**3GPP TSG-RAN WG2 Meeting #119-bis electronic *R2-221xxxx***

**Online, October 10 - 19th, 2022**

**Agenda Item: 6.10.2**

**Source: Thales**

**Title: Summary of [Post119bis-e][110][NR NTN] Stage-2 corrections (Thales)**

**Document for: Discussion and Decision**

# Introduction

This document aims to summarize the following discussion which aims at consolidating a CR for TS 38.300 [1] as outcome of RAN2#119-bis-e.

* [Post119bis-e][110][NR NTN] Stage-2 corrections (Thales)

Scope: Update the Stage-2 CR

Intended outcome: Agreeable Stage-2 CR:

Deadline (for companies' feedback): Thursday 2022-10-20 16:00 UTC

Deadline (for rapporteur's CR in R2-2211046): Friday 2022-10-21 10:00 UTC

Status: Closed

The discussion considers as starting point the draft stage-2 CR [3] developed during the previous discussion; see summary in [2].

# Background

The following proposals were submitted by some companies over the reflector after the submission of the draft CR in R2-2210852 as outcome of [AT119bis-e][110][NR NTN] and before the launch of [Post119bis-e][110][NR NTN].

**Proposal 1: In chap 16.14.8 « Coarse UE location request », add a note « *Note: It is assumed that network can only request coarse UE location provided that user consent is available, if required by regulations.* «**

* Proponents : Huawei, Apple, Xiaomi, Oppo
* Opponents : Ericsson (lack of time to review), Nokia (no need in RAN2 Stage-2 specification)

**Proposal 2 : In chap 16.14.3.3         « Measurements », remove the sentence “*~~When the assistance information of a neighbor cell is absent in SIB19, the neighbor cell can be ignored by the UE when performing measurements~~*” and change as follow “*assistance information (e.g., ephemeris, Common TA parameters, carrier frequency and PCI) provided via system information for UE to perform measurement on neighbour cells in RRC\_IDLE/RRC\_INACTIVE/RRC\_CONNECTED*”**

* Proponents: Mediatek
* Opponents : Google who support the sentence suggested by Ericsson but do NOT think the addition suggested by MTK reflects the RAN2 agreement "The network needs to configure the NTN neighbour cell frequencies in SIB19 if it wants the UE to measure them"

=Moderator> Unless there is full consensus on Mediatek’s proposal before the end of this short post meeting email disc, it is discarded from the CR but can be re discussed at next meeting

**Proposal 3: in chapter 16.14.3.2.2 “Conditional Hand-over” add the following sentence “*It is up to UE implementation how the UE evaluates the time- or location-based condition jointly with the RRM event Ax*”**

* Proponent : CATT
* Opponent (during email disc): Nokia « Overall, is this sentence necessary? The paragraph above already says these need to be configured jointly. And if we do not provide this sentence then it means UE’s behavior is not further restricted. So there is nothing new this sentence introduces (we do not need to explicitly copy each agreement to 3gpp specifications). «

=Moderator> Unless there is full consensus on CATT’s proposal before the end of this short post meeting email disc, it is discarded from the CR but can be re discussed at next meeting

# Discussion

## 3.1 Chap 16.14.8

Companies are invited to provide their views on the proposal below

**Proposal 1: In chap 16.14.8 « Coarse UE location request », add a note « *Note: It is assumed that network can only request coarse UE location provided that user consent is available, if required by regulations.* «**

|  |  |  |
| --- | --- | --- |
| Company | Agree/Disagree | Comment or suggestion |
|  Google |  Agree | It is helpful to have such a note to clarify the understanding. |
|  OPPO | Agree | This clarifies how user consent works. |
| Nokia | Disagree | 38.300 is not a place to clarify how the user consent works. NW will not request coarse UE location if the NW is not allowed to do so. We do not need to ‘assume’ anything.   |
| Xiaomi | Agree | We support this compromise.There should be somewhere in RAN spec to capture this requirement. Actually, the issue has been discussed for a long time, and we think everyone is very clear about the issue. We do not see any need for postponing it to next meeting. |
| Huawei, HiSilicon | Agree | This is not about telling how user consent works in detail but a general statement about proper NW behavior. There is clear motivation and this is common understanding of RAN2 and SA3. We don’t see issue of having this in Stage 2 CR. Regarding “if available”, it is not clear to us this reflects “user consent”. If it is common understanding, we prefer to clarify this in specs.  |
| Apple | Agree | The motivation is not to describe how user consent works, but to indicate the network can not trigger this request at will and there are some restrictions.  |
| Ericsson | Disagree | We agree with Nokia. Not an RAN issue. |
| MediaTek | Agree |  |
| Qualcomm | Agree | This is a different situation for Rel-17 so this clarification needed as no other spec is clear on this. This is in line with what SA3 recommended.We could agree with Nokia and Ericsson for Rel-18 when SA3 defines a solution or something is captured in other specification. |

