

DECREE 5 February 2025.

Authorization for the "Forma Mentis School of Specialization in Psychotherapy" to transfer its main office Rome.

THE GENERAL DIRECTOR
OF THE SYSTEMS OF HIGHER EDUCATION
AND THE RIGHT TO STUDY

Having seen the law of 18 February 1989, n. 56, which regulates the regulation of the profession of psychologist and establishes the requirements for the exercise of psychotherapeutic activity and, in particular Article 3 of the aforementioned law, which subordinates the exercise of the aforementioned activity upon acquisition, following the degree in psychology or medicine and surgery, of specific professional training through at least four-year specialization courses, activated at university specialization schools or at institutions recognized for this purpose;

Having regard to art. 17, paragraph 96, letter b), of the law May 15, 1997, n. 127, which provides that by decree of Minister of Universities and Scientific and Technological Research, the provisions concerning the recognition of the institutes referred to in art. 3, paragraph 1, of the recalled law no. 56 of 1989;

Having seen the decree of the Minister of University and Research scientific and technological 11 December 1998, prot. n. 509, with which the regulation containing provisions for was adopted the recognition of institutes authorised to activate courses in specialization in psychotherapy pursuant to art. 17, paragraph 96, of law no. 127 of 1997 and, in particular, art. 2, paragraph 5, which provides that the recognition of institutes applicants are arranged on the basis of the compliant opinions formulated by the technical-consultative commission referred to in art. 3 of the aforementioned decree no. 509/1998 and by the National Committee for the evaluation of the university system, whose competences have been merged into the National Evaluation Agency of the university and research system referred to in art. 2, paragraph 138, of Law 24 November 2006, n. 286;

Having regard to the opinions expressed at the meetings of 11 October 2000 and of 16 May 2001, with which the National Committee for the evaluation of the university system has identified the minimum standards that the institutes must have applicants in relation to teaching staff, as well as to structures and equipment;

Having seen the ordinance of the Minister of Education, University and Research dated 10 December 2004, containing «Amendments and additions to the ministerial ordinances dated 30 December 1999 and 16 July 2004, containing instructions for the submission of requests for authorization to establish and activate specialization courses in psychotherapy»;

Having seen the decree of 21 April 2023, prot. n. 540, with which the The Secretary General of the MUR has delegated the Director General of the Directorate of Training Regulations higher education and the right to study, to sign the decrees of recognition of the institutions that request it, once the legally prescribed investigation has been concluded;

Having seen the decree of 19 September 2024, prot. n. 1590, with the which was lastly appointed as the technical-consultative commission referred to in art. 3 of the aforementioned regulation;

Given the request of 5 September 2024, and subsequent additions, with which the "Specialization School in Forma Mentis psychotherapy» has requested the transfer of the main office in Rome, from via Fulcieri Paulucci De Calboli n. 5 in via XX Settembre n. 68/b, maintaining the same number of students;

Given the favorable technical assessment of appropriateness expressed by ANVUR with resolution 18 December 2024, n. 293 in merit to the request submitted by the above-mentioned institute;

Decreases:

Art. 1.

1. For the reasons set out in the introduction and for the purposes set out in the in art. 4 of regulation 11 December 1998, n. 509, the «Forma Men-tis School of Specialization in Psychotherapy» is authorized to transfer its main office in Rome, from via Fulcieri Paulucci De Calboli n. 5 to via XX Settem-bre n. 68/ b, maintaining the same number of students.

This decree is published on the institutional website of the Ministry as well as in the *Official Journal* of the Italian Republic.

Rome, 5 February 2025

The general manager: CERRACCHIO

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**MINISTRY OF BUSINESS
AND MADE IN ITALY**

DECREE 17 January 2025.

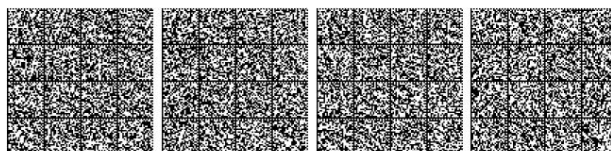
Provisions relating to the single number service European emergency «112».

THE MINISTER OF BUSINESS
AND MADE IN ITALY

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;

Having regard to Delegated Regulation (EU) 2023/444 of the Commission of 16 December 2022 supplementing Directive (EU) 2018/1972 of the European Parliament and of the Council with measures to ensure effective access to emergency services through communications from emergency calls to the single European emergency number «112» and in particular what is provided for in art. 7, paragraph 2, relating to the preparation of a table of march for the national PSAP system update so that it is able to respond to communications from emergency via packet-switched technology, as well as receiving and processing them;

Having regard to Delegated Regulation (EU) 2019/320 of the Commission of 12 December 2018 supplementing Directive 2014/53/ EU of the European Parliament and of the Council as regards the application of the essential requirements



referred to in Article 3, paragraph 3, letter *g*), of that Directive, in order to ensure the location of the caller in emergency communications from mobile devices;

Having regard to Recommendation 2003/558/EC of the European Commission of 25 July 2003 on the processing of caller location information on mobile networks of electronic communication for the purpose of providing emergency call services with location capabilities;

Having seen Legislative Decree no. 259 of 1 August 2003, containing the "Electronic Communications Code" and subsequent amendments;

Having regard to Legislative Decree 30 June 2003, n. 196, Code regarding the protection of personal data, as amended by Legislative Decree 10 August 2018, n. 101 containing «Provisions for the adaptation of national legislation to the provisions of Regulation (EU) 2016/679 of European Parliament and of the Council of 27 April 2016, relating to the protection of natural persons with regard to on the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC»;

Having regard to Legislative Decree no. 207 of 8 November 2021, implementing Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code and in particular Articles 98-*vicies-semel* and 98-*vicies-bis* containing rules on «Provisions to promote the implementation of the single European emergency number» and «Communications of emergency and single European emergency number» which indicate the Ministry of Business and Made in Italy as responsible for the duties towards the operators of electronic communication in relation to the implementation of the single European emergency number "112" in Italy as well as Article 98-*vicies*, paragraph 2, which provides, among other things, that the The Ministry shall ensure that providers of voice communication services adopt all necessary measures to guarantee uninterrupted access to emergency services;

Having regard to Legislative Decree no. 82 of 27 May 2022, implementing Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on accessibility requirements for products and services".

Having regard to Law No. 124 of 7 August 2015, containing "Delegations to the Government on the reorganisation of public administrations" which, in art. 8, paragraph 1, letter *a*), provides, among others the other is the "establishment of the single European number "112" throughout the national territory with operations centres to be created at regional level, according to the procedures defined with the memoranda of understanding adopted pursuant to art. 75-*bis*, paragraph 3, of the code referred to in Legislative Decree no. 259 of 1 August 2003";

Having seen the decree of the Minister of Communications April 27, 2006, published in the *Official Journal* no. 191 of 18 August 2006, containing the "112" service, the single European emergency number";

Having seen the decree of the Minister of Communications of 22 January 2008, published in the *Official Journal* no. 59 of 10 March 2008 containing the «Single European emergency number "112"»;

Having seen the decree of the Minister for Economic Development of 12 November 2009, published in the *Official Journal* no. 30 of 6 February 2010, containing «Provisions regarding the single telephone number service of European emergency "112"»;

Having seen the resolution of the Communications Regulatory Authority no. 11/06/CIR which contains the regulatory provisions for the provision of *Voice over Internet Protocol services* (VoIP) and integration of the national numbering plan;

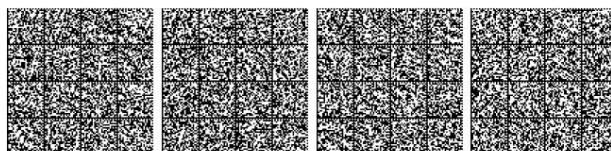
Having regard to the resolution of the Communications Regulatory Authority no. 8/15/CIR containing «Adoption of the new Numbering Plan in the telecommunications sector and

implementing regulation, which modifies and integrates the plan numbering referred to in resolution no. 52/12/CIR» and subsequent amendments and additions;

Taking into account the provisions of Regulation (EU) 2022/612 of the European Parliament and of the Council of 6 April 2022 on *roaming* on public networks mobile communications within the Union, and in particular as indicated in recital 19, where it is, among other things, the other, specified that it is up to the Member States to determine which types of emergency communications are **technically feasible to ensure roaming customers access to emergency services**, as well as that 'host network operators should include in their offer reference information regarding the types of emergency communications that are mandatory and technically feasible to ensure access to **roaming customers in compliance of national measures in the visited Member State**. Wholesale *roaming* agreements should also include information on the technical parameters to ensure access to emergency services, even for *roaming customers* with disabilities, as well as to ensure the transmission of caller location information, including information derived from mobile devices, to the PSAP more eligible in the Member State visited. This information should enable the *roaming provider* to identify and provide free emergency communication and the transmission of the caller's location" and to recital 44 where it is specified that "to ensure that *roaming customers* have uninterrupted, effective access and free of charge to emergency services, hosted networks should not apply wholesale charges to *roaming providers* in connection with any type of emergency communications.

