3GPP TSG-RAN WG3 Meeting #119 R3-230854

27th Feb – 3rd Mar 2023 Athens, Greece

Agenda Item: 12.2.2.1

Source: ZTE (moderator)

Title: Summary of Offline Discussion on AIRAN\_LB

Document for: Approval

# Introduction

After the heated discussion, following are the open issues to be discussed:

* **Adopt a solution based on “Partial Success” for the new AI/ML procedure for data reporting?**
* **Event-based reporting for UE performance feedback in the case of HO trigger?**
* **UE Performance Feedback needs to be supported in the newly defined AI/ML information request/report procedure?**
* **Validity time? Introduce the Requested Timing Informaiton IE in the request message?**
* **Prediction information along with the accuracy?**

**CB: # 17\_AIRAN1\_LB**

**- Discuss the open issues above**

**- Capture agreements and open issues**

**- Provide TP if agreeable**

(ZTE - moderator)

Summary of offline disc R3-230854

**Proposed deadlines: EOB, Wednesday, Mar 1st before the offline discussion.**

# For the Chairman’s Notes

Following are proposed:

**The agreed class1 procedure (AI/ML INFORMATION REQUEST/RESPONSE, which name is FFS) is used to configure UE performance feedback reporting.**

**Introduce into the agreed new request message (AI/ML INFORMATION REQUEST, which name is FFS), an indication that UE performance feedback is provided after handover event. The details of indication needs to be discussed.**

**Introduce an indication in the HO request message to indicate that UE performance feedback is requested after HO completion. The details of indication needs to be discussed.**

**The agreed new class2 non-UE associated procedure (AI/ML INFORMATION UPDATE, which name is FFS) is used for UE performance feedback reporting.**

**Partial reporting mechanism is supported in the agreed AI/ML information procedures (AI/ML INFORMATION REQUEST/RESPONSE/UPDATE, which name is FFS). The solutions needs to be discussed.**

# Discussion

## 3.1 Event-triggered reporting

Based on the discussion and chairman notes, here the event triggered report to be discussed is limited to HO-trigger.

Since some companies propose to introduce the index (event index, feedback indication) in the agreed new class1 message to inform the reporting node of the event index that it triggers measurement reporting and the issue of handover-event is strongly related to the issue how to request the UE performance feedback, moderator thinks firstly we can discuss whether the present agreed new class1 procedure, AI/ML INFORMATION REQUEST/RESPONSE (name of message is FFS), can be used for UE performance feedback.

## **Q3-1:** **Whether the agreed class1 procedure (AI/ML INFORMATION REQUEST/RESPONSE) used for requesting UE performance feedback is feasible?**

**Proposal: The agreed class1 procedure (AI/ML INFORMATION REQUEST/RESPONSE, which name is FFS) is used to configure UE performance feedback reporting.**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei | Yes  | We think RAN3 needs to discuss whether to add a feedback indication in the class 1 procedure already agreed with appropriate trigger events to trigger the feedback |
| ZTE | Yes | The agreed class1 procedure support to stop the periodic measurement report. However, legacy HO procedure can not stop periodic, HO is a one-shot procedure for a single UE. |
| NEC | Yes  | The AI/ML information request/response can be used to request and feedback UE performance.  |
| QC | Yes | We think the agreed Class 1 procedure can be used for feedback. However we think certain indication is needed in the message for the target to understand that this measurement is needed for feedback and should be activated only after the AI/ML action is executed. |
| CATT |  | It seems not necessary to use the non-UE associated procedure to request for per UE feedback.We think a proper way and direct way is just to request via Handover request. |
| Nokia | Yes | It is feasible as long as it can be subsequently indicated to a node when to start measuring UE performance, e.g., through a Handover event. |
| Ericsson | Yes | The agreed WA stating that “*Procedures used for AI/ML support in the NG-RAN shall be “data type agnostic”.*” means exactly that the new Class 1 procedure is suitable for the configuration of any measurement object type, including feedback related measurements. The considerable advantage of using this procedure for collection of UE Performance Feedback is that the feedback configuration can be triggered before any of the events triggering UE performance reporting occurs. This is possible by enabling the requesting node to signal to the reporting node an event identifier (e.g. a numerical index) that can be later added in the procedure messages triggering the events upon which UE performance Feedback needs to be generated and reported.We believe that we should focus our efforts on using the new procedures introduced to support AIML use cases to configure AI/ML data reporting, rather than “stretching” the functionalities of existing procedure so to cover use cases and scenarios for which they were not designed.  |
| Lenovo | See comments | In our understanding, both solutions can work:* Alt1: using the new procedure to configure the UE performance feedback before HO REQ, and indicate in the HO REQ to trigger the measurements as Ericsson suggested.
	+ Pro: less impact to the HO REQ message
	+ Con: the UE performance feedback will eventually depend on two procedures
* Alt2: using HO REQ to request the needed UE performance feedback
	+ Pro: single message can serve the purpose
	+ Con: measurement request in the HO REQ. There are some concern about causing additional delay for HO. But in our understanding that can be avoided by gNB implementation.

