**3GPP TSG-RAN WG4 Meeting # 95-e R4-2008329**

**Electronic Meeting, 25 – 1 June., 2020**

**Agenda item:** 14.1

**Source:** Moderator (NTT DOCOMO, INC.)

**Title:** Email discussion summary for [95e][139] BC\_simplification

**Document for:** Information

# Introduction

In this email discussion we will handle following contributions submitted in AI 14.1: Simplification of band combinations in RAN4 specifications. Note R4-2006633 was moved to AI 15.1 and will not be treated in this e-mail thread.

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| **TDoc** | **Title** | **Source** |
| [**R4-2006626**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_95_e/Docs/R4-2006626.zip) | Simplification of band combination tables in 38.101 | Apple |
| [**R4-2006663**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_95_e/Docs/R4-2006663.zip) | Consideration on potential e-meeting improvement | ZTE Wistron Telecom AB |
| [**R4-2006734**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_95_e/Docs/R4-2006734.zip) | Discussion about Band combination spreadsheet formats | Futurewei |
| [**R4-2006840**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_95_e/Docs/R4-2006840.zip) | Considerations on simplification of EN-DC configuration including FR2 | ZTE Corporation |
| [**R4-2008064**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_95_e/Docs/R4-2008064.zip) | On new format for band combinations | Nokia, Nokia Shanghai Bell |
| [**R4-2008085**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_95_e/Docs/R4-2008085.zip) | Further discussion on improvement of request, SR and BC basket WID index table | Huawei, HiSilicon |
| [**R4-2008112**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_95_e/Docs/R4-2008112.zip) | Simplification of band combinations | NTT DOCOMO INC. |

# Topic #1: Title

## Companies’ contributions summary

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| **T-doc number** | **Company** | **Proposals / Observations** |
| [**R4-2006626**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_95_e/Docs/R4-2006626.zip) **[1]** | Apple | Observation 1: Replacing the bandwidth notation of a FR2 combination with “@” will result in unrecoverable information lossObservation 2: When replacing the bandwidth notation of a FR2 combination with “@”, it will not be possible anymore to create a complete list of all band combinations supported in the 3GPP specsProposal 1: Do not replce the FR2 bandwidth notation with “@”Proposal 2: Replace the band combination tables in chapter 5.5 of 38.101-x by one tab for each table in a single Excel file as attachment to the Word spec and add a reference to the Excel table replacing the currently used table in WordProposal 3: For the notes add another column listing just the numbers of the notes. The notes themselves can be added as additional lines below the table itself, similar to the notes below the word tables. There should not be any superscript notes in cells where there are other numbers or band combinationsProposal 4: For tracking changes in the CRs, the same table format can be used by adding a track changes column with letters: U – Unchanged, M – Modified, N – New combination, D – To be deletedProposal 5: As in the current tables there shall be one column for the band combinations using the official notation for band combinations with only a single combination per line. There shall be a second column listing, separated by commas, all UL combinations allowed for that specific DL combination in column 1 also using the official notation. There can be additional columns like the “Single UL allowed” column or bandwidth columns similar to the columns in the current tablesProposal 6: Cells merged in the Word document need to be unmerged to allow sorting, macros etc. The contents in the cells, which are empty after the unmerge, need to be filled with the same information as in the uppermost left cell of the unmerged cellsAn exemplary Excel file with one table from each 38.101-1/2/3 spec is attached. |
| [**R4-2006734**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_95_e/Docs/R4-2006734.zip) **[2]** | Futurewei | Proposal 1: Prefer option 2 where the rules and marks which are created by 3GPPObservation 1: Whether to introduce a unique name to facilitate recovery for sorting is an FFS.Proposal 2: Re-order the columns of the spreadsheet so that information is not duplicated, and relevant columns are adjacent to form sets. |
| [**R4-2006840**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_95_e/Docs/R4-2006840.zip) **[3]** | ZTE Corporation | Proposal 1: It is suggested to use a wildcard to denote any intra-band contiguous CA configurations for FR2 band if all the CA BW classes within a fallback group specified in TS 38.101-2 have been requested in the EN-DC configurations. Otherwise, the detail EN-DC configurations should be requested individually. If CA configurations for all fallback groups specified in TS 38.101-2, then a general wildcard such as ‘ \* ’ will be used for the FR2 band. The wildcard for each fallback group is suggested as below.Proposal 2: It is suggested to use a bracket to denote intra-band non-contiguous CA configurations, such as (#-$) denotes all configurations between FBG 3 and 4 defined in TS 38.101-2.Proposal 3: For UL column in the EN-DC configuration table, if a wildcard is used, it denotes a valid UL carrier or CA configuration for the FR2 band that does not have more carriers than DL within the same fallback group. |
| [**R4-2008064**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_95_e/Docs/R4-2008064.zip) **[4]** | Nokia, Nokia Shanghai Bell | The specific approach about tracking changes in ExcelOption 2: Following the rules and marks which are created by 3GPP for Excel tracking changes.Issue about band combination informationOption 1: List all next level fallback combos which are not completed. |
| [**R4-2008085**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_95_e/Docs/R4-2008085.zip) **[5]** | Huawei, HiSilicon | Observation 1: It’s feasible to use Excel’s function to track changes.Proposal 1: RAN4 use option 2 as track changes’ manner in Excel table in Rel-17. The procedure can follow Annex B.Proposal 2: The Excel attachment can be used as the template for all of request table, status report table and band combination index table of basket WID.Observation 2:Contact persons are responsible for guaranteeing that all of the information is correct when they are requesting the band combinations and reporting the status of band combinations. When the band combinations are changed, contact person should report the status timely.Rapporteurs are responsible for guaranteeing that the official basket WIDs/SR have high qualities. Rapporteurs can comment the request/SR documents from contact person to improve basket WI. Contact person still can comment the official basket WI and SR. |
| [**R4-2008112**](http://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_95_e/Docs/R4-2008112.zip) **[6]** | NTT DOCOMO INC. | Proposal 1: Add missing existing basket WI of “Dual Connectivity (EN-DC) of LTE inter-band CA xDL1UL bands (x=2,3,4) and NR FR1 1DL1UL band and NR FR2 1DL1UL band” in “cover sheet” page.Proposal 2: Add new columns for number of DL LTE/DL NR/UL LTE/UL NR bands in “Band combination table” page in both ENDC/NRCA/SUL and LTECA templates.Proposal 3: Draft CR approach approved in [4] should also apply EN-DC configuration including FR2. |

## Open issues summary

### Sub-topic 1-1

*Sub-topic 1-1 discuss the details of excel sheet format for request sheet, status report, and band combination table in Rel-17 basket WI related to approved WF of R4-2005168.*

**Issue 1-1-1: Way for Tracking changes in excel format**

* Proposals
	+ Option 1: Following the track changes’ function in Excel which are developed by Microsoft.
	+ Option 2: Following the rules and marks which are created by 3GPP for Excel tracking changes.
* Recommended WF
	+ Take Option 2 in Rel-17 basket WI since there are no proposals on Option 1 while Option 2 is preferred in several contributions [2][4][5].

