ProSe Group Priority way forward
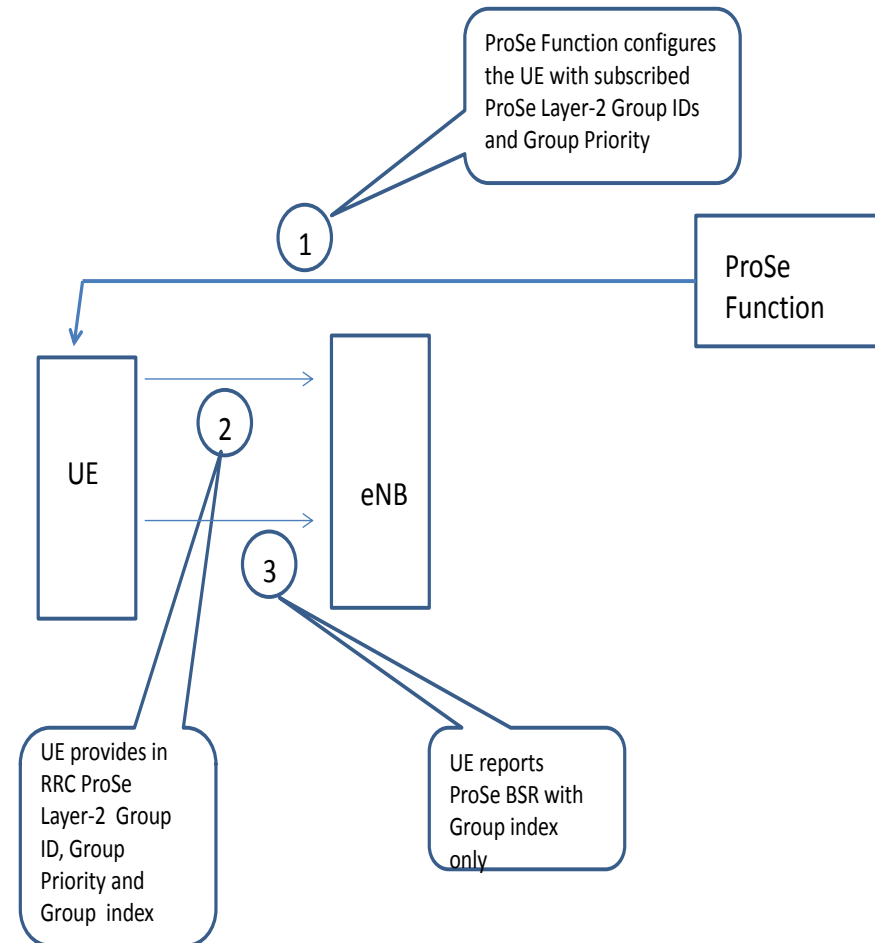
Source: Qualcomm Inc.

Outline

- Status on Group Priority

- System options for support of Group Priority

- Way forward

Status of ProSe Group Priority

- TS 23.303 indicates that Group Priority should be supported but there is no associate procedure

- Some proposals were discussed in SA2#104 without conclusion

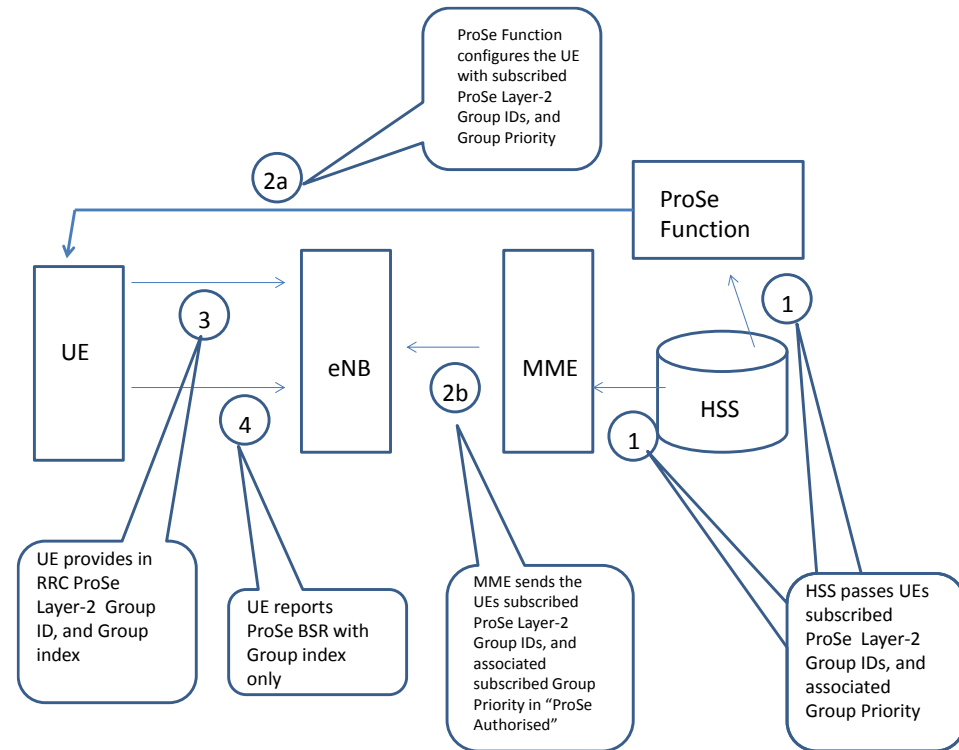- LS from RAN2 (S2-143424) was not handled in SA2#105 due to lack of time