A bigger question is that if we use the same procedure to carry both prediction and measurement, would that mean only AI capable UE can implement and support this procedure considering prediction is something AI specific.  |
| Interdigital | Yes |  |
| Samsung |  | The first issue needs to be solved is whether to include legacy measurement in this new defined AI/ML related procedure. We prefer to put the legacy measurement and prediction information in separated message. The new-defined legacy measurement also can be used for the SON mechanism. The feedback can be used as the factors to do the evaluation in AI/ML and also can be used to evaluate the legacy HO decision. Definitely, how to use it is up to implementation. It is not directly related to the AI/ML. Separate ways are more clear.The HO is UE specific. HO request to request is a straightforward way. |
| CMCC | Yes | CMCC thinks it is an easy way to carry the feedback request indicator and configurations in HO message, but also fine with the option using the new Class 1 procedure. We suggest to get consensus on which procedure is used in this meeting, but leaves the details on the coding of request IE for later discussion. |

## **whether to introduce an indication related to handover-triggered event in the agreed new request message?**

**Proposal:**

**Introduce into the agreed new request message, an indication that UE performance feedback is provided after handover event. The details of indication needs to be discussed.**

**SS: Don’t see the benefits. Without indication, it also works.**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei | Yes | See comment to Q3-1 |
| ZTE | Yes | An indication related to HO is needed in the agreed new request message |
| NEC | Yes  |  |
| QC | Yes |  |
| Nokia | Yes | Same as above. |
| Ericsson | Yes | The scope of the “data request” procedure is to request information from the target node and to inform the target node about “when”, “what” and “how” to report the requested information. Including am indication of the handover-triggered event covers the “when” to report the feedback information requested. Such indicator can be an Event Index/Identifier, e.g. a numerical value. Indeed, more than one identifier could be signalled in the “data request" configuration message to indicate that more than one HO event triggers feedback reporting  |
| InterDigital | Yes |  |
| CMCC | Yes | Of course. The event based feedback should be supported and new Class 1 procedure is data type agnostic, which means we need to carry the indicator to identify what the event is.  |

## **Q3-3: If Q3-1 is yes, to indicate which UE is requested for UE performance after handover, whether following way can be agreed?**

* **Option A: Introduce the *UE to report List* IE in the AI/ML Information Request (name is FFS) message?**
* **Option B: Introduce an indication in the HO request message to indicate that UE is requested for the UE performance after handover, associated with the request message before?**

**Introduce an indication in the HO request message to indicate that UE performance feedback is requested after HO completion. The details of indication needs to be discussed.**

|  |  |  |
| --- | --- | --- |
| **Company** | **Option A or Option B or both** | **Comments** |
| Huawei | Option A | We submitted a TP to TS 38.423 based on Option A (ref. R3-230381); no need to “overload” the existing HO request message, hence use the agreed new class 1 procedure instead |
| ZTE | Option A | Option A is reflected in our TP R3-230599 that it is necessary to indicate the target NG-RAN nodes to collect the UE performance for which UE. In addition, we are fine to add an event ID in the HO request message. |
| NEC | Option A |  |
| QC | Option B | The UE list cannot be determined prior to the AI/ML action (HO) when the class 1 message is sent requesting feedback. Upon the AI/ML action the set of UEs impacted will be known and not prior. Hence there are only 2 possibilities – * To indicate in the HO Request that feedback is requested for the UE OR
* send the Class 1 message after every HO to request for feedback

