3GPP TSG CT Meeting #28 **CP-050146**
1st – 3rd June 2005. Quebec, CANADA.

ETSI MSG Kick off meeting for the eCall activity M-05-035

Sophia Antipolis, France, 3 – 4 May

Source:	ETSI TC MSG
Title:	Liaison on eCall requirements
To:	3GPP TSG SA, 3GPP TSG SA WG1 and TSG SA WG2
Cc:	3GPP TSG CT, 3GPP TSG CT WG1, 3GPP TSG GERAN and 3GPP TSG RAN

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Following discussion in ETSI OCG MSG has been tasked to ensure that it shall be possible to provide requirement for the design of technical solution for an automatic transfer of elements together with an emergency call to a PSAP including external elements to be automatically conveyed between external equipment connected to a User Equipment.

The meeting came with the following requirements:

The requirement is to send a fixed data block (MSD, Minimum Set of Data), which will not exceed 140 Bytes, from the vehicle to the PSAP, at the same time that the emergency call is placed. The data needs to be acknowledged, hence there shall be return channel. It is not necessary that the voice call is active during the transmission of the data, the MSD shall be available for the PSAP operator within a maximum of 4 seconds from sending the MSD from the IVS.
The acknowledgement shall be done at the transport layers and not the application layers, so that the system is compatible with a PSAP that has not yet implemented the eCall functionality.
The terminal shall be dual mode GSM/GPRS and UMTS (WCDMA) in order to ensure full European coverage during the lifetime of the car.
The solution shall seek minimal impact on all nodes involved in the transfer of information, that is, in the mobile network and the fixed network possibly used between the mobile network and the PSAP node.
3GPP should aim at finishing the specification by December 2005.
The solution shall work on all European GSM/3G networks (pan European solution, full roaming capability)

SIM/USIM shall be present owing to the fact that the SIM/USIM presence is already mandatory is several EU countries for Emergency Calls.

Additional Clarification
The source of the information in the MSD will be the vehicle, the content and the method for obtaining this information is outside of the scope of this study. The mobile network will simply provide means of transferring the data. Other aspects of Emergency calls are not expected to be modified.

To achieve the requirement, no technical solution is precluded or recommended.

Actions:

3GPPP is kindly requested to investigate and provide the technical solution so that the time frame foreseen can be met.

It is foreseen that in the course of October a new ad hoc meeting will be planed to review elements that could be provided by 3GPP, and to provide eventual comments from the different parties involved from the European side

Attachments:

As additional information, the following User cases have been provided by eCall Driving Group:

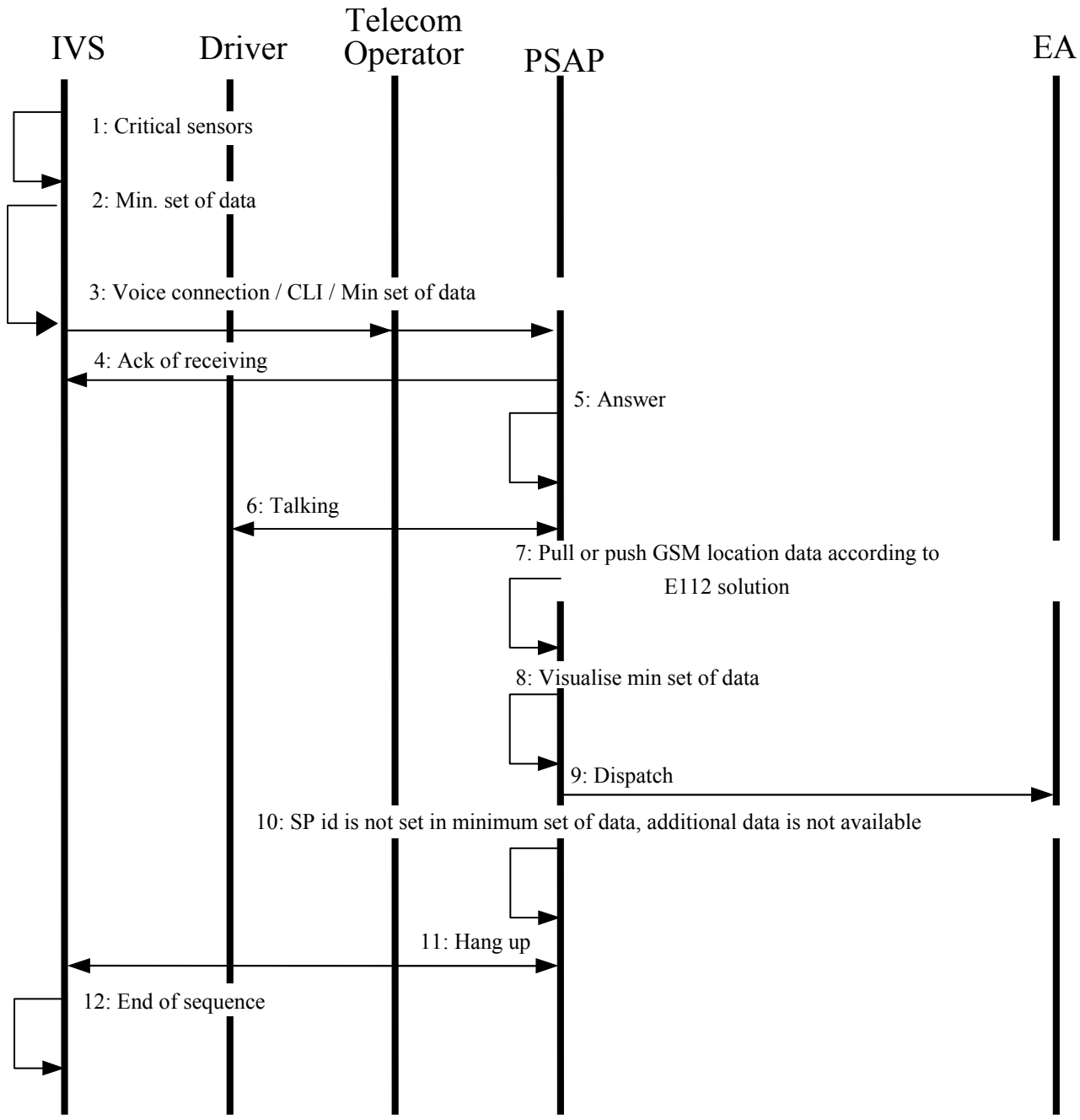
A) Automatic eCall where the only data is minimum set of data, no subscription to SP, the driver is able to speak.
B) Automatic eCall where the only data is minimum set of data, no subscription to SP and silent call.
C) Manual eCall where the only data is minimum set of data, no subscription to SP, driver is able to speak
D) Manual eCall where the only data is minimum set of data, no subscription to SP, silent call
E) Unit malfunction leading to false call

A) Automatic eCall where the only data is minimum set of data, no subscription to SP, the driver is able to speak.

Description
Within this use case the driver dose not have a subscription to a SP and can thus not obtain the benefits from making the additional data available for the PSAPs together with the possibility for establishing language support.

Initialisation
The service starts with:
A vehicle crash occurs and a minimum of 2 critical sensors is activated which causes the IVS unit to begin automatic an emergency sequence.

Sequence Overview



Sequence of Events

1) Emergency service sequence initiated automatically via a minimum of 2 critical sensors. (E.g. airbag and roll over).
2) Minimum set of data is sent via the Telecom operator to the PSAP.
3) A voice call is established between the vehicle and the PSAP.
4) An acknowledgement for receipt of the minimum set of data is sent to the vehicle via the Telecom operator from the PSAP system.
5) The PSAP answers the voice call.
6) The PSAP communicates with the vehicle driver.
7) The PSAP get the minimum set of data (could be before 5).
8) The PSAP visualises the minimum set of data.
9) The PSAP dispatches Emergency Assistance.
10) SP ID is not given in the minimum set of data (SP ID not given in the MSD as no subscription to a SP exists). No additional data is available.
11) The PSAP hangs up the voice call.

