9 of the Communications Market Act. Requirements of section 55 as well as FICORA's regulations must be implemented without compensation.

9 TECHNICAL REGULATIONS ON COMMUNICATIONS NETWORKS AND SERVICES

On the basis of the Communications Market Act, FICORA may issue further technical regulations on communications networks and services. Some of the requirements for VoIP services included in the technical regulations have already been dealt with earlier in this memorandum. This chapter covers the essential requirements not dealt with before and a list of the most important regulations with regard to VoIP services.

- FICORA 9 B/2004 M Obligation to report information security incidents and faults and disturbances in public telecommunications
- FICORA 27 E/2005 M Structure, access points, priority rating, redundancy, and Human Factors aspects of a communications network
- FICORA 28 F/2005 M Interconnectivity, interoperability and signalling in communications networks
- FICORA 29 D/2005 M The performance capacity of communications networks and communications services
- FICORA 30 D/2003 M Power supply for a communications network
- FICORA 31 C/2003 M Technical aspects of charging in communications networks
- FICORA 32 K/2007 M Numbering in a public telephone network
- FICORA 33 C/2005 M Routing and ensuring emergency traffic
- FICORA 35 L/2007 M Barring categories in telecommunications
- FICORA 41 C/2004 M Technical documentation of communications networks and services
- FICORA 43 C/2004 M Electronic protection of a communications network
- FICORA 46 F/2007 M Telephone number portability
- FICORA 47 B/2004 M Information security of telecommunications operators
- FICORA 48 B/2004 M Physical protection of a communications network
- FICORA 49 C/2005 M Transfer of subscriber's number information in communications networks
- FICORA 50 C/2007 M Management of communications networks

The list corresponds to the situation at the time this memorandum was published. All FICORA Regulations can be found at www.ficora.fi.

9.1 Power supply for communications networks

FICORA' regulation on power supply for a communications network [22] prescribes the power supply for network components and telecommunications terminal equipment. Power supply for telecommunications terminal equipment seeks to ensure telephone traffic from the user's basic access

also during electricity break. Power supply for telecommunications terminal equipment is, however, not required in cases where the telephone service is implemented by means of IP technology, as such requirement is regarded to be technically and economically unreasonable. A telecommunications operator providing a VoIP service must, however, ensure that the customers are aware of the restrictions in the telephone service during electricity break.

9.2 Information security

For information security issues, a VoIP service provider must study at least the following three regulations:

The aim of the regulation on the obligation to report information security incidents and faults and disturbances in public telecommunications [23] is to provide FICORA with information required in the supervision of telecommunications, detection of information security violations and formulation of the picture of the situation regarding national information security. The information may also be used to develop legal provisions. The aim of the provisions is to improve the operators' information to customers about information security threats and prevention on the threats.

The regulation on information security of telecommunications operators [24] applies to operations relating to the implementation of public communications services of telecommunications operators as well as to systems, communications networks and communications services used by telecommunications operators for public telecommunications. It prescribes how the operators must maintain the information security related issues.

The regulation on physical protection of a communications network [25] applies to telecommunications operators' premises and networks used for public telecommunications. Physical protection concerns, among other things, locks, protection against break-in, and passage control. The premises referred to in this Regulation are buildings and groups of buildings in the operator's possession which are used for public telecommunications, and flats, rooms, cabinets and other corresponding restricted parts of a building which are in the operator's possession in other buildings and used for public telecommunications.

10 MARKET DEFINITION AND ECONOMIC REGULATION OF THE COMMUNICATIONS MARKETS

10.1 General principles of market definitions and market analyses

Chapter 3 of the Communications Market Act contains provisions which ensure effective competition on the communications markets. At regular intervals the Finnish Communications Regulatory Authority must perform a market analysis of relevant wholesale and retail markets in order to establish the competitive situation. The market analysis is based on Commission recommendation containing a list of markets to be analysed.⁶ The recommendation comprises seven retail markets for products and services provided to consumers and end users, and eleven wholesale markets for products and services provided between the operators. Commission recommendation does not contain VoIP services.

