The eCall discriminator flag and ensuring interoperability and roaming across national and international mobile networks – deployment and operational challenges

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About me

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Content

• eCall implementation – are we ready?

• Interoperability and policy issues - Numbering, Roaming, National Roaming

• Standardization and IVS usage of mobile technology - 2G/3G/4G

• Private Third Party in Car Solutions – experience and an opportunity?
eCall implementation - Are we ready?

• National readiness on PSAPs 1 October 2017
  • eCall PSAP structure and routing table still needs to be defined in some countries

• Mobile operators
  • eCall flag implemented or ready to be switched on
  • Routing plans needs to be implemented

• Manufacturers
  • 2G and 3G standards developed and IVS eq. - should be ok
  • Providers of PSAP call handling systems – should be ok

• Automotive sector
  • Ready but could be cost issue on both 2G and 3G equipment
  • Future proof? - 4G now being included in own solutions
Interoperability and policy issues -

• Scarcity in number resources seems to be less of an issue in most countries – many NRAs have adopted dedicated M2M (and MBB) number series

• M2M operators have deployed extra-territorial use of national E.164 and E.212 numbers:
  • Question on permissibility for extra-territorial usage – recommended only to be permitted in exceptional cases defined by an ECC Decision. Possible candidates are some nomadic voice services and some M2M services
  • Usage of global resources - a hurdle incurring cost of new roaming agreements, implementation and testing – but on longer term?
  • BEREC not in favour of a recent EC suggestion on usage of European numbering scheme for M2M

→Successful launch of eCall requires usage of national E.164 and E.212 numbers
Interoperability and policy issues -

• Extra-territorial usage of national numbers – have been a smooth way to secure international roaming for M2M solutions

• But questions have been raised:
  • Whether solutions are under the scope of the Roaming III Regulation
    – Ok for periodic usage
  • Whether roaming regulation applies for permanent roaming
    – Not in general – but subject to case by case evaluations
    – Commercial agreements is encouraged
    – Some MNOs have included clauses to discourage permanent roaming but seems more to be monitoring the development and not applying specific tariffs at the moment

→ eCall should in its nature and due to limited usage be deemed under the scope of the Roaming III Regulation
Interoperability and policy issues -

• National roaming today not very common – but in some countries used to support a new MNO during network buildout

• National Roaming for eCall would increase security of getting connected when in distress

• Usage of non-European SIMs would give the same result – but resulting in European MNOs becoming uncompetitive on own continent

• But how distinguish eCall from other M2M solutions?
Priority Subscription Solution - Norway – possible to adopt to eCall?

• For a very limited number of users within special public service functions - police, fire, health, defense, civil emergency etc.

• A subscriber with priority will have more security if a mobile network experience congestion or basestations is out of order

• The subscriber will have access to national roaming when outside coverage of home network or basetstations of home network is out of order

• The technical solution is based on MNOs/MVNOs opening a specific sub range of IMSI series for National Roaming

→ NRAs to encourage MNOs/MVNOs to adopt a specific IMSI series for eCall to allow for National Roaming?
Standardization and IVS mobile technology

• We will experience switch off of 3G in 3-5 years

• We will experience switch off of 2G in under 10 years
  • Telstra and AT&T already switched off

• 3GPP standardization of 4G IMS solution is progressing but probably completed too late for the launch of eCall
  • Stage 3 ready March
  • Could be ready for Rel. 14 end year

→ Installing only 2G or 2G/3G IVS is not future proof – 4G needs to be included and support for a broad range of frequencies
Telenor Experience with TPSP eCall (3rd party service provider so called “private” ecall)

• Telenor Connexion supports Volvo On Call services more than a decade.

• eCall solution is a “private” company eco-system, roll-outs are well coordinated and have happened on a country-per-country approach after thoroughly testing incl. PSAP chain. – No major issues have detected to support this from network but truly confirm people have been saved.

• Strict eCall solution and technical restriction on standard so far – concern factor for Automotive OEMs to rollout solutions with a life time of 15+ years with regards to benefits, cost efficiency and support.
Private Third Party in Car Solutions - an opportunity?

Could APPs be developed for eCall so already installed in car solutions could communicate directly with PSAPs?

eCall - Emergency Call on Samsung Gear
Summary

• Successful launch of eCall requires usage of national E.164 and E.212 numbers

• eCall should in its nature and due to limited usage be deemed under the scope of the Roaming III Regulation

• NRAs encourage MNOs/MVNOs to adopt a specific IMSI series for eCall to allow for National Roaming?

• Installing only 2G or 2G/3G IVS is not future proof – 4G needs to be included
  • and support for a broad range of frequencies

• Private Third Party In Car Solutions – an eCall app. opportunity?

→ Are we ready – yes largely but with some limitations
Thank you

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