 **[Rapporteur summary]:**

10 companies provided their views on the proposal 1:

* Proponents: Google, Oppo, Xiaomi, Huawei, Hisilicon, Apple, Mediatek, Qualcomm
* Opponents: Nokia, Ericsson

Although majority of companies are supportive of this proposal but no full consensus has been reached. Therefore, the note cannot be added. The topic may be discussed at next meeting. One possible way forward could be to the intent being captured in SA technical specification.

## 3.2 Chap 16.14.3.3

Companies are invited to provide their views on the proposal below

**Proposal 2 : In chap 16.14.3.3         « Measurements », remove the sentence “*~~When the assistance information of a neighbor cell is absent in SIB19, the neighbor cell can be ignored by the UE when performing measurements~~*” and change as follow “*assistance information (e.g., ephemeris, Common TA parameters, carrier frequency and PCI) provided via system information for UE to perform measurement on neighbour cells in RRC\_IDLE/RRC\_INACTIVE/RRC\_CONNECTED*”**

|  |  |  |
| --- | --- | --- |
| Company | Agree/Disagree | Comment or suggestion |
|  Google |  Disagree | The consensus in "[offline-110][NR NTN] Stage-2 CR" is adding the sentence “When the assistance information of a neighbour cell is absent in SIB19, the neighbour cell can be ignored by the UE when performing measurements” into 16.14.3.3. By taking into account the new RAN2 agreement “The network needs to configure the NTN neighbour cell frequencies in SIB19 if it wants the UE to measure them”, we think the current text is more closed to the original consensus plus the new RAN2 agreement. By the way, the current text in the draft CR is "When the assistance information of a neighbour cell **frequency** is absent in SIB19, the neighbour cell **frequency** can be ignored by the UE when performing measurements". |
|  OPPO | Agree |   |
| Nokia | Agree with P2 |   |
|   |   |   |
| Xiaomi | Agree |   |
| Huawei, HiSilicon | Disagree | Share similar view with Google. P2 seems not a good reflection of the agreement.To address the concern from MTK, maybe we can try:"**When the assistance information of a neighbour cell frequency is absent from SIB19, the UE is not required to perform measurements on the neighbour cell frequency** ". |
|  Apple |  Disagree |  We prefer to keep the sentence and we are also fine with Huawei’s wording.  |
| Ericsson | Agree | In Huawei’s proposed wording it is not clear which information can be absent, which Is true for the RAN2 agreement too… |
| MediaTek | Agree | Mentioned the reasoning in details in RAN2 refelctor (see below) |
| Qualcomm | Disagree | It is better to capture reflecting the RAN2 agreement. |

 **[Rapporteur summary]:**

10 companies provided their views on the proposal 2:

* Proponents: Oppo, Nokia, Xiaomi, Ericsson, Mediatek
* Opponents: Google, Huawei, Hisilicon, Apple, Qualcomm

Huawei suggested the following change instead "**When the assistance information of a neighbour cell frequency is absent from SIB19, the UE is not required to perform measurements on the neighbour cell frequency** " but this either didn’t get any full support.

No full consensus has been reached, therefore, the proposal is not endorsed. The topic may be discussed at next meeting.

