

IEEE 802.3 COM Open Source update - March 2025

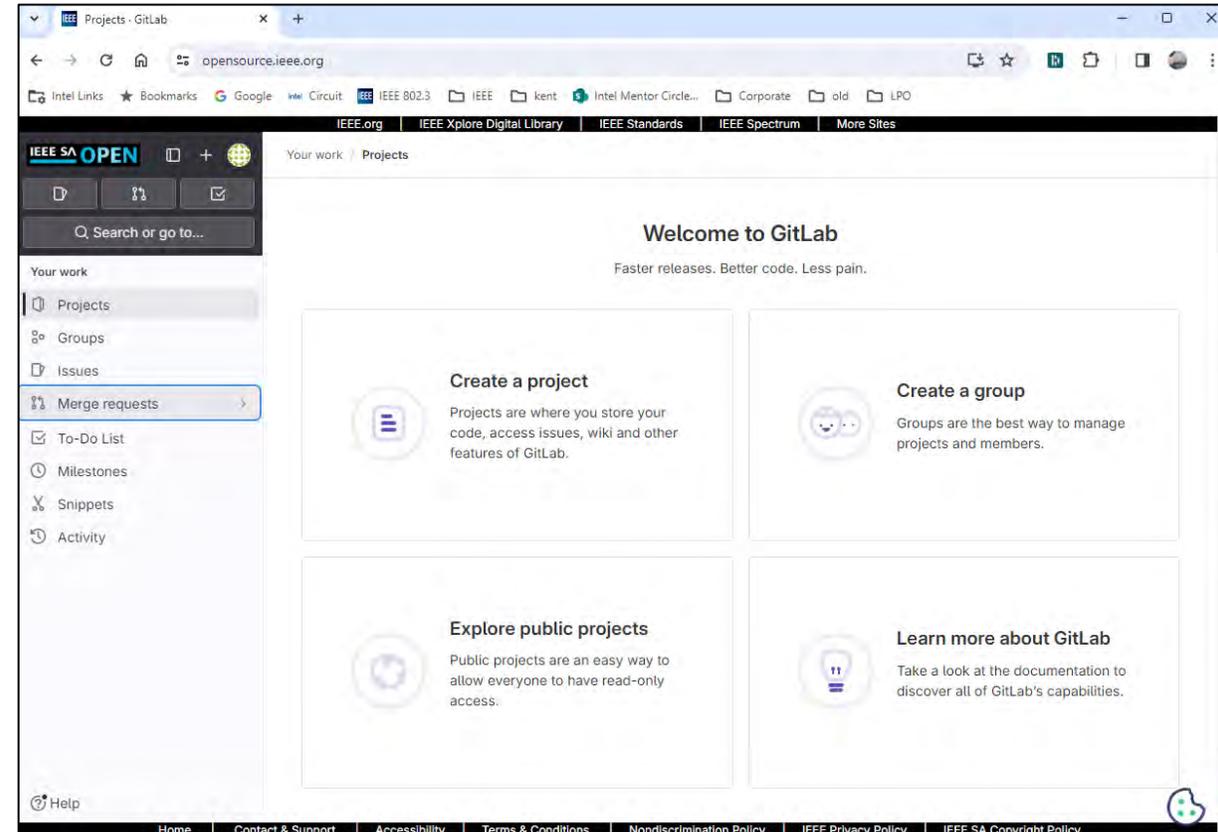
Kent Lusted, IEEE 802.3dj COM Ad Hoc Chair, IEEE 802.3 COM Open
Source Ad Hoc Chair, Synopsys

Review

- 12 December 2024: IEEE SA OSCom voted in favor of establishing IEEE 802.3 COM open source project (Tier 3)
- 23 January 2025: The IEEE 802.3 Working Group Chair established a Channel Operating Margin (COM) Open Source ad hoc
 - Appointed Kent Lusted as ad hoc Chair