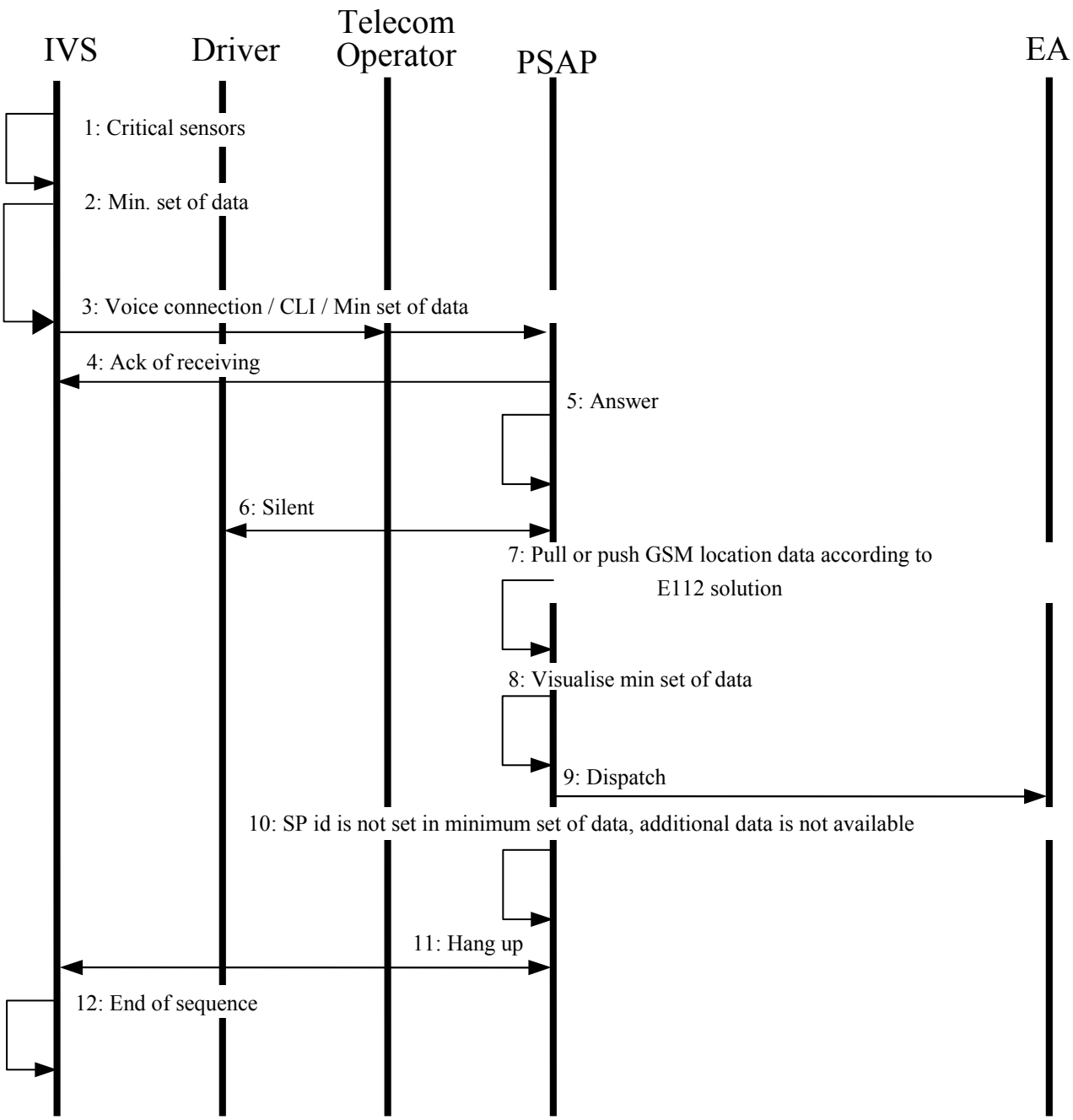
12) The IVS ends the emergency service sequence.

