**3GPP TSG-RAN WG4 Meeting # 94-e-Bis R4-200XXXX**

**Electronic Meeting, 20 – 30 Apr., 2020**

**Agenda item:** 12.3

**Source:** Ericsson

**Title:** Email discussion summary for [94e Bis][232]LTE\_RRM\_Maintenance

**Document for:** Information

# Introduction

*Maintenance of LTE specifications, focussed on at least addressing TBDs, FFSs and square brackets in release 15 and release 16 core specifications for ITU specification submission.*

*List of candidate target of email discussion for 1st round and 2nd round*

* 1st round: Conclude on any open technical issues and identify in principle agreeable CRs which may be agreed or revised in 2nd round
* 2nd round: Review draft revised CRs to get an agreeable set of maintenance CRs at the end of second round which address at least the needs of the ITU specification submission

# Topic #1: euCA requirements finalization

*Main technical topic overview. Closure of outstanding R15 euCA technical issues*

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
|  |  |  |
| R4-2007146 | Nokia, Nokia Shanghai Bell | Proposal 1: UE shall support the idle mode CA measurements of at least 2 inter-frequency carriers of which zero or one inter-frequency carrier may be a non-overlapping carrier and at most 1 inter-frequency carrier can be overlapping.Proposal 2: Clarify in 36.133 that the fields s-NonIntraSearch in SystemInformationBlockType3 do not affect measurements of inter-frequency CA candidate cells. |
| R4-2007147.zip | Nokia, Nokia Shanghai Bell | Cat F Rel 15 CR related to P1 in R4-2007146 |
| R4-2007148 | Nokia, Nokia Shanghai Bell | Cat A Rel 15 CR related to P1 in R4-2007146 |
| R4-2007149.zip | Nokia, Nokia Shanghai Bell | Cat F Rel 15 CR related to P2 in R4-2007146 |
| R4-2007150 | Nokia, Nokia Shanghai Bell | Cat A Rel 15 CR related to P12 in R4-2007146 |

## Open issues summary

* *Number of carriers to measure*
* *Snon-intrasearch*

### Sub-topic 1-1 : number of carriers to measure

*Sub-topic description:* *euCA requirements finalization*

*Open issues and candidate options before e-meeting: (from current 36.133):*  *A UE which supports ca-IdleModeMeasurements shall support the idle mode CA measurements of at least [1, 2 or 3] inter-frequency carriers of which zero or one inter-frequency carrier may be a non-overlapping carrier.*

**Issue 1-1: Required number of carriers to measure**

* Proposals
	+ Option 1: : UE shall support the idle mode CA measurements of at least 2 inter-frequency carriers of which zero or one inter-frequency carrier may be a non-overlapping carrier and at most 1 inter-frequency carrier can be overlapping.
	+ Option 2: Other?
* Recommended WF
	+ Check if proposal 1/option 1 (from R4-2007146, Nokia) is agreeable and if so, discussion can take place on corresponding CR wording.

### Sub-topic 1-2 : s-NonIntraSearch

*Sub-topic description:* *s-NonIntraSearch clarifications*

*Open issues and candidate options before e-meeting:* *36.133 section 4.9.2.2 refers to requirements in section 4.2.2.4, in which the s-NonIntraSearch may be applied.*

**Issue 1-2: TBA**

* Proposals
	+ Option 1: clarify in the RAN4 specification 36.133 section 4.9.2.2, that the s-NonIntraSearch thresholds do not apply to carriers configured for early measurement reporting
	+ Option 2: Other?
* Recommended WF
	+ Check if proposal 2/option 1 (from R4-2007146, Nokia) is agreeable and if so, discussion can take place on corresponding CR wording.

