Emergency calls in the upcoming EU-legislation

Directive of the European Parliament and of the Council establishing the European Electronic Communications Code

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Executive Summary

The European Electronic Communications Code (EECC) will define the way emergencies are handled across the EU. It will be binding on all Member States and the provisions must be implemented within 2 years. Major topics addressed by the EECC include public warning, caller location and accessibility for people with disabilities, among others.

Caller location:

Previous legislation has addressed caller location, but the EECC is more detailed about how emergency calls should be located. Countries should use not only network-based information but also handset-derived information (for instance Advanced Mobile Location). This location information must be provided at no cost to the emergency services or to the caller.

Public warning:

It will be mandatory for Member States to use a Reverse 112 system to warn people about a crisis or threat. This system sends an alert to those affected using telephone networks. Unlike other EECC provisions, Member States will have 42 months to implement Reverse 112.

Accessibility for people with disabilities:

In the past, legislation has been vague about what "equivalent access" for people with disabilities means. The EECC helps to clarify this: access should be made through "emergency communications," meaning not only through voice, but also SMS, video, messaging, total conversation and others.

Access to 112 from online platforms:

All number-based communications services will have to provide access to 112 for their users. This means that people will be able to call 112 from services like Skype Out and Viber, when the infrastructure of the country is ready to receive such calls. Nevertheless, services that do not use a phone number to communicate (e.g. WhatsApp, Facebook Messenger) are not yet obliged to provide this.

Other provisions:

Other provisions of the legislation cover private networks, transnational emergency calls and calls in other languages.

Table of content

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The text and its implications

What is a directive?

The European Electronic Communications Code (EECC) is a **directive**. In the law of the European Union (EU), a directive is a legislative act whose provisions are binding on all the Member States of the EU. Unlike the regulations, which are self-executive, **the directives must be implemented in the national law of all the Member States within a specific deadline**. As a consequence, the text only sets objectives that the Member States much achieve, giving them a certain flexibility regarding the means to achieve those objectives.

How to read the text

When one reads a European legislation, three elements of the legislation should be looked at:

- The **article** in itself. The articles set the obligations to the Member States. This is therefore the main source of information about the objectives that need to be achieved by the Member States.
- The **recitals**. The recitals are included in the text but are not themselves binding. The role of the recitals is to give more information about the context and the reasoning behind an obligation. They are sometimes very useful to understand the articles.
- The **definitions**. As some terms used in the text are sometimes vague, a closer look at the definitions can help to understand what falls under the scope of an article.

This document intends to provide a comprehensive analysis of how to understand the provisions on emergency calls in the European Electronic Communications Code, by analysing the articles, recitals and definitions of the text.

Territorial scope

The provisions in the directive are binding on all the members of the European Union and the European Economic Area, namely Austria; Belgium; Bulgaria; Croatia; Cyprus; the Czech Republic; Denmark (excluding the Faroe Islands and Greenland); Estonia; Finland; France (including Guadeloupe, French Guyana, Martinique, Réunion, Mayotte and Saint-Martin; excluding the other overseas territories); Germany; Greece; Hungary; Iceland; Ireland; Italy; Latvia; Liechtenstein; Lithuania; Luxembourg; Malta; the Netherlands (excluding the Netherlands Antilles); Norway (excluding Svalbard, Bouvet Island, Peter I Island and Queen Maud Land); Poland; Portugal (including Azores and Madeira); Romania; Slovakia; Slovenia; Spain (including Ceuta, Melilla and the Canary Islands); Sweden and the United Kingdom (including the Channel Islands and Gibraltar; excluding the other overseas territories). The countries joining the European Union or the European Economic Area in the future will also have to implement the provisions of the directive.

