

2019 Q4 (Oct, Nov, Dec)

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2019 12 18

Recording: [toc-weekly-20191218.mp4](#)

Agenda

1. Call for Scribe (minutes owner) Lusheng Ji
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	Y		
China Mobile	Jinri Huang Co-Chair	Y		
Deutsche Telekom	David Streibl			
NTT DOCOMO	Masafumi Masuda			
Orange	William Diego		Vincent Danno	
Verizon	Viswa Kumar	Y		

*Quorum: 50% or more of total TSC voting members unless excluded due to attendance. We have a quorum and can vote on activities.

3. Review and Agree to Minutes of [Previous Meeting](#)
 1. Moved by Jinri, Seconded by Viswa, passed 3/0/0.
4. Review of Today's Agenda
 1. Jinri requested new agenda item for discussing community contributions too PoC at MWC Barcelona.
 2. Jun Song: procedure for individual company to contribute at MWC?
 1. Jack: open use of O-RAN SC software because it is open source, but nice to know who/how using; but if making claims regarding O-RAN such as compliance, then need permission from O-RAN Alliance.
 2. Jinri: concur with Jack. also can be done by individual company, but we are collecting and coordinating for representing the community under WG1
 1. Jun: customer related, so need to discuss with them.
 2. Jinri: can proceed in parallel, discussing with customer and providing info to the collection table.
 3. Jack: AT&T has 3, 1 live demo and 2 videos
5. Release Votes and Approval:
 1. Review [Project Readiness for Amber Release](#)
 2. Review [Bronze](#)
6. Marketing of the Amber release (WG, LF, PR)
 1. Jinri: regarding the MWC demos: Paul Smith and Jinri are collecting info on MWC demos; two gate points: 12/19 for entering info and preliminary approval, 01/20 for completing preparation and final approval for any PR.
 2. Jack: LF Networking conference April 2020. we will coordinate presentations there.
 3. Jinri: Global plugfest events at NA, EU, Beijing. PR under preparation, will be on wire today, covering O1/A1 PoC, as well as Beijing plugfest. Active attendance: over 70 companies; 200+ attendees; 4 integration groups testing open front haul; WG6 in HW SW decoupling;
7. Status of Open Action Items (Old Business)
 - **Action** / TOC voting members: Provide an alternate contact on the [TOC](#) list above.
 - Jinri to send out email.
 - **Action** / [Tracy Van Brakle](#) and [Martin Skorupski](#) to align and document the plugfest plan for a demo video.
 - Tracy: completed uploading video recording to O-RAN. Need approval to upload to LF wiki.
 - Jinri will make request to EC tomorrow.
 - Martin: remove this action item.
 - **Action**/ [user-59b16](#) Alignment and adjust OAI code to be compliant with O-RAN Alliance. This is an architectural review of fitting the code.
 - Jack: Rittwik on vacation, action item deferred.
 - **Action**/ [Jinri Huang](#) provide an answer to [user-59b16](#) regarding support for O-CU, O-DU. Without commitments from O-CU and O-DU the end to end use cases are in jeopardy.
 - Jack: will be high priority when we come back in Jan. End-to-end use cases require support from O-CU and O-DU. Need PTL commitments.
 - O-CU PTL: support UE attachment first, challenge for e2e data collection, design in release B.

- Work with RSAC to pull this together, to identify which items to complete in B, which to defer.
 - Same for O-DU's.
 - Every module to perform some basic self-test, reporting, and communication functions so dashboard reports them as part of the inventory.
 - From RSAC main ask for O-CU is E2 interface reporting which depends on progress by WG3.
 - Many software functions can move ahead of spec.
 - **Action/** PTLs enter epics from [Contributions](#) into jira.
 - Will use JIRA more in Release B for reporting and tracking.
 - Need more participation on cross-project/company activities/contributions. Will ask one ToC member to coordinate inter-project activities.
 - **Action/** PTLs participate in the Bronze planning meetings held twice a week by the [RSAC](#) committee. PTLs who are planning to contribute to Bronze must attend.
8. Standing Agenda Items (Brief Status of Ongoing Activities)
 - a. Release Manager/[Release Planning](#): Weekly TOC Scheduling
 - i. [Project Readiness for Amber Release](#)
 - ii. Maintenance Release
 - iii. [Project Bronze Release](#)
 - b. [user-d3360](#) Test & Integration Planning (INT)
 - c. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [Matti Hiltunen](#) RIC Applications (RICAPP)
 - ii. [Thoralf Czichy](#) RIC Platform (RIC)
 - iii. [user-a934b](#) O-RAN Centralized Unit (OCU)
 - iv. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIGH)
 - v. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
 - vi. [Martin Skorupski](#) Operations and Maintenance (OAM)
 - vii. [Alex Stancu](#) Simulations (SIM)
 - viii. [Xiaohua Zhang](#) Infrastructure (INF)
 - ix. [weichen ni](#) Documentation (DOC)
 - x. [John Keeney](#) Non-RealTime RIC (RAN Intelligent Controller) (NONRTRIC)
 - xi. (TBD) O-RAN Radio Unit (ORU)
 - d. [user-59b16](#) Requirements Software Architecture Committee
 9. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items
 - a. By Jinri: possible contribution to MWC Barcelona
 - i. Already covered at item 6 above (marketing)
 - b. O-RAN Alliance Face to face meeting:
 - i. Jinri: on Monday TSC call, we discussed meeting arrangement but no conclusion yet. F2F to be held Feb 17-21, Paris.
 10. Planning for Next Meeting
 11. Any Other Business (AOB)
 12. Meeting Summary (resolutions, new action items, etc.)

2019 12 11

Zoom meeting: [2019-12-11-toc.mp4](#)

Agenda

1. Call for Scribe (minutes owner) Farheen Cefalu
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x		
China Mobile	Jinri Huang Co-Chair	x		
Deutsche Telekom	David Streibl			
NTT DOCOMO	Masafumi Masuda	x		
Orange	William Diego		Vincent Danno	
Verizon	Viswa Kumar			

*Quorum: 50% or more of total TSC voting members unless excluded due to attendance. We have a quorum and can vote on activities.

3. Review and Agree to Minutes of [Previous Meeting](#)
 - a. The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
 - i. Vote to approve minutes for 04 Dec 2019
 - ii. On motion made by [Jinri Huang](#)
 - iii. Seconded by [MASAFUMI MASUDA](#)
 - iv. **VOTE:** Vote taken, item passed
4. Review of Today's Agenda
5. Release Votes and Approval
 - Review [Project Readiness for Amber Release](#)
 - Added [Bronze](#)
6. Marketing of the Amber release (WG, LF, PR)
 1. Jinri - Making a video that will cover the software community.
 2. Zbynek (PM O-RAN Alliance marketing and communications) wrote a newsletter for the EC meeting. Jinri will attend and will include the Amber release in this newsletter.

1. Status of Open Action Items (Old Business)

- a. **Action** / [Tracy Van Brakle](#) and [Martin Skorupski](#) to align and document the plugfest plan for a demo video.
- Jinri - 2 plugfest sessions last week organized by Tracy has been recorded. Tracy reported this to EC this morning. Tracy raised whether she can share the video with the SC. Suggested to put it on the o-ran wiki first then decide whether to make it public on the software wiki.
 - North American and Asian session happening this week.
 - Preparation work has been done
 - Tomorrow there will an operator lab tour
 - Orange, Telecom Italia, Geo, and Sprint will be visiting the lab for the plugfest.
 - Tomorrow afternoon we arranged a slot to shoot a video for the MWC video.
 - In the Asian session we prepared 5 integration line. You can understand it as 5 different sets of test and integration.
 - 5 sets of demos integration and test.
 - We will demonstrate an online show that will be available to public to watch the demo live.
 - To accomodate time zones morning timeslot will be made convenient to US and afternoon for Europe.
 - Around 200 attendees.
 - Keynotes, test and integration results by the group data gates, and round tables.
 - We also prepared the live broadcast can join via Zoom bridge.
 - Although in Chinese we provide translation
 - Next week will be a deep dive sessions.
 - Anyone who is interested can join us.
 - A lot of attention is being given to the software community. We need to work with the plugfest attendees how to utilize their feedback and use it.
- b. **Action**/ [user-59b16](#) Alignment and adjust OAI code to be compliant with O-RAN Alliance. This is an architectural review of fitting the code.
- Started communicating.

2. Standing Agenda Items (Brief Status of Ongoing Activities)

- a. Release Manager/[Release Planning](#): Weekly TOC Scheduling
- i. [Project Readiness for Amber Release](#)
 - ii. Maintenance Release
 - iii. [Project Bronze Release](#)
- b. [user-d3360](#) Test & Integration Planning (INT)
- We will not have TOC meetings the week of December 25 and January 1. These are U.S. holidays.
 - Concern about PTL participation. We have to grow the community and work towards and end to end system.
 - The mission is to have the software work across the system. T
 - Take this time to improve and accomplish the goals of the project.
 - We will ask each PTL to provide a brief discussion on what each PTL is working on each week.
- c. Report out from PTL: Stand-Up & Report Out on Blockers
- i. [Matti Hiltunen](#) RIC Applications (RICAPP)
 - ii. [Thoralf Czichy](#) RIC Platform (RIC)
 - iii. [user-a934b](#) O-RAN Centralized Unit (OCU)
 - iv. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIGH)
 - v. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
 - vi. [Martin Skorupski](#) Operations and Maintenance (OAM)
 - vii. [Alex Stancu](#) Simulations (SIM)
 - viii. [Xiaohua Zhang](#) Infrastructure (INF)
 - ix. [weichen ni](#) Documentation (DOC)
 - x. [John Keeney](#) Non-RealTime RIC (RAN Intelligent Controller) (NONRTRIC)
 - xi. (TBD) O-RAN Radio Unit (ORU)
- d. [user-59b16](#) Requirements Software Architecture Committee
- Epics are complete for the Bronze release.
 - Multiple discussions around two use cases.
 - Traffic sharing
 - Healthcheck
 - Rittwik asked about contributions for O-CU.
 - **Action**/ [Jinri Huang](#) provide an answer to [user-59b16](#) regarding support for O-CU, O-DU. Without commitments from O-CU and O-DU the end to end use cases are in jeopardy.
 - Use Samsung as an E2 starter example.
 - Between now and end of year all PTLs must put the epics into Jira.
 - In January the TOC calls should refer Jira tickets.
 - We are ready to release the bronze release document.([Contributions](#))
 - **Action**/ PTLs enter epics from [Contributions](#) into jira.
 - Martin - suggestion to create one common link.

3. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items

- a. Jinri - 5 minutes to introduce the Asian Plugfest and 3 minutes for the O-RAN F2F
- i. Next F2F is in Feb 17 - 22 in Paris. One week after Barcelona meeting.
 1. Daily working sessions with only 3 hours for TOC. Would like to see more time for TOC added to the agenda.
 2. All these sessions happen in parallel. They are across different working groups. Before we used to invite our delegates from other WGs to join. We also want to reach out to have different WGs meet. Example would be Rittwik attending another working group meeting.
 3. Rittwik only drawback is when TOC is going on you miss the parallel sessions.
- b. Rittwik - Raise a concern about the low attendance of PTLs for the Bronze release planning.
- i. It is the end of year holiday season so low attendance is expected this time of year.

