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COMMISSION

Brussels, 16.12.2022
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COMMISSION DELEGATED REGULATION (EU) …/...

of 16.12.2022

supplementing Directive (EU) 2018/1972 of the European Parliament and of the Council with measures to ensure effective access to emergency services through emergency communications to the single European emergency number '112'

(Text with EEA relevance)

{SWD(2022) 430 final}

EXPLANATORY MEMORANDUM

1. CONTEXT OF THE DELEGATED ACT

Legal basis and objective of the proposed action

Article 109(8) of the European Electronic Communications Code[1] (EECC or the Code) requires the Commission to adopt the first Delegated Act supplementing paragraphs 2, 5 and 6 of that Article by 21 December 2022. The measures adopted shall be necessary to ensure the compatibility, interoperability, quality, reliability and continuity of emergency communications in the Union with regard to caller location information solutions, access for end-users with disabilities and routing to the most appropriate public safety answering point (PSAP). Article 109(8) provides that the delegated acts are without prejudice to and have no impact on the organisation of emergency services, which remains the exclusive competence of Member States.

This Delegated Regulation sets measures necessary to ensure the compatibility, interoperability, quality, reliability and continuity of emergency communications in the Union with regard to caller location information solutions, access for end-users with disabilities and routing to the most appropriate PSAP. These measures will be applicable in all Member States.

The objective of this Delegated Regulation is to ensure effective access to emergency services through emergency communications to the single European emergency number '112' in the Member States. This Delegated Act will supplement the provisions of Article 109(2), (5) and (6) to the extent necessary to meet this objective.

General context of the Delegated Regulation

The first legislative harmonisation in EU law with regard to access to emergency services was achieved through a Council Decision[2] mandating the introduction of the single European emergency call number '112'. The Universal Service Directive of 2002[3], as amended in 2009[4], recognised the importance of access to emergency services and extended the scope of EU law to ensure that all end-users, including end-users with disabilities[5], have access to emergency services and that caller location information is provided.

Emergency communications are an important element in the public safety, security and health toolbox. For the past decades European citizens have relied on the access to emergency services by using the single European Emergency number '112'. In 2019, the share of emergency calls in the Union to the single European emergency number '112' represented

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1 Directive (EU) 2018/1972 of the European Parliament and of the Council establishing the European Electronic Communications Code, OJ L 321, 17.12.2018, p. 36

2 91/396/EEC: Council Decision of 29 July 1991 on the introduction of a single European emergency call number OJ L 217, 6.8.1991, p.31.

3 Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive), OJ L 108, 24.4.2002, p. 51.

4 Directive 2009/136/EC of the European Parliament and of the Council of 25 November 2009 (Citizen's rights directive) amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services, Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector and Regulation (EC) No 2006/2004 on cooperation between national authorities responsible for the enforcement of consumer protection laws (Text with EEA relevance), OJ L 337, 18.12.2009, p. 11.

5 Member States shall ensure that access to emergency services for end-users with disabilities is equivalent to that enjoyed by other end-users.

56% of all emergency calls: out of a total of 267 million calls placed in the Union, 150 million were '112' calls. It is estimated that 2.3 million emergency calls were placed by roaming end-users, out of which 1,5 million were '112' calls.

Technological developments have made it possible for end-users to access emergency services through a wider range of interpersonal communications services, other than calls placed in circuit-switched 'legacy' networks. Meanwhile, more accurate caller location technologies are available, based not only on network information but also on information derived from the handset. These developments are reflected in the EECC[6], adopted in 2019, where emergency communications are not restricted to voice communications and caller location relies on both network-based and handset-derived technologies. Member States were to transpose the EECC to their national legal systems by 21 December 2020 and the transposition measures were to become applicable on the same date. The implementation of the EECC provisions coincide with the transition from circuit-switched to packet-switched network technology. While circuit-switching ensures a dedicated communication channel (circuit) between two end points in the network for the time period of the communication, packet-switching allows a more efficient utilisation of network resources by occupying the channel for the short period of transmission of data packets into which the communication is broken down, while reassembling it at the destination point. More effective mobile network technologies are being deployed today to cater for ever growing levels of data consumption. This is triggering the sunset of 2G and 3G networks, in which voice services are provided via circuit switching. The roadmaps for the network switch-offs vary across Member States whereas the exact timelines are determined by mobile network operators. Meanwhile, the investment efforts are focusing on the deployment of 4G and 5G networks that rely solely on packet switching.

The technological migration enables both the possibility to provide accessible communication services for end-users with disabilities and the novel capabilities of radio equipment. Accordingly, the provisions of the EECC are complemented and referenced by other EU legal provisions under the European Accessibility Act[7] and the Radio Equipment Directive[8].

Moving to all-IP communications will also allow to leverage the potential of using applications, enabling end-users to use various means of voice, text and video communications and provide PSAPs with relevant contextual information. While some national or regional applications of this type already exist, these are not interoperable with the visited country/region PSAPs in roaming conditions. In the future, the cooperation between Member States and the Commission would allow for the interoperability of emergency applications leading to their EU-wide availability, similar to the EU Digital COVID Certificate that was deployed by establishing an EU gateway for the interconnection of national systems[9].

