

**SA5 Rel-19 23Q3 moderated discussion – 5G PM&KPIs and Enhancement of 5G NRM  
(continuation) and QoE collection functionality - Version 0.0.3**

**SA5**

<https://nwm-trial.etsi.org/#/documents/8697>

**Feedback Form 1: Discussion summary**

**1 – China Telecommunications**

In the offline discussion, Ericsson stated that QoE collection functionality needs a SID and then the WID, while China Telecom and Nokia believe that PM and NRM can skip the study phase to propose a WID. Due to the limited relevance of these three sub topics, we all suggest that it is better to initiate respective WIDs separately. Given that the WIDs of other SWGs are not yet clear currently, so PM and NRM haven't submitted the WID proposal at this meeting.

In addition, regarding to TU, referring to past experience, there are quite a few normative works for these sub topics. If the average TU value of 20 topics (6 TUs) is shared by these three sub topics, it is likely that it will not be sufficient. Therefore the TU *estimation* leaves to be determined.

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## 1 5G performance measurements and KPIs (continuation)

### 1.1 Justification

The 5G performance measurements and KPIs, which are essential for performance assurance, need to be enhanced to support monitoring of 5G advanced features in Rel-19 and in Rel-18, for example:

- RAN : MIMO Evolution, Duplex Evolution, Mobility Enhancements further enhance mobility management, enhancements of NR Multicast and Broadcast Services, Mobile Terminated-Small Data Transmission, etc.

- SA: UE Mobility for XR Services, Measurement Data Collection, Multi-Access (Dual 3GPP + ATSSS Enhancements), etc.

On the other hand, for some features there are performance measurements and KPIs defined in Rel-18 but still there are some missing.

### 1.2 Objectives

1. To enhance 5G performance measurements and KPIs for the following features:

- MIMO Evolution; (potential)

- Duplex Evolution; (potential)

- Mobility Enhancements: Layer 1/2 triggered mobility (LTM);

- UE Mobility for XR Services;
- Mobile Terminated-Small Data Transmission;
- Enhancements of NR Multicast and Broadcast Services;
- Upper layer traffic steering, switching and splitting over dual 3GPP access.

2. Continue leftover of Rel-18 5G performance measurements and KPIs that are still missing, and some generic PMs and KPIs enhancement.

### 1.3 Potential collaborations

RAN2, RAN3, SA2

#### Feedback Form 2: comment for PM

##### 1 – Ericsson LM

This is far too little information to be able to agree upon. Please provide better description of Justification, Objective and Potential Collaborations.

##### 2 – Nokia Germany

Comments on Justification:

- It would be good to also mention the specifications where the relevant topics mentioned have been addressed. This will help the justification part. (RAN, SA1 and SA2 specifications)
- In principle, SA5 does not specify performance measurements for use cases identified in SA1 rather only to the implemented features in the downstream groups. So there is no need to quote SA1 where only use cases are dealt.
- There are some PMs already specified in Rel-18 WI for ATSSS. It would help to differentiate what is proposed on ATSSS than what will be available in Rel-18.
- Dual steer has not been agreed in SA2 yet. It would not help to address this in SA5 until there is clarity of this from other WGs.

##### 3 – Ericsson LM

Comments on Justification and Objectives:

As SA5 cannot do measurements and KPIs on topics that are not implemented in 3GPP (e.g. only requirements exist, or only study exist but no normative work is done). Those topics needs to be removed (they can be added later when normative work is done in 3GPP).

#### **4 – China Telecommunications**

Thanks for the above comments. They are very helpful to way forward the discussion. Some of the features listed in justification and objectives are still under discussion or study in other groups, so these are potential objectives in SA5 for pre-discussed. As mentioned in comments, SA5 would not specify performance measurements and KPIs on features that are not implemented in 3GPP, we can firstly put the identified features at the time of WID proposed, and wait for other group's progress to implement the potential measurements by revising the WID to include them.

For the ATSSS, R19 and R18 have a different focus:

R18 □ ATSSS only supports traffic steering, split and switching across one 3GPP access path and one non-3GPP access path.

R19 □ Dual-steer

In some scenarios, it is desired to distribute and/or aggregate the traffic across two 3GPP access paths, such as:

- Two 3GPP access paths in the same PLMN
- Two 3GPP access paths over two different PLMNs, or between a PLMN and an NPN

#### **5 – Ericsson LM**

PM for the RAN features Dual Connect and Lower layer Triggered Mobility should be added.

#### **6 – China Telecommunications**

Which RAN topic do you mean by Dual Connect? Is ATSSS over dual 3GPP access or Dual Connectivity for y bands DL with x bands UL from RAN4?

For the LTM, I would update it in the new version, thanks.

