3GPP TSG-RAN WG3 Meeting #129-bis R3-25xxxx

**Prague, Czech Republic, 13 – 17 October 2025**

Agenda Item: 10.2.1

Source: Qualcomm (moderator)

Title: SoD CB # 19 6G RANArch

Document for: Other

# 1 Introduction

**CB: # 19\_6GRANarch**

**- Work on TP for section 5.1 (General Principles) and section 5.2 (Deployment Scenarios) of the RAN3 TR**

**- Requirements already agreed by RAN do not need to be rediscussed, RAN3 requirements should not conflict**

**- Requirements that will help drive our RAN architecture work**

**- Open issues via FFSes, Editor’s Notes, new TR sub-sections, etc.**

(Qualcomm - moderator)

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| 5 Objectives and requirements *Editor’s note: The detailed objectives of the study are:*  *Single technology framework based on a stand-alone architecture to support the agreed existing and new services, and to satisfy the usage scenarios, requirements, deployment scenarios and design principles with acceptable performance/complexity trade-off, as determined by the RAN requirements in [RP-250810] and [TR38.914], including: [RAN1], [RAN2], [RAN3], [RAN4]* 5.1 General Principles5.2 Deployment Scenarios *Editor’s note: This section may be used to describe the details/solutions related to deployment scenarios as per 38.914.* |

# 2 For the Chair Notes

Editor’s Note: For Rel-20 study/work items, please consider that when agreements/FFSes are captured in a TP, additional inclusion in the Chair Notes may be unnecessary (particularly for stage 3 details).

**Propose the following:**

**TP to TR 38760 in R3-25xxxx – endorsed**

**Propose to capture the following in Chair Notes:**

To be continued: [carefully crafted text]

**Open issue: The study to discuss on whether the protocol stack of RAN-CN and RAN-internal interfaces can evolve over the lifespan of 6G, and on how such interface evolution would impact 6G RAN on Day 1.**

**Open issue: Study the impact of enhanced RAN-based service awareness on 6G RAN architecture.**

# 3 Discussion

## 3.1 Procedural issues

The following discussion is based on the five papers presented during the online session on AI 10.2.1.

Due to limited F2F offline time, we will focus only on those proposals from these contributions that were captured in the Chairman notes. Priority is given to operator contributions (just in case we are running out of time).

The discussion aims to identify the agreeable aspects of these proposals that can be captured in the TP section 5.

During the F2F offline, we should not spend time on whether such agreeable aspects should be captured under section 5.1 (General Principles), section 5.2 (Deployment Scenarios), or potentially other secions. We may want to do this after the F2F offline via email.

The Moderator believes that at this point of the SI, we should be rather inclusive, i.e., we should allow adding requirements to the TR as long as there is strong support. We can add concerns by opponents into Editor Notes. We can also add to an Editor Note that a requirement may have to be revisited during the course of the study.

It is the Moderator’s understanding that solution-related proposals should not be captured in the TR section 5.

## 3.2 Aspects to be considered for TP to TR

**1. Chair notes captured the following on** **R3-256571: 6G RAN general principles and requirements (Qualcomm Inc, Charter Communications, T-Mobile USA, Verizon Wireless, KT Corp, Tejas Networks, Fujitsu, Rakuten, NTT DOCOMO, JIO Platforms, Reliance JIO, FiberCop, CEWiT, Telstra)**

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| 6G RAN Architecture shall support both macro and small cell deployment scenarios to enable heterogeneous deployments for both indoor and outdoor deployment scenarios.  6G RAN shall support RAN sharing mechanisms same as in 5G RAN Sharing (i.e., MOCN and RAN Sharing with Multiple Cell Id)  6G RAN network functions and interfaces shall allow network function virtualization in cloud native deployments to enable RAN, Core, OAM to be deployed in (multi)-cloud environment.  6G RAN architecture shall allow flexible deployment that enables introduction of new 6G services in flexible manner during life cycle of 6G RAN with minimum or not impacting already deployed interface functions/services.  6G RAN shall support inter-vendor inter operable interfaces between RAN nodes and between RAN-CN.  6G RAN shall allow plug and play mechanism between different RAN network functions.  6G RAN protocol stack shall allow support for evolution of each protocol layer over the 6G lifespan.  6G RAN framework shall allow RAN awareness of various services to enable real time service observability and service performance optimization.  6G RAN shall make use of native AI/ML framework for various functions to improve RAN functionality and performance.  6G RAN design shall allow self-organization and performance optimization of various features |

**Proposal: TP to include:**

* The 6G RAN architecture shall strive to support the deployment scenarios defined in TR 38.914.

FFS on the implications of this requirement on 6G RAN architecture. FFS whether all deployment scenarios of this TR can be supported.

**Proposal: TP to include:**

* The 6G architecture shall allow for virtualized and/or cloud-based implementations of 6G RAN functionality, and it shall allow the RAN3-defined interfaces to be supported by such virtualized and/or cloud-based implementations.

**Chair Notes to include:**

* Open issue: The study to discuss on whether the protocol stack of RAN-CN and RAN-internal interfaces can evolve over the lifespan of 6G, and on how such interface evolution would impact 6G RAN on Day 1.

**Chair Notes to include:**

Open issue: Study the impact of enhanced RAN-based service awareness on 6G RAN architecture.















# 4 Conclusion (optional)

# 5 References (optional)

1. Reference 1
2. Reference 2