

2021 Q2 (Apr, May, Jun)

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2021 06 30

Recording: [link to zoom recording](#)

Agenda

1. Call for Scribe (minutes owner): Masafumi Masuda
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x	David Kinsey	
China Mobile	Jinri Huang Co-Chair	x	James Li	
Deutsche Telekom	David Streibl		Ondej Hudousek	
Ericsson	John-Paul Lane		John Keeney	x
NTT DOCOMO	Masafumi Masuda	x	Anil Umesh	
Nokia	Juha Oravainen	x	Thoralf Czichy	
Orange	William Diego	x	Vincent Danno	
Radisys	Ganesh Shenbagaraman	x	Sachin Srivastava	
TIM	Andrea Buldorini	x		
Wind River	Xiaohua Zhang	x	Jackie Huang	

*Quorum: 50% or more of total TOC voting members unless excluded due to attendance.

3. Review and Agree to Minutes of Previous Meeting
 - a. **Decision:** For the 06/23/2021 TOC meeting minutes, motion by [MASAFUMI MASUDA](#), seconded by [Ganesh Shenbagaraman](#). Motion passed.
4. Review of Today's Agenda
 - a. Thoralf-to-Jinri: Any news (after your Saturday mail) on the press release on when and in which format we intend to publish?
 - b. Discuss WG6 AAL request project and repo using BSD-3
5. Release Votes and Approval
 - a. D Release
 - i. Jack: Matti, are we ready on RICAPP?
 - ii. Matti: No. We have to decide how much integration testing we want do for the release.
 - iii. Jack: What about RIC?
 - iv. Thoralf: We are ready. Integration test is also limited, but we can deploy.
 - v. Jack: Did you branch the code?
 - vi. Thoralf: Yes.
 - vii. Jack: ODUHIGH?
 - viii. Manasi: We are ready to branch the code with limited integration.
 - ix. Jack: ODULOW?
 - x. David Kinsey: There was an issue with alignment between ODULOW and Viavi.
 - xi. Jack: OAM?
 - xii. Matti: We are ready to branch.
 - xiii. Jack: SIM?
 - xiv. ALEX: We are ready to branch.
 - xv. Jack: INF?
 - xvi. Xiaohua: The code has been branched.
 - xvii. Jack: NONRTRIC?
 - xviii. John Keeney: We have branched.
 - xix. Jack: SMO?
 - xx. Mahesh: We have not been able to test in the lab. We have not branched yet but could.
 - xxi. Jack: CII badging. ODUHIGH has gotten to passing. ODULOW is 91%. SMO is 78%.