### 3.2.1 Mediatek’s detailed reasoning

However, we don’t think this particular sentence is correct: “*When the assistance information of a neighbor cell is absent in SIB19, the neighbor cell can be ignored by the UE when performing measurements*”

The RAN2 agreement states that

|  |
| --- |
| RAN2 understands that the NW needs to configure the NTN neighbour cell frequencies in SIB19 if it wants the UE to measure them |

This does NOT necessarily mean when the assistance information is absent, the neighbour cell can be ignored by the UE during measurements. In short, what I mean to say is “*If x then y*”, does NOT necessarily mean “*if not x, then not y*”

I think the correct approach is to capture it using affirmative or positive form in a way similar to RAN2 agreement. It can be done by just adding carrier frequency and PCI in 16.14.3.3

|  |
| --- |
| The network can configure * …
* …
* assistance information (e.g., ephemeris, Common TA parameters, carrier frequency and PCI) provided via system information for UE to perform measurement on neighbour cells in RRC\_IDLE/RRC\_INACTIVE/RRC\_CONNECTED.
 |

##  3.3 Chap 16.14.2.2

Companies are invited to provide their views on the proposal below

**Proposal 3: in chapter 16.14.3.2.2 “Conditional Hand-over” add the following sentence “*It is up to UE implementation how the UE evaluates the time- or location-based condition jointly with the RRM event Ax*”**

|  |  |  |
| --- | --- | --- |
| **Company** | **Agree/Disagree** | **Comment or suggestion** |
|  CATT | Agree |  |
|  Google |  No strong view | We agree the view shared by Nokia |
|  OPPO | No strong view |   |
| Nokia | We can respect the majority view (as commented above) | We believe that even without this sentence it is still up to the UE how it evaluates these events (if it is not described anywhere, then adding such statement does not provide any detailed guidance – still all is up to the UE). That is why we indicate the sentence is not needed. We are aware there are plenty of such sentences already in the specification, but that should not encourage people to keep on proposing them. This is our preference (also from the 38.300 rapporteur’s point of view). However, if all other companies somehow think this is needed, we are OK to accept it. |
| Xiaomi | No strong view |   |
| Huawei, HiSilicon | No strong view |    |
| Apple  | No strong view |  But we are fine to have the sentence as below. *It is up to UE implementation how the UE evaluates the time- or location-based condition.* |
| Ericsson | Disagree | We agree with Nokia, this is already specified in stage 2. |
| MediaTek | No Strong view |  |
| Qualcomm | Agree |  |

 **[Rapporteur summary]:**

11 companies provided their views on the proposal 3:

* Proponents: Qualcomm, CATT
* Opponents: Google, Ericsson
* No strong view: Oppo, Nokia, Xiaomi, Huawei, HiSilicon, Apple, Mediatek

Given that Google changed their opinion to “no strong view”, Nokia can follow the majority and that Ericsson agree with Nokia. It seems that a consensus can be reached

Therefore, the proposal can be endorsed.

# 4. Summary and Proposals

Proposal 1 & 2 are discarded.

Proposal 3 can be agreed and is reflected in the draft stage-2 CR in R2-2211046.

# 5. References

[1] 3GPP TS 38.300 “NR; NR and NG-RAN Overall description; Stage-2”, v17.2.0

[2] R2-2210851 rapporteur's summary of [AT119bis-e][110][NR NTN] Stage-2 corrections (Thales)

[3] R2-2210852 draft stage-2 CR as outcomes of [AT119bis-e][110][NR NTN] Stage-2 corrections (Thales)

# 6. Contact information

| Company | Delegate contact |
| --- | --- |
| COMPANY\_NAME | NAME (email@address.com) |
| Apple | Fangli Xu <fangli\_xu@APPLE.COM> |
| CATT | Xiangdong Zhang(zhangxiangdong@catt.cn) |
| Ericsson | Robert Karlsson S <robert.s.karlsson@ERICSSON.COM> |
| Google | Ming-Hung Tao (mhtao@google.com) |
| Huawei, HiSilicon | Xubin(xubin10@huawei.com) |
| Mediatek | Abhishek Roy <Abhishek.Roy@mediatek.com> |
| Nokia | STANCZAK Jedrzej <jedrzej.stanczak@nokia.com> |
| Oppo | Haitao Li <lihaitao@OPPO.COM> |
| Qualcomm | SHRESTHA Bharat <bshresth@qti.qualcomm.com> |
| Thales | nicolas.chuberre@thalesaleniaspace.com |
| Xiaomi | Xiaowei Jiang 江小威 <jiangxiaowei@XIAOMI.COM> |