IEEE SA Open Source Repository

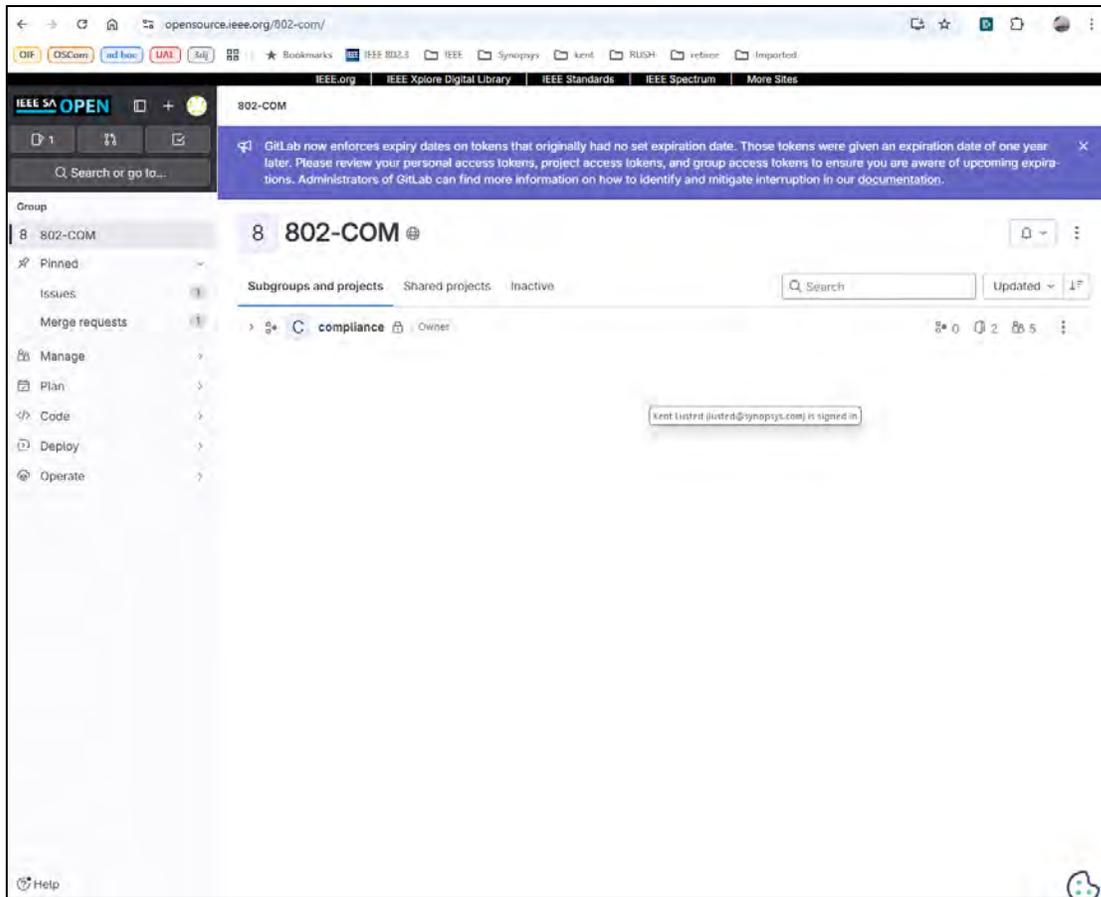
- Hosted by GitLab
 - <https://opensource.ieee.org/>
- Free IEEE web account to access
- Full suite of tools available to manage:
 - Access and responsibilities
 - Commit or merge requests
 - Forking, branching and merging
 - Issues and problems
 - Security