4. Planning for Next Meeting

5. Any Other Business (AOB)

6. Meeting Summary (resolutions, new action items, etc.)

- a. Votes
- i. The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
 1. Vote to approve minutes for 04 Dec 2019

2. On motion made by [Jinri Huang](#)
 3. Seconded by [MASAFUMI MASUDA](#)
 4. **VOTE:** Vote taken, item passed
- b. Actions
- i. Action / TOC voting members: Provide an alternate contact on the [TOC](#) when you can not attend the TOC meeting.
 - ii. **Action** / [Tracy Van Brakle](#) and [Martin Skorupski](#) to align and document the plugfest plan for a demo video.
 - iii. **Action**/ [user-59b16](#) Alignment and adjust OAI code to be compliant with O-RAN Alliance. This is an architectural review of fitting the code.
 - iv. **Action**/ [Jinri Huang](#) provide an answer to [user-59b16](#) regarding support for O-CU, O-DU. Without commitments from O-CU and O-DU the end to end use cases are in jeopardy.
 - v. **Action**/ PTLs enter epics from [Contributions](#) into jira.

2019 12 04

Zoom meeting: [2019-12-04-toc-audio_only_1.m4a](#)

Agenda

1. Call for Scribe (minutes owner) Farheen Cefalu
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x		
China Mobile	Jinri Huang Co-Chair	x		
Deutsche Telekom	David Streibl	x		
NTT DOCOMO	Masafumi Masuda			
Orange	William Diego		Vincent Danno	
Verizon	Viswa Kumar			

*Quorum: 50% or more of total TSC voting members unless excluded due to attendance. We have a quorum and can vote on activities.

3. Review and Agree to Minutes of [Previous Meeting](#)
 - a. The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
 - i. Vote to approve minutes for 20 Nov 2019
 - ii. On motion made by [Jinri Huang](#)
 - iii. Seconded by [user-2057e](#)
 - iv. **VOTE:** Vote taken, item passed
 - b. The minutes of the prior meetings were reviewed, and there was a request to update the audio recording. Recording updated 04 Dec 2019
 - i. Vote to approve minutes for 27 Nov 2019
 - ii. On motion made by [Jinri Huang](#)
 - iii. Seconded by [user-2057e](#)
 - iv. **VOTE:** Vote taken, item passed
4. Review of Today's Agenda
5. Release Votes and Approval
 - a. Have a wiki link with all the release info in one place (in process)
 - b. Vote to accept the license scan and upstream licenses are approved for use. These have been reviewed with LF and are normal.
 - c. Vote on the official release of Amber and branches. Vote to approve the branching and release of the Amber software.
 - d. [Project Readiness for Amber Release](#). Lusheng asking to accept all the repos on the [Project Readiness for Amber Release](#) for the branching of the Amber release.
6. Marketing of the Amber release (WG, LF, PR)
7. Status of Open Action Items (Old Business)
 - a. **Action**/ [Jinri Huang](#) will create a framework for the O-RAN SC marketing plan.
 - Contact Jinri for details around the marketing plan.
 - Jinri - On the web page I saw some videos. We really need to take advantage of the videos at the events.
 - Plugfest Beijing will last two weeks and there is also Barcelona to activate the marketing plan.
 - Channels to promote our visibility
 - Press Release
 - Symposium. - Consisted of key notes and round table for the traditional symposium. Will be in Barcelona this year.
 - Industry events - Invite key speakers to discuss the key features of O-RAN.
 - Possible additional channels
 - O-RAN newsletter internal base of 1200 wiki users, plus 285 subscriptions from web.
 - Twitter
 - Promotional Videos
 - Zbynek Dalecky is the project organizer for the O-RAN Alliance press releases and site.
 - Do we know where to upload the videos? Do we have a sample place for that?
 - [Releasing Amber Tasks](#)
 - b. **Action** / [Tracy Van Brakle](#) and [Martin Skorupski](#) to align and document the plugfest plan for a demo video.
 - Tracy - Plugfest in Beijing and a complimentary meeting in Europe. There is a readout December 5th. I am a member of Paul Smith's team. The EC put on their timeline some blog or press release for the blog and the plugfest the week of December 15.
 - Martin - Setting up infrastructure and will document our findings. The preparations of such an event makes us exercise.

- POCs and plugfests are ongoing. We will be able to do a lot more with the bronze release.
 - When will the readout be ready?
 - It's been a challenge. Thursday 9:30 ET USA. We will put the recording on the O-SC wiki as well as the O-RAN wiki.
 - The North American plugfest should be on everyone's calendar.
 - Tracy thanked the vendors for their support.
 - What is relationship between the POC and the Plugfest?
 - POC in NA and Europe POC is the software management plane. In Beijing it is more the hardware side. They are complimentary.
 - We will collect all of the screenshots and videos and you and Paul can craft the message.
 - c. **Action/ Jinri Huang** will add the F2F meeting minutes to the events page. 27 Nov 2019
 - d. **Action/ user-59b16** Alignment and adjust OAI code to be compliant with O-RAN Alliance. This is an architectural review of fitting the code.
 - i. Rittwik - I still have to work on this.
 - e. **Action/PTLs** update [Releasing Amber Tasks](#) and create a short video like OTF by 29 Nov 2019
 - 8. Standing Agenda Items (Brief Status of Ongoing Activities)
 - a. Release Manager/[Release Planning](#): Weekly TOC Scheduling
 - i. [Project Readiness for Amber Release](#)
 - We are now in the maintenance release. We are collecting user feedback and entering Jira tickets. Typically in the maintenance window we don't do new development work. We typically try to address the technical debt. This is an opportunity to refine your code.
 - ii. Project Bronze Release
 - Epics spreadsheet is on the wiki. Epics have been outlined into high level topics. They are into termination, platform hardening, database related, xApp chaining. Each PTL has to go through the list and put it in jira.
 - Each PTL must look this spreadsheet and review.
 - [Contributions](#)
 - [OSC Use Case:Traffic Steering QoE Contributions](#)
 - Action/ PTLs bring your objectives and interest to the Bronze release calls and get involved. We need an integrated system so talk to your developers communities, friends, and participants from your companies to get involved to be successful.
 - b. [user-d3360](#) Test & Integration Planning (INT)
 - c. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [Matti Hiltunen](#) RIC Applications (RICAPP)
 - ii. [Thoralf Czichy](#) RIC Platform (RIC)
 - iii. [user-a934b](#) O-RAN Centralized Unit (OCU)
 - iv. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIGH)
 - v. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
 - vi. [Martin Skorupski](#) Operations and Maintenance (OAM)
 - vii. [Alex Stancu](#) Simulations (SIM)
 - viii. [Xiaohua Zhang](#) Infrastructure (INF)
 - ix. [weicheng ni](#) Documentation (DOC)
 - x. [John Keeney](#) Non-RealTime RIC (RAN Intelligent Controller) (NONRTRIC)
 - xi. (TBD) O-RAN Radio Unit (ORU)
 - d. [user-59b16](#) Requirements Software Architecture Committee
9. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items
 - a. Rittwik - Discuss the B release.
10. Planning for Next Meeting
11. Any Other Business (AOB)
12. Meeting Summary (resolutions, new action items, etc.)
 - a. **Votes**
 - i. The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
 1. Vote to approve minutes for 20 Nov 2019
 2. On motion made by [Jinri Huang](#)
 3. Seconded by [user-2057e](#)
 4. **VOTE:** Vote taken, item passed
 - ii. The minutes of the prior meetings were reviewed, and there was a request to update the audio recording. Recording updated 04 Dec 2019
 1. Vote to approve minutes for 27 Nov 2019
 2. On motion made by [Jinri Huang](#)
 3. Seconded by [user-2057e](#)
 4. **VOTE:** Vote taken, item passed
 - b. **Actions**
 - i. **Action / Tracy Van Brakle** and [Martin Skorupski](#) Plugfest and demo video alignment update.
 - ii. **Action/ user-59b16** Alignment and adjust OAI code to be compliant with O-RAN Alliance. This is an architectural review of fitting the code.

2019 11 27

Zoom Meeting: [2019-11-27_toc.mp4](#)

Agenda

1. Call for Scribe (minutes owner) Farheen Cefalu
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
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AT&T	Jack Murray Co-Chair	x		
China Mobile	Jinri Huang Co-Chair			
Deutsche Telekom	David Streibl	x		
NTT DOCOMO	Masafumi Masuda			
Orange	William Diego		Vincent Danno	
Verizon	Viswa Kumar			

*Quorum: 50% or more of total TSC voting members unless excluded due to attendance. We have a quorum and can vote on activities.

3. Review and Agree to Minutes of [Previous Meetings](#)
4. Review of Today's Agenda
5. Release Votes and Approval
 - a. Have a wiki link with all the release info in one place (in process)
 - b. Vote to accept the license scan and upstream licenses are approved for use. These have been reviewed with LF and are normal.
 - c. Vote on the official release of Amber and branches. Vote to approve the branching and release of the Amber software.
 - d. [Project Readiness for Amber Release](#). Lusheng asking to accept all the repos on the [Project Readiness for Amber Release](#) for the branching of the Amber release.
6. Marketing of the Amber release (WG, LF, PR)
7. Status of Open Action Items (Old Business)
 - a. **Action/Jinri Huang** will create a framework for the O-RAN SC marketing plan.
 - i. Rittwik: AT&T provided the input. He was looking for other operators.
 - ii. Jack - We have a draft we are working through the press release on Tuesday. We got feedback from EC, LF and a few participants offered some quotes for the press release. We moved this to the O-RAN Alliance to review and final approval. They will release the code on Tuesday. Major item remaining is that the marketing team would like us to improve the feature descriptions that are coming out in this release. They feel it is too technical. Outsiders won't understand as much. We are rounding out the descriptions that will have broader appeal. We want to get the facts in there to communicate the details.
 - iii. We are uploading the epics into the wiki. By next Wednesday meeting I will go through the epics.
 - b. **Action / Tracy Van Brakle and Martin Skorupski** to align and document the plugfest plan for a demo video.
 - i. Tracy - POC plugfest North America is next Thursday. We are on track. Most is working in the lab. Video of overall demo and each equipment vendor will be demonstrating their use cases. Not all will be demonstrating. The video will be stored and available on the wiki.
 - c. **Action/ Jinri Huang** will add the F2F meeting minutes to the events page. 27 Nov 2019
 - d. **Action/ user-59b16** Alignment and adjust OAI code to be compliant with O-RAN Alliance. This is an architectural review of fitting the code.
 - i. Rittwik - No progress yet. Chilin is working on slides to get the word out of the Amber release.
 - e. **Action/ John Murray** closing the remaining the TOC slots.
 - i. Reviewed analytics <https://test.lfanalytics.io/projects/o-ran>
 - ii. Action / [user-d3360](#) sent a note to Agnes and copy [Trishan de Lanerolle](#) regarding the documentation repo analytics on <http://test.lfanalytics.io/projects/o-ran>.
 - f. **Action/ user-d3360** add record and date of the approved licenses on [License Attribution Records](#) wiki page.
8. Standing Agenda Items (Brief Status of Ongoing Activities)
 - a. Release Manager/[Release Planning](#): Weekly TOC Scheduling
 - i. [Project Readiness for Amber Release](#)
 - b. [user-d3360](#) Test & Integration Planning (INT)
 - i. We have a table for tracking our progress for releasing the remaining tasks that have to be completed to ready our release. Reviewed [Releasing Amber Tasks](#).
 1. **Action/PTLs** update [Releasing Amber Tasks](#) with all of your tasks and a short video like OTF by 29 Nov 2019
 - ii. After the TSC meeting we will start our integration and test meeting.
 - c. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [Matti Hiltunen](#) RIC Applications (RICAPP)
 - ii. [Thoralf Czichy](#) RIC Platform (RIC)
 - iii. [user-a934b](#) O-RAN Centralized Unit (OCU)
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 - d. [user-59b16](#) Requirements Software Architecture Committee
9. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items
10. Planning for Next Meeting
11. Any Other Business (AOB)
12. Meeting Summary (resolutions, new action items, etc.)
 - a. Votes - No quorum
 - b. Actions
 - i. **Action/Jinri Huang** will create a framework for the O-RAN SC marketing plan.
 - ii. **Action / Tracy Van Brakle and Martin Skorupski** to align and document the plugfest plan for a demo video.
 - iii. **Action/ Jinri Huang** will add the F2F meeting minutes to the events page. 27 Nov 2019
 - iv. **Action/ user-59b16** Alignment and adjust OAI code to be compliant with O-RAN Alliance. This is an architectural review of fitting the code.
 - v. **Action/PTLs** update [Releasing Amber Tasks](#) and create a short video like OTF by 29 Nov 2019

