**3GPP TSG RAN WG1 Meeting #103-E R1-** **200xxxx**

**e-Meeting, October 26th – November 13th, 2020**

**Source: Moderator (Intel Corporation)**

**Title: Discussion on [103-e-NR-Rel-16-V2X-04]**

**Agenda item: 7.2.4**

**Document for:** **Discussion and Decision**

Introduction

This contribution provides discussion on critical issues for the thread [103-e-NR-Rel-16-V2X-04].

[103-e-NR-Rel-16-V2X-04] Email discussion/approval regarding e-evaluation procedure for periodic resource reservations

* Issue M2-1: Fix undefined UE behaviour for the case of re-evaluation performed during periodic reservation process
* Issue M2-7: Fix the issue of unreachable pre-emption event condition due to prior exclusion of slots related to non-monitored slots in the sensing window

till 10/30, with a potential CR by 11/4 – Sergey (Intel)

Outcome summary

Text proposal

1st round discussion

## Issue M2-1: Fix undefined UE behaviour for the case of re-evaluation performed during periodic reservation process

It is currently uncertain in specification whether a UE should perform re-evaluation procedure only before SCIs of the first period after the re-selection, or before ant SCI regardless of the periodic occasion.

In the last meeting the issue was discussed but no final decision was made. The following was one of the latest proposals:

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| **Updated Proposal*** If periodic reservation is in use by a UE selecting resources, the UE performs re-evaluation procedure at least for resource(s) in the first period after the initial resource re-selection trigger or for resources in non-initial resource re-selection triggered by pre-emption
	+ Allow discussion in the next meeting whether re-evaluation in other than the first period is feasible and can be allowed for the UE implementation
	+ Note, this is intended to be captured in MAC specification
	+ Note, the initial resource re-selection trigger refers to the initial (re-)selection triggered according to clause 5.22.1.2 of TS 38.321, except resource re-selection triggered by re-evaluation and pre-emption
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This option was not supported by a few sources since it precludes re-evaluation every period. However, it was argued that if ‘sl-ReselectAfter’ is configured to 0 or a smaller value, then it may be already possible to do re-evaluation/re-selection when there is no packet transmission in a period.

Another issue found with re-evaluation every period is self-blocking due to step 5) execution. Similar to Issue M2-7, the resource being re-evaluated overlaps with the slot which should be excluded in step 5). In this case, after execution of steps 1)-7), the resource will not be in S\_A, even if there was no collision.

In order to facilitate decision in this meeting, the following set of questions is presented, based on the following two options:

**Option 1:**

* If periodic reservation is in use by a UE selecting resources, the UE performs re-evaluation procedure only for resource(s) in the first period after the initial resource re-selection trigger or for resources in non-initial resource re-selection triggered by pre-emption
	+ Note, this is intended to be captured in MAC specification as a restriction when and which resource for re-evaluation can be passed to PHY
	+ Note, the initial resource re-selection trigger refers to the initial (re-)selection triggered according to clause 5.22.1.2 of TS 38.321, except resource re-selection triggered by re-evaluation and pre-emption

**Option 2:**

* If periodic reservation is in use by a UE selecting resources, the UE performs re-evaluation procedure for resource(s) in every period by the following procedure
	+ During re-evaluation check for resources indicated by a prior SCI with a period, step 5) in 8.1.4 of 38.214 is omitted during re-evaluation check
	+ During re-evaluation check for resources indicated by a prior SCI with a period, in step 6)-c) in 8.1.4 of 38.214, j is let to be ‘1 to Cresel-1’ for re-evaluation, i.e. collision checking is skipped for the nearest period
	+ If the resource is not in the identified resource set, then re-evaluation is indicated to MAC layer
	+ MAC layer resets SL\_RESOURCE\_RESELECTION\_COUNTER following agreed procedures
	+ In SCI, which was supposed to reserve the re-evaluated resource with a period, the reservation period is set to 0

**Q1-1: Does the above description of Option 1 capture the intention of performing re-evaluation only for resource in the first period? Please answer even if you don’t support Option 1.**

