3GPP RAN WG2 Meeting #117-e R2-22xxxxx

eMeeting February 21st – March 3rd, 2022

Agenda Item: 8.21.0

Source: ZTE corporation,Sanechips

Title: Report of [AT117-e][049][NR17TEI] In-principle Agreed CRs and related docs

Document for: Discussion, Decision

# Introduction

This document is intended address a In-principle Agreed CRs and related docs as per the following email discussion guidelines:

* [AT117-e][049][NR17TEI] In-principle Agreed CRs and related docs (ZTE)

Scope: Treat [R2-2202225](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202225.zip), [R2-2202395](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202395.zip), [R2-2202396](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202396.zip), Has comments: [R2-2202397](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202397.zip), [R2-2202398](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202398.zip), [R2-2202399](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202399.zip), [R2-2202400](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202400.zip), [R2-2202626](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202626.zip), [R2-2202627](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202627.zip), [R2-2202628](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202628.zip), [R2-2202629](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202629.zip), R2-22083306, Non-IPA: [R2-2202608](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202608.zip). Check IPA CRs, and determine revisions if needed. Take into account the comments provided in [R2-2202225](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202225.zip). Determine whether the not yet agreed CR in [R2-2202608](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202608.zip) or some variant is agreeable.

Intended outcome: Report, Agreed CRs, Endorsed NR UE cap CRs (for merge)

Deadline: Schedule 1

**Schedule 1:**

A **first round** with **Deadline for comments W1 Thur Feb 24th 1200 UTC** to settle scope what is agreeable etc.

A **Final round** with **Final deadline W2 Wed March 2nd 1200 UTC** to settle details / agree CRs etc.

# Discussion

## PO determination RRC INACTIVE

### UE capability signaling of inactiveStatePO-Determination-r17 in LTE

[R2-2202397](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202397.zip) Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips CR Rel-17 36.331 16.7.0 4759 - F TEI17

[R2-2202225](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202225.zip) Discussion on UE capability signaling of inactiveStatePO-Determination-r17 in LTE Lenovo, Motorola Mobility discussion Rel-17 TEI17 R2-2201140

**Proposal 1:** RAN2 to confirm that no delta signaling of UE capabilities across IE *UE-EUTRA-Capability* and IE *UE-RadioPagingInfo* is applied for normal LTE UEs, i.e. a normal LTE UE shall indicate the entire set of supported capabilities as specified in TS 36.306 in IE *UE-EUTRA-Capability*.

**Proposal 2:** RAN2 to agree to revise the IPA CR to TS 36.331 in R2-2111587 by introducing the UE capability *inactiveStatePO-Determination-r17* in IE *UE-EUTRA-Capability*.

Two options on the UE capability signaling of inactiveStatePO-Determination-r17 in LTE have been raised in [R2-2202225](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202225.zip) and [R2-2202397](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202397.zip):

* Option 1: Introduce the UE capability *inactiveStatePO-Determination-r17* in IE *UE-RadioPagingInfo*.
* Option 2: Introduce the UE capability *inactiveStatePO-Determination-r17* in IE *UE-EUTRA-Capability.*

**Question 1.1.1) On introducing the UE capability *inactiveStatePO-Determination-r17*, which option do companies prefer?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Option 1/2** | **Comments** |
| Lenovo | Option 2-modified | Proposal 2 was not phrased correctly. To be clear we suggest to introduce the UE capability inactiveStatePO-Determination-r17 in both IE UE-EUTRA-Capability and IE UE-RadioPagingInfo. |
| Huawei, HiSilicon | Option1 | We do not think Option 2 is needed. The reason is that the capability is only used for paging and that in RRC\_INACTIVE, the eNB can get the UE-radioPagingCapabilities. There is nothing broken. |
| Qualcomm | Option1 | Agree with Huawei. |
| Samsung | Option 1 | We do not see anything broken. |
| Apple | Option 1 | Agree with Huawei. |
| Xiaomi | Option 1 | Agree with Huawei |
| Ericsson | Option 1 | Agree with others. |
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**Question 1.1.2) Do companies support the principle proposed in R2-2202225 that no delta signaling of UE capabilities across IE *UE-EUTRA-Capability* and IE *UE-RadioPagingInfo* is applied for normal LTE UEs, i.e. a normal LTE UE shall indicate the entire set of supported capabilities as specified in TS 36.306 in IE *UE-EUTRA-Capability*?**

