**3GPP TSG RAN WG1 #100bis-e R1-20xxxxx**

e-Meeting, April 20th – 30th, 2020

Source: NTT DOCOMO, INC.

Title: Summary on Email discussion [100b-e-LTE-UEFeatures-NBIoT-01]

Agenda Item: 6.2.5.2

**Document for:** **Discussion and Decision**

# **Introduction**

This contribution summarizes the following email discussion in AI 6.2.5.2 regarding UE features for additional enhancements for NB-IoT.

[100b-e-LTE-UEFeatures-NBIoT-01] Email discussion/approval on feature group structure for additional enhancements for NB-IoT (20th-24th April) – Hiroki (DCM)

* Confirm to keep FG2-1/3/6~16

# **Confirmation of feature groups**

In [1], there are following feature groups for additional enhancements for NB-IoT.

* 2-1 UE-group wake-up signal (Group WUS) with a wake-up time before the first associated PO (without group resource alternation)
* [2-2] UE-group WUS with a wake-up time before the first associated PO (with group resource alternation)
* 2-3 Transmission in preconfigured UL resources (PUR) (with potential UE-specific cyclic shift for DMRS)
* [2-4] PUR with serving cell RSRP for TA validation
* 2-5 PUR with L1 ACK
* 2-6 Multi-TB scheduling for unicast in DL with a single DCI (Interleaved transmission)
* 2-7 Multi-TB scheduling for unicast in DL with a single DCI (Non-interleaved transmission)
* 2-8 Multi-TB scheduling for unicast in UL with a single DCI (Interleaved transmission)
* 2-9 Multi-TB scheduling for unicast in UL with a single DCI (Non-interleaved transmission)
* 2-10 Multi-TB scheduling for unicast in DL in a single DCI (HARQ bundling for HARQ-ACK feedback to interleaved transmission)
* 2-11 Multi-TB scheduling for SC-MTCH
* 2-12 Resource reservation
	+ DL resource reservation with subframe-level, slot-level and symbol-level granularity of NB-IoT non-anchor carriers.
* 2-13 Resource reservation
	+ UL resource reservation with subframe-level, slot-level and symbol(s)-level granularity of NB-IoT non-anchor carriers.
* 2-14 Quality report in Msg3 for non-anchor access
* 2-15 Quality report in connected mode
* 2-16 NRS on a non-anchor carrier for paging

## 2.1 Discussion 1

**The proposal is to confirm that FG2-1/3/6~16 are kept.**

**Companies are encouraged to provide views if there is a concern or comment on the proposal.**

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
|  |  |
|  |  |
|  |  |

# **Conclusion**

TBD

# **References**

[1] R1-2001485 RAN1 UE features list for Rel-16 LTE after RAN1#100-E Moderator (AT&T, NTT DOCOMO, INC.)

[2] R1-2001858 Discussion on UE features for additional enhancements for NB-IoT ZTE

[3] R1-2002182 UE features for NB-IoT　 Qualcomm Incorporated

[4] R1-2002511 On the RAN1 UE feature list for Rel-16 NB-IoT　 Ericsson

[5] R1-2002605 Rel-16 UE features for NB-IoT　 Huawei, HiSilicon