3GPP TSG RAN Meeting #74
Vienna, Austria, 5 – 8 December 2016

RP-162267

On UE category combinations for new UL UE category 15

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Background

- At RAN#73, the introduction of a new Rel. 13 UL UE category supporting 225Mbps (UL UE category) has been agreed
- The RAN WGs were tasked by 3GPP RAN to discuss the relevant UL/DL UE category combinations for this UL UE category 15

- RAN2 discussed the issue during Q4/2016 and endorsed two sets of CRs
  - Set 1: Paring with a selected subset of Rel. 11, 12 and the new Rel. 13 DL UE categories
  - Set 2: Pairing only with new Rel. 13 DL UE categories 18 & 19

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UL/DL UE category pairing for UL UE category 15

Potential issues with phased introduction of UL/DL category combinations

- Set 1 covers proactively a very wide range of UL/DL combinations due to unclear market demands
  - Include all possible combinations suggested by companies at RAN2#96
  - Provide precaution by the release-wide control of standardized Rel.13 signaling
  - May result in pairing that won't be used/implemented
- Set 2 restricts combinations for the Rel. 13 DL UE categories 18 & 19 only
  - Assumes there will be other DL Categories to be paired with the UL UE Category 15 later on
  - As a consequence, incremental introduction of UL/DL category combinations will be faced
  - This results in fragmented Rel.13 signaling and interoperability risk with later paired DL UE Categories

A reasonable subset of DL UE Categories needs to be selected already now

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UL/DL UE category combinations for UL UE category 15

Nokia compromise proposal

- The two sets of RAN2 CRs only cover the extreme cases:
  - Including several combinations starting from Rel. 11 (table to the right)
  - Include only Rel. 13 DL Cat. (Cat. 18/19)
- Our compromise proposal (in blue) is to pick a reasonable subset starting from Rel. 12 and 800Mbps
  - Related set of CRs available in RP-162269 & RP-162272.

DL UE Cat.	Peak rate	Release
10	450 Mbps	11
12	600 Mbps	11
13	400 Mbps	12
15	800 Mbps	12
16	1 Gbps	12
18	1.2 Gbps	13
19	1.6 Gbps	13

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