

3GPP TSG RAN#93e
RP-212563

Electronic Meeting, September 13 - 17, 2021

Agenda Item: 9.3.2.11

Source: RAN Vice-Chair (Deutsche Telekom)

Title: Email discussion summary for [93e-23-SLRelay-WI]

Document for: Decision

This NWM thread handles the proposed to update the current Rel-17 Sidelink Relay WID to also cover the support of 5G ProSe-based discovery for non-relay. It is assumed that the relay relevant discovery procedure is already part of the current WID and no other WI in RAN handles the case of non-relay.

This thread handles the following documents submitted to RAN#93e:

- **RP-211780** (discussion doc) OPPO
- **RP-211781** (proposed WID update) OPPO
- **RP-212418** (discussion doc) ZTE

Timeline for comments as announced by the RAN Chair

1 Initial Round

1.1 Discussion on the need to cover non-relay in RAN Rel-17

Here companies are invited to indicate, if the **support for non-relay discovery** needs to be explicitly defined as an addition to the existing RAN WI, or if the 5G ProSe discovery is potentially already covered elsewhere for NR (i.e. as part of the V2X framework ?) or implicitly.

Feedback Form 1: View on the need to cover non-relay discovery explicitly

1 – Guangdong OPPO Mobile Telecom.

Firstly, 5G ProSe starts in R17, not covered by RAN work in R16 (at least no coverage on 5G ProSe discovery).

Secondly, 5G ProSe **discovery** consists of two parts, **relay** related ProSe discovery and **non-relay** related ProSe discovery, where the former one is covered in R17 SL Relay WI in RAN side, yet the latter one is not covered in any WI at RAN side yet.

So the gap / hole on **non-relay** related ProSe discovery does exist, the problem is just whether / how we handle this gap. For this, we are fine with following majority view.

2 – Futurewei Technologies

As a gap is identified, it'd be better to have it addressed explicitly in a WI.

3 – Apple Europe Limited

We agree that 5G non-relay Prose Discovery is not covered in RAN yet, so we are fine to revise R17 SL relay WID to add this.

4 – MediaTek Inc.

We agree that it would be good to avoid a disconnect between SA and RAN on this issue, and thus it makes sense to add the non-relay discovery activity to a WI.

5 – HuaWei Technologies Co.

We are open to consider it included in the SL relay, but we understand we should first finish SL relay part, otherwise the baseline solution to consider what is needed or not needed for non-relay part is unclear. So we suggest we should first focus on completing the discussion on SL relay, and the non-relay part can be discussed as second priority once relay part is completed.

6 – Samsung R&D Institute UK

We do not support to add non-relay discovery into the existing RAN WI (i.e., sidelink relay) at this stage. RAN2 has declared the completion of the common part (objective 1) during June plenary meeting(#92e) as requested by RAN. Therefore we have concerns to reopen and extend the scope of the common part after its completion.

7 – LG Electronics Inc.

We wonder whether non-relay discovery is distinguishable in AS layer. If not, no additional RAN work is necessary and a simple clarification that AS layer mechanism designed for relay discovery is also applicable to non-relay discovery. If RAN needs to define a separate solution for non-relay discovery, we share Samsung's concern about reopening the WI scope.

8 – Intel Corporation (UK) Ltd

We understand that non-relay discovery is not covered by any RAN WI. We can check with SA2 to understand the potential RAN impacts and add to any existing or future WI as per majority view. Until now, there has been no SA2 request except the previous question on the message size for discovery that RAN2 already responded.

9 – vivo Mobile Communication Co.

We prefer to postpone this work. Furthermore, We do not think it is good idea to add non-relay discovery into the existing SL relay WI. Adding non-relay objective in this WI may bring a bad precedent and may open the door for other discovery scenario(s). In SL relay WI, We should focus on the completion on SL relay objectives already agreed without any distraction with non-relay objective(s).

10 – QUALCOMM JAPAN LLC.

We support revising WID objective. We think the gap between RAN2 and SA2 should be addressed. And we expect the extra workload is going to be marginal.

