**3GPP TSG RAN Meeting #87e DRAFT RP-200490**

**e-meeting, March 16-19, 2020**

**Agenda Item: 15**

**Source: Discussion Rapporteur (Mediatek)**

**Title: e-Meeting Feedback**

**Document for: Discussion and decision**

# Introduction

This document summarizes all e-Meeting feedback and proposals for upcoming e-Meetings given in references [1]-[28], which includes emails provided with subject [E-meeting\_feedback].

RAN5 information is listed separately.

The intention is that this document can be used by leadership for planning of upcoming e-Meetings.

# General

**High level Observations Efficiency and Progress**

[7] R1: Efficiency lower than for Face to face meeting, not surprising. Progress was as expected.

[8] R2: R16 The ambition level was high, 90% of a normal meeting, The progress was very good, exceeding chair’s expectations by a lot.

[8] R2: For most topics email is significantly less efficient than on-line discussions, partly due to reply turnaround time.

[9] R3: Good progress on most topics considering the new meeting setup. R3 good progress was made thanks to many delegates’ constructive spirit

[10] R4: Overall, the progress was reasonably good. By the nature of email discussion, progress of contentious topics was hard to achieve

[14]: R1 and R4: Efficiency of eMeeting was much lower than a regular meeting. R2: We disagree with the notion that web conference is as efficient as face-to-face meeting.

[15]: Progress was made in many technical areas, however, it was not in the same level as in F2F meetings. Hard to progress in controversial topics. Reasons are e.g. 1) lacking interactions without F2F offline discussions, 2) lacking decision power in email discussion.

[16]: R4: Finally we should acknowledge that even with two weeks duration, e-meetings cannot be as efficient as one week face to face meeting because of the impossibility of offline and time zone differences that by default create at least a 12H lag for topics that involves companies around the world.

[18]: The progress was better than expected in some groups, however the efficiency of the meeting was much lower than face to face.  Controversial aspects took much longer than F2F meetings and some couldn’t be resolved anyways.

[20]: The progress is good. The combination of email discussion and web conference in some working groups paves the way for the good progress. However, the efficiency of the e-meeting could be improved.

[21] Though overall progress was far better than expected, the efficiency of e-meeting is much lower than F2F meeting.

[27] We agree with most responses that the e-meetings are not nearly as efficient as f2f meetings, even with a two week time period.

[30] We like others, note that while progress can be made using these alternate meeting methods, it is tedious and more difficult and does not well address issues of significant controversy. We observe that e-meeting capabilities are all we have when face-to-face meetings are not possible (and we fully support these approaches to progress), but we must also note that despite best efforts and willingness, the use of e-meetings in a business-as-usual context is not a substitute for the traditional face-to-face meetings in terms of efficiency, overall productiveness, and progress of the work to the typical tight deadlines in 3GPP.

**Miscellaneous**

[8] R2 Summaries were found useful. Enabled treatment of input in many papers. Summary recommendations whether to treat or not mainly considered whether there was a clear majority view or not. Consideration of other aspects than majority view needed inclusion in discussions of the summaries. Concerns has been expressed that sometimes there might not have been sufficient time taken for that.

[8] R2: Maintenance CRs Had about two week treatment time, and most issues (also contentious ones) could be discussed for two weeks, a reasonable amount of time. Most treatment was by email. Outcome was good.

[8] R2: Easy or less easy Agreements. There were instructions for R2 109e to identify and prioritize “easy agreements”. For most WIs it was additionally possible to go further and resolve a number of contentious or previously contentious issues, by Web Conferences.

[10] R4: Some delegates didn’t strictly follow the meeting guidelines, perhaps because this was the first such e-meeting.

[18]: R2: We did a lot a progress on agreeing to open issues over a two week period, this came at the expense of the quality of our specifications/CRs that had limited time to be reviewed (if at all).  Obviously a lot of time will have to be spent in April and May fixing issues and ASN.1.

[19]: General: It seems that procedural restrictions are much more rigid for the e-meeting. Some items truly needed in the commercial system were denied while some other less important issues were given ample time just because they have been there since day one, coming out of perhaps research. We support having clear guidance rather than simple to execute, arbitrary made rules, especially when the e-meeting is not one and done. Having deployed commercially for a while, we now have some fairly good ideas what Issues and solutions are truly important and what are not. I hope we give them some due thoughts, as we always did in regular F2F meetings.

**High Level Opinions on the usage of Web Conferences vs Email discussions**

[3]Telco could be considered as part time tool for prompting the decision

[13]: We consider that email was a good way to handle the detailed nature of maintenance discussions, now and in the future.