**Issue 1-1-2: Issue about fallback of band combination information**

* Proposals
	+ Option 1: List all next level fallback combos which are not completed.
	+ Option 2: Using “Are all fallback combos completed? Yes/No” to balance the information and workload.
	+ Option 3: Removing the “fallback combination’s status” item.
* Recommended WF
	+ Depending on 1st round discussion, but take Option 1 if there are no comments since Option 1 is preferred in [4].

**Issue 1-1-3: Order of the column of spread sheet used for the WID & status report**

* Proposals
	+ Option 1: Re-order the columns of the spreadsheet so that information is not duplicated, and relevant columns are adjacent to form sets [2]
	+ Option 2: Keep the current order
* Recommended WF
	+ Depending on 1st round discussion

**Issue 1-1-4: New column for the number of LTE/NR bands**

* Proposals
	+ Option 1: Add new columns for number of DL LTE/DL NR/UL LTE/UL NR bands in “Band combination table” page in both ENDC/NRCA/SUL and LTECA templates [6]
	+ Option 2: Not add the new columns
* Recommended WF
	+ Depending on 1st round discussion

**Issue 1-1-5: Missing existing Rel-16 basket WI**

* Proposals
	+ Option 1: Add missing existing basket WI of “Dual Connectivity (EN-DC) of LTE inter-band CA xDL1UL bands (x=2,3,4) and NR FR1 1DL1UL band and NR FR2 1DL1UL band” in “cover sheet” page [6]
	+ Option 2: Not add
* Recommended WF
	+ Take Option 1 since this is correction.

### Sub-topic 1-2

*Sub-topic 1-2 discuss other than those related to Sub-topic 1-2.*

**Issue 1-2-1: Apply excel format to band combination table in TS 38.101-1/2/3.**

* Proposals
	+ Option 1: Yes
		- The details of way are provided in [1]
			* *NOTE can be added as additional line below the table*
			* *For tracking changes, the same table format in Option 2 in Issue 1-1-1 can be used*
			* *Use separated columns as same with the current table such as columns for DL configuration, UL configuration, Single UL allowed.*
			* *Cells merged in the Word document need to be unmerged to allow sorting, macros etc. The contents in the cells, which are empty after the unmerge, need to be filled with the same information as in the uppermost left cell of the unmerged cells*
	+ Option 2: Yes, but need further modification.
	+ Option 3: No
* Recommended WF
	+ Depending on 1st round discussion

**Issue 1-2-2: Wild card for EN-DC including FR 2 intra-band contiguous CA**

* Proposals
	+ Option 1: Use a wildcard to denote any intra-band contiguous CA configurations for FR2 band if all the CA BW classes within a fallback group specified in TS 38.101-2 have been requested in the EN-DC configurations [3].
	+ Option 2: Use wild card with further modification.
	+ Option 3: Do not use a wild card [1].
* Recommended WF
	+ Depending on 1st round discussion

**Issue 1-2-3: Wild card for EN-DC including FR 2 intra-band non-contiguous CA**

* Proposals
	+ Option 1: Use a bracket to denote intra-band non-contiguous CA configurations, such as (#-$) denotes all configurations between FBG 3 and 4 defined in TS 38.101-2 [3].
	+ Option 2: Use wild card with further modification.
	+ Option 3: Do not use a wild card [1].
* Recommended WF
	+ Depending on 1st round discussion

**Issue 1-2-4: Draft CR approach for EN-DC including FR2 bands**

* Proposals
	+ Option 1: Draft CR approach approved in RP‑181126 should also apply EN-DC configuration including FR2 [6].
	+ Option 2: Do not apply draft CR approach for EN-DC configuration including FR2.
* Recommended WF
	+ Depending on 1st round discussion

## Companies views’ collection for 1st round

### Open issues

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| **Issue** | **Comments** |
| **Issue 1-1-1: Way for Tracking changes in excel format**  | Futurewei: as most companies support option 2, perhaps we can determine what values of the fields / colors to use and some rulesFollowing Apple’s contribution R4-2006626

|  |  |  |  |
| --- | --- | --- | --- |
| Status | Meaning | Highlight Color of status cell | Color of affected columns |
| U | Unchanged |  |  |
| M | Modified  | Yellow | Use yellow highlights on cells of that row that changed |
| N | New combination | Blue |  |
| D | To be deleted | Red |  |

Q: For the WID, it is necessary to say an item is completed? If yes, perhaps “C” for completed : green highlighting can be used.Q: if a new UL band (or carriers) is requested for an existing band combination, do we create a new row or do we update the existing band combination?Huawei: For the color of new band combination, I don’t have strong view about this. “Yellow” or “Blue” are OK to me. Anyway, the unified type and color about change marks for Rel-17 WID or future spce are appreciated.To Futurewei:A1: Column L indicate the Status (New,Ongoing,Completed,Stopped) based on R4-2005168.A2: In my understanding, we just create a new row based on previous experience. There is no limited about UL configuration. All or partial UL configuration can be merged into one cell.XXXNokia: support option 2.ZTE: Support option 2(we have conclusions in last meeting when we have offline discussion with MCC). It is impossible to use option 1 since we have already used option 2 for the Rel-17 combs work.For the background color, we think it is no need to highlight combs with ‘N’, instead highlight ‘M’ and ‘D’ are more meaningful.More importantly, we think the status in the cover sheet are not only for proponents, but also for rapporteur. It should make it clear to how to use them in the cover sheet at the stage of combs requesting. In addtion, it should be make it clear on which columns shall be fill-in/kept for the following cases:- case 1: for proponent requesting combs - case 2: for rapporteur merging all the requested combs, (It shall be aligned with case 1)- case 3: for proponent only reporting the status- case 4: for rapporteur merging all the reporting combs (should all the columns shall be kept for status report??) --<others>Reply to FW:1. No need to add ‘C’. There is a column for the status. The status in the cover sheet are for the combs requesting.
2. update the existing band combination with ‘M’ may be a feasible way.

