https://tools.ietf.org/html/draft-geng-teas-network-slice-mapping-03

5G E2E Network Slice Mapping

draft-geng-teas-network-slice-mapping-03

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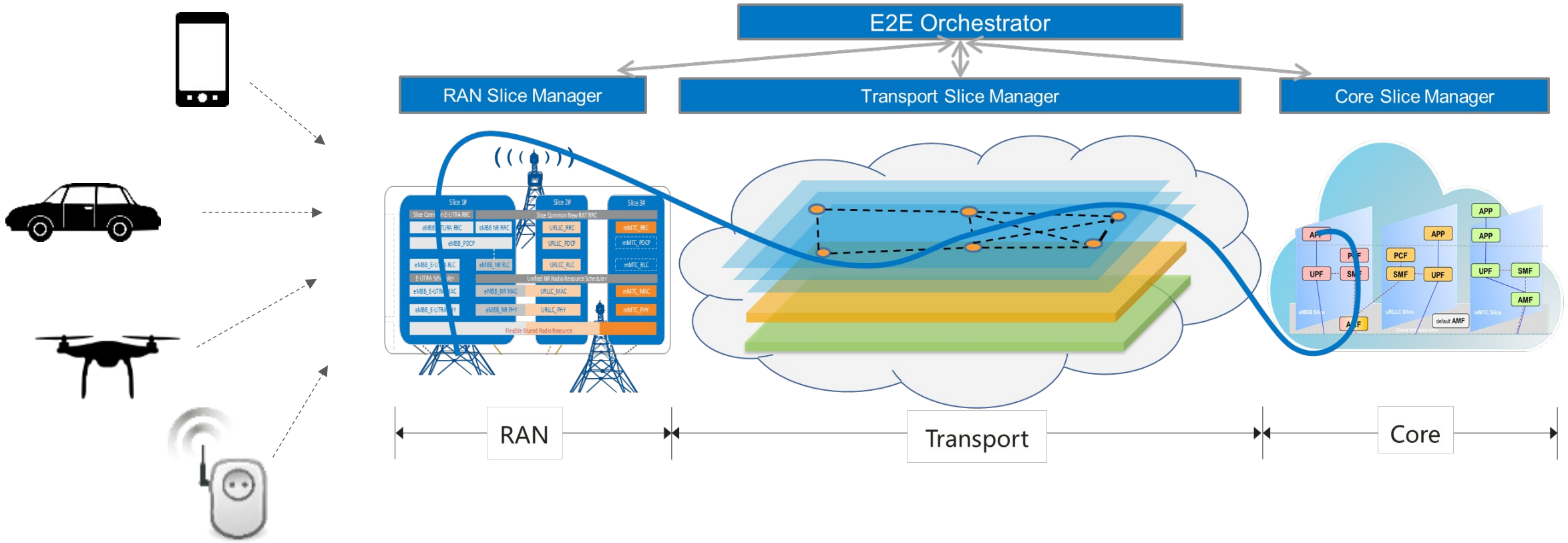
IETF 107 Interim Meeting

