3GPP TSG-RAN WG2 Meeting #130 R2-250xxxx

Malta, 19 – 23 May 2025

**Agenda item: 8.0**

**Source: Nokia (Rapporteur)**

**Title: Report of [POST129bis][002][ASN.1 review] Process improvements**

**WID/SID: General - Release 19**

**Document for: Discussion and Decision**

# 1 Introduction

This document is the report of the following offline session:

* [AT129bis][002][ASN.1 review] Process improvements (Nokia)

 Intended outcome:

 Deadline: 10-17-24

And the start of the post email discussion [POST129bis][002][ASN.1 review] Process improvements (Nokia)

* [POST129bis][002][ASN.1 review] Process improvements (Nokia)

 Intended outcome:

 Deadline: 15-05-25

# 2 Contact Points

Respondents to the email discussion are kindly asked to fill in the following table.

|  |  |  |
| --- | --- | --- |
| Company | Name | Email Address |
| Nokia (Rapporteur) | Jerediah Fevold | jerediah.fevold@nokia.com |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# 3 Summary of Email Discussion on Spec Review

An email discussion, [POST129][032][ASN.1 review] ASN.1 Review Process, was held after RAN2#129 and the discussion and its conclusions were captured in [R2-2502764](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_129bis/Docs/R2-2502764.zip). The summaries and resulting proposals are copied below for reference and to continue the discussion during the present meeting.

|  |
| --- |
| **Discussion Summaries** |
| **Summary 1**: 4/4 companies agree that it would be feasible to split the specification review file into a reasonable number of parts – 13 were suggested in the proposed split from Ericsson. It was noted that splitting would also allow for more parallel work, reducing contention.**Summary 2**: 0/3 companies agree with extracting the ASN.1 for its own review. Field descriptions would be detached from the ASN.1 if we did this, which would make it infeasible to split in that manner.**Summary 3**: Every company agrees that Word should still be used even for the ASN.1 part of the review.**Summary 4**: A few unique suggestions were made to increase the utility of the Word comment bubbles:* Reduce the text content of the RILs, and possible reduce the RIL template.
* Use a separate review file per WI
* Use the Word comment bubbles as pointers to a table of RIL comments, which could be stored
	+ In a separate Excel file
	+ In a separate Word file
	+ In the review Word file in a table at the end

**Summary 5**:4/4 companies support the continued use of manual lock files for checking out the review file, but two companies think that we could still explore a simple tool to automate the creation of the lock file and indicate who has the file checked out. [Rapp: this could be especially useful if we end up splitting the review file.]**Summary 6**: Ericsson provided 7 additional topics for input. Feedback was not generally provided, but 2/4 companies think it would be difficult to define the boundary of what a small change is. There seems potential for discussion on allowing for corrections of typos to be directly implemented into the review file. It was noted that changes on top of changes could occur if the changes are too large, so that should be discussed. It was suggested that splitting the review by WI could avoid the problems of points 2 and 5 – giving each WI the flexibility to implement its CRs and to avoid overlapping comments across WIs. |

The following main proposals were provided based on the discussion.

|  |
| --- |
| **Proposal 1:** Split the review file into multiple parts, respecting section boundaries. The exact split and number of review files is FFS.**Proposal 2:** Discuss the following alternatives to provide comments in the review files:* Reduce the text content of the RILs, and possible reduce the RIL template.
* Use a separate review file per WI
* Use the Word comment bubbles as pointers to a table of RIL comments, which could be stored
	+ In a separate Excel file
	+ In a separate Word file
	+ In the review Word file in a table at the end

**Proposal 3:** Continue to use the manual file locking procedure as a baseline, but keep as FFS the possibility of automatically creating the lock file and providing for download the next version of the review file with the version number incremented. |

And Ericsson proposed to add the following topics to the discussion.