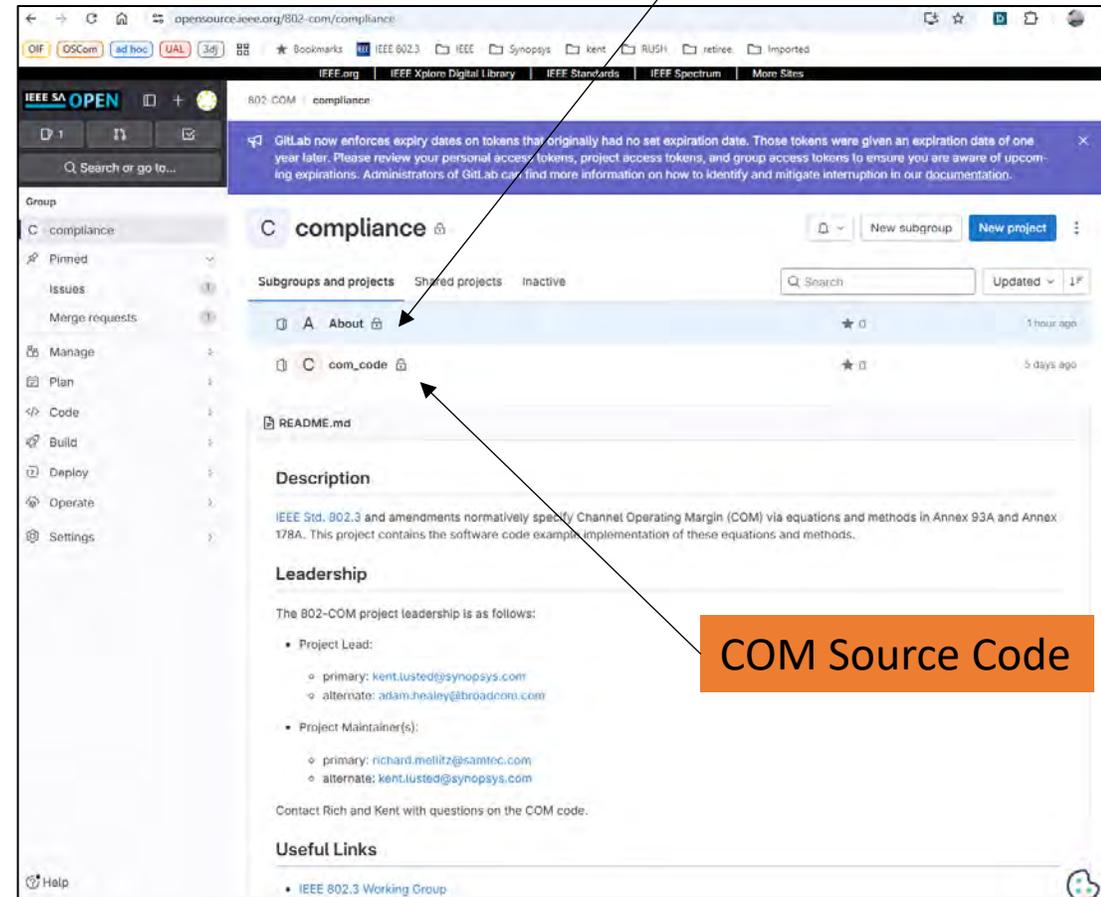
Update – March 2025

- Established the COM code repository on Gitlab
 - Namespace: “802-COM” <https://opensource.ieee.org/802-com/>
 - Operating in “private” mode until the initial commit is completed & tested. (Only visible to project lead and maintainer)
 - After the checks are completed, then Open Source community manager approves and the project goes “public” (visible to all)
- Initial COM code commit to Gitlab
 - In progress: Rich Mellitz and Adam Gregory working with the repo tool
- Establishing IEEE 802.3 COM ad hoc website under IEEE 802.3 Working Group
 - COM development activities will move here, once created
 - [Link here](#)

802-COM Main page



Information



COM Source Code

About

The screenshot shows a web browser displaying the IEEE 802-COM compliance gitlab-profile repository page. The page is titled "802-COM / compliance / About / Repository". The left sidebar contains a navigation menu with options like "Project", "About", "Pinned", "Issues", "Merge requests", "Manage", "Plan", "Code", "Merge requests", "Repository", "Branches", "Commits", "Tags", "Repository graph", "Compare revisions", "Snippets", "Build", "Secure", "Deploy", "Operate", "Monitor", "Analyze", and "Help". The main content area shows a commit history table and a description of the repository.

802-COM / compliance / About / Repository

main ▾ gitlab-profile / + ▾ History Find file Edit ▾ Code ▾

Added hyperlinks to IEEE 802.3 WG, 3dj TF tools and channels, 3dj TF COM ad hoc
Kent Lusted authored 1 minute ago 642b72f3

Name	Last commit	Last update
AUTHORS.md	Update AUTHORS.md	2 hours ago
CONTRIBUTING.md	Add new file	1 hour ago
CONTRIBUTORS.md	Add new file	2 hours ago
LICENSE	Add LICENSE	2 hours ago
README.md	Added hyperlinks to IEEE 802.3 WG, 3dj TF...	1 minute ago

README.md

Description

IEEE Std. 802.3 and amendments normatively specify Channel Operating Margin (COM) via equations and methods in Annex 93A and Annex 178A. This project contains the software code example implementation of these equations and methods.

