3GPP TSG-RAN WG2 Meeting #128 R2-240xxxx

Orlando, United States of America, 18 – 22 November 2024

**Agenda item: 8.0**

**Source: Nokia (Rapporteur)**

**Title: Report of [POST127][004][ASN.1 Modernization] Requirements**

**WID/SID: NR\_newRAT-Core - Release 19**

**Document for: Discussion and Decision**

# 1 Introduction

This document is the report of the following email discussion:

* [POST127][004][ASN.1 Modernization] Requirements (Nokia)

Intended outcome: Agree on requirements for the ASN.1 review process

Deadline:

The deadline for providing comments is November 1, 2024, Friday at 21:00 UTC.

# 2 Contact Points

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

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

An offline session ([R2-2407786](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_127/Docs/R2-2407786.zip)), based on [R2-2407190](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_127/Docs/R2-2407190.zip) (Nokia) and [R2-2407087](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_127/Docs/R2-2407087.zip) (Ericsson), was held during RAN2#127 to discuss potential ways forward to modernize the ASN.1 review process, which takes place at the end of each release. R2-2407190 exemplified an end-to-end procedure using Git and an intermediate format for collaborative review, and R2-2407097 discussed ways to optimize the current review process, which is based on Microsoft Word and macros. Several aspects of process described in R2-24071090 were clarified, but the majority of participants, including the rapporteur, agreed that it would be useful to first hold a discussion on the requirements of the current review process.

The following will be discussed: fundamental requirements, taking into consideration the current process; automated procedures, such as report generation; Microsoft Word, and its ability to meet the requirements; and the use of other tools in conjunction with the current process.

## 3.1 Fundamental Requirements

The following features, excluding report generation, are currently supported as part of the review process, whether manual or automatic: providing comments with suggested corrections; providing comments for discussion or clarification; checking out the latest version of the review file; locking the review file; checking in the review file; notification of checking in the review file; assignment of an ID to each comment; and the merging of agreed corrections into a CR.

These components of the review process imply the following requirements, which we can use as a starting point:

1. Use of a common tool available to all 3GPP member companies.
2. Ability to collaborate on the review file without creating conflicts.
3. Ability to provide comments on the review file.
4. Distribution of notifications when the review file is checked out or checked in.
5. Trackability of comments such that they can be referenced in discussion.
6. Merging of corrections into a CR for merging into the frozen specification.

This first question addresses these requirements and any others that might need to be added.

**Question 1**: Is the list of requirements complete, and if not, which requirements should be removed, and which requirements should be added?

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| Answers to Question 1 |
| Company | Yes/No | Technical Arguments |
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**Summary 1**: TBD.

**Proposal 1**: TBD.

Given that at least the requirements described above are met by the existing review process, the benefits and deficiencies of current procedures should be discussed. Please note that tools will be discussed in future sections, so the discussion should be limited to the experience of executing the review with the current tools.

Review File Check in and Check out Procedure

The following procedure is currently used to check out and check in the review file:

1. Check the FTP server for the latest version of the review file, ending in vN, where N is the version number.
2. Check for the existence of a LOCK file named “vN IS LOCKED for editing.txt”, where N is the version number.
	1. If the version of number of the LOCK file is less than the most recent review file, then the review file is available for checkout.
	2. Else, if the version number of the LOCK file is equal to the most recent review file, then the review file is already checked out, and is unavailable for editing.
3. If the review file was available for checkout, upload a new LOCK file with a new version number equal to the latest version of the review file and set its contents to the reviewer’s name and email address in the following format: “Name <email>”.
4. Work on the review file, adding comments.
5. Rename the review file by incrementing the version number. For example, v010 would become v011.
6. Upload the review file.
7. Send an email on the 3GPP RAN2 reflector notifying everyone that the review file has been checked back in.

**Question 2**: Consider the current process for checking a file in and out. Please describe the any experiences, positive or negative about the existing process.

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| Answers to Question 2 |
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**Summary 2**: TBD.

**Proposal 2**: TBD.

RIL ID Assignment

Each comment requires an ID based on a company identifier, which is fixed by 3GPP RAN2, and a number, which is managed by the company providing comments. The ID is entered into the comment template when the comment is entered into the review file.