Intel: Option 2. For the status updates, we think adding a status “completed” using letter ‘C’ makes sense. Otherwise, where to capture the completeness of the combos which is quite useful information during each update? We support adding a ‘C’ in the status table along with other letters. ‘U’, ‘M’, ‘N’, ‘D’.

|  |  |  |  |
| --- | --- | --- | --- |
| C | Completed | Green |  |

Qualcomm: We support option 2.CHTTL: In general, I think we need to adopt option 2, since it is proposed by MCC. I have additional question on this. In the upcoming RAN plenary, the status of the newly added combination will be “new” in column “L”, but in the later RAN plenary meeting, rapporteur will change the status to “on-going”, in this case is it still considered as “Modified” ? as the content of the row has changed (or maybe this can discussed in the next meeting).Huawei:About UL configuration, there is no limitation currently. All or partial or only one UL configuration can be merged or filled into one cell for basket WI. If companies want to change current situation, analysis about pros and cons are appreciated in next meeting. We may have to address this issue if we plan to transfer spec to Excel table.To ZTE, we can further clarify which column will be filled when requesting or reporting SR.To CHTTL, I suppose any correction should be considered as “modified” since column A just indicate the change marks. There is no additional workload. Firstly you can find out status “New”. Secondly, change the column A and then change the status as “Ongoing”.ZTE:I have another question for NR CA basket WID, since bandwidth information needs to be added in ‘BCS’ worksheeet, which is different with ENDC. If the proponent only update the supported channel bandwidths for the existing band combinations, is ‘M’ also needed in the ‘combinations’ worksheet?(in this case, the combination information in ‘combinations’ worksheet are not changed.)In addition, it seems the ‘BCS’ table in the cover sheet is meaningless. we propose to delete it. It is only for NR CA WID, and it is common sense the BCS table is needed for CA combs requesting. Apple: We support option 2.Futurewei: thanks for answering the questions. From the discussions, it seems a set of simple guidelines could help all and create a consistent spreadsheet. With regard to the completion flag: no strong opinions either way. |
| **Issue 1-1-2: Issue about fallback of band combination information**  | Company name AXXXCompany name BYYYHuawei: The solution about this issue is shown in page 7 of R4-2005168. A clarification to Nokia. For Supported next level fallback modes including initial status when requesting, do we just need to list all next level fallback combos which are not completed or to list all next level fallback combos including initial status when requesting just like rel-16?Nokia: We support option 1. It is essential for rapporteur to know which fallback modes are still open at the time CA/DC is initially requested so that he/she can track the status of fallbacks easily. (it is not necessary to update the status later in the spreadsheet.)ZTE. Similar view as huawei. There is a column ‘Supported next level fallback modes including initial status when requesting (in DL and UL).’ in the template, where the status of the fallback mode are included. It seems more or less duplicate with ‘fallback combination’s status”Intel: We support option 1. Otherwise, the status of each fallback combo is loss of tracking. Rapporteurs ( and proponents as well) always need this information to answer the item “Are all fallback combos completed? Yes/No”, so we believe this is feasible and no extra burden added.Qualcomm: We support option 1. The column for supported next level fallback modes only include the initial status but rapporteur need to know which fallback modes are not finished.CHTTL: Clarification to option 1, is additional column needed for the current tentative excel template? Or it is proposed under the “Supported next level fallback modes including initial status when requesting (in DL and UL)” column.Our suggestion is to list all next level fallback combos status including completed and not completed in the “Supported next level fallback modes including initial status when requesting (in DL and UL)”, with this information rapporteur can know whether all fallback combos are completed or not, so we think the column”Are all fallback combos completed? Yes/No” is not needed for the WID, and it is not possible to update this column every meeting.Huawei:To CHTTL, the column ”Are all fallback combos completed? Yes/No” is a SR checkpoint when the responding combos are finished. Proponents don’t have to report it every meeting. They just need to report it when the combos are finished. We still think page 7 is a good solution.ZTE:In my understanding, if the TP for a certain comb is agreed, then this combs can be seem as completed, and rapporteur will update the status as ‘completed’, meanwhile, the status for all fallback combos are also updated as ‘completed’ in the column of ‘Supported next level fallback modes including initial status when requesting (in DL and UL).’. In this case,, ”Are all fallback combos completed? Yes/No” is meaningless since it is duplicated information. If the TP for a certain comb is agreed but later it is found the some fallback modes are not completed (maybe miss such information during the flagging procedure), then we may remove such combs from the spec since it is stated in the WORD WID that the fallback mode shall be completed in advanced.  |
| **Issue 1-1-3: Order of the column of spread sheet** | Futurewei – the contribution is asking whether one sheet can be used for the WID and the status report. From the study of the reports and WID, the answer is yes. When the columns are ordered correctly, the task of generating the status report / WID is much easier. The question is with the different types of band combinations, can we arrive at a set if is applicable to all types? Can we use generic names?The Huawei contribution does address many of the issues of the needed columns.Company name BYYYHuawei: My understanding is that one sheet can be used for both the WID and the status report for rapporteurs. Based on the previous agreements, Num CC and REL-indep isn’t needed. Because it’s easy to insert a new column in Excel table, there is no need to reserve columns. My preference is to keep the tentative template as RAN4’s agreements.Nokia: Option 1 is ok for us. ZTE: For Num, it is no need. For ‘REL-indep’, we still have concerns on excluding it. Since according to TS38.307, we cannot know the combs in the Rel-16 can be released Indep from Rel-15. The apporach used in TS38.307 is not the same as TS36.307.We can accept option 1 in the case of some new useful information such as ‘REL-indep’ are added.Intel: Option 1. Putting related information/columns together is more friendly to the readers. I think RAN4 also considers using the same formats in the specifications. So it more meaningful to do so. Some suggested formats to consider in following links. The information provided there are well-structured and very useful, we can take them as references.<https://www.sqimway.com/lte_ca_band.php> <https://www.sqimway.com/nr_ca.php>CHTTL: The concept is ok, but the example items listed in R4-2006734 are not based on the current tentative excel sheet? Regarding the order, we would like to discuss whether it is better to put the “RAN Plenary in which the conbination was requested” and "Related WI (acronym)" columns to the last order of the WID but before the status report.Huawei: For the specific order, we can further discuss it. But I think it’s a good choice using tentative template as baseline.Futurewei:To CHTTL: the analysis on the columns was based on all the WIDs and status reports from the last RP. No alignment to the tentative template was not performed. We just need to ensure that the tentative template is applicable to all the band combinations and contain relevant information for the WID and status report. |
| **Issue 1-1-4: New column for the number of LTE/NR bands** | Company name AXXXCompany name BYYYHuawei: I have a solution to address this issue. Rapporteurs can create the limited values in the column E Subclass for the specific WI if necessary. We can distinguish the DL bands as LTE or NR. Since all or partial UL configuration may be merged into one cell, we can’t distinguish the UL bands. For DC\_R16\_xBLTE\_2BNR\_yDL3UL, 1LTE2NR, 2LTE2NR, 3LTE2NR can be used in the column E Subclass.Nokia: option 1 is ok for us.ZTE: Option 2. No need to add new column. There are lots of columns to fill in which make the excel more and more complex. We can easy know the band numbers from the configuration.Intel: Option 1. 1) To HW and all, regarding the ‘Subclass’ field, we are not sure what is its exact meaning. For example, in band combination table sheet in LTE Excel template, what is the purpose of “subclass” field, ‘Only FR1’ seems not reasonable for LTE. FR1 is a NR term with spectrum up to 7.125GHz, apparently it is not for LTE. 2) For Configuration with multiple UL configurations, we suggest each UL configuration should have its own entry, instead of merging them together. Merging can be quite out of control if not well managed. In case that merging UL configurations is the decision, then separation mark must be consistent and when merging multiple row cells, the first cell being merged shall not be empty. Because it creates misalignments when reading this format in post processing the table by computer program.Qualcomm: we support option 1.CHTTL: agree with ZTE that it is not easy to review if we keep extending the number of columns. But I think the reason is for the usage of filtering, would like to know if this can be done by the "Related WI (acronym)" column?To Huawei and Intel, regarding the “Subclass field”, we would like to confirm that only the NR band is considered when choosing the subclass “Only FR1”, “Only FR2”, “FR1+FR2”, is that correct understanding? Regarding LTE CA probably no need to fill the subclass field? or to create one for it ex: LTE only ?Usually the merged UL configurations have the same number of bands, we might not have the case that merge different UL configuration with different number of bands into one column.Huawei: Let me make some explanations about “subclass”. The main purpose is for the usage of filtering in one WID. Different WID have different situation. For example, the classification is based on the number of LTE bands in RP-200080 and RP-192423. On the other hand, the classification is based on the FR1 or FR2 in RP-200271 and RP-200221. Maybe we can collect more demands from rapporteurs to extend the limited values in column “subclass”. For LTE we can follow your suggestion to correct the limited values.NTT DOCOMO, INC.: Option 1.To CHTTLIntension is the usage of filtering within one basket WI since certain basket WI include different number of bands in one basket WI. |
| **Issue 1-1-5: Missing existing REl-16 basket WI** | Nokia: Option 2 should work by allowing 3UL (1 LTE + 1 FR1+1 FR2) in DC\_R16\_xBLTE\_2BNR\_yDL2UL. There is no specific technical work to add FR2 uplink.ZTE: Agreed with Nokia, 3UL shall be restricted in 1LTE+1FR1+1FR2.CHTTL: The cover page of the tentative excel sheet needs to be updated to include all of the approved Rel.17 band combination related baskets after the plenary meeting, also the title and the acronym needs to be updated, so probably we don’t need to specifically agree this in this meeting.Huawei: We can capture this basket WI into the updated template.NTT DOCOMO, INC.: We are OK as long as all basket WI is captured in cover page correctly.Company name BYYY |