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| **Source** | **Short answer** | **Comments** |
| LG Electronics | Yes |  |
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**Q1-2: Does the above description of Option 2 capture the intention of performing re-evaluation in every period? Please answer even if you don’t support Option 2.**

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| **Source** | **Short answer** | **Comments** |
| LG Electronics | Difficult to understand the exact behaviour of Option 2 with the current description. | At least the following comments should be clarified:* What does the sentence of “collision checking is skipped for the nearest period” mean? Is this correct understanding that even though the re-evaluation check for the resources within the current period is performed assuming these resource are periodically reserved “Cresel-1” times, but the resource re-selection can be triggered by this check is limited to the resources within the current period?
* What’s the target behaviour/technical motivation with the sentence of “MAC layer resets SL\_RESOURCE\_RESELECTION\_COUNTER following agreed procedures”?
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**Q1-3: Based on essentiality, spec impact, and backward compatibility which option (or any other alternative) should be implemented?**

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| **Source** | **Short answer** | **Comments** |
| LG Electronics | Option 1 |  |
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**Q1-4: Any other compromise proposals / comments helping to resolve the outstanding issue?**

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| **Source** | **Comments** |
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## Issue M2-7: Fix the issue of unreachable pre-emption event condition due to prior exclusion of slots related to non-monitored slots in the sensing window

In NR SL Mode-2, when pre-emption enabled a UE performs pre-emption checking with both aperiodic and periodic traffic. In case of periodic reservation is enabled in the pool, a UE checks for pre-emption event by comparing RSRP and priority. However, the procedure of resource identification performed by the UE also includes step 5) which excludes slots in the selection window related to slots not monitored in the sensing window, with the set of periodicities configured in the resource pool.

Even if only one period is configured, a UE can face the issue that pre-emption condition is never reached even if there are collisions. This is illustrated in Figure 1 from [1].



Figure 1. Reserved resource with period P during pre-emption

In order to avoid the issue, step 5) may need to be modified for the case when executed during pre-emption checking it does not exclude the reserved resource subject to pre-emption.

**Q2-1: Do you agree that the issue is valid and need to be resolved?**

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| **Source** | **Short answer** | **Comments** |
| LG Electronics | Not critical (i.e., further agreement is not necessary) | Even in Figure 1, according to the current specification, there could be a case that a UE performing the pre-emption checking triggers the resource re-selection of periodically reserved resource if such resource is overlapped with other UE’s resource (e.g., aperiodic resource selection) with a priority satisfying the pre-emption condition, which is identified in a slot different from the location of its periodically reserved resource. |
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**Q2-2: If you think the issue is valid, what solution can be applied?**

* **Examples:**
	+ **Skip step 5) during pre-emption check**
	+ **Do not include TX period when executing step 5)**
	+ **Swap step 5) and step 6)**
	+ **Etc.**

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| **Source** | **Comments** |
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References

