**3GPP TSG-RAN WG2 Meeting#101** **R2-180xxxx**

Athens, Greece, 26th February - 2nd March 2018

**Source:** Nokia, Nokia Shanghai Bell

**Title:** **Title:** Changes implemented as part of email discussion [101#06][NR] 38.331 CR part 6 (Nokia) (Inter-node messages for NR RRC)

**Agenda Item:** 10.4.3.1

**Document for:** Discussion and decision

# Introduction

This document provides history of agreements incorporated into the TP that is being prepared for NR RRC inter-node messages.

# Links to latest documents

The latest published draft TP in RAN2#101 can be found in [R2-1804044](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1804044.zip), with the minutes of the ASN.1 review session on inter-node messages in [R2-1804043](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1804043.zip).

The starting point for the email discussion (replace protocol with FTP when connecting via FTP client, the link below uses HTTP to be browser-friendly): [http://www.3gpp.org/ftp/Email\_Discussions/RAN2/[101%2306][NR]%2038.331%20CR%20part%206%20(Nokia)/](http://www.3gpp.org/ftp/Email_Discussions/RAN2/%5B101%2306%5D%5BNR%5D%2038.331%20CR%20part%206%20%28Nokia%29/).

# List of implemented RAN2 decisions in TP

The below table shows the changes implemented after RAN2#101 as part of the email discussion.