[23] The conference calls are useful at quickly processing long lists of non-controversial issues but it did not provide a good support for detailed technical discussion to solve controversial issues (aka coffee break discussions). Looking further ahead, we see some challenges in treating new topics with e-meetings only.

[27] conference calls and web-based meeting tools such as GoToWebinar may be workable tools, but our view is that they should not be used unless absolutely necessary, and should not be used to hold entire meetings. This is due to the differing time zones and the difficulty holding detailed technical debates over audio connections. It can cause significant household disruptions to be up all night on a conference call or a web-based meeting. In the event that a critical issue cannot be resolved by email, then perhaps a web-based meeting for an hour or two during times that are somewhat reasonable for all time zones could be considered in order to resolve that issue. Some companies have small armies of representatives, but others, such as Sprint, have one representative for each WG so we would have to stay on the call or on the web meeting for the duration of the meeting.

[29] Combination of moderated email discussion and conference calls/GoToWebinar: Utilization of moderated email discussions would be helpful to derive the points for discussion in conference calls or GoToWebinar meetings. Email discussion moderators should be able to coordinate discussion so that a reasonable conclusion can be derived.

**High Level Opinions on the usage of Web Conferences vs Email discussions – R1**

[1][17] R1: Email produced a large number of agreements, we can continue mostly this way with some constructive suggestions for improvement

[4][26] R1 and R4: recommend telco/webinar be introduced in RAN1 and RAN4 to resolve sticky points – email discussions are very useful in digesting initial views, but they fall short of enabling a proper dialogue.

[5] R1 RAN1#100-e-bis works by email only

[14]: RAN1: Web conference should be tried in May; we recognize outcome might be uncertain due to the large group size

[15] R1: Our preference is to continue mainly with email discussions in Q2.

[18] R1: We are ok continuing with just email discussion as long as Rel-17 scope is limited to aspects not requiring face to face discussions, like simulations and scenarios.   If this situation continues in August, we should revisit and consider conference calls as well.  Alternatively, we could try a conference call for one or two topics to understand its limitations for the group.

[21]: R1: Conference call is not preferred considering both the efficiency and difficulties of delegates in different time zones. At least for Rel-16, no conference call is recommended. For Rel-17, topics and time for conference call (if considered) should be strictly limited to the cases where meaningful results are expected via CC.

[24] R1: Regarding having conference calls for RAN1 topics, if it is needed, it can be limited to topics that are interested by a very limited companies (to minimize impact to call quality and delay) and that really requires discussion over a call to resolve. Otherwise, it would be difficult to have reasonable call quality and to have meaningful conversations without constant interruption to each other’s speech (due to delay or bad network connection).

[25] R1: We think the email discussion is sufficient for Rel-15/16 maintenance based on the experience thus no need to have conference call in both April and May for maintenance work. The Rel-16 UE feature discussion can be consolidated by email discussion first and conference call maybe considered for some limited number of contentious points.

**High Level Opinions on the usage of Web Conferences vs Email discussions – R2**

[6] R2 Conference call is a good complement to email discussion. When it comes to a controversial issue, it is often more efficient to setup a conference call to have discussion in order to reach consensus among the interested parties.

[6] R2 Email discussion is appropriate for collecting views and reaching consensus for non-controversial issues. For controversial issues, it is often very difficult and inefficient to rely on just email discussion especially considering time difference of multiple time-zones. It may take more than 12 hours to simply exchange views among delegates in different time-zone. Delay in the email server varies, possibly depending on loading. In some cases, delay can be more than an hour. Overloaded situation also happened to FTP server which incurred long delay to download/upload files.

[8] R2 Web Conferences Worked well in R2, Good to directly treat both easy and contentious topics, Good to get comments on summary papers, to confirm way forwards how to continue treatment for issues, i.e. how to continue by email (note that at R2 109e the general willingness to compromise among companies was high which was a prerequisite for reasonable progress). There were still some IT issues for some users, mostly Screen sharing, but also some Audio issues.

[13]: If RAN2 and RAN3 continue to use conference calls, use of a call should be limited to only where it is necessary to focus on a specific issue

[14]: R2: We are fine to keep the current web conference / email discussion hybrid approach. RAN2 leadership should keep the door open for further suggestions for improvement.

[15]: R2: Combination of conference calls and email discussions was appreciated and resulted progress better than expected. This should be continued.

[18]: R2: The progress made was surprisingly better than expected and the mix of email discussions and conference calls were essential to the positive outcome.  Important to highlight though is the fact that the progress made was for a long list of stage-3 non-controversial issues. This was mainly due to good discipline and intention from delegates that were ready to easily compromise on these issues for sake of WI completion.