**Contributions identified by FL to contain Mode-2 related issues:**

1. [R1-2007612](file:///C%3A%5C%5CUsers%5C%5Cwanshic%5C%5COneDrive%20-%20Qualcomm%5C%5CDocuments%5C%5CStandards%5C%5C3GPP%20Standards%5C%5CMeeting%20Documents%5C%5CTSGR1_103%5C%5CDocs%5C%5CR1-2007612.zip) Remaining details of sidelink resource allocation mode 2 Huawei, HiSilicon
2. [R1-2007774](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007774.zip) Discussion on essential corrections in resource allocation for Mode 2 LG Electronics
3. [R1-2007811](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007811.zip) Remaining issues on Mode 2 resource allocation in NR V2X CATT
4. [R1-2007923](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007923.zip) Remaining issues in mode 2 ZTE, Sanechips
5. [R1-2007935](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007935.zip) Corrections related to Mode-2 resource allocation Intel Corporation
6. [R1-2007986](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007986.zip) Remaining issues on resource allocation mode 2 for NR V2X ETRI
7. [R1-2008081](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008081.zip) Maintenance for mode 2 resource allocation NEC
8. [R1-2008096](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008096.zip) Remaining issues in NR sidelink mode 2 resource allocation Spreadtrum Communications
9. [R1-2008131](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008131.zip) Draft CR on Mode 2 for NR Sidelink Samsung
10. [R1-2008132](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008132.zip) Draft CR on Sidelink Physical Duration to Logical Slot Conversion Samsung
11. [R1-2008236](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008236.zip) Remaining open issues and corrections for mode 2 RA OPPO
12. [R1-2008389](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008389.zip) Remaining issues on resource allocation mode 2 for NR sidelink Sharp
13. [R1-2008431](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008431.zip) Remaining Issues of Mode 2 Resource Allocation Apple
14. [R1-2008531](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008531.zip) Maintenance for resource allocation mechanism mode 2 NTT DOCOMO, INC.
15. [R1-2008606](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008606.zip) Remaining Issues in Mode 2 Resource Allocation Qualcomm Incorporated
16. [R1-2008633](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008633.zip) Remaining issues for Mode 2 resource allocation in NR V2X ASUSTeK
17. [R1-2008667](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008667.zip) Remaining issues on mode 2 resource allocation mechanism vivo
18. [R1-2008750](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008750.zip) Discussion paper on the remaining issues in Rel. 16 for NR V2X Ericsson
19. [R1-2008752](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008752.zip) Draft\_CR\_TS38.212 Ericsson