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| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Lenovo | Yes | Proponent |
| Huawei, HiSilion | No | We don’t think this is needed and this also duplicates the capability info, which is not desirable. |
| Qualcomm | No | What is provided in UE-RadioPagingInfo are the UE capabilities that the eNB needs to know during paging. eNB provides it to CN using UERadioPagingInformation (i.e. outside UE-EUTRA-Capability) and CN sends it back to the eNBs during paging along with the paging message. There is no restriction in RAN2 or RAN3 specs that the container UERadioPagingInformation is for only a certain type of UEs. In fact the procedural text in 36.331 already says the following:  3> if the UE is a category 0, M1 or M2 UE, or supports any UE capability information in ue-RadioPagingInfo, according to TS 36.306 [5]:  4> include ue-RadioPagingInfo and set the fields according to TS 36.306 [5];  So this already applies to "normal" LTE UEs and is contrary to the proposal. While eMTC CR 1579 (R2-143977) added UERadioPagingInformation for "category 0 UE", such restriction was later removed and current spec is category agnostic.  Additionally, if inactiveStatePO-Determination-r17 is moved into UE-EUTRA-Capability, it also needs to be added in UERadioPagingInformation such that it can be communicated between eNB and CN, resulting in unnecessary duplication. |
| Samsung | No |  |
| Apple | No |  |
| Xiaomi | No |  |
| Ericsson | No |  |
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### In principle agreed CRs

**LTE CRs**

[R2-2202395](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202395.zip) Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips CR Rel-17 36.304 16.6.0 0840 - F TEI17

[R2-2202397](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202397.zip) Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips CR Rel-17 36.331 16.7.0 4759 - F TEI17

[R2-2202396](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202396.zip) Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips CR Rel-17 36.306 16.7.0 1839 - F TEI17

**Question 1.2.1) Apart from the UE capability inactiveStatePO-Determination-r17 in 36.331 CR, Do companies agree with the changes in the above CRs for PO determination in INACTIVE state in LTE? Please share more details in the “comments” row if any revision is needed.**

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| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Lenovo | Yes |  |
| Huawei, HiSilicon | Yes |  |
| Qualcomm | Yes |  |
| Samsung | Yes |  |
| Apple | Yes | The cover page of R2-2202396 can be improved:   1. Work Item Code: TEI17 (should have no dash in between) 2. Date: should be 2022 (now it is 2021) |
| Xiaomi | Yes |  |
| Ericsson | Yes |  |
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**NR CRs**

[R2-2202398](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202398.zip) Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips CR Rel-17 38.304 16.7.0 0228 - F TEI17

[R2-2202399](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202399.zip) Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips CR Rel-17 38.306 16.7.0 0679 - F TEI17

[R2-2202400](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202400.zip) Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips CR Rel-17 38.331 16.7.0 2889 - F TEI17

**Question 1.2.2) Do companies agree with the changes in the above CRs for PO determination in INACTIVE state in NR? Please share more details in the “comments” row if any revision is needed.**

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| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Lenovo | Yes |  |
| Huawei, HiSilicon | Yes |  |
| Qualcomm | Yes |  |
| Samsung | Yes |  |
| Apple | Yes |  |
| Xiaomi | Yes |  |
| Ericsson | Yes |  |
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## NR HSDN

