

---

## AT&T Comments on Draft CEPT/ECC Recommendation (17)04 – Numbering for eCall

23 August 2017

### Summary

1. AT&T is pleased to provide the following comments on the consultation by the CEPT Electronic Communications Committee’s Working Group on Numbering and Networks (WG NaN) on draft *Recommendation 17(04) – Numbering for eCall* released on 7 June 2017 (“*Draft Recommendation*”). Given its leadership in working with automotive Original Equipment Manufacturers (OEMs),<sup>1</sup> AT&T welcomes the opportunity to inform policies that will assist the deployment of connected vehicle solutions around the globe. AT&T applauds WG NaN’s recognition that there is no “one-size-fits-all” solution to meet the numbering requirements for eCall, and that approaches involving the use of national numbers (either on an in-country or an extra-territorial, including roaming, basis) or global numbering resources assigned by the ITU are equally valid.

### AT&T Proposed Amendments to the *Draft Recommendation*

2. AT&T urges WG NaN to consider the following amendments to the *Draft Recommendation* to remove any confusion over the status of eCall numbering solutions that rely on permanent roaming, and to align the recommendations more closely with automotive OEM business models, in particular by removing the specific recommendation that encourages OEMs and their service providers to assign national numbering resources to imported vehicles using over-the-air (OTA) re-provisioning technology.

### Permanent Roaming

3. AT&T requests that “temporary” should be deleted from the term “extra-territorial use or temporary roaming” in **recitals (k) and (l)**. This will align the terminology with that used in **recommendation 5** (where WG NaN has already deleted “temporary” from one of the earlier working drafts of the document).<sup>2</sup> Importantly, this change would also eliminate any confusion that extra-territorial use of national numbers in a permanent roaming mode might be excluded. ECC Recommendation (16)02<sup>3</sup> on Extra-Territorial Use of E.164 Numbers (which is cited at recital

---

<sup>1</sup> In 2016, AT&T connected more than 50% of all new connected passenger vehicles in the US and is also connecting a growing number of vehicles in Europe. At the end of the second quarter of 2017, there were 14.6million connected cars on our network. See, e.g., [http://about.att.com/sites/internet-of-things/connected\\_car](http://about.att.com/sites/internet-of-things/connected_car) and [http://about.att.com/story/att\\_vodafone\\_support\\_onstar\\_connected\\_car\\_technology.html](http://about.att.com/story/att_vodafone_support_onstar_connected_car_technology.html) And more recently, AT&T announced its collaboration with the Bridge Alliance of mobile operators to promote connected cars in Asia, the Middle East and Africa to extend our global coverage. AT&T currently works with 25 car and truck OEM brands around the world. See, [http://about.att.com/story/att\\_bridge\\_alliance.html](http://about.att.com/story/att_bridge_alliance.html) In addition to its commercial leadership, AT&T is at the forefront of developing connected car solutions. In January 2014, AT&T opened the AT&T Drive Studio™, the world’s first end-to-end connected car innovation centre, enabling AT&T to work with automotive companies from around the globe to address such issues as safety, diagnostics, entertainment, and security. See, <https://www.business.att.com/enterprise/Service/internet-of-things/foundry-innovation-centers/drive-studio/>

<sup>2</sup> WG NaN Document No. NaN(2017-05)10\_rev1 refers. See, <https://cept.org/ecc/groups/ecc/wg-nan/client/meeting-documents/file-history/?fid=36587>

<sup>3</sup> ECC Recommendation (16)02 on Extra-Territorial Use of E.164 Numbers – High Level Principles of Assignment and Use

(d) of the *Draft Recommendation*) and ECC Report 194<sup>4</sup> both make explicit that the term “extra-territorial use” includes permanent roaming but excludes temporary roaming.<sup>5</sup> (Also, in its 2016 Administrative Order on extra-territorial use of foreign IMSIs in Germany for machine-to-machine (M2M) communications, Germany’s regulator, BNetzA, is similarly clear that “extra-territorial use” includes permanent roaming.<sup>6</sup>) Contrary to the guidance of the documents cited above, the term “extra-territorial use or temporary roaming” referenced in the *Draft Recommendation* might be interpreted, inadvertently, to exclude permanent roaming. Therefore, AT&T believes that deleting “temporary” will remove any uncertainty regarding the authorised status of extra-territorial use of numbers in permanent roaming mode as a legitimate numbering solution for eCall.

