**3GPP TSG-CT WG1 Meeting #134-eC1-22xxxx**

**E-Meeting, 17th – 25th February 2022**

**Source: vivo**

**Title: Clarification on path preference mapping rule**

**Spec: 3GPP TS 24.554 v1.1.0**

**Agenda item: 17.2.18**

**Document for: Decision**

**1. Introduction**

The PC5 interface is selected based on the ProSe application to path preference mapping rules as specified in clause 5.2.4 before 5G ProSe direct communication.

**2. Reason for Change**

Consider the following case:

a) A UE receives a list of ProSe application to path preference mapping rules. The list contains various preference from the network (may be provided by the application server); and

b) In that list, APP#1 is provisioned with both a mapping rule#1 = {ProSe identifier#1 to path preference#1} and a mapping rule#2 = {path preference#2 for all ProSe service}.

In this case, APP#1 should make the decision to use path preference#1. However, if the path preference mapping rules are not prioritized, the UE should loop the provisioned list and then makes the decision. If the path preference mapping rules are prioritized, the UE can make the decision the first try it finding a path preference.

Therefore, from a UE vender perspective, the path preference mapping rules shall be prioritized to reduce the UE implementation complexity.

**3. Conclusions**

<Conclusion part (optional)>

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 24.554 v1.1.0.

\* \* \* First Change \* \* \* \*

### 5.2.4 Configuration parameters for 5G ProSe direct communication over PC5 interface

The configuration parameters for 5G ProSe direct communication over PC5 interface consist of:

a) a validity timer for the validity of the configuration parameters for 5G ProSe direct communication over PC5 interface;

b) a list of PLMNs in which the UE is authorized to use 5G ProSe direct communication over PC5 interface when the UE is served by NG-RAN. Each entry of the list contains a PLMN ID in which the UE is authorized to use 5G ProSe direct communication over PC5 interface;

c) an indication of whether the UE is authorized to use 5G ProSe direct communication over PC5 interface when the UE is not served by NG-RAN;

d) the radio parameters of the 5G ProSe direct communication over PC5 interface applicable per geographical area with an indication of whether these radio parameters are "operator managed" or "non-operator managed" when the UE is not served by NG-RAN;

e) configuration parameters for groupcast mode 5G ProSe direct communication for each application layer group, consisting of:

1) application layer group ID;

2) ProSe layer-2 group identifier;

3) ProSe group IP multicast address;

4) an indication of whether the UE is authorized to use IPv4 or IPv6;

5) optionally, an IPv4 address to be used by the UE as a source address for a specific Group if the UE is authorized to use IPv4; and

6) group security related content;

Editor’s note: Details of group security related content are FFS and will be determinated by SA3 WG.

f) configuration parameters for privacy support, consisting of:

1) a list of ProSe applications requiring privacy. Each entry of the list contains one or more ProSe identifiers and one or more geographical areas where the privacy is required; and

2) a privacy timer value as specified in 3GPP TS 24.555 [17];

g) optionally, a list of ProSe identifier to ProSe NR frequency mapping rules. Each mapping rule contains one or more ProSe identifiers and the ProSe NR frequencies with associated geographical areas;

h) a list of ProSe identifier to destination layer-2 ID for broadcast mapping rules. Each mapping rule contains one or more ProSe identifiers and the destination layer-2 ID for broadcast;

i) optionally, a default destination layer-2 ID for broadcast;

j) a list of ProSe identifier to default destination layer-2 ID for unicast initial signaling mapping rules. Each mapping rule contains one or more ProSe identifiers and the default destination layer-2 ID for initial signalling to establish unicast connection;

k) a list of ProSe identifier to PC5 QoS parameters mapping rules. The PC5 QoS parameters are specified in clause 5.7 of 3GPP TS 23.304 [2];

l) an AS configuration, including a list of SLRB mapping rules applicable when the UE is not served by NG-RAN. Each SLRB mapping rule contains a PC5 QoS profile and an SLRB. The PC5 QoS profile contains the following parameters:

1) the PC5 QoS profile containing a PQI;

2) if the PQI of the PC5 QoS profile identifies a GBR QoS, the PC5 QoS profile containing a PC5 flow bit rates consisting of a guaranteed flow bit rate (GFBR) and a maximum flow bit rate (MFBR);

3) if the PQI of the PC5 QoS profile identifies a non-GBR QoS, the PC5 QoS profile containing the PC5 link aggregated bit rate consisting of a per link aggregate maximum bit rate (PC5 LINK-AMBR);

NOTE 1: PC5 link aggregated bit rate is only used for unicast mode communications over PC5 interface.

4) the PC5 QoS profile containing a range, which is only used for groupcast mode communications over PC5 interface; and

5) the PC5 QoS profile optionally containing the priority level, the averaging window, and the maximum data burst volume. If one or more of the priority levels, the averaging window or the maximum data burst volume are not contained in the PC5 QoS profile, their default values apply;

m) a list of 5G ProSe direct security policies. Each entry in the list contains a 5G ProSe direct security policy composed of:

1) one or more ProSe identifiers;

2) the signalling integrity protection policy for the ProSe identifier(s);

3) the signalling ciphering policy for the ProSe identifier(s);

4) the user plane integrity protection policy for the ProSe identifier(s);

5) the user plane ciphering policy for the ProSe identifier(s);

6) one or more geographical areas where the 5G ProSe direct security policy applies;

Editor’s note: Details of 5G ProSe direct security policies related content are FFS and will be determinated by SA3 WG.

n) a list of ProSe identifiers to default mode of communication mapping rules. Each mapping rule contains one or more ProSe identifiers and the default mode of communication (one of unicast, groupcast or broadcast); and

o) a list of ProSe application to path preference mapping rules (i.e., PC5 preferred, Uu preferred, or no preference) as defined in clause 5.4 in 3GPP TS 24.555 [17]. The list of ProSe application to path preference mapping rules are in prioritized order according to the local configuration of the network.

NOTE 2: In this release of specification, the application ID defined in 3GPP TS 23.303 [35] can be used as the ProSe identifier in 5G ProSe direct discovery and in a consequent 5G ProSe direct communication.

\* \* \* End of Changes \* \* \* \*