**Feedback Form 3: this feedback form had been merged to the upper one**

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|---|
| <p><b>1 – Ericsson LM</b></p> <p>This is far too little information to be able to agree upon. Please provide better description of Justification, Objective and Potential Collaborations.</p> |
| <p><b>2 – China Telecommunications</b></p> <p>0.0.2 version produced.</p>   |
| <p><b>3 – Ericsson LM</b></p> <p>Thank you! But please see previous feedback form.</p>  |

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## 2 Enhancement of 5G Advanced NRM features (continuation)

### 2.1 Justification

Network Resource Model (NRM), which is standardized management and service model, is essential to support new features of NR and 5GC in Rel-19 and Rel-18. E.g.

- SA2/CT4: Architecture enhancements for the support of 5G System Enhancement, aligning information elements on 5GC NF etc.
- RAN: Further Enhancement on MIMO, etc.
- There are continuous enhancements on GSMA NG.116, which may require enhancement for possible misalignments.

On the other hand, continuous work needed for leftover in Rel18 NRM, e.g. stage 3 enhancement, generic NRM enhancement etc.

### 2.2 Objectives

- Enhance NRM to support features, including architecture enhancements for the support of 5G System Enhancement, 5GC NF NRM and enhancement for NR and slice NRM related to development of NG.116.
- Continue leftover of Rel18 NRM, stage 3 enhancement and generic NRM enhancement.

### 2.3 Potential collaborations

SA2, CT4, RAN2, RAN3 and GSMA.

**Feedback Form 4: comment for NRM**

**1 – Ericsson LM**

This is far too little information to be able to agree upon. Please provide better description of Justification, Objective and Potential Collaborations.

**2 – Nokia Shanghai Bell**

Justification:

Network Resource Model (NRM), which is standardized management and service model, is essential to support new features of NR and 5GC in Rel-19 and Rel-18. E.g.

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- RAN: Further Enhancement on MIMO, etc.
- There are continuous enhancements on GSMA NG.116, which may require enhancement for possible misalignments.

On the other hand, continuous work needed for leftover in Rel18 NRM, e.g. stage 3 enhancement, generic NRM enhancement etc.

Objective

- Enhance NRM to support features, including architecture enhancements for the support of 5G System Enhancement, 5GC NF NRM and enhancement for NR and slice NRM related to development of NG.116.
- Continue leftover of Rel18 NRM, stage 3 enhancement and generic NRM enhancement.

Potential collaborations:

SA2, CT4, RAN2, RAN3 and GSMA.

**3 – Ericsson LM**

Thanks for the update!

However there are still some comments:

For Rel-18 things, please refer to the work items.

Regarding Rel-19 things, it is assumed that they are not work items already and therefore this is place holders. As such the management support for those work items should be added to the SID/WID when WIDs exist in other WGs.

**4 – Nokia Shanghai Bell**

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**5 – Ericsson LM**

Is it the intention that no NRM information will be done for work items in other WGs?

## 3 C.Support for QoE collection functionality in RAN and core network

### 3.1 Justification

The number of automation functions are increasing in the RAN, the core network and in the management system. The need for input data on session basis is increasing using QoE, trace and MDT etc.

### 3.2 Objectives

1. To study the need from the RAN, the core network and the management system for information from QoE, trace, MDT and other functions that provide data per session.
2. Propose potential use cases and potential requirements.
3. Propose overall function descriptions.
4. Propose updated management requests.

### 3.3 Potential collaborations

SA2, SA4, CT1, CT4, RAN2 and RAN3.

#### **Feedback Form 5: comment for QoE collection**

##### **1 – Ericsson LM**

Justification:

The number of automation functions are increasing in the RAN, the core network and in the management system. The need for input data on session basis is increasing using QoE, trace and MDT etc.

Objective:

1. To study the need from the RAN, the core network and the management system for information from QoE, trace, MDT and other functions that provide data per session.
2. Propose potential use cases and potential requirements.
3. Propose overall function descriptions.
4. Propose updated management requests.

Potential collaborations:

SA2, SA4, CT1, CT4, RAN2 and RAN3.

##### **2 – Nokia**

A few questions

> What automation functions are you referencing? Are they newly introduced automation function in Rel18?

- > Is it so these automation functions in RAN/Core/Management System will have visible impact the measurement collection from UE application?
- > From TS28.405, clause 5.13 has MDT support already, what new enhancement is needed related to MDT?
- > How would the scope of this work be defined? What is in scope, or what would be out of scope?

## 4 TU estimates and dependencies

**Table 1: TU estimates and dependencies**

| <b>Work Task ID</b> | <b>TU Estimate (Study)</b> | <b>TU Estimate (Normative)</b> | <b>RAN Dependency (Yes/No/Maybe)</b> | <b>SA Dependency (Yes/No/Maybe)</b> |
|---------------------|----------------------------|--------------------------------|--------------------------------------|-------------------------------------|
| PM                  | TBD                        | TBD                            | Yes (RAN2, RAN3)                     | Yes (SA2)                           |
| NRM                 | TBD                        | TBD                            | Yes (RAN2, RAN3)                     | Yes (SA2, CT4)                      |
| QoE                 | TBD                        | TBD                            | Yes (RAN2, RAN3)                     | Yes (SA2, SA4, CT1, CT4)            |