|  |
| --- |
| 1. Make the “RRC style” (e.g. naming conventions) more visible to WI editors and delegates.
	1. The RRC Rapp could give some presentation and provide slide mtrl.
2. Do not implement WI-CRs that are not functionally complete and not in good shape into the review file.
	1. The ASN. Review originally assumed high-quality WI CRs (i.e., formally respecting the RRC style and guidance, as well as functionally complete and stable.
	2. This is indeed controversial topic. Typically, all WI are considered complete at the time of creating the first spec version of the release, however this approach may make ASN.1 review more effective and smoother.
	3. Some WI CR may benefit from a delayed merge, allowing more time to resolve functional and ASN.1 issues outside the ASN.1 review.
3. The time for ASN.1 review is normally very short. To get more time, we could start the ASN.1 review on draft spec before official spec is available. We can discuss if this is feasible closer to the ASN.1 review.
4. To improve ASN.1 review by delegates, encourage the delegates to study and the latest WI CRs to more easily understand spec impact. In this way a reviewer who wants to review how feature X was implemented, can more easily understand feature X if it has reviewed the WI CR for feature X.
5. On adding and commenting RILs, advice delegates on the following:
	1. Avoid a lot of RILs overlapping same word/sentence/paragraph/section.
	2. Avoid too large text comments and text in a RIL
	3. Discussion among companies about a certain RIL should be outside review file (instead use e.g. email among most concerned/involved delegates). In principle only the problem and conclusion need to be captured in the RIL text itself.
6. Allow delegates to introduce changes directly in spec text of the review file
	1. Many minor changes can be corrected directly in the review file, simple typos can be corrected even without a RIL which reduces workload on the delegates
	2. This would possibly also reduce the need for additional tdocs, instead fix the problem inside the review file. So far, we have not allowed changes to the spec text in the review file
7. Can consider a Tdoc cap related to RILs, e.g. one Tdoc for RILs per company per WI.
 |

# 4 Discussion

The discussion can be split into the following topics: splitting the review file; how to provide comments for the review; how to check the review file in and out; direct modification of the review file for small, editorial changes; and review logistics.

## 4.1 Splitting the review file

### 4.1.1 Discussion Points from RAN2#129bis

**Topic 1:** Should we split the review file? If so, should it be split by section or by work item?

|  |  |
| --- | --- |
| **Option** | **Discussion** |
| Split by section | **Support –** Qualcomm, Ericsson, Samsung, vivo (prior to merge WI-specific as normal, but after, we split by section)**Against –** Huawei (would require one reviewer to work with multiple files, and ASN and procedures are closely associated with one another)**Discussion –** Potential split: Procedures, UE capabilities, PC5, Remainder of PDU formats, Xiaomi **(**we first need to understand if the bubble is needed or not) |
| Split by work item(Full file per WI) | **Support** – Huawei (Intention is to reduce contention resolution – kind of like the post-meeting RRC email discussion), CATT**Against** – Ericsson, Xiaomi, Samsung (the point is to create a coherent spec across work items, and that work items should be finished prior to the review), OPPO (cross-topic issue checking is difficult with this split)**Discussion** – OPPO (this doesn’t solve the check-in, check-out problem) |
| Split by company | **Support** – OPPO (Excel sheet per company)**Against** – Ericsson (Best to minimize changes), Nokia**Discussion** – Qualcomm (Maybe reasonable but adds burden to rapporteur)**Notes**: This would ultimately resolve contention |
| No change |  |

### 4.1.2 Discussion after RAN2#129bis

**Question 1**: How should the review file be split, if at all, to reduce contention and/or to improve loading times and reduce performance problems in Microsoft Word? Some examples from the previous discussion include splitting by section, splitting by work item, splitting by company, or keeping the current way.

|  |
| --- |
| Answers to Question 1 |
| Company | Preferred Split | Technical Arguments |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**Summary 1: TBD**