[18] R2: 2 weeks CC is not so efficient. We think 2nd week CC can be replaced by e-mail approval.

[24] R2: The current planning of parallel web-conf rooms with shorter time per-day and extended length per meeting works well – we appreciate leadership effort on balance the time zone issue for delegates at different locations.

[25] R2: We think the current approach, i.e. email discussion + web conference works fine and should be kept.

**High Level Opinions on the usage of Web Conferences vs Email discussions – R3**

[9] R3 Online tool (GoToWebinar) worked Voice quality problems only on the last session, and only for some delegates

[13]: If RAN2 and RAN3 continue to use conference calls, use of a call should be limited to only where it is necessary to focus on a specific issue

[14]: R3: Combination of email discussions (pre-packaged from WIs) and conference slots (LSs, corrections) worked reasonably well, but no comparison to physical meeting (works ok for easy stage 3 detail fixing).

[15]: R3: Similar to RAN2, combination of conference calls and email discussions was appreciated and resulted progress better than expected. This should be continued.

[18] R3: Similar to RAN2 the progress was much better than expected due to mix of conference calls and email discussions. Similar to RAN2, progress was focused in non-controversial issues and this worked well for RAN3 as well. We support RAN3’s chair proposal in status report, but would like to suggest shortening the 2nd week as much as possible, especially given the short timeframe between April and May.

**High Level Opinions on the usage of Web Conferences vs Email discussions – R4**

[15]: R4: For selected and more controversial topics, it could be beneficial to have focused conference call.

[21] R4: Conference call is not preferred considering both the efficiency and difficulties of delegates in different time zones.

[26][4] R1 and R4: recommend telco/webinar be introduced in RAN1 and RAN4 to resolve sticky points – email discussions are very useful in digesting initial views, but they fall short of enabling a proper dialogue.

**Release - 17**

[18]: (emails and calls) it is safe to assume that addressing stage-2 aspects of new Rel-17 WIs via e-meetings will prove to be quite difficult

[25] R1: In May e-meeting, if there is time available, as the 2nd priority, Rel-17 could be started with very limited scope, e.g. the evaluation scenarios and assumptions as mentioned by multiple companies and such topics could also be handled by email.

**Editor’s Comment:** For RAN2 and RAN3, except for 2 companies who think WebConf should not be used for any group, there seems to be wide support to continue the mix E-mail / WebConf that was tried during Q1.

**Editor’s Comment:** For RAN1 and RAN4, most companies support or assume to use email, but there are a couple of suggestions to attempt usage of WebConf for some more controversial topics.

**Details – RAN1**

[1][17] R1: The final endorsed CRs should include all expected information and references for a CR fixing critical issues (see the flagged RP-200194 38.214 NR DC/CA as an example of a CR missing information)

[5] R1 RAN1 to finalize its Rel-16 UE features list in RAN1#100-e-bis and to provide it to RAN2 during the RAN2 April e-meeting week.

[5] R1 RAN1 WG and leadership is reminded that normative agreements must be implemented in specifications promptly.

**Details – RAN2**

[8] R2: Learning – Change needed - Time for CRs. Stage-3 issues fixing in the CRs for many Wis had to be cut short at the end of the meeting. A longer concluding email phase would have been good. The plan that CR discussions go in parallel with other discussions didn’t happen/didn’t work for most WIs (maybe due to load). In principle all CR discussions started at meeting start.

[15]: R2: Improvement areas: Have clearer and more aligned instructions across different sessions and chairs. Now it varied a lot. Clearer agenda and strict time usage in conference calls. Think how to phase meetings: E.g. one week for decision progress (with conference calls) and one week for email review.

[18] R2: Each WI produced CRs for RAN approval, but the quality is challenging due to the very short time of update and review (just 1 day!). Such a radical schedule should be avoided in the future meetings.

[24] R2: For the newly adopted way of summary, it is helpful to differentiate the easy/difficult topics. During the decision of the easy/difficult decision differentiation, it would be good to have guidance from leadership on an transparent and aligned criterion, and furthermore, based on the criterion, allow more time for companies to check / comment on the summary.

[25] R2: The time schedule/deadline for email discussion and web conference could be handled more strictly. And it would be better to consider the time zone difference when selecting the time to close/conclude an email discussion.

**Details – RAN3**

[9] R3 More pressure on delegates, so: Many e-mail discussions continued even after the deadline. Some summaries were uploaded past the deadline. Some summaries were not clearly stating the proposed conclusions. The above made the meeting wrap-up more error-prone. In general: easier to object proposals; more difficult to reach agreements.