[R2-2202626](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202626.zip) Introduction of mobility-state-based cell reselection for NR HSDN [NR\_HSDN] CMCC, CATT, Ericsson, Huawei, ZTE, Nokia, OPPO, vivo CR Rel-17 38.331 16.7.0 2846 1 B TEI17 R2-2110772

[R2-2202627](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202627.zip) Introduction of mobility-state-based cell reselection for NR HSDN CMCC, CATT, Ericsson, Huawei, ZTE, Nokia, OPPO, vivo CR Rel-17 38.304 16.7.0 0223 1 B TEI17 R2-2110232

[R2-2202628](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202628.zip) Introduction of mobility-state-based cell reselection for NR HSDN CMCC, CATT, Ericsson, Huawei, ZTE, Nokia, OPPO, vivo CR Rel-17 38.306 16.7.0 0650 1 B TEI17 R2-2110234

[R2-2202629](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202629.zip) Introduction of mobility-state-based cell reselection for NR HSDN CMCC, CATT, Ericsson, Huawei, ZTE, Nokia, OPPO, vivo CR Rel-17 36.331 16.7.0 4730 1 B TEI17 R2-2110235

**Question 2.1) Do companies agree with the changes in the above CRs for NR HDSN? Please share more details in the “comments” row if any revision is needed.**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Lenovo | Yes |  |
| Huawei, HiSilicon | Yes |  |
| CMCC | Yes | In this meeting, the proposals in R2-2202662 was agreed in AI 8.0.2. The agreed proposal 5 is as follows “The 306 CRs shall include an annex containing the RAN2 determined UE capabilities in the feature list format (similar to annex containing RAN2 agreements) for easy compilation into the TR38.822 in the later stage.”  So to my understanding, the above 38.306 CR for HSDN should also contain an annex of feature list format. As the source company for the above HSDN CRs, **I provide a feature list format for HSDN capability in the following table, and invite companies to check whether it looks OK.**  If the following feature list table looks fine, I will put it into the annex of 38.306CR in next revision. |
| Qualcomm | Yes |  |
| Samsung | Yes |  |
| Apple | Yes |  |
| Xiaomi | Yes |  |
| Ericsson | Yes |  |
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In RAN2#117-e meeting AI 8.0.2, the proposals in R2-2202662 was agreed on Monday in Main room. The agreed proposal 5 is as follows “The 306 CRs shall include an annex containing the RAN2 determined UE capabilities in the feature list format (similar to annex containing RAN2 agreements) for easy compilation into the TR38.822 in the later stage.” Therefore, **the following table of feature list is provided by CMCC, which will be included in the annex of 38.306CR for NR HSDN, if agreeable:**

|  |  |  |  |  |  |  |  |  |  |  |
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| **Features** | **Index** | **Feature group** | **Components** | **Prerequisite feature groups** | **Field name in TS 38.331 [2]** | **Parent IE in TS 38.331 [2]** | **Need of FDD/TDD differentiation** | **Need of FR1/FR2 differentiation** | **Note** | **Mandatory/Optional** |
| TEI17/NR\_HSDN | 1-1 | Cell reselection priority handling for NR HSDN | It is optional for UE to support HSDN cell reselection priority handling in RRC\_IDLE/RRC\_INACTIVE as specified in TS 38.304 and TS 38.331. |  | *N/A* | *N/A* | *N/A* | *N/A* |  | Optional without capability signalling |

**Question 2.2) Do companies agree with the above table of feature list to be captured in the annex of 38.306CR for NR HSDN?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Qualcomm | Yes |  |
| Samsung | Yes | Can be a baseline. |
| Apple | Yes |  |
| Xiaomi | Yes |  |
| Ericsson | Yes |  |
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## NR TADV

