

5G E2E Network Slice Mapping

draft-geng-teas-network-slice-mapping-04

Xuesong Geng, Jie Dong, **Huawei**

Ran Pang, **China Unicom**

Liuyan Han, **China Mobile**

Reza Rokui, Nokia

Tomonobu Niwa, **Individual**

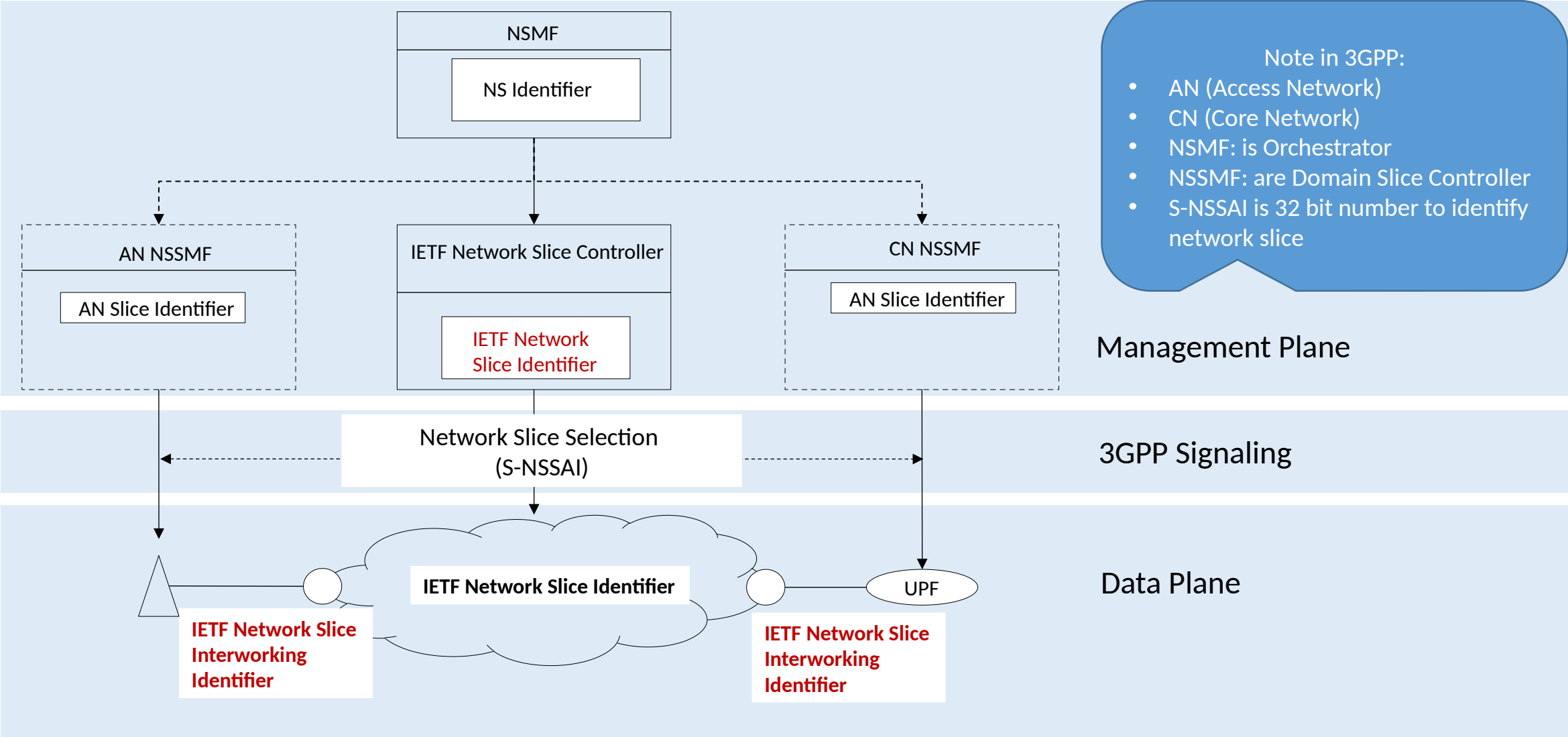
Jaehwan Jin, **LGU+**

Chang Liu, **China Unicom**

