**3GPP TSG-RAN WG2#109 eMeeting *Tdoc*** ⌘***R2-20xxxx***

**Online, 24th February- 6th March 2020**

**Agenda Item: 6.0.1**

**Souce: Samsung**

**Title: [AT109e][066][R16] R16 LTE RRC coordination (Samsung)**

**Document for: Discussion and decision**

# Introduction

This document is the report of the following email discussion:

**[AT109e][066][R16] R16 LTE RRC coordination (Samsung)**

Scope: Cross WI RRC coordination, Address issues found at RRC Merge. Identify which CRs/WIs that are problematic.

Intended outcome: Identification of and Resolution to RRC issues

Deadline: Follows the deadlines of the respective CRs.

As RAN WG2#109 has become an online meeting, ambition level for this effort is mainly to collect general issues and possibly some initial feedback. It is considered best to discuss and conclude these issues alongside the upcoming review in preparation for ASN.1 freeze of R16.

# Discussion

## Merging issues

This section is intended to include real CR merging issues i.e. where CRs affect the same sections while it is unclear how merge them. E.g. cases in which the CRs are not completely independent like when the UE action when a combination of features is configured is not straightforward.

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| --- | --- | --- |
| No | Source | Description |
| 1 | e-mail [108#28] | eMTC, NB-IoT: 5.2.2.9 Handling of PUR release by subclause |
| 2 | e-mail [108#28] | eMTC, NB-IoT: 5.3.1.1: How to capture agreements regarding security handling upon Resume |
| 3 | e-mail [108#28] | eMTC, NB-IoT: 5.3.3.3a: Whether PUR applied for MO UP-EDT calls |
| 4 | e-mail [108#28] | eMTC, NB-IoT: 5.3.3.4a: UE action upon resuming a suspended RRC connection in 5GC |
| 5 | e-mail [108#28] | eMTC, NB-IoT: 5.3.3.xTiming alignment validation for PUR |
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**Tab. 1a**: Main merging issues

**Question 1**: If companies are aware of main merging issues to be addressed during the review in preparation for ASN.1 freeze of TS 36.331 REL-16, please add them to Tab. 1a. Companies are also invited to provide feedback to these issues using the following table

|  |  |
| --- | --- |
| Company | Issue/ comment/ suggestion |
|  |  |

**Tab. 1b**: Feedback regarding main merging issues

## General protocol issues

The following table provides a number of more general issues regarding the merging of R16 CRs to 36.331 as identified during RAN2 e-mail [108#28].

|  |  |  |
| --- | --- | --- |
| No | Source | Description |
| 1 | Rapporteur | For the cause in ResumeRequest, last spare is proposed to be taken for indicating MT EDT request. Seems good to confirm outside specific WI session (as it has general consequences) |
| 2 | Rapporteur | Quite a few new messages/ procedures are introduced. Some concern NR specific versions, some concern critical extensions. Although specification is probably inconsistent already, some general review seems useful. |
| 2.1 | Rapporteur | Related to this, it may be good to have some general discussion regarding extension mechanism for introducing further messages in future. I.e. use of ourter/ inner message branches (number of spares to introduce) and/ or whether to use extension marker |
| 2.2 | Rapporteur | UE assistance: An NR specific message is introduced merely including an octet string carrying an NR IE, for which handling is specified in NR. Approach can be considered as part of general review regarding introduction of messages |
| 2.3 | Rapporteur | FailureInformation2: Rather than creating an entirely new message, it seems possible/ appropriate to introduce a regular critical extension i.e. FailureInformation-r16. In procedure we would then just add setting of the new failure type (no real need to mention –r16 message version) and we would re-use existing ASN.1 section |
| 2.4 | Rapporteur | SidelinkUEInformationNR is merely a container carrying an NR UL DCCH message within octet string. Similar functionality is provided by ULInformationTransferMRDC, that may be possible to re-use |
| 2.5 | Rapporteur | ULInformationTransfer is extended for IAB by means of a critical extension even though only an optional IE is added for F1AP  It seems this approach was selected because in the orginal version field dedicatedInfoType is mandatory  If UE cannot ignore dedicatedInfoType whenever F1AP is included (i.e. when simultaneous transfer needs to be supported, such critical extension seems inevitable |
| 3 | Rapporteur | One area where CRs typically result in changes to the same (ASN.1) section concerns the UE capabilities. Although merging may not always be a real problem, it may be good to discuss/ conclude which handling is preferred i.e. whether to have a CR collecting the changes to UE capabilities across the WIs |
|  |  |  |

**Tab. 2a**: General protocol issues

**Question 2**: If companies have identified other similar general protocol issues to be addressed during the review in preparation for ASN.1 freeze of TS 36.331 REL-16, please add them Tab. 2a. Companies are also invited to provide feedback to these other general comments using the following table

|  |  |
| --- | --- |
| Company | Issue/ comment/ suggestion |
|  |  |

**Tab. 2b**: Feedback regarding general protocol issues

## Other comments

Companies are invited to raise other general (not WI specific) issues that deserve special attention during the review in preparation for ASN.1 freeze that may have been identified when checking the result of the CR merge.

