1. CONTEXT

Pursuant to Article 3(3)(g) of the Radio Equipment Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC, the Commission has been delegated the power to adopt delegated acts in order to ensure that radio equipment supports certain features ensuring access to emergency services.

By means of using this power, hereinafter through the Delegated Act, the Commission aims at specifying and clarifying the classes and categories which are concerned by that Article, to ensure that hand-held mobile telephones with advanced computing capabilities (i.e. smartphones) support technical solutions for compatibility and interworking with the Galileo system1 in 112 emergency calls (E112).

Inclusion of Galileo in mobile phones has been identified as a priority under the EU’s Space Strategy2. Measures that require compatibility with Galileo would be similar to those adopted under the eCall regulation for accessing the 112 emergency number from the eCall in-vehicle based system3. Ensuring the availability of GNSS-Galileo is pertinent to mobile phone-based positioning and E112, given the increased robustness and accuracy that it would provide compared to other location systems4 used alone.

Galileo is an independent GNSS, fully owned and funded by the EU. It provides continuous location information to EU citizens. It is the only GNSS system in the world that is under civil control. It provides for unique features that are designed to help users in safety critical situations. Thus, it will offer a high accuracy feature and an authentication feature, all of which will make the user’s GNSS location information safer, more secure, and more robust.

According to an EU funded study that was carried out in 20165, the current practice of establishing caller location, which is based on cell-ID positioning, whilst available and guaranteed under the Universal Services Directive, is not accurate enough as it provides caller location based on the serving cell-tower of a mobile phone, which may not necessarily be the closest cell-tower. This area is dependent on the angle of coverage and cell radius. The latter can vary from 550 meters to several kilometres. In certain cases, notably in mountains and cities, this can lead to significant errors in positioning emergency callers.

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1 Autonomous geo-spatial positioning with global coverage. GNSS or global navigation satellite systems allow electronic receivers to determine their location (longitude, latitude, and altitude)

European GNSS systems are:
- EGNOS, an augmentation system that improves GPS accuracy and deliver information on its reliability over Europe;
- Galileo, the European global navigation satellite system, usable in combination with other GNSS and providing a highly accurate positioning service under civilian control


A caller-location solution based on a hybrid system that continues to provide cell-ID positioning, complemented by the Wi-Fi and GNSS information already available from a caller’s smartphone, would lead to significant benefits in both indoor and outdoor emergency situations. Whereas GNSS positioning is extremely accurate in outdoor situations, Wi-Fi information could complement this in calls made from indoors. This would allow a more accurate caller location and would permit faster and more effective rescue, together with an optimisation of emergency resources. Solutions based on GNSS positioning are already widely used in several Member States and third countries (e.g. United States and Japan).

Measures impacting on handset manufacturers are expected to be minimal as they are targeted towards those handsets that are already GNSS-enabled. Nearly all new smartphones currently on the market have GNSS capability. Furthermore, leading smartphone chipset manufacturers offer Galileo-ready chips, and smartphones using Galileo have been available on the market since 2016. All major mobile phone producers have added Galileo in their phones (e.g. Apple, Sony, Samsung and Huawei).

The delegated act would simply reinforce current market trends by adding a layer of legal certainty. 285 million emergency calls were made to emergency services in 2015. A large majority (79%) of these calls were placed from mobile phones. According to estimates of the European GNSS Agency, (GSA), by the end of 2016, GNSS-enabled handsets are expected to account for 74% of total mobile phones in use. The delegated act will also help ensure that European citizens will be able to access emergency services in a timely manner in calls to emergency numbers such as 112 from mobile phones registered to their home network when they travel abroad.

A technically feasible method implementing the use of GNSS as a solution for emergency calls, Advanced Mobile Location (AML), is already available on the market. AML transmits the GNSS/Wi-Fi/ cell-ID information available on the caller’s handset via SMS to a Public Safety Answering Point (PSAP). AML has already been deployed in 7 EU Member States - the United Kingdom (UK), Estonia, Lithuania, Belgium, Ireland, Finland, and Austria - based on a technical report published at the European Telecommunications Standards Institute (ETSI). This technical report covers GPS and Galileo. AML is included in 70% of all smartphones in Europe. This number will increase to almost 100% by the end of the year as Apple also indicated that it include AML this year.

In addition, it is not expected that this act will increase the administrative burden of mobile phone manufacturers since a handset driven GNSS solution is already used in at least 7 Member States and in some third countries. The GNSS feature has no impact on mobile phone operators, as this solution is handset driven.

It would also have no financial consequences on the EU budget.

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6 For an updated list of phones including Galileo, please consult: www.usegalileo.eu
8 Short Message Service
9 http://www.etsi.org/deliver/etsi_tr/103300_103399/103393/01.01.01_60/tr_103393v010101p.pdf
2. STAKEHOLDER CONSULTATIONS

The aspects raised by the enforcement of Article 3(3)(g) of the Radio Equipment Directive 2014/53/EU, in particular regarding the use of GNSS-Galileo capabilities in mobile telephones were submitted for public consultation.

