RAN-R18-WS-non-eMBB-KDDI - Version 0.0.4

RAN

3GPP TSG RAN Rel-18 workshop RWS-210576

Electronic Meeting, June 28 - July 2, 2021

Title: Email discussion summary for [RAN-R18-WS-non-eMBB-KDDI]

Agenda item: 4.2 Non-eMBB-driven Functional Evolution

Source: Moderator (KDDI)

Document for: Discussion

1 Input documents covered in this email discussion

- RWS-210138 ReferenceTimeInfo enhancement in EN-DC KDDI Corporation

- RWS-210139 RAN slicing enhancement KDDI Corporation

2 Round 1 Questions/Comments

Feedback Form 1: Company general comments

Feedback Form 2: Company comments/questions on RWS-210138 ReferenceTimeInfo enhancement in EN-DC

1 – Apple Benelux B.V.

What would be the primary use case requiring UE in EN-DC access to high accuracy reference time?

Feedback Form 3: Company comments/questions on RWS-210139 RAN slicing enhancement

1 – ZTE Corporation

Thanks for your proposal. We also see the need for further enhancement for RAN slicing to continue the work for slice remapping. Further enhancement on slice aware cell (re)selection can also be considered in addition to what we have in Rel-17.

In addition, we are interested in UE leverage different slice resource in MN and SN as mentioned in our paper RWS-210482.

Regarding TA aware cell reselection (avoid reselecting to a different TA having the same slice), we would like to understand what would be the consequence if UE re-select a cell in a different TA but supporting an intended slice for UE?

For slice dedicated S-Criterion (some services require higher radio quality), we understand having higher RSRP/RSRQ thresholds (e.g. Qrxlevmin/Qqualmin) for slices requiring higher radio quality would be sufficient, right?

2 – Sony Europe B.V.

We support RAN slicing enhancements especially where the service area for a slice is smaller and slice aware reselection. Thanks.

3 – Intel Corporation (UK) Ltd

As working assumption in Rel-17, best cell concept is assumed for cell reselection. The S-criteria is just part of the suitability check. By changing the S-criteria will only make a cell suitable but it does not change the which cell the UE selects.

Q: could you please clarify how changing the S-crtieria will help in selecting a cell suitable for a certain slice?

4 – Huawei Tech.(UK) Co.. Ltd

Thank you for the contribution.

Does the “Slice dedicated cell selection criterion S”, is a left over of rel-17 RAN2 work on cell selection, or it should be considered as something totally new?

5 – LG Electronics UK

Thanks for the proposal. We understand the intention that some services may require higher radio quality than others. However, it is not clear how S criteria can be used for the purpose.

For ”Slice dedicated cell selection criterion S”, is S criteria per slice defined?

3 Round 1 Answers/Responses

Thank you very much for the questions/comments/supports. Please find our responses below.

1 ZTE Corporation

<Q1>

Regarding TA aware cell reselection (avoid reselecting to a different TA having the same slice), we would like to understand what would be the consequence if UE re-select a cell in a different TA but supporting an intended slice for UE?

<A1>

We expect that the UE keeps the intended slice on going even after re-selecting a cell in a different TA. But it should be discussed in SA side also.

<Q2>

For slice dedicated S-Criterion (some services require higher radio quality), we understand having higher RSRP/RSRQ thresholds (e.g. Qrxlevmin/Qqualmin) for slices requiring higher radio quality would besufficient, right?

<A2>

Yes.

3 Intel Corporation (UK) Ltd

<Q3>

Q: could you please clarify how changing the S-crtieria will help in selecting a cell suitable for a certain slice?

<A3>

Without the new "criterion S", the UE still remains in the same cell having not enough quality and the UE cannot trigger cell reselection procedure to other cells supporting the same slice/same priority having better radio quality. In other words, Rel-17 mechanism can address case1 below, but cannot address case2. We think changing the S-crtieria can address case2.

case1: Cell reselection to other cells having different priorities (inter cell priority)

case2: Cell reselection to other cells having the same priority and better radio quality (intra cell priority)

4 Huawei Tech.(UK) Co.. Ltd

<Q4>

Does the "Slice dedicated cell selection criterion S", is a left over of rel-17 RAN2 work on cell selection, or it should be considered as something totally new?

<A4>

It is something new, for the difference between Rel-17 and our proposal, please refer to our answer to Intel's question above.

5 LG Electronics UK

<Q5>

Thanks for the proposal. We understand the intention that some services may require higher radio quality than others. However, it is not clear how S criteria can be used for the purpose.

For "Slice dedicated cell selection criterion S", is S criteria per slice defined?

<A5>

Yes. S criteria per slice defined, multiple slices share the same S criteria may also be possible, it will be up to the further discussion. The purpose/intention to introduce dedicated S criteria, please refer to our answer to Intel's question above.

4 Round 2 Questions/Comments

Feedback Form 4: Company general comments

Feedback Form 5: Company comments/questions on RWS-210138 ReferenceTimeInfo enhancement in EN-DC

Feedback Form 6: Company comments/questions on RWS-210139 RAN slicing enhancement

5 Round 2 Answers/Responses

No answers since no questions for round2.

6 Moderators' summary

5 companies provided feedbacks on RAN slicing proposal. The important takeaways from the discussion are summarized as below.

1. Benefit with "Slice dedicated cell selection criterion S

Two companies asked the benefit and moderator answered the benefit as below.

Without the new "criterion S", the UE still remains in the same cell having not enough quality and the UE cannot trigger cell reselection procedure to other cells supporting the same slice/same priority having better radio quality. In other words, Rel-17 mechanism can address case1 below, but cannot address case2. We think changing the S-crtieria can address case2.

- case1: Cell reselection to other cells having different priorities (inter cell priority)

- case2: Cell reselection to other cells having the same priority and better radio quality (intra cell priority)

2. Clarification for "Slice dedicated cell selection criterion S

The followings were clarified.

- Having higher RSRP/RSRQ thresholds (e.g. Qrxlevmin/Qqualmin) for slices requiring higher radio quality

- S criteria per slice defined, multiple slices share the same S criteria may also be possible, it will be up to the further discussion

3. The consequence if UE re-select a cell in a different TA but supporting an intended slice

One company asked the question and moderator answered it as below.

We expect that the UE keeps the intended slice on going even after re-selecting a cell in a different TA. But it should be discussed in SA side also.