Considering that the Ministry of Business and Made in Italy, in agreement with the Ministry of the Interior, has conducted some technical tables, concluded in December 2023, for the purposes of the update of the regulatory provisions referred to in the decrees of the Ministry of Communications of 22 January 2008 and the decree of the Ministry of Economic Development of 12 November 2009 in accordance with the provisions of the Commission Delegated Regulation (EU) 2023/444 of December 16, 2022, where, among other things, the definition is expected of a *roadmap* for implementing voice, text or video-based emergency communications across packet switching technologies;

Considering that the technical tables were attended by operators of electronic communications on fixed networks and furniture responsible for collection and delivery to the *Public safety answering point* (PSAP) for emergency calls, the main manufacturers of operating systems for mobile devices referred to in art. 1, paragraph 1, of delegated regulation (EU) 2019/320 and the regional contact persons indicated for participation in the Advisory Commission of which to the art. 98-*vicies-semel* of the legislative decree of 1 August 2003, n. 259;



Considering it necessary to proceed with the integration of the regulations relating to the single European emergency number "112" in force pursuant to the decrees of the Ministry of the communications of 27 April 2006 and 22 January of 2008, and of the decree of the Ministry of Economic Development of 12 November 2009, in light of the changes introduced by the legislative decree of 8 November 2021, n. 207 and of Commission Delegated Regulation (EU) 2023/444, on the basis of the decisions taken within the framework of work of the Advisory Commission, identified by art. 98-*vicies-semel* referred to in the legislative decree of 1 August 2003, n. 259 and on the basis of the results of the aforementioned technical tables;

The agreement of the Ministry of the Interior was obtained;

Decreets:

Art. 1.

Scope of application

1. This decree applies to communications of emergencies originating from public electronic communications networks providing communications services interpersonal based on the number and made towards the single European emergency number "112" and towards the national numbers associated with emergency services for which, pursuant to art. 98-*vicies-bis*, paragraph 5, del Legislative Decree 1 August 2003, n. 259, is required by Ministry of the Interior transmission of information on the caller's location.

2. The national numbers associated with the services emergency are identified in the numbering plan of the electronic communications sector and discipline implementing.

Art. 2.

Definitions

1. For the purposes of this decree, the following definitions shall apply:

a) emergency call centre or PSAP (*Public safety answering point*): a physical location where an emergency communication is initially received as defined in art. 2, letter *n*), of Legislative Decree 1 August 2003, n. 259 and subsequent amendments and additions;

b) single response center or CUR: the most suitable emergency call collection center (PSAP) defined in art. 2, letter *o*), of Legislative Decree 1 August 2003, n. 259 and subsequent amendments and additions;

c) emergency communication: the communication emergency as defined in art. 2, letter *q*) of Legislative Decree no. 259 of 1 August 2003 and subsequent amendments and additions;

d) operator: an undertaking as defined in art. 2, letter *l*), of Legislative Decree 1 August 2003, n. 259 and subsequent amendments and additions;

e) most suitable PSAP: a most suitable PSAP as defined in art. 2, letter *mm*), of the Legislative Decree 1 August 2003, n. 259 and subsequent amendments and integrations;

f) electronic communications network for private use: electronic communications network with which electronic communications services for exclusive use are created as defined in art. 2, letter *ss*), of the legislative decree of 1 August 2003, n. 259 and subsequent amendments and integrations;

g) public electronic communications network: a electronic communications network, as defined in Article 2, letter *tt*), of the legislative decree of 1 August 2003, n. 259 and subsequent amendments and additions;

h) interpersonal communication service based on the number: an interpersonal communication service, such as defined in art. 2, letter *ggg*), of Legislative Decree 1 August 2003, n. 259 and subsequent amendments and additions;

(i) emergency service: the emergency service as defined in art. 2, letter *nnn*), of Legislative Decree 1 August 2003, n. 259 and subsequent amendments and additions;

j) *Voice over long term evolution* or VoLTE type voice service : the voice service provided by a mobile network

based on international ETSI/3GPP *standards* to enable high-quality voice communications in networks through radio access in LTE 4G technology and the "core" network in IMS technology (*IP Multimedia system*).

k) *Voice over IP* or VoIP type voice services : services voice messages provided by a *standards*- based fixed or mobile network international ETSI/3GPP for the provision of voice service in *Voice over IP* technology through IP connections, as for mobile through 5G;

l) mobile devices: mobile phones with features similar to those of computers in terms of capacity of processing and storage of data referred to in art. 1, paragraph 1 of Delegated Regulation (EU) 2019/320;

m) mobile device operating system manufacturers: entities that develop, produce and distribute *software* intended to constitute the operating platform necessary for managing *hardware* resources of mobile devices;

n) real-time text: a form of conversation textual as defined in art. 2, paragraph 1, letter *p*) of the Legislative Decree 27 May 2022, n. 82.

Art. 3.

Access to the single number service European emergency number «112»

1. The methods for routing to the CUR of the emergency communications, pursuant to art. 1, paragraph 1, are adopted on the basis of the provisions contained in Annex 1.

2. The methods of delivery to the interconnection of the emergency communications are adopted with the formats of *routing numbers* defined in the technical specifications 763-3 and 769 and subsequent amendments and additions.

3. Operators providing public services interpersonal communication based on the number ensure, through the application of the defined methods in the technical specifications ST 763, ST 763-3 and ST 769 and subsequent amendments and additions, the routing of calls via the single European emergency number "112", also for calls originating



from devices without an active SIM card or with a SIM not registered on mobile network as provided in the part C of Annex 1.

4. Operators providing public number-based interpersonal communication services shall ensure access to emergency services via the single number of the European emergency number «112» from private electronic communication networks, which are not accessible to the public but they allow calls to public networks, keeping in mind taking into account the provisions of Annex 1, in particular when the undertaking responsible for that network does not provide an alternative access to an emergency service.

5. Operators providing public number-based interpersonal communication services shall ensure access to emergency services via the single European emergency number '112' for number-based emergency communications on VoLTE or VoIP voice services and real-time text.

6. Operators shall deliver the communications within the terms established by current legislation. emergency calls made to the single emergency number European «112» in compliance with the accessibility requirements set out in art. 3, paragraph 5 and Annex I, Section V, letter a) point i) and iii) of the Legislative Decree of 22 May 2022, n. 82 and according to the methods defined with the technical specifications ST 769 and subsequent amendments and additions.

Art. 4.

Caller location on landline and mobile networks

1. Caller location information for all emergency communications is provided according to the procedures set out in Annexes 2 and 3.

2. Transmission of location information

It is also mandatory in the case of emergency communications originating from users who use integrated fixed-mobile services.

3. Operators providing public number-based interpersonal communication services shall ensure the transport only of caller location information derived from mobile devices,

where available. This information is stored for only the time strictly necessary.

4. The manufacturers of mobile device operating systems shall ensure that the information is identified caller location derived from the aforementioned devices and guarantee their availability for the relevant transport referred to in paragraph 3.

5. Mobile device operating system manufacturers refer to the specific guidelines indicated in Part C, point 2, of Annex 1, with regard to the emergency communications using voice services VoLTE or VoIP type and real-time text.

Art. 5.

Relevant reporting obligations to the NUE 112 telephone districts

1. The communication to the operators of the transition of the areas covered by the telephone districts to the model identified in art. 98-*vicies-semel*, paragraph 1, of the de-

Legislative Decree 1 August 2003, no. 259, is published on Government website of the single emergency number service European «112» managed by the Ministry of the Interior.

2. Following this communication, the operators are required to comply with the obligation of correct management of the *routing number* as indicated in art. 2, paragraph 5, of Annex 1 of this decree.

3. Within ninety days following the communication referred to in paragraph 1, all operators shall provide to update the *routing management methods number*.

Art. 6.

Sanctions

1. In case of non-compliance with the provisions of the this decree applies the sanctions referred to in art. 30, paragraph 12 of Legislative Decree 1 August 2003, n. 259 and subsequent amendments, Communications Code electronics.

Art. 7.

Transitional provisions

1. Until the transition of services is completed emergency to the model identified in art. 98-*vicies-semel*, paragraph 1, of the legislative decree of 1 August 2003, n. 259, for all telephone districts on the national territory, the continuity of service is ensured by the operators according to the procedures set out in art. 2, paragraph 5, of Annex 1 of this decree.

Art. 8.

Repeal

1. From the date of publication of this decree, the decree of 22 January 2008 containing the «Single European emergency number "112"» of the Ministry of Communications and the decree of 12 November 2009 containing «Provisions regarding the single telephone number service of European emergency "112"» of the Ministry of Economic Development economic are repealed.

Art. 9.

Final provisions

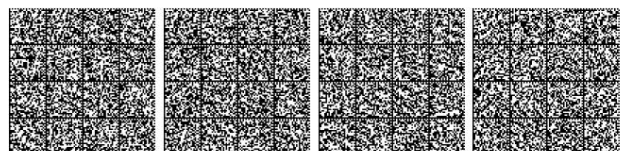
1. This decree will be transmitted to the control bodies for the relevant procedures and published in the *Official Journal* of the Italian Republic and in the institutional website of the Ministry.