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX | Sub topic 1-1: Sub topic 1-2:….Others: |

### CRs/TPs comments collection

*Major close-to-finalize WIs and Rel-15 maintenance, comments collections can be arranged for TPs and CRs. For Rel-16 on-going WIs, suggest to focus on open issues discussion on 1st round.*

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2007147 | Company A |
| Company B |
|  |
| R4-2007149 | Company A |
| Company B |
|  |

## Summary for 1st round

### Open issues

*Moderator tries to summarize discussion status for 1st round, list all the identified open issues and tentative agreements or candidate options and suggestion for 2nd round i.e. WF assignment.*

|  |  |
| --- | --- |
|  | **Status summary**  |
| **Sub-topic#1** | *Tentative agreements:**Candidate options:**Recommendations for 2nd round:* |

*Recommendations on WF/LS assignment*

|  |  |  |
| --- | --- | --- |
|  | **WF/LS t-doc Title**  | **Assigned Company,****WF or LS lead** |
| #1 |  |  |

### CRs/TPs

*Moderator tries to summarize discussion status for 1st round and provides recommendation on CRs/TPs Status update*

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation**  |
| XXX | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |

## Discussion on 2nd round (if applicable)

## Summary on 2nd round (if applicable)

*Moderator tries to summarize discussion status for 2nd round and provided recommendation on CRs/TPs/WFs/LSs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP/LS/WF number** | **T-doc Status update recommendation**  |
| XXX | *Based on 2nd round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |

# Topic #2: Rel-13 maintance

*Release 13 essential corrections*

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2007424.zip | Rohde & Schwarz | Cat F Rel 13 CR In SchedulingRequest-Config-DEFAULT tables of tests A.7.3.50/51/54/55/58/58 the CR-ConfigIndex changed from 0 (5 ms periodicity) to 5 (20 ms periodicity). |
| R4-2007425 | Rohde & Schwarz | Cat A Rel-14 CR shadow for 7424 |
| R4-2007426 | Rohde & Schwarz | Cat A Rel-15 CR shadow for 7424 |
| R4-2007427 | Rohde & Schwarz | Cat A Rel-16 CR shadow for 7424 |
| R4-2007724.zip | Huawei, Hisilicon | Cat F Rel 13 CR : Add the clarification that “provided that the cell is at least YdB better ranked, where ‘Y’ is specified in Table 4.6.2.6-3” |
| R4-2007725 | Huawei, Hisilicon | Cat A Rel-14 CR shadow for 7724 |
| R4-2007726 | Huawei, Hisilicon | Cat A Rel-15 CR shadow for 7724 |
| R4-2007727 | Huawei, Hisilicon | Cat A Rel-16 CR shadow for 7724 |
| R4-2006082 | Anritsu | Cat F Rel13 CR : Delete patrameter of sr-Configindex in Table A.7.3.55.1-4. |
| R4-2006083 | Anritsu | Cat A rel 14 CR shadow for 6082 |
| R4-2006084 | Anritsu | Cat A rel 15 CR shadow for 6082 |
| R4-2006085 | Anritsu | Cat A rel 16 CR shadow for 6082 |
| R4-2006086 | Anritsu | Cat F rel 13 CRChange a reference to the RMC in the associated test as follows: A.8.1.26 PDSCH parameters in Table A.8.1.26.1-2 R.11 HD-FDD -> R.25 HD-FDD |
| R4-2006087 | Anritsu | Cat A rel 14 CR shadow for 6086 |
| R4-2006088 | Anritsu | Cat A rel 14 CR shadow for 6086 |
| R4-2006089 | Anritsu | Cat A rel 14 CR shadow for 6086 |

## Open issues summary

*Discussion of updates in CRs*

### Sub-topic 2-1

*Sub-topic description: Rel-13 essential corrections*

*Open issues and candidate options before e-meeting:*

**Issue 2-1: Please provide comments on CRs directly**

* Proposals
	+ Option 1: TBA
	+ Option 2: TBA
* Recommended WF
	+ TBA

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX | Please provide comments on CRs directly |

### CRs/TPs comments collection

*Major close to finalize WIs and Rel-15 maintenance, comments collections can be arranged for TPs and CRs. For Rel-16 on-going WIs, suggest to focus on open issues discussion on 1st round.*

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2007424 | Company A |
| Company B |
|  |
| R4-2007724 | Company A |
| Company B |
|  |
| R4-2006082 |  |
|  |
|  |
| R4-2006086 |  |
|  |
|  |