#### Over-the-Air Provisioning

4. AT&T requests that **recommendation 8** (“*in cooperation with relevant mobile network operators and service providers, encourage the vehicle importing companies to work together with national service providers to assign national numbering resources for imported vehicles for eCall by using over-the-air provisioning where possible*”) should be deleted in its entirety. AT&T does not believe that this recommendation reflects the way that automotive OEMs wish to provide eCall solutions. Based on AT&T’s experience with automotive OEMs, it should not be assumed that a local IMSI profile and a local E.164 number will be provisioned OTA in each national market where vehicles are sold, especially in circumstances where eCall is provided in conjunction with other value-added services. Indeed, OEMs typically require simpler, global (or at least regional) solutions that do not require such re-provisioning for each market.
5. In order to achieve the necessary economies of scale, automotive OEMs often look to partner with a single Mobile Network Operator (MNO) that can deliver wireless connectivity in multiple countries where the OEM seeks to sell its vehicles. By relying on a single MNO for its global wireless connectivity needs, the OEM can negotiate one wireless connectivity contract; use one Mobile Country Code (MCC) and Mobile Network Code (MNC) for the IMSIs in all of its SIMs (*i.e.*, E.212 resources); use E.164 numbers sourced from one MNO; and use the ordering, provisioning and billing systems of one MNO. This avoids the need for the OEM to i) maintain separate SIM card inventories for each country; ii) know during manufacture the ultimate destination of each vehicle; iii) make substantial financial investments to integrate its data centres and help desks

---

<sup>4</sup> ECC Report 194 on Extra-Territorial Use of E.164 Numbers

<sup>5</sup> ECC Report 194 states (at 4.1) that ‘Extra-territorial use of E.164 numbers is in this Report defined as: “Use of E.164 numbers of one country in another country on a permanent basis.” ... The above defined situation can be realised with or without roaming.’ While ECC Recommendation 16(02) effectively defines extra-territorial use to include permanent roaming, by excluding temporary roaming: “...the use of an E.164 number in a foreign country on a temporary basis, either as a user of mobile roaming services or as a user of nomadic VoIP services, is not regarded as extra-territorial use in the context of this ECC Recommendation.”

<sup>6</sup> “[E]xtra-territorial use” means the use of foreign IMSIs in the Federal Republic of Germany on a permanent basis. Permanent use can take place by way of permanent activation of the IMSIs in a telecommunications network in Germany or by way of international roaming (permanent roaming).’ See, [https://www.bundesnetzagentur.de/SharedDocs/Downloads/EN/Areas/Telecommunications/Companies/NumberManagement/TechnicalNumbers/IMSI\\_Extra-territorial.pdf?\\_\\_blob=publicationFile&v=1](https://www.bundesnetzagentur.de/SharedDocs/Downloads/EN/Areas/Telecommunications/Companies/NumberManagement/TechnicalNumbers/IMSI_Extra-territorial.pdf?__blob=publicationFile&v=1) at 2.2.

---

with a domestic MNOs in each market where it intends to sell vehicles; and iv) utilize the different ordering and provisioning platforms of each MNO in each country.

6. Automotive OEMs and MNOs have demonstrated their commitment to OTA re-provisioning capabilities.<sup>7</sup> Typically this has been in the context of facilitating switching between MNOs at the end of the initial contract term between the OEM and MNO. Notably, this OTA capability has been evolving since the first release of the GSMA embedded M2M SIM specification and the latest version (3.1) now enables full, interoperable OTA provisioning between different carriers and different SIM card vendors. OTA provisioning can therefore accommodate changes to profiles of different MNOs over the lifespan of a vehicle, creating more choice and flexibility for OEMs. Moreover, a vehicle is a high-value product which can have an average lifespan of 15 years.<sup>8</sup> Thus, it is not surprising that an increasing number of OEMs support the GSMA embedded SIM specification and require their MNO suppliers to provide compliant solutions. However, for the reasons described in paragraph 5 above, it would not be practical or efficient to use OTA to achieve an outcome where vehicles are re-provisioned at the point of import or manufacture with national numbering resources of the local market where they are to be sold. Additionally, such a requirement would result in a single OEM and their service provider having to manage potentially multiple eCall numbering combinations across European markets.
7. AT&T assumes that WG NaN included this recommendation on OTA (as well as **recommendation 4** where OTA is also mentioned), to address the concern outlined in the Introduction of the *Draft Recommendation* that the burden of providing numbering resources for eCall devices should not fall disproportionately on one, or a few, European countries. AT&T believes that, provided there is a flexible approach to numbering for eCall that does not favour any one solution – that is, permits use of ITU assigned numbers, numbers from countries outside Europe and national numbers from CEPT member countries (some of which may be involve use on an extra-territorial basis, including permanent roaming) – this range of options should more evenly distribute the burden of providing numbering resources.

\* \* \*
8. AT&T would be pleased to answer any questions concerning these comments. A copy of the *Draft Recommendation* showing AT&T's proposed amendments is attached for ease of reference.