We think sending Class 1 message after every HO is an overhead, Hence the easiest way is to preconfigure the measurements prior to the HO via the agreed Class 1 message and indicate in the HO Request message the “Measurement ID” of the earlier configured measurement. This way the measurement configuration need not be repeated in the HO message and the target also knows that feedback needs to be provided for this UE after the HO.Please refer to our paper R3-230481 for detailed callflow on how this can work. |
| Nokia | Option B | We also think that it much simpler to configure the UE performance measurement once and only trigger the actual measurement at Handover procedure.  |
| Ericsson | Option B | We are in favor of Option B because it enables the requesting node to “dynamically” indicate for which UE Performance feedback is required. The major drawback of Option A is the fact that it constrains the requesting node to use a “static” list of UEs for which performance feedback is required. This static list must be built before the reporting request is sent to the reporting node, but at the time of formulating such reporting request it is not known whether a UE will carry out mobility towards a certain target cell, hence how can it be possible to add a priori a list of UEs for which an HO to a given target cell will occur and for which UE performance feedback is needed? |
| Lenovo | Option B | If we really want to go for Q3-1, Option B is better. Option A has the problem that if a UE in the request list that was expected to be handed over but the handover does not happen eventually, what will the gNB do? |
| InterDigital | Option B |  |
| Samsung | Option B | Similar view as Lenovo. The HO is UE specific. If proving a list of UE, there may exist many UEs not being handed over to such cell. |
| CMCC | Option B | The HO message identifies the UE by nature, no need to make the new procedure too complicated.  |

## 3.2 Class 2 procedure for UE performance feedback reporting

In the last meeting, following is the left issues:

*There seems to be agreement that reporting of AI/ML feedback is sent in a new class 2 procedure, but this agreement can be finalized when the stage 2 discussion finalized in the future. Whether this is the same class 2 message as already agreed for Data Reporting of AI/ML Related Information is FFS.*

Moderator think no matter the class1 procedure used for UE performance feedback is the present agreed new AI/ML information procedure or Handover procedure, the target NG-RAN node needs to collect a single UE performance or a list of UEs’ performance, the current agreed class2 non-UE associated procedure can be used for reporting the UE performance feedback, and *UE identifier* IE is listed in the message. In order to move forward, follow proposal can be agreed.

**The agreed new class2 non-UE associated procedure (AI/ML INFORMATION UPDATE, which name is FFS) is used for UE performance feedback reporting.**

## **Q3-4:** **Companies are invited to provide views on whether the proposal above is acceptable?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei | Yes | We think RAN3 needs to discuss whether to introduce the performance matrix in the new class 2 non-UE associated procedure to report the cell-based UE performance feedback. Please refer to R3-230381 in Huawei’s paper, we made attempts for the tabular capturing the performance feedback. |
| ZTE | Yes |  |
| NEC | Yes  | This class 2 non-UE associated procedure can be used to report cell based UE performance.  |
| QC | See Comments | Our preference is to introduce a new Class 2 procedure to send UE performance feedback as the AI/ML training input metrics and AI/ML feedback metrics differs for different use cases, and the feedback procedure modular and lean and not overload the agreed Class 2 AI/ML training input report message.However if the majority wants to reuse the agreed Class 2 procedure for UE performance feedback , we are fine to go with the majority. |
| CATT |  | We prefer to have a dedicated UE associated procedure for UE performance feedback.Otherwise,it make the present agreed class2 non UE assocated procedure very complex.  |
| Nokia | Yes | We agree that there is no need to define a new procedure. |
| Ericsson  | Yes | As mentioned above, the agreed WA stating that “*Procedures used for AI/ML support in the NG-RAN shall be “data type agnostic”.*” Implies that the new Class 2 procedure can be user to report UE Performance Feedback. We believe this is the best approach because it allows the requesting node to receive not only UE Performance Feedback but also information that are needed together with the feedback in order to e.g. retrain the model or perform inference. |
| InterDigital | Yes |  |
| Samsung | See comments | Prefer non-UE associated way. But whether to use the new defined class 2 procedure depends on the conclusion of Q3.1. |
| CMCC | Yes | We have agreed to introduce the procedures as data type agnostic. Also think the new Class 2 procedure can be used for both single UE feedback and non-UE associated feedback. It depends on the configuration of feedback request in Class 1 procedure.  |

## 3.3 Partial reporting mechanism

We discussed whether partial reporting mechanism is supported, and supporting companies acknowledged the motivation of partial reporting mechanism. Hence, moderator tries to propose that the partial reporting mechanism should be supported in the present agreed AI/ML information procedure.