- xxii. Jinri: The major issue is RICAPP.
- xxiii. Jack: It's ODULOW and RICAPP.
- xxiv. Matti: We could say that we do the final integration in the maintenance release.
- xxv. Jack: What would people's feeling about branching and packaging everything for July-2 release?
- xxvi. Rittwik: We should document by PTLs the flows that have been tested in the release page at least.
- xxvii. Jack: The decision is that all projects should branch that can branch, that the individual projects need to update the release page and that we will postpone the release date and vote for our next Wednesday meeting. How does that affect our PR?
- xxviii. Jinri: PR is fine.
- xxix. **Action point:** PTLs to branch that can branch and to update the release page.
- b. AAL project
 - i. Jack: I had a discussion yesterday with WG6 on their work on the accelerator abstraction layer. It's part of an extension to DPDK contribution in Linux Foundation, but they want to do that under O-RAN. The tricky part is that the community specifies BSD-3 as the contribution. What the request was to create a new project for the AAL project.
 - ii. Trishan: All incoming code on O-RAN SC is Apache 2.0, but for this particular repo, we would make the exception for BSD.
 - iii. Thoralf: How do you formally sign?
 - iv. Trishan: I will check.
 - v. Jack: We may have to add a CLA. We'll get that clarification.
 - vi. **Action point:** Trishan to check if your have to sign a new agreement for the repo.
 - vii. Jinri: For this project, what is the expected output? Is it traditional coding or documentation?
 - viii. Jack: It would be both.
 - ix. Jinri: If this is a stage-3 work, why is this to be in our software community instead of WG6?
 - x. Jack: I believe this is the right way.
 - xi. Juha: Will we have a project proposal?
 - xii. Jack: I have a write up from WG6. We will talk about it next week and have a vote.
 - xiii. **Action point:** Jack to present the write up about the AAL project to have a vote.
 - xiv. John Keeney: Is there any plan to integrate the DPDK and the existing OSC functions?
 - xv. Jack: That would be a discussion around ODULOW and ODUHIGH.
 - xvi. Ganesh: We will go through the document and will provide an update next week.
 - xvii. **Action point:** Ganesh to provide an update from ODU point of view.
- 6. Copyright update
 - a. Jack: O-RAN Board meeting happened on Monday and they approved the 2 items that affect our work in the copyright space. They approved a clarification on the copyright on the IPR statement and also approved the SCCL license for our use in the OSC-P project.
 - b. Thoralf: Will there be a written summary?
 - c. Jack: Yes. The license and the fact that they approved it will be added to the O-RAN ALLIANCE web site.
 - d. Rittwik: What is the OSC-P?
 - e. Jack: O-RAN Specification Code Project.
- 7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
- 8. Old business and Status of Open Action Items
 - a. Release preparation for "D" Release
 - i. **Action point:** Jinri to organize release statement and PR for "D" Release.
 - b. "E" Release timeline.
 - i. **Action point:** Jack to create "E" Release timeline and publish.
 - ii. Jack: After the "D" Release is out, let's get a short presentation to make sure we understand how the architecture looks like.
 - c. Repo clean-up:
 - i. Jack: Every repo should be attached to a project with a PTL. House-keeping and due diligence are the responsibility of the PTL.
 - d. 5G Super Blueprint status - tabled for D and E, will be reevaluated for F release.
 - e. PTL company change.
 - i. Jack: I got a message from Mahesh, PTL of SMO. He has moved from VMware to Juniper. We have to decide to do going forward. Hopefully he can attend next meeting and have a dialogue.
- 9. Standing Agenda Items (Brief Status of Ongoing Activities)
 - a. Release Manager [Trishan de Lanerolle](#) /[Release Planning](#): Weekly TOC Scheduling
 - b. [user-59b16](#) Requirements Software Architecture Committee
 - c. Integration and Test (*PTL needed*)
 - d. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [Mahesh Jethanandani](#) Service Management and Orchestration (SMO)
 - ii. [John Keeney](#) Non-Real Time RIC (RAN Intelligent Controller) (NONRTRIC)
 - iii. [Matti Hiltunen](#) RIC Applications (RICAPP)
 - iv. [Thoralf Czichy](#) RIC Platform (RIC)
 - v. [@gusu](#) O-RAN Centralized Unit (OCU)
 - vi. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIGH)
 - vii. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
 - viii. [Martin Skorupski](#) Operations and Maintenance (OAM)
 - ix. [Alex Stancu](#) Simulations (SIM)
 - x. [Xiaohua Zhang](#) Infrastructure (INF)
 - xi. [weichen ni](#) Documentation (DOC)
 - xii. (TBD) O-RAN Radio Unit (ORU)
- 10. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items
- 11. Planning for Next Meeting
- 12. Any Other Business (AOB)
- 13. Meeting Summary (resolutions, new action items, etc.)

2021 06 23

Recording: [link to zoom recording](#)

Agenda

1. Call for Scribe (minutes owner): Masafumi Masuda
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
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Deutsche Telekom	David Streibl	x	Ondej Hudousek	
Ericsson	John-Paul Lane	x	John Keeney	
NTT DOCOMO	Masafumi Masuda	x	Anil Umesh	
Nokia	Juha Oravainen	x	Thoralf Czichy	
Orange	William Diego	x	Vincent Danno	
Radisys	Ganesh Shenbagaraman	x	Sachin Srivastava	
Wind River	Xiaohua Zhang	x	Jackie Huang	

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3. Review and Agree to Minutes of Previous Meeting

- a. Decision:** For the 06/16/2021 TOC meeting minutes, motion by [MASAFUMI MASUDA](#) , seconded by [user-2057e](#). Motion passed.

4. Review of Today's Agenda

5. Release Votes and Approval

- a.** Trishan: We have Andrew from the release engineering team to discuss automated self service features.
- b.** Andrew: The proposal is that we enable the automated self service.
- c.** Thoralf: The only technical change is that after Info Yang model is changed it will be published to the TOC mailing list?
- d.** Andrew: Correct. We are proposing here is taking the government body requirement out of picture and moving to a mechanical process but you are still informed.
- e.** Thoralf: If we say we want to keep the old process, what would we do?
- f.** Andrew: Then we will keep the old process.
- g.** Jack: The vote would be to change the process. Approval of the proposed motion is that we would move to the automated process and rejection is to stay with the current process. From my standpoint, more automation is good.
- h.** Thoralf: It's a good thing and I don't see risks.
- i. Decision:** For the change to the automated process, motion by Andrew, seconded by [Jinri Huang](#). Motion passed.
- j.** Andrew: We will make the change and let the TOC mailing list know.