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6 See Article 2 and Article 109 EECC.

7 The European Accessibility Act (EAA), Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services, OJ L 151, 7.6.2019, p. 70.

8 Commission Delegated Regulation (EU) 2019/320 of 12 December 2018 supplementing of Directive 2014/53/EU of the European Parliament and of the Council with regard to the application of the essential requirements referred to in Article 3(3)(g) of that Directive in order to ensure caller location in emergency communications from mobile devices, OJ L 55, 25.2.2019, p. 1–3.

9 https://joinup.ec.europa.eu/collection/open-source-observatory-osor/news/eu-gateway-eu-digital-covid-certificate

2. CONSULTATIONS PRIOR TO THE ADOPTION OF THE ACT

Roadmap consultation

In October 2021, the Commission published for consultation a roadmap entitled "Ensuring effective access to emergency services in the Union through emergency communications to the single European emergency number '112'"[10] for 4 weeks public feedback period. Feedback was received from 29 respondents originating from 13 Member States.

Targeted stakeholder consultation

Article 109 of the Code establishes that the measures supplementing paragraphs 2, 5 and 6 of that article are to be necessary to ensure the compatibility, interoperability, quality, reliability and continuity of emergency communications in the Union with regard to caller location information solutions, access for end-users with disabilities and routing to the most appropriate PSAP. In order to specify such measures it is first necessary to look at and assess technical solutions for the provision of caller location information solutions, access for end-users with disabilities and routing to the most appropriate PSAP.

A targeted stakeholder consultation was conducted by the eMercury consortium[11]. The consultation solicited the views of providers of electronic communication networks and services, network-independent electronic communication services providers, end-user associations, PSAPs, national regulatory authorities (NRAs), government bodies, handset and handset operating system providers, network equipment providers, PSAP equipment providers, standardisation bodies, as well as consultants active in the market.

The targeted consultation ran for 9 weeks, from 10 December 2021 to 4 February 2022, and comprised a stakeholder workshop, consultation paper and bilateral meetings as well as a final workshop presenting the findings of the study on 11 May 2022. The goal of the consultation was to collect feedback and views on the technical solutions for the three areas that are within the scope of the delegated act. The consultation included technical questions on the description and assessment of the identified solutions, and was therefore sent to targeted stakeholders with significant experience in the market, as well as to organisations representing the interests of end-users with disabilities, to consult on access solutions for those end-users.

Replies to the written consultation were received from 29 respondents, including four business associations, three end-users associations, 14 companies representing different parts of the emergency communications chain (operators, network equipment providers, PSAP equipment providers and providers of network-independent electronic communications services), four public authorities (NRAs and ministries) and four PSAPs. Bilateral meetings were organised with 11 stakeholders representing different parts of the emergency communications chain. In addition, the stakeholder workshop brought together 121 participants, representing four business associations, one end-users' association, 28 companies representing different parts of the emergency communications chain (operators, network equipment providers, PSAP equipment providers and providers of network-independent electronic communications services), 29 public authorities (NRAs, ministries and Expert Group members), eight PSAPs and one standardisation body.

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10 Emergency communications – improving access through the single European emergency number '112' (europa.eu)

11 The Commission services commissioned via a tender procedure a "Study on Technical Solutions to Ensure Compatibility, Interoperability, Quality, Reliability and Continuity of Emergency Communications in the Union" to an external contractor, the E-MERCURY consortium. eMercury is a consortium of IES Solutions and the European Emergency Number Association (EENA); the study was conducted between May 2021-May 2022.

Consultation with Member States (Expert Group)

The Expert Group on Emergency Communications was set up on 6 March 2020 to assist the Commission with the preparation of measures to ensure effective access to emergency services through emergency communications to the single European emergency number '112'. The Group is composed of representatives of the Member States' authorities responsible for the functioning of the national PSAP system and electronic communications NRAs. Its first meeting took place by video conference on 6 May 2020.[12] At the meeting, the following topics were discussed: the provisions of the EECC and the scope of the Delegated Act, as well as possible technical and regulatory gaps concerning effective access to emergency services.

The second meeting of the Expert Group took place by video conference on 9 July 2020.[13] The Group discussed various aspects of the monitoring of the implementation of emergency communications that fed into the assessment of the effectiveness of the access to emergency services, and continued the discussion on the effectiveness gaps.

The third meeting of the Expert Group took place by video conference on 27 October 2021.[14] The Group discussed the roadmap for the delegated act and was informed about the initial findings of the e-Mercury study supporting the development of the Delegated Act.

The fourth meeting of the Expert Group took place by video conference on 12 May 2022.[15]. The Group discussed the findings and recommendations of the e-Mercury study. The Commission presented tentative ideas for defining effective emergency communications and measures regarding caller location, access for end-users with disabilities and routing to the most appropriate PSAP.

The fifth meeting of the Expert Group took place by video conference on 8 September 2022.[16] The Group discussed the draft Delegated Act and accompanying Staff Working Document, made available by the Commission services, in particular the following aspects: the proposed specifications for the accuracy and reliability of the caller location information and the timing of the reporting, the requirement for routing the call "without delay" to the most appropriate PSAP, as well as the relation between the draft Delegated Act and the EAA. Following the meeting, 8 Members submitted written contributions summarising or expanding the feedback provided at the meeting.

