**3GPP TSG-CT WG1 Meeting #135-eC1-222673**

**E-Meeting, 6th – 12th April 2022**

Title: Emergency services and UE rejected with "PLMN not allowed to operate in the country of the UE’s location"

Response to: - -

Release: Rel-17

Work Item: 5GSAT\_ARCH-CT

Source: CT1

To: SA1

Cc: SA2, SA3LI

**Contact person: Chen-Ho CHIN**

**chin.chenho@oppo.com**

**+32 477 413371**

**Send any reply LS to: 3GPP Liaisons Coordinator,** [**mailto:3GPPLiaison@etsi.org**](mailto:3GPPLiaison@etsi.org)

Attachments:

**1. Overall Description:**

In the Reply LS on selecting a PLMN not allowed in the country where a UE is physically located (in S1-211319/ C1-213551) SA1 has answered on the Q3:

Q3: "*… could SA1 provide the necessary guidance for selecting a PLMN that can provide emergency services to the UE over satellite access?*"

"*The UE should first determine a most suitable PLMN based on its own physical location determination. As there may be border cases where the UE cannot determine sufficiently accurate or sufficiently precise in which country it is, the UE may also still attempt to obtain (emergency) services from a PLMN that according to the UE is not allowed to operate in the country of the UE’s location. If the PLMN indicates it is not allowed to operate in the country of the UE’s location, the UE should not (re)-attempt emergency calls.*"

With respect to PLMN selection the definitions in 23.122 for cause #78 ensure that the UE attempts to select a different allowable PLMN if this cause is received.

However for the case that no allowable PLMN is available, and even no acceptable cell is available besides the cell on which #78 is received CT1 has the understanding that there should be no limitations to block request from upper layers to attempt a emergency service. This is in CT1's understanding in line with the existing principles that there are no limitations for subsequent emergency service attempts if a emergency service attempt was rejected by the network.

**2. Actions:**

**To SA1**

**Action 1:** CT1 kindly ask SA1 to confirm the CT1 understanding that for the case that there is no other cell available besides the cell on which #78 was received, that there should be no limitations to block request from upper layers to attempt a emergency service.

**Action 2:** If SA1 does not agree with the outlined CT1 understanding, CT1 kindly ask SA1 to provide guidance on the indented UE behaviour.

In a previous LS (in S1-211319/ C1-213551), SA1 provided the following guidance with respect to support of emergency services when network has rejected a UE with "PLMN not allowed to operate in the country of the UE’s location" – CT1 has assigned reject cause #78:-

[generally] that the PLMN is unable to provide support the various requirements related to emergency services, notably routing to a suitable PSAP

but

However, in border areas, PLMNs and/or PSAPs may provide some support for emergency calls from across a border ………in case the UE itself has determined that it is in a country the PLMN is not allowed to operate in, the UE may attempt to obtain emergency services

Thus these SA1 guidance has a linkage to whether the UE is able to determine its location, e.g. UE determines it is in border areas.

So in discussing the stage 3 support for emergency services where the UE does and does not know (or can or cannot ascertain) its location, CT1 would like to progress with:-

1. If a UE is rejected with #78 for a normal registration or registration update or when requesting access for resources/services when normally registered, the UE is allowed to attempt emergency registration to that same rejecting NW in attempt to obtain emergency services, if no other NW can be found;
2. If the UE is rejected with #78 for an emergency registration then UE shall not re-attempt to obtain emergency services from that PLMN until the validity of reject cause #78 expires, even if no other NW can be found.

In coming to the above, CT1 took into consideration

1. the UE might not be able to determine its location (for whatever reason) or with *sufficient* accuracy;
2. even if UE could determine its location, that determination should not be (fully) trusted;
3. emergency services could be attempted even in a forbidden PLMN, if no other PLMNs could be found,
4. there can be many locations where the NTN rejecting the UE with #78, is the only (mobile or otherwise) network around;
5. the network has the ultimate right to refuse to provide emergency services, i.e reject the attempt for emergency registration, or rejecting request for resources for emergency services.

Would SA1 have any issues if CT1 progress with CRs for 1) and 2)?

**2. Actions:**

**To SA1**

**ACTION1:** CT1 kindly ask SA1 to indicate if SA1 is agreeable or have problems if CT1 progress with 1) and 2).

**ACTION2:** If SA1 is agreeable to 1) and 2), SA1 to kindly consider if a stage 1 change is needed to align with stage 3.

**3.** **Date of Next CT1 Meetings:**

CT1#136e 12th - 20th May 2022 electronic meeting