**Partial reporting mechanism is supported in the agreed AI/ML information procedures (AI/ML INFORMATION REQUEST/RESPONSE/UPDATE, which name is FFS). The solutions needs to be discussed.**

## **Q3-5** **Companies are invited to provide views on whether the proposal above is acceptable?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei | Yes but | We think the partial reporting as a general concept can be supported via legacy procedure (i.e., resource status reporting procedure in TS 38.423), thus in our understanding, the agreed class 1&2 procedure is able to achieve the purpose of partial successful reporting, i.e. no new indication is needed; if companies share different view, we are open to discuss the motivation if any new mechanism should be introduced in a new “fashion”.  |
| ZTE | Yes | The partial reporting mechanism should be supported for AI/ML information. Technically, some AI/ML algorithm could use part of information as input.Since the source NG-RAN node can decide whether its model can use partial information to perform model inference or model training, the target NG-RAN node could respond the partial measurement if the partial reporting is allowed. |
| NEC | Yes  | Partial reporting can be supported without any impact of the legacy procedure.  |
| QC | Yes | We think partial reporting should be supported.If it is not supported, then source needs to send multiple request messages with different measurement configuration to find out which one of the measurements is not supported by the target. With the agreed Class 1 procedure, the procedure can be successful only when all the measurements requested by source can be supported by target. However if out of 5 measurements requested, 4 are supported and 1 is not supported in the target, then target need not fail the procedure, rather use the partial success and continue with reporting. |
| CATT | Yes |  |
| Nokia | Yes  | We can align the new procedures to the XnAP Resource Status baseline procedures.  |
| Ericsson | Yes | In the absence of “capability signaling” which was agreed not to be supported for the moment, “partial reporting” is the only mechanism left which can enable the source and target nodes to establish a rapidly convergent and effective reporting information flow. In the absence of the partial reporting support the only way to establish an effective reporting information flow between the source and the target nodes is through an iterative and repetitive “trial and error” process which is a signaling and time consuming process.We do not think partial reporting is available today as part of the Xn: Resource Status Reporting procedure and therefore it is not available in the new class 1 procedure. This is because the Xn: Resource Status Reporting does not allow to understand if a measurement was not provided because it is not supported (hence it should not be requested again) or because it was not available (hence if can be requested again and reported, if conditions at the reporting node allow). The latter knowledge corresponds to knowing the capabilities of a neighbour node in terms of supported measurements.  |
| InterDigital | Yes |  |
| Samsung | Yes | Due to different and time-varying AI/ML capabilities, partial reporting should be supported.Radio resources status, the number of active UEs and RRC connections have been agreed as the part of predicted resource status metrics. Whether to include TNL capacity indicator, slice available capacity, and composite available capacity group are still under discussion. The prediction of these parameters may be generated by separate models, such as one model for one parameters. Due to different AI/ML capability, the requested node may not provide all the requesting predictions. Part of the predicted status also can help to set the SON decision. One node requests the other node to report three predicted parameters, but the other node can only provide one of them. The node also can take it as the reference information to determine ES or LB decision. |
| CMCC | Yes | Let’s discuss on the baseline procedure for the partial report.  |

And some companies think partial success report has already been supported by default. But moderator checked the RESOURCE STATUS PROCEDURE in the 38.423, the partial reporting cannot be supported by default.

If NG-RAN node2 is capable to provide all requested resource status information, it shall initiate the measurement as requested by NG-RAN node1 and respond with the RESOURCE STATUS RESPONSE message.

**Interaction with other procedures**

When starting a measurement, the *Report Characteristics* IE in the RESOURCE STATUS REQUEST indicates the type of objects NG-RAN node2 shall perform measurements on. For each cell, NG-RAN node2 shall include in the RESOURCE STATUS UPDATE message:

- the *Radio* *Resource Status* IE, if the first bit, "PRB Periodic" of the *Report Characteristics* IE included in the RESOURCE STATUS REQUEST message is set to "1".

Based on the copied context from 38.423 above, it can be seen that if any of the requested measurement are not configured successfully, the target NG-RAN node will respond with the failure message. If the requested measurement is acknowledged by target NG-RAN node and target NG-RAN node responds with the RESOURCE STATUS REPSONSE message, then the target NG-RAN shall send the requested measurement in the UPDATE message. Hence, moderator thinks the partial reporting mechanism cannot be supported by legacy reporting mechanism.