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| **Issue** | **Comments** |
| **Issue 1-2-1: Apply excel format to band combination table in TS 38.101-1/2/3.** | Company name AXXXCompany name BYYYHuawei: 1. It's the trend that RAN4 will handle more and more spreadsheet using Excel table. 2. We need to confirm which table or sub-clause can be replaced by Excel table. 3 For 38.101-3, two bands are listed as example. However, three bands have a different situation.Nokia: support option 1.ZTE: Option 3. For the replacement of using Excel as the template, we prefer to use only in the case of request sheet, status report and basket WI. If we also use excel sheet as the attachment in 38.101-x, this will make the specification too complex and inconvenient to read. We don’t think it is necessary to change the format at least for the Table 5.5A in 101-1 and 101-2, since there is not much improvement in the simplification of the specification brought by the Excel attachment. Reasonable use of wildcards can not only reduce the size of configuration table, but also maintain the consistency with the previous version of specifications.A further question to Apple’s contribution R4-2006626, why there is no need of introducing “note” column in 101-1 and 101-2 as 101-3 supposed. The note is added as a row at the bottom of table, however it is noted for the whole line of combination not for a specific column in that row. Such as “Note 1” in 101-1 is not for the whole table.Intel: Option 2 and Option 1 No matter which option (including option 3), we propose some additional guidelines/suggestions to the excel template, these are in micro level, but we think they are very important and benefit every company, and should be followed for better quality of work. We strongly suggest capturing the following rules in the Excel template in a separate sheet called ‘Rules for handling band combination EXECL file’, companies are welcome to add more rules besides the following we are proposing:1) The data content of a table should always start at the same cell. (e.g. header in cell A1…X1, data in cell A2…X2). This is required for posting processing.2) No table name changes once we fix the template3) Avoid multiple data in a single cell* If this is unavoidable, use a clearly defined format with comma-separated values.
* Avoid putting multiple lines of data in a single cell.
* Except of cells which contain comments, there should be no carriage-return/line-feed in the cells.