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| **ID#** | **Description of proposed/agreed change (as per RAN2#101 minutes or new issues)** | **Status (green = implemented to draft, yellow = discussion item, red = not implemented, purple = will not be implemented during this email discussion)**  |
| **1** | **Agree to adopt power coordination for FR1 as per CR (based on** [**R2-1803380**](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1803380.zip)**).** | **Already implemented to** [R2-1804044](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1804044.zip)**.** |
| **2** | **Decision during discussion on** [R2-1803057](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1803057.zip)**:****Define one new Container (*****MeasurementTimingConfiguration*) to cover SMTC IE and/or associated carrier frequency information (as defined by TS38.331). Up to RAN3 how to utilize this inter-node message (RAN2 understanding is that this would be used in at least X2 setup/modification phase). Send reply LS back to RAN3 to inform them of our solution (Nokia, R2-180xxxx, offline discussion #xxx).****NOTE: This part was changed in draft v2: the v0 change was done as an IE, now implemented as inter-node message in v2** | **Implemented to the latest draft v2 as an inter-node message that contains the SMTC information per carrier.** |
| **3** | **Remove all FFS within the ASN.1 of subclause 11 in NR RRC. Retain *AS-Context* within *HandoverPreparationInformation*** | **Implemented to the latest draft (some FFS were removed already in** [R2-1804044](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1804044.zip)**)** |
| **4** | **Resolve the BPC restriction signalling details in capability discussions, then adopt the corresponding changes here** | **Implemented to the draft v3 using allowed BPC/BC lists.** |
| **5** | **Create NR *UECapabilityInformation* – message already now, containing the information on NR and MR-DC capabilities** | **Latest draft refers (as before) to the *UECapabilityInformation* - message** |
| **6** | **fullConfig indication removed from CG-Config(as per LS to RAN3 in** [R2-1804100](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1804100.zip)**)** | **Already implemented to** [R2-1804044](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1804044.zip)**.** |
| **7** | **Use CG-Config as inter-node message name** | **Already implemented to** [R2-1804044](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1804044.zip)**.** |
| **8** | **Include also short DRX configuration in DRX-Info.** | **Implemented to the latest draft** |
| **9** | **Add field description to clarify how the CSI-RS results can be used (Z535, see minutes of discussion in 4043 below).****9) Removal of CSI-RS resources from CG-ConfigInfo (Z353)**- Z353 says that for "candidateCellInfoListMN" in SCG-ConfigInfo, the CSI-RS measurement results are not applicable since CSI-RS measurements are not supported in LTE Bx event. --> Suggest to add an IE description to explain the restriction, or to introduce another CandidateCellInfoList for the MN case.- Adding field description with MN restrictions seems easiest and avoids having separated IEs. | **Implemented to the draft v2 as follows:**Including CSI-RS measurement results in *candidateCellInfoListMN* is not supported in this version of the specification. |
| **10** | **Use Cell-level IEs from RRM TP for “ResultsThreeQuantities” (e.g. ResultsCSI-RS-Cell and ResultsSSB-Cell).****V2: Checked against part4 discussion an dupdated top use IE *MeasQuantityResults* that is also used for other cell-level results.** | **Already implemented to** [R2-1804044](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1804044.zip)**, updated to comply with** [R2-1803934](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1803934.zip) **in the latest draft****Implemented to the draft v2 with modifications.** |
| **11** | **Capture outcome of offline discussion #25 in the TP for inter-node messages.** | **Implemented to the latest draft** |
| **12** | **Capture outcome of the offline discussion on SCG failure information (number 26??) in the TP for inter-node messages (if needed)** | **Some parts implmented to the latest draft v3 –likely needs doublechecking for RAN2#101bis** |
| **13** | **If RAN4 finalizes their discussion on per-UE tx power limits, capture the outcome in the TP for inter-node messages (if needed).** | **Will not be implemented since no information from RAN4 was received.** |
| **14** | **Discussion for** [R2-1802082](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1802082.zip)**:*****FFS: Whether the beam measurement information is provided in the HandoverPreparationInformation following the same principles as beam measurement information in the SCG change case.*****Conclusion from offline discussion #22 in** [R2-1804013](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1804013.zip)**:*****1: The beam measurement information is provided in the HandoverPreparationInformation following the same principles as beam measurement information in the SCG change case.*** | **Will not be implemented since this is part of NR SA and not needed for NSA.**  |
| **15** | **Decisions in** [R2-1802480](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1802480.zip)**:****1: In handover between LTE connected to 5GC and NR, QoS flow related handling follows the principles defined for intra-NR handover and related information should be included in HandoverPreparationInformation.****2: The same measurement related content is included for the inter-RAT handover from LTE to NR as for the SN addition case in EN-DC.**=> TP to drafted for next meeting. | **Will not be implemented since this is part of NR SA and not needed for NSA.** **Also, a TP is expected to be provided for the next meeting to handle this further.** |
| **16** | **Decision based on** [R2-1802529](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1802529.zip)**:****1 SN can inform MN of the selected BC.** | **Implemented to the latest draft in CG-Config using *BandCombinationIndex*.** |
| **17** | **Decision based on** [R2-1802598](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1802598.zip)**:****1: Remove fullConfigSN from the CG-Config IE.****2: Change to scg-CellGroupConfig, scg-RB-Config in the TP is agreed** | **Implemented to the latest draft v2** |
| **18** | **Decision based on Tdoc** [R2-1803042](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1803042.zip) **and resulting TP in** [R2-1803941](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1803941.zip)**:****1) For per-UE gap and independent FR1 gap case, SN indicates to MN the list of SN configured frequencies measured by UE.** **2) For independent FR2 gap case, MN indicates to SN the list of MN configured frequencies measured by UE.****3) Information can be exchanged whenever there is any change in the set of frequencies to be measures.****FFS: Whether any information in addition to the frequencies to be measured is needed for the purpose of handling CSI-RS measurements.****=> In addition add the FR1 gap configuration in the MeasGapConfig and add an indication whether the gap configuration is per UE or per FR (impacts ASN.1 review discussion part 4, 6)** | **Implemented to the draft v2 as follows:*** **Both FR1 and FR2 gap configurations included**
* **SN-configured measured carriers are part of MeasConfigSN in CG-Config**
* **MN-configured measured carriers are part of MeasConfigMN in CG-ConfigInfo. An indication of per-UE or per-FR gap is also added.**
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| **19** | **Decision based on discussion of** [R2-1803102](http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_101/Docs/R2-1803102.zip)**:****1 Within CG-ConfigInfo specified in 38.331, use a container (octet string) for candidateCellInfoSN to facilitate transparent forwarding of results** | **Implemented to the latest draft** |
| **20** | **The field *ue-InactiveTime* still uses *ffsTypeAndValue*****Submitted by email discussion rapporteur** | **Implemented to draft v2: using the LTE values (and optionality flag) since there is not clear indication to do something else.**  ue-InactiveTime ENUMERATED { s1, s2, s3, s5, s7, s10, s15, s20, s25, s30, s40, s50, min1, min1s20c, min1s40, min2, min2s30, min3, min3s30, min4, min5, min6, min7, min8, min9, min10, min12, min14, min17, min20, min24, min28, min33, min38, min44, min50, hr1, hr1min30, hr2, hr2min30, hr3, hr3min30, hr4, hr5, hr6, hr8, hr10, hr13, hr16, hr20, day1, day1hr12, day2, day2hr12, day3, day4, day5, day7, day10, day14, day19, day24, day30, dayMoreThan30} OPTIONAL, |
| **21** | **Remove -r15 suffixes (not needed for the first release)****Submitted by email discussion rapporteur** | **Implemented to the latest draft** |
| **22** | **Re-added FFS on HandoverPreparationInformation on Xn applicability (since it relates to SA and not NSA)** | **Implemented to the draft v2** |
| **23** | **candidateCellInfoList in CG-Config enclosed in an OCTET STRING to align with CG-ConfigInfo and allow transparent forwarding of measurement results from source SN to target SN****Submitted by Samsung** | **Implemented to the draft v2** |
| **24** | Removed the value *maxUL-TimingDiff* from the field *failureType* since there is not RAN4 confirmation whether it is needed (and this aligns with part5 discussion). The value can be re-added later on if needed**Submitted by Samsung** | **Implemented to the draft v2** |
| **25** | **Clarify in field descriptions of scg-CellGroupConfig, scg-RB-Config that the configuration may come from target SgNB or (just) SgNB**Submitted by DCM:Regarding ID#17, our understanding is that the agreement which “*Change to scg-CellGroupConfig, scg-RB-Config in the TP is agreed*” means to change this field description to (target).Because this IE is generated by not only target SgNB. | **Implemented to the draft v2** |
| **26** | **Changes on changes to be removed****Submitted by email discussion rapporteur** | **Implemented to the draft v3** |
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