[18] R3: As the recommendation in Chairman status report, two-weeks e-meeting with on-line session is preferred. However, the starting/closing time should be strictly managed.

**Details – RAN4**

[14]: R4: Agenda should be down-scoped to just a few topics per WI, treating too many topics is inefficient because summary documents become huge and are difficult to track. There should be a feedback mechanism for moderators. Chairmen should intervene in the discussion to make clarifications (for example, stop the discussions that are trying to revert previous agreements), this should be feasible if the number of threads and topics/thread is limited.

[16]: R4: We believe that some further discipline is needed on the baskets that require a lot of verification before the meeting and thus take time from reading the other contributions and be prepared for the meeting.

[16]: R4: Also band combinations were requested for all possible orders without the basic fall backs in place. One simple rule could be applied for band combinations: unless the lowest fallback level combinations are completed there should be no TP/TRs for the higher order combinations and if still submitted be simply noted. We have seen cases where up to 5 band combinations where proposed with all its fallbacks lower order as new in the same meeting. This should be prevented: first the two band constituents should be finalized as these are the critical UL/harmonics/IMD cases and requires verification and potential agreement on feasibility and architecture impact. It is then OK to introduce all the higher combinations at once in the next meeting.

[16]: R4: It may also be useful to split/recombine some items after the submission deadline as we have seen some moderators having only a handful documents to cover and others a huge amount.

[18]: R4: Similar concerns about the workload and the inefficiency of the meeting due to workload.  For companies with small delegation it was impossible to track the discussions even if you were focusing on a small amount of topics.

[21] R4: Draft WF or Draft CR should be provided early enough for the delegate to check.

# E-meeting planning

[3] Extend the E-meeting to 2.5-3 weeks

[8] R2: E-mail decision making was suspended during the weekend. This was ok - important and good for a hectic meeting.

[18] Given the short time frame between April and May we suggest that for April meeting we only have one week e-meeting discussion and progress the leftovers by longer email discussions until May or over a very short 2nd week discussion.

[18] R1: The phased approach was good to identify essential issues and focus on those issues.  This should be continued for April and May.

[21] “Grace period” should be guaranteed to delegates in any time zone. That is, the deadline of e-mail discussion should not be set from Friday evening to Monday morning in any time zone. Discussion can also be prohibited during the grace time.

[23] Weekends should never be required for e-meetings to allow for some rest period to all, and no deadline must require working during the weekend. Besides, since it is apparently not possible to prohibit some people to work during the weekend, the new agreements should only span one week (as for regular RAN WG meetings). The following week should then be used as usual: the review the possible CRs capturing those agreements. For controversial issues, email discussions between meeting can still take place.

[20] GThe e-Meeting working hour each day should be same as that of face-to-face meeting. Due to delegates in different time zone, the working hour could be derived from the time zone of original face-to-face meeting venue as the reference.

a. Delegates do not need to reply the emails outside the e-meeting hours.

b. No agreements would be made outside the e-meeting hours.

[29] Time slot for conference calls or GoToWebinar: Considering different time zones, conference calls or GoToWebinar meetings should be held at time slots that can reasonably be accommodated by all regions. We don’t think it is proper to continue such meetings even after 1am in a certain region. We also recommend the meeting duration should have a limit, e.g., 3 hours. Hence, discussion topics should be limited and clearly defined. Difficult time slots could be rotated between time zones to share pain. For example, RAN2 did some effort for sharing pain in their Feb e-meeting.

# Load

[1][17] R1: Workload was high, "rest periods" with no decisions should be designated on the weekend (see figure)

[6] It is hard to manage or follow massive number of emails in parallel. It is important to control the number of issues discussed over emails. Overall, email discussions with help of conference calls can be considered but it is important to limit the number of issues discussed in conference calls and email discussions to make it more manageable.

[7] R1: Load was high

[8] R2: Learning – Change needed – Load. The overall load ended up at too high levels, i.e. the meeting was too ambitious. Too high load is not only a problem for persons, it also results in worse quality.

[9] R3 pressure on delegates. Further reduce scope of discussions and/or increase meeting length. 1 week not enough for an e-meeting; 2 weeks more appropriate. Should help “dilute” the pressure. Discussion will benefit from additional online sessions.

[15]: As email discussions were running over multiple weeks, delegates felt more exhausted than in normal F2F meetings. Reduced scope should be considered as well as limited meeting duration. Weekend emails discouraged and agreements should be avoided

[13][5]: Restraint in the quantity of email discussions is necessary to ensure a manageable workload and high-quality decisions. R2 and R3: Chairs should strive to avoid that the conference call outcome triggers significant additional email workload.