4) If possible, avoid merged cells. If unavoidable (e.g. LTE inter-band BCS table) the data should be in the upper(left) cell, this cell cannot be empty.5) Avoid any data which could be formatted incorrectly. E.g. 4-2-22 would be interpreted by Excel incorrectly as a date6) The data in the cell “Supported next level fallback modes….” is difficult to process automatically, because it can contain multiple lines of data in a single cell and also some leading status information. If a better way cannot be found to store this data, the syntax in this cell must be clearly defined. (E.g. always use the same type of brackets, etc.) This is very important.7) Wherever possible users should use data-lookup or data validation to avoid inconsistent data entry.Qualcomm: Before we solve all the issues raised in the last meeting, we prefer option 1.CHTTL: Option 2. Not sure all of the tables need to transfer to excel, the original topic is for the EN-DC combinations with FR2 band, probably we can start with this case which contains less columns, and less notes compaired with other cases.Apple: We support option 1, as the high number of combinations makes the word files unreadable, even scrolling through the tables takes excessive time. Using a wildcard will remove essential information on which combinations are really specified in RAN4 specs and which not.Answer to ZTE’s comment/question: We think also for 38.101-1 and 38.101-2 it is useful to replace the word tables with Excel, for example for 101-1 table 5.5A.3-1 is already 15 pages long and needs landscape format to be able to fit on the page and table 5.5A.2-2 in 38.101-2 is 12 pages long, also in landscape format. We just used short tables for the examples, since it was easier and faster to generate them for a discussion paper. For 38.101-1 and 38.101-2 the notes are at the bottom without adding a column since the notes are generally applicable, not necessarily related to a specific line, so we didn’t add the line. However, we would also be ok to add a note column for consistency.For Intel: We are open to add some additional rules to the ones we proposed in our paper |
| **Issue 1-2-2: Use a wild card for EN-DC including FR 2 intra-band contiguous CA** | Nokia: As far as we use Excel, there is no reason to use wild card, as we can easily increase the number of rows. Option 3 should work.ZTE: We prefer Option 1 since using a wild card within a fallback group can not only reduce the scale of configuration table but also solving the problem of many band combinations which were not actually proposed before.Intel: Option 3. No wildcard. Agree with Nokia. And furthermore, it seems there is no additional effort in inputting Excel content into spec. Wildcard will incur extra-effort to interpret what are the real band combination combos in the spec.Qualcomm: Before we solve all the issues raised in the last meeting, we prefer not to use wild card method.CHTTL: agree with Nokia and Intel and QC. We already shared some concern on the wild card usage in the previous meeting.Apple:We also think option 3 would be fine. The point is that the wild card approach would significantly remove required information from the table. There would not be a complete list of specified combinations anymore, instead there would be many more combinations indirectly listed as supported although they haven’t been specified and requested in a WI. Additionally the wildcard approach doesn’t simplify the 44 pages of FR1 EN-DC combinations in 38.101-3.NTT DOCOMO, INC: We prefer option 1. The proposed methods in [3] limit the use case and would address the concern raised in the last meeting.XXXCompany name BYYY |
| **Issue 1-2-3: Use a wild card for EN-DC including FR 2 intra-band non-contiguous CA** | Nokia: As far as we use Excel, there is no reason to use wild cards, as we can easily increase the number of rows. Option 3 should work.ZTE: We prefer Option 1. By introducing a wild card within a fallback group, it is easy to represent the cases of EN-DC including FR2 intra-band non-contiguous CA. It’s better to keep flexibility to differentiate intra-band non-contiguous and non-contiguous CA.Intel: Option 3. No wildcard. Agree with Nokia. And furthermore, it seems there is no additional effort in inputting Excel content into spec. Wildcard will incur extra-effort to interpret what is the real band combination combos in the spec.Qualcomm: Before we solve all the issues raised in the last meeting, we prefer not to use wild card method.CHTTL: agree with Nokia and Intel and QC. We already shared some concern on the wild card usage in the previous meeting.Apple:We also think option 3 would be fine. The point is that the wild card approach would significantly remove required information from the table. There would not be a complete list of specified combinations anymore, instead there would be many more combinations indirectly listed as supported although they haven’t been specified and requested in a WI. Additionally the wildcard approach doesn’t simplify the 44 pages of FR1 EN-DC combinations in 38.101-3.NTT DOCOMO, INC: We prefer option 1. The proposed methods in [3] limit the use case and would address the concern raised in the last meeting.XXXCompany name BYYY |
| **Issue 1-2-4: Draft CR approach for EN-DC including FR2 bands** | Nokia: Option 1.ZTE: Option 1. Meanwhile, a question for clarification: If we adopt option 1, does it means TP is not allowed for EN-DC including FR2 bands?Qualcomm: We support option 1.CHTTL: Regarding option 1, my understanding is TP is still allowed.Apple: Generally we agree to option 1, but with a modification. The point here is that it doesn’t work for intra-band UL non-contiguous CA, regardless if FR1 or FR2, since there can be IMD products similar to inter-band combinations when the separation is large. We currently see this in the proposed CR to just replace CA\_n28A-n77A with CA\_n28A-n77(2A) and UL CA\_n77(2A). However, CA\_n77(2A) generates all orders of IMD far out of band even falling into the RX band of n28. So this approach from RP-181126 should not be applied for replacing single UL carriers with UL intra-band non-contiguous CA combinations in FR1 nor FR2.ZTE: To CHTTL, we prefer to forbid TP, only using draft CR method. It can be foreseen no technical issues for ENDC including FR2, just add the new configurations in the table.NTT DOCOMO, INC.: Option 1We agree with Apple. Actually, the point Apple said was mentioned in RP-181126 and this point should be clarified as common understanding.* + *In case there are some exceptional cases are found and explanation is necessary, submitting TPs are allowed.*
		- *Example: In case the number of CCs for UL for one of the bands for a certain CA configuration increases, the noise level falling into Rx band of the other band(s) fr the CA configuration may increase. Hence, reference sensitivity degradation must be evaluated.*

 XXXCompany name BYYY |
|  |  |

### 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** |
| XXX | Company A |
| Company B |
|  |
| YYY | 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.*

|  |  |  |
| --- | --- | --- |
| **Sub topic** | **Issue** | **Status summary**  |
| **#1-1:****The details of excel sheet format** | *1-1-1: Way for Tracking changes in excel format* | *Tentative agreements:**Option 2 since all companies prefer Option 2**Candidate options:** *Option 1: Following the track changes’ function in Excel which are developed by Microsoft.*
* *Option 2: Following the rules and marks which are created by 3GPP for Excel tracking changes.*

*Recommendations for 2nd round:*The details of rules for using excel sheet format should be clarified.Suggestion from the moderator is to collect companies’ views in E-mail discussion summary in 2nd round, and capture the consensus parts in WF assigned to Huawei. The below points were raised in 1st round * Introduce or not “C”(completed) in column A
* How to introduce new UL configuration requested for existing band combinations
	+ Create new low
	+ Merge existing band combinations
* Delete or not the following items
	+ “N”(New) in Column A
	+ BCS table in cover sheet
* What column should be filled-in for the following cases
	+ case 1: for proponent requesting combs
	+ case 2: for rapporteur merging all the requested combs, (It shall be aligned with case 1)
	+ case 3: for proponent only reporting the status
	+ case 4: for rapporteur merging all the reporting combs (should all the columns shall be kept for status report??)
* Need or not to set “Modified” in column A in the following cases:
	+ When status is changed from “New” to “Ongoing” by rapporteurs at first RAN meeting after the combinations were requested
	+ When only BCS information is changed
 |
| *Issue 1-1-2: Issue about fallback of band combination information* | *Tentative agreements:**The consensus part seems to be that we need to list information about “next level fallback modes” in excel format, but it is better to make common understanding on the details in 2nd round.**Candidate options:** *Option 1: List all next level fallback combos which are not completed.*
* *Option 2: Using “Are all fallback combos completed? Yes/No” to balance the information and workload.*
* *Option 3: Removing the “fallback combination’s status” item.*

*Recommendations for 2nd round:*Suggestion from the moderator to collect companies’ views in E-mail discussion summary in 2nd round, and capture the consensus parts in WF assigned to Huawei. Page 7 in R4-2005168 should be a baseline of discussion since it includes option 1 which seems to be a majority view in 1st round. In 2nd round, the following points should be discussed further:* For column ““Supported next level fallback modes including initial status when requesting (in DL and UL)”
	+ Option 1: List all next fallback combinations including both completed and non-completed
	+ Option 2: List next fallback combinations which is not completed.
* For column ”Are all fallback combos completed? Yes/No”.
	+ Option 1: Need this column, and update when fallbacks are completed
		- 1-A: Contact person updates it
		- 1-B: Rapporteur updates it
	+ Option 2: Need this column, and not update the status after the combinations was initially requested.
	+ Option 3: Not need this column
* For clarification, is additional column needed related to next level fallback modes?
	+ Yes
	+ No
 |
| *Issue 1-1-3: Order of the column of spread sheet* | *Tentative agreements:**Option 1, but we need to discuss the specific columns and orders.**Candidate options:** *Option 1: Re-order the columns of the spreadsheet so that information is not duplicated, and relevant columns are adjacent to form sets [2]*
* *Option 2: Keep the current order*

