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# Expert meeting on eCall

## PSAP requirements

2 december 2005

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# Participants/stakeholders.

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- The Netherlands
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- Finland
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- United Kingdom
  - Martin Hill.
  - Andy Rooke.
- Spain
  - TBD.

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# Performance indicators

# Netherlands.



- ❑ Netherlands.
- ❑ 90% of incoming calls have to be answered within 10 seconds.
- ❑ Calls have to be evaluated and forwarded to 2nd stage PSAP's within:
  - ❑ 20 seconds for fixed network calls.30 seconds for mobile calls.
  - ❑ 2nd stage PSAP's have to answer 90% of calls from 1st stage PSAP's within 10 seconds.
- ❑ Dispatch within 90 seconds after call reception.
- ❑ Urban area: 10 minutes.
- ❑ Rural/suburban area: 15 minutes..

# United Kingdom



- UK
- 95% of incoming calls have to be answered within 5 seconds; typically, this is 7 seconds.
- PSAP to 2Nd Stage PSAP: 90% of the calls have to be forwarded within 10 seconds.
- Ambulance services are moving towards the target of answering 95% of incoming calls within 5 seconds.
- This is targeted but not achieved yet.
- Dispatch performance time dependent on the urgency.
- In the UK, this is risk/safety related:
- Area I, High risk: target is: within 15 minutes in 80% of all cases. For large urban areas like London this is 10 minutes.
- Area II, Lower risk: target is: within 1 hr in 90% of all cases. (This is a very recent national standard).
- Area III: Lowest risk: to be attended later.
- Area IV: can be handled otherwise, like by phone etc.

# Finland



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- ❑ Finland
  - ❑ Incoming call has to be answered within 10 secs. Average is about 8 seconds.
  - ❑ Risk evaluation and dispatch to emergency service within 90 seconds.
  - ❑ Dispatch within 1 minute after reception of call at emergency room.
  - ❑ In Finland, three areas have been defined, not geographically but risk related:
    - ❑ Area I (high risk like chemical plants): within 6 minutes.
    - ❑ Area II (middle risk): within 10 minutes.
    - ❑ Area III (low risk): within 20 minutes.

# Location accuracy Callies



	Indoor	Urban	Suburban	Rural	Highway Crossroads
Caller can provide general information	10 - 50 m	10 - 50 m	30 - 100 m	50 - 100 m	20 - 100 m
Caller cannot provide any information	10 - 50 m	10 - 50 m	10 - 100 m	10 - 100 m	10 - 100 m

Olten, 2 December 2005

# Location accuracy US

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- ❑ Phase I: wireless carriers have to deliver the telephone number and the location of the base station or cell site together with its radius of service in meters to the designated Public Safety Answering Point (PSAP).
- ❑ Phase II: is depending on the technology used: the use of handset-based technology requires 50 m accuracy for 67% of calls, and 150 m for 95% of calls; the use of network-based technology requires 100 m accuracy for 67% of calls, and 300 m for 95% of calls.

# Location accuracy eCall

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- ❑ Set on 50 – 100 m within the eCall expert group.
- ❑ For the sake of swift implementation.
- ❑ Natural migration to better accuracy expected.
- ❑ PSAPs will monitor that and modify their requirements when technical feasible, also considering cost – benefit aspects.

# Need for best accuracy.

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- ❑ Limited by today's technology and costs.
  - Acknowledged by the PSAP's.
- ❑ GPS already improved.
  - SA abandoned.
- ❑ 2008: combined Galileo – GPS.
  - More robust.
  - More accurate
  - Also in problem areas
- ❑ Natural migration path OK.

# Some examples.

- Accurate route guidance to the scene of the incident via the fastest possible route; the Golden Hour principle counts here!
- Needed to distinguish exactly the lane where the incident occurred
- This applies also if there is a ditch or a canal, 1 meter will give the proper distinction on what side of the ditch or canal the incident occurred.
- This applies to canyon and gorges in mountainous areas also.
- In rough and inaccessible terrain, it can be very difficult to locate an incidents, time counts!
- A car can simply vanish into the shrub, a few years ago there was an example on London's M25 orbital ring road. A car was detected only after 5 weeks!
- Another example is from the USA, a car remained undetected for a week; the driver freed himself from the wreckage by cutting off his own thumb.
- A mountaineer in the US fell into a gorge and got trapped. He cut of his own arm with a pocket-knife and was rescued eventually.
- A car can get submersed without leaving a trace; the water plants floating on the surface can render a car totally invisible from the shore.
- Last know postion as accurate as possible to define search area.