Leadership

The 802-COM project leadership is as follows:

- Project Lead:
 - primary: kent.lusted@synopsys.com
 - alternate: adam.healey@broadcom.com
- Project Maintainer(s):
 - primary: richard.mellitz@samtec.com
 - alternate: kent.lusted@synopsys.com

Contact Rich and Kent with questions on the COM code.

Home Contact & Support Accessibility Terms & Conditions Nondiscrimination Policy IEEE Privacy Policy IEEE SA Copyright Policy

README

The screenshot shows a web browser displaying the GitHub repository page for IEEE 802-COM compliance. The URL is opensource.ieee.org/802-com/compliance/gitlab-profile/-/blob/main/README.md. The page features a navigation sidebar on the left with options like About, Pinned, Issues, Merge requests, Manage, Plan, Code, Merge requests, Repository, Branches, Commits, Tags, Repository graph, Compare revisions, Snippets, Build, Secure, Deploy, Operate, Monitor, Analyze, and Help. The main content area displays a success message: "Your changes have been committed successfully." Below this, the file name "README.md" (2.62 KIB) is shown with options to view, blame, edit, replace, or delete. The README content includes sections for Description, Leadership, Useful Links, and Disclaimer Notice. The Description states that IEEE Std. 802.3 and amendments specify Channel Operating Margin (COM) via equations and methods in Annex 93A and Annex 178A. The Leadership section lists the Project Lead (Kent Lusted) and Project Maintainer(s) (Richard Mellitz and Kent Lusted) with their email addresses. The Useful Links section lists the IEEE 802.3 Working Group, IEEE 802.3 COM Open Source Ad hoc, IEEE P802.3dj Task Force Tools and Channels, and IEEE P802.3dj Task Force COM Ad Hoc. The Disclaimer Notice states that the material is subject to change and is presented "as is" with all faults, and that IEEE disclaims all warranties and representations.

IEEE SA OPEN

802-COM / compliance / About / Repository

Your [changes](#) have been committed successfully.

README.md 2.62 KIB

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Contact Rich and Kent with questions on the COM code.

Useful Links

- [IEEE 802.3 Working Group](#)
- [IEEE 802.3 COM Open Source Ad hoc](#)
- [IEEE P802.3dj Task Force Tools and Channels](#)
- [IEEE P802.3dj Task Force COM Ad Hoc](#)

Disclaimer Notice

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IEEE SA OSCom Tier 3 Volunteer Roles & Responsibilities - Summary

- IEEE Open Source Project Lead – Kent Lusted (Adam Healey as alternate)
 - Responsible for the vitality, organization, development, evaluation, operation, security, and maintenance of an IEEE Open Source Project.
- Maintainer (Rich Mellitz , Kent Lusted)
 - Authority to commit (save changes) to the IEEE code and document repository
- Contributor
 - Any person who submits any material to an IEEE open-source Project
 - All Contributors to IEEE Open Source Projects shall submit an appropriate IEEE Contributor License Agreement
 - Every Contributor is required to obtain an IEEE account that requires agreeing to the IEEE Code of Ethics and the IEEE Code of Conduct
 - IEEE membership is not required to be a Contributor

Contributor License Agreements (CLA)

- CLA and Terms of Use on GitLab CLAs are found in the IEEE SA OSCoM “community” group at <https://opensource.ieee.org/community/cla>
 - BSD3 license <https://opensource.ieee.org/community/cla/bsd3>
 - IEEE Entity CLA for BSD-3 License
 - IEEE Individual CLA for BSD-3 License
 - IEEE Individual CLA for BSD-3 with Public Domain Appendix
- Completed License agreements go to: oscontrib@ieee.org
 - You will receive a CLA number from IEEE staff when your CLA has been accepted
 - List of signed CLAs: <https://opensource.ieee.org/community/cla/signed>
- Questions: Contact me or [Joshua Gay](#) (IEEE SA OSCoM)

In Progress

- Establishing governance related processes
 - How Maintainers and Committers are determined, added, removed, and authorized
 - Who may contribute to the project
 - How merge requests are handled
 - How and when releases are evaluated or reviewed
 - Who decides when a release can be made

Summary

- 802-COM created at <https://opensource.ieee.org/802-com/>
- Initial code commit in progress
 - “Private” repo moving to “Public” when checks are completed
- Contributors need a signed CLA
- IEEE 802.3 Working Group page created
 - URL HERE
- Stay tuned for more information

