3GPP 6G Spec Modernization Study 6GSM-250040

Conference Call #01, August 6th, 2025

Source: MediaTek Inc.

Abstract: This document reviews 3GPP working methods’ best practices as well as tools in use and makes several proposals/recommendations for consideration as part of the ongoing FS\_6G\_Specs.

Considerations on Best Practices and Tools

# 1 Working methods: best practices

## 1.1 Templates (and tools)

3GPP MCC has developed:

- A clear and simple set of Drafting Rules in TR 21.801 [ref]

- A set of templates for key 3GPP documents (see [3GPP information folder](https://www.3gpp.org/ftp/Information))

- Helpful tools developed by MCC are also available

- In some instances, TSG/WG specific templates

A best practice is for the entire 3GPP community to systematically follow and use the above. Not using these leads to a number of issues e.g. when merging documents, updating CRs, exchanging LS, tracking LS history etc.

It is also important that the elected/appointed leadership, MCC as well as Rapporteurs, Editors and Moderators in particular, ensure these are being followed.

NOTE: Microsoft Word has means to restrict adding exotic styles to a specific document in order to preserve the original styles and formatting thereof (File > Info > Protect Document > Restrict Editing). The source and target documents ought to be using the same template

**Proposal 1: To remind the entire 3GPP community to systematically follow and use 3GPP drafting rules and templates. MCC-developed tools can be recommended that help achieving this.**

**Proposal 2: The elected/appointed leadership, MCC, Rapporteurs, Editors and Moderators to make sure 3GPP drafting rules and templates are being used and followed.**

Discussion document templates akin to the 3GPP template e.g. reusing 3GPP styles are also often but not systematically used that can be very useful in case of e.g. pCRs/draft CR implementation in a draft TR/TS or other document merger.

**Proposal 3: To consider the use of a single discussion document template, reusing 3GPP styles, across all groups.**

A particular emphasis must be put on the CR Coversheet which shall not be compromised for it provides critical information (e.g. title, WI code, impact, category, release, reason for change, summary of changes, consequences if not approved) not only for updating specifications, but also for implementation.

**Proposal 4: The continuous use of the CR coversheet shall remain.**

## 1.2 Formulation

Parts of some specifications are often not easily readable e.g. making use of long complicated sentences incl. misc. clauses and/or if statements as functions evolve over Releases. This can lead to ambiguous specifications and ultimately wrong implementation. No tool, whether it be Microsoft Word, Markdown or otherwise, would change this.

Some best drafting practices should be followed to ensure clear documentation such as:

- Short sentences

- Bulleted content and hierarchy (B1, B2, etc.), possibly numbered (e.g. as in RRC specification), helping break down a complicated statement and logic into a simpler formulation and format

**Proposal 5: Clear documentation especially specification should be ensured to avoid any ambiguity, e.g. by means e.g. of short sentences, bulleted content and hierarchy.**

## 1.3 TDoc-related aspects

### 1.3.1 TDoc "metadata"

With a typically large or very large number of TDocs to handle in every meeting it is very important to be able to quickly and reliably identify the item and topics any TDoc treats as well as the observations and/or proposals it makes.

The meeting agenda helps providing a first-order classification of topics, hence TDocs. Errors i.e. wrong agenda item can happen at TDoc reservation, however these are rare enough and will often be timely identified by MCC, Leadership or Delegates.

The TDoc reservation tool developed by MCC allows providing necessary details (and in case of CRs, mandatory fields) that provides invaluable information to help categorising, sorting, filtering input documents from the TDoc list alone.

- The Abstract part in the TDoc reservation is however not often used that is otherwise very useful in providing valuable information and in saving time.

- The Title of a TDoc is very important, especially for CRs/pCRs/draft CRs and should therefore be descriptive enough.

A best practice would consist in making sure all relevant information be provided when a TDoc is being reserved such that it is very clear what it does by simply looking at the TDoc list.

**Proposal 6: To ensure that all relevant information be provided when a TDoc is being reserved including a descriptive Title, a descriptive Abstract, impacted WI code, etc.**

### 1.3.2 TDoc content

While there is no clear TDoc template for discussion documents, it has become a normal practice to clearly document observations and proposals as part of a document, a best practice that should be further encouraged across all groups for it is tremendously helpful especially for large documents. This is also particularly useful with automation tools.

**Proposal 7: To clearly document observations and proposals in discussion documents.**

## 1.4 TSs and TRs Figures

There has been a growing trend of adding AI-generated illustrations (typ. jpegs imported as bitmaps) into TRs that besides not adding much value results in a significant file size. Specifications and TRs do not need fancy pictures – but instead clear technical diagrams and charts that are best pasted as Vector graphics (such as Enhanced Metafile or Windows Metafile) that are very frugal compared to e.g. bitmaps.

**Proposal 8: Not to import any picture as bitmaps, but instead as Vector graphics. Not to import AI-generated or other "fancy" illustrations that are not strictly technical.**

## 1.5 MCC, Leadership

Every group has its own way of working which is ok. However, depending on the group, the Leadership and MCC Secretaries typically have different means of handling meeting data whether it be the agenda, timeplan, Tdoc list, Folder structure, meeting report, status report, etc. which can make it difficult obtain information rapidly when e.g. following different groups, coming from another group or at change of leadership.

It would be good to explore some "standardised" way e.g. of setting up meeting folders at least for key information such as agenda, timeplan, inbox, draft, latest session/chair notes, Tdocs.

It would also be good to explore some common meeting report template and status report template, which would be very helpful parsing information across different groups. This is particularly important e.g. for cross TSG/WG topics, and at plenary. The Status Report template used in RAN is very useful.