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| --- | --- | --- |
| No | Source | Description |
| 1 |  |  |
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**Tab. 3a**: Other general issues

**Question 3**: If you have other general comments to be addressed during the review in preparation for ASN.1 freeze of TS 36.331 REL-16, please add them to Tab. 3a. Companies are also invited to provide feedback to these other general comments using the following table

|  |  |
| --- | --- |
| Company | Issue/ comment/ suggestion |
|  |  |
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**Tab. 3b**: Feedback regarding other general issues

# Conclusion & recommendation

This document includes a report of [AT109e][066][R16] R16 LTE RRC coordination. The main aim of this effort is to collect general issues and possibly some initial feedback while further discussion and conclusion is expected to be done alongside the upcoming review in preparation for ASN.1 freeze of R16.

# References

[1] R2-2001159 Draft 36331 Rel-16 resulting from CR merge [108#28][R16 RRC] Samsung Telecommunications

[2] R2-2001160 Notes from 36331 Rel-16 CR merge [108#28][R16 RRC] Samsung Telecommunications

# Overview of implemented CRs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Tdoc | Title | Source | CR | WI | E-mail# |
| **R2-1911503** | Introduction of RLOS support indicator and RLOS request indicator | Qualcomm Incorporated | 4049 |  |  |
| **R2-1913059** | Introduction of RRC parameters and UE capabilities for enhanced high speed scenario |  | 4095 |  |  |
| **R2-1914018** | Introduction of UECapabilityInformation segmentation in 36.331 | MediaTek Inc., CATT, Ericsson, Spreadtrum Communications, ZTE Corporation, Sanechips, OPPO, Qualcomm Incorporated |  |  |  |
| [**R2-1914640**](http://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_108/Docs/R2-1914640.zip) | Running CR for Introduction of Even futher Mobility enhancement in E-UTRAN | Ericsson |  | feMob | 35 |
| [**R2-1914661**](http://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_108/Docs/R2-1914661.zip) | Introduction of a second SMTC for inter-RAT cell reselection | Orange, AT&T, Vodafone, Telecom Italia S.p.A., CMCC, NTT Docomo Inc., Samsung, Ericsson | 4114 | NR TEI16 |  |
| [**R2-1915034**](http://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_108/Docs/R2-1915034.zip) | Introduction of voice fallback indication | Qualcomm Incorporated, T-Mobile USA, Verizon, China Telecom, Softbank, Ericsson | 4136 | NR TEI16 |  |
| [**R2-1915281**](http://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_108/Docs/R2-1915281.zip) | Running CR for 36.331 for CA/DC Enhancements | Ericsson |  | eDCCA | 33 |
| [**R2-1915979**](http://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_108/Docs/R2-1915979.zip) | Running CR to 36.331 for NR V2X | Huawei, HiSilicon |  | NR-V2X | 44 |
| [**R2-1916316**](http://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_108/Docs/R2-1916316.zip) | Correction on non-3GPP paging | Huawei, HiSilicon | 4172 | LTE TEI16 |  |
| [**R2-1916318**](http://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_108/Docs/R2-1916318.zip) | Introduction of DL MIMO efficiency enhancement | Huawei, HiSilicon |  | LTE TEI16 |  |
| [**R2-1916364**](http://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_108/Docs/R2-1916364.zip) | Introduction of Rel-16 eMTC enhancements | Qualcomm Incorporated |  | eMTC | 29 |
| [**R2-1916407**](http://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_108/Docs/R2-1916407.zip) | CR of TS 36.331 for introducing NavIC in LTE | Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs Private Limited, Tejas Networks Ltd., Qualcomm Incorporated | 4137 | NavIC |  |
| [**R2-1916490**](http://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_108/Docs/R2-1916490.zip) | Correction of UE assistance information | Samsung Telecommunications | 4164 |  |  |
| [**R2-1916554**](http://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_108/Docs/R2-1916554.zip) | Text Proposal for TS 36.331 for support of F1AP signalling over LTE leg | Nokia, Nokia Shanghai Bell |  |  |  |
| [**R2-1916566**](http://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_108/Docs/R2-1916566.zip) | Introduction of additional enhancements for NB-IoT in TS 36.331 | Huawei |  |  | 109 |
|  | Running CR for IAB | Ericsson |  | IAB | 31 |
|  | Running CR for MDT | Huawei |  | MDT | 43 |
|  | DL segmentation | Ericsson |  | TEI16 | 59 |
| **R2-1915561** | Running LTE RRC CR for PPP-RTK support (SSR) | Qualcomm Incorporated |  | NR\_pos-Core |  |
| **R2-1912737** | Addition of broadcast of barometric pressure assistance data | Polaris Wireless, FirstNet, Intel, AT&T, NextNav | 4026 | TEI16, LCS\_LTE\_acc\_enh-Core |  |
| **R2-1914075** | Broadcast of TBS assistance data | NextNav, AT&T, FirstNet, Polaris Wireless | 4134 | TEI16, LCS\_LTE\_acc\_enh-Core |  |