Revised drafts of the Delegated Act and Staff Working Document were shared with the Expert Group on 31 October 2022. Several members provided comments by 4 November and the final drafts were shared with the Expert Group on 12 December 2022.

BEREC opinion

BEREC (the Body of European Regulators for Electronic Communications) delivered its opinion[17] on the draft Delegated Act (submitted on 5 August 2022 together with the accompanying Staff Working Document) on 14 October 2022.

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12 Minutes of the 1st meeting of the Expert Group are available here.

13 Minutes of the 2nd meeting of the Expert Group are available here.

14 Minutes of the 3rd meeting of the Expert Group are available here.

15 Minutes of the 4th meeting of the Expert Group are available here.

16 Minutes of the 5th meeting of the Expert Group are available here.

17 https://www.berec.europa.eu/en/document-categories/berec/opinions/berec-opinion-on-the-draft-commission-delegated-regulation-supplementing-directive-eu-20181972-of-the-european-parliament-and-of-the-council-with-measures-to-ensure-effective-access-to-emergency-services-through

With regard to caller location information, BEREC noted that the draft Delegated Regulation bears provisions that represent an important step forward, but considered that it could envisage the provision of detailed guidelines, with the aim of sharing solutions and consequently providing advice to Member States for possible future improvements and possible harmonisation, without at this stage imposing specific values. BEREC also suggested that the draft Delegated Regulation should aim at harmonised implementation of the Advanced Mobile Location in the EU, and formulate the ambition to search for solutions around the localisation of nomadic services, e.g. by involving also ETSI.

BEREC generally supported the functional equivalence requirements proposed in the draft Delegated Regulation. BEREC further suggested that adding a link to the EAA and the timelines in Article 4 could be beneficial, and – with regard to specific means of access to emergency services – noted that real time text is already dormant in many handsets, but needs to be activated by mobile network operators in cooperation with handset or operative system providers. In BEREC's view, the applications dedicated to end-users with disabilities may serve as supplementary services, while the primary solution for emergency communication should be standardised network and handset native services.

BEREC agreed with putting the focus on routing, especially in the context of migrating to all-IP or when using applications or "over-the-top solutions". In BEREC's opinion it may not be possible to ensure routing to the most appropriate PSAP without delay in case of technological limitations in roaming or border areas, or in the case of nomadic VoIP services. BEREC underlined that harmonisation is important in addressing interoperability issues. Furthermore, in BEREC's view a short or longer-term roadmap should be set up by the draft Delegated Regulation in order to address all the envisaged problems concerning routing, and that the draft Delegated Regulation should envisage a roadmap to harmonise the solutions throughout the Member States. While BEREC expressed doubts as regards the need for reporting on the routing performance and on the roadmap to upgrade the PSAP system, it also suggested that guidance regarding such reporting would be necessary.

Finally, BEREC highlighted that harmonisation and standardisation are crucial in order to solve the problems that currently exist in emergency communications. BEREC is of the view that coordination in handling interoperability issues among Member States would be essential and noted that packet-switched emergency communications could be considered one of the future goals in Europe.

'Have Your Say!' feedback

From 8 August until 12 September 2022, stakeholders were invited to provide feedback on the draft Delegated Act published on the Commission's portal 'Have Your Say!'. 28 submissions were received: 13 from companies/business organisations (one of which is a global organisation representing mobile operators and organisations across the mobile ecosystem), 2 from business associations, 2 from public authorities, 5 from non-governmental organisations, 1 from a trade union and 5 from EU citizens. The feedback received on the 'Have your Say' portal reflected a broad range of opinions on various topics. For this reason, the below summarises the main points, in which a level of convergence was identified among the stakeholders. All replies are public.[18]

A significant number of stakeholders, including a business association and two non-governmental organisations, expressed general support for the draft Delegated Regulation.

[18] Accessible at: Emergency communications – improving access through the single European emergency number '112' (europa.eu)

Furthermore, a significant number of stakeholders, including one global organisation, two non-governmental organisations and a public authority, confirmed that emergency communications solutions have to adapt to the migration to packet-switched network technologies. Moreover, a number of stakeholders, including a global organisation, one non-governmental organisation and a public authority, highlighted the importance of standards to ensure the interoperability of emergency communications at handset, network and PSAP level. Finally, a number of stakeholders, including a business association and a global organisation, signalled the lack of interoperability in particular with regards to VoLTE communications.

A significant number of stakeholders, including a business association and a public authority, indicated the need to provide for technically feasible solutions for caller location and a routing solution for network independent number-based interpersonal communication service providers.

Support was expressed by a number of stakeholders, including a business association and a public authority, with regards to the goal of achieving the interoperability of emergency applications and a business association suggested to allow only a small number of interoperable applications or a single EU-wide application in order to facilitate the standardisation process and to avoid fragmentation. However, several contributions, including from one non-governmental organisation that represents persons with disabilities from across Europe, indicated that emergency applications should rather be complementary to natively enabled text or video based emergency communication, in particular when it comes to means of access for end-users with disabilities.