Timeframe

Date	European Commission	European Parliament	Council of the EU
14.09.2016	Release of the proposal		
01.12.2016			Policy debate on the proposal
21.03.2017		Public Hearing at the IMCO committee[1]	
10.05.2017		Deadline for amendments at IMCO Committee	
04.09.2017		Vote at the IMCO Committee	
02.10.2017		Vote at the ITRE Committee[2]. Decision to open interinstitutional negotiations	
11.10.2017			Mandate to open interinstitutional negotiations
25.10.2017	Trilogue[3] #1		
06.12.2017	Trilogue #2		
01.02.2018	Trilogue #3		
28.02.2018	Trilogue #4		
20.03.2018	Trilogue #5		
25.04.2018	Trilogue #6		
22.05.2018	Trilogue #7		
05.06.2018	Trilogue #8 – Agreement reached		
29.06.2018			COREPER[4] vote on the agreement reached in trilogues
10.07.2018		Vote at the ITRE Committee on the agreement reached in trilogues	
14.11.2018		Vote in plenary on the agreement reached in trilogues	
03.12.2018			Vote by the Council on the trilogues agreement
End of 2018		Signature of the text (about 1 week after the Council vote)	
End of 2018	Publication in the official journal of the European Union (OJ) (few days after the signature of the text)		
3 days after the publication in the OJ	Entry into force of the text		
2 years after the publication in the OJ	Deadline for transposition of the text into national law (except where specifically mentioned)		

[1] European Parliament's committee on Internal Market and Consumers Protection. This was the parliamentary committee in charge of the provisions related to consumers protection and universal service in this legislation.
[2] European Parliament's committee on Industry, Research and Energy. This was the parliamentary committee responsible for the whole legislation.
[3] A trilogue is the name given to the informal interinstitutional negotiations between the European Parliament, the Council of the EU and the European Commission in order to find an agreement on a proposal.
[4] Committee of the Permanent Representatives of the European Union. One of the components of the Council of the EU.

Provisions

Each sub-section is articulated in the same way: firstly, the current legislation on the topic is recalled; in the second part, the relevant provision in the EECC text is quoted; while the third part analyses the provisions set out in the directive and gives indications on how to interpret the text.

Caller location

Since 2002, the EU legislation states that emergency calls should be located: "Member States shall ensure that undertakings concerned make caller location information available free of charge to the authority handling emergency calls as soon as the call reaches that authority." (Article 26, paragraph 5 of the Universal Service Directive, as amended in 2009).

The obligation is strengthened in the EECC:

> *"Member States shall ensure that caller location information is made available to the most appropriate PSAP without delay after the emergency communication is set up. This shall include network-based location information and, where available, handset-derived caller location information. Member States shall ensure that the establishment and the transmission of the caller location information are free of charge for the end-user and to the PSAP with regard to all emergency communications to the single European emergency number '112'. Member States may extend that obligation to cover emergency communications to national emergency numbers. Competent regulatory authorities, if necessary after consulting BEREC, shall lay down criteria for the accuracy and reliability of the caller location information provided." (article 109, paragraph 6)*

Handset-based location

While the past legislation did not specify which method should be used to locate emergency calls, leading to unsatisfactory accuracy levels, the upcoming directive mandates the use of both network-based location information and handset-derived caller location information (where available, meaning where the caller's device supports location capabilities). In the past years, handset-based technologies (GNSS, Wifi) have proven to be very accurate, as this is acknowledged in recital 290 of the text: *"[…] Handset-based location technologies have proven to be significantly more accurate and cost effective due to the availability of data provided by the EGNOS and Galileo Satellite system and other Global Navigation Satellite Systems and Wi-Fi data. Therefore handset-derived caller location information should complement network-based location information even if the handset-derived location may become available only after the emergency communication is set up."* Technologies providing handset-derived caller location information to the emergency services include for instance Advanced Mobile Location (AML)[5].

Caller location free of charge to user

Another change brought by the EECC is the fact that the provision of caller location will also have to be free to the caller, irrespective of how the location is provided, as is explained in recital 290: *"The establishment and transmission of caller location information should be free of charge for both the end-user and the authority handling the emergency communication irrespective of the means of establishment, for example through the handset or the network, or the means of transmission, for example through voice channel,*

[5] More information on http://www.eena.org/pages/aml

SMS or Internet Protocol-based." In the current legislation, the obligation of making the transmission of caller location information free only applies to PSAPs.

Reverse 112

Despite numerous resolutions voted by the European Parliament on the topic, there is currently no mandate at EU-level on alerting citizens in case of ongoing crisis or upcoming threat.

