

Mobile caller location in Europe

Presenter

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The European Emergency Number Association:

- Brussels-based NGO set up in 1999;
- Dedicated to promoting **high quality emergency services** reached by 112 throughout the EU;
- Serves as a **discussion platform** for emergency services, public authorities, decision makers, associations and solution providers in view of improving emergency response in accordance with **citizens requirements**;
- Promoting the establishment of an efficient **system for alerting citizens** about imminent or developing emergencies.

EENA is a platform gathering stakeholders

EENA organises events

- EENA Conference
- 112 Awards Ceremony
- EENA Members Workshop & Meet Your MEP event

EENA works on technical and operations issues

- Operations Committee
- Technical Committee (including Next Generation 112 issues)
- Certificate of Quality Standard for emergency call centres

EENA advocates

- Monitoring European legislation and budget pertaining to 112
- Cooperation with the European Institutions

EENA participates to EU funded projects

- **CHORIST** (Integrating Communications for enHanced enviroNmental RISk management and citizens safeTy), 2006-2009
- **EPSOS** (Smart Open Services for European Patients), 2008-2013
- **REACH112** (REsponding to All Citizens needing Help), 2009-2012
- **HeERO1** and **HeERO2** (Harmonised eCall European Pilot), 2011-2014
- **ESENet** (Emergency Services Europe Network), 2013-2014
- **EmerGent** (Emergency Management in Social Media Generation), 2014-2017

EENA broadly has 2 distinct groups of Members.

- On the **demand** side, there are Ministries, Public Authorities, PSAPs etc (c1100 individual members from c80 countries)
- On the **supply** side, there are vendor companies. Those who sell products & services to the above. HW/SW companies, integrators, consultants, developers (c70 Companies)
- In addition, we have Researchers (c80), Members of the European Parliament (c180), International Organisations/Associations (c15)

Introduction



Time of delivery



Costs

Privacy



Accuracy



Legal Framework - Universal Service Directive (Article 26):

- Member States shall ensure that undertakings concerned make caller location information available free of charge to the authority handling emergency calls **as soon as the call reaches that authority.** [...] **Competent regulatory authorities shall lay down criteria for the accuracy and reliability of the caller location information provided.** [26.5]
- In order to ensure effective access to “112” services in the Member States, **the Commission, having consulted BEREC, may adopt technical implementing measures.** However, these technical implementing measures shall be adopted without prejudice to, and shall have no impact on, the organisation of emergency services, which remains of the exclusive competence of Member States. [26.7]

Mobile communications to emergency services

Mobile phone calls location

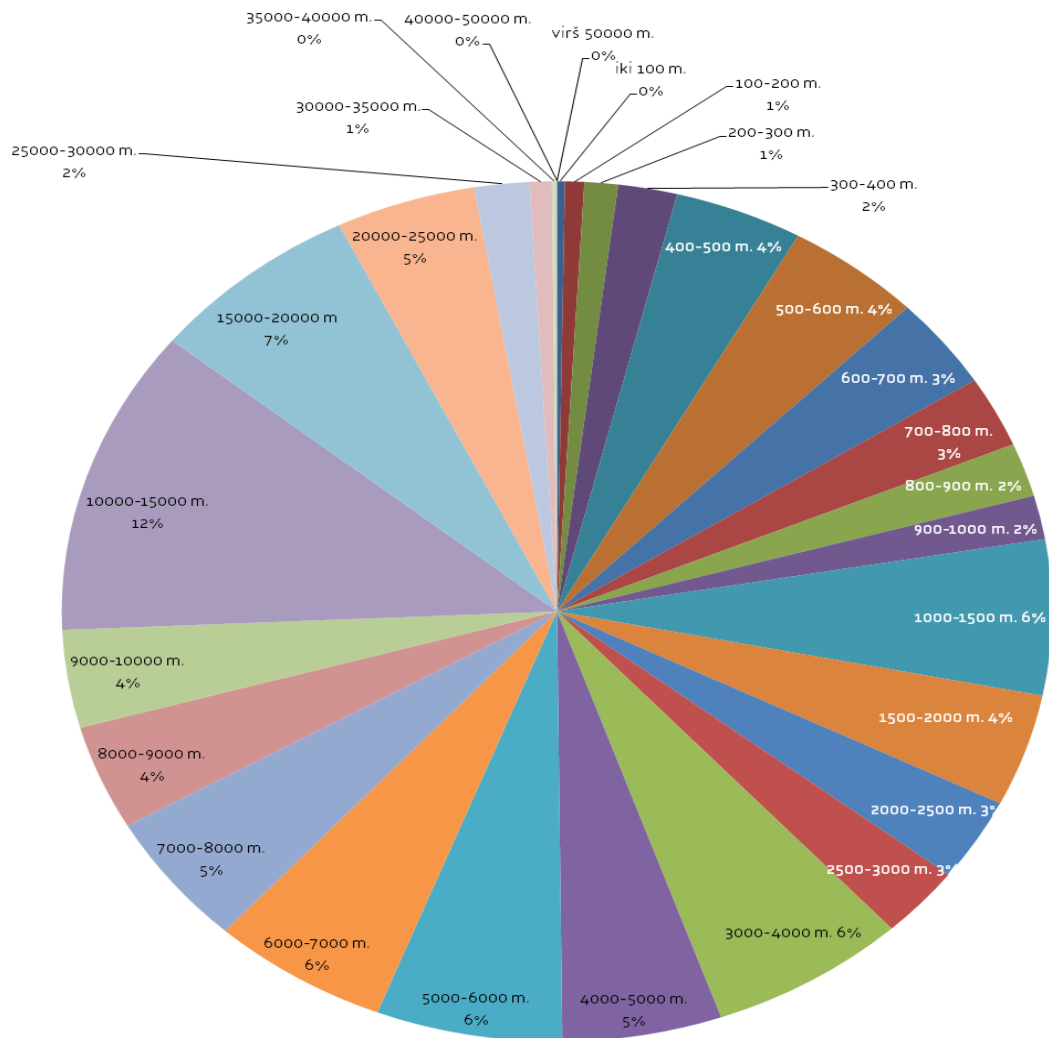
- Time for the provision of the caller location information (COCOM Report 2015):
- In some Member States almost immediate (between 1.2 and 2 secs)
 - Other countries between 5 and 12 secs
 - Some Member States more than 10 minutes