[18] R1: The number of email threads was too large.  We should consider reducing the number of threads.  One suggestion, if there are too many topics for a WI we can consider TDMing the topics to avoid excessive work load in parallel.

[14]: R1: Number of threads should be continued to be limited. R3: Number of new email discussions added (from conference call topics) should be contained

[16]: R4: We were surprised that, although the scope was reduced, we ended up with more contributions than usual. Especially in forms of TRs, CRs, and band combinations. Often without the associated discussion documents for CRs.

[16] R4: For this it is important to make progress by steps rather than trying to achieve all agreements in one go especially for some of the release 16 complex WI for which RAN4 only had a few F2F meetings.

[18] The workload during those two weeks was extremely high and tough on all delegates and chairs, and not sustainable over the long run.  If this continuous we should re-adjust our expectations as a group.

[18] We also suggest to reduce the number of parallel email discussions ongoing at a time and email discussions should not be continued over the weekend.

[20]: Too many email threads in the reflectors. Some email servers have trouble to handle the tremendous amount of emails in the same time. The personal email box might be overloaded.

[20]: The workload is too high for all delegates and chairmen. The email discussions continue for two weeks and over the weekend. RAN1 had a one week preparation email discussion before the meeting. It makes the 3-week non-stop email discussions. The timeline of email discussion in the e-meeting needs to be controlled.

[20] The number of email threads during the e-Meeting should be in proportion to the TU allocated for the respective feature. The scope and the rules of discussion for each email thread needs to be defined clearly

[21] The work load of delegates was also higher than expected. This is due to enormous number of e-mail discussions and different time zones.

[21] The number of e-mail discussions should be reduced. Delegates had really tough time to follow all interested e-mail threads. It is suggested to WG chairs/session chairs to set up the reasonable number of e-mail discussions, with less ambition level. Not try to resolve all issues, but focus on the essential issues.

[23] Limited scope and workload are necessary: The amount of email discussions creates inevitably large workload for e-meetings. Judicious restrictions on both scope and workload are needed. With email discussions, all time zones should also be accounted for (i.e. sufficient time should be given for companies to comment). Hence, the agenda for e-meetings should be more limited than in F2F meetings especially since the time period between April and May e-meetings is quite short if 2-week e-meeting is used in April.

[24] R1: We also tend to agree to put a limit on the number of email discussion, and even one step further that there should be also limitation of number of topics to be discussed per email thread. In some email threads, there were multiple topics being discussed at the same time. It essentially increases the number of email discussions.

[24] R2: Similar to bullet for RAN1, it would be also preferred to have limited number of email discussion.

[25] R1: And we agree with several companies that number of email threads could be reduced if possible.

[25] R2: We suggest to limit the number of email threads to focus on the real essential issues.

[26][4] Data volume has also been an issue in various WGs – hence better structuring of email discussions, reduction of concurrent items/agenda items under discussion and any other creative idea is welcome so the email volume and handling remain manageable.

**Editor’s Comment:** Load is an issue that need to be dealt with, in R1, R2, R4, and also R3. As > 50% of input referred to this and there were no contrary view it could be concluded that this should be very high priority.

# Web Conference Details

*Observed issues relate to RAN2 and RAN3. Proposals may relate to any group to use Web Conferences.*

[6] The following issues regarding conference calls are worth noting: One minor issue is to set up a proper time, considering different time-zones. Given that delegates are spread all over the world, it is inevitable that some calls will happen at inconvenient hours. Limited number of parallel sessions (possibly due to the limited number of software licences or overloaded situation) is another issue. To get around this limitation, some kind of TDM can be used between different WGs. Conference calls can be held by Chairman/Vice Chairman with decision powers. Conference calls can be used to have regular status check on a limited number of issues which are contentious. The topic for discussion should be precise and clear for each session in order to limit the number of participants.

[9] R3: Don’t go overtime! Allocate more online time for CBs

[12]: Conference Call Timings - timings should use the global standard for time (UTC)

[12]: Some conference calls had audio issues. If the participants cannot clearly hear proposals then consensus cannot be declared. Chairmen need to be careful with this.

[13]: The issues with access and voice reliability have to be taken into consideration, since they affect decision-making.

[13]: Start and finish time of calls needs to be firmly managed. Delegates must be able to join other discussions when they are scheduled.

[15]: Webinar worked surprisingly well. In short run, at least delays of emails should be solved. In longer run, better tools should be considered for email over-flow and document handling.

[18] R2: Conference call starting time and closing time should be strictly managed. We have observed that some sessions extended more than 1 hour. As delegates are in different time zones, extending CC will have big impact on some delegates, and should be strictly prohibited.

