3GPP TSG-RAN WG3 Meeting #108-e R3-203957

E-meeting, 1 – 11 June, 2020

**Agenda item: 10.2.2.1**

**Source: Nokia (moderator)**

**Title: Summary of discussions on** **Mobility Load Balancing**

**Document for: Approval**

# 1 Introduction

This paper provides summary of discussions at RAN#108-e on:

**CB: # 1006\_Email\_SONMDT\_MLB**

**- Topics for discussion**

 **- Misc. corrections**

 **- Active UEs (which interfaces, how to encode)**

 **- TNL capacity (range, which interfaces, granularity)**

 **- HW capacity (which interfaces, granularity)**

 **- RRC connections (range, which interfaces)**

 **- SUL (whether to support, parameters)**

**- Misc corrections and alignment**

**- Can also discuss other issues based on contributions submitted**

(Nok - moderator)

I have separated out reporting per slice in a separate question in section 3.6 (might have been considered as "granularity" above).

Companies responsible for MLB TPs are proposed as follows:

* X2AP: CATT
* F1AP: Huawei
* E1AP: Nokia
* XnAP: Ericsson
* (no stage 2 TPs submitted)

# 2 For the Chairman’s Notes

[To be completed]

# 3 Discussion

## 3.1 Active UEs (which interfaces, metric definition, how to encode)

**Interface for reporting:**

For use case for reporting, one operator observes (3471): ***There is a big demand of MLB between LTE ad NR cells for initial EN-DC deployment***

**Question: Can priority be given to the EN-DC use case in Rel-16, and hence reporting on the X2 interface?**

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**Metric definition:**

Several companies propose using mean (and potentially also max) values defined in TS 38.314. Other companies question e.g. whether the current version of this specification is suitable as reference for RAN3 stage 3 specification.

**Questions: Could a mean value be sufficient for reporting in Rel-16? Does reference to TS 38.314 provide significant benefit?**

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**How to encode:**

Different encoding schemes have been proposed, including granularity of 0.1 and 1.

**Question: Can granularity of 1 be considered sufficient?**

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## 3.2 TNL capacity

Main question is whether to include load TNL load information for both backhaul (S1-U/NG-U) and fronthaul links (F1-U) reported separately over X2 and Xn. It has been argued that the deployment architecture (split vs. non-split) should not be reflected over X2 and Xn interfaces.

**Question: Can a reasonable way forward be to add TNL Capacity Indicator per node over X2/Xn (reflecting backhaul load), while cell load reflects fronthaul load in case of split architecture (3319)?**

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## 3.3 HW capacity (which interfaces, granularity)

No particular issue or FFS was detected by the moderator. Please comment if any change is needed.

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## 3.4 RRC connections (range, which interfaces)

It is proposed to remove this metric from X2 (3676, 3900).

**Question: Can the RRC connections metric be removed from X2AP?**

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## 3.5 SUL (whether to support, parameters)

Reporting of radio load status for SUL is proposed by one company (3676). Postpone to Rel-17 is also proposed (3900).

**Question: Can reporting of SUL related parameters be postponed to Rel-17?**

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## 3.6 Reporting per slice (whether to support, parameters)

Current status: Available slice capacity is agreed on Xn and F1. TNL and HW capacity are FFS on E1. Other parameters (e.g. PRB metric, DRB usage) per slice are proposed in 3874, 3319. Benefits are seen, but also proposal to postpone to Rel-17 (3900).

**Question: Can a reasonable compromise be to agree TNL load on E1 in Rel-16, and postpone further reporting per slice to Rel-17?**

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## 3.7 Misc. corrections and alignment

**To be completed.**

# 4 Conclusion, Recommendations [if needed]

If needed

# 5 References

[1] R3-20xxxx, Title, Company