2019 11 20

Zoom meeting: [2019-11-20_toc_audio_only.m4a](#)

Agenda

1. Call for Scribe (minutes owner) Farheen Cefalu
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x		
China Mobile	Jinri Huang Co-Chair			
Deutsche Telekom	David Streibl			
NTT DOCOMO	Masafumi Masuda	x		
Orange	William Diego	x	Vincent Danno	
Verizon	Viswa Kumar			

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3. Review and Agree to Minutes of [Previous Meetings](#)
 - a. The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
 - i. Vote to approve minutes for 13 Nov 2019
 - ii. On motion made by [William DIEGO](#)
 - iii. Seconded by [MASAFUMI MASUDA](#)
 - iv. **VOTE:** Vote taken, item passed
4. Review of Today's Agenda
5. Release Votes and Approval
 - a. Have a wiki link with all the release info in one place (in process)
 - i. Gather all items related to the Amber Release under [Amber Release \(Nov 2019\)](#) on this wiki.
 - b. Vote to accept the license scan and upstream licenses are approved for use. These have been reviewed with LF and are normal.
 - i. LF code scans, code licenses, and code clean up work status.
 - ii. TSC will take a vote to approve upstream licenses that are compatible within our projects.
 - iii. This will be repeated at every release.
 - iv. Lusheng - LF sends us a spreadsheet that lists all the red and yellow items that have failed the scan.
 1. binary issues have all been addressed.
 2. non-binary have been scanned.
 3. Attribution tab these are the files hosted in our repo and they are not Apache 2 license. Common practice is to copy from another open project into our project code. As long as the foreign code license is not copy left. As long as it is open source friendly it is legally safe to practice. Foreign code files should contain their own license claims and should be highlighted as non open source compatible.
 4. We follow the LF practice about foreign code from the [License Attribution Records](#) page. You will find the best practices for license attribution friendliness.
 5. We want TOC approval for the Request to Approve section of [License Attribution Records](#)
 - a. Vote to approve Request to Approve referencing and using the additional licenses for the open source software community from section of [License Attribution Records](#).
 - b. On motion made by [user-d3360](#)
 - c. Seconded by [MASAFUMI MASUDA](#)
 - d. **VOTE:** Vote taken, item passed
 6. Action/ [user-d3360](#) add record and date of the approved licenses on [License Attribution Records](#). ([user-d3360](#): completed 11/21)
 - c. Vote on the official release of Amber and branches. Vote to approve the branching and release of the Amber software.
 - i. [Project Readiness for Amber Release](#). Lusheng asking to accept all the repos on the [Project Readiness for Amber Release](#) for the branching of the Amber release.
 - ii. Where do we put the video demos?
 1. Not appropriate on gerrit. We will have to display videos on this wiki.
 - a. Under the Amber release tab we will have a table with all the projects and videos. That will be the release point to go to on the wiki for the Amber release.
 - b. Action / [Farheen Cefalu](#) work with Jack to update the Amber Release page.
 - c. The Release PR will go out Dec 3. The final day of the release is November 30. The guidance is to do it on a Tuesday. The first Tuesday in December the press release will go out. The vote today is the official designation and preparation of the Amber release. Clean up these last remaining items to support the release by the end of November. Once we branch we will move into the maintenance cycle to start fixing defects and moving to the maintenance release for Amber. We will go through a similar process for each release.
 - d. Approve the Amber Release and go ahead and branch all the code and related information supporting the release thereby closing the Amber release so that we can close all Amber activities by November 30 and do a press release on December 3rd for the O-RAN-SC Amber Release. [Project Readiness for Amber Release](#).
 - i. Is the vote only for green?
 1. It is for green not red.
 - e. Lusheng - Allow all the green repos to align with the process from this [Project Readiness for Amber Release](#).
 - i. On motion made by [user-d3360](#)

- ii. Seconded by [William DIEGO](#)
 - iii. **VOTE:** Vote taken, item passed
- 6. Marketing of the Amber release (WG, LF, PR)
 - 1. The key is PR. We had an EC meeting on Monday. We discussed the PR statement. Jack and Jinri are working through the input from different entities. O-RAN Alliance gave guidance along with LF. Statement is not a lot of content. We open it for quotes from companies related to the release. Individual companies who want to add quotes to the statement reach out to [John Murray](#) or [Jinri Huang](#). There is a deadline for 27 Nov 2019 to get your quotes in. We don't have a formal PR system but we are working through getting that sorted out through the assistance of O-RAN Alliance and LF.
- 7. Status of Open Action Items (Old Business)
 - a. **Action/Jinri Huang** will create a framework for the O-RAN SC marketing plan.
 - b. **Action / Tracy Van Brakle** and [Martin Skorupski](#) to align and document the plugfest plan for a demo video.
 - i. Tracy - It's moving forward and we will record the readout on December 5th. There are updated slides on O-RAN SC and the ONAP wiki.
 - ii. Martin - For NJ there are new code artifacts based on the current repo available. First use case of O-RAN Alliance OAM is still available. I am confident that we will have a nice plugfest in New Jersey.
 - iii. There is a simplified optimization. It will be an interesting event in both the POC and plugfest.
 - c. **Action/ Jinri Huang** will add the F2F meeting minutes to the events page. 27 Nov 2019
 - d. **Action/ user-59b16** Alignment and adjust OAI code to be compliant with O-RAN Alliance. This is an architectural review of fitting the code.
 - e. **Action/ John Murray** closing the remaining the TOC slots.
 - f. **Action/ user-d3360** update the TOC with the status of branching Amber on 20 Nov 2019
 - g. **Action / John Murray** We will vote on the licensing next week 20 Nov 2019 regarding the [License Attribution Records](#)
- 8. Standing Agenda Items (Brief Status of Ongoing Activities)
 - a. Release Manager/[Release Planning](#): Weekly TOC Scheduling
 - i. [Project Readiness for Amber Release](#)
 - b. [user-d3360](#) Test & Integration Planning (INT)
 - i. We will be doing a demonstration of the branching process after this call.
 - c. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [Matti Hiltunen](#) RIC Applications (RICAPP)
 - ii. [Thoralf Czichy](#) RIC Platform (RIC)
 - 1. A reminder to the extra line Nokia wanted in source files for near-RT RIC to add this sentence: "This source code is part of the near-RT RIC (Radio Intelligent Controller) platform project (RICP)." (see also [Scope of the near-RT RIC platform and its components \(summary\)](#)). This is to clearly define the scope of the project to near-RT RIC. This was discussed earlier and Jack was supposed to come back with solution to this.
 - a. Add it under the license
 - iii. [user-a934b](#) O-RAN Centralized Unit (OCU)
 - iv. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIG)
 - v. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
 - vi. [Martin Skorupski](#) Operations and Maintenance (OAM)
 - vii. [Alex Stancu](#) Simulations (SIM)
 - viii. [Xiaohua Zhang](#) Infrastructure (INF)
 - ix. [weichen ni](#) Documentation (DOC)
 - 1. Ask reviewing for documentation at <https://docs.o-ran-sc.org/en/latest/>, whether all Amber release repos docs are shown well on the documentation page. (ODUHIG and ric-app-admin are finished, but the link has some delay, so not shown on the page so far. There also a couple of repos are still working on docs, almost finish.)
 - x. [John Keeney](#) Non-RealTime RIC (RAN Intelligent Controller) (NONRTRIC)
 - xi. (TBD) O-RAN Radio Unit (ORU)
 - d. [user-59b16](#) Requirements Software Architecture Committee
 - i. Epics are in the spreadsheet. Most people have contributed to the epics. We have been going through the epics in the RSAC.
 - ii. Request to have all the PTLs to be review the spreadsheet of epics.
 - iii. Matti - we will share slides with Rittwik for xApps.
 - iv. Rittwik - In the spreadsheet we have classified them into higher level topic names. These classifications are really our epics. Please review the spreadsheet. Next week we can briefly go over. The next meeting we will shift from PTLs to planning and requirements software. Development meetings will start in February.
- 9. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items
- 10. Planning for Next Meeting
 - a. Next week Thursday is a holiday. There may be lighter attendance next Wednesday. We will recap Amber and start the discussion around Bronze.
- 11. Open Discussion
- 12. Any Other Business (AOB)
- 13. Meeting Summary (resolutions, new action items, etc.)
 - a. Votes
 - i. The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
 - 1. Vote to approve minutes for 13 Nov 2019
 - 2. On motion made by [William DIEGO](#)
 - 3. Seconded by [MASAFUMI MASUDA](#)
 - 4. **VOTE:** Vote taken, item passed
 - ii. Vote to approve Request to Approve referencing and using the additional licenses for the open source software community from section of [License Attribution Records](#).
 - 1. On motion made by [user-d3360](#)
 - 2. Seconded by [MASAFUMI MASUDA](#)
 - 3. **VOTE:** Vote taken, item passed
 - iii. Vote to allow all the green repos to align with the process from this [Project Readiness for Amber Release](#).
 - 1. On motion made by [user-d3360](#)
 - 2. Seconded by [William DIEGO](#)
 - 3. **VOTE:** Vote taken, item passed
 - b. Actions
 - i. **Action/Jinri Huang** will create a framework for the O-RAN SC marketing plan.

- ii. **Action** / [Tracy Van Brakle](#) and [Martin Skorupski](#) to align and document the plugfest plan for a demo video.
- iii. **Action**/ [Jinri Huang](#) will add the F2F meeting minutes to the events page. 27 Nov 2019
- iv. **Action**/ [user-59b16](#) Alignment and adjust OAI code to be compliant with O-RAN Alliance. This is an architectural review of fitting the code.
- v. **Action**/ [John Murray](#) closing the remaining the TOC slots.
- vi. **Action**/ [user-d3360](#) add record and date of the approved licenses on [License Attribution Records](#). ([user-d3360](#): completed 11-21)

2019 11 13

Zoom meeting: [2019-11-13_toc.mp4](#)

Agenda

1. Call for Scribe (minutes owner) Farheen Cefalu
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x		
China Mobile	Jinri Huang Co-Chair			
Deutsche Telekom	David Streibl	x		
NTT DOCOMO	Masafumi Masuda	x		
Orange	William Diego	x	Vincent Danno	
Verizon	Viswa Kumar			

*Quorum: 50% or more of total TSC voting members unless excluded due to attendance. We have a quorum and can vote on activities.