B) Automatic eCall where the only data is minimum set of data, no subscription to SP and silent call.

Description
In this case the PSAP operator cannot get in voice contact with the vehicle driver. The nature of the emergency has to be determined based on the minimum set of data.

Initialisation
The service starts with:
A vehicle crash occurs and a minimum of 2 critical sensors is activated which causes the IVS unit to begin an automatic emergency sequence.

Sequence Overview



Sequence of Events

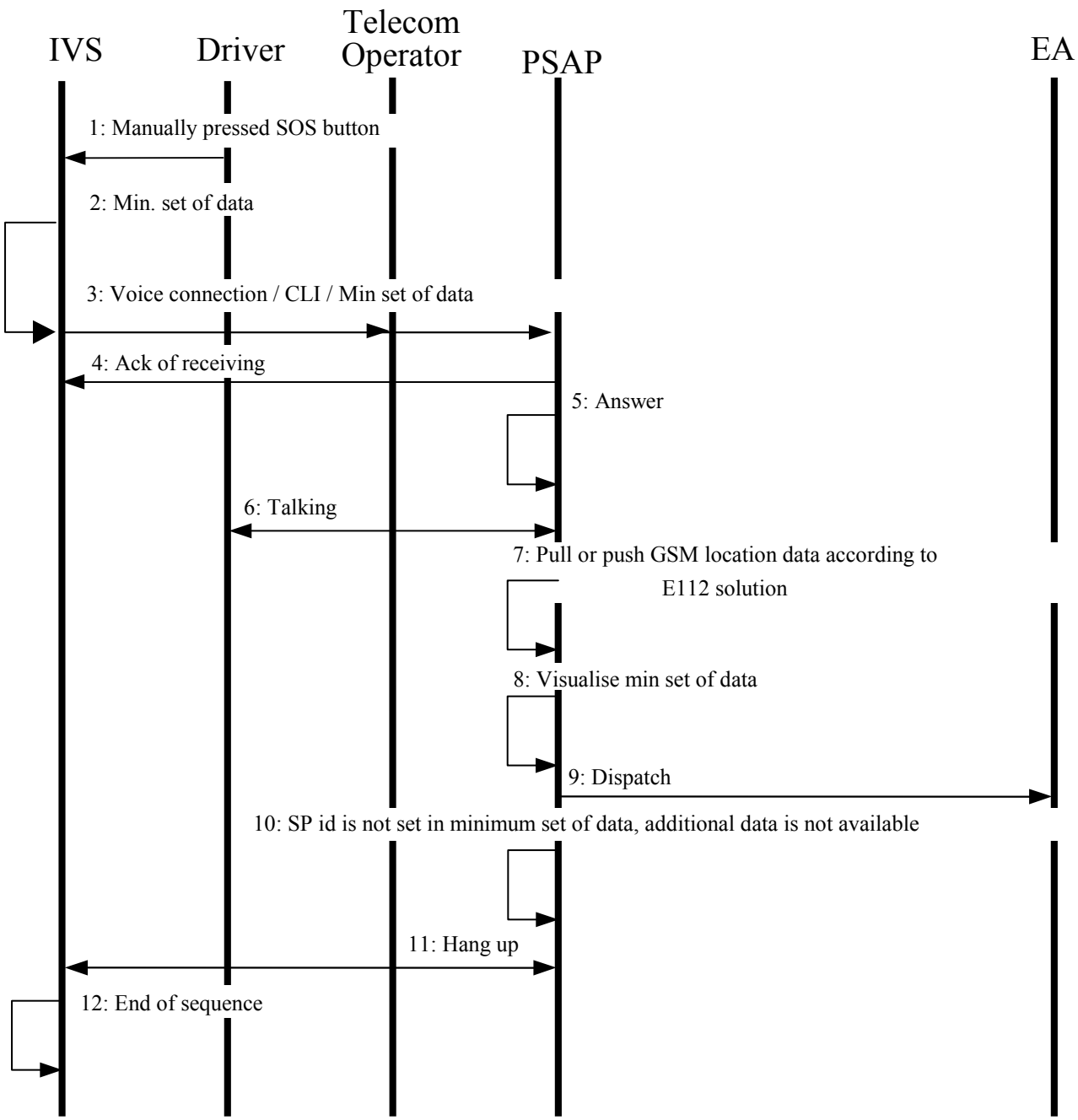
1) Emergency service sequence initiated automatically via a minimum of 2 critical sensors. (E.g. airbag and roll over).
2) Minimum set of data is sent via the Telecom operator to the PSAP.
3) A voice call is established between the vehicle and the PSAP.
4) An acknowledgement for the receiving of the minimum set of data is sent to the vehicle via the Telecom operator from the PSAP.
5) The PSAP answers the voice call.
6) The PSAP cannot hear the driver (silent call).
7) The PSAP pull or get the minimum set of GSM location data from the telecom operator location database.
8) The PSAP visualises the minimum set of data.
9) The PSAP dispatches Emergency Assistance, based only on the minimum set of data. The PSAP or EA may decide that there is no emergency.
10) SP ID is not given in the minimum set of data (SP ID not given in the MSD as no subscription to a SP exists). No additional data is available.
11) The PSAP hangs up the voice call.
12) The IVS ends the emergency service sequence.