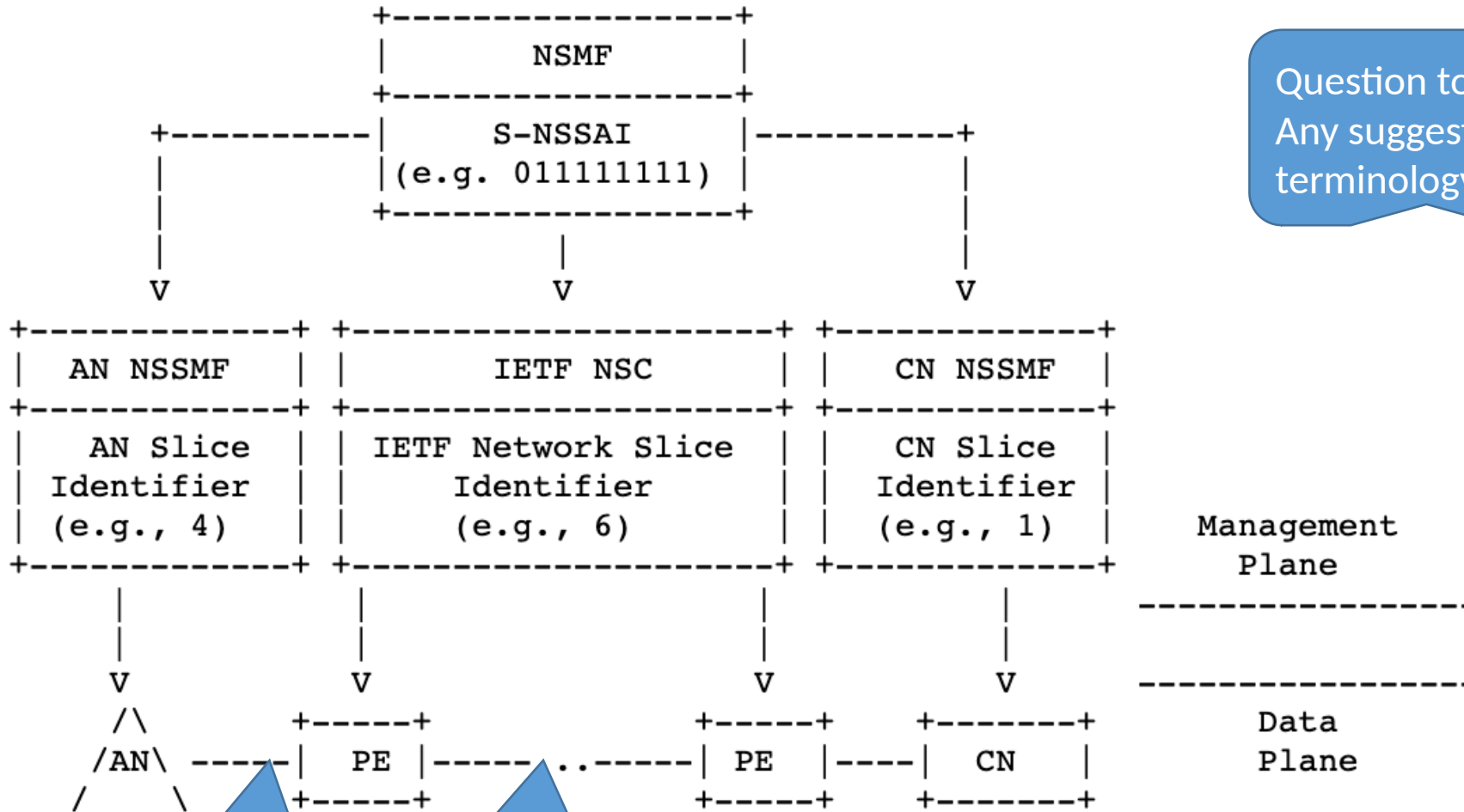
Nikesh Nageshar, **Individual**

IETF 112- TEAS WG

Motivation: Provide Mapping Procedure between 5G network slice in 3GPP and IETF network slice



The Identifiers



Question to working group:
Any suggestions about the terminology for **ID-A** and **ID-B**?

