3GPP TSG-RAN WG2 Meeting #111-e R2-200xxxx

Online, 14th - 28th August 2020

**Agenda item: 7.3.4**

**Source: Huawei**

**Title: Summary of [AT111-e][306][NBIOT R16] 36.304 miscellaneous corrections (Huawei)**

**Document for: Report**

# 1 Scope of the offline discussion

This is the summary of offline email discussion “[AT111-e][306][NBIOT R16] 36.304 miscellaneous corrections (Huawei)”, as indicated below:

[R2-2006851](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_111-e/Docs/R2-2006851.zip) Minor corrections on 36304 for NB-IoT ZTE Corporation, Sanechips CR Rel-16 36.304 16.1.0 0804 - F NB\_IOTenh3-Core

* Merge WUS related changes with #305, and other with #306

[R2-2007335](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_111-e/Docs/R2-2007335.zip) Correction to NB-IoT supported functionality in idle mode Huawei, HiSilicon CR Rel-16 36.304 16.1.0 0808 - F NB\_IOTenh3-Core

* [AT111-e][306][NBIOT R16] 36.304 miscellaneous corrections (Huawei)

 Status:

 Scope: Polish the CR.

 Intended outcome: Agreeable CR in R2-2008306

 Deadline: Tuesday 25 1100 UTC.

It is proposed to proceed in two phases:

* Friday 21 1100 UTC : agree on the changes
* Tuesday 25 1100 UTC: agree on the wording of the CR

A draft CR merging the relevant contents of the two above documents has been uploaded to the draft folder for reference.

# 2 Offline discussion

## 2.1 1st change: section 4.4

Companies are requested to provide comments in the table below (one row for each new comment to better keep track of the discussion – please don’t edit the previous comments).

|  |  |  |
| --- | --- | --- |
| **Company** | **Do you agree with the intent of the change?** | **Detailed comments** |
| ZTE | Yes |  |
| Huawei, HiSilicon | **yes** |  |
| Nokia | **Yes** |  |

Conclusion:

## 2.2 2st change: section 7.1

Companies are requested to provide comments in the table below (one row for each new comment to better keep track of the discussion – please don’t edit the previous comments).

|  |  |  |
| --- | --- | --- |
| **Company** | **Do you agree with the intent of the change?** | **Detailed comments** |
| ZTE | Yes |  |
| Huawei, HiSilicon | **yes** |  |
| Nokia | **Yes** |  |

Conclusion:

## 2.3 3rd change: section 7.6

Companies are requested to provide comments in the table below (one row for each new comment to better keep track of the discussion – please don’t edit the previous comments).

|  |  |  |
| --- | --- | --- |
| **Company** | **Do you agree with the intent of the change?** | **Detailed comments** |
| ZTE | Yes | Specifically, we think there are much redundant description in section 7.6. * Firstly, SFN corresponding to the PO (PF) has been mentioned twice. So we suggest to only keep one, e.g., to remove “*Paging Frame (PF) given by: SFN mod T= (T div N) \* k, N: min(T, nB), k: 0, 1, .., N-1*”, and to optimize the below wording with such change “SFN is the SFN corresponding to the PO for all UE\_IDs, as defined in 7.1”
* Secondly, there are also repeated description about “Index i\_s” and one of them can be removed.
* Lastly, “Ns: max(1,nB/T)” is not used and so removed.

In summary, the compact change from our suggestion is as following:*For FDD, when nrs-NonAnchorConfig is signalled in system information, the POs associated with NRS are determined using the DRX parameters broadcast in systeminformationBlockType2-NB:**- T is the value of defaultPagingCycle broadcast in system information.**- nB is the value corresponding to nB broadcast in system information: 4T, 2T, T, T/2, T/4, T/8, T/16, T/32, T/64, T/128, T/256, T/512, and T/1024.**The POs associated with NRS are determined as follows:**- if nB is equal to 4T, 2T, T or T/2:**POs for which R = 1 have associated NRS**where:**R = (PO\_Index+ offset) mod 2**where:**- PO\_Index = (SFN/ T \* nB + i\_s) mod nB**- Offset = (FLOOR ((SFN + 1024\*H-SFN) / T)) mod 2**- SFN is the SFN corresponding to the PO for all UE\_IDs, as defined in 7.1.**- H-SFN is the H-SFN corresponding to the PO for all UE\_IDs, as defined in 7.3**- i\_s is the index i\_s corresponding to the PO for all UE\_IDs, as defined in 7.2**- else:**all POs have associated with NRS.*If other suggestion is to keep “*Paging Frame (PF) given by: SFN mod T= (T div N) \* k, N: min(T, nB), k: 0, 1, .., N-1*”, we are wondering whether we need following change for H-SFN?*- H-SFN is the H-SFN corresponding to the PO, H-SFN=0, 1, .., 1023* |
| Huawei, HiSilicon |  **no** | 1. About the removal of the formula, we agree that the formula is similar to the one on section 7.1, which is reassuring as both formulas calculate the PF of the PO, from the UE perspective in section 7.1 and from the NW perspective in section 7.6. For the proposed change, we do not think that the meaning of ‘H-SFN is the H-SFN corresponding to the PO for all UE\_IDs as given by the equation in 7.1,’ is clear and we have the following concerns:i. ‘H-SFN corresponding to the PO for all UE\_IDs’ would obviously point to multiple H-SFN values (corresponding to different UE\_IDs) and thus to multiple PFs where the intention here is to identify whether a specific PO has NRS or not.ii. The text seems to imply that the UE should try all possible UE\_ID values, which would be quite painful, when there are actually only N = min (T, nB) possible values in a DRX cycle2. About the removal of the Ns, we agree it is not used in the calculation of PF but it is used in the determination of i\_s. This is an indentation problem that should be correctedThe POs are determined by: - Paging Frame (PF) given by: SFN mod T= (T div N) \* kwhere:- N: min(T, nB)- k: 0, 1, .., N-1- Index i\_s pointing to PO from subframe pattern defined in 7.2.where Ns: max(1,nB/T) |
| Nokia | **Yes** |  With the suggested changes related I and II given by Huawei. |

Conclusion:

# 3 Conclusion

# 4 Participants

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| --- | --- | --- |
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