11 – ZTE Corporation

The support of 5G ProSe discovery is not covered by any RAN WI. RAN2/3 is suggested to identify the RAN dependency issues and start specification work in RAN to support 5G ProSe discovery mechanism in Rel-17. Otherwise, SA2 would have supported the 5G ProSe discovery feature in Rel-17 while RAN would not. It results in an incomplete support of 5G ProSe discovery in Rel-17. Considering that SL relay at least covers the U2N relay discovery support, we slightly prefer to extend the work scope of SL relay to cover the generic 5G ProSe discovery support.

12 – CATT

We share some previous comments that currently it seems not very clear what is the different impact to RAN with non-relay discovery or relay discovery. It may be useful to check with SA2 first. We are not sure if WID change is necessary at this stage.

13 – Ericsson LM

RAN2 will have to repeat discussions on all discovery related issues (e.g., discovery configuration, discovery message format, discovery resource allocation, discovery resource pool, discovery logical channel prioritization, discovery measurement) for non-relay discovery to see if there is any issue. Given there is only limited time left for Rel-17, RAN2 will probably not be able to address all these issues hence we think we should stick to the original scope.

14 – Guangdong OPPO Mobile Telecom.

Just to clarify: we understand some of the concern re-opening the discussion on discovery, e.g., whether that means R2 goes through the whole thing once more, and lead to double work. It is also our view that this should be prevented (regardless whether this is handled in this release or later), and thus restriction like the NOTE "For the non-relay discovery (Objective 7), RAN2 takes the agreement for relay-based discovery achieved before RAN#93 as baseline" (already included in 1781) would be helpful (other methods would be welcome as well).

15 – Nokia Denmark

In our view the priority for the RAN2 work should be in the common parts as agreed by RAN. From the technical perspective we see it would make sense to cover the non-Relay ProSe discovery aspects within the Rel-17 SL Relay WI. However, this would require that some additional time is allocated for this additional RAN2 work.

16 – Beijing Xiaomi Mobile Software

We see that non-relay discovery is not covered in RAN for REL17. We anticipate that any non-relay discovery work would be small compared to relay discovery, which should be considered as a basis for only essential changes to facilitate non-relay discovery.

We would not support this introducing new or unnecessarily divergent functionality (cf. relay discovery) and also not taking very much time from the existing work to complete. RAN should support SA2 to complete it's WI, in a similar manner to the assistance we receive from SA2 to complete our WIs.

17 – Lenovo (Beijing) Ltd

We are fine to add support for non-relay discovery since SA agreed to support. In rel-17, we still have many remaining issues for discussion. Therefore, the relay discovery mechanism can be reused for the normal discovery procedure. Any enhancement can be discussed in Rel-18.

18 – Philips International B.V.

We support adding this, since this clearly was an oversight that this was not supported, and would lead to misalignment between RAN and SA specs. We expect that the same discovery framework for relay discovery can be reused for non-relay discovery. This was also generally the assumption from the beginning and also in SA2.

1.2 Discussion on proposal in RP-211781

Here companies are invited to discuss the proposal in **RP-211781** to add this objective to the existing WID on Sidelink relay, or propose alternatives and provide a good estimate of the required work (list of topics, RAN WG involved (R2/3/4 ?), estimation of additional work load (additional TUs ?), “quick win enhancements” to basic proximity detection (e.g. related to the request of SA2 to RAN2 as discussed in RP-212418).

Feedback Form 2: Feedback on proposal in RP-211781

1 – Guangdong OPPO Mobile Telecom.

We are open to suggestions to limit the work load / TU impact due to this addition (if agreed by RAN finally).

2 – Futurewei Technologies

Since it is non-relay discovery that is in question, it seems more reasonable to discuss it in sidelink enhancement WI. On the other hand, we understand some companies may feel better to have all discovery matters (non-relay related and relay related) handled in a same WI, e.g., to ease the stage-3 specification efforts. We are open to discussing non-relay discovery also in sidelink relay WI, as long as extra TU is allocated to account the additional works.

3 – Apple Europe Limited

We think no new mechanism is needed and non-relay discovery can share the same solution with relay discovery. Regarding the support of different discovery ranges, in order to minimize the work load and impact to RAN1, we prefer not to have any new solution for R17 and enhancements can be left to R18 work.