[18] R3: Access/voice quality should be taken into account when making the final decisions since errors happened in last meeting.

[18] R3: It’s preferred to categorize the CBs in the 2nd week from deadline point of view based on the date of online discussion in the first week. In this way, we can avoid the rush decisions in the final day.

[26][4] On telcos/webinars: a very clear, focused agenda and clear decision points are required. Quirks/inefficiencies experienced during Q1 telcos/webinars should also be addressed for Q2.

# E-mail Discussions Details

**General**

[3] Introduce DRX-style email discussion mechanism

[3] Improve web email reflector

[12]: Official end times for email discussions need to be clear and should not occur over the weekend. Also consideration for different time zones of delegates (for email discussions) needs to be built in (e.g. it would be unfair for a delegate to have a proposal completely revised at 3am and then approved at 4am).

[13]: The gating of email discussion stages would benefit from being cleaner to work towards mitigating the “at-any-moment” nature of email discussions which other companies also raise. The time points should serve to establish common expectations about what occurs when they arrive.

[19] If possible, please try to make the email threads a bit easier to filter, e.g., by adding the section numbers from the chairman notes to the index and not changing thread names before, during or after meetings.

[20]: The scope and the rules of discussion for each email thread needs to be defined clearly to avoid repetitive discussion. It would be beneficial to have some guidance and partial/full conclusion from Chairman in the middle point of the email discussion. This would avoid the deadlock of the email discussion.

[21] “Grace period” should be guaranteed even in weekdays. Delegates should be allowed to off the work from 1am to 6am in any time zone.

[23] Clear deadlines for all the phases of email discussions must be ensured: For example, each discussion could first have a discussion phase, followed by moderator proposal for decisions based on discussion, followed by review of the proposals by all companies, and only then followed by decision on proposals. When each phase has clear deadline taking into account time zone differences and potential reflector delays, it allows for all time zones to participate and makes the deadlines for decisions clear. (This kind of approach was done in RAN2 e-meeting, for example.)

[23] Neutral moderation of email discussions is necessary to allow convergence on all topics: The focus should be on understanding the technical concerns and discussions shouldn’t just devolve into “counting numbers” on proposals. The moderator should push for having proposals that accomplish compromises and documenting the different views and reasoning behind them.

[26][4] Another important point is fairness taking into account the different timezones and deadlines, but also moderated email discussions. Improvements on that front are highly encouraged, in particular to avoid abuse of deadlines (late comments by the deadline preventing any response). On moderated email discussions, it is especially critical that they be handled in a fair and unbiased manner by moderators and that any summary thereof be open to review by the group to ensure it is indeed fair an unbiased.

[27] For deadlines during an eMeeting, because of the different time zones it would be unfair to delegates in North America if their colleagues in Asia and Europe had x number of full or half work days before a deadline, but those delegates in North America did not. Sprint supports having in-meeting deadlines at 5 pm US Pacific time in order to give North American delegates ample work hours to review documents and participate in discussions. We appreciated the RAN4 chairman accommodating this late proposal from Sprint in RAN4.

[29] Disciplined email discussion: It would be important to make email discussions disciplined especially when controversial topics are discussed. Setting and respecting very clear deadlines for commenting, submission of a proposed conclusion, and final commenting period on the proposed conclusion would be helpful. In addition, rotating the reference time zone for the email discussion deadline might be considered if it can be helpful to share pain. If CET was the reference time zone for February e-meetings, Pacific time (UTC-7) could be used for April, and Korea/Japan time (UTC+9) could be used for May, etc.

**RAN1**

[1][17] R1: The chairs should step in more to actively help progress the email threads to conclusion (possible if the number and scope of the email threads is limited)

[1][17] R1: The ending time of the e-meeting should be strictly observed

[2] R1: In RAN1 e-meeting #100-bis and e-meeting #101 (if applicable), restrict the total number of email threads over the whole NR V2X WI, rather than restrict the number of email threads per NR V2X agenda item.

[14]: R1: We think there should be more differentiation in the allowed number of reflector threads for different WI/SI, as they may progress at different pace. There should be also more differentiation between different A.I.s belonging to the same WI/SI.

[15]: R1: Consider varying number of email threads per AI for each WI as needed, while maintaining the number of email threads reasonable per WI

[15]: R1: Feature lead role in moderating the discussion is crucial. A bit more time should be given for feature leads to make a summary for preparation phase. The scope of the preparation face should more strictly controlled.

[5] R1 RAN1 leadership are kindly requested to clarify the expectation at each of the deadlines announced for email discussions, aiming to achieve a common understanding of what is expected to occur at each stage.

[13]: An e-meeting should have a clear end time. Only commencement of work that is always necessarily carried out after the meeting decisions are known should be handled after the end time.

[21]: R1: Email discussion closing time should be strictly managed. Extending the e-mail discussion may not be noticeable by some delegates, and may not be followed up.

[5] R1 Technical decision making in e-meetings to occur within the announced duration of the e-meeting.

**RAN2**

[8] R2: At-meeting Email discussions worked ok. The process could be better described. There were some misunderstandings e.g. on what is a deadline. Important to allow gradual convergence, and have a plan for conclusion, which worked ok, but could be further improved.

[8] R2: Email discussions Turnaround time. For fairness and reasonable reply hours it is important to allow sufficient turnaround time for replies in email. R2 generally applied min 18h but usually 24h, which seemed ok.

**RAN3**

[14]: R3: Process needs to be better set out to both ensure fairness and reduce load, for example: Fewer email topics / extend time span of email discussions / offset email discussions. Better define scope or allow a phase to discuss scope first (which means extending / phasing). Deadlines/ intermediate deadlines need to be clear and respected.

[9] R3: RAN3 Vice-Chairs should set up e-mail discussions for WIs of their competence. Online “status check” of e-mail discussions toward end of meeting is beneficial and helps to converge. Suggest a template for e-mail summary conclusions so clear statements are provided. Allow CB coordinator to announce CB closing when a conclusion has been reached

**RAN4**

[15]: R4: It is important to select neutral, unbiased and competent moderator.

[15]: R4: Topics with many diverse areas were difficult to follow due to excessive emails and several versions of summary with comments. More focused email threads could improve this. Important to understand and follow procedure and deadline for providing comments and feedback during different phases of e-meeting.

[16]: R4: Overall it is very difficult to follow all the threads for a company like ours that have one or two delegates and no back-office in addition, even when limited to the threads where we have contributions in the current or past meetings: strict selection of items and time lines should be applied and not changed during the meeting. We should make sure that no deadline is placed in the week-end or early Monday as, even if some work/email reading can be entertained, it cannot be expected that people are available to see all emails.

[21] R4: E-mail discussion time and provision time of summary for 1st and 2nd round should be strictly managed.

[21] R4: Comment deadline in 2nd round discussion should be a couple of hours ahead of closing time for moderator to have enough time to summarize the issues.

**Editor’s Comment:** There seems to have been confusion on the E-mail discussion process, the meaning of milestones, deadlines etc. There seems to be improvement potential to gather common/general aspects into a cross-group guideline.

**Editor’s Comment:** There are some comments on fairness regarding email discussions. Such comments are on one hand very important but the comments given here are general. It would be helpful if companies could provide detailed observations directly to each group chairman**.**

**Separate Reflector**

[20] General:

The e-Meeting can have its own email reflector to distinguish with the normal working group reflector. E.g., 3GPP\_TSG\_RAN\_87e@LIST.ETSI.ORG

a. It is possible to have another sub-grougs under the main groups similar to the parallel sessions chairing by vice Chairman during the face-to-face meeting in the working group. E.g., 3GPP\_TSG\_RAN\_WG1\_100e\_eMIMO@LIST.ETSI.ORG.

i. This will reduce the number of email threads in a sub-group.

ii. The email threads could be easily followed by the delegates in the sub-group.

iii. The delegate could decide to subscribe to the sub-groups, which is similarly to attend the parallel session during f-2-f meeting.

From [28]

A normal TSG Plenary meeting is a closed meeting with a defined attendance list (registered attendees from amongst valid 3GPP members) and has a defined process for formally indicating actual attendance as a delegate at the meeting itself. To the extent possible, these aspects of a normal face-to-face TSG meeting should be replicated under an e-meeting format (either email or conference calls).

In particular, the following is observed for the upcoming TSG level e-meetings

1. Meetings are decision making

2. The usual TSG email reflector lists are large and the community represented on this list would not all be attending e-meeting (nor would they all have been attending the F2F meeting)

a. For example, the RAN email reflector list (right now) is 1650 participants

b. Many are not 3GPP members, since anyone can join the 3GPP TSG and WG lists.

c. There may be legal implications if non-members comment on active meeting issues, since they are not bound by either the anti-trust or IP policies.

3. Someone who is not registered for the meeting may make comments during the course of the formal meeting (which may not even be relevant to the agenda topics) . These comments could easily spin, and even though they are not official, damage and influence is already done. We know how quickly things could spin, and during a 24/7 e-meeting, this could happen at any time (so far this has not occurred).

4. Efficiency and effectiveness of the electronic meeting will suffer with a pool of participants not officially registered as delegates for the meeting having the ability to engage in the dialogs – or even monitor conversations.

5. Only officially registered delegates are vetted as members of 3GPP and only these delegates should be conferred the right to read and comment at the e-meeting (just as in a F2F meeting).

AT&T suggests a simple remedy with many advantages could solve the major concerns of the above issues, and make it easy for registered delegates to review meeting emails:

1. For TSGs (and possibly WGs as well) separate email reflectors should be created for each e-meeting (e.g, for RAN a list specific for RANXXe) which would only be available for access to the registered meeting participants.

2. This provides a self-contained set of email documentation containing only messages pertinent to the particular TSG e-meeting at hand, and additionally aids the MCC and participants in seeing clear discussions, decisions, and results.

3. It is most likely that other e-meetings may be initiated, and therefore new reflectors could be created to silo those meetings as well.

4. If necessary for administrative purposes for the upcoming TSG e-meetings, the initial list of identified participant permitted to engage in the TSG e-meeting reflector could be those registered by a certain cut-off date, such as the Friday prior to the start of the meeting series. Additional registrations added during the meeting could be added to the email reflector on a daily or twice daily basis by the MCC. Participants should however be notified that in order to guarantee participation, they should be registered for the meeting by X date (Friday PM, Monday AM, whatever the TSG Chairs and MCC decide is appropriate).

# RAN5

*RAN5 specific views are listed separately here*

From [14]:

- Reduced scope worked, we did not have the complete agenda for RAN5#86-e.

- “Meeting handling tool” (RAN5 specific xls with macros for different actions (verdict, comment, overlap, conflict , tagging etc.) helped group conveners (with help from secretaries) gather discussions and comments/revisions on a daily basis . This meeting handling xls was uploaded to the meeting FTP every day /every other day except weekend so RAN5 team had a view of the progress and they could bring up concerns to the convenors' attention based on the status.

- Allowing “intermediate verdicts” for CR’s at the end of first week of e-meeting helped clear CR’s/discussions that were agreed ,and also catch the attention of CR’s/discussion papers that were not seen by many RAN5-ers and helped bring those t-docs “back” into discussion to be concluded during the second week.

- Having facilitators for different topics helped to share the load for the leadership team.

- Giving freedom to authors / interested delegates to declare on the exploder the topics they felt a conference call and/or offline emails with appropriate participants (and allowing to summarize on the reflector the outcome of the conference call or offline email) worked well

- Time zone issues did not work very well

- RAN4 dependent RAN5 CR’s had to wait till the last day of RAN5 e-meeting to achieve any conclusions since RAN4 did not declare a verdict for those until the last day.  As such a few RAN5 CRs were even handled post the official deadline

- Exploder lists were not judiciously used and many times misused

From [15]:

* With the reduced scope of the agenda and the rules set up by RAN5 leadership team worked quite well.
* Reduced scope of the agenda for a single e-meeting was ok. For upcoming e-meetings extended agenda need to considered to not defer progress of active work items.
* The longer meeting period of e-meeting (2 weeks vs 1 week) sometimes enables topics to be more explored.

# Editor’s Comments

Note that this document is intended to be used in entirety. The comments in this section are no summary or end conclusion. They represent observations and comments by the editor on some commonalities in some of the input.

**Editor’s Comment:** For RAN2 and RAN3, except for 2 companies who think WebConf should not be used for any group, there seems to be wide support to continue the mix E-mail / WebConf that was tried during Q1.

**Editor’s Comment:** For RAN1 and RAN4, most companies support or assume to use email, but there are a couple of suggestions to attempt usage of WebConf for some more controversial topics.

**Editor’s Comment:** Load is an issue that need to be dealt with, in R1, R2, R4, and also R3. As > 50% of input referred to this and there were no contrary view it could be concluded that this should be very high priority.

**Editor’s Comment:** There seems to have been confusion on the E-mail discussion process, the meaning of milestones, deadlines etc. There seems to be improvement potential to gather common/general aspects into a cross-group guideline.

**Editor’s Comment:** There are some comments on fairness regarding email discussions. Such comments are on one hand very important but the comments given here are general. It would be helpful if companies could provide detailed observations directly to each group chairman.

# References

**Tdocs**

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4. RP-200159 Considerations for Q2 e-meetings MediaTek Inc.
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10. RP-200009 Status Report RAN WG4 RAN4 Chairman (Futurewei)
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**Emails 2020-03-16 – 2020-03-19 0245 CET**

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