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## Disturbances in telecommunications services

### Content

Chapter 1 General provisions .....	2
1 Objective of the Regulation .....	2
2 Scope of application .....	2
3 Definitions .....	3
Chapter 2 Detection and management of disturbances .....	3
4 Monitoring functionality and information security .....	3
5 Management of events disturbing or threatening functionality or information security .....	3
6 Notifying the Finnish Transport and Communications Agency of a reduced management capacity .....	4
7 Submitting disturbance management contact details to the Finnish Transport and Communications Agency .....	4
8 Management of customer notifications .....	4
9 Management of modifications .....	5
Chapter 3 Notifications to users .....	5
10 Notifying on information security incidents .....	5
11 Threshold of notifying on functionality disturbances .....	5
12 Notifying on functionality disturbances online and by phone .....	5
13 Notifying on functionality disturbances through direct contact to customers .....	6
14 Content of functionality notifications .....	6
Chapter 4 Notifications to the Finnish Transport and Communications Agency .....	6
15 Section 15 Notifying on information security incidents .....	6
16 Severity rating of functionality disturbances .....	6
17 Obligation to notify the Finnish Transport and Communications Agency of functionality disturbances .....	9
18 Preliminary notification of functionality disturbances .....	9
19 Follow-up notifications of functionality disturbances .....	9
20 Section 20 Final reporting of functionality disturbances .....	10
Chapter 5 Statistics .....	11
21 Functionality statistics .....	11
22 Information security statistics .....	11
Chapter 6 Signatures .....	11
23 Signatures .....	11

## **Chapter 1 General provisions**

### **1 Objective of the Regulation**

The objective of this Regulation is to:

1. ensure the detection of disturbances and threats to public communications networks and services;
2. contribute to a quick removal of disturbances;
3. ensure that users are informed about disturbances; and
4. ensure that the Finnish Transport and Communications Agency is informed about disturbances.

### **2 Scope of application**

This Regulation is applied to disturbances in public telecommunications services, i.e. events that disturb or threaten functionality or information security.

The Regulation covers the following:

1. Chapter 2: control and maintenance of networks and services; detection, management and prevention of disturbances; management of disturbance notifications by customers as well as management of modifications;
2. Chapter 3: informing users of disturbances;
3. Chapter 4: informing the Finnish Transport and Communications Agency of disturbances;
4. Chapter 5: compilation of statistics on disturbances.

The scope of this Regulation is limited as follows:

1. the Regulation is not applied to temporary provision of communications networks or services or to temporary capacity;
2. sections 10 and 15 and Chapter 5 are not applied to information security incidents covered by Regulation 611/2013<sup>1</sup> of the European Commission on personal data breaches;
3. Chapters 4 and 5 are applied to a mass communications service in a mass communications network in so far as it concerns the transfer and broadcasting of public service television programmes referred to in section 7(1) of the Act on the Finnish Broadcasting Company (1380/1993) or television programmes for several different audience groups broadcast by virtue of a national programming licence referred to in section 211 of the Act on Electronic Communications Services or any provisions issued under it;
4. Chapters 4 and 5 are applied to a mass communications service in a mass communications network in so far as it concerns the transfer or broadcasting of public service radio programmes referred to in section 7(1) of the Act on the Finnish Broadcasting Company or the transfer or broadcasting of radio programmes subject to a programming licence referred to in section 34 of the Act on Electronic Communications Services if the licence specifies a population coverage of at least 95 per cent; and
5. Chapters 4 and 5 are not applied to radio broadcasters whose licence specifies a population coverage of less than 95 per cent.