## **Q3-6 Companies are invited to provide views on whether the partial reporting mechanism cannot be supported by legacy reporting mechanism?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei | No | We think partial reporting as a general concept can already be supported based on implementation, e.g., after target node provides the response (acknowledging the requested measurements can and will be provided) it is up to target node itself to provide the actual UPDATE message with the actual measurement results. |
| ZTE | Yes | As the current spec 38.423 state, the update message shall include the measurement, which is configured successfully during request and response message. If it is up to target node itself to provide the actual update message, we don’t know we need failure message when any of measurement can not be supported. |
| NEC | No  | Agree with HW’s view. |
| QC | Yes | Partial success is not supported by XN Resource status reporting procedure. |
| CATT | No but | We are now introducing a new procedure.So we don’t think it is necessary to completely align with resource status procedure.If the NG-RAN node failed the procedure only in case non of the request could be supported,it could be supported without extra IEs. |
| Nokia | No | Agree with Huawei. It is up to the reporting node to provide the available measurement results. |
| Ericsson | Yes | The following tgext in TS38.423 should clearly point at the fact that partial success is not supported over the XnAP:“If any of the requested measurements cannot be initiated, NG-RAN node2 shall send the RESOURCE STATUS FAILURE message with an appropriate cause value. ”Namely, even if one measurement is not supported and cannot be initiated, the full set of measurements requested will be failed. Partial success means, instead, that if one or more measurements fail to be initiated, the remaining messages that can be initiated can be reported, hence the procedure is successfully terminated and not failed. |
| InterDigital | Yes |  |
| Samsung | Yes | Agree the analysis of moderator and E///. The current Xn procedure can not support the partial reporting. |
| CMCC |  | There is no partial reporting now, but whether the requested measurement can be initiated may be already known through the configuration. We don’t think this is the key function of the partial report procedure. Do not let this question block our discussion.  |

## **Q3-7** **If Q3-6 is no, whether “Partial Reporting Indication” needs to be introduced into the request message, or acknowledged information (successful/unsuccessful report characteristics) in the response message?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei | Seems not needed. | As stated in Q3-5, we are open to discuss whether and how such partial reporting should be introduced in a new “fashion”, however, at least for the moment, we don’t see the necessity.  |
| ZTE | Yes | Indication in the request message is essential. And for a simple way, indicate the successful bitmap in the response is enough. No need to define lots of failure cause (e.g., not supported, not available, temporarily not supported, temporarily not supported). One partial reporting failure cause value is enough. |
| NEC | Not needed | The reporting node can report information as much as it is capable to do so, the absent information is assumed not supported by the requesting node. If the requesting node doesn’t need the partial information, it can stop the reporting from the reporting node.  |
| QC | Seems not needed.Open to discuss further | Motivation is not clear. We do not understand what is the use case for which the source will need all or none of the measurements. Open to discuss this further. |
| CATT | FFS | Further clarification is needed. |
| Nokia | No | We don’t see why a partial indicator is needed or how it can be useful. Even if you support partial success, you still may not receive all of the measurements that you need so you would still need to cancel the reporting in that case. It seems that the legacy mechanism is sufficient. |
| Ericsson | Yes | The Requesting node needs to include the Partial Reporting Indicator in order to let the reporting node know whether only parts of the requested measurements can be reported. The use case for this is that the requesting node may support an AI/ML model that needs all the requested measurements in order to run inference. In this case, receiving only part of the requested measurements constitutes a waste of signalling and resources because the requesting node cannot use such information.  |
| InterDigital  | Yes |  |
| Samsung | Yes | As the reporting requirement is from requesting node, requesting node should indicate whether the partial reporting is supported or not. If supporting, the requested node can feedback the subset of requested items. If not, the requested node must report all the requested items or reject the request.After receiving the request from requesting node, the requested node finds it can only provide part of the request prediction item and it can indicate the item which it can provide in the response message. |
| CMCC |  | An alternative way is to add “mandatory” or “optional” indicator for each feedback in the request message. For the target node, if the optional feedback is unavailable, it can reply the partial success report; if the mandatory feedback is not available, just response failure.  |

## 3.4 Miscellaneous left issues

There are several FFS in the current BLCR, companies are invited to provide your views on whether following can be captured into TP:

1. Add description of agreed AI/ML information IE (e.g, predicted resource status, etc):

**Interaction with other procedures**

When starting a measurement, the Report Characteristics IE in the AI/ML INFORMATION REQUEST indicates the type of objects NG-RAN node2 shall perform measurements on. For each cell, NG-RAN node2 shall include in the AI/ML INFORMATION UPDATE message:

- the Predicted Radio Resource Status IE, if the first bit, "Predicted Resource Status Periodic " of the Report Characteristics IE included in the AI/ML INFORMATION REQUEST message is set to "1"