# EU Approach

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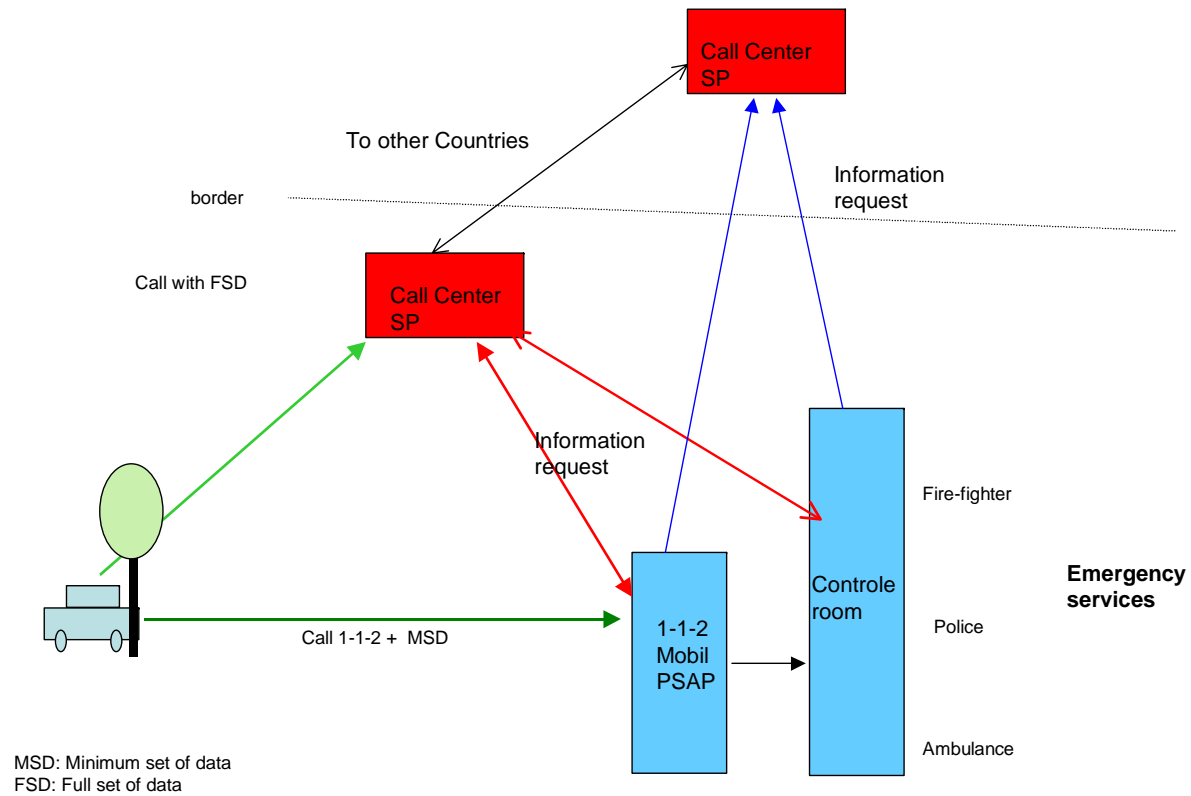
- Took note of US pitfalls.
- Consensus driven approach was chosen in the EU.
- 1st and 2nd communication on e-112
- eCall MoU.

# Communication



- ❑ PSAPs operate call back procedures.
  - To reassure people.
  - To keep them conscious.
  - To operate longer term activities (pursuits).
- ❑ Robust communication system.
  - The car should talk to the person, not the GSM.
    - GSM could easily get lost in case of a crash.
    - Person can be trapped, not able to reach the GSM if it is lost from its bracket.
- ❑ PSAPs prefer a in-car robust solution (could be low cost).

# E-call consolidated



# Next steps



- Spanish contribution to be consolidated.
- Status and consolidation MSD.
- Status and consolidation FSD.
- Role SP's
  - FSD
  - Relation to Control centres EA's
  - Backoffice
    - E.g. insurance companies.
- Coverage of hazardous materials transport.
- Future coordinated action.
  - Dialogue PSAP – industry.
  - More functionality MSD
  - More functionality FSD
- Voice over IP.