3GPP TSG-RAN WG1 Meeting #101-e Tdoc R1-20xxxxx

e-Meeting, May 25th – June 5th, 2020

**Agenda Item: 8.3**

**Title: Email discussion for TR skeleton for Study on support of reduced capability NR devices**

**Source: Rapporteur (Ericsson)**

**Document for: Discussion, Decision**

# 1 Introduction

This document captures the RAN1#101e email discussion [101-e-NR-RedCap-Skeleton] for the TR skeleton for the study item “Study on support of reduced capability NR devices” with SID in [RP-193238](https://www.3gpp.org/ftp/tsg_ran/TSG_RAN/TSGR_86/Docs/RP-193238.zip). Companies are invited to enter their comments on the TR skeleton below.

# 2 Draft TR skeleton

A draft TR skeleton has been provided by the rapporteur in [R1-2003288](http://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_101-e/Docs/R1-2003288.zip) and presented in an online (GTW) session in RAN1#101e. The structure of the draft TR skeleton is inspired by TR 36.888. There are clauses for all SI objectives, including clauses 8.2, 8.3, 10 and 11 which concern RAN2-led objectives. The text that has been inserted in some clauses originates from the SID.

# 3 Discussion

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| **Company** | **Comments** |
| FUTUREWEI | 1. There should be a section for each technique in section 7.X on "Compatability and coexistence with NR"
2. Some text has been copied and pasted into the skeleton, which is fine. Under 7.3 two notes from the SID should be copied:
* The lowest capability considered should be no less than an LTE Category 1bis modem
* Rel-15 SSB bandwidth should be reused and L1 changes minimized
1. The techniques to be studied under section 7.6 have not yet been agreed. We are *only* OK with listing in the TR techniques that we all agree to include in the study. We are *not* OK with treating this as a ”blank check” for whatever proposal anybody wants to include that somehow requires less processing as we only have limited time and we should focus on the WID objectives that we were able to clearly define.

Specifically, we are not ok to include generic ”TBS reduction” or ”peak data rate reduction” or ”modulation restriction” or ”HARQ simplifications”. The only technique that we are ok to include now is ”restriction to a single MIMO layer”. We are also OK to state ”Section 7.2 reduced number of UE Rx/Tx antennas and Section 7.3 UE bandwidth reduction will reduce the UE processing.” Our recommendation is to progress those two objectives, and then decide later whether we will study anything beyond those techniques. This will also avoid us getting stuck now in arguments about what exact data rates and how many types of devices redcap supports. The SID has some requirements for different services, but can be satisfied with just one redcap device that meets all the requirements. There is nothing in the SID that says we must develop a custom devices that exactly match and do not exceed the data rates listed for the three use cases. |
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