**3GPP TSG-RAN WG2 Meeting #109bis-e R2-200**

**Electronic, 20 April – 30 April 2020**

**Agenda Item: 6.19 Other NR Rel-16 WIs/SIs**

**Source: CMCC**

**Title: Summary for views on NR HST CRs**

**Document for: Discussion and decision**

# 1 Introduction

Agreements in RAN2#109-e on RAN2 signaling design for NR HST:

Agreements [AT109e][050][R16 Other WISI]

* Introduce network assistant signalling in the IE ServingCellConfigCommon and IE ServingCellConfigCommonSIB to enable the enhanced RRM requirements for Rel-16 NR HST.
* Introduce network assistant signalling in the IE ServingCellConfigCommon and IE ServingCellConfigCommonSIB to enable the enhanced UE demodulation requirements for HST-SFN deployment with joint transmission scheme for Rel-16
* Introduce new UE capability for NR HST to indicate whether UE is capable of supporting the enhanced RRM requirements.
* Introduce new UE capability for NR HST to indicate whether UE is capable of the enhanced demodulation processing for HST-SFN joint transmission scheme with velocity up to 500km/h.

CMCC prepared the corresponding CRs [1-2] in this meeting based on above agreements. This paper is to collect companies’ views on HST CRs based on [R2-2003508](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_109bis-e%5CDocs%5CR2-2003508.zip) and [R2-2003509](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_109bis-e%5CDocs%5CR2-2003509.zip) [1-2].

**[AT109bis-e][047][NR16 Other] NR HST (CMCC)**

Scope: Treat papers above on NR HST. If convergence is difficult, this may be treated on-line.

Wanted Outcome: Agreed-in-principle CRs

Deadline: April 28 0700 UTC

# 2 Companies’ views on HST CRs

**Q1: Whether 38.331 CR for HST in** [**R2-2003508**](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_109bis-e%5CDocs%5CR2-2003508.zip) **is agreeable?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Y/N** | **Comments** |
| CMCC | Yes |  |
| Qualcomm Incorporated | No | A few comments.*ServingCellConfigCommon** Missing comma, before the added extension group.
* Need M looks more appropriate for the field *highSpeedConfigforNR-r16*. Otherwise the network always needs to include the field within *ServingCellConfigCommon* when the configuration needs to be maintained.

*ServingCellConfigCommonSIB** Missing comma, before the added extension group.

*HighSpeedEnhforNRParameters** Not sure about the need of extension marker there.

*UE-NR-Capability** Duplicated *UE-NR-Capability-v16xy*
 |
| OPPO | No | Agree the comments from QC as:*ServingCellConfigCommon** Missing comma, before the added extension group.

*ServingCellConfigCommonSIB** Missing comma, before the added extension group.

*UE-NR-Capability*Duplicated *UE-NR-Capability-v16xy* |
| vivo | Yes | We are OK with the CR by fixing some ASN.1 compiling issues:*ServingCellConfigCommon:** Expecting a “,” before “[[”.

*ServingCellConfigCommonSIB** Expecting a “,” before “[[”.

*HighSpeedEnhforNRParameters*The first letter for the parameter IEs shall be lowercase.  |
|  |  |  |

**Q2: Whether 38.306 CR for HST in** [**R2-2003509**](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_109bis-e%5CDocs%5CR2-2003509.zip) **is agreeable?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Y/N** | **Comments** |
| CMCC | Yes |  |
| Qualcomm Incorporated | No | RAN4 LS was not clear about FDD-TDD differentiation. We would wait for the official RAN4 feature list.BTW, we could also not verify:* If the feature is only applicable in FR1.
* Whether the RAN4 specification references are correct.
 |
| OPPO |  | Agree with QC. We can add to TBD in FDD-TDD differentiation Column. |
| vivo |  | For this part, we also prefer to wait for formal inputs on RAN4 feature list.  |
|  |  |  |

The CRs are provided for Rel-16. But for operators, in order to meet the strong requirement for the HST market, it is preferable to allow UE early implementation in Rel-15.

Background: The Rel-14 LTE HST feature is early implemented from Rel-13 without RAN2 specification change [3].

**Q3: Is it acceptable for you to allow HST feature (including RRM enhancement and UE demodulation enhancement) to be early implemented by UE in Rel-15?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Y/N** | **Comments** |
| CMCC | Yes | From RAN2 point of view, HST early implementation for R15 UEs can be allowed.  |
| Qualcomm Incorporated | No | The same argument can be made to any other release-16 feature. We should avoid this as much as possible. |
| OPPO | No |  |
| vivo |  | We need further check more. I assume this email discussion only focuses on the agreeable CRs.  |
|  |  |  |

# Reference

1. [R2-2003508](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_109bis-e%5CDocs%5CR2-2003508.zip) 38.331 CR on introduction of RRC parameters and UE capabilities for Rel-16 NR HST CMCC, Huawei, HiSilicon, CATT CR Rel-16 38.331 16.0.0 1464 2 B NR\_HST R2-2002085
2. [R2-2003509](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_109bis-e%5CDocs%5CR2-2003509.zip) 38.306 CR on introduction of UE capabilities for Rel-16 NR HST CMCC, Huawei, HiSilicon, CATT CR Rel-16 38.306 16.0.0 0242 2 B NR\_HST R2-2002086

[3] R2-1705861, Reply LS on supporting Rel-14 feature of performance enhancement for high speed scenarios from Rel-13 UEs