Respectfully Submitted,

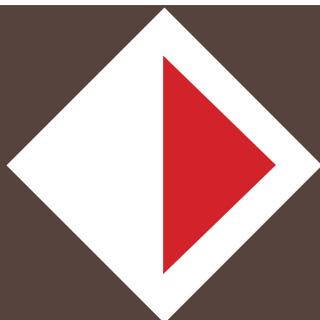


Mike Corkerry  
Executive Director, EMEA Government Affairs  
AT&T

---

<sup>7</sup> See, <http://www.gsma.com/newsroom/press-release/automotive-industry-adopts-gsma-embedded-sim-specification/>

<sup>8</sup> This is the figure that BIPT cites for Belgium in its public consultation on numbering aspects for eCall service. See, [http://www.bipt.be/public/files/fr/22101/Consultation\\_eCall.pdf](http://www.bipt.be/public/files/fr/22101/Consultation_eCall.pdf) at 6.A.



# ECC Recommendation (17)04

Numbering for eCall

Approved DD Month YYYY

DRAFT

## INTRODUCTION

eCall is a service designed for automotive vehicles to provide quick emergency response in case of a road accident or emergency, anywhere in the European Union. Its aim is to advance Europeans' protection and safety, and reduce fatalities caused by road accidents as well as related injuries and property loss.

A Regulation of the European Parliament and of the Council amending Directive 2007/46/EC was agreed in December 2014 concerning type-approval requirements for the deployment of the eCall in-vehicle system in all new passenger cars and light duty types of vehicles. The regulation requires all new type-approved car models to be equipped with eCall technology from 31 March 2018.

eCall is a 112 emergency call that can be generated either manually by a vehicle's passengers, by pressing a dedicated eCall button, or automatically, via activation of in-vehicle sensors when a road accident occurs. When activated, the eCall in-vehicle system establishes a voice connection directly with the relevant Public Safety Answering Point (PSAP).

Even if no passenger is able to speak, for instance due to injuries, a Minimum Set of Data (MSD) has been defined [1] and is sent to the PSAP over the voice connection. The MSD includes accurate location information (GPS geographic coordinates) on the crash site, the triggering mode (automatic or manual), the vehicle identification number, a timestamp as well as current and previous positions. This way, with this information, that is valuable for emergency responders, they can reach the exact location as soon as possible.

In order to provide with the above mentioned eCall functionalities the vehicles need facilities to communicate with the PSAP. This is carried out by means of mobile networks utilising physical SIM-cards or embedded SIMs (embedded Universal Integrated Circuit Cards – eUICCs). In order to provide the service, E.164 telephone numbers and E.212 IMSI resources are needed.

It depends on the national circumstances whether there is a need to open up a separate M2M numbering range in order to provide sufficient resources, including for eCall. To the extent national numbers are used for eCall, numbering plan managers and electronic communications network and service providers will need to cooperate closely so that a sustainable numbering solution can be implemented to ensure that the burden of providing numbering resources for eCall devices does not fall disproportionately on one, or a few, European countries. Issues around extra-territorial use of numbers and regulatory shopping (i.e. selecting the regulatory regime that is least demanding) need to be resolved in the context of a harmonised approach.

Considering that PSAPs, car manufacturers (Original Equipment Manufacturers – OEMs) and operators have concerns regarding regulatory certainty on the use of numbers for eCall, i.e. those numbers and identifiers residing in the SIM/eUICC, this Recommendation will provide guidance to administrations on how to address these concerns. This Recommendation will also take into account the use of eUICC technology [2] for eCall.

Numbering related concerns with eCall also include roaming and so called permanent roaming issues in light of the EU's roaming regulation and life cycle management of numbering resources in the event of a vehicle being written off or reaching end of life naturally (number recycling).

With the introduction of eCall there are other responsibilities than numbering that national authorities should accommodate and that is to ensure that the eCall discriminator/eCall flag is handled by the mobile network operators according the Commission Recommendation 2011/750/EU.

eCall may be implemented in two different ways [3]. The first is referred to as the public 112-based eCall service where eCalls are directly routed to the PSAP. The second is referred to as third party service supported eCall systems (TPS eCall services) where the first part of the eCall is routed to a service centre of an OEM and the second part is subsequently routed by the TPS service centre to the PSAP. eCall is mandatory and the customer will be able to opt for either one of the two implementations. In order to ensure continuity of the public 112-based eCall service in all Member States throughout the lifetime of the vehicle and to guarantee that the public 112-based eCall service is always automatically available, all vehicles should be equipped with the public 112-based eCall service, regardless of whether or not a vehicle owner

opts for a TPS eCall service. This Recommendation addresses both implementations and the generic term “eCall” refers to both implementations in this document.