Concerns were raised by a number of stakeholders, including a business association and a global organisation, regarding the unavailability of access to emergency services in the context of the decommissioning of 2/3G networks, in Member States where the VoLTE communication is not seamlessly available for emergency communication purposes, suggesting that such networks should be maintained in those Member States. Support was received by a global organisation and two business organisations, with regard to the provision of national roadmaps for technological migration to packet-switched communication. In this context the issue of VoLTE based eCall availability was raised. Some stakeholders, including a global organisation and a public authority, indicated the need to bring certainty to the timeline of the migration by imposing a migration deadline. In addition a business organisation advocated for the centralisation of PSAP systems whereas another suggested a single PSAP for network independent number-based interpersonal communication services.

A number of contributors, including a non-governmental organisation, indicated the need to implement harmonised solutions for emergency communications that originated in private networks.

Furthermore, a significant number of stakeholders, including a non-governmental organisation and a public authority, suggested the harmonisation of the minimum criteria of caller location accuracy and reliability across the EU.

Support was expressed by a number of stakeholders, including two non-governmental organisations and a business association, with regard to the implementation of a standardised handset derived Advanced Mobile Location solution across the EU, while making it available also in roaming. With regard to the accuracy of caller location, the vertical accuracy to support caller location at a floor-level accuracy inside buildings, also called z-axis, was deemed feasible by one stakeholder that is providing 3D geolocation services, while the importance of network-based caller location accuracy was supported by another stakeholder.

3. LEGAL ELEMENTS OF THE DELEGATED ACT

Appropriate instrument

Since pursuant to Article 109(8) of the Code the Delegated Act aims at ensuring effective access to emergency services through emergency communications to the single European emergency number '112', the most appropriate instrument is a delegated regulation that would apply directly to Member States and their competent regulatory authorities responsible for emergency communications in their territories. Such an instrument would also avoid unnecessary delays in implementation, which may arise if the adoption of transposition measures were delayed.

Summary

In accordance with the requirements of Article 109 (8) of the Code, the Delegated Regulation consists of the following main elements.

First, in order to ensure the compatibility, interoperability, quality, reliability and continuity of emergency communications with regard to caller location information solutions, this Regulation provides for harmonised definitions of effective emergency communication and contextual information. The definition of 'effective emergency communications' rests on two aspects: i) the timely communication between the end-user and the most appropriate PSAP and ii) the provision of contextual information. Contextual information is defined as the information conveyed by the end-user or derived and transmitted automatically from the end-user's device or the network.

Second, in order to ensure the compatibility, interoperability, quality, reliability and continuity of emergency communications with regard to caller location solutions, this Regulation sets out parameters that need to be taken into account by the competent regulatory authorities when setting the criteria for accuracy and reliability of caller location information. The obligation of competent regulatory authorities to establish such criteria is already laid down in Article 109(6) of Directive 2018/1972. The imposition of specific technical solutions involving network-based and handset-derived location information is outside the scope of this Regulation, given the number of alternative technical solutions and Member States' obligation to make both these types of location information available for the most appropriate PSAP. At the same time, the criteria for accuracy and reliability of caller location information should ensure that the provided caller location information would be precise enough to allow emergency services to intervene. Caller location criteria that do not allow for sufficient accuracy and reliability produce caller location information that emergency services cannot effectively use. Accordingly, the Regulation stipulates that, for fixed networks, the accuracy criterion should be expressed through the caller location information related to the physical address of the network termination point, such as a street address, apartment, flat, floor or similar information; for mobile networks it should be expressed in metres to indicate the maximum radius of the horizontal search area that is presented to the emergency services for intervention purposes, including if applicable, the elevation or vertical accuracy. As regards the reliability criterion, the Regulation provides that it should be the success rate, expressed as a percentage, of the technical solution or mix of technical solutions to establish a caller location corresponding to the accuracy criterion.

Third, to ensure the compatibility, interoperability, quality, reliability and continuity of emergency communications with regard to access for end-users with disabilities, this Regulation establishes functional equivalence requirements for emergency communications to be used by end-users with disabilities for accessing emergency services. Member States should implement technically feasible solutions to ensure that the functional effectiveness of

the emergency communication allows the transmission of contextual information with equivalent speed to the most appropriate PSAP and the emergency services. To ensure functional equivalence, the Regulation requires as follows: two-way interactive communication, seamless access across the Union, free-of-charge access, appropriate answering and handling, provision of caller location and awareness. These functional equivalence requirements mirror the functional aspects of the mainstream voice-based communication, i.e. a call to '112', available to other end-users. These functionalities must be replicated in all Member States, subject to technical feasibility.

Fourth, to ensure the compatibility, interoperability, quality, reliability and continuity of emergency communications with regard to routing to the most appropriate PSAP, this Regulation sets out the requirement that the emergency communication must be routed to the most appropriate PSAP without delay. It also establishes that the emergency communication has to be routed to the most appropriate PSAP that is technically capable to convey the contextual information to the emergency services when those services are alerted. To ensure that seamless access across the EU is technically feasible when using an emergency application, the Regulation calls on Member States to cooperate with the Commission to identify common interoperability requirements, which would enable routing of the mobile application-based emergency communications to the most appropriate PSAP when roaming.

