Proposed TOC for NW slicing

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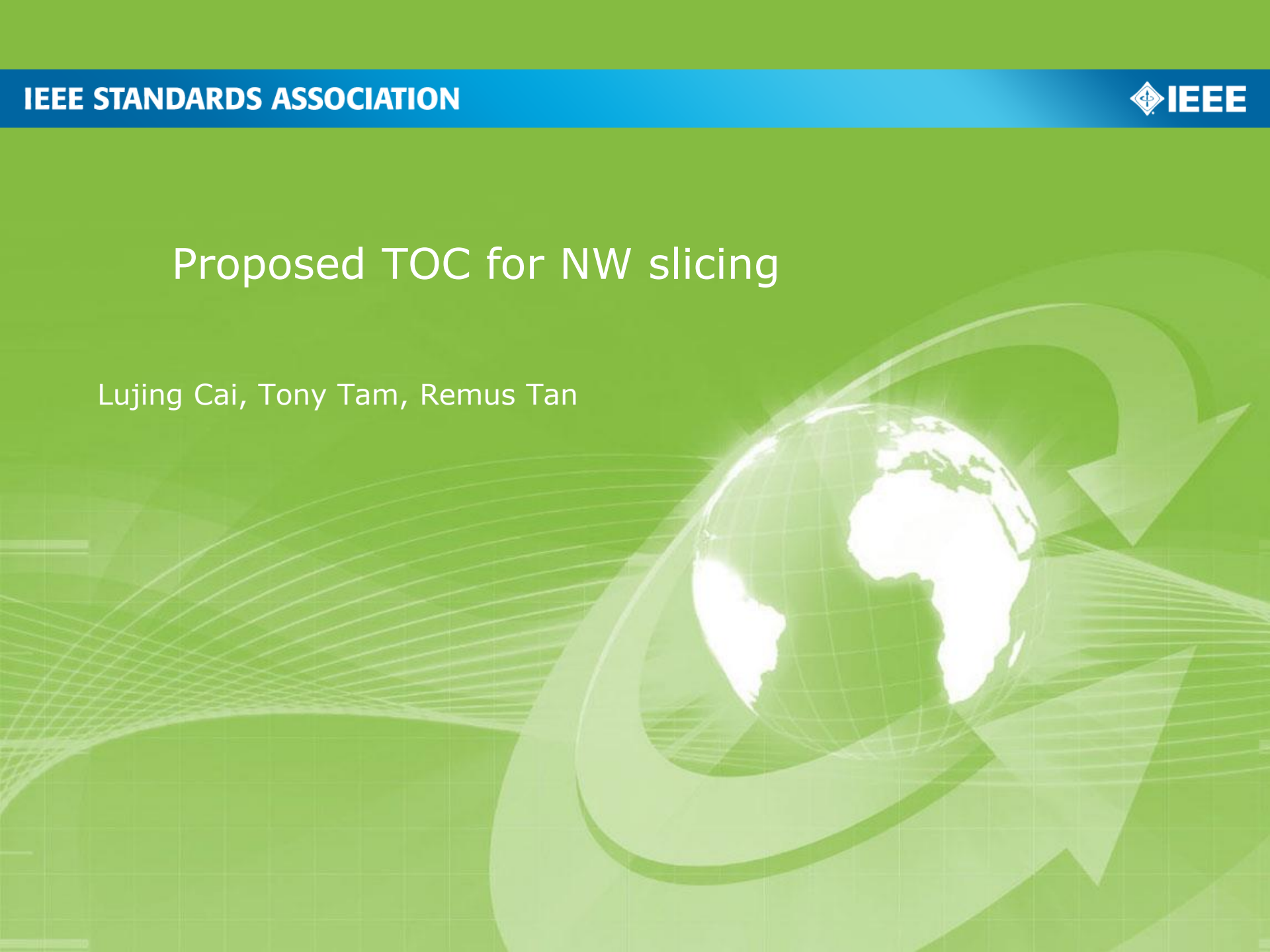

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Proposed TOC of the specification

- 5.3 NGFI Deployment Scenarios
  - 5.3.1 Deployment with multiple functional splits
  - 5.3.2 Massive MIMO / Beamforming macro deployment
  - 5.3.3 Centralized-RAN based macro deployment
  - 5.3.4 Network slicing
    - 5.3.4.1 Network slicing impact analysis
    - 5.3.4.2 NW slicing use cases
      - 5.3.4.2.1 NW slicing use case 1: Carrier Ethernet
      - 5.3.4.2.2 NW slicing use case 2: Fixed Wireless (FWA)
    - 5.3.4.3 Orchestration Architecture/Interface (place holder for discussion)
  - 5.3.5 Support for legacy and heterogeneous deployments
- 6. NGFI Network Requirements
  - 6.1 Overview
  - 6.2 Transport Requirements for Networking Slicing
  - 6.3 Control-plane requirements

Proposed TOC
For NW slicing

More Details

5.3.4 Network slicing

The Network slicing …
-Introduction of Network slicing:

- NW slicing-why (Tony slide6)
- 3GPP reference model (Tony slide7), Network slicing on 5G network: Core NW slicing, RAN slicing, Cloud, SDN, SDR
- System view of NW slicing (Tony slide 9-10 combined)
- End-to-End Network slicing concept, different views on NW slicing (Service/System/network)
- Separation of UL and DL, control plane and user plane
- Cite 22.261 for the high level slicing requirement(Lujing slide 4, Tony slide 5)

More Details

5.3.4.1 Network slicing impact analysis

- What does it mean for transport? (Lujing slide 5, naming of front/midhaul TBD)
- Transport impact by RAN sliding (Lujing slide 6 slide 7), points to make
  - Co-exist of multiple types of transport traffic in the commonly shared transport network
  - Time variation on Latency & throughput or other KPI requirements
  - Dynamic configuration/re-configuration of the transport
  - Converged, addressable, and switchable transport network
  - All transport traffic need be coordinated/correlated
- Different transport KPI requirements(Tony slide 12, 15 Combined), points to make
  - Transport KPI various depending on the service
  - Large KPI variations associated with different transport segmentations (e.g. fronthaul1/NGFI-1, fronthaul2/NGFI-2)
  - Large variations of physical resource (WDM, OTN, Microwave, Ethernet), driven by different KPIs (Tony slide 15)
- Soft vs hard transport slicing (proposed by Remus, For further study)

More Details

5.3.4.2 NW slicing use cases

- 3GPP SDAT layer (3GPP BBS forum)
- Non-mobile use case

5.3.4.2.1 NW slicing use case 1: Carrier Ethernet

5.3.4.2.2 NW slicing use case 2: Fixed Wireless (FWA)

More Details

6.2 Transport Requirements for Networking Slicing

(Provide high level requirement due to NW slicing by refereeing the previous section)

Additional requirement due to network slicing (higher level description) (Lujing slide 8)

- Dynamic & flexible configuration/reconfiguration capability
- Converged, addressable, and switchable transport network
- Communication and coordination between the transport C&M/O&M and top level network orchestrator
- minimum service requirement to ensure protection/isolation of sliced services
- Visibility/monitoring ability to the top network orchestrator

Three transport options (Lujing slide 9)

- Slicing-based transport, slicing known to both transport C&M and data plane (Network level as well as Node level)
  - Tony's new slides
  - Life cycle management (Tony side 27)
- Slicing-awareness – slicing known only to transport C&M (only to Network level), semi-transparent
  - More detailed items to be added
- Slicing-agnostic – slicing unknown to transport NW
  - More detailed items to be added

For Discussion

Orchestration Architecture & Interface

- Whether it is within the scope of NGFI
- Whether it should be included in the specification
- Data model definition?