- the *Predicted* *Number of Active UEs* IE, if the second bit, "Predicted Number of Active UEs Periodic" of the *Report Characteristics* IE included in the AI/ML INFORMATION REQUEST message is set to "1";

- the *Predicted* *RRC Connections* IE, if the third bit, "Predicted RRC Connections Periodic" of the *Report Characteristics* IE included in the AI/ML INFORMATION REQUEST message is set to "1"

B. Report Characteristics IE in the request message

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Report Characteristics | C-ifRegistrationRequestStart |  | BITSTRING(SIZE(32)) | Each position in the bitmap indicates the object the NG-RAN node2 is requested to report.First Bit = Predicted Resource Status Periodic,Second Bit = Predicted Number of Active UEs Periodic,Third Bit = Predicted RRC connections Periodic | YES | reject |

C. And new code point "add" in the Registration Request IE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Registration Request | M |  | ENUMERATED(start, stop, add…)  | Type of request for which the AI/ML related information is required. | YES | reject |

|  |  |  |
| --- | --- | --- |
| **Company** | **A, B, C** | **Comments** |
| Huawei | Ok for A, B, open to discuss for C | For A and B there might be other IEs, e.g. the ones in our TP in R3-230381 (basically, reusing the existing metrics); for C we are open to discuss based on a clear need/motivation for these new code points  |
| ZTE | All | A, B, C are reflected in our TP R3-230599.For c, some companies want to discuss the “update”. We think this issue is discussed in the SON topic. From our view, we don’t need to discuss this issue again in the AI RAN topic. As what we agreed before, the AI/ML information should obey the reporting mechanisms as the resource status reporting. In addition, when the source node needs information of other cells, the registration request can be set to “add”. |
| CATT |  | In our contribution,we propose to classify the various metrics into several categories which could be handled by CU-CP,CU-UP and DU separately instead of putting all of the metrics into one IE |
| Nokia | A, B,C | For A, we think that the text below should be removed at this stage:“If NG-RAN node2 is a gNB and if the cell for which Predicted Radio Resource Status IE is requested to be reported supports more than one SSB, the Predicted Radio Resource Status IE for such cell shall include the SSB Area Radio Resource Status Item IE for all SSB areas supported by the cell. If the SSB To Report List IE is included for a cell, the Predicted Radio Resource Status IE for such cell shall include the requested SSB Area Radio Resource Status List IE; If the cell for which Predicted Radio Resource Status IE is requested to be reported supports more than one slice, and if the Slice To Report List IE is included for a cell, the Predicted Radio Resource Status IE for such cell shall, if supported, include the requested Slice Radio Resource Status Item IE;” |
| Ericsson | Ok for B | We realise that A includes measurements that were not explicitly agreed such as predicted per slice resources.We prefer not to add C in order to reduce the complexity of the procedure.  |
| Lenovo | B | Agree with Ericsson |
| InterDigital | B |  |
| Samsung | ALL | Agree with ZTE |
| CMCC | B and C |  |

## 3.5 Other issues (not listed above)

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Huawei | Yes | In our TP for 38.423 in R3-230381 (and corresponding discussion paper in R3-230380) we proposed to:* discuss and agree that whether an incoming handover for the purpose of AI/ML inference based load balancing should be identified
* source node to inform the target node of the timestamp of the handover based on AI/ML inference
 |
| ZTE |  | We prefer to focus on the issues listed above in this meeting. |
| QC |  | We also prefer to discuss the event based trigger design for threshold and othee AI/ML actions other than HO. However due to lack of time, we are fine to discuss it in the next meeting. |
| CATT | Yes | We have the following proposal:Support of provision of predicted information not only for (t0,t0+T) duration but also (t0+T,t0+2T) which could support the scenario that the source NG-RAN node may want to do the RRM strategy in the time point t0+x\*T(0<x<1) |
| Nokia | Yes | It seems that we didn’t address 2 points captured in the Chair notes:* **Validity time? Introduce the Requested Timing Informaiton IE in the request message?**
* **Prediction information along with the accuracy?**

At least in our view we need to introduce timing information regarding when a prediction is requested because without this information it is unclear when inference needs to be executed. In addition with respect to accuracy information, we think it needs to be included only in the request message as a minimum accuracy requirement for the requested predictions but it seems to us that signaling accuracy information per prediction is redundant. |
|  |  |  |

# References