Rome, January 17, 2025

The Minister: URSO

Registered at the Court of Auditors on 5 February 2025

Office for the control of the acts of the Ministry of Enterprise and Made in Italy in Italy, of the Ministry of Agriculture, Food Sovereignty and of Forests and the Ministry of Tourism, reg. no. 119



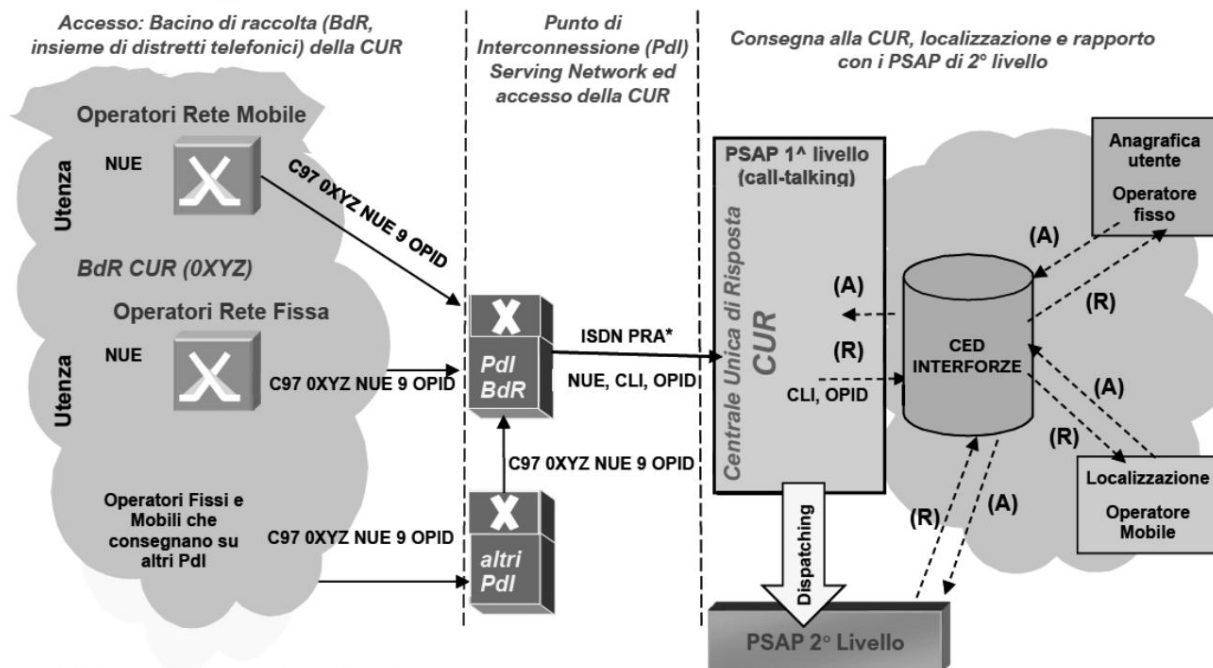
Gestione ed instradamento delle comunicazioni di emergenza 112 NUE (Numero Unico Europeo) nel modello CUR: requisiti e vincoli

Il presente allegato illustra le modalità per la gestione tecnica nelle reti di comunicazione elettronica e l'instradamento verso le CUR delle comunicazioni di emergenza di cui all'art. 1 comma 1, nell'ambito del Servizio del Numero Unico Europeo di Emergenza «112 NUE».

Art 1 Modello di servizio CUR

La figura 1 illustra il modello funzionale del servizio 112 NUE individuato dal Codice delle Comunicazioni Elettroniche di cui al decreto legislativo 1° agosto 2003, n. 259 e s.m.i. Si evidenziano i tre domini logici separati dalla linea tratteggiata:

- Accesso;
- Punto di interconnessione (PdI) con la *Serving Network* ed accesso alla CUR;
- Consegna alla CUR.

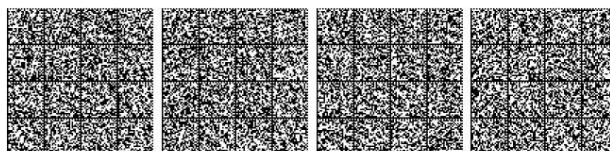


NUE: Codici di emergenza integrati nel NUE

* La componente di accesso alle sedi CUR/PSAP evolverà nel tempo in tecnologie VoIP "IP-based" secondo un processo che sarà definito con le pertinenti Amministrazioni nazionali

Figura 1 - Servizio NUE modello «CUR»: schema logico/funzionale¹

¹ Si evidenzia che nel caso delle soluzioni operative su alcuni distretti telefonici, nei quali il servizio di emergenza 112 NUE è fornito utilizzando il RgN C97, di cui all'art. 2, anche nella fase transitoria nella quale non è ancora presente una CUR, secondo l'architettura di cui alla figura 1, sono svolte dai PSAP competenti su base territoriale le attività connesse alla ricezione delle comunicazioni di emergenza, incluse le richieste di localizzazione di cui all'Allegato 2 e 3.



Part A

Access

Access to the management of emergency communications of the 112NUE Service concerns all public electronic communication networks: the selection of emergency numbers of customers included in the Collection Basin (BdR) served by the CUR, is delivered to the Interconnection Point (Pdl), relating to the district of origin of the call (0XYZ) with the *Serving Network*. The delivery format is that defined in this Annex 1 (RgN C970XYZNUE9OPIID, as defined in the following art. 2).

The BdR includes all the telephone districts, in their entirety, which constitute the geographical area of competence of the individual CURs territorially competent for the management of NUE services.

The BdR of a CUR for the single NUE selection code (112, 113, 115, 118 as well as those which, although classified as emergency, are temporarily not yet integrated into the management by the CUR on the basis of the indications of the Ministry of the Interior as provided for by art. 98-vicies semel of Legislative Decree 1 August 2003, n.259 and subsequent amendments), is an indivisible element and must be kept intact even in the case of applications of Disaster Recovery (DR) policies, cited in this Annex 1.

The *Serving Network* for emergency services ensures the delivery of emergency communications to the CUR. In order to ensure the service, the *Serving Network* supports the reception of the Routing Number (RgN) also on PdlIs other than those defined for the 0XYZ district (see the "Other PdlIs" symbol in the figure).

The access technology used to certify CURs and second-level PSAPs will evolve over time according to the transition highlighted in the migration plan from circuit-switched to packet-switched technology defined by the Ministry of the Interior, in accordance with the provisions of delegated regulation (EU) 2023/444.

In line with these timescales, on the basis of the agreements between the Administrations responsible for the CURs and second level PSAPs and the operator who has the role of *-serving network*, the *-serving network* makes available the delivery of emergency communications in *Full IP* mode through the use of *Access Gateways* as indicated in the following figure 2.

The Administrations responsible for CURs and second-level PSAPs define the implementation projects for the introduction of *Full-IP* calls in their first or second-level PSAPs and implement them according to the timescales indicated in the roadmap for the migration from circuit-switched to packet-switched technology defined within the framework of the work of the Consultative Commission, following the provisions of art. 7 par. 2 of Delegated Regulation (EU) 2023/444.

Figure 2 represents a high-level functional diagram related to the transition of the network system operating as *-serving networks* for PSAPs towards packet-switched networks.

Currently, an architecture based on "legacy" public network accesses in ISDN technology is used according to figure 1; this "legacy" architecture and accesses are maintained until the migration towards technical solutions based on packet-switched networks on the public network up to the CUR sites and the second level PSAP sites, on the basis of the functional scheme defined in the following figure 2.



L'effettiva architettura evolutiva di dettaglio verso soluzioni "IP based" deve essere individuata da parte delle strutture in capo a ciascuno dei domini coinvolti (accesso, rete, PSAP di competenza Regionale, PSAP di competenza centrale) e recepita in eventuali ulteriori indicazioni che possono essere oggetto di ulteriore specificazione nel quadro delle attività previste dalla tabella di marcia di cui all'art. 7 comma 2 del Regolamento Delegato (UE) 2023/444.

La figura 2 rappresenta lo schema funzionale connesso alla transizione della *servicing network* per l'accesso di CUR e PSAP di secondo livello in tecnologia a commutazione di pacchetto.

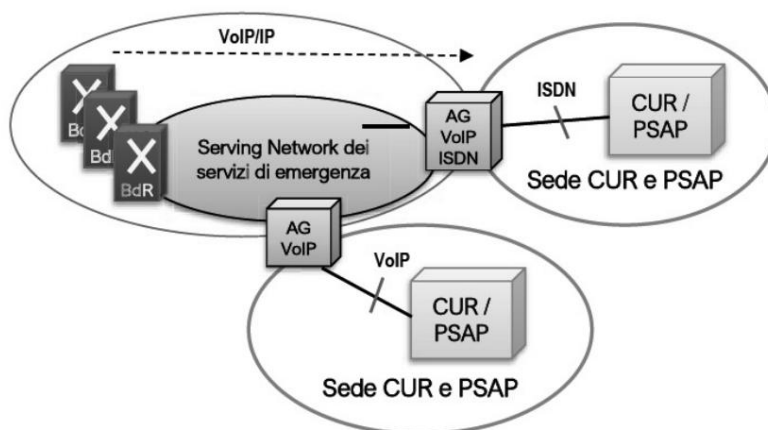


Figura 2 - Schemi funzionali di evoluzione "All-IP" per l'accesso di CUR e PSAP alla "Serving Network"

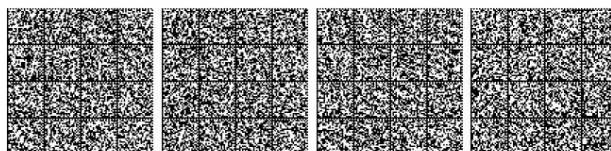
Parte B

Punto di interconnessione (PdI) con Serving Network

Il Punto di Interconnessione della *Serving Network* gestisce il *routing* dei tentativi di chiamata ricevuti con il RgN C97 verso i punti di attestazione della CUR con la *Serving Network*. Il Punto di Interconnessione ed i Punti di attestazione della CUR normalmente coincidono con lo stesso nodo di controllo.