## Summary for 1st round

### Open issues

*Moderator tries to summarize discussion status for 1st round, list all the identified open issues and tentative agreements or candidate options and suggestion for 2nd round i.e. WF assignment.*

|  |  |
| --- | --- |
|  | **Status summary**  |
| **Sub-topic#1** | *Tentative agreements:**Candidate options:**Recommendations for 2nd round:* |

*Suggestion on WF/LS assignment*

|  |  |  |
| --- | --- | --- |
|  | **WF/LS t-doc Title**  | **Assigned Company,****WF or LS lead** |
| #1 |  |  |

### CRs/TPs

*Moderator tries to summarize discussion status for 1st round and provided recommendation on CRs/TPs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation**  |
| XXX | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |

## Discussion on 2nd round (if applicable)

## Summary on 2nd round (if applicable)

*Moderator tries to summarize discussion status for 2nd round and provided recommendation on CRs/TPs/WFs/LSs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP/LS/WF number** | **T-doc Status update recommendation**  |
| XXX | *Based on 2nd round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |

# Topic #3: Rel-14 maintance

*Main technical topic overview. Rel-14 essential corrections*

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2007876 | Huawei, HiSilicon | Cat F Rel-14 CR : Change the inter-frequency reselection margin for eMTC to 8dB for normal and enhanced coverage for RSRP based, and 5.5dB for RSRQ based.A redundant note is also removed. |
| R4-2007877 | Huawei, HiSilicon | Cat A Rel-15 CR shadow for 7876 |
| R4-2007878 | Huawei, HiSilicon | Cat A Rel-16 CR shadow for 7876 |

## Open issues summary

*Discussion of updates in CRs*

### Sub-topic 2-1

*Sub-topic description:*

*Open issues and candidate options before e-meeting:*

**Issue 2-1: Please provide comments on CR directly**

* Proposals
	+ Option 1: TBA
	+ Option 2: TBA
* Recommended WF
	+ TBA

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Rapporteur | Please provide comments on CRs directly |

### CRs/TPs comments collection

*Major close to finalize WIs and Rel-15 maintenance, comments collections can be arranged for TPs and CRs. For Rel-16 on-going WIs, suggest to focus on open issues discussion on 1st round.*

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2007876 | Company A |
| Company B |
|  |

## Summary for 1st round

### Open issues

*Moderator tries to summarize discussion status for 1st round, list all the identified open issues and tentative agreements or candidate options and suggestion for 2nd round i.e. WF assignment.*

|  |  |
| --- | --- |
|  | **Status summary**  |
| **Sub-topic#1** | *Tentative agreements:**Candidate options:**Recommendations for 2nd round:* |

*Suggestion on WF/LS assignment*

|  |  |  |
| --- | --- | --- |
|  | **WF/LS t-doc Title**  | **Assigned Company,****WF or LS lead** |
| #1 |  |  |

### CRs/TPs

*Moderator tries to summarize discussion status for 1st round and provided recommendation on CRs/TPs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation**  |
| XXX | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |

## Discussion on 2nd round (if applicable)

## Summary on 2nd round (if applicable)

*Moderator tries to summarize discussion status for 2nd round and provided recommendation on CRs/TPs/WFs/LSs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP/LS/WF number** | **T-doc Status update recommendation**  |
| XXX | *Based on 2nd round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |

# Topic #4: Rel-15 maintance

*Main technical topic overview. Discussion of release 15 clean up, excluding euCA which is discussed under topic 1.*

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2006966 | Ericsson | CAT F Rel 15 CR : All tentative values in square brackets are finalised except for values which are expected to be addressed by other release 15 CRs in RAN4#95All TBD in specifications are addressed |
| R4-2006968 | Ericsson | Cat F Rel 15 CR / Clause A.8.7A renamed from TBD to E-UTRAN FDD – UTRAN TDD Measurements.Spelling corrections. |
| R4-2006969 | Ericsson | Cat A Rel 16 CR to 6968 |

## Open issues summary

*Before e-Meeting, moderators shall summarize list of open issues, candidate options and possible WF (if applicable) based on companies’ contributions.*