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<sup>1</sup> Commission Regulation (EU) No 611/2013 of 24 June 2013 on the measures applicable to the notification of personal data breaches under Directive 2002/58/EC of the European Parliament and of the Council on privacy and electronic communications:

<https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:173:0002:0008:EN:PDF>

### **3 Definitions**

For the purposes of this Regulation:

1. *DVB-C network service* means a digital cable television broadcasting service in accordance with the DVB-C (Digital Video Broadcasting, Cable) standard;
2. *internet access service* means a communications service referred to in section 3(1)(3) of the Act on Electronic Communications Services;
3. *mass communications service* means the transfer or broadcasting of television or radio programmes and related ancillary and supplementary services;
4. *other communications service* means a communications service referred to in section 3(1)(37) of the Act on Electronic Communications Services that does not belong to any other service category defined in this section;
5. *e-mail service* means the transfer, transmission or reception service of electronic mail messages that uses internet name services in the transmission of messages;
6. *short message service, or SMS service*, means a communications service provided in the mobile network that enables the sending and reception of short messages only containing alphanumeric characters and special characters; and
7. *public telephone service* means a communications service referred to in section 3(1)(42) of the Act on Electronic Communications Services.

## **Chapter 2 Detection and management of disturbances**

### **4 Monitoring functionality and information security**

A telecommunications operator must constantly monitor its communications networks and services in order to detect and prevent events that may disturb or threaten their functionality or information security. The telecommunications operator must apply power supply and circumstance monitoring referred to in the Finnish Transport and Communications Agency's Regulation on resilience of telecommunications services to the equipment facilities available to the operator.

The telecommunications operator must have appropriate systems and procedures for the reception and analysis of internal and external disturbance notifications, software alerts, hardware alerts, device status alerts and other communications network or service monitoring notifications.

Updated documentation must be prepared and maintained on the monitoring mechanisms of networks and services.

### **5 Management of events disturbing or threatening functionality or information security**

The telecommunications operator must prepare and maintain documented instructions for procedures on how to address events that disturb or threaten the functionality or information security of communications networks or services and for minimising their impact and removing them without undue delay.

The instructions for procedures must contain the following:

1. organisation of functionality and information security management;
2. definitions of the responsibilities of various operators, containing at least the information necessary for reaching failure reparation personnel and persons managing information security;
3. locations of emergency units and equipment; and

4. instructions for securing emergency communications through temporary arrangements.

Any telecommunications operator owning communications networks or providing services, in which a disturbance of severity rating A or B referred to in section 17 of this Regulation may occur, must, on the basis of disturbance notifications, hardware alerts and other monitoring data, be prepared, at any time of the day, to take necessary measures to remove any significant disturbance or a threat thereof or to minimise its impact.

## **6 Notifying the Finnish Transport and Communications Agency of a reduced management capacity**

Any telecommunications operator owning communications networks or providing services, in which a disturbance of severity rating A or B referred to in section 17 of this Regulation may occur, must, without undue delay, inform the Finnish Transport and Communications Agency of any significant reduction in its capacity to manage functionality and information security.

The notification must state the reason for the reduction and the measures through which the telecommunications operator is seeking to correct the situation.

The telecommunications operator must provide regular reports to the Finnish Transport and Communications Agency on the progress of the corrective measures of the situation referred to in subsection 1 and inform the Finnish Transport and Communications Agency without undue delay once the significant reduction has been completely eliminated.

The notifications must be made through the Finnish Transport and Communications Agency's online system or by e-mail. Furthermore, a notification of the initial detection of a reduced management capacity must be made by telephone.

## **7 Submitting disturbance management contact details to the Finnish Transport and Communications Agency**

The telecommunications operator must give the Finnish Transport and Communications Agency, separately for each communications service, the contact information through which the Finnish Transport and Communications Agency may ask the telecommunications operator to provide more details about disturbances in events where the functionality or information security of communications networks and services is disturbed. The contact information must also include the contact information for the network or service operations centres of the telecommunications operator.

Any changes in the contact information must be notified without undue delay.

The contact information must be given primarily through the Finnish Transport and Communications Agency's online system or on the form set out in Annex 1 to this Regulation.

## **8 Management of customer notifications**

The telecommunications operator must be prepared to receive disturbance notifications from customers with the following minimum requirements:

1. a person representing the telecommunications operator who receives the notifications must be reachable by phone on weekdays during office hours; and

2. notifications may be submitted online or as messages on an answering machine on all days of the week 24 hours a day.