Il Punto di attestazione della CUR garantisce:

- l'instradamento verso la CUR dei tentativi ricevuti con RgNC97 provenienti dal BdR della CUR;
- l'invio dei parametri tecnici mandatori:
 - *Calling Line Identifier (CLI)* del chiamante;
 - Codice OPID della rete origine della chiamata;
 - Servizio NUE richiesto dal Cliente (112, 113, 115, 118, altri definiti con successive attività di integrazione come da indicazioni del Ministero dell'interno ai sensi dell'art. 98 vicies bis, comma 3, del DLgs 259/2003).
- alta affidabilità e ridondanza della consegna primaria;



x *Disaster Recovery* (DR) policies towards one or more vicarious CURs (not illustrated in the figure). DR policies are applied on each BdR in its entirety.

It should be noted that the management of the DR involves the use of support/backup CURs located in sites in the same Region or in different Regions, based on agreements between the competent Administrations. The technological solutions adopted for the implementation of the DR solutions may evolve - upon possible indication of the Ministry of the Interior pursuant to art. 98 vices bis paragraph 3, in consideration of the need for impact analysis so that calls are handled in the most appropriate way for the national structure of emergency services - also involving the use of routings, possibly even temporary, on public electronic communication networks according to methods capable of guaranteeing high reliability and redundancy.

Part C

Delivery to CUR

The delivery to the CUR deals with the following activities which are relevant to the purpose of this Annex:

- x receiving the emergency call as defined by the Technical Regulations Operational (DTO) issued by the Advisory Commission;
- x caller location derived from the network infrastructure² (ref. Annexes 2 and 3); x
- dispatching to the PSAP² responsible for the emergency.

The routing of emergency calls can take place following the principle of subsidiarity between the CURs, even those different from the one of territorial competence, at the request of the competent Administrations (eCall *emergency service*, solution for calls from deaf citizens, DR, etc.).

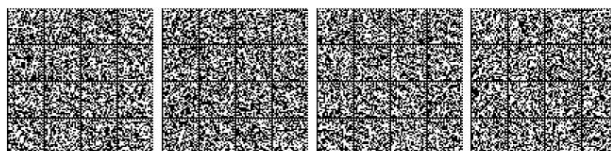
The CUR will manage emergency communications, according to the methods and procedures defined in the DTO.

In the event of technical unavailability in real time of the location of the calling user³ in , and in particular of the information in the network reporting of the originating district, the forwarding of communications to the emergency numbers may not be technically feasible for the access operator⁴

² In this context, the CUR also requires localization deriving from mobile devices, outside the scope of this Decree.

³ This condition can occur, typically in the case of "*VoIP-based*" technologies at the user site, in a way that is not detectable by the access operator, for example in the case of the presence of geographically extended private user networks and/or through the user's autonomous use of Internet connections, including wireless and WiFi, which allow the use of terminals and voice APPs in places other than the customer site. Furthermore, it can occur in the case of innovative "*IP-based*" services, also provided by the operator, which do not use direct access to the operator's public voice network but local wireless coverage, e.g. of the WiFi type (so-called "*WiFi Calling*"). It should be noted that even in these cases, the valorization of the RgN referred to in art. 2 must be ensured by inserting the district code of relevance of the CUR to which the call is intended (including the possible case of use of the default CUR referred to in the following note 4).

⁴ In these cases, if in order to maximize the chances of call delivery the Authority responsible for emergency services decides to identify a default CUR to which to forward calls, the information will be made available to the Operators for the consequent routing operations.



Mobile network access with 4G/VoLTE mobile terminals to emergency services

In the case of mobile terminals and networks capable of carrying out emergency communications via VoLTE or VoIP voice services and/or Real-Time Text via *IP Multimedia Subsystem* (IMS) and 4G/VoLTE radio accesses and, subject to verification of compatibility and technical feasibility, via subsequent evolutions (e.g. VoNR 5G5), the technical management and routing method of emergency calls is as follows: 1. International standards (e.g. ETSI/3GPP TS 122101)

require that a mobile terminal autonomously detects a call as an emergency based on the number selected by the end user and in particular prescribe that:

- a) the user selections 112 and 911 must always be recognised by the terminal as emergency numbers; b) the terminal without a SIM must

recognise the additional numbers 000, 08, 110, 999, 118 and 119 as emergency numbers; these indications have also been accepted internationally in the ITU-T Recommendation E.161.16 .

In such cases, the terminal starts a so-called "emergency session" and associates a service class⁷ among those provided for in the ETSI/3GPP standards with the call and the numbering actually selected by the customer is not transmitted to the operator's network⁸ .

2. In order to minimize possible problems related to the actual behavior of mobile terminals sold on the market, the following guidelines are defined for access to emergency services, including those not yet routed to the CUR:

- a) for emergency numbers, which are automatically detected by the terminal, referred to in point 1 above (therefore the codes 112, 911, etc.), depending on whether or not the SIM is present in the terminal, and for which the user selection is not conveyed in signalling to the mobile operator's network, the routing defined for the 112 code is always applied, through the use, by the terminal in the signalling towards the mobile operator's network, of the associated standard "service category" defined by ETSI/3GPP.

- b) In the case of a mobile terminal with a SIM card registered on the operator's network:

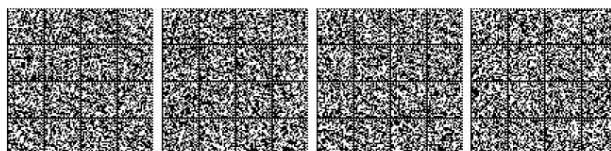
(the) the applicable ETSI/3GPP technical specification⁹ provides for the possibility that the network

⁵ In the event of future technological developments for the provision of voice services through 5G, it is highlighted that, at least in the initial phases, access to emergency services may continue to be provided through the 4G/VoLTE service upon notification to the Ministry.

⁶ ITU-T Recommendation E.161.1 "Guidelines to select Emergency Number for public telecommunications networks" which requires that the selection of the set of "foreign" emergency numbers 911, 000, 08, 110, 999, 118 and 119 be treated as "Emergency setup" and, therefore, in Italy they are assimilated to the selection of 112 as an associated service category.

⁷ The association between emergency numbers and the related class of service is defined by the operator; in the absence of such indications, the terminal normally recognizes the numbers defined by ETSI/3GPP and uses the generic class of service. The operator can instruct the terminal to recognize additional emergency numbers and the related class of service via the network and/or via SIM configuration. For example, SIM cards can be configured by an operator to associate the "police" class of service with the 112 code and this, in the scenario of the user accessing another operator that also uses the classes of service for the other emergency numbers with "police" associated with the 113 code, determines that the calls will be routed to the 113 code.

⁸ In the case of 4G/VoLTE mobile terminals, only terminals called "Emergency Capable", i.e. capable of supporting emergency calls on the 4G/VoLTE mobile network, are the majority of new generation mobile terminals on the market ⁹ ETSI/3GPP TS 122 101.



mobile can send an additional list of emergency numbers to the terminal, indicating the relevant category of service (SOS, 112 or 113 "Police", 115 "Fire Brigade", 118 "Ambulance", 1530 "Marine Guard"¹⁰). In the case of emergency numbers for which a class of service is not defined in the ETSI/3GPP technical specification, the service class of the code 112 can be associated. Any different indications may be shared at a specific technical table with the operators convened by the Ministry in agreement with the Ministry of the Interior pursuant to art. 98 *vicies bis*, paragraph 3, of Legislative Decree 259/2003.

- (ii) For emergency numbers that are not automatically detected by the terminal, not covered by point (i) above, the operator may apply, according to ETSI/3GPP standards, call management, so-called, as a "normal call", that is, managed by the terminal and at network level as a normal telephone call. This treatment also allows direct management according to the specific characteristics associated with national emergency numbers, current and possibly future, for which there is no specific "class of service" in international standards;
- (iii) Alternatively, as indicated in point (i), the mobile operator's network may support, also for emergency codes other than 112, the mode based on the emergency "service categories" defined by ETSI/3GPP and configure the mobile terminals that register on its network in this mode, managing the direct forwarding of voice calls only to emergency numbers that have a standard international "service category". Calls to national emergency numbers, current and any future ones, that do not fall within the standard ETSI/3GPP service categories, may be conveyed to the CUR/PSAPs assimilating them to the service category associated with the code 112.