6. Copyright update

7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)

- a. Action Point:** Jinri to lead O-RAN White paper version 3.
- b. Action Point:** All to consider engaging with WG10 for the IM / DM modelling tool chain discussion.
- c. Action Point:** [John Murray](#) to work with O-RAN SFG to create a procedure for reporting bugs found during security badging in OSC.
- d.** Update from TIFG meeting with OSC.
 - i. Action Point:** All to TOC members to consider working with TIFG on an ongoing basis to represent OSC. [William DIEGO](#) offered to support this activity with help from others.

8. Old business and Status of Open Action Items

- a.** CII badging.
 - i.** Jack: We are hoping that the release happens next week. Regarding the CII badging, where are we on ODU HIGH?
 - ii.** Manasi: We need to fix some errors first. We will get it done by this Friday.
 - iii.** Jack: Has anyone from ODU HIGH been working with Intel?
 - iv.** Manasi: We have been.
 - v.** Jack: How is SMO doing?
 - vi.** Mahesh: It will be somewhere close to 100% this Friday.
 - vii. Action point:** PTLs to complete CII badging process.
- b.** Release preparation for "D" Release
 - i.** Jack: Is RICAPP ready for release?
 - ii.** Matti: No. In the OSC Lab, there are some issues. The latest E2 simulator is not working.
 - iii.** Jack: Does anyone know the status?
 - iv.** Ultan: I can help.
 - v.** Jinri: Has this integration not happened completely or it's ongoing but blocked by some issues?
 - vi.** Matti: Some of the older versions worked.
 - vii.** Jack: We haven't had volunteers stepping into the broader integration project. Where are you, RIC Team?
 - viii.** Thoralf: We also suffer from the same problem. If somebody could try to deploy the Near-RT RIC platform and put xApp there, it would help.
 - ix.** Jack: OCU is not active. Where are we on ODU HIGH?
 - x.** Manasi: After today's develop session, we should be able to declare completion for the "D" Release and cut the branch.
 - xi.** Jack: OAM?
 - xii.** Martin: We deployed the closed loop use case with Non-RT RIC Team and have configured with ODU HIGH using IPv6.
 - xiii.** Jack: Who are you working with on IPv6?
 - xiv.** Martin: Network setup team.
 - xv.** Jack: SIM?
 - xvi.** Alex: We are good to go.
 - xvii.** Jack: INF?
 - xviii.** Xiaohua: It's ready to go by the end of this week.
 - xix.** Jack: NONRTRIC?
 - xx.** John Keeney: We are able to go.

- xxi. Jack: SMO?
- xxii. Mahesh: Issue has been testing in the OSC Lab.
- xxiii. Jack: If we list out the functionality and note in the release documentation we've got this with the simulator, it's OK.
- xxiv. Rittwik: Maybe in the maintenance release we can try non simulated way.
- xxv. Jack: Rittwik, did you get information about the switch?
- xxvi. Rittwik: We are planning to insert the FH switch after the release.
- xxvii. Jack: Jinri, have you made any progress on writing?
- xxviii. Jinri: We discussed "D" Release statement in the last EC. It has not decided whether we include it in the O-RAN PR or we need a separate PR. We still need contributing companies' quote.
- xxix. **Action point:** PTLs to wrap up "D" Release preparations.
- xxx. **Action point:** Jinri to organize release statement and PR for "D" Release.
- c. "E" Release timeline.
 - i. **Action point:** Jack to create "E" Release timeline and publish.
 - ii. Jack: After the "D" Release is out, let's get a short presentation to make sure we understand how the architecture looks like.
- d. Repo clean-up:
 - i. Jack: Every repo should be attached to a project with a PTL. House-keeping and due diligence are the responsibility of the PTL.
- e. 5G Super Blueprint status - tabled for D and E, will be reevaluated for F release.
- f. PTL company change.
 - i. Jack: I got a message from Mahesh, PTL of SMO. He has moved from VMware to Juniper. We have to decide to do going forward. Hopefully he can attend next meeting and have a dialogue.
- 9. Standing Agenda Items (Brief Status of Ongoing Activities)
 - a. Release Manager [Trishan de Lanerolle](#) /[Release Planning](#): Weekly TOC Scheduling
 - b. [user-59b16](#) Requirements Software Architecture Committee
 - c. Integration and Test (*PTL needed*)
 - d. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [Mahesh Jethanandani](#) Service Management and Orchestration (SMO)
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 - xii. (TBD) O-RAN Radio Unit (ORU)
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2021 06 16

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Agenda

1. Call for Scribe (minutes owner): Masafumi Masuda
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x	David Kinsey	
China Mobile	Jinri Huang Co-Chair		James Li	x
Deutsche Telekom	David Streibl		Ondej Hudousek	
Ericsson	John-Paul Lane		John Keeney	x
NTT DOCOMO	Masafumi Masuda	x	Anil Umesh	
Nokia	Juha Oravainen	x	Thoralf Czichy	
Orange	William Diego	x	Vincent Danno	
Radisys	Ganesh Shenbagaraman	x	Sachin Srivastava	
Wind River	Xiaohua Zhang	x	Jackie Huang	

*Quorum: 50% or more of total TOC voting members unless excluded due to attendance.