Option 1: Only UE provisioned and signalled subscribed Group Priority

- ProSe Function
  - Provisions the UE with ProSe Layer-2 Group ID(s) and associated subscribed Group Priorit(ies)
- UE
  - UE generates Group Indices for the "active" groups
  - Signals ProSe Layer-2 Group ID(s), Group Indices and associated subscribed Group Priorit(ies) in RRC
  - UE selects ProSe resource pool based on Group priority in mode 2
  - UE reports ProSe BSR using only Group Indices
- eNB
  - Takes into account the Group Priority when scheduling radio resources in mode 1
- Impacted WGs: SA2, CT1, CT6, RAN2

ProSe Function configures the UE with subscribed ProSe Layer-2 Group IDs and Group Priority

1

ProSe Function

UE

2

eNB

3

UE provides in RRC ProSe Layer-2 Group ID, Group Priority and Group index

UE reports ProSe BSR with Group index only

Option 2: UE provisioned and signalled Group Priority, MME/HSS signalled subscribed Group Priority

○ ProSe Function
   – Provisions the UE with ProSe Layer-2 Group ID(s) and associated subscribed Group Priorit(ies)

○ UE
   – UE generates Group Indices for the "active" groups
   – Signals ProSe Layer-2 Group ID(s), and Group Indices in RRC
   – UE selects ProSe resource pool based on Group priority in mode 2
   – UE reports ProSe BSR using only Group Indices

○ HSS
   – Stores ProSe Layer-2 Group ID (s) and subscribed Group Priorities

○ MME
   – Provides the ProSe Layer-2 Group ID (s) and subscribed Group Priorities in "ProSe Authorised" to eNB

○ eNB
   – Takes into account the UE signalled Group Priority and the MME/HSS provided subscribed Group Priority when scheduling radio resources in mode 1

○ Impacted WGs: SA2, CT1, CT4, CT6, RAN2, RAN3

ProSe Function configures the UE with subscribed ProSe Layer-2 Group IDs, and Group Priority

UE provides in RRC ProSe Layer-2 Group ID, and Group index

UE reports ProSe BSR with Group index only

MME sends the UEs subscribed ProSe Layer-2 Group IDs, and associated subscribed Group Priority in "ProSe Authorised"

HSS passes UEs subscribed ProSe Layer-2 Group IDs, and associated Group Priority

Comparison

- Option 2 is complementary to option 1

- Option 1 and 2 can work for both mode 1 and mode 2

- Option 2 presents more control since the "subscribed Group Priority" is provided from CN (on S1-AP)

- Option 2 has system wide impacts

- Both options can be "upgraded" in rel.13 to also support "situational" priority as MCPTT requirements (TS 22.179)

Way forward

- Agree with option 2
  - See attached CR

- Answer RAN2 LS as follows:
  - Whether a ProSe Layer-2 group ID can be associated with priority level?
    - [SA2 answer]: Yes. See attached CRs
  - If there is an associated group priority for each ProSe Layer-2 group ID:
  - Can the ProSe function provide the UE with this information?
    - [SA2 answer]: Yes see attached CR.
  - What is the number of group priority levels that will be supported?
    - [SA2 answer]: SA2 believes that 3 or 4 priority levels will be suitable. SA2 also includes SA1 in the LS response in order to verify whether this number of priority level is adequate from service requirements perspective.