- c) In the case of mobile terminals without a SIM, only calls to the numbers automatically recognised by the terminal (typically the code 112 and the numbers indicated in point 1) can be ensured, by applying the specific technical solution defined in ST 769 and ST 763/ST 763-3 characterised by the "temporary" CLI "0160". d) In the case of mobile terminals with a SIM that cannot register on the mobile network of a different operator, similar to the case in point 3 above, only calls to the numbers automatically recognised by the terminal, defined in point 1, can be provided, by applying the specific technical solution defined in ST 769 and ST 763/ST 763-3 which provides for the use of the "temporary" CLI in the format "0160". If the mobile terminal has inherited the "service category" mode from a previous configuration also for emergency numbers other than the 112 code, on the basis of unforeseeable conditions associated with the configurations of the mobile network to which it is currently connected, it may be possible to make calls to such additional emergency numbers.

3. The methods indicated in the previous points also apply to foreign "roamer" users who connect to a national mobile network, and to mobile virtual operators (MVO).

In the case of foreign "roamers", support for the "service category"-based mode is required

¹⁰It should be noted that the association between the classes of service and each national emergency number is the responsibility of the individual operator who identifies and manages this association, according to the type of emergency service.



standard described above, if consistently supported by foreign mobile networks and terminals, accepting the limitations with respect to emergency services, current and possibly future, which do not have standard "service categories", i.e. the assimilation to a call to the 112 code.

The provisions of Regulation (EU) 2022/612 remain applicable with specific reference to the technical feasibility of solutions for international *roaming* customers .

Art. 2

Routing Number Format for Access to 112 NUE Service

1. For the calls referred to in art. 1, paragraph 1, of this Decree, the *Routing Number* (RgN) format to be used at the Interconnection Points¹¹ between operators is defined in the technical regulations of the Ministry of Business and Made in Italy ST 763-3 for interconnection in TDM/ISUP technology and ST 769 for interconnection in VoIP/ IP technology.

2. This RgN format requires the insertion of the information of the call originating operator at the end of the numbering associated with the various NUE emergency services integrated in the CUR model:

CAB + 01 1 I2 I3 +NUE+"9" + OP_IDorig

where the various fields take on the following meaning and valorization:

- x the "AB" field is set to "97";
- x the "011213" field , of variable length from 2 to 4 digits, identifies the telephone district to which the calling user number belongs in the case of calls originating from a landline or the telephone district in which the mobile network has detected the presence of the calling mobile terminal;
- x the "NUE" field: represents the emergency number NUE, pursuant to resolution 8/15/CIR and smi, which has been integrated into the NUE/CUR model;
- x the number "9" is a separator to avoid ambiguity in recognition and correct treatment of the subsequent field "OP_IDorig" and its values;
- x the "OP_IDorig" field uniquely identifies, at a national level, the operator, fixed or mobile, who plays the role of access operator for the voice call to the emergency number, referred to in the previous NUE field, and is valued with the OP_ID identifier assigned to the Ministry of Business and Made in Italy for the uses envisaged in the technical standards ST 763-3 (TDM interconnection) and ST 769 (VoIP/IP interconnection).

This RgN format and the valorisation of the related fields are the subject of the technical regulations defined by MiMIT (ST 763, ST 763-3, ST 769 and subsequent amendments)

3. The RgN indicated in paragraph 2, during the integration process in the NUE/CUR, is also used for emergency numbers that may be additional to those already addressed to the CUR, following the preliminary technical feasibility checks that must be requested by the

¹¹ In the residual cases of interconnections still in TDM/ISUP technology, in continuity with the methods already used for emergency services, the delivery of calls is carried out by the access operators at the transit node level, in order to guarantee uniformity of treatment between fixed and mobile and an optimal distribution of calls towards the operational centres that will provide the NUE services.



subject assigned the relevant emergency numbers.

4. The use of such RgN at the interconnection for the NUE emergency numbers integrated in the CUR model is mandatory for all public electronic communication networks. To ensure an adequate level of robustness and reliability of the solution, the identification of the operator who originated the call (OP_ID) must always be made available to the CUR, in order to guarantee, in all conditions, the correct recognition of such operator.

5. Until the completion, for all telephone districts on the national territory, of the transition of emergency services to the model identified in art. 98-*vicies semel*, paragraph 1, of Legislative Decree no. 259 of 1 August 2003 and subsequent amendments, operators shall guarantee, for telephone districts not already transitioned to the CUR model, the correct and reliable handling of calls through the pre-existing RgN format defined in the MiMIT ST763/ST 763-3 and ST 769 technical regulations. (i.e. C99 + 0 11213 + emergency number) taking into account what is indicated in note (1) referred to in Figure 1. The caller location functions are ensured based on the availability, for the PSAP receiving the emergency communication, of the caller ID.

Art. 3

Access to NUE emergency services from a private electronic communication network

In the case of private electronic communications networks referred to in art. 3, paragraph 4, of this decree, routing to the correct CUR or PSAP can be ensured by the public operator only if the manager of such private network guarantees, also through specific configurations and interventions, that:

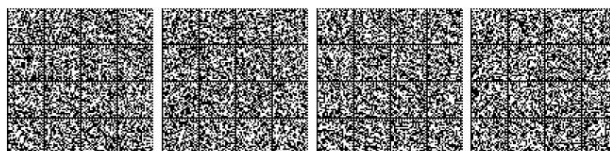
- a) the internal line or extension from which the call originates is always located in the same telephone district as the customer's premises contracted with the public operator, even when using smartphone apps connected to WiFi coverage;
- b) the CLI of such calls to emergency services belongs to the numbers that the operator has associated with the private network operator for the specific public network access, to which the private network of the operator of that network is connected.

In the event that the call originates from a location not located in the same district as the number associated with access to the public network of the location contracted with the private network operator, access to the territorially competent emergency services may be affected by the incorrect information made available in terms of both the success of the call delivery and the timeliness of the call delivery to the services responsible for managing the rescue. Should this eventuality occur, it is the responsibility of the private network operator to ensure, for each location, the presence of an additional line dedicated to emergency communications to allow alternative and easy access to the rescue services as provided for by Legislative Decree 1 August 2003, no. 259 and subsequent amendments.

Art. 4

Priority management through radio access of emergency calls

In order to prevent congestion conditions on radio access and ensure uninterrupted access to emergency services as provided for by art. 98 *vicies*, paragraph 2, of Legislative Decree 1 August 2003, n.259 and subsequent amendments, and therefore ensure that emergency communications are managed by the mobile network of



operators in compliance with the principle of uninterrupted access to emergency services, emergency communications are given priority over other types of voice or data communications through the use of the ARP12 parameter.

The ARP parameter contains information about the priority level, preemption capability and preemption vulnerability of a radio channel; this parameter provides a scalar value from 1 to 1513 to indicate the priority level and two flag values:

- x *Pre-Emption Capability* of the connection, which determines the possibility of being able to prevail over other lower priority connections;
- x *Pre-Emption Vulnerability* that causes protection from higher priority connections.

Emergency communications must be assigned by mobile network operators the value of ARP=1 and the *Pre-Emption Capability flag* set to "yes" and *Pre-Emption Vulnerability* set to "no". Any requests to assign ARP=1 to other types of calls and/or any changes to the above-mentioned "flags" must be submitted to the Ministry of Business and Made in Italy which, pursuant to art. 98 vicies bis, paragraph 2, will evaluate them in agreement with the Ministry of the Interior.

¹² The main international technical specifications of reference for the use of this parameter and for assigning priority to communications in the contexts indicated are for example ETSI TS 123 203 and ETSI TS 129 212. The ARP parameter, *Allocation Retention Priority*, through the appropriate configurations defines the level of pre-emption attributed to a communication, or the possibility of managing an ongoing communication on the mobile network to free up radio access resources in the face of a request with a higher priority. The APR parameter has no impact on packet forwarding and priority definition within EPC nodes, where decisions are based on the QCI parameter of the bearer.

¹³ For the purposes of this decree, the ARP values from 1 to 6 can be considered



Operators of public electronic communications networks providing number-based interpersonal communications services: provision of fixed network-derived location

Part A

Object

This document defines, within the scope of the 112 NUE emergency service, the provision to the “Inter-Force Concentrator” (also referred to as Inter-Force CED hereinafter) of the location service for emergency calls originating from operators of public electronic communications networks that provide interpersonal communication services based on the number for the purposes of location derived from the fixed network (hereinafter also “fixed network”).

The “Inter-force Concentrator” is the IT system located at the Inter-force CED of the Ministry of the Interior which provides: on the one hand, the interface with the CUR and with the second level operational centres (so-called PSAP, *Public-Safety Answering Point*) of relevance for the 112 NUE emergency services, if integrated in the CUR model in Annex 1, for receiving requests for location and sending the related responses, and on the other, the interface with the operators of public electronic communications networks that provide interpersonal communication services based on the number for the purposes of location derived from the fixed network for the request for the location service within the scope of this decree.

The management and routing methods of 112 NUE emergency communications in the CUR model are indicated in Annex 1.

Until the transition of the emergency response structures is completed, service continuity is ensured in accordance with the procedures set out in Article 2, paragraph 5, of Annex 1.