IETF Network Slice Interworking Identifier (**ID-A**)

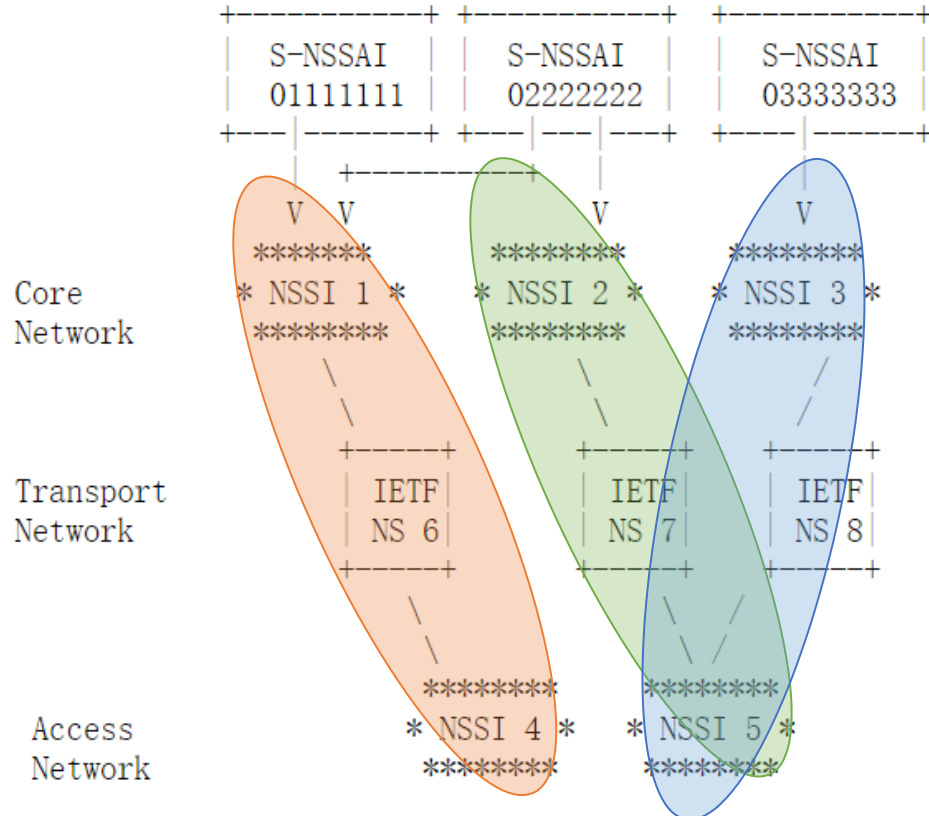
IETF Network Slice Identifier (**ID-B**)

Update Overview in v04

- Simplify 3GPP Network Slicing Description
- Use Network Slice Terminologies defined in IETF
- Clarify the terminologies introduced by this document

