3GPP TSG-RAN WG3 #113-e R3-214207

Online, Aug 16th - Aug 26th, 2021

Agenda Item: 22.3

Source: CMCC (moderator)

Title: SoD of Cell Relation Handling

Document for: Approval

# Introduction

**CB: # 2004\_NTN\_Cell\_Rel**

**- Check similarities with CB 02\_NTN\_NW-ID and CB 03\_NTN\_Reg\_Pag**

**- Is any enhancement needed and agreable?**

**- Evaluate solutions based on validity time window**

**- Other issues?**

(CMCC - moderator)

Summary of offline disc in [R3-214207](file:///C%3A%5Czhmq%5C%E4%BC%9A%E8%AE%AE%5C3GPP%E4%BC%9A%E8%AE%AE%5CR3-113e%5Cagenda%5CInbox%5CR3-214207.zip)

# For the Chairman’s Notes

TBD

# Discussion

## Exchange of Served and Neighbour NTN Cell Information between gNBs

In RAN3#112e meeting, we reach the conclusion that serving/neighbor NTN cell information, if any, may be exchanged between gNBs via Xn. However, reference paper [2] proposes that exchanging served and neighbour cell information between gNBs ordinarily has no use in non-GEO NTN.

**Question 1: Shall companies confirm exchanging served and neighbour cell information between gNBs over Xn?**

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| Company | Comment |
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## Assuming exchanging served and neighbour NTN cell information between gNBs is allowed, any enhancement is needed?

### Time Window over Xn

Based on reference paper [1][3][4], an enhancement in XnAP for proving serving cell information with a time window is introduced to indicate the start time and the stop time of validity of a cell. As comparison, reference paper [2] reckons no need to adopt any enhancement, if the intention is merely to make the serving information more precise in non-GEO NTN, as the receiving node can simply ignore any field which may not be precise.

**Question 2:** **Do you agree with adopting the enhancement by introducing the time window over Xn?**

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### Time Window over NG

Based on reference paper [1], the time related to the availability of TACs is introduced in NG SET UP procedure to inform AMF that the TACs of the gNB schedule. The time related to the availability of TACs can be seen as another form of time window.

**Question 3:** **Do you agree to transfer the time window over NG?**

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| Company | Comment |
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### Time window over F1

Based on reference paper [1], the information of validity time window will be populated by the OAM of DU in a CU-DU split structure. Such information should be transferred to CU over F1 for further interactions with other gNBs.

**Question 4: Do you agree to transfer the time window over F1?**

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| Company | Comment |
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## Stage3 Details

If time window is agreed, should we agree Stage3 TP in R3-213341?

**Question 5: If time window is agreed, should we agree Stage3 TP in R3-213341?**

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## Mobility between NTN and TN

Based on the reference paper [2][3][4], companies tend to handle mobility between NTN and TN over Xn with low priority in Rel-17.

**Question 6: Do you agree to handle mobility between NTN and TN over Xn with low priority in Rel-17?**

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| Company | Comment |
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# Conclusion, Recommendations [if needed]

If needed

# References

1. R3-213341, Time Window management for signalling reduction (HW)
2. R3-213670, On remaining issues regarding cell relation handling (CATT)
3. R3-214085, Further Discussion on Cell Relation for NTN (ZTE)
4. R3-214099, Discussion on cell relation (CMCC)