A customer notification of a disturbance must be communicated to the organisation responsible for correcting the situation within one business day of the notification.

## **9 Management of modifications**

The telecommunications operator must carry out modifications to the network, software, hardware, configuration, interface and equipment facilities in a controlled and systematic manner to cause the least possible disturbance to the operation of public communications networks and services.

Sufficient time must be reserved for carrying out modifications, maintenance and updates to allow a controlled manner of executing a planned operation.

The telecommunications operator must define and document the processes and practices guiding the modifications.

## **Chapter 3 Notifications to users**

### **10 Notifying on information security incidents**

Regulation 611/2013 of the European Commission shall apply to notifying users of information security incidents, where appropriate.

### **11 Threshold of notifying on functionality disturbances**

The telecommunications operator must notify users at least of the disturbances affecting the functioning of its communications network or service that last for a continuous period of more than 60 minutes and affect the minimum of 250 users.

If the functionality disturbance of a public telephone service, SMS service or internet access service prevents the use of the service completely for a continuous period of more than one week, the telecommunications operator must inform its users, even if the disturbance affects less than 250 users.

### **12 Notifying on functionality disturbances online and by phone**

The telecommunications operator must immediately publish online a text format notification of the disturbances referred to in section 11(1) of this Regulation.

In addition, the telecommunications operator must immediately publish online a cartographic presentation of the disturbances referred to in section 11(1) of this Regulation, when:

1. the disturbance affects a public telephone service, an SMS service, an internet access service, a network service in a terrestrial mass communications network or a DVB-C network service; and
2. a cartographic presentation is relevant and easy to understand, considering the number of users, nature and significance of the communications service.

Additionally, information corresponding to that referred to in subsections 1 and 2 must be available without delay by phone at least during the business hours of the helpline of the telecommunications operator.

The content of notifications referred to in subsections 1, 2 and 3 above must be updated without delay if there is a substantial change to the information provided earlier on the user impact of the disturbance.

The disturbance notification referred to in subsection 1 must be available to users online for at least one month after the impact of the disturbance has been eliminated.

### **13 Notifying on functionality disturbances through direct contact to customers**

Where possible, the telecommunications operator must notify its users of the disturbances referred to in section 11(2) of this Regulation through direct contact to customers.

### **14 Content of functionality notifications**

In addition to the estimated duration of the disturbance, the measures available to users for combating the disturbance, the probable costs of such measures, and the sources of further information on a disturbance referred to in section 274 of the Act on Electronic Communications Services, the telecommunications operator must provide at least the following information in its functionality disturbance notifications:

1. which communications service is affected by the disturbance;
2. how the functionality of the communications service is affected by the disturbance;
3. what the geographic scope of the disturbance is; and
4. when the disturbance was detected.

In notifications concerning television or radio channels or their ancillary and supplementary services, the following information must also be provided:

1. which mass communication network is affected by the disturbance; and
2. which television or radio channels are affected by the disturbance.

## **Chapter 4 Notifications to the Finnish Transport and Communications Agency**

### **15 Section 15 Notifying on information security incidents**

Regulation 611/2013 of the European Commission shall apply to notifying the Finnish Transport and Communications Agency of information security incidents, where appropriate.

The notifications may be submitted on a form set out in Annex 2 to this Regulation.

If an information security incident is caused by a Denial-of-Service attack, the telecommunications operator may alternatively fulfil its notification obligation provided in subsection 1 by using the Finnish Transport and Communications Agency's DDoS notification interface.

### **16 Severity rating of functionality disturbances**

Disturbances affecting the functioning of public communications networks and services are rated according to their impact on communications services into four different severity ratings: A, B, C and D. Disturbances affecting the functioning of a

public communications network or service are rated according to Table 1 and disturbances affecting the mass communications service of a public communication network are rated according to Table 2.