3. Review and Agree to Minutes of [Previous Meetings](#)
 - a. The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
 - b. Vote to approve minutes for 06 Nov 2019
 - c. On motion made by [user-2057e](#)
 - d. Seconded by [MASAFUMI MASUDA](#)
 - e. **VOTE**: Vote taken, item passed
4. Review of Today's Agenda
5. Marketing of the Amber release (WG, LF, PR)
 1. Jack saw the initial draft of the framework for the O-RAN SC marketing plan and needs to review. Comments from participating companies is encouraged. We are entering the window of time to get approvals to get a quote. Those interested reach out to [Jinri Huang](#) and copy [John Murray](#).
6. Status of Open Action Items (Old Business)
 - a. **Action**/ [Jinri Huang](#) will create a framework for the O-RAN SC marketing plan.
 - b. **Action** / [Tracy Van Brakle](#) and [Martin Skorupski](#) to align and document the plugfest plan for a demo video.
 - c. **Action**/ [Jinri Huang](#) will add the F2F meeting minutes to the events page. 27 Nov 2019
 - d. **Action**/ [user-59b16](#) Alignment and adjust OAI code to be compliant with O-RAN Alliance. This is an architectural review of fitting the code.
 - e. **Action**/ [John Murray](#) closing the remaining the TOC slots.
 - f. **Action**/ [user-d3360](#) update the TOC with the status of branching Amber on 20 Nov 2019
 - g. **Action** / [John Murray](#) We will vote on the licensing next week 20 Nov 2019 regarding the [License Attribution Records](#)
 - h. **Action**/ TOC Docker hub prefix naming vote due 13 Nov 2019 . Suggestion was made to call the prefix o-ran-sc
 - i. Jack: Use **oransc** and **oranscp**. This makes it evident that there is a difference and when people investigate that difference they see that it is associated with licensing
7. Standing Agenda Items (Brief Status of Ongoing Activities)
 - a. Release Manager/[Release Planning](#): Weekly TOC Scheduling
 - i. [Project Readiness for Amber Release](#)
 1. we are in week 44. At this point we should be preparing to branch the code.
 - a. Yes, branching now vs. later. Now there will be significant changes made on both branches vs. later less items to change.
 - i. No prepare for branching. Not actually branching. We are fixing and freezing that has to be wrapped up by the end of next week so we have one week to address any issues in the package.
 - b. [user-d3360](#) Test & Integration Planning (INT)
 - i. [Project Readiness for Amber Release](#)
 - ii. The teams have made good progress in turning the cells in the link above to green.
 - iii. What areas should we focus on to close.
 1. Producing the documentation and the minimum requirement for documentation are the release notes.
 - iv. Licensing [License Attribution Records](#). LF has a scanning process for code licenses. They will be scanning licenses that we are pulling from an upstream source are being generated by a tool. The community should take the time to review [License Attribution Records](#).
 - v. What is the next milestone to hit by this Friday from the TOC?
 1. Was hoping to have all the cells green by today but will wait until Friday 15 Nov 2019 . We need this done to branch the Amber code. We need to complete the branching by next weeks meeting. 20 Nov 2019 .
 - 2.
 - c. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [Matti Hiltunen](#) RIC Applications (RICAPP)

- ii. [Thoralf Czichy](#) RIC Platform (RIC)
 - 1. request to approve one new repo and committer changes for two existing repos as per this [e-mail](#)
 - a. When we request changes from LF Aric Gardner has info.yml files for committer management. This will be done through Gerrit. Need TOC and LF approval.
 - i. This will be handled in Bronze.
 - iii. [user-a934b](#) O-RAN Centralized Unit (OCU)
 - iv. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIGH)
 - v. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
 - vi. [Martin Skorupski](#) Operations and Maintenance (OAM)
 - vii. [Alex Stancu](#) Simulations (SIM)
 - viii. [Xiaohua Zhang](#) Infrastructure (INF)
 - ix. [weichen ni](#) Documentation (DOC)
 - 1. Thoralf: need to discuss how we know when a repo/subproject is done. So far not all is visible in readthedocs it seems.
 - x. [John Keeney](#) Non-RealTime RIC (RAN Intelligent Controller) (NONRTRIC)
 - 1. [Henrik Andersson](#) as a committer for the Non-RealTime RIC .
 - 2. Motion made by [John Keeney](#)
 - 3. Seconded by [user-2057e](#)
 - 4. **VOTE:** Vote taken, item passed
 - xi. (TBD) O-RAN Radio Unit (ORU)
 - d. [user-59b16](#) Requirements Software Architecture Committee
- 8. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items
 - 9. Planning for Next Meeting
 - 10. Open Discussion
 - 11. Any Other Business (AOB)
 - 12. Meeting Summary (resolutions, new action items, etc.)
 - a. **Votes**
 - i. The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
 - 1. Vote to approve minutes for 06 Nov 2019
 - 2. On motion made by [user-2057e](#)
 - 3. Seconded by [MASAFUMI MASUDA](#)
 - 4. **VOTE:** Vote taken, item passed
 - ii. Add [Henrik Andersson](#) as a committer for the Non-RealTime RIC .
 - 1. Motion made by [John Keeney](#)
 - 2. Seconded by [user-2057e](#)
 - 3. **VOTE:** Vote taken, item passed
 - b. **Actions**
 - i. **Action/Jinri Huang** will create a framework for the O-RAN SC marketing plan.
 - ii. **Action / Tracy Van Brakle** and [Martin Skorupski](#) to align and document the plugfest plan for a demo video.
 - iii. **Action/ Jinri Huang** will add the F2F meeting minutes to the events page. 27 Nov 2019
 - iv. **Action/ user-59b16** Alignment and adjust OAI code to be compliant with O-RAN Alliance. This is an architectural review of fitting the code.
 - v. **Action/ John Murray** closing the remaining the TOC slots.
 - vi. **Action/ user-d3360** update the TOC with the status of branching Amber on 20 Nov 2019
 - vii. **Action / John Murray** We will vote on the licensing next week 20 Nov 2019 regarding the [License Attribution Records](#)

2019 11 06

Zoom Meeting: [2019-11-06_toc_audio_only.m4a](#)

Agenda

- 1. Call for Scribe (minutes owner) Farheen Cefalu
- 2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x		
China Mobile	Jinri Huang Co-Chair	x		
Deutsche Telekom	David Streibl			
NTT DOCOMO	Masafumi Masuda	x		
Orange	William Diego		Vincent Danno	
Verizon	Viswa Kumar	x		

*Quorum: 50% or more of total TSC voting members unless excluded due to attendance. We have a quorum and can vote on activities.

- 3. Review and Agree to Minutes of [Previous Meetings](#)
 - a. The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
 - b. Vote to approve minutes for 30 Oct 2019
 - c. On motion made by [MASAFUMI MASUDA](#)
 - d. Seconded by [user-bc668](#)
 - e. **VOTE:** Vote taken, item passed
- 4. Review of Today's Agenda
- 5. Marketing of the Amber release (WG, LF, PR)

- [illegible]

build the "B" release. The E2E use cases will drive the build.

1. If needed we can create automated script to grab the Amber release branch and put it into a big tar ball. However for A release not everything is integrated.
 2. Earlier we had a word document that detailed the scope of A release. Now that we heard there is a project will there be one for B release.
 1. The release architecture team should pull together and close software development and write detailed release notes. These are a part of the documentation for the release.
6. **Action/ John Murray** closing the remaining the TOC slots.
 1. Jack sharing tes.lfanalytics.io/projects/o-ran.
 1. We are not releasing it yet because the data that is presented is not accurate. This is progress. When clicked on we get metrics. The site is not fully released yet. We are continuing to work it. [Trishan de Lanerolle](#) there needs to be an overview. I wanted to show the progress. Lusheng is working with them on the first level. Getting the public release of metrics is important to show because we want to fill in the TOC slots.
7. **Action/ user-d3360** add the link of the Jenkins instructions from the the Jenkins status page to the top of the [Project Readiness for Amber Release](#) wiki page.
 1. Chris Lott has written a very good page and I still have to create a link to it.
8. **Action/ weichen ni** will provide PTLs with the steps that they need to view their converted docs on the documentation wiki. He will add the link to the top of the [Project Readiness for Amber Release](#) .
9. **Action/** Each PTL write up a small clear statement about their license attribution that they can post to the email list.
 1. This is from the license scan that the LF provided. There is code with DSD or MIT licenses.
 2. These licenses can be used in upstream projects.
 3. BSD-3-Clause need to be clearly marked of which directory from the external source. This was the assignment for PTLs to provide so TOC can approve.
7. Standing Agenda Items (Brief Status of Ongoing Activities)
 - a. Release Manager/[Release Planning](#): Weekly TOC Scheduling
 - i. Lusheng demonstrated the spreadsheet with the copyright and copyleft items.
 - ii. [Project Readiness for Amber Release](#)
 - iii. Do we allow an extension to the code freeze?
 1. At this point they should put the code in and it will be a part of the maintenance release if we choose to have one. At this point freeze the code and document. That repo won't be a part of this release. It will be a part of maintenance release if they are green.
 - iv. Action/ PTLs update [Project Readiness for Amber Release](#) red rows as soon as possible. We want to move ahead.
 - v. Regarding support contact [user-d3360](#) or [Chris Lott](#) for CICD.
 - vi. **Action/** PTLs must update their release notes in their documentation by 13 Nov 2019 . We will review the red rows on [Project Readiness for Amber Release](#). If you haven't completed give us a percentage complete. We need a good faith demonstration.
 - vii. As we are preparing for releasing docker images to docker hub prefix the organization with the docker name. TOC Co chairs have been asked for how to name this. ORAN is NYSE for Orange. Use o-ran. Jack - We should use o-ran-sc or scp. This makes it clear which license gets what. They both begin with O-RAN.
 1. Concern about confusion around sc and scp. I would call it o-ran-sc. Once in binary the licensing is not important.
 2. Action / [TOC](#) We need to confirm this by 13 Nov 2019 .
 - b. [user-d3360](#) Test & Integration Planning (INT)
 - c. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [Matti Hiltunen](#) RIC Applications (RICAPP)
 - ii. [Thoralf Czichy](#) RIC Platform (RIC)
 1. request to approve one new repo and committer changes for two existing repos as per this [e-mail](#)
 - iii. [user-a934b](#) O-RAN Centralized Unit (OCU)
 - iv. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIGH)
 - v. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
 - vi. [Martin Skorupski](#) Operations and Maintenance (OAM)
 - vii. [Alex Stancu](#) Simulations (SIM)
 - viii. [Xiaohua Zhang](#) Infrastructure (INF)
 - ix. [weichen ni](#) Documentation (DOC)
 - x. [John Keeney](#) Non-RealTime RIC (RAN Intelligent Controller) (NONRTRIC)
 - xi. (TBD) O-RAN Radio Unit (ORU)
 - d. [user-59b16](#) Requirements Software Architecture Committee
8. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items
 - a. Lusheng - email request for release status review.
9. Planning for Next Meeting

10. Open Discussion
 - a. [Sonia Sangari](#) needs access to build Jenkins jobs. [Sonia Sangari](#) send [user-d3360](#) a request for Jenkins jobs access.
11. Any Other Business (AOB)
12. Meeting Summary (resolutions, new action items, etc.)
 - a. **Votes**
 - i. Vote to approve minutes for 30 Oct 2019
 1. On motion made by [MASAFUMI MASUDA](#)
 2. Seconded by [user-bc668](#)
 3. **VOTE:** Vote taken, item passed
 - ii. Vote to approve closing the B release name end date 08 Nov 2019 noon UTC
 1. On motion made by [Thoralf Czichy](#)
 2. Seconded by [user-bc668](#)
 3. **VOTE:** Vote taken, item passed
 - b. **Actions**
 - i. **Action/**[Jinri Huang](#) will create a framework for the O-RAN SC marketing plan.
 - ii. **Action /** [Farheen Cefalu](#) send out a note today of when we have to have our votes in by 08 Nov 2019 . Update the site
 - iii. **Action /** [Tracy Van Brakle](#) and [Martin Skorupski](#) to align and document the plugfest plan for a demo video.
 - iv. **Action/** [Jinri Huang](#) will add the F2F meeting minutes to the events page. 27 Nov 2019
 - v. **Action/** [John Murray](#) to work with OAI interface.
 - vi. **Action/** [user-59b16](#) Alignment and adjust their code to be compliant with O-RAN Alliance.
 - vii. **Action/**[user-59b16](#) send the B release epics to [user-bc668](#)
 - viii. **Action/** [John Murray](#) closing the remaining the TOC slots.
 - ix. **Action/** [user-d3360](#) add the link of the Jenkins instructions from the the Jenkins status page to the top of the [Project Readiness for Amber Release](#) wiki page.
 - x. **Action/** PTLs must update their release notes in their documentation by 13 Nov 2019 .
 - xi. **Action/** TOC Docker hub prefix naming vote due 13 Nov 2019 . Suggestion was made to call the prefix o-ran-sc

2019 10 23

Zoom meeting: [2019-10-23_toc._audio.m4a](#)

Agenda

1. Call for Scribe (minutes owner) Farheen Cefalu
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x		
China Mobile	Jinri Huang Co-Chair			
Deutsche Telekom	David Streibl	x		
NTT DOCOMO	Masafumi Masuda	x		
Orange	William Diego		Vincent Danno	
Verizon	Viswa Kumar			

*Quorum: 50% or more of total TSC voting members unless excluded due to attendance. We have a quorum and can vote on activities.