The Commission has addressed stakeholders on the inclusion of Galileo in mobile phones for the purposes of emergency calls on several occasions.

On 7 May 2014, a public hearing was held to gather insight and contributions from the stakeholders involved in providing emergency assistance in response to 112 calls with regard to the opportunity of enabling mobile phones to determine the caller location using the GNSS, and in particular Galileo and to send it to PSAPs.

A large majority of stakeholders was in favour of measures to enhance legal certainty in order to foster GNSS caller location deployment and ensure a timely, effective and uniform service for the public. They concluded that this would also guarantee EU independence; crucial in emergency situations.

A public consultation was conducted from 18 April until 12 July 2016 prior to the adoption of the Space Strategy. The consultation was addressed to stakeholders in the public and private sectors, in industry, including small and medium-sized enterprises (SMEs), research and academia in Europe, as well as to citizens who wanted to share their views on the future Space Strategy. The use of Galileo for emergency calls (E112) was perceived as very useful; with most stakeholders responding that the caller location would be more accurate if GNSS location data was used, including Galileo.

The Delegated Regulation has not been subject to an impact assessment as it simply clarifies other pieces of legislation which were subject to impact assessments: The Universal Services Directive, the Electronic Communications Code, and the Radio Equipment Directive.

Two meetings were held with expert groups:

1. The initiative was presented to the Space Policy Expert Group (SPEG) on 14 November. This expert group is being consulted as part of the Better Regulation Procedure.

2. A preliminary version of the draft text of the delegated regulation was presented to members of the Telecommunication Conformity Assessment and Market Surveillance Committee (TCAM) on 01 December. Members were given until 31 January to comment on

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11 The full report of the meeting is in annex xx

12 Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users’ rights relating to electronic communications networks and services. Provision of caller location information, to the extent technically feasible, in calls made to the 112 number has been a legal requirement since 2002, with the Universal Services Directive.

13 Proposal for a Directive of the European Parliament and of the Council establishing the European Electronic Communications Code (Recast) - COM(2016)590. The Universal Services Directive was overhauled in 2016 in the form of the Electronic Communication Code (COM(2016)590 final), which reinforces this requirement whereby “Member States shall ensure that caller location information is available to the PSAP without delay after the emergency communication is set-up” (Article 102). The Electronic Communications Code was subject to an Impact Assessment.

the text. No negative comments were received. The text is now being analysed to incorporate comments received. The observations presented during the meetings and the online consultation will be taken into account when preparing the final draft version of this act.

3. LEGAL BASIS

In accordance with Article 290 of the Treaty on the Functioning of the European Union (TFUE), this Commission Delegated Regulation supplements Directive 2014/53/UE, and in particular Article 3(3)(g) thereof.


Pursuant to Article 3(3)(g) of Directive 2014/53/EU, the Commission is empowered to adopt delegated acts, on categories or classes of radio equipment in order to ensure that radio equipment support certain features ensuring access to emergency services.

The purposes of the Delegated Act, based on Article 3(3)(g) of Directive 2014/53/EU, is to specify the features, the classes and categories which are concerned by that Article.

The Delegated Act will specify that hand-held mobile telephones with advanced computing capabilities (commonly referred-to as ‘’smartphones’’), are covered by Article 3 (3) (g).

The objective is to ensure that hand-held mobile telephones with advanced computing capabilities (“smartphones”) support technical solutions for compatibility and interworking with the Galileo system in 112 emergency calls (E112).

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15 Autonomous geo-spatial positioning with global coverage. GNSS or global navigation satellite systems allow electronic receivers to determine their location (longitude, latitude, and altitude)

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EXPLANATORY CONTEXT WITHIN WHICH THE ACT IS BEING DRAFTED

(1) Pursuant to Article 3(3) (g) of Directive 2014/53/EU, the Commission has been empowered to adopt delegated acts in order to specify which categories and classes of radio equipment support certain features ensuring access to emergency services.

(2) Recital 14 of Directive 2014/53/EU confirms that radio equipment can be instrumental in providing access to emergency services and should therefore in appropriate cases be designed in such a way so as to support the features required for access to those services.

(3) According to Regulation (EU) No 1285/2013 of the European Parliament and of the Council the aim of the European satellite navigation policy is to provide the Union with two satellite navigation systems, the system established under the Galileo programme and the European Geostationary Navigation Overlay Service (EGNOS) and it is therefore important that the Union support the development of applications and services based on these systems.

(4) The system established under the Galileo programme is an independent global satellite navigation system which can be used in combination with other global navigation satellite systems (GNSS) and provides a highly accurate positioning service under civilian control.

(5) In its conclusion of 30 May 2017, the Council of the European Union supports the Commission’s objective to foster the introduction of Galileo in specific markets, as well as measures to strongly encourage that new chipsets and receivers put on the European market are Galileo ready.