3. Review and Agree to Minutes of Previous Meeting
 - a. **Decision:** For the 06/09/2021 TOC meeting minutes, motion by [MASAFUMI MASUDA](#) , seconded by [Juha Oravainen](#) . Motion passed.
4. Review of Today's Agenda.

- a. Thoralf-asks for: approval of this request <https://lists.o-ran-sc.org/g/toc/message/463> (related to com/asn1c)
- b. **Decision:** For the request for archiving the repo, motion by [Thoralf Czichy](#) , seconded by [John Keeney](#) . Motion passed.
- c. John Keeney: We are still blocked on adding the PTLs as committers to the IT/DEP repo. I'd like to raise the motion to explicitly approve the change.
- d. **Decision:** For the request for the addition, motion by [John Keeney](#) , seconded by [Juha Oravainen](#) . Motion passed.
- e. John Keeney: Thoralf or I will open a LF support ticket.
- f. Jack: Matti, you can follow up Felix?
- g. Matti: Yes.
5. Release Votes and Approval
6. Copyright update
7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 - a. Collaboration between OSC and O-RAN Alliance on an SMO project definition.
 - i. Rittwik: I've been attending the SMO meetings. I'm trying to see if I can encourage EC to put priorities.
 - ii. Jack: What's the ask to the EC?
 - iii. Rittwik: EC is going to take a look at the summary and say go ahead with the MVP package.
 - b. **Action Point:** Jinri to lead O-RAN White paper version 3.
 - c. **Action Point:** All to consider engaging with WG10 for the IM / DM modelling tool chain discussion.
 - d. **Action Point:** [John Murray](#) to work with O-RAN SFG to create a procedure for reporting bugs found during security badging in OSC.
 - e. Update from TIFG meeting with OSC.
 - i. **Action Point:** All to TOC members to consider working with TIFG on an ongoing basis to represent OSC. [William DIEGO](#) offered to support this activity with help from others.
 - ii. Jack: There are only 2 plugfest applications responded to the Call for Hosting. I want to make sure people are aware.
8. Old business and Status of Open Action Items.
 - a. Release process for "D" Release.
 - i. **Action point:** Jack to talk to Felix and move forward the release process for "D" Release targeting the release date of June 30 and TOC voting for approval on June 23.
 - ii. **Action point:** Jinri to organize release statement and PR for "D" Release.
 - iii. Rittwik: We have made some progress including closed-loop process usecases.
 - iv. Jack: We are in the process of getting FHGW in place?
 - v. Rittwik: Thanks to Nokia.
 - vi. Jack: PTLs, any other items we need to address?
 - vii. Rittwik: Mahesh was building a SMO.
 - viii. Martin: He has artifacts on the same VM.
 - ix. Rittwik: I have a request to PTLs. If all the PTLs do the release process in the similar way, Felix's job will be easy.
 - b. "E" Release timeline.
 - i. **Action point:** Jack to create "E" Release timeline and publish.
 - ii. Jack: After the "D" Release is out, let's get a short presentation to make sure we understand how the architecture looks like.
 - c. CII badging.
 - i. **Action Point:** PTLs to wrap up CII badging.
 - ii. Jack: We are still pending on ODU HIGH.
 - iii. Manasi: We are waiting for a few responses from Near-RT RIC.
 - iv. Thoralf: I can ask them again.
 - v. Jack: I have to follow up Intel.
 - d. Repo clean-up:
 - i. Jack: Every repo should be attached to a project with a PTL. House-keeping and due diligence are the responsibility of the PTL.
 - e. 5G Super Blueprint status - tabled for D and E, will be reevaluated for F release.
 - f. PTL company change.
 - i. Jack: I got a message from Mahesh, PTL of SMO. He has moved from VMware to Juniper. We have to decide to do going forward. Hopefully he can attend next meeting and have a dialogue.
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 - xi. [weichan ni](#) Documentation (DOC)
 - xii. (TBD) O-RAN Radio Unit (ORU)
10. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items
11. Planning for Next Meeting
12. Any Other Business (AOB)
13. Meeting Summary (resolutions, new action items, etc.)

