

COM Ad Hoc Status Report – June 2025

17 June 2025

Kent Lusted, Synopsys, IEEE 802.3 COM Ad Hoc Chair

Overview

- Completed first set of change requests from the May 2025 interim meeting
 - [COM release v4.9](#) on IEEE SA Open Source Website
- Received revised and new change requests for consideration
- Altered and clarified change request procedures to improve integration with open source flows
- Configuration sheet “templates” added to repository

Change Request Submission Clarifications

- Two pieces to each change request submission
 - 1. Presentation has the high level summary and the justification for the code change
 - No code line changes or markups are encouraged in this file
 - 2. Make a branch/fork with your code changes in the open source site
 - And associate with the ppt in #1
 - Enables the review of the changes
 - “Public” fork/branch in your namespace –
 - Each branch is a specific request
 - Send the link out to the COM ad hoc chair and the maintainers

Branch/Fork Process Clarifications

- Update the sub-routines, not the big .m files
- The big .m files that contain all the sub-functions should never be modified directly.
 - They are generated using the `Management.make_release` function
- After modifying the relevant sub-routines, run `Management.make_release` to create the big .m file.
 - You can use a command like this:
`Management.make_release('com_ieee8023_.m','4p91_beta_Quantization_Noise_01');`
 - It doesn't exactly have to be that but the idea is to include the next version (4p91), note that it is beta, reference the branch name or something that notes the feature (Quantization_Noise). Optionally including that _01 at the end in case there are other revisions of the big file
- Submit the whole package (sub-functions and big .m files) as a merge request

Review and Notification Process Updates

- Refine the review process:
 - Submit the change request in advance of COM ad hoc meeting #X
 - Review in meeting #X and take Q&A
 - Folks can try it out before considering at next meeting (#X+1)
- Min 5 day notice for submission at a COM ad hoc meeting (meeting #X)
 - Have presentation and the code branch merge request “completed”
 - Merge request is “code freeze”
- Min 14 day review of the code changes before “ballot” (straw poll) for merge decision (at meeting X+1)
 - Accept, AIP (“editorial license”), Reject

Config Sheets

- Created “known good” config sheet with established syntax
 - Consider it a template
 - Have syntax for all parameters in a given COM code version release
 - Does not have to align with IEEE 802.3 draft specification parameter values
- Documentation text inside the config sheet
 - Help w/ backward compatibility for legacy rates
- Location
 - Under com_code as “config_templates”
 - Directory structure continues to evolve
 - Config templates would be part of the release
- In the future, will add a readme.md file to explain it to open source people

Config Sheet Usage Modes

- Sheets for Usage modes:
 - Channel COM
 - Rx itol
 - SNDR

Thanks!

Open Requests for 4p9

- Hossein: 4p8_5 (incomplete) -> 4p9_1
 - Improving COM Simulation Run Time in the Presence of Quantization Noise
- AdamG: 4p8_6 (deferred) -> 4p9_2
 - Optimize FOM Reduction
- AdamG: 4p8_9 (deferred) -> 4p9_3
 - MMSE FOM Speed Up commit request
- RichM: 4p9_4
 - Zero padding addressing issues in mellitz_3dj_03_2505 (Zero_pad_and_flim)
- RichM: 4p9_5
 - COM Implementation example of receiver interference tolerance specified in 178A.1.7.5 (RiTol)
- AdamG: 4p9_6
 - bug in getPSDs index

Agenda for 17 June

- Opening business
- Update on submission process/flow – Kent
- Review commit requests
 - 4p9_1 to 4p1_6

Notes

- Powerpoint focuses on the justification for the change.
 - No code line changes are encouraged in the ppt.
- Make the code changes in the open source environment as a branch/fork. And associate with the ppt
 - Enables the review of the changes
 - “Public” fork/branch in their namespace – send the link out to the COM ad hoc email reflector for review and/or link in the ppt
 - Each branch is a specific request

Notification

- ~~Advance notice of 1 week (7 days) before consideration~~
 - Now: submit the change request, review in a meeting, then next meeting is considered.
- Min 5 day notice for discussion at a COM ad hoc meeting.
 - have presentation and the code branch merge request “completed”
 - Merge request is “code freeze”
- Min 14 day review of the code changes before “ballot” (straw poll) for merge decision
 - Accept, AIP (“editorial license”), Reject
- Maintenance process:
 - Deadline for advance for discussion at meeting. 35 days
 - Consideration of the topic. Balloting process.

Next meeting

- Process for config sheets
- Kent to find a date for next group huddle