3. Review and Agree to Minutes of [Previous Meetings](#)
 - The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
 - Vote to approve minutes for 16 Oct 2019
 - On motion made by [user-2057e](#)
 - Seconded by [MASAFUMI MASUDA](#)
 - **VOTE:** Vote taken, item passed
4. Review of Today's Agenda
5. Status of Open Action Items (Old Business)
 - a. [Tracy Van Brakle](#) and [Martin Skorupski](#) to align and document the plugfest plan for a demo video.
 - i. Tracy reviewed with several working groups last week. I am uploading the current slides and a welcome package. Demo video will record the live demo and read out in zoom and post that in the O-RAN Alliance wiki and the O-RAN-SC wiki. Unless there are other suggestions for the video?
 1. Good idea we need to figure out how we'll organize our information about our releases from that demo and marketing stand point.
 2. Action [Farheen Cefalu](#) Add to the marketing of the Amber release to TOC agenda. We need to work on a package with WG and LF on what PR we are going to put out.
 3. Call to action for TOC members to lead the Amber release marketing and PR strategy for the Amber release.
 4. Tracy - Talk to Jack offline for the expectations on the vendors. They are asking questions about PR.
 5. Action/ [Tracy Van Brakle](#) will send out an email to TOC mail list. We are not going to keep score or pass fail.
 6. [Trishan de Lanerolle](#) support [Tracy Van Brakle](#) with PR.
 - b. [Jinri Huang](#) will upload presentations and minutes under Events page on the wiki of the face to face meeting.
 - i. [user-59b16](#) reach out to [Jinri Huang](#) for slides.
 1. Make sure there is nothing in the documents that O-RAN is not ready to release publicly.
 2. Executive Committee slides can go up?

- a. Let's get a list of what we can put up. There is a difference between the TOC meetings and the O-RAN Alliance meetings. We can point to the O-RAN Alliance wiki or else we need permission to share their slides on O-RAN-SC.
 - b. Action/ [Farheen Cefalu](#) remind Jack about how we want to arrange the events page with O-RAN Alliance slides.
- c. [user d3360](#) send [Jini Huang](#) the count of committers in gerret.
 - i. Amber metrics need to be gathered. How many committers?
 - 1. Action/ [Trishan de Lanerolle](#) provide a report to [John Murray](#) of the analytics around contributions of the Amber release.
 - ii. LF has a new analytics platform based on code contributions in a project.
 - 1. When will the reports be available?
 - 2. Action/ [Farheen Cefalu](#) add an agenda item for project metrics.
- 6. Standing Agenda Items (Brief Status of Ongoing Activities)
 - a. Release Manager/Release Planning: Weekly TOC Scheduling
 - i. We have 2 weeks and then we will have our updated code freeze.
 - ii. We will freeze code November 2 and then a few weeks of defect fixing, then freeze and branch the code. We will document the code during the code freeze and then have our release. Once we branch the code we will return to a maintenance cycle in January. The maintenance release will run through Feb 1. This is projected for B. We have not finalized the B plan. Dec. 2 we will start Epic identification. RSAC will come with their use cases and details. We take off from December 21st to January 6th. If changes need to be made make them now. They need to be finalized in the next few weeks.
 - b. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. Action/ Jack will move the order of the agenda by moving Test to the top during the release process.
 - ii. [Matti Hiltunen](#) RIC Applications (RICAPP)
 - iii. [Thoralf Czichy](#) RIC Platform (RIC)
 - 1. Below a list of changes to repos (new ones, as well as deletions) under the RICP (near-RT RIC Platform) that we would like the TOC to approve. Parts marked with RICP/RICAPP are proposed by Matti and I (PTLs for RICAPP and RICP) and parts marked with RICP only me as PTL.

(WE1) Project RICP

ric-plt/resource-status-manager

- Summary: Implements the management of Resource Status messages over E2
- Description: The Resource Status Manager is responsible to control the generation of Resource Status messages sent by the RAN to the RIC by issuing Resource Status Requests. The RSM provides an API that allows to start and stop the generation of these messages as well as to issue specific request commands. The RSM provides also default values which are used whenever a new RAN (eNB) is added to the RIC.
- License: Apache 2
- Initial committers: (all AT&T) Shuky Har-Noy (shuky.har-noy@intl.att.com), Hila Anina (hanina@intl.att.com), Yaki Ratz (yaki.ratz@intl.att.com)

(WE2) Project RICP/RICAPP

We (RICP and RICAPP PTL) would like to remove the following repositories:

- ric-app/demo (empty)
- ric-app/reporter (not maintained anymore for 6 months (and actually confusing community if someone uses this as reference) and e.g. the measurement campaign xApp can replace it)
- com/asn1 (an ASN.1 compiler for which we found that it causes too many issues that we had to troubleshoot. We already switched to using com/asn1c (which is derived from https://urldefense.proofpoint.com/v2/url?u=https-3A__github.com_vlm_asn1c&d=DwIFAg&c=LFYZ-o9_HUMeMTSQCivJg&r=Tnwenk7t78Qk7cMIMZ90EGmbng6eVuV4yQNhqbtpKkk&m=xoq2zMPPhab9uHOEBVXWXAfXjPsyFpAgdbNtyADOnwY&s=Rkl10dXpdSlyLJTKITd3zwy98mepgWMQ_0PNWZ8QjQ&e=))

(WE3) Project RICP

new repo: ric-plt/ric-test

- Summary: RIC platform-specific testing that are not specific to a single RIC component
- Description: This repo includes test cases that span the full RIC platform, i.e., that cannot run against a single RIC component. This may also include simulators related to the E2 base protocol, or related abstract test xApps (that do not actually implement 3GPP specifications). Note that the test cases must still be limited to RIC platform only. If you want to write/check test cases that integrate also other O-RAN SC components, check the it/test repository.
- License: Apache 2
- Initial committers: (first one AT&T, the other two from Nokia): Xuan Tuyen Tran (Harry) (tuyen@research.att.com), Amit Uttam (amit.uttam@nokia.com) and Shashikumar HN (shashikumar.hn@nokia.com)

(WE4) Project RICP

new repo: ric-plt/ric-dep

- Summary: Code and configuration files that are needed for deploying a near-RT RIC platform instance
- Description: This includes, for example, helm charts for RIC platform components. In this we can make assumptions about the underlying k8s already existing or we can also spin up blueprints for such a deployment. Note that this component is intentionally limiting itself to the RIC platform and does not include other O-RAN SC components. For such you might want to look at the it/dep repo managed by another O-RAN SC project.
- License: Apache 2
- Initial committers: (first one AT&T, the other two from Nokia): Lusheng Ji (lji@research.att.com), Prabhu K (prabhu.k@nokia.com) Ranjit Angajala (ranjit.angajala@nokia.com)

Note that this needed for legal reasons to clearly define the scope of the near-RT RIC project. It is aligned with a "scope" wiki text that we wrote for the same reason.

Also note that we continue with the it/dep repo as a general integration repo where any O-RAN SC components can be integrated together. In scope of their work on integrating all O-RAN SC components, engineers working on the it/dep repo might re-use some of the functionality that was original committed to ric-plt/ric-dep .

(WE5) Project RICP/RICAPP

We would like to remove the empty ric-app/uemgr and instead create a new repo under ric-plt/. This is in order to clearly link

the demo xApp to the RIC platform project. At the same time also note that the license of this is changed to a documentation

license. So that its legal scope reflects its actual role in the RIC platform. Naturally there will continue to be actual xApps under the

RICAPP project. Placing it under the RICP project (and not RICAPP) allows Nokia to contribute to it. The name is intentionally kept

generic. As part of this change we also move this page https://urldefense.proofpoint.com/v2/url?u=https-3A__wiki.o-2Dran-2Dsc.org_display_RICA_UE-2BManager-2BxApp&d=DwIFAg&c=LFYZ-o9_HUMeMTSQicvjlg&r=Tnwenk7t78Qk7cMIMZ90EGmbng6eVuV4yQNhqbtPKkk&m=xoq2zMpPhab9uHOEBVXWXAFXjPsyFpAgdbNtyADOnwY&s=gal_Yvwbqi4X3KKgd2KIO1cau-oPGsKTpA0lo3SzHeo&e= to the RICP

project (a reference in RICA continues to refer to it.

deleted repo: ric-app/uemgr
new repo: ric-plt/demo1

- Summary: A simple demo xApp running on the RIC platform.
- Description: Contains a simple demo xApp running on the RIC platform.

- License: Creative Commons Attribution 4.0 International License
- Initial committers: (all Nokia) Timo Tietavainen (timo.tietavainen@nokia.com), Jussi Maki Aijala (jussi.maki-aijala@nokia.com), Juha Hyttinen (juha.hyttinen@nokia.com), Anssi Mannila (anssi.mannila@nokia.com)

(WE6)) Project RICP

We delete the following repo: ric-plt/ue-nib . The scope of the RIC platform does not include this functionality. If, then

such functionality should be developed outside of the RIC platform, e.g., under the RICAPP project. Some of the earlier functionality (read and write

of the demo data that is actually needed in the "demo1" demo xapp (under documentation license) is moved into the demo1 repo as it is

closely related and does not make too much sense as standalone documentation repo. Note that this implies that the functionality is now under document license in ric-plt/demo1

- a. Empty repos are allowed to be deleted. Repos with content are open source and remain for historical reasons.
 - i. Needs to be marked as deprecated. When we complete the Amber release there should not be code dependencies. Therefore we can remove the repos because this is the first A release.
- b. The RIC platform as an entity must be open source contained platform. When you cross over to system integration is work in a different project that will rely on the RIC project but other people on different licenses won't be able to participate.
 - i. E2 was removed due to legal issues.
 - ii. RIC PLT E2 had files ASN1 files that were not supposed to be there. That compiler was used in early development but won't be used again.
- c. Concern about putting this in documentation license downstream and someone contributes back to a test repo then it becomes a part of the test by the integration team.
 - i. That is acceptable.
2. Proposal to make changes to the RIC Platform repos above
3. On motion made by [Thoralf Czichy](#)
4. Seconded by [MASAFUMI MASUDA](#)
5. **VOTE:** Vote taken, item passed
- iv. [user-a934b](#) O-RAN Centralized Unit (OCU)
- v. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIGH)
- vi. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
- vii. [Martin Skorupski](#) Operations and Maintenance (OAM)
- viii. [Alex Stancu](#) Simulations (SIM)
- ix. [Xiaohua Zhang](#) Infrastructure (INF)
1. During f2f repos were summarized. 3 repos were supposed to be contributed by inspur. I double checked and they are not using those repos anymore. They will not be making future contributions.
 - a. These are seed code repos that were not a part of the Amber release. We need to go ahead and clean up and remove those seed repos. No vote needed. This is normal clean up.
 - b. Action/ [Xiaohua Zhang](#) raise a ticket with LF to remove the seed code projects.
- x. [weichen ni](#) Documentation (DOC)
- xi. [John Keeney](#) Non-RealTime RIC (RAN Intelligent Controller) (NONRTRIC)
- xii. (TBD) O-RAN Radio Unit (ORU)
- c. [user-d3360](#) Test & Integration Planning (INT)
 - i. Call to all PTLs to give a status report for release preparation. Action/ [user-d3360](#) post the request through mail list.
 - ii. Next TOC will occur after daylight savings time. Not all communities will recognize that shift and that will move this meeting minus 1 hour.
- d. [user-59b16](#) Requirements Software Architecture Committee