Adding Section 3: Simplified 3GPP Network Slicing Description

- Use S-NSSAI as 3GPP E2E network slice identifier

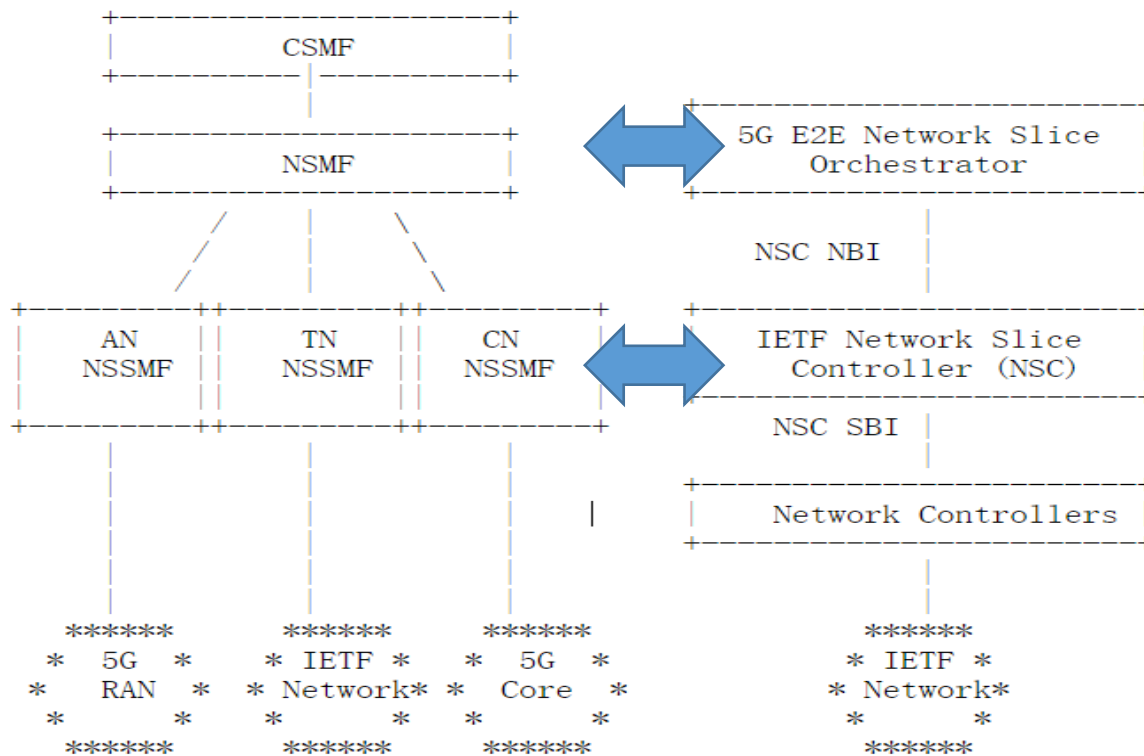


This figure shows a typical mobile network with three 5G e2e network slices:

- 3 network slice **Red**, **Green** and **Blue** created (they are identified by S-NSSAI 01111111, 02222222 and 03333333, respectively.)
- Each instance of e2e network slice contains AN slice, CN Slice and one or more IETF network slices.
 - For example, e2e network slice 01111111 has AN Slice instance 4, CN Slice instance 1 and IETF network slice 6. Note that 3GPP does not cover the IETF network slice.

Updating Section 4: Use Network Slice Terminologies defined in IETF

- Add description about relationship between IETF and 3GPP Network Slice management



This figure shows the necessary elements for mapping end-to-end network slice into IETF network slices, including:

- NSMF <---> 5G E2E Network Slice Orchestrator
- TN NSSMF <---> IETF Network Slice Controller (NSC)

Updating Section 4: Clarify the terminologies introduced by this document

- Avoid using abbreviations in this version for ease of understanding : replace **TNSI** with **IETF Network Slice Identifier**, replace **TNSII** with **IETF Network Slice Interworking Identifier**;
- The definition of the terminologies is as follows:
 - **IETF Network Slice Identifier**: An identifier allocated by IETF Network Slice Controller (NSC) in management plane. In data plane, IETF Network Slice Identifier **may be instantiated with existing data plane identifiers and doesn't necessarily require new encapsulation.**
 - **IETF Network Slice Interworking Identifier**: Data-plane network slice identifier which is used for mapping the end-to-end network slice traffic to specific IETF network slice. The IETF Network Slice Interworking Identifier is a new concept introduced by this draft, which may **be instantiated with existing data plane identifiers and doesn't necessarily require new encapsulation.**

Next Steps

- Update the document with WG comments
- The authors believe the document is stable and provides good base for IETF network slice mapping in 5G E2E network slice deployment, so:
 - WG adoption?

Thanks