*Recommendations for 2nd round:*Suggestion from the moderator to collect companies’ views in E-mail discussion summary in 2nd round, and capture the consensus parts in WF assigned to Huawei. The following order should be a baseline.NOTE: The columns marked as blue are not described in R4-2006734, but listed in the tentative template. The order of these column should be discussed. For the first set (common columns), they should have the following* Change marks (new, modified, deleted, changed)
* Band combination name
* Uplink Configuration
* BCS
* Subclass
* Contact name, company

For the second set (WID specific)* Email
* other supporting companies (min. 3)
* RAN Plenary in which the combination was requested
* Related WI(acronym)
* WID status (new, ongoing, completed, stopped)
* supported fallback modes
* Are all fallback combos completed?(Yes or No)
* TR#

For the last set (Status Report specific)* TPs provided as input for TR
* CRs provided to RAN
* Core part completed? yes/no
* Perf. part completed? yes/no
* open issues/comments
* Note

We also need to discuss whether or not “Rel-independent from” column should be added. |
| *Issue 1-1-4: New column for the number of LTE/NR bands* | *Tentative agreements:**Nothing.* *Candidate options:** *Option 1: Add new columns for number of DL LTE/DL NR/UL LTE/UL NR bands in “Band combination table” page in both ENDC/NRCA/SUL and LTECA templates [6]*
* *Option 2: Not add the new columns*

*Recommendations for 2nd round:*Suggestion from the moderator to collect companies’ views in E-mail discussion summary in 2nd round, and capture the consensus parts in WF assigned to Huawei. Based on 2nd round, the following options should be discussed:* For filtering the number of LTE/NR bands,
	+ *Option 1: Add new columns for number of DL LTE/DL NR/UL LTE/UL NR bands in “Band combination table” page in both ENDC/NRCA/SUL and LTECA templates [6]*
	+ *Option 2: Use column “Subclass”*
	+ *Option 3: Do nothing*

*In addition, the following topics should be discussed:** *For column “Subclass”, it is encouraged to provide specific proposal about what types of subclass is needed, and what types of band combinations should be categorized in each type of Subclass.*
* *For UL configuration*
	+ *Option 1: List one UL configuration in one line.*
	+ *Option 2: List multiple UL configuration in one list (Keep current format)*
		- *Option 2-A: UL configuration included in one line should have same number of bands.*
		- *Option 2-B: No restriction on the number of bands as long as the combinations within the same basket WI.*
 |
| *Issue 1-1-5: Missing existing REl-16 basket WI* | *Tentative agreements:**Nothing.* *Need clarification on Nokia’s suggestion.**Candidate options:** *Option 1: Add missing existing basket WI of “Dual Connectivity (EN-DC) of LTE inter-band CA xDL1UL bands (x=2,3,4) and NR FR1 1DL1UL band and NR FR2 1DL1UL band” in “cover sheet” page [6]*
* *Option 2: Not add*

*Recommendations for 2nd round:*Suggestion from the moderator to collect companies’ views in E-mail discussion summary in 2nd round, and capture the consensus parts in WF assigned to Huawei. * *For WI for DC\_R16\_xBLTE\_2BNR\_yDL2UL,*
	+ *Option 1: Not add in cover sheet since there is no specific technical work on configuration on this WI (need clarification on Nokia’s suggestion)*
	+ *Option 2: Add this WI.*
 |
| **#1-2** | *Issue 1-2-1: Apply excel format to band combination table in TS 38.101-1/2/3.* | *Tentative agreements:**Nothing.**Candidate options:** *Option 1: Yes(Nokia, Qualcomm, Apple)*
	+ *The details of way are provided in [1]*
		- *NOTE can be added as additional line below the table*
		- *For tracking changes, the same table format in Option 2 in Issue 1-1-1 can be used*
		- *Use separated columns as same with the current table such as columns for DL configuration, UL configuration, Single UL allowed.*
		- *Cells merged in the Word document need to be unmerged to allow sorting, macros etc. The contents in the cells, which are empty after the unmerge, need to be filled with the same information as in the uppermost left cell of the unmerged cells*
* *Option 2: Yes, but need further modification.(CHTTL)*
* *Option 3: No(ZTE)*

*Recommendations for 2nd round:*Suggestion from the moderator to collect companies’ views in E-mail discussion summary in 2nd round, and capture the consensus parts in WF assigned to FSS.The following points should be discussed:* For use of excel sheet for band combinations table in TS 38.101-x (Since this discussion seems to be same with 1st round, it is encouraged to focus on discussion on specific tables and specification in order to find benefits and concerns of this method)
	+ Option 1: Apply all band combinations table in TS 38.101-1/2/3
	+ Option 2: Apply part of band combinations table
		- It is preferred to provide specific table and spec number.
	+ Option 3: Do not apply any band combinations table.
* *Description of some guidelines/suggestions to the excel template*
 |
| *Issue 1-2-2: Use a wild card for EN-DC including FR 2 intra-band contiguous CA* | *Tentative agreements:**Nothing.**Candidate options:** *Option 1: Use a wildcard to denote any intra-band contiguous CA configurations for FR2 band if all the CA BW classes within a fallback group specified in TS 38.101-2 have been requested in the EN-DC configurations [3].*
	+ *ZTE, NTT DOCOMO*
* *Option 2: Use wild card with further modification.*
* *Option 3: Do not use a wild card [1].*
	+ *Nokia, Intel, Qualcomm, CHTTL, Apple*

*Recommendations for 2nd round:*Suggestion from the moderator to collect companies’ views in E-mail discussion summary in 2nd round, and capture the consensus parts in WF assigned to FSS.* For Use a wild card for EN-DC including FR 2 intra-band contiguous CA (Since this discussion seems to be same with 1st round, it is encouraged to discuss option 2 if possible.)
	+ *Option 1: Use a wildcard to denote any intra-band contiguous CA configurations for FR2 band if all the CA BW classes within a fallback group specified in TS 38.101-2 have been requested in the EN-DC configurations [3].*
	+ *Option 2: Use wild card with further modification.*
	+ *Option 3: Do not use a wild card [1].*
 |
| *Issue 1-2-3: Use a wild card for EN-DC including FR 2 intra-band non-contiguous CA* | *Same with Issue 1-2-2.* |
| *Issue 1-2-4: Draft CR approach for EN-DC including FR2 bands* | *Tentative agreements:**Option 1, but need clarification and may need modification of use of draft CR approach.**Candidate options:** *Option 1: Draft CR approach approved in RP‑181126 should also apply EN-DC configuration including FR2 [6].*
	+ *ZTE, Qualcomm, Apple, NTT DOCOMO*
* *Option 2: Do not apply draft CR approach for EN-DC configuration including FR2.*

