Viestintävirasto
Kommunikationsverket
Finnish Communications
Regulatory Authority

FICORA 58/2009 M

UNOFFICIAL TRANSLATION

Regulation

ON THE QUALITY AND UNIVERSAL SERVICE OF COMMUNICATIONS NETWORKS AND SERVICES

Issued in Helsinki on 20 October 2009

The Finnish Communications Regulatory Authority (FICORA) has, under section 129 of the Communications Market Act of 23 May 2003 (393/2003), prescribed as follows:

Section 1
Scope of application

This Regulation lays down provisions in

- Chapter 1 on the performance and quality of public communications networks and public authority networks and communications services provided therein, as well as performing measurements of them;
- Chapter 2 on the monitoring of quality parameters with regard to customer service of a communications service provided in a public communications network, and;
- Chapter 3 on the technical definition and measurement of the minimum speed of an appropriate Internet connection pertaining to the universal service obligation.

Section 2
Definitions

In this Regulation, a communications network or service component means a network element, device or information system of which a communications network or service is comprised, or which it utilizes.

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In this Regulation, Internet access service means a communications service through which a connection can be established to the Internet, and the services available on the Internet can be accessed.

In this Regulation, telephone service means a communications service enabling a user to make and receive national and international calls and to use emergency services by means of a number or numbers specified in the national or international numbering plan.

In this Regulation, DVB-T network service means digital terrestrial television broadcasting services in accordance with the DVB-T (Digital Video Broadcasting, Terrestrial) standard.

In this Regulation, DVB-C network service means digital cable television broadcasting services in accordance with the DVB-C (Digital Video Broadcasting, Cable) standard.

In this Regulation, the main transmitter of the DVB-T network means transmitters in the DVB-T network which are used to create the coverage area of the digital television network.

In this Regulation, a gapfiller of the DVB-T network means, in general, transmitters having significantly lower power than the main transmitters which are used to ensure the local reception of the transmissions of the terrestrial digital television network in areas where the signal sent by the main transmitter is weak.

In this Regulation, super head end means equipment connected between reception antennas or other signal sources as well as the head ends of the cable television network to process signals distributed in the cable television network.

In this Regulation, head end means equipment connected between reception antennas or other signal sources and another component of the cable television network to process signals distributed in the cable television network.

Chapter 1

Performance and quality of communications networks and services

Section 3

Requirements for communications networks and services

A telecom operator must monitor the performance of the communications network or service components it administers, and the quality and service reliability of the communications networks and services it provides.

In order to monitor the performance of a network, a telecom operator must measure the utilization rate of the capacity of its communications network or service components. A telecom operator must determine and document the limits for the utilization rate of capacity in order to ensure the quality of service. If they should be exceeded, a telecom operator must take appropriate measures to ensure that the capacity of the network is sufficient.

A telecom operator must be able to verify, by means of separate measurements, the performance of the components of its communications network or service and the quality of the communications services it provides. If necessary, a telecom operator must begin the measurements.

The measurements of the performance of the network and traffic must not cause disturbance to other forms of network usage.

A telecom operator must have the appropriate mechanisms listed in sub-sections 1 and 2 for handling the results of the measurements. A telecom operator must document these mechanisms.

Section 4

Special requirements for telephone services

A telecom operator must measure and compile statistics on the availability of the components of communications networks and services it controls which affect the availability of telephone services.

A telecom operator must dimension the components of communications networks and services it controls and which affect the functionality of telephone traffic in such a manner that the unsuccessful call ratio is no more than 1 per cent of all call attempts. The ratio must take into consideration the measured values of traffic quantities as well realistic projections for development over the long them. A telecom operator must compile statistics on call barring of its telephone service on an annual basis.

A telecom operator must be able to measure and compile statistics of the call set-up time separately for national and international calls.

A telecom operator must be able to clarify the reasons for unsuccessful call set-up, dropped calls and imperfect call clearing.

Section 5

Special requirements for internet access services

A telecom operator must be able to measure, if necessary, the connection speed of the Internet access service it provides.

A telecom operator must monitor and maintain the performance of its network in order to fulfil its agreement with the customer on the quality and features of Internet access service.

A telecom operator must measure the response time of the DNS resolver, access control and DHCP services it provides. A telecom operator must be able to compile statistics of the measurements it has performed.

Section 6

Special requirements for telephone services

The requirements included in this section are to be applied to DVB-T network service to the extent to which it is being provided in the digital terrestrial mass communications network for carrying out television operations requiring a programme licence referred to in section 7 of the Act on Television and Radio Operations, and to DVB-C network service to the extent to which it is being provided in the cable television network for the

purpose of the transfer, provision and distribution of television programmes and ancillary and supplementary services related to these programmes referred to in Section 134 (amended 1329/2007) of the Communications Market Act. Sub-section 5 of this Section applies to a communications service concerning the above-mentioned functions.

The average availability of a DVB-T network service transmitter, calculated on a six-month moving average basis, must be at least 99.5 per cent for main transmitters, and 98.5 per cent for a gapfiller. Unavailability refers to the duration during which the transmission power of a transmitter has dropped more than 3 dB or the transmission power of a service transmitter is more than 6 dB below the power of a normal transmitter. Statistics must be compiled on the availability rate of main transmitters and gapfillers on a monthly basis.

The average availability of a channel-specific transmission power of DVB-T network service, calculated on a six-month moving average, must be at least 99.5 per cent. Encoding, multiplexing, remultiplexing and transfer are to be taken into consideration when monitoring availability. Statistics must be compiled on availability rates on a monthly basis.

The average availability of a channel-specific transmit power of a DVB-C network service with respect to super head end, calculated on a six-month average basis, must be at least 99.5 per cent, and that of other head ends at least 98.5 per cent. Head ends, encoding, multiplexing, remultiplexing and transfer are to be taken into consideration when monitoring the availability. Statistics must be compiled on availability rates on a monthly basis.

Network or service operators operating in DVB-T or DVB-C networks must monitor the effects of communications network or service components they administer on the service components of a television service. These are video, audio, timing, subtitling, EPG and teletext components.

If necessary, both DVB-T and DVB-C network service providers must be able to monitor, separately for each service, the impairment of the quality of television services caused by a network service used for the transmission of television services in accordance with ITU-R BT.500.

Service providers of DVB-T network service and DVB-C network service must, on a monthly basis for each channel, measure and compile statistics of the use of the capacity of video components. They must also provide a monthly average of the use of capacity based on broadcasting times.

DVB-C network service must meet the requirements set in standard IEC 60728-1 for performance and quality within the limits of national implementation technology.

Chapter 2
Quality of customer service

Section 7
Quality monitoring

A telecom operator must measure the supply times of telephone and broadband subscriptions it has delivered to a fixed location, and store data on the supply times. In addition, a telecom operator must measure and provide quarterly statistics on the delivery reliability of these subscriptions.

In addition, a telecom operator must measure and provide quarterly statistics on the response time for the customer telephone service it provides.

Chapter 3
Universal service

Section 8
Verification of the quality of universal service

A service operator designated to provide universal service must be able to verify that the Internet access service it provides as universal service meets the special requirements concerning service quality referred to in section 60 c of the Communications Market Act and decree 732/2009 of the Ministry of Transport and Communications.

The verification must be based on a measurement taken of terminating data transmission direction and from a point located in the network of a universal service provider to the customer's subscription. The measurements must be based on the UDP or TCP protocol and respectively either the payload of UDP or TCP traffic is to be used as a basis of calculation.

The duration of the measurement is 24 hours. It is not compulsory for the measurement to be continuous. Unless continuous measurement is applied, the following sampling must be used:

- The measurement interval must be less than two minutes.
- The duration of a sample must be at least 10 seconds.

Section 9

Transitional provisions and entry into force

This regulation enters into force on 1 January 2010 and will remain in force until further notice.

The regulation repeals FICORA’s Regulation FICORA 29 D/2005 M of 1 April 2005 on the performance capacity of communications networks and services. In addition, this regulation and FICORA Regulation 57/2009 M on the maintenance of communications networks and services and procedures in the event of faults and disturbances which will enter into force on 1 January 2010, repeal FICORA's previous Regulation 50 C/2007 M of 24 August 2007 on management of communications networks.

Section 8 of the Regulation will be applied from 1 July 2010.

Section 10

Information and publication

This Regulation is included in the Series of Regulations issued by the Finnish Communications Regulatory Authority and it can be obtained from the FICORA Customer Service Office:

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