3GPP TSG-RAN WG3 Meeting #111-e R3-21xxxx

E-meeting, 25 January – 4 February, 2021

**Agenda item: 15.2**

**Source: Nokia (moderator)**

**Title: (TP for TR 38.890) RAN3#111-e agreements on mobility**

**Document for: Text Proposal**

# 1 Introduction

ThisTP captures agreements on mobility taken at RAN3#111-e.

The following TPs towards clause 6.6 of the TR were submitted to the present meeting:

* R3-210529 (Ericsson)
* R3-210658 (Nokia, Nokia Shanghai Bell)
* R3-210771 (CATT)
* R3-210849 (ZTE)
* R3-210863 (Huawei)

# Annex - TP for TR 38.890 v0.2.0

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## 6.6 Support for Mobility

Seamless mobility is a key functionality in NR and its impacts should be measurable at the application layer. To enable measuring the impact of the mobility on the application and users’ QoE, it is required to support QoE measurement reporting continuity in intra-system intra-RAT intra-node and inter-node handover scenarios, for both QoE measurements and RAN-visible QoE measurements.

Editor's NOTE: Management-based activation to be further checked.

In LTE, to support the QoE measurement in mobility scenarios, the QoE configuration is forwarded from the source eNB to the target eNB inside the *Trace Activation* IE over X2 interface, as a part of *UE Application Layer Measurement Configuration IE* that is defined as a list to transfer multiple QoE configurations for multiple service types (i.e., one QoE configuration for one service type).. The same IE is sent over S1 interface for mobility scenarios when the X2 interface is not established between the source and target.

In NR, to support mobility for QoE measurements in CONNECTED state, the QoE measurement configuration transfer is supported on the Xn and NG interfaces, inside the *Trace Activation* IE as a part of *UE Application Layer Measurement Configuration IE* that is defined as a list to transfer multiple QoE configurations for multiple service types (i.e., one QoE configuration for one service type). To support keeping QoE measurement configuration in INACTIVE state mobility, QoE measurement configuration for a UE can be fetched from the node hosting the UE Context.

In addition, the SA4 requirements for QoE measurements stipulate that the client shall check the QoE configuration only when a session starts. This means that the client shall continue the QoE measurements for an ongoing session even if the UE moves out of the configured area. The SA4 requirements are RAT-independent and shall therefore be applied to the mobility solution for QoE measurement in NR, as well. QoE measurement reporting continuity in intra-system inter-RAT handover scenarios should therefore be prioritized in Rel-17. QoE measurement reporting continuity in inter-system handover scenarios may be handled in Rel-18. Appropriate action for the case where the target RAT does not support the source RAT configurations (including QoE configuration) is to be defined in normative phase in coordination with RAN2. Other issues requiring clarification in normative phase include how the area scope is configured to cover inter-RAT/inter-system, how service continuity is dealt together with QoE measurements, how the target RAT/System know if the source side has configured the QoE measurement for the concerned UE.

Editor's NOTE: the solutions enabling the fulfilment of the SA4 QoE requirements are FFS.

Editor's NOTE: FFS whether, and under which conditions, the target node may decide the subsequent handling of management based QoE configuration.

Overriding the signalling based QoE measurement configuration with a management based QoE measurement configuration is precluded. Management based QoE can be overridden with management based QoE configuration. A QoE framework type indication (i.e.,”signalling based” or “management based”) is included into the X2AP UE Application layer measurement configuration IE. The same applies when the UE Application layer measurement configuration IE is introduced on XnAP.For support of MR-DC, choice between one or more of the following alternatives may be done in normative phase:

* Alternative 1: Flexible QoE configuration, i.e. may be done by either MN or SN.
* Alternative 2: Flexible QoE measurement reporting, i.e. may be done via either MN leg or SN leg (e.g. depending on load situation).

Alternatives 1 and 2 may be combined.

One example use case for MR-DC QoE support is that for a DC - capable UE, the RAN may want to determine whether to set up the DC for this UE or not. For instance, if QoE performance with only one leg set up is sufficiently good, then setting up the other leg may be unnecessary, i.e. it would unnecessarily drain the UE’s battery.

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