- i. Discussed traffic churn use case with different values. We should prepare for that. We are going to look at our spreadsheet of epics consolidate and move on to call flows. It's in a word document with some call flows. I am hoping that [Thoralf Czichy](#) and [Matti Hiltunen](#) will discover algos that will work with xApps. Talked to Samsung about CU DU binary code for an example. Jin Sun said their management will look into it. Radisys agreed to provide a CU DU binary.
 1. As part of the release planning when we get into the B release we identify the epics. Yes there is an approval. This is the version of our requirements and use cases as part of the B release. That package should be brought to the TOC for a vote to freeze the target environments.
 - a. When does that happen?
 - i. December 7th once the epics are identified we should freeze it so the projects can commit to B release. This gives the development team to groom their user stories.
 2. How many end to end use cases?
 - a. One
 3. Jack would like to see a simpler e2e base line "hello world" use case that demonstrates that the platform is working. It is a simple metrics use case that can exercise the components and return metrics on the different components running in place. We need a use case that we maintain for the basic level of operation before talking about complex. We want a base line use case that exercises the system and gathers metrics. A heartbeat check. This way everyone is at a base point before advancing their use case. There should be a self diagnostic test so the platform is base lined.
 4. [user-59b16](#) post the presentation.
7. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items
 - a. Action/ [Farheen Cefalu](#) add Summarize F2F meeting at O-RAN Alliance event to next weeks agenda.
 - b. ~~[Thoralf Czichy](#) Near RealTime RIC platform repos that are required.~~
8. Planning for Next Meeting
 - a. Action/ [Farheen Cefalu](#) add Summarize F2F meeting at O-RAN Alliance event to next weeks agenda.
 - b. Jack will be adding more items to next weeks agenda.
9. Open Discussion
10. Any Other Business (AOB)
11. Meeting Summary (resolutions, new action items, etc.)
 - a. **Votes**
 - The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
 - Vote to approve minutes for 16 Oct 2019
 - On motion made by [user-2057e](#)
 - Seconded by [MASAFUMI MASUDA](#)
 - **VOTE:** Vote taken, item passed
 - Proposal to make changes to the RIC Platform repos above or Thoralf's request through lists.o-ran-sc.org
 - On motion made by [Thoralf Czichy](#)
 - Seconded by [MASAFUMI MASUDA](#)
 - **VOTE:** Vote taken, item passed
 - b. **Actions**
 - [Farheen Cefalu](#) Add to the marketing of the Amber release to TOC agenda.
 - Call to action for TOC members to lead the Amber release marketing and PR strategy for the Amber release.
 - [Trishan de Lanerolle](#) support [Tracy Van Brakle](#) with PR.
 - [user-59b16](#) will reach out to [Jinri Huang](#) for F2F slides to put in the Events wiki.
 - Action/ [Farheen Cefalu](#) remind Jack about how we want to arrange the events page with O-RAN Alliance slides.
 - Action/ [Trishan de Lanerolle](#) provide a report to [John Murray](#) of the analytics around contributions to the Amber release. How many committers?
 - Action/ [Farheen Cefalu](#) add an agenda item for project metrics.
 - Call to all PTLs to give a status report for release preparation. Action/ [user-d3360](#) post the request through mail list.
 - [user-59b16](#) post the churn use case presentation on RSAC.
 - Action/ [Farheen Cefalu](#) add Summarize F2F meeting at O-RAN Alliance event to next weeks agenda.
 - Action/ [Farheen Cefalu](#) move the order of the agenda by moving Test to the top during the release process.

2019 10 02

Zoom Meeting: [2019-10-02-toc.mp4](#)

Agenda

1. Call for Scribe (minutes owner) [Farheen Cefalu](#)
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair			
China Mobile	Jinri Huang Co-Chair	x		
Deutsche Telekom	David Streibl			
NTT DOCOMO	Masafumi Masuda	x		
O-RANGE	William Diego	x	Vincent Danno	
Verizon	Viswa Kumar			

*Quorum: 50% or more of total TSC voting members unless excluded due to attendance. We have a quorum and can vote on activities.

3. Review and Agree to Minutes of [Previous Meeting](#)
 1. The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
 1. Vote to approve minutes for 25 Sep 2019

2. On motion made by William Diego
3. Seconded by Masafumi Masuda
- VOTE:** Vote taken, item passed
4. Review of Today's Agenda
 1. Items added to section 10 New Agenda new Business below.
5. Status of Open Action Items (Old Business)
 1. **Actions:** Plugfest
 1. [Tracy Van Brakle](#) to provide writeup next week as base for blog, etc.
 2. [Farheen Cefalu](#) add to the wiki events page.
 1. Jinri received a call for participation. [Farheen Cefalu](#) follow up with Tracy and Jinri.
 3. [Jinri Huang](#) to talk to CMCC how to promote at Beijing plugfest.
 1. Jinri will report back 09 Oct 2019 .
 1. Two parallel sessions in Beijing and USA. Jinri wants to promote TOC in both events.
 2. **Action/** [user-2057e](#) start a poll for B release.
 3. **Action/** [user-59b16](#) publish the meeting details on the RSAC page regarding WG3 and E2.
 1. Last week Rittwik organized the meeting to align the O-RAN working groups. Jinri attended. There was another alignment meeting with software working group and O-RAN Alliance.
 4. [user-d3360](#) SPDX identifier for Apache 2.
 1. [John Murray](#) email [Trishan de Lanerolle](#) to confirm there is no issue from LF, if no objection I am okay with it. Bring this back next week.
 2. **Action/** [user-d3360](#) contact [Trishan de Lanerolle](#)
 1. Conclusion is we are not using SPDX.
 5. **Action/** [user-d3360](#) talk to Jack about which use cases are being covered by the test and integration team, for release B.
 6. **Action /** [Tracy Van Brakle](#) TOC will look to [Tracy Van Brakle](#) and [Martin Skorupski](#) to align and document the plugfest plan for a demo video.
6. Standing Agenda Items (Brief Status of Ongoing Activities)
 - a. Release Manager/Release Planning: Weekly TOC Scheduling
 - i. RSAC meeting Rittwik mentioned most development work in RSAC is ongoing. Our target is to have our release at the end of November. Initial idea to reconsider the timeline. Rittwik and Jack are not here. Call for opinions.
 1. Matti - Code freeze is Monday this week. We are not supposed to add anything. Proposal by Rittwik to extend the release by three weeks (1 full sprint). Code freeze was September 30 extend it for three weeks. Team needs more development time.
 - a. Who should we request an extension from?
 - i. Release Manager
 - ii. Voting approval by TOC and TSC.
 - iii. **Action/** [user-59b16](#) place a formal approval request for code freeze extension.
 - b. LF projects release has a special meaning.
 - i. Code hosted by LF gerrit, nexus, etc.
 - ii. To release code must be published to other global repos. Gerrit goes to github. Docker images go to Dockerhub. To publish means to publish to these global repositories. Meaning we should have some standards.
 1. Do we have any standards for release?
 - a. LF has different criteria for different releases.
 - b. Licenses have to have standards.
 - c. As far as software quality is the TOC/TSC decision.
 - ii. Jun Song - wants to raise an issue. RSAC meeting I raised two issues for KPI XApp. We don't know how to verify and test the xApp once we complete the coding.
 1. Matti - from integration point of view what are the requirements his KPI xApp has to meet? It will talk to simulator via E2 termination. Other xApps are tested with a simple simulator without E2. **Action/** [Matti Hiltunen](#) document the simulator test on the RSAC space in the wiki. We don't have anything else for the Amber release besides the simulator to test xApps.
 2. Lusheng - I would like to see one xApp for a complete integration. I would like to see it following the overall flow and architecture. We can enhance a component for the Amber release. It can be deployed so the APIs provided by the near real time platform would be a big achievement.
 - a. As long as you can deploy the xApp would be a minimum viable product.
 - i. Martin agrees. We need to have the basic building blocks complete.
 - iii. Jinri - We need Rittwik to vote on extending the timeline.
 - b. [Release](#) planning link.
 - c. Copyright
 - i. Which projects have the copyright issue?
 1. CU, DU, RIC Applications.
 - ii. There was a form from O-RAN Alliance regarding the copyright issue.
 1. We should let Jack address. He wants to test one or two components. Jinri will review with Jack.
7. Report out from PTL: Stand-Up & Report Out on Blockers
 - a. Non real time RIC (RAN Intelligent Controller) - [John Keeney](#)
 - b. RIC Applications - [Matti Hiltunen](#)
 - c. RIC Platform - [Thoralf Czichy](#)
 - i. [Outstanding Resource Requests for Linux Foundation](#)
 1. https://lists.o-ran-sc.org/g/toc/topic/new_repo_requests_ricp/34367904?p=,,,100,0,0,0::recentpostdate%2Fsticky,,,100,2,0,34367904
 - a. hi,

I hereby request two new repos managed by the RICP (near-RT RIC platform) project.

ric-plt/asn1-documents

- Summary: ASN.1 definitions and related documents

- Description: ASN.1 definitions and related documents that are needed by other components in compilation. E.g., this includes E2 ASN.1 definitions.

- License: Creative Commons Attribution 4.0 International License (unless document comes from somewhere else)

- Initial committers: Thoralf Czichy (thoralf.czichy@...), Alistair Urie (alistair.urie@...), Paul Stephens (paul.stephens@...), Antti Puhakka (antti.puhakka@...)

ric-plt/streaming-protobufs

- Summary: protobuf definitions used when streaming messages to other xApps

- Description: contains protobuf definitions that xApps can use, for example, to derive statistics from streams of messages obtained from the RAN.

- License: Creative Commons Attribution 4.0 International License

- Initial committers: Timo Tietavainen (timo.tietavainen@...), Jussi Maki Aijala (jussi.maki-aijala@...), Rolf Badorek (rolf.badorek@...)

All committers are already committers in other repos of the RIC platform. Additionally we have Alistair and Paul working in WG3 of

the O-RAN alliance and myself as RIC PTL.

Thoralf

ii. Vote to approve two new repos managed by the RICP (near-RT RIC platform) project

1. ric-plt/asn1-documents will be in word or pdf which are not reviewable by git Gerrit. License will be the common.

a. Committers: [Thoralf Czichy](#), Alistair Urie, Paul Stephens, Antti Puhakka.

2. Protobuf definitions ric-plt/streaming-protobufs. They are an interface. No code link or creative logic. 3 Nokia Committers. See [Thoralf Czichy](#) message on lists.o-ran-sc.org TOC.

a. Committers: [Thoralf Czichy](#), Jussi Maki Aijala, Rolf Badorek.