C) Manual eCall where the only data is minimum set of data, no subscription to SP, driver is able to speak

Description
The service is activated by manually pressing the SOS button. The IVS unit formulates a minimum set of data message to the PSAP. A voice call is established to the PSAP allowing the PSAP representative to communicate with the driver of the vehicle. The nature of the emergency is determined and the PSAP representative contacts the appropriate Emergency Authority to request timely assistance for the driver of the vehicle. The emergency service is time and mission critical.

Initialisation
The service starts with:
The vehicle driver presses the SOS button, which causes the IVS unit to begin an automatic emergency sequence.

Sequence Overview



Sequence of Events

1) Emergency service initiated by the vehicle driver manually pressing the SOS button.
2) Minimum set of data is sent via the Telecom operator in the voice channel to the PSAP.
3) A voice call is established between the vehicle and the PSAP.
4) An acknowledgement for the receiving of the minimum set of data is sent to the vehicle via the Telecom operator from the PSAP.
5) The PSAP answers the voice call.
6) The PSAP communicates with the vehicle driver.
7) The PSAP pull or get the minimum set of GSM location data from the telecom location database.
8) The PSAP visualises the minimum set of data.
9) The PSAP dispatches Emergency Assistance.
10) SP ID is not given in the minimum set of data (SP ID not given in the MSD as no subscription to a SP exists). No additional data is available.
11) The PSAP hangs up the voice call.

