3GPP TSG-RAN WG3 #127 R3-250829

Athens, GR, 17 – 21 Feb. 2025

Agenda Item: 18.2. Support LP-WUS Indicating Paging Monitoring

Source: NTT DOCOMO INC.

Title: Summary of offline discussion on LP-WUS

Document for: Discussion, agreement

# Introduction

In online discussion, following were captured in chair notes.

Proposal 4: We propose RAN3 checking and confirming whether every Rel-17 gNB or later one always copies and pastes the entire “UE-RadioPagingInfo-r17” into the “UERadioPagingInformation”, including every ASN.1 extension within “UE-RadioPagingInfo-r17”, regardless of whether the gNB can decode the extension or not, and then draft a reply LS accordingly.

HW: whether Rel-15 or Rel-16 gNB has the issue arised by SA2 requiring the input from the operator.

NTT DCM: Confirm the issue for Rel-15 and Rel-16 gNB. How to resolve the issue is pending the next step.

Nokia: need to confirm by RAN2 first.

ZTE: whether need to check with RAN2.

CATT: according to the latest RAN2 discussion, RAN3 assume the gNB can always copies and pastes the entire “UE-RadioPagingInfo-r17” into the “UERadioPagingInformation”, including every ASN.1 extension within “UE-RadioPagingInfo-r17”, regardless of whether the gNB can decode the extension or not.

E///: pending to RAN2 decision.

Proposal 2: Send an LS to SA2/SA3 (as a reply LS to the SA2’s) pointing out the problem stated in Observation 1 and asking SA2/SA3 whether it is acceptable to introduce a further extended UE ID—20-bits at least—into the “Core Network Assistance Information for RRC INACTIVE” structure.

NTT DCM: RAN3 waits for RAN2 ls to SA2.

QC, HW, Nokia, Samsung, E///: wait for RAN2, confirm the UE ID needs to be extended.

**emergency PDU session**

RAN3 wait for SA2/CT1 progress on emergency call back to decide whether to disable LP-WUS during emergency PDU session.

Nokia: No extra standards work is needed for the emergency call case. SA2 discussion is separate discussion.

QC: wait for SA2 progress. SA2 discuss three issues now including the above issue.

HW: QC comments related with the LS of eDRX, and wait RAN2 and SA2.

ZTE: no issue for CN-based subgrouping.

CATT: UE-based subgrouping solution is different.

E///: RAN2 confirm eDRX is coexisting with LP-WUS.

**RAN3 will follow RAN2 conclusion on the terminology of “LP-WUS” and wait for the LS from RAN2 to SA2.**

Proposal 5: RAN3 to discuss that network should be aware of which LP-WUS cell/frequency the LP-WUS supporting UE was released from to avoid first paging attempt being missed, when the RAN pages the LP-WUS in the last visited cell.

Nokia: wait for RAN2 discussion, and is not clear about the issue.

HW: there are two issues, one is the last serving cell in RAN2 and the other one is the frequency.

**CB: # LPWUS**

**- further discuss on the issues limit in RAN3.**

**- capture the open issues related with other working groups.**

**- draft the BL CRs of stage 2, NG, Xn, F1.**

(Moderator- NTT DCM)

Offline summary in [R3-250829](Inbox%5CR3-240829.zip)

# For the Chairman’s Notes

Extended UE Identity Index:

**Regarding the extension of *Extended UE Identity Index* IE, RAN3 waits RAN2 progress.**

Emergency call back:

**Regarding the issue on delay of emergency call back due to LP-WUS function, RAN3 waits RAN2 progress and will not send LS at this moment.**

LS from SA2 (terminology):

**RAN3 will follow RAN2 conclusion on the terminology of “LP-WUS” and wait for the LS from RAN2 to SA2.**

LS from SA2 (UE capability issue):

**RAN3 wait for SA2/CT1 progress on emergency call back to decide whether to disable LP-WUS during emergency PDU session.**

Mismatch between LR camping cell and MR camping cell:

**FFS on whether network should be aware of which LP-WUS cell/frequency the LP-WUS supporting UE was released from to avoid first paging attempt being missed, when the RAN pages the LP-WUS in the last visited cell.**

# Discussion

## Check following CRs

Check following CRs dropped in [the folder](http://10.10.10.10/ftp/RAN/RAN3/Inbox/Drafts/CB%20%23%20LPWUS/)

* R3-250838 BLCR for 38.470 by Nokia
* R3-250839 BLCR for 38.473 by HW
* R3-250840 BLCR for 38.413 by ZTE
* R3-250841 BLCR for 38.300 by Vivo/DCM
* R3-250842 BLCR for 38.423 by Ericsson

## Extended UE Identity Index

Following was captured during online session:

Proposal 2: Send an LS to SA2/SA3 (as a reply LS to the SA2’s) pointing out the problem stated in Observation 1 and asking SA2/SA3 whether it is acceptable to introduce a further extended UE ID—20-bits at least—into the “Core Network Assistance Information for RRC INACTIVE” structure.