Table 1. Severity rating

Disturbance severity rating	Disturbance impact
<b>A</b>	<p>The disturbance prevents</p> <ol style="list-style-type: none"> <li>1. the operation of a <i>public telephone service</i> of <math>\geq 100,000</math> users, or</li> <li>2. the operation of a <i>telephone service</i> in a continuous geographical area of <math>\geq 60,000</math> km<sup>2</sup> and the operational disturbance affects <math>\geq 25,000</math> users, or</li> <li>3. the operation of an <i>internet access service</i> of <math>\geq 200,000</math> users, or</li> <li>4. the operation of an <i>internet access service</i> in a continuous geographical area of <math>\geq 60,000</math> km<sup>2</sup> and the operational disturbance affects <math>\geq 25,000</math> users, or</li> <li>5. the operation of an <i>SMS service</i> of <math>\geq 200,000</math> users, or</li> <li>6. the operation of an <i>e-mail service</i> of <math>\geq 500,000</math> users, or</li> <li>7. the operation of <math>\geq 500</math> mobile network base stations in a continuous geographical area.</li> </ol>
<b>B</b>	<p>The disturbance prevents</p> <ol style="list-style-type: none"> <li>1. the operation of a <i>public telephone service</i> of <math>\geq 10,000</math> users, or</li> <li>2. the operation of a <i>telephone service</i> in a continuous geographical area of <math>\geq 20,000</math> km<sup>2</sup>, or</li> <li>3. the operation of an <i>internet access service</i> of <math>\geq 50,000</math> users, or</li> <li>4. the operation of an <i>internet access service</i> in a continuous geographical area of <math>\geq 20,000</math> km<sup>2</sup>, or</li> <li>5. the operation of an <i>SMS service</i> of <math>\geq 50,000</math> users, or</li> <li>6. the operation of an <i>email service</i> of <math>\geq 200,000</math> users, or</li> <li>7. the operation of <i>another communications service</i> of <math>\geq 200,000</math> users, or</li> <li>8. the operation of <math>\geq 100</math> mobile network base stations in a continuous geographical area.</li> </ol>
<b>C</b>	<p>The disturbance prevents</p> <ol style="list-style-type: none"> <li>1. the operation of a <i>public telephone service</i> of <math>\geq 1,000</math> users, or</li> <li>2. the operation of an <i>internet access service</i> of <math>\geq 1,000</math> users, or</li> <li>3. the operation of an <i>SMS service</i> of <math>\geq 1,000</math> users, or</li> <li>4. the operation of an <i>email service</i> of <math>\geq 50,000</math> users, or</li> <li>5. the operation of <i>another communications service</i> of <math>\geq 50,000</math> users, or</li> <li>6. the operation of <math>\geq 10</math> mobile network base stations in a continuous geographical area.</li> </ol>
<b>D</b>	<p>The disturbance prevents</p> <ol style="list-style-type: none"> <li>1. the operation of a <i>public telephone service</i> of <math>&lt; 1,000</math> users, or</li> <li>2. the operation of an <i>internet access service</i> of <math>&lt; 1,000</math> users, or</li> <li>3. the operation of an <i>SMS service</i> of <math>&lt; 1,000</math> users, or</li> <li>4. the operation of <math>&lt; 10</math> wireless base stations providing <i>internet access service</i>, or</li> <li>5. the operation of an <i>email service</i> of <math>&lt; 50,000</math> users, or</li> <li>6. the operation of <i>another communications service</i> of <math>&lt; 50,000</math> users, or</li> <li>7. the operation of <math>&lt; 10</math> mobile network base stations in a continuous geographical area.</li> </ol>