Useful Links

- IEEE 802.3 COM Open Source ad hoc website
 - [Link here](#)
- 802-COM Open Source project
 - <https://opensource.ieee.org/802-com/>
- IEEE P802.3dj COM ad hoc website
 - <https://www.ieee802.org/3/dj/public/adhoc/COM/index.html>
- IEEE P802.3dj COM beta releases
 - <https://www.ieee802.org/3/dj/public/adhoc/COM/index.html>
- IEEE P802.3dj formal COM releases
 - <https://www.ieee802.org/3/dj/public/tools/index.html>

Backup

Opensource Webpage Front End

- 802-com.ieee-saopen.org
 - Not setup yet.
- Example ieesaopen-next
 - <https://opensource.ieee.org/saopen-next/saopen-next.ieee-saopen.org>
 - <https://saopen-next.ieee-saopen.org/>

Open Source Project Visibility

- Per IEEE SA OSCom maintenance manual, projects are also classified by visibility on the IEEE SA Open Source website:
 - **Private:** The Maintainer grants project access explicitly to each user. All users are Open Source Community members. The OSCom Community Manager and Platform administrators do have access.
 - **Internal:** The project can be accessed by any IEEE Open Source Community member.
 - **Public:** The project can be accessed without any authentication to view and download.

Select
Public
for COM

IEEE OSCom Project Tiers

There are five tiers of IEEE Open Source Projects:

Tier 1 — Individual Projects, which are maintained and managed by an individual who may accept contributions from others.

Tier 2 — Group Projects—Projects maintained and managed by a group of individuals or organizations. Such Projects will typically have multiple maintainer(s), committers, etc.

Tier 3 — Open Source Projects reviewed and approved for use of the IEEE Open Source Platform by OSCom to create IEEE Open Source Releases or products.

Tier 4 — IEEE Open Source Projects incorporated into IEEE standards—IEEE Open Source Projects operating in conjunction with an SASB authorized standards Project.

Tier 5 — Joint IEEE Open Source Projects—IEEE Open Source Projects that are operating in conjunction with another IEEE Board or Organizational Unit and are also subject to the policies and procedures of that Board or Organizational Unit.

https://standards.ieee.org/wp-content/uploads/import/documents/other/OSCOM_Operations_Manual.pdf

Select Tier 3
for COM

Per IEEE SA OSCom Operations Manual Clause 2, “Open Source is **incorporated** into an IEEE standard if it is normatively or informatively included as part of the text of the standard or cited in the standard.”

- Neither of these apply to the COM code at this time

IEEE SA OSCom Tier 3 Volunteer Roles & Responsibilities (1/2)

- IEEE Open Source Project Lead
 - Responsible for the vitality, organization, development, evaluation, operation, security, and maintenance of an IEEE Open Source Project.
 - The IEEE Open Source Project Lead may delegate specific responsibilities to an alternate IEEE Open Source Project Representative
- Maintainer
 - Authority to commit (save changes) to the IEEE code and document repository
 - May assign committer(s) to the repository
 - Shall be IEEE members of any grade
- Committer
 - Have the ability to commit code (save changes) to a Project

IEEE SA OSCom Tier 3 Volunteer Roles & Responsibilities (2/2)

- Contributor
 - Any person who submits any material to an IEEE open-source Project
 - All Contributors to IEEE Open Source Projects shall submit an appropriate IEEE Contributor License Agreement
 - Every Contributor is required to obtain an IEEE account that requires agreeing to the IEEE Code of Ethics and the IEEE Code of Conduct
 - IEEE membership is not required to be a Contributor
- Peer Reviewers
 - Perform a code review or evaluate the security, usability, performance, or other aspects of a planned release
- Users
 - Responsible for observing the copyright and licensing information in each open-source file

Tier 3 Project Form (1/6)



IEEE SA Open Source Committee (OSCom)

Open Source Project Request

Title: IEEE 802.3 Channel Operating Margin (COM) Tool

OS Project Lead/POC: Kent Lusted

Alternate OS Project lead: Adam Healey

OS Project Maintainer(s): Kent Lusted, Rich Mellitz

Last updated January 2023



(2/6)

PROJECT TITLE AND RELATED STANDARDS

Open source project title: IEEE Std. 802.3 Channel Operating Margin (COM) Code

Related standards project (if applicable):

- PAR number or standard number: IEEE Std. 802.3 and Amendments
- Scope statement:

- Explanation of what the standard does:

Defines Ethernet local area network operation for selected speeds of operation from 1 Mb/s to 800 Gb/s using a common media access control (MAC) specification and management information base (MIB).