4 – MediaTek Inc.

Considering the limited time for a Rel-17 WI to absorb this addition, it’s important to limit the impact. We think this can be done as Apple suggested, by reusing the relay discovery mechanism and especially by avoiding any new solution that would impact RAN1.

Regarding which WI to use, neither solution is perfect, but the technical work for discovery is already done in the SL relay WI and it seems reasonable to keep the discovery work together. In any case the work will need to be coordinated between the two sidelink WIs.

5 – Samsung R&D Institute UK

We do not support to add the objective to the existing WID. We think that the new objective should be considered and discussed for later release if needed.

6 – HuaWei Technologies Co.

See our reply to Q1, if this is added, we think we should seek out a simple enough solution. We suggest to first complete the SL relay part as the baseline solution, and apply to non-relay part when essential.

7 – LG Electronics Inc.

We think the conclusion should be dependent of the answer to our question on whether a separate RAN solution is necessary for non-relay discovery. In our understanding, the same RAN discovery solution can apply to both relay and non-relay case, and if this can be confirmed by the group, then we can add a simple note in the WID to clarify that the relay discovery mechanism can also be applicable to non-relay cases.

8 – Intel Corporation (UK) Ltd

RAN could discuss the extension of relay WID after getting more information from SA2 on what RAN enhancement/modification is needed.

9 – vivo Mobile Communication Co.

We are **NOT** in favor on adding any non-relay objective in this SL relay WI. We may discuss this only after completion of SL U2N Relay WI. Or alternatively, this can be considered in Rel-18 e.g., in consideration of U2U relay discovery and non-relay discovery as a whole.

10 – QUALCOMM JAPAN LLC.

We agree with Apple and MediaTek that relay discovery solution can be reused to non-relay discovery. We prefer not to introduce a new solution, unless a critical issue is indentified. We expect it will be just that RAN2 only needs to confirm that the relay discovery solution can be reused. In that sense, we prefer to address it in sidelink relay WI.

11 – ZTE Corporation

The following two potential issues are identified for the support of non-relay discovery:

- 1) discovery authorization: the authorization and discovery message transmission design in SL relay can be reused for the generic 5G ProSe discovery to a large degree. RAN3 should be involed. This can be discussed together with the U2N relay authorization. The aentipicated effort for discovery authorization is low.
- 2) discovery message range: either LTE discovery range support or the NR SL transmission range can be considered as baseline. RAN2 should be involved. The specification effort depends on which solution to use.

12 – CATT

See our response to previous question. It seems a bit unclear at this stage whether/how to change the WID. Perhaps RAN could stick to the current WID objectives first and consider any potential gap if identified by SA2.

13 – Ericsson LM

If we do this, we would have to create two flavors of the Rel-17 discovery procedure. These different procedures would not only have impact in RAN, but also SA groups need to have different discovery message designs. RAN2 must ensure that two UEs use the same flavor, or that they are compatible somehow. All this may be possible to standardize, but given this late stage in the release, and the general slow progress in the sideline area, we don't think it is feasible to extend the scope now.

14 – TELECOM ITALIA S.p.A.

No support to add new objectives at this stage of the Release. This is incredible. We need to close the Release and companies try to add new objectives.

And no analysis on RAN2, 3 and especially RAN4 is provided in RP-211781 !!

15 – Guangdong OPPO Mobile Telecom.

SA/CT, focusing on discovery payload design, has already specified different content/format of relay/non-relay messages, which is the reason of the discussion here, i.e., they (relay and non-relay discovery) are indeed different from SA/CT perspective. But that does not necessarily mean different solution in RAN side as well, but on the contrary, we believe almost all RAN aspects could be the same, and thus believe some restriction on this direction would be helpful.

16 – Nokia Denmark

The proposal is acceptable for us if additional TUs are allocated to this additional RAN2 work. This or any other additional work may not impact the completion of the prioritized common parts.

17 – Beijing Xiaomi Mobile Software

As mentioned by others we see that SA2 have specified varying message contents for relay and non-relay messages. Once the relay discovery is satisfactorily complete then we can see if a gap exists in RAN between non-relay discovery and the relay discovery. In RAN we anticipate that the relay discovery mechanism can be reused to a large extent, extensions and non-essential changes would not be acceptable. Creating a WI objective would be a clear way to manage this limitation.

