**3GPP TSG-SA5 Meeting #143-e *S5-223135rev1***

e-meeting, 9 - 17 May 2022

**Source: China Mobile**

**Title: Rel-18 pCR 28.828 Add charging scenarios and key issues for PNI-NPN on converged charging for access connection**

**Document for: Approval**

**Agenda Item: 7.5.4**

# 1 Decision/action requested

***The group is asked to discuss and agree on the proposal.***

# 2 References

[1] 3GPP TR 28.828: "Charging management; Study on charging aspects for enhanced support of non-public networks".

# 3 Rationale

This pCR proposes to add charging scenarios and key issues for PNI-NPN on converged charging for access connection to TR 28.828 [1].

# 4 Detailed proposal

The following changes are proposed to be incorporated into TR 28.828.

|  |
| --- |
| **First change** |

6.x Topic X: Converged charging for access connection in PNI-NPN

6.x.1 Use cases

#### 6.x.1.1 Use case #Xa: Network access control

Relying on PLMN network, PNI-NPN provides logically independent 5G non-public network for vertical industry customers through network slice instances/ dedicated DNNs, and supporting of CAG feature. CAG is used for access control to prevent unauthorized UEs from trying to access a PNI-NPN.

The NPN-OP provides the PNI-NPN (e.g. vertical industry customers) to NPN-SP, and NPN-SP provides NPN services to NPN-SC. It is important for NPN-OP to collect usage for PNI-NPN resources associated to access connection for the purpose of charging or statistics.

The potential charging requirements for this UC are: REQ-eNPN\_CH\_PNI-NPN\_NAC-01, REQ-eNPN\_CH\_PNI-NPN\_NAC-02.

6.x.2 Potential charging requirements

**REQ-eNPN\_CH\_PNI-NPN\_NAC-01:** The 5G system should support converged charging per UE for PNI-NPN network access and usage.

**REQ-eNPN\_CH\_PNI-NPN\_NAC-02:** The 5G system should support converged charging per vertical industry consumer for PNI-NPN network access and usage.

6.x.3 Key issues

This key issue is for investigating how to support converged charging for access connection in PNI-NPN considering REQ-eNPN\_CH\_PNI-NPN\_NAC-01 and REQ-eNPN\_CH\_PNI-NPN\_NAC-02. This investigation covers the following:

- **Key Issue #xa:** Identification of the charging information for converged charging for PNI-NPN network access and usage;

- **Key Issue #xb:** Identification of the main interactions with the NFs to obtain the charging information;

- **Key Issue #xc:** The charging mechanism supporting converged inter-provider charging for PNI-NPN network access and usage.

### 6.x.4 Possible solutions

TBD

### 6.x.5 Evaluation

TBD

### 6.x.6 Conclusion

TBD

|  |
| --- |
| **End of changes** |