*Recommendations for 2nd round:*Suggestion from the moderator to collect companies’ views in E-mail discussion summary in 2nd round, and capture the consensus parts in WF assigned to FSS.*The following points should be discussed:** *Whether TPs are allowed or not.*
* *Clarify the case where draft CR approach should not be applied.*
 |

*Recommendations on WF/LS assignment*

|  |  |  |  |
| --- | --- | --- | --- |
|  | **WF/LS t-doc Title**  | **Assigned Company,****WF or LS lead** | **NOTE** |
| #1WF | WF on refinement on excel format for band combinations | Huawei, HiSilicon | This WF will capture the consensus parts in Sub-topic 1-1. |
| #2WF | WF on simplification on band combinations in specification | ZTE | This WF will capture the consensus parts in Sub-topic 1-2. |
| #3Revision of R4-2008112 | Simplification of band combinations | NTT DOCOMO, INC. | This revision capture required clarification in Issue 1-2-4 in Sub-topic 1-2. |

### 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)

### Sub-topic 1-1

*Sub-topic 1-1 discuss the details of excel sheet format for request sheet, status report, and band combination table in Rel-17 basket WI related to approved WF of R4-2005168.*

*In below, suggestions for further refinement on the excel sheet template in 1st round are summarized. Companies are encouraged to comment on each issue, and consensus parts should be captured in WF handled by Huawei.*

**Issue 2-1-1: Introduce “C”(completed) in column A in addition to “N”(New), “M”(Modified), “D”(Deleted), and “U”(Unchanged”)**

* Proposals
	+ Option 1: Yes
	+ Option 2: No

**Issue 2-1-2: How to introduce new UL configuration which is requested for existing DL band combinations**

* Proposals
	+ Option 1: Create new low
	+ Option 2: Marge existing band combinations

**Issue 2-1-3: Delete or not the following items from excel template**

* Items
	+ Item 1:“N”(New) in Column A
	+ Item 2: BCS table in cover sheet
* Proposals
	+ Option 1: Yes, delete
	+ Option 2: No

**Issue 2-1-4: What column should be filled-in for the following cases**

* Cases
	+ case 1: for proponent requesting combs
	+ case 2: for rapporteur merging all the requested combs, (It shall be aligned with case 1)
	+ case 3: for proponent only reporting the status
	+ case 4: for rapporteur merging all the reporting combs (should all the columns shall be kept for status report??)
* Proposals
	+ Companies are encouraged to provide their proposals

**Issue 2-1-5: Need or not to set “Modified” in column A in the following cases:**

* Cases
	+ case 1: When status is changed from “New” to “Ongoing” by rapporteurs at first RAN meeting after the combinations were requested
	+ case 2: When only BCS information is changed
* Proposals
	+ Option 1: Yes, need to set “M”(Modified)
	+ Option 2: No, need to set “U”(Unchanged)

**Issue 2-1-6: For column “Supported next level fallback modes including initial status when requesting (in DL and UL)”**

* Proposals
	+ Option 1: List all next fallback combinations including both completed and non-completed
	+ Option 2: List next fallback combinations which is not completed.

**Issue 2-1-7: For column ”Are all fallback combos completed? Yes/No”.**

* Proposals
	+ Option 1: Need this column, and update when fallbacks are completed
		- Option 1-A: Contact person updates it
		- Option 1-B: Rapporteur updates it
	+ Option 2: Need this column, and not update the status after the combinations was initially requested.
	+ Option 3: Not need this column

**Issue 2-1-8: For clarification, is additional column needed related to next level fallback modes?**

* Proposals
	+ Option 1: Yes
		- NOTE: It is preferred to clarify what additional column is need.
	+ Option 2: No

**Issue 2-1-9: How to order the columns of the spread sheet.**

* Proposals
	+ Option 1: Use the following order:
		- NOTE: The columns marked as blue are not described in R4-2006734, but listed in the tentative template. The order of these column should be discussed.

 For the first set (common columns), they should have the following

* Change marks (new, modified, deleted, changed)
* Band combination name
* Uplink Configuration
* BCS
* Subclass
* Contact name, company

For the second set (WID specific)

* Email
* other supporting companies (min. 3)
* RAN Plenary in which the combination was requested
* Related WI(acronym)
* WID status (new, ongoing, completed, stopped)
* supported fallback modes
* Are all fallback combos completed ? (Yes or No)
* TR#

For the last set (Status Report specific)

* TPs provided as input for TR
* CRs provided to RAN
* Core part completed? yes/no
* Perf. part completed? yes/no
* open issues/comments
* Note
	+ Option 2: Other
		- NOTE: It is preferred to provide the required modification.

**Issue 2-1-10: Whether or not “Rel-independent from” column should be added.**

* Proposals
	+ Option 1: Yes
	+ Option 2: No

**Issue 2-1-11: For filtering the number of LTE/NR bands,**

* Proposals
	+ Option 1: Add new columns for number of DL LTE/DL NR/UL LTE/UL NR bands in “Band combination table” page in both ENDC/NRCA/SUL and LTECA templates [6]
	+ Option 2: Use column “Subclass”
	+ Option 3: Do nothing

**Issue 2-1-12: For column “Subclass”**

* Proposals
	+ Option 1: Stay as it is (No change)
	+ Option 2: Need modification
		- NOTE: It is encouraged to provide specific proposal about what types of subclass is needed, and what types of band combinations should be categorized in each type of Subclass.

**Issue 2-1-13: How to list multiple UL configuration**

* Proposals
	+ Option 1: List one UL configuration in one line.
	+ Option 2: Stay as it is(List multiple UL configuration in one list)
		- Option 2-A: UL configuration included in one line should have same number of bands.
		- Option 2-B: No restriction on the number of bands as long as the combinations within the same basket WI.

**Issue 2-1-14: For WI for DC\_R16\_xBLTE\_2BNR\_yDL2UL,**

* Proposals
	+ Option 1: Not add in cover sheet since there is no specific technical work on configuration on this WI (need clarification on Nokia’s suggestion)
	+ Option 2: Add this WI.