Part B

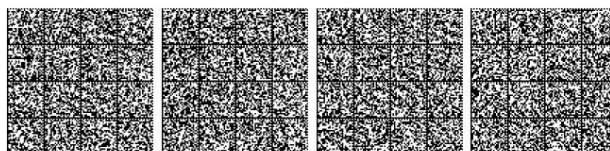
Requirements

1. Emergency call routing management

For all emergency communications whose management and routing method occurs in accordance with the provisions of art. 1 of Annex 1, the Access Operator must introduce the identification code of its network (hereinafter *OP_IDorig*) in the call signalling and provide it to the interconnection with the emergency services Serving Network, which directly delivers the emergency communication to the first and second level PSAPs.

2. Localization of emergency calls in the CUR model

The automatic receipt of line identification data (*Automatic Number Identification*, ANI, i.e. the CLI (*Calling Line Identifier*) of the call) and the location of the caller in an emergency (*Automatic Location Identification*, ALI), by the Single Response Centers (CUR) and therefore of the second level PSAPs, is a functionality obtained through the implementation of the



model specified in art. 1 of Annex 1.

For the operating procedures defined for the management of line identification and caller location data within the scope of emergency communication reception activities by the CUR and second level PSAPs, compliance with the provisions of Legislative Decree 30 June 2003, no. 196, Personal Data Protection Code and subsequent amendments and additions is guaranteed.

3. Location data from fixed network

Caller location from a landline refers to the address relating to the location of the fixed network terminal system from which the call to 112 NUE originates.

The operator, based on the information received from the "Interforce Concentrator", will verify that the CLI received is related to customers contained in their company databases and, if so, will send in response to the request, a string containing the elements useful for the location of the caller to the 112 NUE service. To the above request, the operators respond by providing, except in cases where the location of the caller is not technically feasible, only for their own customers:

- x Location of the plant (address and street number) corresponding to the CLI sent by the "Inter-Force Concentrator" ¹;
- x Name and Surname (or company name) corresponding to the CLI sent by the "concentrator inter-forces";

In particular, some cases have been identified in which the location of the caller NUE is not technically available for the emergency communications referred to in this decree coming from:

- x nomadic VoIP services in the "55"2 decade ;
- x internal telephone terminals of a telephone switchboard, including *ISDN PBXs and VoIP3* without prejudice to the provisions of Article 3 of Annex 1;
- x calls in "*call completion*" mode via devices which are external to the public network nodes and are connected to a different network than the one to which the user who generated the call is connected;
- x calls from telephone operator users (hosted) in *Numbering Hosting* on the network of the host telephone operator;
- x calls from VULL users (*Virtual Unbundling of the Local Loop*);
- x calls from WLR (*Wholesale Line Rental*) users.

4. Minimum Localization Requirements (ALI)

The following defines the characteristics that the location information provided by fixed line operators must have in order to be used as ALI by second level CURs and PSAPs.

¹ The information (toponymic particle and address) can also be provided in a single string.

² For nomadic VoIP services in the "0" decade, the physical location of the line must be understood to be the "usual" address indicated by the Customer when signing the contract.

³ It should be noted that the availability, by the private network operator, of a single voice line (with associated specific numbering in decade 0) for each of its offices, allows the provision of the location of the office from which the emergency call originated, falling within the types of access not equipped with a PBX.



involved in emergency management.

ALI refers to the location of the line from which the emergency communication to the 112 NUE service originates, created by the operator in its own network.

5. Horizontal accuracy, reliability, availability and localization success rate

Caller location shall be obtained each time an emergency call is made from the fixed network; its accuracy shall not fall below levels that render the information of little support to emergency operations; more specifically, within the limits of technical feasibility, the position of the end-user shall be localised with the reliability, accuracy, availability and success rate necessary to allow the emergency services to usefully come to the aid of the caller.

The determination of the criteria for the accuracy and reliability of caller location information, pursuant to Article 98 *vicies bis*, paragraph 5, of Legislative Decree 1 August 2003, no. 259, is the responsibility of the Ministry of the Interior, after consulting the Ministry and the Communications Regulatory Authority.

6. Localization Mode

Localization is provided in automatic PULL mode only in the presence of an emergency communication falling within the scope of this decree pursuant to art. 1 paragraph 1.

Localization occurs through a *query* created by the Interforce CED to the operator's system containing the localization data of the line from which the emergency communication originates following a request initiated by the CUR after receiving it. Please refer to the following sections for the detailed definition of the procedure.

7. Response times (Latency)

Caller location information is promptly routed to the most technically suitable PSAP that is able to transmit contextual information to emergency services when those services are alerted; the entire location process is completed within the time frame of the voice call.

In any case, the localization activity must not delay the transfer of the voice call to the competent second level PSAPs.

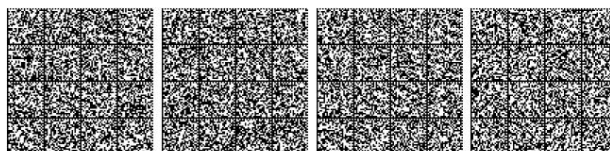
8. Intelligibility of location information

The location information indicated in point 2 is made available to the CUR and second level PSAP systems through the communication protocol with the "*Inter-force Concentrator*" defined by the Ministry of the Interior - Inter-force CED.

The CUR and the second level PSAPs implement the expected geographic map display systems.

9. Provision of the localization service to the Interforce CED

The location information of the calling line, with the minimum characteristics described in the previous point, must be made available to the Inter-Force CED by the operators of public electronic communications networks that provide interpersonal communication services based on the



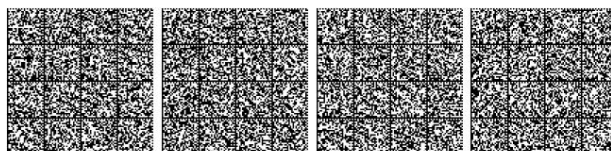
number for localization purposes derived from the fixed network.

- a) The location information is made available by the operator to a server within its own network with access control functions, management of location requests and responses.
- b) Location messages are exchanged between the operator and the Inter-Force CED through a separate data connection (VPN with IPSec Tunnel) from the one used for emergency communication voice. Each operator will manage the requests/responses relating to location towards the "inter-force concentrator" for communications under their own jurisdiction.
- c) The initial location request is made automatically by the CUR, which has received the emergency communication, to the "inter-force concentrator", and then, from the latter, to the operator of origin of the call, who is identified through the OP_IDorig defined in Annex 1. This request is started upon receipt of the voice and, therefore, of the *Calling Line Identifier* (CLI) of the emergency call (this is the so-called "Pull" mode). In order to avoid location requests relating to emergency communications not yet established (unanswered call attempt), the initial location request to the "inter-force concentrator" is sent with the following detailed timeframes:
 - x when the CUR PBX answers the call, in case of management via queue, of incoming calls to the CUR;
 - x to the response of the CUR NUE operator, in the event of the absence of an entry queue at the CUR, i.e. in case of queuing time set to zero).
- d) The key used by the "inter-force concentrator" in the location request (*i.e. query*) to the telephone operator is the CLI (caller number), i.e. the number of the caller present in the call to 112 NUE and present in the location request sent by the CUR.
- e) The protocol common to all fixed operators for the exchange of location messages with the Inter-Force CED is defined in the document: "*Specific implementation of the MLP protocol (fixed telephony)*", to which reference is made for the technical details of the implementation of the MLP protocol for fixed networks⁴. The "Inter-Force Concentrator" operated by the Inter-Force CED is responsible

for transferring the location information to the CUR that actually manages the emergency call and that requested the location of the "caller".

With regard to response times, the location of the "caller" must be satisfied so that it can be routed without delay to the competent CUR, as the most suitable PSAP pursuant to the legislation; specifically, it is required that the IT systems of each operator make the location information available "*under maximum load conditions*". The time interval from the reception of the location request from the CED to the Operator's system

⁴ The "fixed" MLP protocol document is made available to operators by the Interforce CED through the 112 NUE services portal



of landline telephone calls until the response is sent from the same system must not exceed three seconds.

The location data is always available for querying by the CED Interforce and the operator cannot apply filters to its access. It is the duty of the CUR and the CED Interforce to ensure that the location "query" is sent to the operator's customer registry system only starting from the establishment of the corresponding emergency call, in accordance with the current "privacy" legislation.

If, for any reason, emergency communication to the NUE is interrupted (call termination) without obtaining caller location information during the first contact, the CUR may contact the user via a telephone number recall function (CLI).

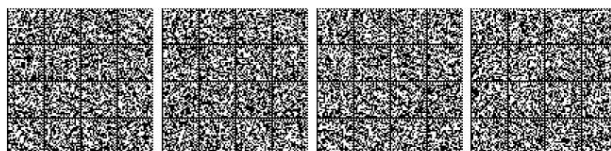
The recall function is a call originated by the CUR to the telephone number (CLI) that had previously accessed the 112 NUE service, and is a normal voice call operated by the CUR/PSAP to the telephone number that does not require any additional operation by the operator and/or the possibility of correlation with previous calls to emergency services. The location query by the CUR to the operator's registry systems is always technically possible, if the CUR has the user's number and if this "query" is consistent with the "privacy" legislation. It is the responsibility of the CUR and the Interforce CED to comply with the regulatory constraints for querying the operator's customer registry system.

For each call, in compliance with the "privacy" legislation, only one location request can be made, by CUR/CED Interforce to the operator.

Part C

"Assurance" management - functionality restoration and maintenance interventions

For the management of the functionality restoration and maintenance interventions, an interaction takes place between the CED Interforce and the operator (normally with the Operator's Operating References) via telephone calls and/or *e-mail*. The references are made available to the operators by the CED Interforce.



Operators of public electronic communications networks providing number-based interpersonal communications services: provision of mobile network-derived localisation

Part A

Object

This document defines, within the scope of the 112 NUE emergency service, the provision to the “Inter-Force Concentrator” (also referred to as Inter-Force CED hereinafter) of the location service for emergency calls originating from operators of public electronic communications networks that provide interpersonal communication services based on the number for the purposes of location derived from the mobile network.

The “Inter-force Concentrator” is the IT system located at the Inter-force CED of the Ministry of the Interior which provides: on the one hand, the interface with the CUR and with the second level Operations Centres (so-called PSAP, *Public-Safety Answering Point*) of relevance for the NUE 112 emergency services, if integrated in the CUR model in Annex 1, for receiving requests for location and sending the related responses, and on the other, the interface with the operators of public electronic communications networks that provide interpersonal communication services based on the number for the purposes of location derived from the mobile network for the request for the location service within the scope of this decree.

The management and routing methods for 112 NUE emergency communications in the CUR model are indicated in Annex 1. Until the transition of the emergency response structures is completed, service continuity is ensured according to the methods set out in art. 2, paragraph 5, of Annex 1.

Part B

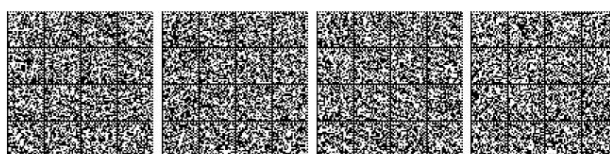
Requirements

1. Emergency call routing management

For all emergency communications whose management and routing method occurs in accordance with the provisions of art. 1 of Annex 1, the access operator must introduce the identification code of its network (hereinafter *OP_IDorig*) in the call signalling and provide it to the interconnection with the emergency services *Serving Network*, which directly delivers the emergency communication to the first and second level PSAPs.

In the case of emergency calls made to 112 NUE and originating from mobile terminals without a SIM or with an unregistered SIM¹ (i.e. SIM from another mobile operator), the following applies:

¹ Unregistered SIMs are SIMs from a different mobile operator than the one the terminal is currently accessing in the absence of a roaming agreement: in this condition the terminal is not able to register on the operator's network and, as in the case of a terminal without a SIM, it can only make emergency calls using the limited methods defined in the reference technical regulations of the Ministry of Business and Made in Italy.



in Annex 1 art. 1, for the valorization of the CLI of such calls, the format defined in the technical regulations ST 763-3 and ST 769 of the Ministry of Enterprise and Made in Italy (at the time of writing this annex the format of the CLI is "0160 + OP_IDorig + the last seven digits of the IMEI), to which reference must be made.

Part C

Localization of emergency calls in the CUR model

The automatic receipt of line identification data (*Automatic Number Identification, ANI*, or the CLI - *Calling Line Identifier* - of the call) and location of the caller in an emergency (*Automatic Location Identification, ALI*), by the CURs and therefore by the second level PSAPs, is a functionality that is obtained through the implementation of the model specified in art. 1 of Annex 1.

For the operating procedures defined for the management of line identification and caller location data within the scope of emergency communication reception activities by the CUR and second level PSAPs, compliance with the provisions of Legislative Decree 30 June 2003, no. 196 - Personal Data Protection Code and subsequent amendments is guaranteed.

Minimum Localization Requirements (ALI)

a. Localization availability and success rate

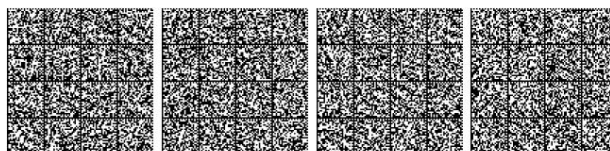
Caller location is obtained whenever an emergency call is made from a mobile terminal anywhere in the mobile network coverage area, including 4G/VoLTE coverage (and 5G coverage according to the emergency service release plans for such access technology by individual operators, where used for the provision of the mobile *voice VoIP service*).

Future technical evolutions of the networks will be analyzed to assess their implications on the provision of localization.

Location systems based on *Cell-ID* and, optionally, on other mobile radio network parameters (TA) fall into the "*network-based*" category and allow for network-wide availability upon installation of nodes that estimate the position starting from the parameters normally used for mobile radio network functions (SMLC/GMLC/e-SMLC (4G)/LMF (5G), *Location Server*).

In the case of emergency calls originating from users of a mobile operator made through WiFi coverage, i.e. through the "*WiFi Calling*" service, in compliance with the international technical standards defined by ETSI/3GPP, the "*network-based*" localization is based, if available, on the last cell on which the mobile terminal was registered, before the terminal, according to its own service logic, settles on the WiFi "*hot spot*". In particular:

- a) Localization, even if limited to the sole case of calls to code 112, can be provided through localization carried out autonomously by the mobile terminal, in alternative forms or satellite coordinates and/or geographic information derived from WiFi coverage. This localization method, currently made available by the inter-force CED according to the solution called "*Advanced Mobile Location*" or AML, as defined and implemented by the Ministry of the Interior, is outside the scope of this decree.
- b) As a last alternative, the location can be the last cell registered on the network systems



mobile in case the geographical location of the mobile terminal is not available;

c) in any case, such location information is always made available on the mobile location platform similarly to the case of "network-provided" location.

b. Horizontal accuracy and reliability, availability and success rate of localization

Caller location shall be obtained each time an emergency call is made by the mobile network; its accuracy shall not fall below levels that render the information of little support to emergency operations; more specifically, within the limits of technical feasibility, the position of the end-user shall be localised with the reliability, accuracy, availability and success rate necessary to allow the emergency services to usefully come to the aid of the caller.

The reliability of the localization systems used by operators must be ensured, according to the criteria set out in the previous paragraph, within the various technologies used in mobile networks (2G, 3G and 4G/VoLTE and evolutions, according to the release plans of the individual operators).

The determination of the criteria for the accuracy and reliability of information on the location of the caller, pursuant to Article 98 *vicies bis*, paragraph 5, of Legislative Decree 1 August 2003, n.259, by the Ministry of the Interior, after consulting the Ministry and the Authority for Communications Guarantees.

c. Localization mode

Localization is provided in automatic PULL mode, only in the presence of an emergency communication falling within the scope of this decree pursuant to art. 1, paragraph 1.

Localization occurs through a *query* created by the CED Interforze to the operator's system containing the line localization data following a request initiated by the CUR, after receiving it. Please refer to the following sections for the detailed definition of the procedure.

d. Response times (Latency)

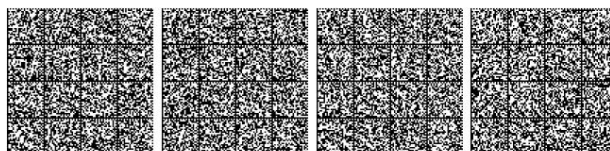
The caller location information is routed to the most technically suitable PSAP capable of transmitting the contextual information to the emergency services at the moment in which those services are alerted; the entire location process is completed within the time frame of the voice call. (see points 3 and 7 of the following point g).

In any case, the localization activity must not delay the delivery of the emergency communication to the competent PSAPs (see requirement no. 7 for latency requirements).

e. Intelligibility of location information

The location information indicated in the previous point d is made available to the CUR and second level PSAP systems through the communication protocol with the "inter-force concentrator" defined by the Ministry of the Interior - Inter-force CED.

The CUR and the second level PSAPs implement the expected geographic map display systems.



f. Provision of the localization service to the Interforce CED

The caller location information with the minimum characteristics described in the previous points b and c must be made available to the CED Interforce, by the operators of public electronic communications networks that provide interpersonal communication services based on the number for the purposes of location derived from the mobile network. The location information is made

available from the mobile operator to a platform/server within its own network with access control functions, management of location requests and responses. This functionality is performed by the node indicated as *Gateway Mobile Location Center, GMLC, or location gateway* in the ETSI/3GPP standards. In the following, the term GMLC is generally used to indicate the mobile network system that makes location information available to the "queries" of the Interagency CED.

The requirements are:

1. Location request/response messages (ELIR requests/ELIA responses) are exchanged between the mobile operator and the Inter-Force CED on a separate data connection (VPN with IPSec Tunnel) from the one used for emergency call voice. Each Mobile Operator manages the requests/responses relating to location towards the "inter-force concentrator".
2. The initial location request is made automatically by the CUR, which has received the communication from the NUE, towards the "inter-force concentrator", and then, from the latter, towards the Mobile Operator of origin of the call (identified by the OP_IDorig received in the RgN defined in Annex 1) on the GMLC system of the mobile network of origin of the call. This request is started once the communication to the NUE has been established and, therefore, when the called and calling number (CLI) associated with the emergency communication are available.