Table 2. Severity rating for mass communications services

Disturbance impact on the service	Disturbance severity rating	
<p><b>Radio:</b> users are unable to follow the broadcast, because</p> <ol style="list-style-type: none"> <li>1. the quality of the sound is insufficient or there is no sound at all, or</li> <li>2. the transmission of emergency alert messages with the RDS system is not working.</li> </ol>	A	The scope of the disturbance covers: <ol style="list-style-type: none"> <li>1. <math>\geq 300,000</math> users, or</li> <li>2. a continuous geographical area of <math>\geq 60,000</math> km<sup>2</sup>.</li> </ol>
	B	The scope of the disturbance covers: <ol style="list-style-type: none"> <li>1. <math>\geq 100,000</math> users, or</li> <li>2. a continuous geographical area of <math>\geq 20,000</math> km<sup>2</sup>.</li> </ol>
	C	The scope of the disturbance covers: <ol style="list-style-type: none"> <li>1. <math>\geq 50,000</math> users.</li> </ol>
	D	The scope of the disturbance covers: <ol style="list-style-type: none"> <li>1. <math>&lt; 50,000</math> users.</li> </ol>
<p><b>TV:</b> users are unable to follow the broadcast, because</p> <ol style="list-style-type: none"> <li>1. the picture is missing, or</li> <li>2. the Finnish or Swedish sound component is missing.</li> </ol>	A	The scope of the disturbance covers: <ol style="list-style-type: none"> <li>1. <math>\geq 300,000</math> users, or</li> <li>2. a continuous geographical area of <math>\geq 60,000</math> km<sup>2</sup>.</li> </ol>
	B	The scope of the disturbance covers: <ol style="list-style-type: none"> <li>1. <math>\geq 100,000</math> users, or</li> <li>2. a continuous geographical area of <math>\geq 20,000</math> km<sup>2</sup>.</li> </ol>
	C	The scope of the disturbance covers: <ol style="list-style-type: none"> <li>1. <math>\geq 50,000</math> users.</li> </ol>
	D	The scope of the disturbance covers: <ol style="list-style-type: none"> <li>1. <math>&lt; 50,000</math> users.</li> </ol>
<p><b>TV:</b> users cannot access all available services, because</p> <ol style="list-style-type: none"> <li>1. teletext service is not working, or</li> <li>2. Finnish or Swedish subtitles are not working, or</li> <li>3. audio-subtitling is not working, or</li> <li>4. subtitles for people with a hearing disability are not working.</li> </ol>	B	The scope of the disturbance covers: <ol style="list-style-type: none"> <li>1. <math>\geq 100,000</math> users, or</li> <li>2. a continuous geographical area of <math>\geq 20,000</math> km<sup>2</sup>.</li> </ol>
	C	The scope of the disturbance covers: <ol style="list-style-type: none"> <li>1. <math>\geq 50,000</math> users.</li> </ol>
	D	The scope of the disturbance covers: <ol style="list-style-type: none"> <li>1. <math>&lt; 50,000</math> users.</li> </ol>
<p><b>TV:</b> users cannot access all available services, because</p> <ol style="list-style-type: none"> <li>1. EPG is not working, or</li> <li>2. the synchronisation of picture and sound is not working.</li> </ol>	C	The scope of the disturbance covers: <ol style="list-style-type: none"> <li>1. <math>\geq 50,000</math> users.</li> </ol>
	D	The scope of the disturbance covers: <ol style="list-style-type: none"> <li>1. <math>&lt; 50,000</math> users.</li> </ol>



## **17 Obligation to notify the Finnish Transport and Communications Agency of functionality disturbances**

Disturbances of severity rating A, B or C that have lasted for a continuous period of at least 30 minutes must be notified to the Finnish Transport and Communications Agency by a preliminary notification referred to in section 18, by follow-up notifications referred to in section 19 and by a final report referred to in section 20.

If a functionality disturbance of severity rating A, B, C or D is caused by a Denial-of-Service attack, the telecommunications operator may alternatively fulfil its notification obligation provided in subsection 1 by using the Finnish Transport and Communications Agency's DDoS notification interface.

The obligation to notify lies primarily with the service operator providing the communications service that is being disturbed. With respect to mass communication services, the obligation to notify lies primarily with the network operator.