2021 06 09

Recording: [2021-6-9.m4a](#)

Agenda

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2. Roll Call & Quorum Check

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Radisys	Ganesh Shenbagaraman	x	Sachin Srivastava	
Wind River	Xiaohua Zhang		Jackie Huang	x

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3. Review and Agree to Minutes of Previous Meeting
 - a. **Decision:** For the 06/02/2021 TOC meeting minutes, Motion by [MASAFUMI MASUDA](#), seconded by [Jinri Huang](#). Motion passed.
4. Review of Today's Agenda.
5. Release Votes and Approval.
6. Copyright update
 - a. Jack: We had a meeting with representatives of ETSI committee. We are working on the path of getting a solution for a 3GPP project. I expect that Board meeting will approve the license. Then, we'll start process and procedures.
7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 - a. Jinri: We had 2 OSC sessions in the virtual F2F meetings last week. There will be SMO sessions this week. There will be a Board meeting at the end of this month. TSC has approved the change of TOC members.
 - b. SMO discussions.
 - i. Rittwik: Question is do we really need a functional division of SMO from implementation perspectives. Another question is if there is a slicing assurance component needed in SMO.
 - ii. Jack: We primarily focus on key APIs and interfaces that we need to make sure open and interoperable. A bigger question on SMO is that slice manager is above SMO or not. End users should not touch some components from security and other points of view.
 - iii. Mahesh: I agree.
 - iv. John Keeney: Implementation and software architecture is not within the scope of O-RAN Alliance. If slicing should happen inside the SMO, it's out of scope. It's about software architecture. If outside the SMO, it has to be specified as the requirement of O-RAN interfaces.
 - v. Rittwik: Some vendors are opposit. This is a chance for us to bring up.
 - vi. Jack: David says WG1 identifies that slice management function is part of SMO. We need to get clarification. I don't believe direct customer access to SMO is acceptable.
 - c. **Action Point:** Rittwik to follow up the FHGW implementation.
 - d. **Action Point:** Jinri to lead O-RAN White paper version 3.
 - e. **Action Point:** All to review the SMO Feature Package(s) currently under discussion by the MVP-C.
 - f. **Action Point:** All to consider engaging with WG10 for the IM / DM modelling tool chain discussion.
 - g. **Action Point:** [John Murray](#) to work with O-RAN SFG to create a procedure for reporting bugs found during security badging in OSC.
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 - i. **Action Point:** All to TOC members to consider working with TIFG on an ongoing basis to represent OSC. [William DIEGO](#) offered to support this activity with help from others.
 - b. **Action Point:** **TOC members and whole community** to indicate what do we really need to deliver in D- and E-releases to be successful and useful?
 - c. Collaboration between OSC and O-RAN Alliance on an SMO project definition.
 - d. 5G Super Blueprint status - tabled for D and E, will be reevaluated for F release
 - e. **Action Point:** PTLs to wrap up CII badging.
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 - a. Release process for "D" Release.
 - i. Thoralf: How do we physically release "D" Release?
 - ii. Jack: We are in the middle of the process. First, we do the license scans, second, review all the pieces and documentations in place and package things up. For integration use cases, have you been testing xApp and Near-RT RIC?
 - iii. Matti: We are still trying to get enough people's accounts on the OSC Lab.
 - iv. Rittwik: I also suggest that maybe some tests can be done by the teams. Who cuts the branch?
 - v. Thoralf: It would be straightforward and simple that PTLs cut the branch. It's best to look at what has been done for "C" Release.
 - vi. We'll talk to Felix. Trishan, did you see the scans and results?
 - vii. Trishan: Yes.
 - viii. Jack: Mahesh, this is the first full SMO release. I'll have Felix connect with you.
 - ix. Mahesh: OK.
 - x. Thoralf: What's the release date?
 - xi. Jack: June 30. Jinri, can you take the responsibility for release statement and PR?
 - xii. Jinri: Sure.
 - xiii. Jack: The ideal is to take the TOC vote and approval on June 23.
 - xiv. **Action point:** Jack to talk to Felix and move forward the release process for "D" Release targeting the release date of June 30 and TOC voting for approval on June 23.
 - xv. **Action point:** Jinri to organize release statement and PR for "D" Release.
 - b. "E" Release timeline.
 - i. Jack: I got to get "E" Release timeline and publish. Does anybody have any questions or concerns doing the same timeline as Cherry Release for "E" Release?
 - ii. John Keeney: My suggestion is to start requirement gathering for "F" Release before the end of "E" Release.
 - iii. Jack: I agree.
 - iv. **Action point:** Jack to create "E" Release timeline and publish.
 - c. Repo clean-up.
 - i. John Keeney: We need to clean up repos in OSC.
 - ii. Jack: Trishan, is there a way to generate a report showing repos not attached to any projects?
 - iii. Trishan: Yes. We are reviewing it in the analytics platform.
 - iv. Jack: Every repo should be attached to a project with a PTL. House-keeping and due diligence are the responsibility of the PTL.
 - v. Matti: We have some repos for Amber Release that have not been maintained. Is that against the open source philosophy?
 - vi. Trishan: Once repos get inactive, just get archived after updating the description and getting TOC approval.
- 11. Planning for Next Meeting
- 12. Any Other Business (AOB)
- 13. Meeting Summary (resolutions, new action items, etc.)