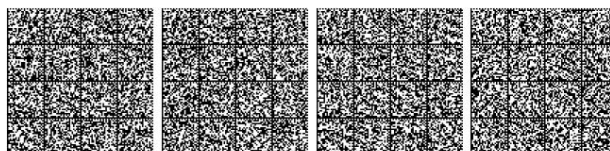
In order to avoid initial localization requests relating to calls not yet established, the initial localization request from the CUR to the "inter-force concentrator" is sent with the following detailed timeframes:

- a) when the call is answered by the CUR PBX, in the case of queue management of incoming calls to the CUR;
 - b) to the response of the CUR "NUE" operator, in the event of no entry queue to the CUR and i.e. in the event of queuing time set to zero.
3. The key used by the "inter-force concentrator" in the location request (*query*) to the Mobile Operator is the caller's number (CLI) received in the relevant emergency call reporting parameter and present in the location request sent by the CUR).
 4. The protocol common to all mobile operators for requests/responses for information localization with the Interforce CED is based on the following standard:

Mobile Location Protocol TS 101 3.0.0 and later versions, Emergency Location Immediate Service (ELIS) (which manages the "Pull" mode referred to in point d above) of the *Open Mobile Alliance Location Interoperability Forum* (OMA LIF)².

See also the document: "MLP Protocol Implementation Specification (Mobile Telephony)" for

² LIF TS 101 V 3.0.0 (6 June 2002) "Location Inter-operability Forum (LIF) Mobile Location Protocol" Appendix C: Geographic Information.



the technical details of implementing the MLP.3 protocol

5. Mobile location information is exchanged according to one of the geographic formats provided by the MLP TS 101 3.0.04 standard and later versions.

a) The coordinate reference system used as default for the MLP protocol services is the “*Geographic 2D Coordinate Reference System WGS84*” the same used for the GPS localization system. This reference system uses the *World Geodetic System 1984* based on the WGS84 ellipsoid as a representation of the Earth's geoid.

The axes of the reference system can use the following units:

Degrees, minutes, seconds, hemisphere (DMSH):

Example:

<coord>

<X> 30 27 45.3N</X> or 30 27 45N

<Y>45 25 52.9E</Y> or 45 25 52E

</coord>

Decimal degrees

Example

<coord>

<X>51.514</X>

<Y>^0.102</Y>

</coord>

b) Mobile user localization is not a deterministic operation and therefore a geographic area is usually used rather than a single point to represent the uncertainty of the estimate. The extension of the geometric figure used is linked to the probability of the caller actually being in the represented area (typically used probability values are 67% and 95%).

The following are the representations and/or definitions, supported by the MLP5 standard, that can be used by Mobile Operators to make localization available, via the Interforce CED, to the CUR:

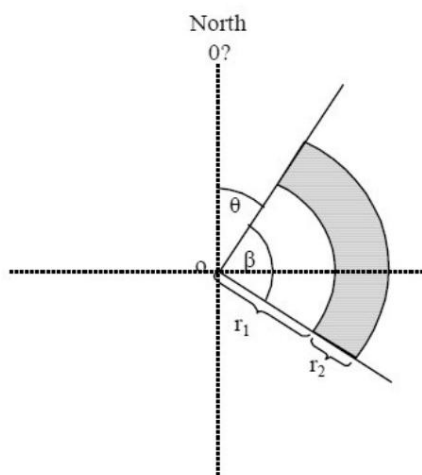
Ellipsoid point with uncertainty arc

³ available to operators according to the methods identified by the Ministry of the Interior - Inter-force CED

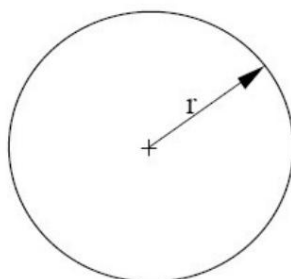
⁴ ETSI has published a technical specification of the MLP OMA LIF standard with reference to the ELIS service. The standard is: ETSI TS 102 164 V1.2.2 (2004-05), *Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); Emergency Location Protocols*.

⁵ LIF TS 101 V 3.0.0 (6 June 2002) “*Location Inter-operability Forum (LIF) Mobile Location Protocol*” Appendix C: *Geographic Information, 10.5 Shapes representing a geographical position*.

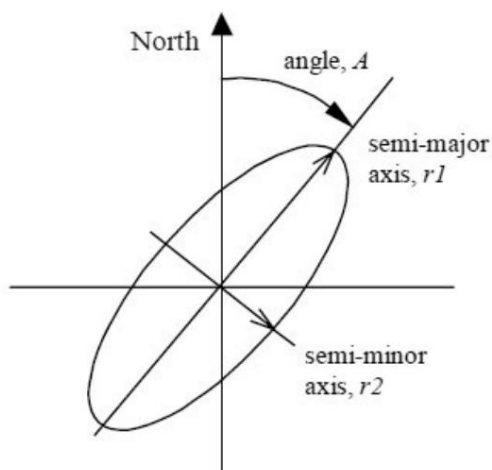




Ellipsoid point with uncertainty circle



Ellipsoid point with uncertainty ellipse



Polygon

See the textual definition of the LIF TS 101 V 3.0.0 specification in paragraph 10.5.5.

The “*inter-force concentrator*” operated by the inter-force CED is responsible for transferring the location information to the CUR that actually manages the emergency call and that previously requested the location of the “*caller*”.



6. With regard to response times, the location of the “*caller*” must be of a type that can be satisfied quickly and specifically, it is required that the IT systems of each mobile operator make the location information available “*under maximum load conditions*”. The interval from the reception of the location request by the mobile operator's system until the sending of the response by the same system must not exceed 4 seconds in 90% of cases.

7. The location data is available on the mobile operator's system (*server*) for a maximum time interval of fifteen minutes from the establishment of the corresponding emergency call. The location can therefore be requested only during the time period of the aforementioned availability of the location data present on the telephone operator's server.

If, for any reason, the emergency call to the “*NUE*” is interrupted (call termination) without obtaining the caller's location information during the first contact, the location may be requested by the CUR, via a telephone number recall function (customer's MSISDN). The number recall is a normal voice call made by the CUR/PSAP to the number that had previously called 112 NUE and, therefore, does not involve new locations; the CUR/PSAP can access the location data already present on the mobile operator's platform within the time period set out in point 7 above.

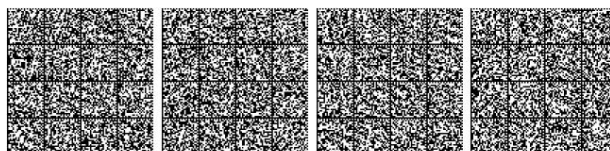
8. Only one location request is made for each emergency call or recall.
from the Interforce CED to the mobile operator.

The CUR/PSAP verifies that the recall is carried out only according to the timeframes and methods described above.

9. Each operator declares to the Ministry of the Interior and to the Interagency Data Center the maximum (peak) total number of location requests per second (rloc/sec) expected and sustainable by its own location platform. This number of location requests is determined by each operator based on the emergency calls to “112 NUE” originating from its own mobile customers present on the national territory and on the calls back by the CUR to the same customers of the operator. The Ministry of the Interior and the Operators may, after consulting the Ministry, agree to modify the values mentioned above if necessary in order to correctly size the various IT systems of the actors involved in the location process and not overload them to the point of compromising the quality of the service.

10. Availability of the location service in *network-based* mode

For the 112 NUE emergency services, it is permitted to locate Italian and foreign users (where technically possible) who are *inbound roaming* in a national mobile network and, in particular, a mobile operator can only locate users who are accessing its own network (and not in *outbound roaming*). The following table provides a summary of the cases where it is technically feasible or possible to locate the “*caller*”.



Customer type	Localization Method/Type Available
National Mobile Operator Customer	Possible Location
National customer in national <i>roaming</i> on network National operator	Possible Location
Foreign customers <i>roaming</i> on the Operator's network national	Possible Location
Customers on Operator network without SIM or no SIM registered ⁶	Possible localization (CLI "temporary" in format "0160")
2 SIM or Twin SIM with same user mobile number	Localization possible on the "master" SIM ⁷ or for last emergency call ⁸

Part D

Assurance management - of functionality restoration and maintenance interventions

For the management of functionality restoration and maintenance interventions, an interaction takes place between the Inter-Force CED and the operator (normally with the Operator's Operating References) via telephone calls and/or *e-mail*. The references are made available to the operators by the Inter-force CED.

⁶ Unregistered SIMs are SIMs from a different mobile operator than the one the terminal is connected to. currently accessing in the absence of a roaming agreement: in this condition the terminal is not able to register on the operator's network and, as in the case of a terminal without a SIM, can only make emergency calls using the limited methods defined in the technical reference regulations of the Ministry of Enterprise and Made in Italy.

⁷ It should be noted that in the event that both the "Master" and "Slave" SIMs can both make calls, the localisation available is that of the last call to emergency services.

⁸ Typically, a so-called "Master" card and a "Slave" card are identified for the SIM pair. The customer in any case moment can decide which card should be the "Master". Localization takes place exclusively on the card that at that moment the customer has defined "Master". In case of multiple calls from different "devices", the localization provided may be that relating to the last call.