The EECC will make the use of telephone networks to alert the population mandatory in case of large-scale disaster:

> *"1. By 42 months after entry into force, Member States shall ensure that, when public warning systems regarding imminent or developing major emergencies and disasters are in place, public warnings are transmitted by providers of mobile number-based interpersonal communication services to end-users concerned.*
>
> *2. Notwithstanding paragraph 1, Member States may determine that public warnings be transmitted through publicly available electronic communications services other than those referred to in paragraph 1 and other than broadcasting services, or through internet access service or a mobile application relying on an internet access service, provided that the effectiveness of the public warning system is equivalent in terms of coverage and capacity to reach end-users including those only temporarily present in the area concerned, taking utmost account of BEREC guidelines. Public warnings shall be receivable by end-users in an easy manner.*
>
> *BEREC shall, after consulting the authorities in charge of PSAPs and by 18 months after entry into force publish guidelines on how to assess whether the effectiveness of public warnings under paragraph 2 is equivalent to those under paragraph 1." (article 110)*

A mandatory Reverse 112 system

To understand the way paragraph 1 is phrased, one has to keep in mind that the definition of public warning and the sending of the alert falls under civil protection, which is a national competence. For this reason, the final text has to mention "when public warnings […] are in place". However, it is assumed that all European countries have already a public warning system in place, most of them relying mainly on sirens. The "providers of mobile number-based interpersonal communication services", i.e. the mobile network operators, will also in the future have to transmit alerts to the citizens in case of ongoing or upcoming crisis. The main technologies enabling such system are cell broadcast and location-based SMS[6].

While the provision to "end-users concerned" might appear a bit vague, a clearer definition is brought in recital 293: "*End-users concerned should be deemed to be those end-users who are located in the geographic areas potentially being affected by imminent or developing major emergencies and disasters during the warning period, as determined by the competent authorities.*"

[6] More information about the technologies available can be found on EENA's operational document on public warning: http://www.eena.org/uploads/gallery/files/operations_documents/2012_06_25_publicwarning.pdf

Alternative transmission channels

Paragraph 2 of the article introduces an alternative transmission channel, still using communications networks but where the message is not carried by a mobile network operator; for instance, in the case of a national app. However, paragraph 2, as well as recital 294 bring clear conditions for the use of this alternative:

- The alternative method should be as "efficient" as the technologies described in the first paragraph of the article. "As efficient" means here that the same amount of people are covered by this technology (including visitors) and that they can be reached within the same amount of time. National authorities have the responsibility to assess the effectiveness of such alternatives, following guidelines drafted by BEREC.
- The reception of the alert should be "easy", which means that the user should not be required to log into an app: *"Public warnings other than those relying on mobile number-based interpersonal communications services should be transmitted to end-users in an easily receivable manner. Where a public warning system relies on an application it should not require end-users to login or register with the authorities or the application provider."* (recital 294)
- Any visitor entering the Member State should be informed by a free SMS of how to get public warning alerts: "In order to inform end-users entering a Member State of such available public warning systems, that Member State should ensure, that those end-users receive, automatically by means of SMS, without undue delay and free of charge, easily understandable information on how to receive public warnings, including by means of mobile terminal equipment not enabled for internet access services." (recital 294).
- The transmission of public warning alerts should remain free of charge to the user.
- The alternative should comply with privacy rules.

EU-wide Reverse 112 system

If national authorities will remain competent to define the alert: when, which transmission, which text, which public… the text also intends to pave the way for the introduction of a pan-European Reverse-112 system in the future: "In *the course of the future review of this Directive, the Commission could also assess whether it is possible, in accordance with Union law, and feasible to set up a single EU-wide public warning system in order to alert the public in the event of an imminent or developing disaster or major state of emergency across different Member States."* (recital 294).

Specific deadline for implementation

Finally, it is important to point out that the deadline for the implementation of this article has been extended to 42 months.

Accessibility for people with disabilities

The 2009 legislation added the principle of "equivalent access" to make sure that persons with disabilities can also easily reach the emergency services. However, the lack of clarity in the text resulted in diverging implementations across the EU Member States.

The EECC intends to consolidate and clarify this principle:

> *"Member States shall ensure that access for end-users with disabilities to emergency services is available through emergency communications and equivalent to that enjoyed by other end-users in accordance with Union law harmonising accessibility requirements for products and services. The*

Commission and the national regulatory and/or other competent authorities shall take appropriate measures to ensure that end-users with disabilities can access emergency services on an equivalent basis with others, whilst travelling in another Member States, where feasible, without any pre-registration. These measures shall seek to ensure interoperability across Member States and shall be based to the greatest extent possible on European standards or specifications published in accordance with the provisions of Article 39, and they shall not prevent Member States from adopting additional requirements in order to pursue the objectives set out in this Article." (article 109, paragraph 5)

To clearly understand the provisions set out in this paragraph, one has to carefully analyse the details of the wording and check carefully the definitions and the recitals.