(3/6)

PROJECT DESCRIPTION

What open source will be developed:

Reference software code implementations and configuration spreadsheets of the Channel Operating Margin (COM) equations and methods in IEEE Std. 802.3 and Amendments (e.g. Annex 93A and 178A). It will also provide branch support to enable participants to development new features and new capabilities for use by industry.

Why this is valuable:

The contributed COM software code implementation and configuration spreadsheets are being widely used by IEEE 802.3 participants as well as participants in other industry SDOs/SIGs (e.g. OIF)

(4/6)

RELATION TO EXISTING OPEN SOURCE

Relation to known open source:

none

Description of pre-existing open source that will be used (if any):

Not applicable

(5/6)

GOVERNANCE

Requested license (and reason):

BSD 3-clause. Requested by the contributor of the initial code commit

How will the project be governed?

By the IEEE 802.3 Working Group and will follow all applicable IEEE governance requirements including having an Open Source Lead and Maintainer per SASB and OSCom Operations Manuals

(6/6)

SUMMARY

Summary of the project and your questions for OSCom:

The contributed COM software code implementation and configuration spreadsheets are being widely used by industry participants for the development of IEEE Std. 802.3 specifications and amendments. The IEEE SA Open Source platform provides a viable platform for the development of the code in an open source manner that benefits broad industry.

Review of the formal project request: (To be completed by the OSCom Administrator.)

Governance Related Questions

- How Maintainers and Committers are determined, added, removed, and authorized
- Who may contribute to the project
- How merge requests are handled
- How and when releases are evaluated or reviewed
- Who decides when a release can be made.

COM Code Change Request Types

- There are three predominant types of COM changes that need to be considered
 - Maintenance - Structured
 - Corrections to existing functions or code related to IEEE 802.3 Std and amendments.
 - Stable and “proven” releases
 - Development - Fast and flexible
 - New features and new capabilities for IEEE 802.3 TF/SG use
 - Align with changes to draft specification, as the spec changes
 - Adjacencies
 - Requests for features and capabilities beyond the IEEE 802.3 Std and amendments (e.g. OIF, etc.)

Thanks!

Useful References

- IEEE SA Open Source Committee (OSCom) Operations Manual
 - https://standards.ieee.org/wp-content/uploads/import/documents/other/OSCOM_Operations_Manual.pdf
- IEEE SA Open Source Committee Maintenance Manual
 - <https://opensource.ieee.org/community/manual>

Proposed *Short-term* COM Code Commit Request Dispositions (WIP)

- Managed at the Task Force level via COM ad hoc for the short-term
- Proposed short-term disposition designations for COM code commit requests were leveraged from the IEEE SA Balloting and Comment Resolution Process Guidelines
 - <https://standards.ieee.org/wp-content/uploads/import/governance/revcom/guidelines.pdf>
- Disposition Designations:
 - **Accepted:** The group agreed exactly with the commit request and change proposed by the submitter.
 - **Revised:** The group agrees with the commit request (at least in part) and implements a change that is not exactly what the submitter proposed.
 - **Rejected:** The group does not agree to make the change, or cannot come to a consensus to make changes necessary to address the commit request
 - **Deferred:** The group is unable to review or implement the commit request within the specified timeline for the next release
 - **Incomplete:** The commit request is missing details.

Proposed *Short-term* COM Code Change Management Guidelines (WIP)

- Managed at the Task Force level via COM ad hoc for the short-term
- Steps
 1. Requests for changes to the COM code are sent to Kent and Rich as a “Commit Request”
 - Brief title, submitter, description of desired change, suggested remedy
 2. Commit Requests are assigned a number associated with the COM version
 - For tracking purposes
 3. Commit Requests are introduced in the COM ad hoc
 - Details are discussed, if time allows
 - Specific code changes are provided to participants by website or reflector (TBD)
 4. Participants review the Commit Request(s) offline between the COM ad hoc meetings
 - Use of the 3dj electrical track reflector is encouraged for discussion and debate on Commit Requests
 5. A straw poll on a Commit Request is taken at a future COM ad hoc meeting to gauge support
 - If there was support, then a Commit Request becomes part of the next formal COM code release