Fifth, the Regulation requires Member States to report and provide updated information to the Commission on the obligations established in this Regulation. To ensure the access to emergency services by emergency communications to the most appropriate PSAP in the context of the technological migration to all-IP networks, the Regulation requires Member States to prepare and send to the Commission a roadmap for upgrading the national PSAP system to be able to receive, answer and process emergency communications through packet-switched technology. The roadmap must indicate a timetable for the expected deployment of voice, text or video-based emergency communications through packet-switched technologies, taking in to account the obligations and legal deadlines set in the European Accessibility Act.

The scope of this Regulation is restricted to the access to emergency services through emergency communications to the single European emergency number '112' with regard to caller location information solutions, access for end-users with disabilities and routing to the most appropriate PSAP. The organisation of emergency services as such remains the exclusive competence of Member States and is outside of the scope of this Regulation.

COMMISSION DELEGATED REGULATION (EU) …/...

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supplementing Directive (EU) 2018/1972 of the European Parliament and of the Council with measures to ensure effective access to emergency services through emergency communications to the single European emergency number '112'

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code[19], and in particular Article 109 (8) thereof,

Whereas:

(1) Pursuant to Article 109 (8) of Directive (EU) 2018/1972, in order to ensure effective access to emergency services through emergency communications to the single European emergency number '112' in the Member States, the Commission shall adopt delegated acts, with the first such act to be adopted by 21 December 2022. These delegated acts are to supplement paragraphs 2, 5 and 6 of Article 109 of the Directive on measures necessary to ensure the compatibility, interoperability, quality, reliability and continuity of emergency communications in the Union with regard to caller location information solutions, access for end-users with disabilities and routing to the most appropriate public safety answering point (PSAP).

(2) Emergency communications are an important element for the pursuit of public safety, security and health. For more than 30 years, citizens of the Union have relied on access to emergency services using the single European Emergency number '112. They should continue to be able to do so in the digital world. Citizens should benefit from comprehensive and timely delivery of contextual information necessary for addressing an emergency situation. The high level of connectivity that is targeted by Europe's digital transformation, as reflected in the Decision establishing the Digital Decade Policy Programme 2030[20], is bringing about a technological migration to all-IP technologies of electronic communication services used by citizens, in particular by persons with disabilities. The migration from circuit-switched to packet-switched technologies in electronic communication networks triggers the deployment of voice services through IP Multimedia Subsystem based fixed and mobile managed VoIP technologies such as Voice over Long Term Evolution (VoLTE), Voice over New Radio (VoNR in 5G) and Voice over Wi-Fi (VoWiFi). Packet-switched technologies also enable text and video-based services like real time text and total conversation services. Those IP-based communication services cannot be supported by the legacy

[19] OJ L 321, 17.12.2018, p. 36.

[20] Decision …/…. of the European Parliament and of the Council of … establishing the Digital Decade Policy Programme 2030, OJ […]

circuit-switched networks, such as 2G and 3G networks that are in the process of being decommissioned. Therefore, there is a need to migrate emergency communications to packet-switched technologies as well. This Regulation aims to ensure that in this transformational process the quality and reliability of emergency communications are ensured.

(3) The goal of emergency services is to avoid, alleviate or manage the effects of emergency incidents through emergency intervention. The time necessary for emergency intervention has a fundamental impact on the outcome of emergency incidents. Effective emergency intervention requires rapid mobilisation of the intervention resources that could effectively address the emergency incident, and the fast arrival at the intervention scene.

(4) The goal of emergency communications is to enable end-users to access emergency services to request and receive emergency relief from emergency services. While emergency communications are set up between the end-user and the PSAP, it should be the role of the most appropriate PSAP to process the information received and convey the request to the emergency services, hence ensuring access to emergency services. Depending on the national organisation of PSAP systems and emergency services systems, PSAPs and emergency services can be overlapping or autonomous entities.

(5) In order to enable access to emergency services, effective emergency communications should ensure both the timely communication between the end-user and the most appropriate PSAP and the making available in a timely manner of contextual information, including caller location information. The contextual information contributes to the description of the emergency incident, for example, the physical environment, the condition and abilities of the persons involved, the localisation of the incident, etc. The availability and accuracy of contextual information enables the timely identification of the appropriate intervention resources and the quick arrival at the intervention scene, e.g. when an accurate caller location is available. This information may be conveyed to the emergency services through emergency communications by the end-user, or derived automatically from the device of the end-user or the network.

(6) Caller location is one of the most important types of contextual information associated with emergency communications and it has a high impact on their effectiveness. The accuracy and reliability of caller location information influences the time necessary to identify the site of the emergency and the on-site arrival of emergency services.