**Proposal 1: TBD**

## 4.2 Providing comments for the review

### 4.2.1 Discussion points from offline at RAN2#129bis

**Topic 2:** How can we more efficiently provide comments in the review file?

|  |  |
| --- | --- |
| **Option** | **Discussion** |
| Reduce comment template | Support – Samsung, OPPO |
| Comments contain an identifier pointing to a comment table* Table at the bottom of the review file
* Table in a separate document
 | Support – Ericsson (preference to keep bubbles but OK with a separate table), Samsung, OPPO (with more context than just the pointer to a table)Against – Xiaomi (use a different kind of inline text pointer instead of bubble comments)Discussion – CATT, vivo, Huawei (global numbering is important), Qualcomm (at least need bubble comments to point to text), Xiaomi (number of bubbles, not the content that is the problem; supports a review Excel sheet per company and a reference to section number and line number, but Ericsson mentions this could be very difficult for the rapporteur to use) |
| Reduce instances of comments addressing the same topic |  |
| Discuss potentially controversial issues with companies externally instead of in the review file |  |

It was noted by Huawei that finding comments is very difficult and it’s hard to find out if multiple companies commented in the same place.

### 4.2.2 Discussion after RAN2#129bis

**Question 2**: Which of the following enhancements should be considered to improve the end of release review?

* A – reduce the comment template to increase readability
* B – enter a pointer to a comment ID inside the bubble comments and either store the comment body at the end of the Word file or separately in an Excel file.
* C – enforce some rules about duplicate or similar comments – these could be discussed with the original reviewer externally to the review file
* D – discuss potentially controversial issues with companies externally instead of in the review file to avoid multiple comments addressing the same topic.

|  |
| --- |
| Answers to Question 2 |
| Company | Preferred Enhancement(s) | Technical Arguments |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**Summary 2: TBD**

**Proposal 2: TBD**

## 4.3 Checking the review file in and out

### 4.3.1 Discussion points from offline at RAN2#129bis

**Limit the amount of time the review file(s) can be checked out or allocate specific review time slots**

* Support – Samsung, vivo
* Against – Ericsson thinks companies have behaved well

### 4.3.2 Discussion after RAN2#129bis

During the discussion, there was insufficient time to fully discuss this topic. Therefore, we propose two questions, one which was discussed: a time limit for the review file checkout, and a new one about automating the check-in/check-out process.

**Question 3**: Should a limit be imposed on the amount of time the review file can be checked out?

|  |
| --- |
| Answers to Question 3 |
| Company | Yes/No | Technical Arguments |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**Summary 3: TBD**

**Proposal 3: TBD**

**Question 4:** Should we devise a way to automate the process of checking the review file in and out? Currently, we download the latest version of the review file, create a lock file with the version name, whose contents are the name of the delegate who checked out the file, and then upload the review file with the version number incremented by 1.

|  |
| --- |
| Answers to Question 4 |
| Company | Yes/No | Technical Arguments |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**Summary 4: TBD**

**Proposal 4: TBD**

## 4.4 Direct Modification of the review file

During the offline session, we did not get to this topic, but given the more important topics to discuss first, we will preserve but postpone this topic.

**Topic 5:** Should delegates be allowed to make small editorial changes, e.g., grammar and formatting changes directly to the review file? If so, should a comment be provided in addition to the change?

## 4.5 Logistics

### 4.5.1 Discussion points from RAN2#129bis

The RAN2 chair suggested that MCC could create a temporary version of the specification to kickstart the review. However, several companies mentioned that the MCC would not have enough time to do an early implementation and that very few companies comment on the running CRs as is. Perhaps the better solution is that companies proactively check the running CRs in advance of the review. It was further noted that running CRs are endorsed right before the plenary submission date, so the draft cannot be created on time and that this concept could duplicate work.

A compromise solution would be to assign RIL numbers to the running CRs to begin the review in advance.

### 4.5.2 Discussion after RAN2#129bis

Based on the offline discussion and the email discussion held prior to this meeting, one question is posed, and another is postponed until the first set of issues is resolved.

The following topic is postponed.

**Topic 6:** Should we impose a limitation for RIL discussion papers to one TDoc per company per WI per meeting?

**Question 5:** Should we formalize the review of running CRs prior to the specification freeze such that RIL issues can be identified in the running CR prior to the merge for the cross-WI review?

|  |
| --- |
| Answers to Question 5 |
| Company | Yes/No | Technical Arguments |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**Summary 5: TBD**

**Proposal 5: TBD**

# 5 Conclusion

TBD.