### Sub-topic 2-1

*Sub-topic description:*

*Open issues and candidate options before e-meeting:*

**Issue 2-1: Please provide comments on CR directly**

* Proposals
	+ Option 1: TBA
	+ Option 2: TBA
* Recommended WF
	+ TBA

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Rapporteur | Please provide comments on CRs directly |

### CRs/TPs comments collection

*Major close to finalize WIs and Rel-15 maintenance, comments collections can be arranged for TPs and CRs. For Rel-16 on-going WIs, suggest to focus on open issues discussion on 1st round.*

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2006966 | Company A |
| Company B |
|  |
| R4-2006968 | Company A |
| Company B |
|  |

## Summary for 1st round

### Open issues

*Moderator tries to summarize discussion status for 1st round, list all the identified open issues and tentative agreements or candidate options and suggestion for 2nd round i.e. WF assignment.*

|  |  |
| --- | --- |
|  | **Status summary**  |
| **Sub-topic#1** | *Tentative agreements:**Candidate options:**Recommendations for 2nd round:* |

*Suggestion on WF/LS assignment*

|  |  |  |
| --- | --- | --- |
|  | **WF/LS t-doc Title**  | **Assigned Company,****WF or LS lead** |
| #1 |  |  |

### CRs/TPs

*Moderator tries to summarize discussion status for 1st round and provided recommendation on CRs/TPs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation**  |
| XXX | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |

## Discussion on 2nd round (if applicable)

## Summary on 2nd round (if applicable)

*Moderator tries to summarize discussion status for 2nd round and provided recommendation on CRs/TPs/WFs/LSs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP/LS/WF number** | **T-doc Status update recommendation**  |
| XXX | *Based on 2nd round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |

# Topic #5: Rel-16 maintance

*Main technical topic overview. Release 16 clean up.*

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2006967 | Ericsson | CAT F Rel 16 CR : All tentative values in square brackets are finalised except for values which are expected to be addressed by other release 15 CRs in RAN4#95All TBD in specifications are addressed |
| R4-2007118 | Nokia, Nokia Shanghai Bell | Cat F Rel 16 CR : Subclause references are corrected in subclauses 5.2.2.4.1 , 5.2.2.5.1 and 5.3.2.2.1 Typo corrected in subclause 5.5.2.3.2. |

## Open issues summary

*Before e-Meeting, moderators shall summarize list of open issues, candidate options and possible WF (if applicable) based on companies’ contributions.*

### Sub-topic 2-1

*Sub-topic description:*

*Open issues and candidate options before e-meeting:*

**Issue 2-1: Please provide comments on CR directly**

* Proposals
	+ Option 1: TBA
	+ Option 2: TBA
* Recommended WF
	+ TBA

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Rapporteur | Please provide comments on CRs directly |

### CRs/TPs comments collection

*Major close to finalize WIs and Rel-15 maintenance, comments collections can be arranged for TPs and CRs. For Rel-16 on-going WIs, suggest to focus on open issues discussion on 1st round.*

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2006967 | Company A |
| Company B |
|  |
| R4-2007118 | Company A |
| Company B |
|  |

## Summary for 1st round

### Open issues

*Moderator tries to summarize discussion status for 1st round, list all the identified open issues and tentative agreements or candidate options and suggestion for 2nd round i.e. WF assignment.*

|  |  |
| --- | --- |
|  | **Status summary**  |
| **Sub-topic#1** | *Tentative agreements:**Candidate options:**Recommendations for 2nd round:* |

*Suggestion on WF/LS assignment*

|  |  |  |
| --- | --- | --- |
|  | **WF/LS t-doc Title**  | **Assigned Company,****WF or LS lead** |
| #1 |  |  |

### CRs/TPs

*Moderator tries to summarize discussion status for 1st round and provided recommendation on CRs/TPs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation**  |
| XXX | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |

## Discussion on 2nd round (if applicable)

## Summary on 2nd round (if applicable)

*Moderator tries to summarize discussion status for 2nd round and provided recommendation on CRs/TPs/WFs/LSs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP/LS/WF number** | **T-doc Status update recommendation**  |
| XXX | *Based on 2nd round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |