

3GPP TSG RAN Meeting #95-e  
Electronic Meeting, 17<sup>th</sup> - 23<sup>rd</sup> March 2022

RP-220647

# Considerations for Release-18 WI/SI Packages

Source: KT Corp.  
Agenda: 9.1  
Document for: Discussion



클라우드편

# 3GPP has approved quite a number of new Release-18 WI/SIs



## Release 18



### TSG SA priorities\*

#### SA2 led - System Architecture and Services

- XR (Extended Reality) & media services
- Edge Computing Phase 2
- System Support for AI/ML-based Services
- Enablers for Network Automation for 5G Phase 3
- Enh. support of Non-Public Networks Phase 2
- Network Slicing Phase 3
- 5GC LoCation Services Phase 3
- 5G multicast-broadcast services Phase 2
- Satellite access Phase 2
- 5G System with Satellite Backhaul
- 5G Timing Resiliency and TSC & URLLC enh.
- Evolution of IMS multimedia telephony service
- Personal IoT Networks
- Vehicle Mounted Relays

#### SA3 led - Security and Privacy

- Privacy of identifiers over radio access
- SECAM and SCAS for 3GPP virtualized network products and Management Function (MnF)
- Mission critical security enhancements Phase 3
- Security and privacy aspects of RAN & SA features

#### SA4 led - Multimedia Codecs, Systems and Services

##### Systems & Media Architecture:

- 5G Media, Service Enablers
- Split-Rendering
- 5G AR Experiences Architecture

##### Media:

- Video codec for 5G
- Media Capabilities for Augmented Reality Glasses
- AI / ML Study

##### Real-Time Communications:

- XR conversational services
- WebRTC-based services and collaboration models

##### Immersive Voice & Audio:

- EVS Codec Extension for Immersive Voice and Audio Services (IVAS\_Codec)
- Terminal Audio quality performance and Test methods for Immersive Audio Services (ATIAS)

##### Streaming & Broadcast services:

- 5GMS Enh. (Network slicing, Low latency, Background traffic, 5GMS Uplink)
- Further MBS Enh. (Free to air, Hybrid unicast/broadcast)

- Access Traffic Steering, Switching & Splitting support in the 5G system architecture Phase 3
- Proximity-based Services in 5GS Phase 2
- UPF enh. for Exposure & SBA
- Ranging based services & sidelink positioning
- Generic group management, exposure & communication enh.
- 5G UE Policy Phase 2
- UAS, UAV & UAM Phase 2
- 5G AM Policy Phase 2
- RedCap Phase 2
- Support for 5WWC Phase 2
- System Enabler for Service Function Chaining
- Extensions to TSC Framework to support DetNet
- Seamless UE context recovery
- MPS when access to EPC/5GC is WLAN

#### SA5 led - Management, Orchestration and Charging

##### Operations, Administration, Maintenance and Provisioning (OAM&P):

- Intelligence and Automation: Self-Configuration of RAN NEs, Enh. autonomous network levels, Evaluation of autonomous network levels, Enh. intent driven management services for mobile networks, AI/ML management, Enh. of the management aspects related to NWDAF

- Management Architecture and Mechanisms: Network slicing provisioning rules, Enh. service based management architecture
- Support of New Services: Enh. Energy Efficiency for 5G Phase 2, New aspects of Energy Efficiency for 5G networks Phase 2, Enh. management of Non-Public Networks, Network and Service Operations for Energy Utilities, Key Quality Indicators(KQIs) for 5G service experience, Deterministic Communication Service Assurance

##### Charging:

- Charging Aspects for Enh. Support of Non-Public Networks

#### SA6 led - Application Enablement & Critical Communication Applications

##### Critical Communications:

- MCX Enhancements - MC over 5GS (5MBS, ProSe) Adhoc group comm., MCPTT Enh.
- Railways - Gateway UE, Interworking

##### Service Frameworks:

- Edge App Architecture Enh., SEAL Enh., Subscriber-Aware API (CAPIF Enh.)
- Fused location, Application Data Analytics, App Layer NW Slicing
- Enablers for Vertical Applications:
  - Enhancements to V2X, UAS application-enablement
  - Future Factories, Personal IoT networks, Capability exposure for IoT platforms

### TSG RAN priorities\*

#### RAN1 led - Radio Layer 1 (Physical layer)

- NR-MIMO Evolution
- AI/ML - Air Interface
- Evolution of duplex operation
- NR Sidelink Evolution
- Positioning Evolution
- RedCap Evolution
- Network energy savings
- Further UL coverage enhancement
- Smart Repeater
- DSS
- Low power WUS
- CA enhancements

#### RAN2 led - Radio layer 2 & layer 3 Radio Resource Control

- Mobility Enhancements
- Enhancements for XR
- Sidelink Relay Enhancements
- NTN (Non-Terrestrial Networks) evolution - NR
- NTN (Non-Terrestrial Networks) evolution - IoT
- UAV (Uncrewed Aerial Vehicle)
- Multiple SIM (MUSIM) Enhancements
- In-Device Co-existence (IDC) Enhancements
- Small data
- MBS

#### RAN3 led - UTRAN/E-UTRAN/NG-RAN architecture & related network interfaces

- Additional topological improvements - IAB/VMR
- AI/ML for NG-RAN WI
- AI/ML for NG-RAN SI
- SON/MDT Enhancements
- QoE Enhancements
- Resiliency of gNB-CU-CP

#### RAN4 led - Radio Performance and Protocol Aspects

- RAN4-led spectrum items
- <5MHz in dedicated spectrum

#### Rel-18 Workplan for TSG CT

CT will work on Stage 3 completion and ASN.1 code and OpenAPI freeze of Rel-17 until June 2022 (TSG#96).

Work Item discussion on Rel-18 Stage 2 / Stage 3 (under CT) from June 2022.

\*These are preliminary lists (As at SA#94-e)

See the 3GPP Work Plan for full details, as Release 18 develops:  
[www.3gpp.org/specifications/work-plan](http://www.3gpp.org/specifications/work-plan)

\*Source: RP-213697 [RAN#94-e]

## **New Release-18 RAN4 packages to be approved**

- **New Release-18 WI/SI approved in RAN#94e also containing RAN4 core part**
- **RAN4 always needs to handle a lot of spectrum related WIs which is critical for operators' commercial needs**
- **Still new RAN4 Release-18 needs to be approved as these are essential features for 5G-Advanced technology**
- **Operators' concerns for having too large number of WI/SIs which seems unrealistic to be completed on time**

## Proposals for the New Release-18 WI/SI packages

- In order to avoid unwanted scope reduction at the end when certain number of WG time budget has been already used, it is helpful to check the progress in effective manner
- Also beneficial to avoid submitting exception sheet and approve packages for the next release when we do not know what is actually being undone in the current release
- **KT proposes to set the 'Checkpoint' for every Rel-18 WI/SI (except for the spectrum WIs) at RAN#98 or RAN#99 to check the progress and revise the WID/SID to set the realistic completion target**

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