**Issue 2-1-15: Description of some guidelines/suggestions to the excel template is needed or not.**

* Proposals
	+ Option 1: Yes, and describe the following rules
		- 1) The data content of a table should always start at the same cell. (e.g. header in cell A1…X1, data in cell A2…X2). This is required for posting processing.
		- 2) No table name changes once we fix the template
		- 3) Avoid multiple data in a single cell
		- If this is unavoidable, use a clearly defined format with comma-separated values.
		- Avoid putting multiple lines of data in a single cell.
		- Except of cells which contain comments, there should be no carriage-return/line-feed in the cells.
		- 4) If possible, avoid merged cells. If unavoidable (e.g. LTE inter-band BCS table) the data should be in the upper(left) cell, this cell cannot be empty.
		- 5) Avoid any data which could be formatted incorrectly. E.g. 4-2-22 would be interpreted by Excel incorrectly as a date
		- 6) The data in the cell “Supported next level fallback modes….” is difficult to process automatically, because it can contain multiple lines of data in a single cell and also some leading status information. If a better way cannot be found to store this data, the syntax in this cell must be clearly defined. (E.g. always use the same type of brackets, etc.) This is very important.
		- 7) Wherever possible users should use data-lookup or data validation to avoid inconsistent data entry.
	+ Option 2: Yes, but need more clarification and/or modification for Option 1
	+ Option 3: No

### Sub-topic 1-2

*Sub-topic 1-2 discuss other than those related to Sub-topic 1-1.*

*Companies have different views on Sub-topic 1-2. Moderator’s suggestion is to discuss modified proposals and acceptable options should be captured in WF handled by ZTE for discussion in the future meeting.*

**Issue 2-2-1: Apply excel format to band combination table in TS 38.101-1/2/3.**

NOTE: Since this discussion seems to be same with 1st round, it is encouraged to focus on discussion on specific tables and specification in order to find benefits and concerns of this method)

* Proposals
	+ Option 1: Apply all band combinations table in TS 38.101-1/2/3
	+ Option 2: Apply part of band combinations table
		- It is preferred to provide specific table and spec number.
	+ Option 3: Do not apply any band combinations table.

**Issue 2-2-2: Use a wild card for EN-DC including FR 2 intra-band contiguous CA**

NOTE: Since this discussion seems to be same with 1st round, it is encouraged to discuss option 2 if possible.

* Proposals
	+ *Option 1: Use a wildcard to denote any intra-band contiguous CA configurations for FR2 band if all the CA BW classes within a fallback group specified in TS 38.101-2 have been requested in the EN-DC configurations [3].*
	+ *Option 2: Use wild card with further modification.*
	+ *Option 3: Do not use a wild card.*

**Issue 2-2-3: Use a wild card for EN-DC including FR 2 intra-band non-contiguous CA**

NOTE: Since this discussion seems to be same with 1st round, it is encouraged to discuss option 2 if possible.

* Proposals
	+ *Option 1: Use a wildcard to denote any intra-band non-contiguous CA configurations for FR2 band if all the CA BW classes within a fallback group specified in TS 38.101-2 have been requested in the EN-DC configurations [3].*
	+ *Option 2: Use wild card with further modification.*
	+ *Option 3: Do not use a wild card*

### Sub-topic 1-3

*Sub-topic 1-2’ discuss draft CR approach related to Issue 1-2-4 in 1st round.*

*The consensus part should be captured in revision of R4-2008112.*

**Issue 2-3-1: Clarify the case where draft CR approach should not be applied**

* Proposals
	+ *Option 1: Clarification described in RP-181126 is sufficient*
		- *[From RP-181126] In case there are some exceptional cases are found and explanation is necessary, submitting TPs are allowed.*
			* *Example: In case the number of CCs for UL for one of the bands for a certain CA configuration increases, the noise level falling into Rx band of the other band(s) for the CA configuration may increase. Hence, reference sensitivity degradation must be evaluated.*
	+ *Option 2: Further clarification is needed*
		- *It is encouraged to provide specific proposals.*

**Issue 2-3-2: Whether submission of TPs is allowed or not for other band combinations than what discussed in Issue 2-3-1.**

* Proposals
	+ *Option 1: Allowed* (it depends on proponents)
	+ *Option 2: Not allowed (need to submit by draft CR)*

## Companies views’ collection for 2st round

### Sub-topic 1-1

|  |  |
| --- | --- |
| **Issue 2-1-1** | **Introduce “C”(completed) in column A in addition to “N”(New), “M”(Modified), “D”(Deleted), and “U”(Unchanged”)** |
| **Comments**  |  |

|  |  |
| --- | --- |
| **Issue 2-1-2** | **How to introduce new UL configuration which is requested for existing DL band combinations** |
| **Comments**  |  |

|  |  |
| --- | --- |
| **Issue 2-1-3** | **Delete or not the following items from excel template** |
| **Comments**  |  |

|  |  |
| --- | --- |
| **Issue 2-1-4** | **What column should be filled-in for the following cases** |
| **Comments**  |  |

|  |  |
| --- | --- |
| **Issue 2-1-5** | **Need or not to set “Modified” in column A in the following cases:** |
| **Comments**  |  |

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| **Issue 2-1-6** | **For column “Supported next level fallback modes including initial status when requesting (in DL and UL)”** |
| **Comments**  |  |

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| **Issue 2-1-7** | **For column ”Are all fallback combos completed? Yes/No”.** |
| **Comments**  |  |

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| **Issue 2-1-8** | **For clarification, is additional column needed related to next level fallback modes?** |
| **Comments**  |  |

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| **Issue 2-1-9** | **How to order the columns of the spread sheet.** |
| **Comments**  |  |

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| **Issue 2-1-10** | **Whether or not “Rel-independent from” column should be added.** |
| **Comments**  |  |

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| **Issue 2-1-11** | **For filtering the number of LTE/NR bands,** |
| **Comments**  |  |

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| **Issue 2-1-12** | **For column “Subclass”** |
| **Comments**  |  |

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| **Issue 2-1-13** | **How to list multiple UL configuration** |
| **Comments**  |  |

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| **Issue 2-1-14** | **For WI for DC\_R16\_xBLTE\_2BNR\_yDL2UL,** |
| **Comments**  |  |

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| **Issue 2-1-15** | **Description of some guidelines/suggestions to the excel template is needed or not.** |
| **Comments**  |  |

### Sub-topic 1-2

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| **Issue 2-1-1** | **Apply excel format to band combination table in TS 38.101-1/2/3.** |
| **Comments**  |  |

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| **Issue 2-1-2** | **Use a wild card for EN-DC including FR 2 intra-band contiguous CA** |
| **Comments**  |  |

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| **Issue 2-1-3** | **Use a wild card for EN-DC including FR 2 intra-band non-contiguous CA** |
| **Comments**  |  |

### Sub-topic 1-3

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| **Issue 2-1-1** | **Clarify the case where draft CR approach should not be applied** |
| **Comments**  |  |

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| **Issue 2-1-2** | **Whether submission of TPs are allowed or not for other band combinations than what discussed in Issue 2-3-1.** |
| **Comments**  |  |

## 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*

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| **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”* |