PEMEA CONSORTIUM
Connecting internet apps to emergency services

PEMEA Close EDS

PEMEA-CLOSE-EDS

V1.0

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Contributors

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Table of Contents

1. Introduction

PEMEA was originally designed to allow mobile emergency applications to roam across Europe and defines the structure of the messages sent from the AP nodes and routed to the PSAPs.

TS 103 478 [R.1] does not specify how the AP should notify the tPSP/PIM that the caller has terminated the emergency communication or how the tPSP/PIM should notify the PA that the PSAP has terminated the emergency communication.

The tPSP/PIM nodes can know that the call has been ended at by the caller if the resources associated with the EDS of the call are no longer available. It can be checked using the endpoints provided by the AP for retrieving location updates or the user information.

But there is no mechanism that allows an AP to know if the emergency communication has been ended by the PSAP, this document defines a new attribute that allows to achieve this functionality meanwhile being compatible with the emergencyDataSend schema defined in TS 103 478 [R.1].

It is not specified in TS 103 478 [R.1] how the AP notifies the tPSP/PIM that the caller has ended the emergency communication, therefore, this document introduces a new feature that allows the AP to indicate a URL where the tPSP/PIM can notify of the end of the emergency communication by the PSAP.

The new element defined in this document are conveyed in the *emergencyDataSend* element of the PEMEA EDS message, defined clause 11.1 in TS 103 478 [R.1].

2. Terms and Definitions

The following terms and definitions are used in this document:

AP	Application Provider
ASP	Aggregating Service Provider
EDS	Emergency Data Send
EMTEL	Emergency Communications
ETSI	European Telecommunications Standards Institute
PEMEA	Pan-European Mobile Emergency Application
PIDF-LO	Presence Information Data Format Location Object
PIM	PSAP Interface Module
PSAP	Public Safety Answering Point
PSP	PSAP Service Provider
TS	Technical Specification
URI	Uniform Resource Identifier

3. Approach

3.1 Overview

TS 103 478 [R.1] defines in clause 11.1 the *emergencyDataSend* message structure. This document adds a new conditional parameter to the parameters defined in clause 11.1.1 called *onClosePost*. This new parameter provides a URI at the AP for receiving close messages. The PSAP can notify the AP about the end of a call by sending a request to this URI though its tPSP/PIM.

3.2 emergencyDatasend message structure

TS 103 478 [R.1] defines the onClosePost and onErrorPost parameters in the table of clause 11.1.1. The present document provides a new element for that table:

Parameter	Presence	Type	Description
onClosePost	Conditional	xs:anyURI	Provides a URI at the AP that a terminating PSP or PIM shall post to when the call is ended by the PSAP.

3.3 emergencyDatasend example

TS 103 478 [R.1] defines an example of an emergencyDataSend in clause 11.1.2. The following example extends it adding the new onClosePost parameter. The example also takes into consideration the PEMEA cellular network information update from PEMEA-CONS-CNI [R.2].

```
<emergencyDataSend xmlns="urn:pemea:apps:xml:ns:pemea:base"
 xmlns:pdf="urn:ietf:params:xml:ns:pidf"
 xmlns:gp="urn:ietf:params:xml:ns:pidf:geopriv10"
 xmlns:gml="http://www.opengis.net/gml"
 xmlns:gs="http://www.opengis.net/pidflo/1.0"
 xmlns:cell="urn:ietf:params:xml:ns:geopriv:lm:cell"
 xmlns:cell5g="urn:pemea:consortium:xml:ns:cellnetworks:cell5g"
 xmlns:con="urn:ietf:params:xml:ns:geopriv:conf"
ttl="5"
onClosePost="https://cooAP.example.com.be:2001/pemea/close/CoolAP-7496"
onErrorPost="https://cooAP.example.com.be:2001/pemea/error/CoolAP-7496"
onCapSupportPost="https://cooAP.example.com.be:2001/pemea/cap/CoolAP-7496">
<route msgSeq="CoolAP-7496" >
  <hops>
    <hop position="0" timeStamp="2016-02-01T19:43:00+11:00">
      <node>https://cooAP.example.com.be:2001/pemea/</node>
    </hop>
  </hops>
</route>
<callerIds>
  <callerId typeOfId="msisdn">tel: +34600123456</callerId>
</callerIds>
<apMoreInformation>
  <information typeOfInfo="RTT" protocol="PEMEA">https://coolap.example.com.be:2002/rtt?id=CoolAP-7496</information>
  <information typeOfInfo="IM" protocol="PEMEA">https://coolap.example.com.be:2002/im?id=CoolAP-7496</information>
  <information typeOfInfo="Audio_Video"
protocol="PEMEA">https://coolap.example.com.be:2007/audiovideo?id=CoolAP7496</information>
  <information typeOfInfo="Location_Update" protocol="HELD_Deref">https://coolap.example.com.be:2045/loc?id=CoolAP-
7496</information>
</apMoreInformation>
<accessData>
  <cell5g:cell5g>
    <cell5g:network>5G</cell5g:network>
```

```
      <cell5g:mcc>255</cell5g:mcc>
      <cell5g:mnc>023</cell5g:mnc>
      <cell5g:nci>687194767</cell5g:nci>
     </cell5g:cell5g>
   </accessData>
   <pdf:presence entity="tel: +34660123456">
    <pdf:tuple id="circle">
     <pdf:status>
      <gp:geopriv>
       <gp:location-info>
         <gs:Circle srsName="urn:ogc:def:crs:EPSG::4326">
          <gml:pos>42.5463 -73.2512</gml:pos>
          <gs:radius uom="urn:ogc:def:uom:EPSG::9001">
           30.0
          </gs:radius>
         </gs:Circle>
         <con:confidence pdf="normal">95</con:confidence>
        </gp:location-info>
        <gp:usage-rules/>
        <gp:method>GNSS</gp:method>
      </gp:geopriv>
     </pdf:status>
    </pdf:tuple>
   </pdf:presence>
</emergencyDataSend>
```

4. Conveyance

The new parameter defined in this document are conveyed in the *emergencyDataSend* element as an attribute.

In the clause 16 of TS 103 478 [R.1] the *emergencyDataSend* element has the *edsType* type, which extends the *edsBaseType* type. The schema of the *edsBaseType* is defined to allow any extra attributes, so it is not mandatory to update this schema, but it should be extended with the new *onClosePost* attribute to have a better consistency.

```
  <xs:complexType name="edsBaseType">
   <xs:complexContent>
    <xs:restriction base="xs:anyType">
     <xs:sequence/>
     <xs:attribute name="ttl" type="pemea:posIntType" use="required"/>
     <xs:attribute name="onClosePost" type="xs:anyURI" use="optional"/>
     <xs:attribute name="onErrorPost" type="xs:anyURI" use="optional"/>
     <xs:attribute name="onCapSupportPost" type="xs:anyURI" use="optional"/>
     <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:restriction>
   </xs:complexContent>
  </xs:complexType>
```

5. References

5.1 Normative References

[R.1]   ETSI TS 103 478: "Emergency Communications (EMTEL); Pan-European Mobile Emergency Application", March 2020.

[R.2]   PEMEA-CONS-CNI: "Cellular Network Information for PEMEA", June 2023.

5.2 Informative References

N/A

6. HISTORY

Document history		
V1.0	28 July 2023	First Version