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RP-182338

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Motivation for WID update on Rel-16 LTE MTC and NB-IoT

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Background

FS_CIoT_5G study completed

- SA2 completed the study on Cellular IoT support and evolution for the 5G System (FS_CIoT_5G)
  - Conclusions documented in TR 23.724
- SA2 sent LS RP-182700 to RAN, RAN2, RAN3 with the following:
  - SA2 would like to point out the following key RAN impacts resulting from the study (details can be found in TR 23.724):
    - Support of extended DRX in CM-IDLE
    - Support of extended DRX in CM-CONNECTED with RRC_INACTIVE (support of sleep cycles up to the NAS and SMS retransmission timers)
    - Support of EDT for Data over NAS and user-plane transmission
    - Support of Inter-UE QoS for data over NAS (resource prioritisation between different NB-IoT UEs)
    - Support of restriction of use of Enhanced Coverage
    - Delivery of Expected UE Behaviour information to the RAN
    - Additional information in SIB to indicate supported CIoT features; indication of CIoT features supported by the UE in RRC
- Note that the current Rel-16 eMTC and NB-IoT items include the following note:
  - **Based on the outcome of the SA2 study, this WID may later be updated to include the RAN aspect of connection to 5G Core.**

Proposal

- Revise work items NB_IOTenh3 and LTE_eMTC5 to include the following objective:
  - Specify support for the following features [RAN2, RAN3]
    - Support of extended DRX in CM-IDLE
    - Support of extended DRX in CM-CONNECTED with RRC_INACTIVE (support of sleep cycles up to the NAS and SMS retransmission timers)
    - Support of EDT for Data over NAS ~~and user-plane transmission~~
    - Support of Inter-UE QoS for data over NAS (resource prioritisation between different NB-IoT UEs)
    - Support of restriction of use of Enhanced Coverage
    - Delivery of Expected UE Behaviour information to the RAN
    - Additional information in SIB to indicate supported CIoT features; indication of CIoT features supported by the UE in RRC

NOTE: “user plane transmission” is removed since RAN2 needs to discuss whether UP EDT/data in RRC_inactive are supported, according to LS

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Thank you!

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