18 – Lenovo (Beijing) Ltd

see our reply for Q1.

19 – Philips International B.V.

We support the changes to the WID. Given that we think the relay discovery framework can be reused for non-relay discovery, it is probably not even needed to add any additional TUs.

1.3 Other aspects to be considered

Please add here other aspects to be considered which do not fit to the above sections.

Feedback Form 3: Other aspects to be considered

2 Intermediate Round

Summary of initial round

Majority of companies (11) indicated that the support for discovery of non-relay should be ensured to also have a consistent end-2-end solution with SA2. It was mainly argued that discovery for relay has priority and should be the baseline also for non-relay. The amount of additional work is seen either zero (as 2 companies indicated that on AS there should not be any difference) to marginal or low.

3 companies indicated that they do not support to add non-relay discovery in the RAN WI.

2 companies suggested to ask SA2 for guidance or awaiting a clear request.

Proposal by the moderator: Given the above summary, the moderator proposes to continue the discussion on the text for a SL relay WID update, aiming to enable the basic non-relay discovery by re-use of the relay discovery solution in RAN (i.e. no "nice to have" enhancements, commonality).

2.1 WID update

The moderator suggests finding agreement on the WID objectives update, taking RP-211781 as baseline:

Can the new – secondary – objective be agreed as an update of the SL Relay WID as below (from RP-211781)?

Secondly, the objective of this work item also covers the non-relay discovery.

7. Specify mechanisms for **non-relay discovery** [RAN2, RAN3, RAN4];

NOTE 5: For the non-relay discovery (Objective 7), RAN2 takes the agreement for relay-based discovery achieved before RAN#93 as baseline.

IMPORTANT: If you think it cannot, please suggest a changed wording with ~~strikethrough~~ and underlined text or a clear "we do not support, because ..." !

Feedback Form 4: WID update

1 – Intel Corporation (UK) Ltd

We are ok to add a general objective to make sure that there is no gap between RAN and SA in supporting non-relay discovery.

Nevertheless, given that it is quite late to add a new objective, we should minimize the additional work in RAN2/3/4 for non-relay discovery.

Considering it is not clear yet what additional work is needed in RAN2/3/4, we would like to suggest the following NOTE instead of the current proposed NOTE.

NOTE 5: RAN2 prioritizes relay discovery for discussion and for the non-relay discovery (Objective 7), RAN2 takes the agreement for relay-based discovery achieved before RAN#93 as baseline and discusses if any different handling is needed as second priority.

2 – Apple Europe Limited

We are fine to add an objective to cover the non-relay discovery in SL relay WID. For the NOTE, we prefer to make clear that "separate solution(s) for non-relay discovery are not pursued in Rel-17".

3 – ZTE Corporation

We are fine to add an objective to support the specification of non-relay discovery. However, we think it may not be appropriate to use most of relay UE or remote UE specific agreement to non-relay UE as baseline. For example, when to trigger the discovery message transmission is not applicable for non-relay UE discovery. The discovery resource allocation of non-relay UE may directly follow the legacy mechanism for SL communication UE instead of relay/remote UE. So we suggest to remove the note.

4 – QUALCOMM JAPAN LLC.

We are fine to add a new objective. Since the work is related to what SA is doing, it is better to align the terminology. So instead of "non-relay discovery", we propose to use "5G ProSe Direct Discovery".

On the note, we think the text suggested by the moderator already provides sufficient guideline to WGs. Adding more text could just add confusion and restrict their work unnecessarily.

5 – HuaWei Technologies Co.

Some slight update over Intel's version, we are not sure why relay-based discovery as baseline needs to limit to before RAN#93. Thus we suggest to remove "before RAN#93e". In general we agree with the moderator we should first completing the relay parts before starting non-relay parts, and the note itself indicates we have baseline solution, but this does not mean non-relay part cannot have difference, and thus we think the note is useful.

NOTE 5: RAN2 prioritizes completion of relay discovery, and for the non-relay discovery (Objective 7) RAN2 takes the agreement for relay-based discovery achieved as baseline and discusses if any different handling is needed as second priority.