**Proposal 9: To explore means to set up common folder structure among TSG/WG for meeting information incl. agenda, timeplan, inbox, draft, latest session/chair notes, TDocs etc.**

**Proposal 10: To explore a common meeting report template and status report template across all TSG/WG.**

# 2 Tools

## 2.1 Microsoft Word: Benefits and Requirements

### 2.1.1 WYSIWYG

Microsoft Word provides a main benefit which is WYSIWYG from a human standpoint. Following best practices in the above clause 1 should be helpful in improving this through further streamlining of documentation across all TSGs and WGs.

WYSIWYG is particularly critical during a meeting when online revisions e.g. (p)CRs are being treated, and especially so when the number of documents is large (think e.g. Friday revisions). Ultimately, it is delegates that will identify whether or not a document is ok, which requires WYSIWYG.

Whether or not a new tool is used, WYSIWYG is required which should be reliable in all situations. If e.g. an original Markdown file results in a problematic WYSIWYG outcome then this could be a showstopper vs. using Word.

**Proposal 11: Reliable and timely WYSIWYG is critical, cannot be jeopardised and shall therefore be preserved regardless of the tool at hand. This is a fundamental requirement.**

Microsoft Word allows different visualization panes of the very same open document which is invaluable when working on different parts thereof e.g. when comparing contents in different clauses.

**Proposal 12: The ability to visualize different (disjoint) parts of the same document at the same time is required.**

Microsoft Word allows different documents to be open and visible on the same screen at the same time. Such functionality is required regardless of the tool at hand.

**Proposal 13: The ability to open, review and edit several documents concurrently on the same screen is required.**

### 2.1.2 Styles

Microsoft Word is very well used today and familiar with all delegates, with the caveat that it may be too loose a tool or also too unfamiliar in terms of the functionality if offers. As indicated in clause 1, means exist in Word to restrict the editing of documents to specific styles (e.g. 3GPP styles) which can help avoiding time-consuming formatting issues otherwise arising from Word.

**Proposal 14: 3GPP templates could be natively restricted to avoid style issues, so long as input and target documents share a common template.**

### 2.1.3 Macros

Microsoft Word also allows native macros to be used which can be of considerable help for delegates in speeding up the handling a document with their own developed tools. As macros are blocked for some delegates by company’s rules, the use of macros must not be mandated.

**Proposal 15: The ability to natively develop and support adjunct tools such as Macros in Word is required.**

## 2.2 Microsoft Word: Drawbacks and Requirements

### 2.2.1 File size

The size of some specifications can prevent the seamless handling of a Word File. This is a recurring issue in some TSs but also and importantly some TRs.

For TSs, specifications have been split into separate files for close to 30 years now whenever file size issues were encountered. Whilst somewhat impractical e.g. for it impedes on reviewing cross-correlation between different parts of the specs, it is an effective means to tackle the issue especially as it follows a sound process e.g. for the TOC, and file naming convention.

**Proposal 16: Rapporteurs should be able to limit the size of TRs, following best practices in Clause 1, e.g. with regards to figures. It should be possible for Rapporteurs to split TRs into smaller files in a similar fashion as TSs get split when necessary.**

### 2.2.2 CR/pCR/draft CR/TP implementation

Changes to TRs/TSs frequently originate in discussion documents, which today do not always faithfully use the 3GPP styles. For a spec or running-CR rapporteur, the typical workflow is either to duplicate the pCR/TP manually (in case of a small change) or to copy-and-paste a block of changes (which depends on the source document having used styles and formatting correctly). For MCC, the implementation of CRs from individual Word changes into the rev-marked TS is a labour-intensive process that then requires manual checking by the spec rapporteur.

While it is evidently possible to implement such changes in Word, there is an opportunity to consider whether more automated, structurally oriented tools might make the process easier and, importantly, less error-prone.

**Proposal 17: Consider the multiple workflows for change implementation in TRs/running CRs/TSs in evaluating candidate tools.**

### 2.2.3 Automation

The .docx file format can be impractical for external tools e.g. AI tools that could be used to treat the content thereof thus impeding automation / processing. This stems from complex data arrangement in a .docx file especially related to tables, figures, equations that can lead to a high probability of errors when using such tools. Arguably it is simpler and more reliable (though not bullet-proof) to operate such tool with text-based inputs only. Tools are available allowing e.g. figures, equations to be described following a specific syntax that could be parsed by some AI tool.

The ability to use some AI tool to automatically parse a document (or a multiplicity of documents) is becoming increasingly attractive, though not absolutely essential to the actual development of specifications.

**Proposal 18: Means should be considered to allow a more reliable use of AI tools to parse 3GPP documents. This could be reflected as part of best practices and should be considered in the Drafting Rules. It should be noted that the 3GPP Drafting Rules recommend the use of OMML (Office Math Markup Language) format, native in Microsoft Word, for equations today.**

Note that while some issues may not be faced by all WGs, the use of automation may be relevant to all WGs.

In order to better enable the use of automation tools, it could be considered that MCC issue a Markdown file of any particular TS/TR alongside the normal .docx file should Microsoft Word remain in use.

**Proposal 19: Consider providing a companion Markdown file alongside a specification’s .docx file, in case Microsoft Word remains in use.**

## 2.3 Applicability to WGs

It should be noted that while some issues occur in some working groups, not all groups experience issues at all or at the same magnitude. WGs also have different working practices that may suggest different constraints or expectations for the applicable tools.

**Proposal 20: WG-specific characterisation is necessary through the study.**

# Conclusion

The proposals pertaining to best practices and tools are recapped hereafter.

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Tools:

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