## **18 Preliminary notification of functionality disturbances**

A preliminary notification must, in addition to the estimated duration of the disturbance or threat set out in section 275 of the Act on Electronic Communications Services, contain at least the following information:

1. the communications network or service affected by the disturbance;
2. a description of how the disturbance is affecting the communications service;
3. the severity rating of the disturbance (A, B or C);
4. an estimate of the geographical area affected by the disturbance;
5. an estimate of the impact on emergency communications;
6. a short description of the reasons that caused the disturbance as long as they are known to the telecommunications operator and of the failed communications network and service components; and
7. the contact information of the telecommunications operator for the purpose of requesting additional information on the fault or disturbance.

A preliminary notification of an A-rated disturbance must be made through the Finnish Transport and Communication Agency's online system or by e-mail within an hour of detecting the disturbance. In addition, the notification must be made by telephone.

A preliminary notification of a B-rated disturbance must be made through the Finnish Transport and Communications Agency's online system, by e-mail or telephone within three hours of detecting the disturbance.

A preliminary notification of a C-rated disturbance must be made through the Finnish Transport and Communications Agency's online system, by e-mail or telephone within one business day of detecting the disturbance.

## **19 Follow-up notifications of functionality disturbances**

If the impact of an A-, B- or C-rated disturbance on a communications service changes significantly from the preliminary notification, the telecommunications operator must, without undue delay, notify the Finnish Transport and Communications Agency of the change.

The telecommunications operator must give regular reports on the progress of the corrective measures of an A-, B- or C-rated disturbance until the impact on the communications service has been completely eliminated.

If it has not been possible to eliminate the impact of the disturbance on the operation of the communications service within three hours (A-rated disturbance) or within 12 hours (B-rated disturbance) of the detection of the disturbance, the telecommunications operator must, without undue delay, provide the following to the Finnish Transport and Communications Agency:

1. an updated estimate of the duration of the disturbance or threat set out in section 275 of the Act on Electronic Communications Services; and
2. a detailed and reasoned explanation of why the correction of the operation of the communications service has been delayed.

Once the impact of an A-, B- or C-rated disturbance on the operation of a communications service has been eliminated, the telecommunications operator must, without undue delay, notify the Finnish Transport and Communications Agency of the elimination of the disturbance.

The follow-up notifications referred to in the above subsections must be made primarily through the Finnish Transport and Communications Agency's online system or by e-mail. If necessary, the notifications may be made by telephone. In addition, in case of an A- rated disturbance, the notification referred to in subsection 4 must be made by telephone and additionally either through the Finnish Transport and Communications Agency's online system or by e-mail.

## **20 Section 20 Final reporting of functionality disturbances**

The telecommunications operator must provide the Finnish Transport and Communications Agency a final report of all A-, B- and C-rated disturbances within a week of detecting the disturbance. The final report must be submitted through the Finnish Transport and Communications Agency's online system or on the form set out in Annex 3 to this Regulation.

The final report must contain the following information:

1. the final impact of the disturbance on the communications service;
2. the original cause of the disturbance; and
3. other matters that impacted the management of the disturbance.

The final report concerning a disturbance of severity rating A or B must contain the following additional information:

1. a report on the course of events (how the disturbance was detected and which corrective measures were taken, as set out in section 275 of the Act on Electronic Communications Services); and
2. an explanation set out in section 275 of the Act on Electronic Communications Services of the measures undertaken to prevent the reoccurrence of such disturbance.

The content of the final report must be based on the information available by the time of preparing the report. If information is missing from the final report of an A-rated disturbance, the telecommunications operator must complete the missing information as soon as it becomes available to the operator.

## **Chapter 5 Statistics**

### **21 Functionality statistics**

The telecommunications operator must prepare biannual statistics on the number of functionality disturbances detected by the network management categorised into disturbances related to fixed network telephone services, fixed network internet access services, mobile communication services, e-mail services, DVB-C network services, terrestrial television services, IPTV services and radio services.

### **22 Information security statistics**

The telecommunications operator must prepare biannual statistics on the total number of information security incidents managed by the telecommunications operator.

## **Chapter 6 Signatures**

### **23 Signatures**

Helsinki on 2 December 2019

*Kirsi Karlamaa*  
*Director-General*

*Jarkko Saarimäki*  
*Director*