6 – Nokia Denmark

We can accept the proposed scope addition if the needed additional TUs are added to the WI. RAN2 has not yet completed the prioritized common parts and every discussion take time. Thus, it is not acceptable to add new objectives without TUs. The SL Relay work without any addition is already using significantly more time than allocated.

7 – Deutsche Telekom AG

Deutsche Telekom supports the addition of the objective to have alignment with SA2 and a Rel-17 e2e solution.

We also agree with Qualcomm that we should call it "5G ProSe Direct Discovery" instead of non-relay.

With regard to the note we think it is helpful, but we should not overstress the importance of every word in a note. We believe we have agreement that this is 2nd priority, relay discovery is used as a basis and enhancements optimisations which would require more discussion/work would not be covered in Rel-17

8 – CATT

If WID change is considered necessary by majority we are fine with that.

Then in our view it is meaningful to indicate priority in the WID, as we believe R2 should first make sure the originally planned work is completed on time. In this sense we think the reworded note (by Intel and Huawei) is the right direction.

9 – Ericsson LM

Companies argue that this has zero/almost zero impact. No specific optimizations/enhancements should therefore be needed, is our interpretation of what the proponents say.

We want to make this clear in the WID and in particular that WGs shall not work on optimizations for this particular scenario. We want to add this wording:

”Enhancements and optimizations beyond basic functionality for the non-relay scenario are not considered.”

If companies are not fine with this, we assume that means that those companies think that the non-relay scenario indeed requires non-negligible additional work in WGs beyond current WID scope. And if that is the case, I guess we cannot add the additional scenarios.

10 – LG Electronics Inc.

We agree with Ericsson. If an objective is added with no TU update, it should be very clear that no specific enhancements are pursued for non-relay case. So a note proposed by Apple or Ericsson should be captured instead of the note proposed by the moderator which in our understanding opens the door to non-relay specific enhancements even with 2nd priority.

11 – Samsung R&D Institute UK

In our understanding, 5G ProSe Direct Discovery defined by SA2 includes group discovery and this feature (i.e., group discovery) has different characteristic from U2N relay discovery which uses broadcast transmission format. In some sense discovery message in groupcast transmission format may not be optimization or enhancement from the baseline of U2N relay discovery and this may be a basic function for groupcast discovery message. We have concern that RAN2 may take time to discuss the support of groupcast discovery message in groupcast format additionally.

If this secondary objective is added, then we support to capture the note “support of non-relaying discovery without separate solutions” as Apple comments.

12 – MediaTek Inc.

We agree to add the objective, and we think Huawei’s proposal is a good wording for the NOTE. The intention is to have the relay solution as the baseline, not to take a snapshot at the time of a particular meeting and work from that.

13 – Guangdong OPPO Mobile Telecom.

Proponent.

And same view as Deutsche Telekom AG.

14 – vivo Mobile Communication Co.

If we agree to the WI objective to add non-relay discovery, we should further clarify that "SL-DRX specific to non-relaying discovery is not within the scope of this Revised WID". Because we think this should be considered in SL enh WI. So we propose an update of the objective as:

7. Specify mechanisms for non-relay discovery (exclude SL-DRX specific for non-relaying discovery) [RAN2, RAN3, RAN4];

or alternatively we can add a note to clarify this.

15 – Beijing Xiaomi Mobile Software

We support the inclusion of the objective in the Relay WID, and we think a note is essential to ensure that the work is kept to a manageable (almost none) size. The note should clarify the baseline and priority handling. We also support the proposal from Apple that the Note clarifies no separate solution for non-relay discovery are pursued in REL17. If it is identified that some scenarios that are supported by SA2 are excluded then SA2 can be informed that those scenarios are not supported in this release, but basic functionality should be covered. We also have concerns on calling it non-relay discovery so agree it would be more appropriate to call it 5G ProSe direct discovery.

2.2 Need extra Time Units ?

The moderator assumes that the work to enable baseline non-relay discovery in Rel-17 (i.e. no optimizations) does not require any additional TUs for any RAN WG.