### In principle agreed 38.305 CR

[R2-2203366](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2203366.zip) Addition of Timing Advance measurement reporting in NR E-CID [NRTADV] Ericsson, NTT Docomo, Polaris Wireless, Verizon, China Telecom, FirstNet, Deutsche Telekom, Intel Corporation, CATT, Nokia, Nokia Shanghai Bell, Huawei CR Rel-17 38.305 16.7.0 0082 1 B TEI17 R2-2110711

**Question 3.1) Do companies agree with the changes in the above 38.305 CR for NR TADV? Please share more details in the “comments” row if any revision is needed.**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Lenovo | Yes but | Some cover page issues need to be fixed:  In “Other specs affected” the CR# for 38.300 should be changed to “CR0407”. Furthermore, the spec# TS 38.472 should be corrected to TS 38.473. |
| Huawei, HiSilicon | Yes |  |
| Qualcomm | Yes |  |
| Samsung | Yes |  |
| Xiaomi | Yes |  |
| Ericsson | Yes (proponent) |  |
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### Complementary 38.300 CR

[R2-2202608](file:///C:\Users\johan\OneDrive\Dokument\3GPP\tsg_ran\WG2_RL2\TSGR2_117-e\Docs\R2-2202608.zip) Introduction of RACH triggers for T\_ADV in NR E-CID [NRTADV] Huawei, HiSilicon, Ericsson, CATT, NTT DOCOMO, Deutsche Telekom, Polaris Wireless, ZTE Corporation CR Rel-17 38.300 16.8.0 0407 - B TEI17

**Question 3.2) Do companies agree with the changes in the above 38.300 CR for NR TADV? Please share more details in the “comments” row if any revision is needed.**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Lenovo | Yes but | Cover page: since 38.300 is a RAN spec the CN box in “Proposed change affects” does not need to be ticked. |
| Huawei, HiSilicon | Yes | Proponent. It is true that the change itself does not impact the CN, but procedural wise, it is first triggered by LMF to eNB for E-CID. Anyway we can go with the majority. |
| Qualcomm | Yes |  |
| Samsung | Yes |  |
| Xiaomi | Yes |  |
| Ericsson | Yes |  |
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# Conclusions

<To be generated based on company input>

# References

[1] R2-2202225 Discussion on UE capability signaling of inactiveStatePO-Determination-r17 in LTE Lenovo, Motorola Mobility

[2] R2-2202395 Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips

[3] R2-2202396 Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips

[4] R2-2202397 Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips

[5] R2-2202398 Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips

[6] R2-2202399 Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips

[7] R2-2202400 Correction on PO determination in inactive state ZTE corporation, Ericsson, vivo, CMCC, China Telecom, China Unicom, Samsung, Nokia, Nokia Shanghai Bell, Sanechips

[8] R2-2202626 Introduction of mobility-state-based cell reselection for NR HSDN [NR\_HSDN] CMCC, CATT, Ericsson, Huawei, ZTE, Nokia, OPPO, vivo

[9] R2-2202627 Introduction of mobility-state-based cell reselection for NR HSDN CMCC, CATT, Ericsson, Huawei, ZTE, Nokia, OPPO, vivo

[10] R2-2202628 Introduction of mobility-state-based cell reselection for NR HSDN CMCC, CATT, Ericsson, Huawei, ZTE, Nokia, OPPO, vivo

[11] R2-2202629 Introduction of mobility-state-based cell reselection for NR HSDN CMCC, CATT, Ericsson, Huawei, ZTE, Nokia, OPPO, vivo

[12] R2-2203366 Addition of Timing Advance measurement reporting in NR E-CID [NRTADV] Ericsson, NTT Docomo, Polaris Wireless, Verizon, China Telecom, FirstNet, Deutsche Telekom, Intel Corporation, CATT, Nokia, Nokia Shanghai Bell, Huawei

[13] R2-2202608 Introduction of RACH triggers for T\_ADV in NR E-CID [NRTADV] Huawei, HiSilicon, Ericsson, CATT, NTT DOCOMO, Deutsche Telekom, Polaris Wireless, ZTE Corporation