2021 06 02

Recording: [2021-6-2.m4a](#)

Agenda

1. Call for Scribe (minutes owner): Masafumi Masuda
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x	David Kinsey	
China Mobile	Jinri Huang Co-Chair		James Li	
Deutsche Telekom	David Streibl	x	Ondej Hudousek	
Ericsson	John-Paul Lane	x	John Keeney	
NTT DOCOMO	Masafumi Masuda	x	Anil Umesh	
Nokia	Juha Oravainen	x	Thoralf Czichy	
Orange	William Diego	x	Vincent Danno	
Radisys	Ganesh Shenbagaraman	x	Sachin Srivastava	
Wind River	Xiaohua Zhang		Jackie Huang	x

*Quorum: 50% or more of total TOC voting members unless excluded due to attendance.

3. Review and Agree to Minutes of Previous Meeting
 - a. **Decision:** For the 05/26/2021 TOC meeting minutes, Motion by [John Paul Lane](#), seconded by [Juha Oravainen](#). Motion passed.
4. Review of Today's Agenda
 - a. Rittwik: We should discuss OSC meeting for tomorrow.
 - b. Jack: Let's do that under the O-RAN-related business.
5. Release Votes and Approval.
6. Copyright update

- a. Jack: We have 2 agenda items for the Board meeting: 1) approval of the new copyright license and 2) modification of the IPR policy.
- 7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 - a. Tomorrow's OSC meeting:
 - i. Jack: Rittwik can cover topics for the F2F meetings.
 - ii. Rittwik: We have couple of items. I'll go over what was expected in "D" Release and have PTLs cover what was done. And for "E" Release, we have the disaggregated best agent and the continuation of DU/RU interaction as well as the closed-loop use case. We need to consider Network Slicing is on the table or not. After that, we will discuss what the requests are from OSC. We need basic things. Let's see what kind of feedbacks we will get. "E" Release planning starts this month, right?
 - iii. Jack: Yes, it's the end of this month as we wrap up the "D" Release.
 - iv. Rittwik: We should push the EC to prioritize FM and PM data models and information modes ahead of the other MVPs. Is that a good enough message?
 - v. Jack: Is that what will be done in the SMO compared to the other modules?
 - vi. David Kinsey: It's not only in the SMO. There are more elements to work together.
 - vii. Jack: We just need a better way to track activities across the modules. Challenge is how to keep interest in the other topics as well. Regarding Slicing, is that creating a module in the SMO or somewhere else?
 - viii. Rittwik: There are 3 components we need to create. I don't think we can get there that quickly. We just want to construct basic slices.
 - ix. Mahesh: Implementation has to happen on each of the network elements.
 - x. Rittwik: Probably we can leverage some of what ONAP has done. That's just a thought. We are discussing use cases we can think of. Keep in mind that a lot of design discussions are still happening.
 - xi. Jack: Issue is lining up stuff in SMO and other resources to work on?
 - xii. Rittwik: This is our request to O-RAN Alliance.
 - xiii. Jack: For the work that got to be done across the OSC, has there been discussion?
 - xiv. Rittwik: We just had an initial discussion last week.
 - xv. David Kinsey: We haven't had a full conversation. We will show only the 2 elements. All depends on what we can do. We don't know. We need to have a clear definition of scope. There hasn't been a lot of definitions coming from O-RAN.
 - xvi. Rittwik: Request is Network Slicing is on the table or should we do design work first.
 - xvii. John Keeney: I don't know if we want to develop whole new NSMF. We will have to talk about that.
 - xviii. Rittwik: We just had an initial discussion. Back to earlier question, what is MVP's relation to OSC. Do we need to validate all the specs coming out as part of MVP package? Does the OSC certify and budget? My suggestion was to let that OSC check it first as a gating factor then release it as a package. We need your guidance.
 - xix. Jack: Any thoughts or opinions?
 - xx. John-Paul: It's a good initiative. Challenges are to get alignment and to coordinate across WGs. Maybe we should pick subsets and build piece by piece.
 - xxi. David Kinsey: That's what we've been asking for. Take the simple stuff first, not focus on new features. Design has to be more mature.
 - xxii. John-Paul: I agree. MVP-C can set certain use cases and features for the release, then it comes down to WGs with the priority set and the resources available.
 - xxiii. David Kinsey: I agree. We couldn't develop, certify or demonstrate actual features without definition. That's a limitation of our gating function.
 - xxiv. Jack: How do we progress? MVP is a much broader program. Challenge is how we advance things. O-CU is going to be a more major obstacle. We don't have to follow whole MVP, but we need to have identifiable progress. It's a challenge, but let's continue dialogue. We need to make significant progress in "D" Release. Is RSAC aligned on deliverables for "E" Release?
 - xxv. David Kinsey: We haven't had specific discussions yet.
 - xxvi. Rittwik: For tomorrow, let's focus on "D" Release and just give them a tease for "E" Release.
 - xxvii. Mahesh: We have to get basic workings. Near-RT RIC, O-DU and O-RU are existing and some of them are able to communicate with SMO.
 - xxviii. Jack: O-RU is using M-plane from O-DU. Do we have the implementation?
 - xxix. David Kinsey: O-DU Low doesn't have a NETCONF client yet. The other aspect is hybrid mode.
 - xxx. Jack: Any progress on FHGW?
 - xxxi. Rittwik: Viavi has shipped TM500. Nokia IXR is being prepared.
 - b. O-RAN White paper version 3:
 - i. Jack: Activity is going on. Just to make sure wider community gets visibility.
 - ii. David Kinsey: There was a thread and a dialogue.
 - iii. Jack: Jinri owns that action item. Send him a note.
 - c. **Action Point:** All to review the SMO Feature Package(s) currently under discussion by the MVP-C.
 - i. Jack: Currently under discussion. It is important to align on SMO and where the resources coming from. There are challenges. MVP-C may be much more ambitious than we can take on.
 - d. **Action Point:** All to consider engaging with WG10 for the IM / DM modelling tool chain discussion.
 - e. **Action Point:** John Murray to work with O-RAN SFG to create a procedure for reporting bugs found during security badging in OSC.
- 8. Old business and Status of Open Action Items.
 - a. Update from TIFG meeting with OSC.
 - i. **Action Point:** All to TOC members to consider working with TIFG on an ongoing basis to represent OSC. William DIEGO offered to support this activity with help from others.
 - b. **Action Point:** TOC members and whole community to indicate what do we really need to deliver in D- and E-releases to be successful and useful?
 - c. Collaboration between OSC and O-RAN Alliance on an SMO project definition.
 - d. 5G Super Blueprint status - tabled for D and E, will be reevaluated for F release
 - e. Old business: CII badging
- 9. Standing Agenda Items (Brief Status of Ongoing Activities)
 - a. Release Manager Trishan de Lanerolle /Release Planning: Weekly TOC Scheduling
 - b. D Release Timelin
 - c. user-59b16 Requirements Software Architecture Committee
 - i. **Action Point:** All PTLs to amend the OSC D highlights section for their project by May 26th
 - d. Integration and Test (PTL needed)