If different views exist, this can be stated here with a clear justification why and how much increase in which RAN WG would be needed.

Feedback Form 5: Need extra Time Units ?

1 – Nokia Denmark

The SL Relay work without this addition is already using significantly more time than allocated. Additional scope and additional discussions will need more time. RAN2 has not yet even finalized the work on common parts. We can only accept the proposed additional scope if the needed additional TUs are added.

2 – Deutsche Telekom AG

(as moderator to Nokia:) Fine, I hear your concerns, but we have basically 3 assumptions:

- inherently supported already (no impact at all)
- marginal to low impact - can be handled as normal process within the allocated TUs
- more work which requires additional TU (your view) - I explicitly asked for a clear justification and how much increase - you didn't answer those two questions, but gave a quite general view - could you please be more precise !

3 – Ericsson LM

Proponents say there is zero/almost zero impact. There should be no need for additional time. We trust that this is true and that completion of the WI will not be at risk in the end of the release.

4 – MediaTek Inc.

We agree that this can be done without a TU increase.

5 – Guangdong OPPO Mobile Telecom.

We agree that this can be done without a TU increase.

6 – vivo Mobile Communication Co.

We also think it is not realistic to add an objective without increasing the TU.

7 – Beijing Xiaomi Mobile Software

we expect this can be done without additional TUs. If discussion identifies aspects, not yet identified, which cause the work to require additional TUs then it should come back to RAN before discussion burns into the existing TUs to decide if,

- a) it is warranted/supported
- b) any TUs can be found or
- c) it is not supported in this release

8 – Nokia Denmark

Our apologies for not being specific on the TUs and sufficiently clear on the reasons. We were hoping that RAN2 would provide an estimate considering that now 2 TUs have been allocated to SL relay WID but that has not been sufficient in the RAN2 discussions. Earlier we agreed that the common aspects would be the priority in the RAN2 discussions but most of the discussion time has been used for L2 relay discussions and the common parts are not yet complete. If we add more objectives to the WID, it is likely to risk the completion of common parts. In our view TUs should at least be increased from 2TUs to 2.5 TUs for RAN2.

9 – Deutsche Telekom AG

(as moderator to Nokia:) So you claim now that the addition of non-relay proposed consumes 0.5 TUs ? Other companies say this is no to low/marginal additional work.

Can we try to get a compromise with the assumption that no additional TU is needed for the baseline work in Rel-17 (this seems to be majority view up to now). Obviously this excludes anything which goes beyond the basic functionality in Rel-17.

Thanks.

10 – MediaTek Inc.

R2 Chair: First, on the observed TU usage, R2 time consists of RP planned TUs and other time, where the other time is used to compensate somewhat for planning inaccuracies, so most WIs get some baseline TU GTW time and also some additional GTW time for CBs etc. Second, formally there are still some R2 reserve TUs in the TU plan, but honestly I think TU planning is less important towards the end of a release. Third, regardless TU usage, the load in R2 is high (very high) and if we add something it MUST be

managable with little impact. One possible way could be to make the objective very specific wrt solution (wid objectives can have both objective part and solution limitation part). IF we cannot specify such that we can assure little and manageable impact maybe we should not add this.

11 – MediaTek Inc.

R2 Chair: Just to clarify: I think R2 TUs is not necessarily a blocking part, but we must ensure that this can be specified with little impact ..

2.3 Final Round

Summary of Intermediate Round

There was again a clear majority of companies indicating that the support for discovery of non-relay should be ensured to also have a consistent end-2-end solution with SA2. It was stressed that the WI update would be acceptable under the condition that the work on non-relay discovery has secondary priority, uses relay discovery agreements in RAN2 as the basis and only provides baseline support for non-relay discovery. Any optimisation should not be treated as part of this Rel-17 WI. It was also requested to update the term "non-relay" to "5G ProSe Direct Discovery" and a note should be added which clearly defines that the work has second priority, based on relay work and enhancements and optimisation are excluded.

Proposal by the moderator: Agree to update the Objectives of the WI with the following wording and note:

[Start changes]

Secondly, the objective of this work item also covers the non-relay discovery (i.e. 5G ProSe Direct Discovery).