A clearer mandate

The main change compared with the previous text is that access for persons with disabilities should be made "though emergency communications". If the definition of "emergency communication" is still vague: "communication by means of interpersonal communications services between an end-user and the PSAP with the goal to request and receive emergency relief from emergency services"; recital 285 brings the key elements to understand the provision: "*Emergency communications are means of communication, that include not only voice communications but also SMS, messaging, video or other types of communications, for example real time text, total conversation and relay services. Member States, taking into account the capabilities and technical equipment of the PSAPs, should be able to determine, which number-based interpersonal communications services are appropriate for emergency services, including the possibility to limit those options to voice communications and their equivalent for end-users with disabilities, or to add additional options as agreed with national PSAPs.*" If the recital provides a clear list of what falls under the definition of "emergency communication", it will remain up to the Member States to determine what type of communication is best suited, taking into account the national infrastructure.

People with disabilities travelling to other Member States

Finally, the paragraph also recalls that the principle of "equivalent access" also applies to visitors with disabilities, but with no more specification than "where feasible, without any pre-registration".

Access to 112 from online platforms

In the past months, most of the legislative discussions have focussed on who should provide access to 112? Should this obligation only fall on the mobile network operators, or should it also be extended to online platforms such as Skype or WhatsApp?

The 2009 legislation already opened the debate, by stating that the obligation of providing access to 112 would also extend to number-based over-the-top services, such as Skype Out or Viber *"once internationally-recognised standards ensuring accurate and reliable routing and connection to the emergency services are in place"* (recital 40 of the Universal Service Directive, as amended in 2009). Concretely, very few Member States have adopted such an obligation, mainly because of the call handling infrastructure of the Member States (to provide access to emergency services, an OTT requires the establishment of a one-stop-shop in each country).

The EECC keeps a rather similar wording compared with the 2009 legislation:

"Member States, in consultation with national regulatory authorities and emergency services and providers of electronic communications services, shall ensure that providers of publicly available number-based interpersonal communications services, where that service allows end-users to originate calls to a number in a national or international telephone numbering plan, provide access to emergency services through emergency communications to the most appropriate PSAP." (article 102, paragraph 2)

You didn't understand anything? No worries. Fortunately, the recitals provide much clearer information on the scope of the obligation to provide access to emergency services.

What are we talking about?

First of all, one has to distinguish providers of number-based communications services and providers of number-independent communications services. Number-based are the communications services done through the public switched telephone network (PSTN), i.e. phone numbers. Within number-based communications services, a specific category are the network-independent providers who, unlike the mobile network operators, provide communications services in a PSTN without having control over the network. This is for instance the case for Skype Out (when you make a call via Skype by dialling a phone number) or Viber. Number-independent communications services are communications services which do not provide access to a PSTN. Examples are infinite, but to mention some of them: WhatsApp (although you need a phone number to register, this is used by WhatsApp as an identification and not for communications purposes), Facebook Messenger, Snapchat, Twitter, Tinder… Now that this distinction is done and understood, we can go into the details and analyse whether obligations to provide access to 112 will apply to those platforms.

Number-based interpersonal communications services

If it is no surprise that all mobile network operators should provide reliable access to 112, the question is more open to the network-independent number-based communications services. In principle the obligation also includes such services. However, recital 286 of the legislation does take into account the current technical limitations and requires some standards to be implemented to ensure a correct routing of the call to the appropriate PSAP: *"For such network-independent providers, namely providers which are not integrated with a public communications network provider, providing caller location information may not always be technically feasible. Member States should ensure that standards ensuring accurate and reliable routing and connection to the emergency services are implemented as soon as possible in order to allow network-independent providers of number-based interpersonal communications services to fulfil the obligations related to access to emergency services and caller location information provision at a level comparable to that required of other providers of such communications services. Where such standards and the related PSAP systems have not yet been implemented, network-independent number-based interpersonal communications services should not be required to provide access to emergency services except in a manner that is technically feasible or economically viable. As an example, this may include the designation by a Member State of a single, central PSAP for receiving emergency communications."* (recital 286).

When access to 112 or the transmission of caller location is not supported, the provider of network-independent number-based communications services should clearly inform the end-user of those limitations, as stated in recital 284.