**Other Rel.16 NR V2X contributions**

1. [R1-2007610](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007610.zip) Correction on sidelink PT-RS sequence generation Huawei, HiSilicon
2. [R1-2007611](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007611.zip) Remaining details of sidelink resource allocation mode 1 Huawei, HiSilicon
3. [R1-2007613](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007613.zip) Remaining details of physical layer procedures for sidelink Huawei, HiSilicon
4. [R1-2007772](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007772.zip) Discussion on essential corrections in physical layer structure LG Electronics
5. [R1-2007773](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007773.zip) Discussion on essential corrections in resource allocation for Mode 1 LG Electronics
6. [R1-2007775](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007775.zip) Discussion on essential corrections in sidelink synchronization mechanism LG Electronics
7. [R1-2007776](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007776.zip) Discussion on essential corrections in physical layer procedure LG Electronics
8. [R1-2007779](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007779.zip) A remaining issue on UE procedures for reporting HARQ-ACK on uplink Fujitsu
9. [R1-2007780](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007780.zip) A remaining issue on simultaneous transmissions of uplink and PUSCH carrying sidelink HARQ-ACK Fujitsu
10. [R1-2007809](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007809.zip) Remaining issues on physical layer structure for NR sidelink CATT
11. [R1-2007810](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007810.zip) Remaining issues on Mode 1 resource allocation in NR V2X CATT
12. [R1-2007812](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007812.zip) Remaining issues on sidelink synchronization mechanism in NR V2X CATT
13. [R1-2007813](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007813.zip) Remaining issues on physical layer procedures for NR V2X CATT
14. [R1-2007921](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007921.zip) Remaining issues of NR sidelink physical layer structure ZTE, Sanechips
15. [R1-2007922](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007922.zip) Remaining issues in Mode-1 ZTE, Sanechips
16. [R1-2007924](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007924.zip) Remaining issues of synchronization ZTE, Sanechips
17. [R1-2007925](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007925.zip) Remaining issues in PHY procedures for Rel-16 sidelink ZTE, Sanechips
18. [R1-2007934](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007934.zip) Remaining opens of sidelink physical structure for NR V2X design Intel Corporation
19. [R1-2007936](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007936.zip) Corrections related to Mode-1 resource allocation Intel Corporation
20. [R1-2007987](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2007987.zip) Physical layer procedures for sidelink ETRI
21. [R1-2008095](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008095.zip) Remaining issues in NR sidelink mode 1 resource allocation Spreadtrum Communications
22. [R1-2008097](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008097.zip) Remaining issues on sidelink physical layer procedure Spreadtrum Communications
23. [R1-2008129](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008129.zip) Text Proposals on Physical Layer Structures for NR Sidelink Samsung
24. [R1-2008130](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008130.zip) Draft CR on PUCCH Power Control for NR Sidelink Mode 1 Scheduling Samsung
25. [R1-2008133](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008133.zip) Draft CR on Physical Layer Procedures for NR Sidelink Samsung
26. [R1-2008230](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008230.zip) Draft TP on physical structure for NR sidelink OPPO
27. [R1-2008231](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008231.zip) Text proposal of mode 1 for NR sidelink OPPO
28. [R1-2008232](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008232.zip) Text proposal of physical layer procedure for NR sidelink OPPO
29. [R1-2008237](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008237.zip) Corrections for FDM-based semi-static power split for in-device coexistence OPPO
30. [R1-2008334](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008334.zip) Correction on sidelink timing definition Huawei, HiSilicon
31. [R1-2008381](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008381.zip) Remaining issue on physical layer structure and procedure for sidelink in NR V2X Panasonic Corporation
32. [R1-2008387](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008387.zip) Remaining issues on physical layer structure for NR sidelink Sharp
33. [R1-2008388](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008388.zip) Remaining issues on resource allocation mode 1 for NR sidelink Sharp
34. [R1-2008390](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008390.zip) Remaining issues on synchronization mechanism for NR sidelink Sharp
35. [R1-2008391](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008391.zip) Remaining issues on physical layer procedures for NR sidelink Sharp
36. [R1-2008428](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008428.zip) Remaining Issues of Physical Layer Procedures Apple
37. [R1-2008429](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008429.zip) Remaining Issue of Sidelink Physical Layer Structure Apple
38. [R1-2008430](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008430.zip) Remaining Issues of Mode 1 Resource Allocation Apple
39. [R1-2008496](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008496.zip) Maintenance for PSFCH and PSCCH symbol on NR sidelink ASUSTeK
40. [R1-2008497](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008497.zip) Remaining issues on sidelink power control ASUSTeK
41. [R1-2008498](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008498.zip) Miscellaneous issues of SL HARQ-ACK reporting on PUCCH ASUSTeK
42. [R1-2008529](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008529.zip) Maintenance for sidelink physical layer structure NTT DOCOMO, INC.
43. [R1-2008530](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008530.zip) Maintenance for resource allocation mechanism mode 1 NTT DOCOMO, INC.
44. [R1-2008532](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008532.zip) Maintenance for sidelink physical layer procedure NTT DOCOMO, INC.
45. [R1-2008533](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008533.zip) Maintenance for sidelink-related collision NTT DOCOMO, INC.
46. [R1-2008604](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008604.zip) Remaining Issues in Physical Layer Structure Qualcomm Incorporated
47. [R1-2008605](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008605.zip) Remaining Issues in Mode 1 Resource Allocation Qualcomm Incorporated
48. [R1-2008665](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008665.zip) Remaining issues on physical layer structure for NR sidelink vivo
49. [R1-2008666](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008666.zip) Remaining issues on mode 1 resource allocation mechanism vivo
50. [R1-2008668](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008668.zip) Remaining issues on sidelink synchronization mechanism vivo
51. [R1-2008669](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008669.zip) Remaining issues on physical layer procedure for NR sidelink vivo
52. [R1-2008721](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008721.zip) Remaining issues on physical layer procedures for sidelink KT Corp.
53. [R1-2008751](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008751.zip) Draft\_CR\_TS38.211 Ericsson
54. [R1-2008753](file:///C%3A%5CUsers%5Cwanshic%5COneDrive%20-%20Qualcomm%5CDocuments%5CStandards%5C3GPP%20Standards%5CMeeting%20Documents%5CTSGR1_103%5CDocs%5CR1-2008753.zip) Draft\_CR\_TS38.213 Ericsson

1. [R1-2008754](file:///C%3A%5C%5CUsers%5C%5Cwanshic%5C%5COneDrive%20-%20Qualcomm%5C%5CDocuments%5C%5CStandards%5C%5C3GPP%20Standards%5C%5CMeeting%20Documents%5C%5CTSGR1_103%5C%5CDocs%5C%5CR1-2008754.zip) Draft\_CR\_TS38.214 Ericsson