7. Specify mechanisms for **5G ProSe Direct Discovery** [RAN2, RAN3, RAN4];

NOTE 5: RAN2 prioritizes completion of relay discovery work, and for 5G ProSe Direct Discovery (Objective 7) takes the agreement for relay-based discovery achieved as baseline while enhancements and optimizations beyond basic functionality (e.g. groupcast discovery or SL-DRX specific for 5G ProSe Direct Discovery) for the 5G ProSe Direct Discovery scenario are not considered.

[End changes]

The discussion on the question of additional TU needs clarified that - assuming reuse and only basic non-relay discovery without enhancements and optimisation - no to low/marginal additional work is needed. Majority of companies indicated that with this clear limited additional objective the work could be performed without additional TUs. One company claimed additional 0.5 TU would be needed, but did not provide convincing argumentation, why this addition would result from this new objectives (the moderator had the impression that the request was meant as a general TU increase). RAN2 Chair indicated that TU would not be the stopping point, if additional content is limited and clearly defines what is to be considered and what is not

3 Final Round

3.1 Agreement on WID update

Please provide **only** input if you **DISAGREE** with the moderator's proposal on the WID update wording provided above (in Intermediate Round's summary between [Start changes] and [End changes]) and provide a clear reasoning why.

Feedback Form 6: Disagree with WID update in 2.3

1 – Guangdong OPPO Mobile Telecom.

Thanks moderator for the great effort on coordinating / reaching the proposal above as the final step.

Which is quite good to us, and my comment here is just to ensure companies on the same page for the “(e.g. groupcast discovery or SL-DRX specific for 5G ProSe Direct Discovery)”

1) For the “groupcast discovery”, we assume that map to “group member discovery announcement / solicitation” messages. If the intention is to exclude them (so that we still have a gap between RAN and SA/CT on supporting the messages) due to they are of a different cast type, I do not see a clear reason. Since e.g., SRB0 for DCR message can be used for B-cast and U-cast, and SRB4 for relay-related discovery can be used for B-cast and U-cast, i.e., these are examples where different cast type did not lead to a delta part, I thought G-cast based discovery message will not be a special case, and worth to be supported - but w/o additional optimization for sure.

2) For the “SL-DRX specific for 5G ProSe Direct Discovery”, the intention of the related comment was to exclude it from SL-relay WI but leave it to eSL WI. We share the view on the intention, but not sure if it is really needed to be captured since obviously all SL-DRX discussion has been done in eSL WI, and we did not mention that for relay-related discovery either, so there seems no need to highlight that for non-relay-related discovery now. Furthermore, I am also worrying this text here being mis-interpreted as SL-DRX for ProSe discovery being excluded not only from SL-relay WI only, but also from R17 as a whole (i.e., excluded from eSL WI as well).. maybe add “in this WI” to the end of the NOTE helps a bit.

Based on the views above, we would suggest removing the (...) part (i.e., (e.g. ~~groupcast discovery or SL-DRX specific for 5G ProSe Direct Discovery~~)), with the intention that: for 1) above, we still aim at support of groupcast-related discovery but without additional optimization/delta-part, and for 2) above, we do not cover SL-DRX part in SL-relay but not prevent other WI to do that. In this way, we can save the effort to exhaustively list all aspects into ”e.g..”

2 – Intel Corporation (UK) Ltd

We have the same view as Oppo. We prefer to remove (e.g. groupcast discovery or SL-DRX specific for 5G ProSe Direct Discovery).

3 – ZTE Corporation

We also think it is better to remove the e.g. part in the note. We are fine with other revisions.

4 – Apple Europe Limited

We also think the e.g part is a bit confusing. First, the SL-DRX is not part of the relay WI, but in SL enhancement WI. So there is no need to exclude it. Then, regarding the groupcast part, we understand that the intention is not to exclude ProSe group discovery support, but just not to introduce the groupcast transmission in the AS layer for discovery. The ProSe group discovery can still use broadcast-based discovery transmission method which is shared with relay discovery. So, the e.g. part can be simply changed to "(e.g. AS layer groupcast for discovery)". Finally, it is not clear that the e.g. part is coupled with "basic function" or "enhancements and optimizations". So, it is better to move this "e.g" part exactly right after "optimizations".