By decision, the Finnish Communications Regulatory Authority must declare a telecommunications operator to be an operator with significant market power if, on the basis of market analysis, it is seen in a particular market to exert economic influence, alone or with others, that allows it to operate, to a considerable extent, independently of competitors, consumers or other users. By decision, FICORA must impose on an operator with significant market power obligations that are needed to eliminate barriers to competition or to promote competition. The obligations must be in correct proportion to the aim being addressed. Sections 18(2) and 20 of the Communications Market Act contain a complete list of obligations that may be imposed on an SMP operator. FICORA imposes the obligations separately on each SMP operator on each analysed market, and the im-

⁶ Commission recommendation of 11 February 2003 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services

posed obligations may vary among operators and markets. Therefore, the obligations currently applied and currently in force should be checked in FICORA's decisions.

FICORA has issued nearly 500 SMP decisions which can be found in Finnish on the website at <http://www.ficora.fi/suomi/tele/HMV.htm>. The English versions can be found at <http://www.ficora.fi/englanti/tele/smp.htm>. The website also contains additional information about the procedure related to significant market power and SMP decisions.

FICORA supervises that the operators comply with the SMP obligations. FICORA may, on own initiative or at request of another operator or user, examine whether or not the prices set by the SMP operator are non-discriminatory and reasonable. Where necessary, FICORA may oblige an operator to stop applying discriminatory conditions or to set the prices at a reasonable level. Since 1 March 2005 FICORA has been able, in an individual case, to decide on the maximum price to be charged. Pricing supervision is focused on monitoring of the operators' mutual pricing. Newcomers' entrance to the market is possible when the operators' mutual pricing is reasonable and equitable. This creates pressure to decrease prices charged from end users.

Economic regulation supports the provision of VoIP services. Regulation of fixed network wholesale markets creates better conditions for competitive broadband provision, which for its part, enhances and makes the provision of VoIP services easier in Finland. The aim of regulation is to create favourable conditions also to commercial VoIP services which are not tied to a certain Internet operator.

10.2 Application of SMP obligations to VoIP services

VoIP services are not included in the SMP decisions on retail markets currently in force. Therefore, SMP obligations imposed on the retail market (M1-M7) do not concern VoIP services at the moment.

The markets for call origination, call termination, transit service (M8, M9 and M10) are relevant for interconnection whereas the market for call termination on individual mobile networks (M 16) is relevant for telephone traffic and interconnection of telephone traffic. FICORA regards that VoIP traffic is also voice traffic. Therefore, SMP obligations set on markets 8, 9, 10 and 16 apply also when the SMP operator has implemented the service by means of VoIP technology. VoIP interconnection is further dealt with in chapter 5.1.

Other SMP decisions on the wholesale market do not directly concern VoIP services. However, VoIP service providers have the right to lease local loops and broadband access from SMP operators.

10.3 VoIP and market data collection

FICORA collects data on communications markets for SMP decisions and for general market monitoring. The data is collected at regular intervals from one to four times annually.

FICORA has collected data on VoIP markets since autumn 2004. Currently, information on VoIP is inquired quarterly in context of the broadband survey. Information is collected from broadband service providers and independent VoIP operators. The inquiries have concentrated on the amount of VoIP connections and traffic volume.

10.4 Monitoring of market effects of VoIP services in Europe

The development and exploitation of VoIP services is closely monitored also in the European Union. In June 2004, the Commission published a document on the treatment of VoIP services and their regulation⁷. In February 2005, the European Regulators Group (ERG) gave a common statement on the regulative approach and promotion of VoIP services. The Commission will publish a new recommendation on relevant markets at the end of 2007. In this context, VoIP and other new

⁷ COMMISSION STAFF WORKING DOCUMENT on The treatment of Voice over Internet Protocol (VoIP) under the EU Regulatory Framework, An Information and Consultation Document, 14 June 2004

technologies will have been considered better than before. FICORA has participated actively in the reform of the recommendation.

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