- i. **Action Point:** [user-59b16](#) will reach out from SMO to identify any support which can be offered. PTLs are also key to this.
- ii. **Action Point:** Adding PTLs as committers to the INT project could help to expedite the integration and verification progress for OSC D release. PTLs to follow up with [Trishan de Lanerolle](#) providing LF IDs to be added to the relevant YAML file.
 - 1. Trishan: I have made the request and 5 PTLs have received LF IDs.
 - 2. Mahesh: Getting OSC lab integration effort is important.
 - 3. John Keeney: Response rate from LF is slow. We are supposed to be releasing it next week.
 - 4. Trishan: I'll chase it down. SMO is missing.
 - 5. Jack: Who would be given that role?
 - 6. Mahesh: I'll provide that.
 - 7. John Keeney: I know another ticket which has been open for several weeks to fix some information in the analytics dashboard.
 - 8. Trishan: It wasn't prioritized. Let's follow it up off-line.
 - 9. Jack: It is important. We need to clean up.
- e. CII badging:
 - i. Jack: We talked about CII badging last week.
 - ii. Mahesh: I can try to add a few items to show some progress.
 - iii. Jack: What do we have to do to close O-DU High and Low?
 - iv. Sphoorthi: I've been working on it.
 - v. Jack: Any major blocker?
 - vi. Sphoorthi: Nothing. We will provide update.
 - vii. Jack: We need to wrap up.
- f. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [Mahesh Jethanandani](#) Service Management and Orchestration (SMO)
 - ii. [John Keeney](#) Non-Real Time RIC (RAN Intelligent Controller) (NONRTRIC)
 - iii. [Matti Hiltunen](#) RIC Applications (RICAPP)
 - iv. [Thoralf Czichy](#) RIC Platform (RIC)
 - v. [@gusu](#) O-RAN Centralized Unit (OCU)
 - vi. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIG)
 - vii. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
 - viii. [Martin Skorupski](#) Operations and Maintenance (OAM)
 - ix. [Alex Stancu](#) Simulations (SIM)
 - x. [Xiaohua Zhang](#) Infrastructure (INF)
 - xi. [weichen ni](#) Documentation (DOC)
 - xii. (TBD) O-RAN Radio Unit (ORU)
- 10. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items
- 11. Planning for Next Meeting
- 12. Any Other Business (AOB)
- 13. Meeting Summary (resolutions, new action items, etc.)