(7) Directive (EU) 2018/1972 requires competent regulatory authorities to establish the caller location accuracy and reliability criteria. Those criteria represent the minimum levels of accuracy and reliability of caller location information that have to be implemented on the territory of the Member State through network-based and handset-derived technologies. According to the case-law of the European Court of Justice[21], the criteria should ensure, within the limits of technical feasibility, that the end-user's position is located as reliably and accurately as is necessary to enable the emergency services to usefully come to the end-user's assistance. The mix of these technologies ensures that even where a handset-derived caller location solution fails to make the caller location information available to the most appropriate PSAP, emergency

[21] Case C 417/18; Judgment of the Court (Fourth Chamber) of 5 September 2019, AW and Others v Lietuvos valstybė

services can rely on network-based location to usefully come to the end-user's assistance, in line with the caller location accuracy and reliability criteria established by Member States. Caller location criteria, which do not allow the establishment of minimum levels of accuracy and reliability may lead to implementation that does not ensure that emergency services receive caller location information, which they can effectively use. It should be for the Member States to assess the combined effect of the technically feasible caller location solutions, and to establish minimum criteria for both accuracy and reliability of caller location, which, if implemented, would enable emergency services to usefully intervene. The usefulness of the accuracy of caller location information might vary depending on the area from which the emergency communication is originated (e.g. urban or rural) and could be reflected accordingly in the criteria set. In order to ensure a harmonised approach within the Union to the setting of the accuracy and reliability criteria which ensures a minimum level of contextual information, it is necessary to define the parameters that competent regulatory authorities should take into account when laying down such criteria. Moreover, it is important to recall that pursuant to the principle of sincere cooperation laid down in Article 4(3) of the Treaty on European Union, competent regulatory authorities are to cooperate among each other when laying down the criteria for the accuracy and reliability of the caller location information by consulting the Body of European Regulators for Electronic Communications (BEREC) or other relevant fora competent to provide guidance in this regard, in order to ensure the full effectiveness of Article 109(6) of Directive (EU) 2018/1972.

(8) The accuracy of caller location information may be expressed as a maximum radius of the search area for the intervention that is presented to the emergency services. Emergency intervention times could be significantly reduced when accurate and reliable network-based and handset-derived caller location information is available to the most appropriate PSAP, especially when end-users requesting emergency assistance are not able to specify their location. Therefore, for fixed networks, Member States should express the minimum levels of accuracy to be implemented on their territory as caller location information related to the physical address of the network termination point, for example by reference to the concrete street address, apartment, floor or similar information. For mobile networks the minimum levels of accuracy should be expressed in metres to indicate the maximum radius of the horizontal search area that is presented to the emergency services for intervention purposes. If applicable and technically feasible, the elevation or vertical accuracy criterion should be expressed in metres as well. Member States should assess whether these parameters are feasible to be applied to network independent providers of number-based interpersonal communication services when these are used in fixed or mobile networks.

(9) The reliability of caller location should pertain to two aspects of the caller location information: the establishment and the transmission. The reliability of caller location information should be established according to the statistical measurements that indicate the success rate with which the actual location of the device originating the emergency communication matches the physical area indicated on the basis of the caller location information. An emergency communication should trigger both network-based and handset-derived caller location information, when the latter is available. The reliability of the caller location information for the emergency services should be established as a combined effect of these two technologies. The reliability of transmission of caller location information should be expressed as the success rate of the technical solution to transmit the caller location information to the most

appropriate PSAP. The success rate is dependent on the capabilities of the network to convey the information, in case of network-based caller location, or the interoperability between the handset and the network resources to allow the transmission, in case of handset derived caller location, as well as the most appropriate PSAP capabilities to receive the information.

(10) In order to enable the Commission to monitor the caller location criteria established in accordance with this Regulation, Member States should report on the adoption of the criteria and explain how they have taken into account the parameters established in this Regulation.

(11) Directive (EU) 2018/1972 requires access to emergency services through emergency communications for end-users with disabilities to be equivalent to that enjoyed by other end-users. The principle of equivalence implies that end-users with disabilities should be able to access emergency services through emergency communications in a functionally equivalent manner to that in which other end-users access emergency services, in particular by calling the '112' number via voice-based services. Since there is no common understanding of the functional equivalence requirements, the requirements that replicate the functionalities of emergency communications enjoyed by other end-users, mainly voice-based services, should be established. If for technical reasons, Member States are not able to comply with the functional equivalence requirements established by this Regulation, they should inform the Commission of the specific reasons why this is not possible. Member States should inform the Commission when the technical design of the mandated means of access to emergency services does not require or allow the use of the single European emergency number '112' and how it is ensured that the same or higher awareness is reached amongst end-users with disabilities with regard to that means of access.

(12) In order to enable the Commission to monitor the compatibility, quality, reliability, interoperability and continuity of the means of access to emergency services for end-users with disabilities, Member States should report the means of access to emergency services mandated in their jurisdiction for end-users with disabilities, including those using roaming services. The report should contain a first assessment of the compliance of the reported means of access with the functional equivalence requirements in accordance with this Regulation. The migration to all-IP networks will enable the implementation of new, accessible communication services like real time text and total conversation services. Member States should therefore report interoperability, compatibility or continuity issues encountered when deploying such services, in particular for roaming end-users. In order to fulfil their obligation under Article 16 of Regulation (EU) 2022/612 to report to BEREC the means of access to emergency services that are mandated in their Member State and that are technically feasible to be used by roaming customers, national regulatory authorities or other competent authorities should establish, if applicable, the technical reasons for the lack of availability of the emergency communication service for roaming end-users where those services are available for domestic end-users. The first report, as well as information provided in the following years will enable the Commission to assess the necessity of adopting further measures, including standardisation mandates, to address such issues.