1. On motion made by William Diego

2. Seconded by Masafumi Masuda

VOTE: Vote taken, item passed

b. O-RAN Centralized Unit [user-a934b](#)

c. O-RAN Distributed Unit High [Sachin Srivastava](#)

d. O-RAN Distributed Unit Low [Zhimin Yuan](#)

e. O-RAN Radio Unit (TBD)

f. Operations and Maintenance - [Martin Skorupski](#)

g. Simulations - [Alex Stancu](#)

h. Infrastructure - [Xiaohua Zhang](#)

i. DOC - [weichen ni](#)

j. O-CU [user-a934b](#)

8. Test & Integration Planning - Lusheng

9. Requirements Software Architecture Committee - Rittwik

10. New Agenda Items (New Business)

1. Approval from [Thoralf Czichy](#) for Near Real time RIC

b. Face to face meeting discussion regarding agenda [Jinri Huang](#)

i. Who will be at F2F? [Jinri Huang](#), [MASAFUMI MASUDA](#), [William DIEGO user-a934b](#). Rittwik will be there. Thoralf and Matti will work with Rittwik for the RIC presentation.

ii. October 14 - 16 we are in the afternoon session from 4:30 - 7:00PM. There are four purposes for the meeting.

1. consolidate our alignment with WG.

2. Discuss release B planning

3. Copyright issue discussion

4. Discuss the respective projects but since low attendance of PTLs we may reconsider.

5. To make the communication for WG better there is a slide. Check with other working groups and prepare similar slides. Let us call them Alignment Analysis. I can see a list of items divided into three groups with three marks.

a. "Aligned" mark: items developed based on released spec. or what have been agreed in the WG.

b. "pre-spec" mark: items being specified, or to be specified in the future in WG.

c. "TBD" mark;

i. Do the items go beyond the interface protocols A1, O1?

1. Definitely interface and maybe messages. This is generic.

a. Should the PTLs or WGs come with the list of items?

6. Last remarks: Go to WG3 wiki and check out their alignment document as an example.

7. Reviewed draft agenda

a. Day 1: Alignment - Needs TOC support to convince TSC about WGs alignment.

b. Day 2: Allocate 2 hours for Release B.

c. Day 3: Copyright issues.

c. There is a motion in working group 1 to rename the non real time RIC. Mentioned to Jack. We have until the Costa Rica F2F meeting to decide if the OSC has a meeting on this. **Action/** Farheen add to next weeks call.

d. **Action/** Farheen add discuss the relationship with the upstream projects to next weeks agenda. John Keeney is looking for guidance for upstream and downstream projects such as Acumos and Akraino.

11. Any Other Business (AOB)

12. Meeting Summary (resolutions, new action items, etc.)

1. **Votes:**

1. The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.

1. Vote to approve minutes for 25 Sep 2019
 1. On motion made by William Diego
 2. Seconded by Masafumi Masuda
 1. **VOTE:** Vote taken, item passed
 2. Vote to approve two new repos managed by the RICP (near-RT RIC platform) project
 1. ric-plt/asn1-documents will be in word or pdf which are not reviewable by git gerrit. License will be the common.
 1. Committers: [Thoralf Czichy](#), Allistair Urie, Paul Stephens, Antti Puhakka.
 2. Protobuf definitions ric-plt/streaming-protobufs. They are an interface. No code link or creative logic. 3 Nokia Committers. See [Thoralf Czichy](#) message on [lists.o-ran-sc.org](#) TOC.
 1. Committers: [Thoralf Czichy](#), Jussi Maki Aijala, Rolf Badorek.
 1. On motion made by William Diego
 2. Seconded by Masafumi Masuda
 - VOTE:** Vote taken, item passed
2. **Actions**
1. Plugfest **Actions**
 1. [Tracy Van Brakle](#) to provide writeup next week as base for blog, etc.
 2. [Farheen Cefalu](#) add to the wiki events page.
 3. Jinri received a call for participation. [Farheen Cefalu](#) follow up with Tracy and Jinri.
 4. [Jinri Huang](#) to talk to CMCC how to promote at Beijing plugfest. Jinri will report back 09 Oct 2019 .
 1. Two parallel sessions in Beijng and USA. Jinri wants to promote TOC in both events.
 5. **Action/** [user-2057e](#) start a poll for B release.
 6. **Action/** [user-59b16](#) publish the meeting details on the RSAC page regarding WG3 and E2.
 7. **Action/** [John Keeney](#) discuss renaming of near real time RIC.
 8. **Action/** [John Keeney](#) discuss the relationship with the upstream projects such as Acumos and Akraino.
 9. **Action/** [Jinri Huang](#) discuss PTLs slide preparation for the F2F meeting.

2019 10 16

Zoom Meeting: [2019-10-16_toc.mp4](#)

Agenda

1. Call for Scribe (minutes owner) Farheen Cefalu
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x		
China Mobile	Jinri Huang Co-Chair	x		
Deutsche Telekom	David Streibl			
NTT DOCOMO	Masafumi Masuda			
Orange	William Diego		Vincent Danno	
Verizon	Viswa Kumar	x		

*Quorum: 50% or more of total TSC voting members unless excluded due to attendance. We have a quorum and can vote on activities.

3. Review and Agree to Minutes of [Previous Meetings](#)
 - The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
 - Vote to approve minutes for 09 Oct 2019
 - On motion made by [Jinri Huang](#)
 - Seconded by [user-bc668](#)
 - **VOTE:** Vote taken, item passed
4. Review of Today's Agenda
5. Status of Open Action Items (Old Business)
 - ☐ [Tracy Van Brakle](#) and [Martin Skorupski](#) to align and document the plugfest plan for a demo video.
 - Where are the presentations from the face to face meeting.
 - Create a file list under the Events page in the wiki.
 - Face to face meeting discussions and meetings notes or recordings.
 - **Action/** [Jinri Huang](#) will upload presentation and minutes under Events page.
 - ☒ [Jinri Huang](#) expand on the events page with anything that is relevant to the Plugfest.
 - ☒ [Matti Hiltunen](#) document the simulator test on the RSAC space in the wiki.
 - The need for the simulator and what function it has at this time.
 - The testing should be in the simulator or the xApp or the integration and test spaces.
 - The ask was to have the simulator for hand sets so the they could drive use cases.
 - The RSAC needs a proposal for a use case.
 - ☒ [user-d3360](#) talk to Jack about which use cases are being covered by the test and integration team, for release B.
 - Open source community will focus on demonstrating the advancement of the contributions while the use cases can drive the future activities.
 - Chance to contribute an end to end use case.
 - **Action/** TOC provide [user-59b16](#) with end to end use cases in the RSAC Committee.
 - The work begins to have the system engineering done.

- We will discuss and document a detailed use case in this mornings working group.
 - Radisys will hinge on the DU project.
 - If a black box version of their DU can be provided.
 - Ganesh - Rittwik's proposal is regarding black box/ binary contribution.
 - It is an open call. If Samsung wants to provide the interface from CU DU it does not have to be open source until future releases.
 - ✓ ~~John Keeney discuss renaming of non-RT RIC.~~
 - We concluded last week that we don't want to re-name the non-RT RIC
 - ✓ John Keeney ~~provide alignment slide for f2f meeting to Jinri Huang~~
 - ✓ **Action/TOC** continue review the Nokia proposal for the near-RT RIC and return with feedback.
 - ✓ **Action/TOC** approve committers for user-a934b
 - ✓ user-bc668 approve O-CU committers.
6. Standing Agenda Items (Brief Status of Ongoing Activities)
- a. Release Manager/[Release Planning](#): Weekly TOC Scheduling
 - b. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [Matti Hiltunen](#) RIC Applications (RICAPP)
 1. [Matti Hiltunen](#) I request a repo that will be managed by the RICAPP project (for now):
 2. com/asn-to-json-converter
 - Summary: A streaming application that receives ASN.1 messages via Kafka and publishes them as JSON via Kafka
 - Description: The ASN1 to JSON converter is a Kafka Streamer application that received from the E2Terminator messages with ASN1 Binary payload (PER) that is encoded in Base64 and convert it to textual JSON that can be consumed by other applications. The converter receives the packed messages on an input Kafka Topic and publishes the input on dedicated output topics. Aligned with O1 tracing. Can be used for traces from any component that uses ASN.1 message format.
 - License: Apache 2
 - Initial committers: Shuky Har-Noy (shuky.har-noy@intl.att.com), Hila Anina (hanina@intl.att.com), Yaki Ratz (yaki.ratz@intl.att.com)
 3. Create com/asn-to-json-converter repo
 - On motion made by [Matti Hiltunen](#)
 - Seconded by [Jinri Huang](#)
 - **VOTE**: Vote taken, item passed
 - ii. [Thoralf Czichy](#) RIC Platform (RIC)
 - iii. [user-a934b](#) O-RAN Centralized Unit (OCU)
 - iv. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIGH)
 - v. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
 - vi. [Martin Skorupski](#) Operations and Maintenance (OAM)
 - vii. [Alex Stancu](#) Simulations (SIM)
 - viii. [Xiaohua Zhang](#) Infrastructure (INF)
 - ix. [weichen ni](#) Documentation (DOC)
 - x. [John Keeney](#) Non-RealTime RIC (RAN Intelligent Controller) (NONRTRIC)
 - xi. (TBD) O-RAN Radio Unit (ORU)
 - c. [user-d3360](#) Test & Integration Planning (INT)
 - i. Request for adding committers for the integration and test open frame work.
 - ii. Dear O-RAN SC ToC,

We would like to request the addition of two more committers to the it/otf Gerrit repository to help completing the Amber release target:

ORDWAY, ADAM G <ao8347@att.com>, LFID ao8347;

MEILINGER, JUSTIN <jx088j@att.com>, LFID jx088j.

 - Request the addition of two more committers ORDWAY, ADAM G <ao8347@att.com>, LFID ao8347 and MEILINGER, JUSTIN <jx088j@att.com>, LFID jx088j to the it/otf Gerrit repository to help completing the Amber release target.
 - On motion made by [user-d3360](#)
 - Seconded by [Jinri Huang](#)
 - **VOTE**: Vote taken, item passed
 - **Action/** [user-d3360](#) send [Jinri Huang](#) the count of committers.
 - iii. In the building how much code is residing?
 1. Source code repo is a recipe. The source code is not imported into the repo. It is the recipe that puts it there.
 2. During build time the upstream.
 - a. Is the resulting build unique to our project so O-RAN SC will use that work.
 - i. Yes, it is optimized kernel and the packages.
 1. Be careful in impacting all of our other resources and projects.
 2. How often do you need to rebuild this?
 - a. No, we want to build once per release or patch releases. Maybe one or two times per release should be good.
 - b. Concerns about managing the resource consuming job. Work with Lusheng to schedule time early in the process so we can be efficient in the resources across projects and not block others.
 - iv. Lusheng - tonight will provide the full report at the f2f.