5 – CATT

Thanks to the moderator for the suggested WF. First of all, we are not against the proposed WF, and it is also fine for us to remove the part in the bracket.

But we just have one question for clarification. Now the suggested note makes it clear that the potentially required extra work has lower priority than the existing objective for relay discovery, but is it then correct understanding that this added objective 7 also has lower priority than the other existing objectives in the WID, e.g., service continuity, QoS management, etc..? This is already rather late stage, and R2 is highly loaded as has been pointed out by R2 Chair, so we'd like to check with the interested companies to see if there is a common understanding here.

Thanks.

6 – Deutsche Telekom AG

As Deutsche Telekom we also propose to remove the e.g. part in ().

It should be sufficiently clear what should be the focus as 2nd priority: BASELINE for 5G ProSe Direct Discovery in Rel-17 -> rest can be enhanced in Rel-18, but we have ensured consistency with SA2.

7 – Ericsson LM

We are fine to keep the brackets as it adds some value (making sure the WG does start to optimize e.g. DRX for non-relay discovery). But an editorial comment is to remove "cast" to make it clearer:

(e.g. groupcast discovery or SL-DRX specific for 5G ProSe Direct Discovery)

8 – MediaTek Inc.

We would prefer to remove the parenthetical. For the DRX part, it's clear that the DRX discussion is taking place under the SL_enh WI, and there isn't a real risk of the topic emerging in the relay discussions. For the groupcast part, we agree with other companies that the intended issue seems to be about "group discovery" rather than "groupcast discovery", and the point is that we would not introduce enhancements/optimisations for this case—which is already covered by the part outside the parenthetical.

9 – vivo Mobile Communication Co.

We agree with RAN2 Chair suggestion "One possible way could be to make the objective very specific wrt solution (wid objectives can have both objective part and solution limitation part). IF we cannot specify such that we can assure little and manageable impact maybe we should not add this." . The content in () is here to make the objective more specific. If proponents agree with MediaTek that DRX discussion is taking place under the SL_enh WI, maintaining the content in () on DRX is just proving some constancy

that SL-DRX specific for 5G ProSe Direct Discovery will not be discuss in SL relay WI. So, we prefer to keep the () content on DRX. Ericsson revision is also fine to us.

10 – Beijing Xiaomi Mobile Software

The text in parentheses is in reference to optimisations beyond the basic functionality introduced for the relay discovery, it is clear to us that no optimisations beyond this are within scope and no discussion will be permitted, hence the text in the parenthesis is not needed.

To the question above regarding priority handling, we believe the session chair will manage the priority handling in the agenda so that all items are completed in good time (and with the good cooperative spirit of all participants of course).

11 – Deutsche Telekom AG

(as moderator to CATT in post #5) It is clear that the new proposed objective has the lowest priority over what has been agreed as objectives in the current WID - the session Chair/RAN2 chair has the obligation to handle the topics in the correct priority.

4 Conclusion

*** Thanks to all delegates for active participation on this discussion ! ***

As conclusion of this discussion I as moderator will report the following to the main session:

Agreement has been reached that the current WID for SL relay is updated with the addition of a second priority objective to cover also the relevant baseline work for 5G ProSe Direct Discovery to ensure consistency in Rel-17 with SA2.

The current WID will be updated with the following working:

[Start changes]

Secondly, the objective of this work item also covers the non-relay discovery (i.e. 5G ProSe Direct Discovery).

7. Specify mechanisms for 5G ProSe Direct Discovery [RAN2, RAN3, RAN4];

(...)

NOTE 5: RAN2 prioritizes completion of relay discovery work, and for 5G ProSe Direct Discovery (Objective 7) takes the agreement for relay-based discovery achieved as baseline while enhancements and optimizations beyond basic functionality for the 5G ProSe Direct Discovery scenario are not considered.

[End changes]

The update will be provided by the WI rapporteur (OPPO) in **RP-212601**

As part of the RAN#93e meeting minutes it should be noted:

”Further work in Rel-17 on group discovery or SL-DRX specific for 5G ProSe Direct Discovery will not be handled in this WID.”

This discussion is closed now.