(13) Emergency communications and caller location information have to be routed to the most appropriate PSAP to enable the appropriate answering and handling of the emergency communications. Effective routing of emergency communications should be ensured also in the context of the technological migration from circuit-switched to

packet-switched technologies. The most appropriate PSAP is normally determined by the Member State on the basis of a territorial competence to handle emergency communications or the competence to handle a certain type of communication, for example a PSAP equipped to handle real time text or sign-language communication. The interpersonal communication services provided through packet-switched technologies providing voice, text – including real time text –, and video may be routed in the public network domain or PSAP domain. Depending on the national organisation of PSAPs, while the emergency communication reaches PSAP system through the public networks, further routing may be necessary within the PSAP domain to reach the most appropriate PSAP. In order to guarantee the availability of effective emergency communications to the benefit of all end-users, Member States should ensure the timeliness of routing to the most appropriate PSAP of all types of emergency communications and of caller location information mandated on their territory.

(14) The effectiveness of access to emergency services is dependent on the timeliness of the conveyance of the contextual information to the emergency services. Member States should ensure that the most appropriate PSAP to which the emergency communication is routed, is technically capable of transmitting in a timely manner the contextual information to the emergency services from the moment those services are alerted by that PSAP. According to the national organisation of PSAPs, the most appropriate PSAP may assess the usefulness of the contextual data and filter the information to be provided to emergency services.

(15) In order to enable the monitoring by the Commission of the effectiveness of routing to the most appropriate PSAP, Member States should report on the performance of the routing of emergency communications to the most appropriate PSAP in terms of their timeliness, including when using voice, text, or video services.

(16) Ensuring seamless access to emergency services, without pre-registration, for end-users, including end-users with disabilities, travelling in another Member State might not be under the sole control of a Member State and would require compliance with commonly agreed interoperability requirements. Without prejudice to the implementation of real time text and total conversation services pursuant to Directive (EU) 2019/882, it should be possible to implement access to emergency services through voice, text or video services through emergency communications via mobile applications. Mobile applications may enable the transmission of rich contextual data to the most appropriate PSAP. Once a mobile application is downloaded and installed, the end-user may communicate with the most appropriate PSAP across the Union if the common interoperability requirements make that possible, and the mobile application providers and the national PSAP systems comply with those requirements. Member States should cooperate with the Commission in good faith to identify the common interoperability requirements the implementation of which would enable the use of such emergency communications to the most appropriate PSAP via mobile applications across the Union.

(17) PSAP systems that were developed to answer and handle circuit-switched communications may not be able to answer, handle and process all features of emergency communications initiated through packet-switched technology. In order to ensure transparency with relevant stakeholders, in particular electronic communications services and network providers, as well as to ensure a coherent and timely upgrade of PSAPs systems within their territory, Member States should prepare a roadmap for the upgrade of the capabilities of their PSAP systems to answer, handle

and process emergency communications provided through packet-switched technologies. The roadmap should contain the expected timeline and date of deployment of novel means of access to emergency services through emergency communications through packet-switched technologies, whether these are enabled in the core network as number-based interpersonal communication services or deployed via a mobile application. The roadmap should contain information on the timeline of the upgrade of the capabilities of the PSAP systems, taking account of the obligations set in Directive 2019/882[22] and the legal deadlines provided therein. This concerns in particular the appropriate answering by the most appropriate PSAP the emergency communications to the single European emergency number '112', by using synchronised voice and text (including real time text), or, where video is provided, voice, text (including real time text) and video synchronised as total conversation. If applicable, the expected legal mandate to deploy emergency communications through packet-switched technologies under national legislation should be indicated. The roadmap should refer to the intermediary milestones, for example public and stakeholder consultations, legislative measures, interoperability, continuity and reliability testing, public procurement, etc. Member States should provide the roadmap to the Commission and provide updates on its implementation. Member States should also report the interoperability and continuity issues encountered with regard to the provision of electronic communication services used for accessing emergency services to enable the Commission to assess the necessity of adopting further measures, including standardisation mandates, that would address such bottlenecks.

(18) A regular and structured gathering of information from Member States regarding several aspects pertaining to the effectiveness of emergency communications in the Union is necessary to enable the Commission to monitor their implementation and compliance with obligations set out in Article 109 of Directive (EU) 2018/1972, as supplemented by this Regulation. Following the first report as provided for in this Regulation, Member States should provide the Commission with updated information as requested in the context of each data gathering that the Commission initiates for the purposes of fulfilling its obligation to report to the European Parliament and the Council pursuant to Article 109 (4) of Directive (EU) 2018/1972.

(19) The Body of European Regulators for Electronic Communications was consulted in accordance with Article 109(8) of Directive (EU) 2018/1972 and delivered an opinion on 14 October 2022.

(20) The European Data Protection Supervisor was consulted in accordance with Article 42(1) of Regulation (EU) 2018/1725 of the European Parliament and of the Council[23] and delivered an opinion on 15 November 2022.

HAS ADOPTED THIS REGULATION:

CHAPTER 1

[22] Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services, OJ L 151, 7.6.2019, p. 70.

[23] Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC, OJ L 295, 21.11.2018, p. 39.