Number-independent interpersonal communications services

As some number-independent communications services, such as WhatsApp or Facebook Messenger, have become increasingly used, the question can be raised as to whether these services need to provide access to the emergency services. Long discussions have been held between the EU decision-makers to decide as to whether the obligation should apply or not, in spite of the current technical limitations both on the online platform and on the PSAP's side.

The decision-makers eventually settled on a rather fair mandate: no obligation at the moment. However, in the future, BEREC[7] will assess whether the penetration rate of such platforms will "threaten" access to emergency services (for example: if WhatsApp has become so widely used that people no longer use regular SMS or regular telephone service). If this becomes the case, the obligations to provide access to emergency services can also be extended to those platforms.

This can be found in article 123 of the directive: *"BEREC shall monitor the market and technological developments regarding the different types of electronic communications services and shall, three years from the entry into force of this Directive and every three years thereafter, or upon a reasoned request from at least two of its members from a Member State, publish an opinion on such developments and on their impact on the application of Title III. […] As a basis for the opinion, BEREC shall in particular analyse: "c) to what extent effective access to emergency services is appreciably threatened, in particular due to an increased use of number-independent interpersonal communications services, by a lack of interoperability or technological developments."* (article 123).

Transnational emergency calls

Situations in which a person calls 112 to report an emergency occurring in another country are frequent. In such cases, the emergency services do not have any way to contact their counterparts in other countries. As a solution, some countries were using the EENA transnational database (which was not mandatory) or used embassies to bridge between different countries' emergency services.

The EECC acknowledges this challenge and mandates the establishment of a secured and institution-maintained transnational database:

> *"BEREC shall maintain a database of E.164 numbers of European emergency services to ensure that they are able to contact each other from one Member State to another, if such a database is not maintained by another organisation." (article 109, paragraph 8)*

BEREC will hence be responsible for establishing and handling such a "directory", unless another organisation takes this responsibility. This might be the case, as CEPT[8] is about to set up such a database.

[7] Body of European Regulators for Electronic Communications; regulating agency of the telecommunication market in the European Union

[8] European Conference of Postal and Telecommunications Administrations. Coordinating body for national European (not only the EU) telecommunications agencies.

Access from private networks

In some cases, users of private networks have to dial another number to reach the emergency services (for instance in a hotel, often you have to first dial "0" or "9" to make a normal call outside of the hotel).

As the Universal Service Directive did not mention anything about this point, the EECC suggests that:

> *"Member States shall promote the access to emergency services through the single European emergency number '112' from non-publicly available electronic communication networks enabling calls to public networks, in particular when the operator responsible for that network does not provide an alternative and easy access to an emergency service." (article 109, paragraph 1)*

In its first reading, the European Parliament initially intended to make direct access to 112 from private networks mandatory. However, the interinstitutional negotiations considerably watered down this provision, which only requires Member States to "promote" direct access to 112.

Promotion of 112

Recent figures suggest that more than half of European citizens are still unaware of the European emergency number (find the latest Barometer survey here). While the Universal Service Directive did require the Member States to actively participate in the promotion of 112, the EECC adds a supporting role from the European Commission:

> *"Member States shall ensure that citizens are adequately informed about the existence and use of the single European emergency number '112', as well as its accessibility features, including through initiatives specifically targeting persons travelling between Member States, and end-users with disabilities. That information shall be provided in accessible formats, addressing different types of disabilities. The Commission shall support and complement Member States' action." (article 102, paragraph 7)*

Although the last sentence highlights the role of the European Commission, it will not have any major consequence. However, another improvement brought by the EECC concerns the promotion of the means of access to emergency services for people with disabilities. Furthermore, it is also specified that promotion actions should be done in different formats, so as to target all citizens, including those with disabilities.

Emergency calls in different languages

Situations where a person calls the emergency services but does not speak the national/regional language are frequent. However, in most European countries, there is no requirement to be able to handle emergency calls in languages other than the national language. The EECC refers to this issue in one of its recitals:

> *"[…] Member States should consider the PSAPs ability to handle emergency communications in more than one language. […]"* (Recital 286)

Although this provision is not mandatory and does not imply any major consequence, its inclusion in the EU legislation should nevertheless be noted. The issue of languages was probably too sensitive for the Member States to have a stronger requirement in the legislation.

Need more information?

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