5G E2E Network Slicing



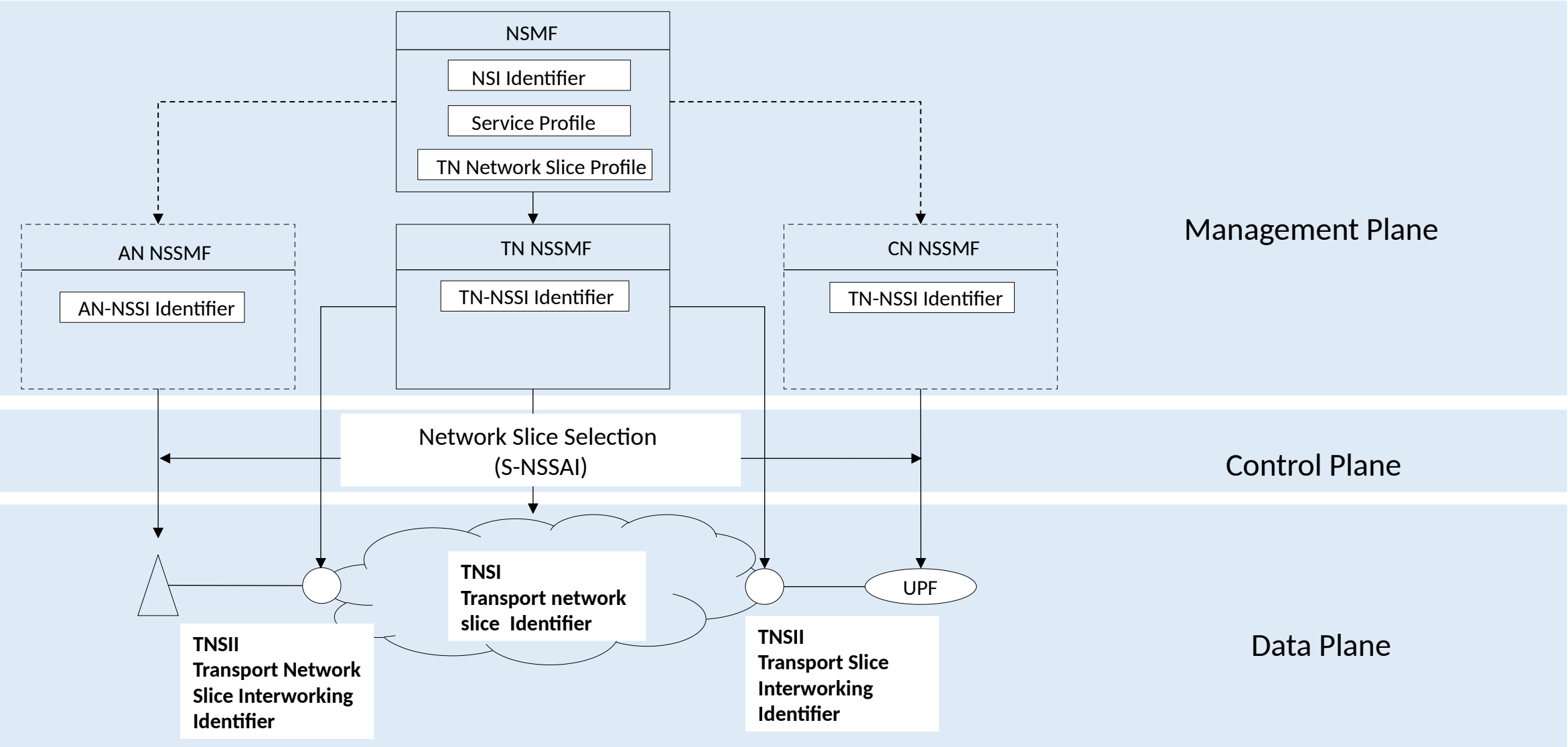
*The “Transport Slice” and “Transport Network” in the document are defined from the perspective of 5G end-to-end slicing, and correspond to the **IETF Network Slice(**draft-ietf-teas-ietf-network-slice-definition**);**

5G E2E Network Slice Identification

Network slice related identifiers in management plane, control plane and data(user) plane play an important role in end-to-end network slice mapping.

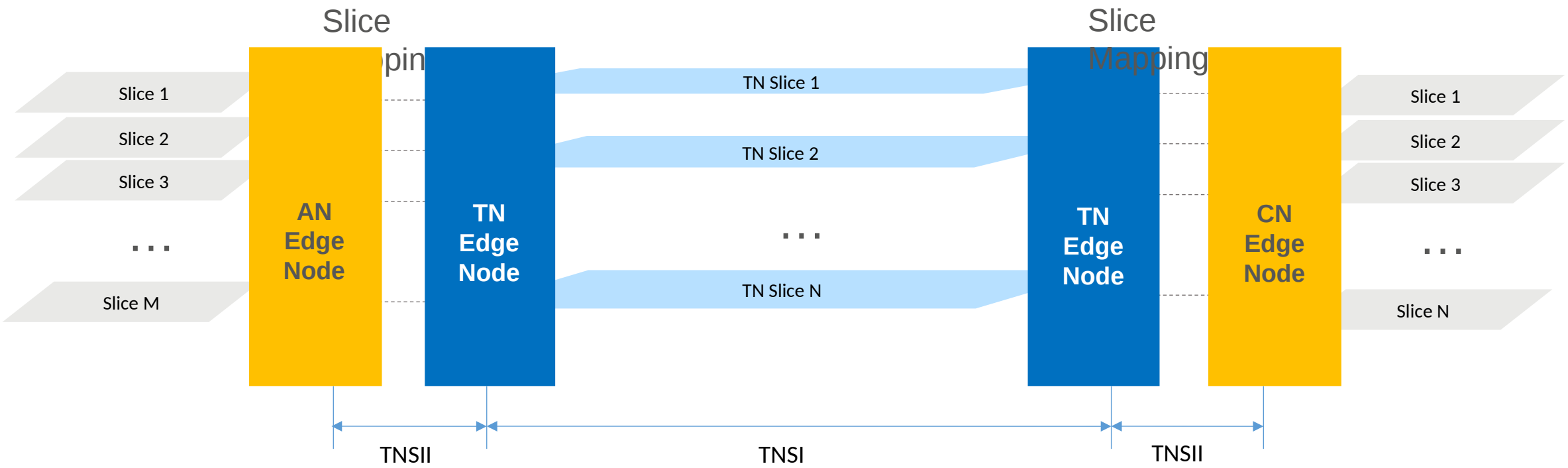
- **NSI** : Network Slice Instance, end-to-end network slice defined in ***management plane*** [3GPP TS23501];
- **NSSI**: Network Slice Subnet Instance, network slice defined in subnet's ***management plane*** , e,g,. AN NSSI, CN NSSI [3GPP TS2850];
- **TN-NSSI:** Transport Network Slice Instance, network slice defined in transport network's ***management plane*** . The concept of TN-NSSI follows the terminologies defined in 3GPP.
- **S-NSSAI:** Single Network Slice Selection Assistance Information, end-to-end network slice identifier in ***control plane*** [3GPP TS23501];
- **TNSII:** Transport Network Slice Interworking Identifier, network slice identifier which is used for mapping end-to-end network slice into transport network slice in ***data plane***. TNSII is a concept introduced by this document.
- **TNSI:** Transport Network Slice Identifier, transport network slice identifier in ***data plane.*** TNSI is a concept introduced by this document, which is used inside transport network.

5G E2E Network Slicing Overview



NSMF: Network Slice Management Function **NSSMF:** Network Slice Subnet Management Function

TNSII Data Plane Options



One typical encapsulation of TNSII is VLAN ID, other options are also listed and analyzed in this document

- Layer 2: VLAN ID;
- Layer 3: DSCP, IP DA, SRv6, IPv6 Extension Headers, MPLS label;
- Upper Layer: UDP source port;

What has been updated in v03

- Add reference to the network slice north bound interface: draft-wd-teas-ietf-network-slice-nbi-yang;
- Clarification about relationship between E2E network slice mapping and E2E QoS mapping: independent with each other;
- Detailed specification of TNSII as response to the comments from WG:
  - TNSII is a new concept introduced by this draft, which can be instantiated with existing data plane identifiers and doesn't necessarily request new encapsulation. TNSII may be pre-allocated as a global identifier.

What is the next?

- Operators are interested in this topic because it is necessary for 5G E2E network slice deployment, so we propose:
  - More comments and contribution from the WG
  - Further cooperation between IETF and 3GPP

Thank you and Be Safe