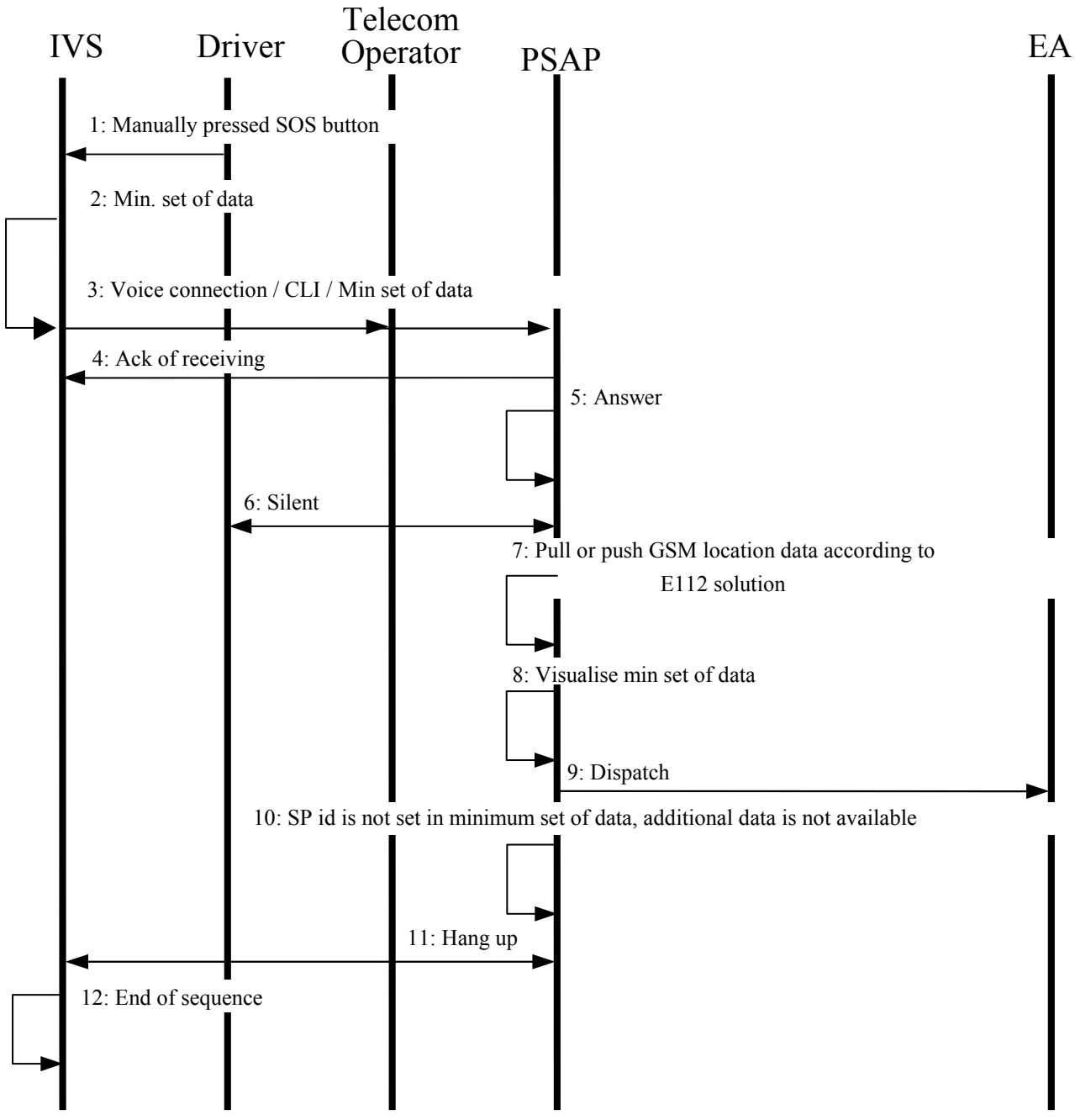
12) The IVS ends the emergency service sequence.

D) Manual eCall where the only data is minimum set of data, no subscription to SP, silent call

Description
In this case the PSAP operator cannot get in voice contact with the Vehicle driver. The nature of the emergency has to be determined based on the minimum set of data.

Initialisation
The service starts with:
The vehicle driver presses the SOS button, which causes the IVS unit to begin an automatic emergency sequence.