DRAFT

## ECC RECOMMENDATION OF 17(04) ON NUMBERING FOR eCALL

“The European Conference of Postal and Telecommunications Administrations,

*considering*

- a) Regulation (EU) 2015/758 of the European Parliament and of the Council of 29 April 2015 concerning type-approval requirements for the deployment of the eCall in-vehicle system based on the 112 service and amending Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles;
- b) Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union;
- c) ECC Recommendation (11)03 on Numbering and Addressing for Machine-to-Machine (M2M) Communications;
- d) ECC Recommendation (16)02 on Extra-Territorial Use of E.164 Numbers – High Level Principles of Assignment and Use;
- e) conclusions and recommendations from the European eCall Implementation Platform (EeIP) Lifecycle Management Task Force (LCM TF)<sup>1</sup>;
- f) Commission Recommendation of 8 September 2011 on support for an EU-wide eCall service in electronic communication networks for the transmission of in-vehicle emergency calls based on 112 ('eCalls') – (2011/750/EU);
- g) European Emergency Number Association (EENA) eCall Operations Document Version: 2.0 Code: 3\_1\_5\_eCall\_v2.0.doc Revision Date: 13/08/2014;
- h) that the numbering solution for eCall is independent of the chosen implementation of eCall;
- i) that the planned implementation of eCall requires SIM or eUICC installed in the vehicle;
- j) that the planned implementation requires E.164 and E.212 numbering resources;
- k) that the E.164 and E.212 numbering resources for eCall may include (i) national resources or (ii) global resources (assigned by ITU TSB). National resources may include resources from "home" country (domestic use) or from a third country (extra-territorial use or **temporary**-roaming);
- l) that global numbering resources (assigned by ITU TSB) or national resources from a third country (extra-territorial use or **temporary**-roaming) could be used for addressing eCall devices and these numbering resources need to be provisioned on electronic communications networks in Europe to facilitate call-back from the PSAP to the vehicle;
- m) that the OEMs may decide upon the technical implementation of SIM or eUICC in the vehicle;
- n) that the OEMs may have signed an agreement with an operator to provide connectivity for eCall for the OEM's vehicles Europe wide rather than having agreements on a country-by-country basis;
- o) that after the life-cycle of a vehicle the E.164 numbers for eCall should be returned to the number reserve of the relevant numbering assignee;

<sup>1</sup> At time of public consultation, the LCM report was still in draft.

*recommends*

that CEPT administrations, when considering E.164 and/or E.212 numbering resources for eCall, should:

1. liaise with national stakeholders to facilitate the smooth introduction of eCall;
2. in cooperation with relevant mobile network operators and service providers, encourage their national OEMs to implement eUICC and over-the-air provisioning technology for eCall;
3. make available national numbering resources for eCall;
4. permit the extra-territorial use of their respective national numbering resources for eCall;
5. permit the use of global numbering resources (assigned by ITU TSB) or national numbering resources from another country (extra-territorial use or roaming) within the national territory for addressing eCall devices and encourage operators to provision these numbering resources in their networks to facilitate call-back from the PSAP to the vehicle Europe-wide;
6. where E.164 numbering resources for global services (assigned by ITU TSB) are used, assignees should be aware that they are responsible for ensuring that the numbers are diallable Europe-wide;
7. encourage the use of existing E.164 national M2M numbering ranges or introduce a new dedicated eCall numbering range where there is a risk of exhaustion in national mobile numbering ranges;
- ~~8. in cooperation with relevant mobile network operators and service providers, encourage the vehicle importing companies to work together with national service providers to assign national numbering resources for imported vehicles for eCall by using over the air provisioning where possible;~~
- ~~9-8.~~ ensure that E.164 numbers are recovered and recycled after a vehicle reaches end-of-life.

*Note:*

Please check the Office documentation database <http://www.ecodocdb.dk> for the up to date position on the implementation of this and other ECC Recommendations.

## ANNEX 1: LIST OF REFERENCE

This annex contains the list of relevant reference documents.

- [1] CEN Standard EN-15722 defines the minimum set of data (MSD) which is sent to the PSAP for pan-European eCall
- [2] Smart Cards; Embedded UICC; Requirements Specification (ETSI TS 103 383 V12.0.0 (February 2013)) and GSMA Remote Provisioning Architecture for Embedded UICC (eUICC) Technical Specification: Version 3.1 (May 2016)
- [3] Regulation (EU) 2015/758 of the European Parliament and of the Council of 29 April 2015 concerning type-approval requirements for the deployment of the eCall in-vehicle system based on the 112 service and amending Directive 2007/46/EC.

DRAFT