(6) Directive 2002/22/EC of the European Parliament and of the Council refers to the single European emergency call number (“112”) and obliges Member States to ensure that undertakings which operate public telephone networks make caller location information available to authorities handling emergencies, to the extent technically feasible, for all calls to at least the single European emergency call number 112.

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17 Brussels, 30 May 2017, 9817/17.
(7) Regulation (EU) No 2015/758 of the European Parliament and of the Council\(^\text{19}\), in Recital 10, confirms that the provision of accurate and reliable positioning information is an essential element of the effective operation of the 112-based eCall in-vehicle system and requires, in Article 5 (4), that manufacturers that the receivers in the 112-based eCall in-vehicle systems are compatible with the positioning services provided by the Galileo and the EGNOS systems. Manufacturers may also choose, in addition, compatibility with other satellite navigation systems.

(8) With respect to wireless communication devices, hand-held mobile telephones with advanced computing capabilities (i.e. smartphones) is the category of telecommunication radio equipment that is most used in the European Union to make calls to the single European emergency call number 112. Smartphones have GNSS capability. The provision of accurate and reliable positioning information is an essential element of the effective operation of the E112 emergency communication service. Therefore, it is appropriate to require that the location feature, where it is already available in smartphones, is compatible with and interworks with the services provided by the Galileo programme as set out in Regulation (EU) No 1285/2013.

(9) The harmonisation of GNSS capability in smartphones shall contribute to more effective location possibilities in case of emergency within the territory of the Europana Union. A caller location solution implementing GNSS advanced mobile location, has already been deployed in 7 Member States based on a commonly used technical solution.

(10) Through such a measure European citizens will be able to access emergency services in a timely manner in calls to at least the 112 services from mobile phones registered to their home network when they travel abroad. It will also help ensure that emergency services can locate callers and provide rapid assistance. It will also provide citizens from the 21 other Member States with the same level of assistance, thus guaranteeing equal treatment. European standardisation organisations are thus invited to take this caller location solution into account and enter into discussions with relevant manufacturers in drawing up harmonised standards.

(11) The EU’s Space Strategy\(^\text{20}\), which was adopted in 2016, also calls for the inclusion of Galileo in mobile phones as one of its priorities.

(12) Therefore this Regulation specifies that hand-held mobile telephones with advanced computing capabilities (i.e. smartphones) are concerned by Article 3 (3) (g) of Directive 2014/53/EU.

(13) Directive 2014/53/EU is limited to the expression of essential requirements. In order to facilitate conformity assessment with those requirements, it provides for a presumption of conformity for radio equipment which is in conformity with voluntary

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harmonised standards that are adopted in accordance with Regulation (EU) No 1025/2012 of the European Parliament and of the Council\(^\text{21}\) for the purpose of expressing detailed technical specifications of those requirements.

(14) The European Committee for Electrotechnical Standardisation (Cenelec) and the European Telecommunications Standards Institute (ETSI) were requested to draft, in support of the implementation of Article 3 of Directive 2014/53/EU, harmonised standards for radio equipment (M/536).\(^\text{22}\) The technical solution developed by ETSI and deployed already in 7 Member States should be included in a harmonised standard, prepared on the basis of the Commission standardisation request (M/536).

(15) In order to ensure certainty, it is necessary to define the minimum features that the radio equipment concerned shall support, ensuring consistency with at least Regulation (EU) No 1285/2013 and Directive 2002/22/EC.

(16) It is necessary to provide for transitional arrangements in order to allow the manufacturers to update any documents and reports related with the concerned radio equipment.

(17) The Commission has carried out appropriate consultations, including at expert level during the preparatory work of the measures set out in this Regulation and has consulted the Space Policy Expert Group at its meeting of 14 November 2017 as well as the Telecommunications Conformity Assessment and Market Surveillance Committee established in accordance with Article 45 of Directive 2014/53/EU.

MAIN PRINCIPLES OF THE TEXT

1. This Regulation specifies categories and classes of radio equipment which are concerned by the essential requirements set out in Article 3 (3) (g) of Directive 2014/53/EU.

2. This Regulation applies to mobile devices, as defined in paragraph (3).

3. For the purposes of this Regulation:
   (a) ‘mobile devices’ means hand-held mobile telephones with advanced computing capabilities (i.e. smartphones);
   (b) ‘certain features’ means technical solutions for compatibility and interworking with at least the Galileo system referred to in Regulation (EU) No 1285/2013, for calls made to at least the single European emergency number ‘112’ referred to in Directive 2002/22/EC.

4. Mobile devices shall support certain features for ensuring compliance with the essential requirements set out in Article 3(3)(g) of Directive 2014/53/EU.


5. The validity of the EU Declaration of Conformity as well as any certificates, reports and documents issued in accordance with the provisions of Directive 2014/53/EU is not affected by this Regulation, provided that they relate with a mobile device which was placed on the market before [date: 12 months after date of applicability of this Regulation] and which complies with the provisions of Article 2 of this Regulation.

6. This Regulation shall enter into force on the twentieth day following that of its publication in the Official Journal of the European Union, and it shall apply as of … [24 months after the entry into force].