NTT DCM: RAN3 waits for RAN2 ls to SA2.

QC, HW, Nokia, Samsung, E///: wait for RAN2, confirm the UE ID needs to be extended.

Proposed summary from moderator:

**Regarding the extension of *Extended UE Identity Index* IE, RAN3 waits RAN2 progress.**

## Emergency call

Following was captured during online session:

Proposal 4: We propose RAN3 checking and confirming whether every Rel-17 gNB or later one always copies and pastes the entire “UE-RadioPagingInfo-r17” into the “UERadioPagingInformation”, including every ASN.1 extension within “UE-RadioPagingInfo-r17”, regardless of whether the gNB can decode the extension or not, and then draft a reply LS accordingly.

HW: whether Rel-15 or Rel-16 gNB has the issue arised by SA2 requiring the input from the operator.

NTT DCM: Confirm the issue for Rel-15 and Rel-16 gNB. How to resolve the issue is pending the next step.

Nokia: need to confirm by RAN2 first.

ZTE: whether need to check with RAN2.

Proposed summary from moderator:

**Regarding the issue on delay of emergency call back due to LP-WUS function, RAN3 waits RAN2 progress and will not send LS at this moment.**

## LS from SA2 (terminology)

Following was captured during online session:

**RAN3 will follow RAN2 conclusion on the terminology of “LP-WUS” and wait for the LS from RAN2 to SA2.**

Proposed summary from moderator:

**RAN3 will follow RAN2 conclusion on the terminology of “LP-WUS” and wait for the LS from RAN2 to SA2.**

## LS from SA2 (UE capability issue)

Following was captured during online session:

RAN3 wait for SA2/CT1 progress on emergency call back to decide whether to disable LP-WUS during emergency PDU session.

Nokia: No extra standards work is needed for the emergency call case. SA2 discussion is separate discussion.

QC: wait for SA2 progress. SA2 discuss three issues now including the above issue.

HW: QC comments related with the LS of eDRX, and wait RAN2 and SA2.

ZTE: no issue for CN-based subgrouping.

CATT: UE-based subgrouping solution is different.

E///: RAN2 confirm eDRX is coexisting with LP-WUS.

Proposed summary from moderator:

**RAN3 wait for SA2/CT1 progress on emergency call back to decide whether to disable LP-WUS during emergency PDU session.**

## Mismatch between LR camping cell and MR camping cell

Following was captured during online session:

Proposal 5: RAN3 to discuss that network should be aware of which LP-WUS cell/frequency the LP-WUS supporting UE was released from to avoid first paging attempt being missed, when the RAN pages the LP-WUS in the last visited cell.

Nokia: wait for RAN2 discussion, and is not clear about the issue.

HW: there are two issues, one is the last serving cell in RAN2 and the other one is the frequency.

Proposed summary from moderator:

**FFS on whether network should be aware of which LP-WUS cell/frequency the LP-WUS supporting UE was released from to avoid first paging attempt being missed, when the RAN pages the LP-WUS in the last visited cell.**

# Conclusions

Extended UE Identity Index:

**Regarding the extension of *Extended UE Identity Index* IE, RAN3 waits RAN2 progress.**

Emergency call back:

**Regarding the issue on delay of emergency call back due to LP-WUS function, RAN3 waits RAN2 progress and will not send LS at this moment.**

LS from SA2 (terminology):

**RAN3 will follow RAN2 conclusion on the terminology of “LP-WUS” and wait for the LS from RAN2 to SA2.**

LS from SA2 (UE capability issue):

**RAN3 wait for SA2/CT1 progress on emergency call back to decide whether to disable LP-WUS during emergency PDU session.**

Mismatch between LR camping cell and MR camping cell:

**FFS on whether network should be aware of which LP-WUS cell/frequency the LP-WUS supporting UE was released from to avoid first paging attempt being missed, when the RAN pages the LP-WUS in the last visited cell.**

# References

## Discussion papers

1. [**R3-250091**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250091.zip), Nokia
2. [**R3-250105**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250105.zip), Qualcomm
3. [**R3-250126**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250126.zip), Huawei
4. [**R3-250166**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250166.zip), NEC
5. [**R3-250186**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250186.zip), ZTE
6. [**R3-250187**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250187.zip), ZTE (TP)
7. [**R3-250296**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250296.zip), NTT Docomo
8. [**R3-250368**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250368.zip), Vivo
9. [**R3-250487**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250487.zip), Ericsson
10. [**R3-250598**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250598.zip), CATT
11. [**R3-250667**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250667.zip), CMCC

## LS out

1. [**R3-250128**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250128.zip), Huawei
2. [**R3-250599**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250599.zip), CATT

## CRs

1. [**R3-250092**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250092.zip), Nokia
2. [**R3-250127**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250127.zip), Huawei
3. [**R3-250369**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250369.zip), Vivo
4. [**R3-250473**](https://www.3gpp.org/ftp/TSG_RAN/WG3_Iu/TSGR3_127/Docs/R3-250473.zip), Ericsson