

3GPP TSG-RAN Meeting #85
Newport Beach, California, USA, Sept 16th – 20th, 2019

Tdoc RP-192134



Agenda Item: 8.1.13 - Other SA-led items with potential RAN impacts
Source: Ericsson

Rel-17 Impacts on RAN from NPN in SA



Background and expected RAN impact

SA Plenary #84 agreed SP-190453, New SID: Study on enhanced support of Non-Public Networks, including the following objective;

Study enhancements to 5GS that would enable more efficient support of non-public networks and simplification of 5G system for non-public networks.

The following aspects are in scope of the study:

1. *Study enhancements to enable support for SNPN along with subscription / credentials owned by an entity separate from the SNPN.*
NOTE: The entity separate from the SNPN might provide applications using the services of the SNPN for its communication.
2. *Study how to support UE onboarding and provisioning for non-public networks.*
3. *Study enhancements to the 5GS for NPN to support service requirements for production of audio-visual content and services e.g. for service continuity.*
NOTE: The above objective covers NPN specific SA1 requirements as part of AVPROD that are not covered by the other objectives.
4. *Study the possibility for customizations or optimizations of 5GS when used for NPN considering different deployment scenarios, e.g. when the NPN is deployed and managed with the support of PLMN, when the NPN is deployed for different coverage and device density.*
5. *Study the need for additional exposure capabilities due to support for NPN.*
6. *Study support for SNPN and PLMN sharing the same NG-RAN, if anything missing from Rel-16.*
7. *Study support for voice/IMS emergency services for SNPN.*
NOTE: The above objectives are expected to be further aligned based on Stage 1 requirements.

The objectives are color-coded based on our understanding of whether there is RAN impact:

- **blue** means that there *maybe* RAN impact (more details on following slides)
- **orange** means we don't foresee RAN impact

Objective 1



- Objective 1 reads:

1. Study enhancements to enable support for SNPN along with subscription / credentials owned by an entity separate from the SNPN.

NOTE: The entity separate from the SNPN might provide applications using the services of the SNPN for its communication.

- This objective relates to that a UE which has credentials from entities **other** than the SNPN can access an SNPN.
- Our view is that:
 - Depending on SA2-decisions, there may be impact to RAN of this objective.

Objective 6



- Objective 6 reads:

6. Study support for SNPN and PLMN sharing the same NG-RAN, if anything missing from Rel-16.

- This objective relate to various RAN Sharing solutions. RAN sharing was addressed by SA2 LS to RAN groups during Rel-16 work: [S2-1906814.zip](#) on support for RAN sharing solutions.
- Our view is that:
 - relevant sharing scenarios were covered by the RAN sharing scenarios discussed in the SA2 LS. These have been analysed and responded by RAN WG's ([R2-1911827.zip](#), [R3-194785.zip](#))
 - However, depending on SA2 progress there may be something which is missing which needs to be studied in RAN

Objective 7



- Objective 7 reads:

7. Study support for voice/IMS emergency services for SNPN.

NOTE: The above objectives are expected to be further aligned based on Stage 1 requirements.

- Our view is that:
 - There may be impact from objective 7. To determine potential RAN impact, a RAN-SI would be suitable.

Conclusions



- SA2 Rel-17 study on NPN (SP-190453) describes enhancements for NPN
- At least objective 1, 6 and 7 has potential RAN impact and hence RAN needs to conduct a study to determine if and what would be the impact of this.
- We propose:
 - Conduct an email discussion following September plenary to formulate a Rel-17 RAN SID on NPN for studying RAN impact of the corresponding SA2 study (draft SID in RP-192154)