- d. [user-59b16](#) Requirements Software Architecture Committee
- 7. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items
 - [Jun Hyuk Song](#) binary seed code submission.
 - We thought seed code is possible through open source. Binary is not an option on the table. We are reluctant to open our code to binary code. We learned binary code is being submitted by another vendor.
 - Jack - This is a rich topic for discussion. In open source the code is open and people can look and contribute. We've had discussions with companies about including the binary code as an option. Binary code is not a contribution to the open source community. However binary code can be used for integration and test. For example Intel wanted to keep their layer 1 software. They didn't have to contribute that software. Instead they are contributing a loader module that will pull in their binary from their location. The process to get their code is consistent. The open source community doesn't treat it as open source but instead uses it for test and integration. In this case the O-DU could choose to license from Intel and build it into their process. Intel would contribute the loader. The binary itself is not open source. The company would have to deal with Intel directly for their binary. They are not open source but are build, test, and integration options. The build APIs are open source.
 - Jinri - Do we need to discuss this with the O-RAN legal team?
 - The broader issue for us is that it is hosted by the Linux Foundation. These contributions aren't in source code. Theoretically, if you could contribute binary it would have to under one of our two licenses meaning people could use it. That is not their intent. It is best for them to keep their code under their management. If we use it for integration and test then O-RAN would have to set up how to make it available for us to use.
 - [Jun Hyuk Song](#) TOC membership. There are open vacancies for the TOC membership.
 - Jack - We want to promote open source developers. Interest in a viable candidate to contribute open source code.
 - [Jun Hyuk Song](#) What about xApps? Are there requirements for that?
 - Jack - We didn't put a hard requirement on contributing magnitude of code. Demonstrate your interest in the activity and the community.
 - F2F Summary
 - Samsung - contributions in the form of binary code.
- 8. Planning for Next Meeting
- 9. Open Discussion
- 10. Any Other Business (AOB)
- 11. Meeting Summary (resolutions, new action items, etc.)
 - a. Votes
 - The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
 - Vote to approve minutes for 09 Oct 2019
 - On motion made by [Jinri Huang](#)
 - Seconded by [user-bc668](#)
 - **VOTE:** Vote taken, item passed
 - Create com/asn-to-json-converter repo
 - On motion made by [Matti Hiltunen](#)
 - Seconded by [Jinri Huang](#)
 - **VOTE:** Vote taken, item passed
 - Request the addition of two more committers ORDWAY, ADAM G <ao8347@att.com>, LFID ao8347 and MEILINGER, JUSTIN <jx088j@att.com>, LFID jx088j to the it/otf Gerrit repository to help completing the Amber release target.
 - On motion made by [user-d3360](#)
 - Seconded by [Jinri Huang](#)
 - **VOTE:** Vote taken, item passed
 - b. Actions
 - [Tracy Van Brakle](#) and [Martin Skorupski](#) to align and document the plugfest plan for a demo video.
 - [Jinri Huang](#) will upload presentations and minutes under Events page on the wiki of the face to face meeting.
 - [user-d3360](#) send [Jinri Huang](#) the count of committers in gerret.

2019 10 09

Zoom Meeting: [2019-10-09_toc_audio_only.m4a](#)

Agenda

1. Call for Scribe (minutes owner) Farheen Cefalu
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x		
China Mobile	Jinri Huang Co-Chair	x		
Deutsche Telekom	David Streibl	x		
NTT DOCOMO	Masafumi Masuda	x		
O-RANGE	William Diego	x	Vincent Danno	
Verizon	Viswa Kumar			

*Quorum: 50% or more of total TSC voting members unless excluded due to attendance. We have a quorum and can vote on activities.

3. Review and Agree to Minutes of [Previous Meetings](#)
 - a. The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
 1. Vote to approve minutes for 02 Oct 2019

2. On motion made by [Jinri Huang](#)
3. Seconded by [user-2057e](#)
VOTE: Vote taken, item passed
4. Review of Today's Agenda
5. Status of Open Action Items (Old Business)
 - ☒ [Tracy Van Brakle](#) to provide writeup next week as base for Plugfest blog, etc.
 - ☐ [Tracy Van Brakle](#) and [Martin Skorupski](#) to align and document the plugfest plan for a demo video.
 - There will be a demo next week. Not tested yet.
 - Call to all O-RAN Alliance working group members to propose more demonstrations for the plugfest on this call.
 - ☒ [Farheen Cefalu](#) add to the wiki events page. Follow up with Tracy and Jinri. (Plugfest).
 - ☐ [Jinri Huang](#) expand on the events page with anything that is relevant to the Plugfest.
 - ☒ [Jinri Huang](#) to talk to CMCC how to promote at Beijing plugfest. Jinri will report back 09 Oct 2019
 - 2 sessions. 1 in Beijing (China Mobile). Jinri will use Martin and Tracy's demo video for the Beijing session.
 - ☒ [user-2057e](#) start a poll for B release.
 - ☐ [Matti Hiltunen](#) document the simulator test on the RSAC space in the wiki.
 - ☒ [user-59b16](#) place a formal approval request for code freeze extension.
 - Extend the code freeze to October 18 or October 25.
 - ☒ [user-59b16](#) publish the meeting details on the RSAC page regarding WG3 and E2.
 - We had two meetings today to align all the WGs and projects. ODU and Infra still have to update but we are in good shape for the f2f.
 - ☐ [user-d3360](#) talk to Jack about which use cases are being covered by the test and integration team, for release B.
 - Trying to get people from other projects and companies more involved because it requires a lot of activities that need to test their items. Code testing and end to end use cases drive the OSC solutions that we promote work. The integration and test team will be driven by the end to end use cases that we pick as a community for our release. This is important for the discussion next week. RSAC have a clear managable set of use cases that demonstrate the value and capability of where we are in the O-RAN stack to the community and beyond. You can only have a certain amount of end to end use cases. The team has to focus on these use cases as a primary goal. End to end use cases are the primary driver to demonstrate what the release can be used for.
 - [Rittwik](#) - If you want a full stack ete demo it will require CUs and DUs who won't be ready until the B release.
 - The goal is trying to demonstrate functionality towards the goal. Simulators can be used. We have to show the community is advancing in it's goals. The spirit of end to end is talking about broader functionality and not just the individual. Write an end to end use case around Martin's demo. Integration and Test team should develop a plan to evaluate an end to end use case.
 - ☒ [John Keeney](#) discuss renaming of ~~near~~ non real time RIC.
 - People are complaining about which is the real name of RIC? People don't like typing the extra words "near real time..." or "non real time ..."
 - [Jinri](#) spoke to O-RAN TSC. There are difference of opinions in WG1. Keep it open until later.
 - [Martin](#) - Do you have a proposal because it has implications to O-RAN Alliance.
 - [John](#) - I propose that we don't change it.
 - [Jack](#) - Better to change it now rather than later. It will become harder to make the changes across documentation and it will have a ripple effect throughout the projects.
 - ☒ [John Keeney](#) discuss the relationship with the upstream projects such as Acumos and Akraino.
 - Asking for feedback on relationships with upstreams projects. Do other people have other discussions?
 - Yes lots of discussions in the background. See new Partnerships link in the top navigation bar. We have slides we will share and put on the agenda in the coming weeks. We will pick one of the projects and talk through it. We are starting to document which ones we are interacting with and we have develop a breakdown of what our interactions is with.
 - [Irfan Ghauri](#) - Are there collaboration agreements?
 - In open source there are no formal collaborations except for O-RAN Alliance, 3GPP, and ETSI. They require formal collaborations
 - [Jinri](#) raised a concern about the putting the O-RAN Alliance in the Partnership category.
 - It is not owned by O-RAN Alliance.
 - [Peter Moonki Hong](#) - How do the open source developers refer to the other collaborative projects such as Akraino? For example I am a developer who would like to test O-RAN software stack and there are other components from Akraino. Could you provide formal guidance of how we interact with the partnerships?
 - [Jack](#) - In the near term start by reaching out to Lusheng about integration. Akraino is a part of the INF project it's early. We have contacts from Akraino. Acumos is being used by the Near real time RIC dashboard. Reach out to the TSC in those projects. We will expand the partnerships with a list of contacts.
 - ☒ [Jinri Huang](#) discuss PTLs slide preparation for the F2F meeting.
 - Top mission is the complete the alignment with the working group at the face to face meeting.
 - [Rittwik](#) - preparing one slide deck for discussing the near real time RIC. We should sit in the WG3 meeting.
 - From Non Real Time RIC we presented our alignment with WG2. WG1 and WG6 I am quite confused about the scope and architecture when it comes to the Non real time RIC.
 - Can you share the slides with the community?
 - Yes, there is one slide.
 - [Jinri](#) needs to see whether these items are aligned.
 - ☒ [John Keeney](#) provide alignment slide for f2f meeting to [Jinri Huang](#)
 - [Jinri](#) requesting all the working groups to present their slides by the end of this week.

6. Standing Agenda Items (Brief Status of Ongoing Activities)

- a. Release Manager/[Release Planning](#): Weekly TOC Scheduling
 - There is a formal request. In the Amber release this schedule was ambitious process. One of the goals is to get people to get familiar and start contributing. Code freeze is supposed to occur at the end of this week. The developers enter a maintenance cycle. To get a release out we add a maintenance release. So the developers can continue to fix defects while everyone plans on what the new features are in the B release. This next window October 14 - November 2 is time to work on fixing bugs on the software only for this release. We should allow this extension because there is not enough code to do end to end testing.
 - The proposal is to move the code freeze date to add a development sprint 5. Focus on getting the code as mature as possible for Amber to make it useful. This is a one time event.
 - Jinri agrees to delay.
 - Extend the release schedule code freeze from October to November 2. On motion made by [Jinri Huang](#) seconded by [user-2057e](#)
 1. **VOTE**: Vote taken, item passed
 - b. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [Matti Hiltunen](#) RIC Applications (RICAPP)
 - ii. [Thoralf Czichy](#) RIC Platform (RIC)
 1. For legal reasons we need a controlled way to define the scope of the near-RT RIC platform. Concrete suggestion is [here](#). The basic idea is a description of scope and RICP project meeting approval for changes to that scope plus TOC approval for new repos. Additionally we would like the following sentence in the beginning of each file (in addition to the copyright and license statement): "This source code is part of the near-RT RIC (Radio Intelligent Controller) platform project (RICP)." (suggested by legal dept.). Jack's opinion on the extra sentence needed. The rest of the procedure was ok-ed by RICP project meeting.
 - a. Jack will review the proposal.
 - b. David - keep Paul in the loop to avoid surprises.
 - c. John - The title should be updated.
 - d. **Action**/TOC continue review the [proposal](#) and return with feedback
 2. E2AP documentation now available as document (PDF/DOCX) plus ASN.1 file: <https://gerrit.o-ran-sc.org/r/gitweb?p=ric-plt/asn1-documents.git;a=tree>
 3. RICP presentation at ONS, Antwerpen, 2019: [Overall architecture \(not component-specific\)](#)
 - iii. [user-a934b](#) O-RAN Centralized Unit (OCU)
 1. Request for approval of the committer.
 - iv. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIGH)
 - v. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
 - vi. [Martin Skorupski](#) Operations and Maintenance (OAM)
 - vii. [Alex Stancu](#) Simulations (SIM)
 - viii. [Xiaohua Zhang](#) Infrastructure (INF)
 - ix. [weichen ni](#) Documentation (DOC)
 - x. [John Keeney](#) Non-RealTime RIC (RAN Intelligent Controller) (NONRTRIC)
 - xi. (TBD) O-RAN Radio Unit (ORU)
 - c. [user-d3360](#) Test & Integration Planning (INT)
 - d. [user-59b16](#) Requirements Software Architecture Committee
7. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items
 - a. Discuss OSC Partners and Open Source alignment
8. Planning for Next Meeting
9. Open Discussion
10. Any Other Business (AOB)
 - a. PTLs attend [user-d3360](#) meeting for Integration and Test.
11. Meeting Summary (resolutions, new action items, etc.)
 - a. **Votes**
 - i. The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
 1. Vote to approve minutes for 02 Oct 2019
 2. On motion made by [Jinri Huang](#)
 3. Seconded by [user-2057e](#)
VOTE: Vote taken, item passed
 - ii. Seeking approval from TOC for new code freeze date for Amber release to Oct 18 (or Oct 25). TOC to recommend a suitable date for code freeze.
 - Extend the release schedule code freeze date to November 2.
 - On motion made by [Jinri Huang](#)
 - Seconded by [user-2057e](#)
 - **VOTE**: Vote taken, item passed
 - b. **Actions**
 - i. [Tracy Van Brakle](#) and [Martin Skorupski](#) to align and document the plugfest plan for a demo video.
 - ii. [Jinri Huang](#) expand on the events page with anything that is relevant to the Plugfest.
 - iii. [Matti Hiltunen](#) document the simulator test on the RSAC space in the wiki.
 - iv. [user-d3360](#) talk to Jack about which use cases are being covered by the test and integration team, for release B.
 - v. [John Keeney](#) discuss renaming of ~~near~~ non real time RIC.
 - vi. [John Keeney](#) provide alignment slide for f2f meeting to [Jinri Huang](#)