SUBJECT MATTER, SCOPE AND DEFINITIONS

Article 1

This Regulation establishes measures to ensure effective access to emergency services through emergency communications with regard to caller location information solutions, access for end-users with disabilities and routing to the most appropriate PSAP.

Article 2

For the purposes of this Regulation, the following definitions apply:

(1) 'effective emergency communication' means emergency communication as defined in Article 2, point (38) of Directive (EU) 2018/1972 that ensures:

(a) timely communication between the end-user and the most appropriate PSAP, and

(b) the making available in a timely manner of contextual information, including caller location information;

(2) 'contextual information' means the information conveyed through an emergency communication by the end-user or derived and transmitted automatically from the device of the end-user or the relevant network in order to enable the timely identification of the intervention resources of the emergency services and the fast arrival of the emergency services at the intervention scene.

CHAPTER 2

CALLER LOCATION INFORMATION

Article 3

1. When laying down criteria for the accuracy and reliability of caller location information pursuant to Article 109 (6) of Directive EU 2018/1972, competent regulatory authorities shall ensure, within the limits of technical feasibility, that the end-user's position is located as reliably and accurately as is necessary to enable the emergency services to come to the end-user's assistance. Competent regulatory authorities shall lay down the criteria taking into account the parameters specified in paragraphs 2 and 3 of this Article.

2. With respect to the fixed networks:

(a) the accuracy criterion for caller location information shall be expressed as information related to the physical address of the network termination point;

(b) the reliability criterion for caller location information shall be expressed as the success rate, in percentage, of the technical solution or mix of technical solutions to establish and transmit to the most appropriate PSAP a caller location information corresponding to the accuracy criterion.

3. With respect to the mobile networks:

(a) the accuracy criterion for caller location information shall be expressed in metres. If applicable, the elevation or vertical accuracy criterion shall be expressed in metres as well;

(b) the reliability criterion for caller location information shall be expressed as the success rate, in percentage, of the technical solution or mix of technical solutions to establish and transmit to the most appropriate PSAP a search area corresponding to the accuracy criterion.

CHAPTER 3

ACCESS TO EMERGENCY SERVICES FOR END-USERS WITH DISABILITIES

Article 4

When implementing means of access to emergency services through emergency communications for end-users with disabilities, Member States shall ensure that, subject to technical feasibility, the following functional equivalence requirements are met:

(a) the emergency communication enables two-way interactive communication between the end-user with disabilities and the PSAP;

(b) the emergency communication is available in a seamless way, without pre-registration, to end-users with disabilities travelling in another Member State;

(c) the emergency communication is provided to end-users with disabilities free of charge;

(d) the emergency communication is routed without delay to the most appropriate PSAP that is qualified and equipped to appropriately answer and process the emergency communication from end-users with disabilities;

(e) equivalent levels of accuracy and reliability of caller location information are ensured for the emergency communication for end-users with disabilities as for emergency calls by other end-users;

(f) the end-users with disabilities are enabled to reach at least the same level of awareness about the means of access to emergency services through emergency communications as other end-users about emergency calls to ‘112’, either by the design of the means of access or through awareness raising measures.

CHAPTER 4

ROUTING TO THE MOST APPROPRIATE PUBLIC SAFETY ANSWERING POINT

Article 5

Member States shall ensure that emergency communications and caller location information are routed without delay to the most appropriate PSAP that is technically capable to convey the contextual information to the emergency services when alerting those services.

Article 6

For the purpose of ensuring the technical feasibility of the seamless access to emergency services as provided in Article 4(1), point (b) of this Regulation, without prejudice to the

implementation of Directive (EU) 2019/882, Member States shall cooperate with the Commission to identify common interoperability requirements that enable the emergency communication to the most appropriate PSAP via a mobile application anywhere in the Union.

CHAPTER 5

REPORTING

Article 7

1. Member States shall regularly report to the Commission the performance of the routing to the most appropriate PSAP under Article 5, implemented for emergency communications and caller location information.

2. Member States shall prepare and report to the Commission no later than [*nine months after entry into force of this Regulation*] a roadmap for upgrading the national PSAP system in order to be able to receive, answer and process emergency communications through packet-switched technology. The roadmap shall indicate the date of the expected deployment of voice, text or video based emergency communications through packet-switched technologies. The roadmap shall also include the indicative date by when PSAPs will be ready to receive such emergency communications. Member States shall provide updated information on the implementation of the intermediary milestones of the roadmap in accordance with Article 8.

Article 8

1. Member States shall report to the Commission no later than [*one year after entry into force of this Regulation*]:

   (a) the criteria for the accuracy and reliability of caller location information expressed according to the parameters referred to in Article 3,

   (b) the means of access to emergency services through emergency communications to be used by end-users with disabilities, including those using roaming services, and the assessment of their compliance with the functional equivalence requirements in Article 5.

2. Member States shall provide the Commission with the information referred to in this article and Article 7 without prejudice to the initial deadlines provided therein, in the context of each data gathering that the Commission initiates for the purposes of fulfilling its obligation to report to the European Parliament and the Council pursuant to Article 109 (4) of Directive (EU) 2018/1972.

CHAPTER 6

FINAL PROVISIONS

Article 9

This Regulation shall enter into force on the third day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 16.12.2022

For the Commission
The President
Ursula VON DER LEYEN