**Question 3**: Consider the current process for manually assigning an ID to a RIL. Please describe the any experiences, positive or negative about the existing process.

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| Answers to Question 3 |
| Company | Benefits and Deficiencies |
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**Summary 3**: TBD.

**Proposal 3**: TBD.

Comments, identified by RIL IDs, generally come in two varieties: comments for clarification or discussion; and comments suggesting changes to the text. When a comment is provided to make a change to the text, the existing text is copied and pasted into the comment description, and the correction is provided in the proposed change section of the comment, with a strikethrough font for deletions, and an underlined font for additions, essentially replicating the format of Microsoft Word’s “Track Changes” functionality. These changes cannot be directly copied into a CR containing a snippet of the specification to modify, but rather they are manually entered into the CR.

**Question 4**: Consider the current process for providing comments. Please describe the any experiences, positive or negative about the existing process.

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| Answers to Question 4 |
| Company | Benefits and Deficiencies |
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**Summary 4**: TBD.

**Proposal 4**: TBD.

End-to-End Procedure

3GPP has implemented a functional process to facilitate the end-of-release ASN.1 review. However, improvements could be made to each component of the review by modifying existing procedures or by developing new ones. The discussion on these improvements could apply to any of the previously discussed components or additional components.

**Question 5**: For any of the fundamental features of the review process, please provide any additional comments regarding suggestions for improvement, which could be to the current process or for a new process.

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| Answers to Question 5 |
| Company | Technical Arguments |
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**Summary 5**: TBD.

**Proposal 5**: TBD.

## 3.2 Automated Procedures

Automated procedures such as one to create a report of all the “RILs” are used to ease the work of the rapporteur in tracking corrections submitted by companies. These are useful for summarization and reducing the burden of searching the entire review file for comments.

**Question 6**: Which automations have been useful during the review process?

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| Answers to Question 6 |
| Company | Existing Automations |
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**Summary 6**: TBD.

**Proposal 6**: TBD.

In addition to the automations used today, which others could be useful augmentations of the review process? Some examples could include automatic version control instead of the manual creation of a lock file and sending of an email to advertise that comments have been added.

**Question 7**: Which additional automations could be useful during the review process?

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| Answers to Question 7 |
| Company | Potential Additional Automations |
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**Summary 7**: TBD.

**Proposal 7**: TBD.

## 3.3 Microsoft Word Features

Microsoft Word supports a wide variety of features that aid in collaborative work on documents. These features include balloon comments, all of which can be viewed simultaneously, and tracked changes. While the tracked changes feature has been determined to be infeasible for use with many collaborators, other features may work well for large-group collaboration.

**Question 8**: Which collaborative features of Microsoft Word have been most useful in the review process, and what are their benefits and detractors, in the context of use in Microsoft Word?

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| Answers to Question 8 |
| Company | Microsoft Word Collaborative Features - Benefits and Detractors |
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**Summary 8**: TBD.

**Proposal 8**: TBD.

Microsoft Word supports a wide variety of features useful in individual work on documents, such as split view, viewing multiple pages at the same time, and easy navigation between sections using the Navigation Pane.

**Question 9**: Which document editing and viewing features of Microsoft Word have been most useful in the review process, and what are their benefits and detractors, in the context of use in Microsoft Word?

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| Answers to Question 9 |
| Company | Microsoft Word Editing and Viewing Features - Benefits and Detractors |
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**Summary 9**: TBD.

**Proposal 9**: TBD.

## 3.4 Other Tools

During the offline discussion, companies mentioned using tools other than Microsoft Word to aid in the review, such as external tools or Microsoft Word plugins to perform syntax checking and highlighting of the ASN.1 parts of the specification. It would be useful to understand which other tools have been used in the review process to ensure that any future changes to the review process are not overly disruptive to companies’ procedures.

**Question 10**: Other than Microsoft Word, which tools have been useful during the ASN.1 review process, and what have the tools been used for?

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| Answers to Question 10 |
| Company | Review Tools and their Purpose |
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**Summary 10**: TBD.

**Proposal 10**: TBD.

# 4 Conclusion

TBD.