Sequence Overview



Sequence of Events

1) Emergency service initiated by the vehicle driver manually pressing the SOS button.
2) Minimum set of data is sent via the Telecom operator in the voice channel to the PSAP.
3) A voice call is established between the vehicle and the PSAP.
4) An acknowledgement for the receiving of the minimum set of data is sent to the vehicle via the Telecom operator, from the PSAP.
5) The PSAP answers the voice call.
6) The PSAP cannot hear the driver (silent call).
7) The PSAP pull or get the minimum set of GSM location data from the telecom operator location database.
8) The PSAP visualises the minimum set of data.
9) The PSAP dispatches Emergency Assistance, based only on the minimum set of data. The PSAP or EA may decide that there is no emergency.
10) SP ID is not given in the minimum set of data (SP ID not given in the MSD as no subscription to a SP exists). No additional data is available.
11) The PSAP hangs up the voice call.
12) The IVS ends the emergency service sequence.

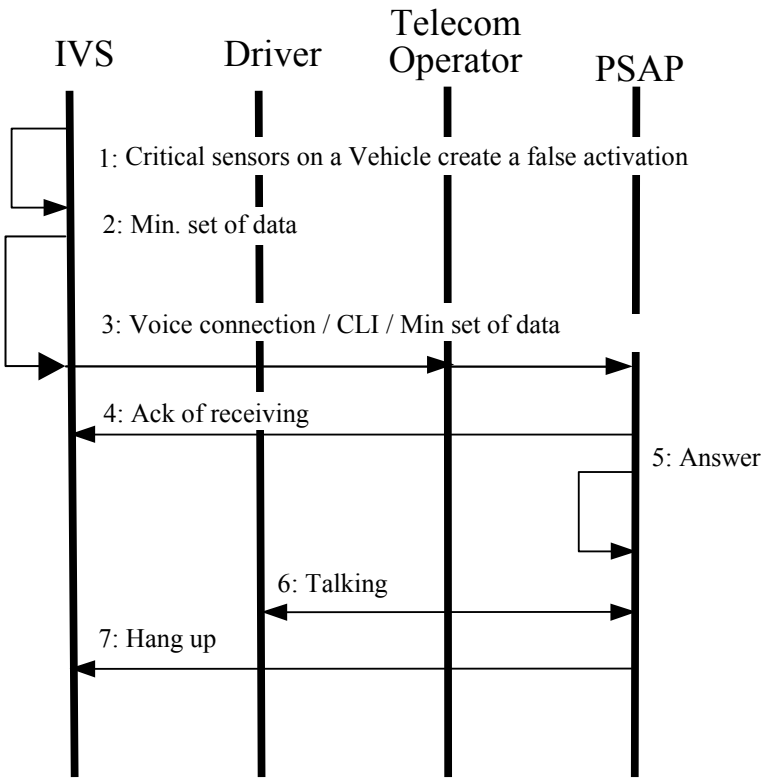
E) Unit malfunction leading to false call

Description
This use case deals with the internal malfunction of the IVS, which triggers an eCall where no emergency situation exists.
Malfunctions that lead to a false call is not necessarily only based on an IVS unit malfunctioning but in addition on the possibility of a deliberate or accidental false activation of the IVS unit by a person within the vehicle.

Member states should develop their own protocols to allow the PSAP to disconnect the call if they are convinced that there is no emergency situation after establishing voice contact. However this activation could be minimised by the utilization of effective HMI for the location of the in-vehicle push button.

Initialisation
Critical sensors on a Vehicle create a false activation, which causes a request to the IVS unit to begin an automatic emergency sequence.

Sequence Overview



Sequence of events
1) Critical sensors in a Vehicle create a false activation, which causes a request to the IVS unit to begin an emergency sequence.
2) Minimum set of data is sent via the Telecom operator in the voice channel to the PSAP.
3) A voice call is established between the vehicle and the PSAP.
4) An acknowledgement for the receiving of the minimum set of data is sent to the vehicle via the Telecom operator, from the PSAP.
5) The PSAP answers the voice call.
6) The PSAP communicates with the vehicle driver.

7) No incident, the PSAP hangs up the voice call.