Time for the provision of the caller location information too long in some countries

- **Accuracy** (COCOM Report 2015): wide majority of MS reported Cell/Sector ID

**Cell ID / sector ID not accurate enough
No Member State imposed stricter caller location criteria**

Lithuanian ERC data related to mobile caller location



Summary:

0-2,000m = 32%

2,001m-8,000m=41%

8,001m-50,000m=27%

**Most common reading:
10,000m-15,000m=12%**

Improving mobile caller location: a priority for 112



Survey @ EENA Conference Warsaw 2014



16. If you could meet with Vice President Neelie Kroes, European Commissioner in charge of 112, what would be your priority request item: (choose one answer)

1) To improve the awareness of 112



8.7 %

2) To better regulate and enforce caller location



84.1 %

3) To improve access to 112 for people with disabilities



7.2 %

EU Emergency Services Workshop 2014



european emergency number association



7. Do you think that GNSS/GPS location data from mobile handsets should be used for locating callers ? (choose one answer)

1) Yes



94.2 %

2) No



5.8 %

EU Emergency Services Workshop 2014

Impact of inaccurate mobile caller location information



Case study (1)



- July 2009, Massif du Mont-Blanc, France
- Dr Bivort, a 77 year-old Belgian doctor, was hiking in the Massif du Mont-Blanc.
- He called the 10-digits special emergency number and reported that he suffered a leg injury.
- He remained online for more than one hour trying to detail his position.
- Due to the lack of collaboration between emergency services and MNOs, the location was not made during the call
- The MNO managed to locate the cell after the call but the battery went dead.
- First responders searched for Dr Bivort for the following 3 weeks.

Dr Bivort's remains were found 2 years later

Case study (2)

- 16 February 2012, Kysuca region (mountains), Slovakia
- Miroslava Sadlekova, a sixteen years old girl coming back from school, got lost because of a snow storm.
- Realising that her life was highly threatened by frost, she called the emergency number 112.
- The MNO provided CLI that was totally useless (1km radius)
- The call taker had to contact the mother of the victim and the mayor of the town to determine the location of the girl. Finally fire-fighters got the good location and found the girl after one hour in a poor condition and transported her immediately to the hospital.



[View the video of the rescue](#)

- In Spain, several cases where “Whatsapp” was used to send GPS data to emergency service (10 meters margin of error).
- Recent articles state that it was used at least 8 times in 2 months by Mountain Rescuers, only in Madrid Region.
- “Whatsapp messages” shared between callers and rescuers’ mobile phones (not integrated with 112).
- <http://www.abc.es/medios-redes/20130102/abci-whatsapp-excursionistas-montaneos-201301021045.html>





London Ambulance Service
NHS Trust



Saving Lives: Using improved Mobile Phone Technology

18 September 2015

Richard Webber
LAS Head of Control Services



Call Review

Landline

T1-T3 103 seconds
(Location & Chief Complaint)

T1-T5 236 seconds
(Call length)

4.4% over 3½ minutes

Mobile

T1-T3 130 seconds
27 Seconds longer

T1-T5 278 seconds
42 Seconds longer

10% over 3½ minutes



Emergency Calls from Mobile Phones- UK Info



- 67% of calls made to Emergency Services in UK from mobile phones
- Equates to c70k calls per day of which 26k are from EE customers.
- Location information derived from mobile cell site – caller could be located anywhere in what can be a large area
- Calls from mobiles on average 30 seconds longer before despatch – However can typically take 3 minutes of extra questions for stressed/injured victims.
- **Of the total ‘confirmed’ critical incidents, approx 36k per year involve searches of 30+ minutes because the mobile caller was unable to give location**
- 330k other cases of caller being unable to speak clearly : currently not able to be fully checked

Source: BT & DCMS 999/112 Liaison Committee

EENA extrapolation of UK figures Only on critical incidents without location

- Of the total 'confirmed' critical incidents, approx 36k per year involve searches of 30+ minutes because the mobile caller was unable to give location.
- Assumption: target of 20mins for intervention for critical incidents.

	Low range average delay (10 mins)	Mid range average delay (20 mins)	High range average delay (30 mins)
Number of minutes lost	360,000	720,000	1,080,000

EENA extrapolation for the EU

Only on critical incidents without location

- Extrapolation of critical incidents in the EU without location involving searches of 30+ minutes based on UK ratio (number of critical incidents / total number of calls = 0.1%).
- Approximately 320 million emergency calls in EU, **thus 320,000 critical incidents.**
- Assumption: target of 20mins for intervention for critical incidents.

	Low range average delay (10 mins)	Mid range average delay (20 mins)	High range average delay (30 mins)
Number of minutes lost	3,200,000	6,400,000	9,600,000

Thank you!

Questions?

Contact information

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