2021 05 26

Recording: [TOC 20210526](#)

Agenda

1. Call for Scribe (minutes owner): John-Paul Lane
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x	David Kinsey	
China Mobile	Jinri Huang Co-Chair		James Li	x
Deutsche Telekom	David Streibl	x	Ondej Hudousek	
Ericsson	John-Paul Lane	x	John Keeney	
NTT DOCOMO	Masafumi Masuda	x	Anil Umesh	
Nokia	Juha Oravainen	x	Thoralf Czichy	
Orange	William Diego	x	Vincent Danno	
Radisys	Ganesh Shenbagaraman	x	Sachin Srivastava	
Wind River	Xiaohua Zhang		Jackie Huang	x

*Quorum: 50% or more of total TOC voting members unless excluded due to attendance.

3. Review and Agree to Minutes of Previous Meeting
 - a. **Decision:** For the 05/19/2021 TOC meeting minutes, Motion by [JP Lane](#), seconded by [user-2057e](#). Motion passed.
4. Review of Today's Agenda
 - a. Rittwik raised O-DU low and high integration for today's agenda.
5. Release Votes and Approval.
 - a. John Keeney: I'd like to request approval to edit certain SonarQube rules. Common set of SonarQube quality rules after each commit, report is then generated with list of bugs, code standards etc. Some of these rules are overly restrictive and inappropriate. More details included in John's [email](#).

- b. Trishan: It would be good to have a process for administering changes. Changing at project level could get messy.
 - c. David: Agree with Trishan. Maybe disable the reporting function instead of editing the rules?
 - d. Jack: This would normally be done in coordination with the INT team (and Trishan) to ensure there is commonality & consistency with the approach across all projects. Unfortunately, the INT team has been under-resourced. Can we amend the motion to address the specific SonarQube rule ('Java var') and then consider a process going forward?
 - e. John K: Yes, that is acceptable. I raise a motion to disable specific SonarQube rule around 'Java var'.
 - f. John K: This would be for Non-RT RIC, SIM and Portal projects.
 - g. Jack: Is there any reason why this would not apply to all projects?
 - h. John K: I am not aware of any blocker to this but PTLs might want to comment.
 - i. John K makes motion to change specific rule. David seconded. Motion passed.
 - j. Jack: Motion passed for this specific rule. Need to discuss how to handle going forward.
 - k. Trishan: Please include me on the LF ticket, John.
 - l. John K: Yes, will do.
6. Copyright update
- a. Jack: Copyright is completed. Focusing on language and wording to enable IPR discussions with O-RAN board. No proposed changes to licensing or the process around the license. On track. Expectation is that this will be voted on the upcoming O-RAN board meeting.
7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
- a. Jinri: Major focus still on virtual F2F meeting. Sent link to wiki page to email reflector. **Action point:** Rittwik to post link to F2F meeting schedule. Trishan: can we get a version of the osc sessions posted on osc wiki. non-member participants in the osc can't access the oran alliance wiki
 - b. Jinri: Preparation continues for white paper input from OSC.
 - c. Jinri: TSC leadership asked for update on the INT project resourcing issues (no PTL assigned at this time).
 - d. Jack: I got a call and I have talked with several EC members about this issue. There has been some progress - James from CMCC is getting more involved with the test lab. Discussed with Rittwik & Mahesh that as SMO expands, another resource could be found to support the INT activity. Felix can support / participate but we are still looking for someone to step in to the INT PTL role to coordinate across the projects. We are at the point where we need to get ready for the OSC release (security scans etc.).
 - e. Jinri: Haseeb has raised a question over email. When you get some time, can you have a look at this please?
 - f. Mahesh: Yes, we are reviewing internally and will respond shortly.
 - g. Jack: There is a lot of SMO conversation outside of OSC / O-RAN Alliance. Encourage all in OSC to get involved and support OSC SMO project in providing clear guidance on what OSC SMO should / could be.
 - h. **Action Point:** RSAC co-chairs ([user-59b16](#) & [David Kinsey](#)) and PTLs to follow-up with [Jinri Huang](#) on suggestions for O-RAN Virtual F2F agenda items. Target date for submissions 05/14/2021.
 - i. **Action point:** [Jinri Huang](#) / [James Li](#) to share white paper and clarify process for making contributions.
 - j. **Action Point:** [Jinri Huang](#) to follow up with RSAC and PTLs on suggested OSC input into version 3 of O-RAN White Paper.
 - k. **Action Point:** All to review the SMO Feature Package(s) currently under discussion by the MVP-C.
 - l. **Action Point:** All to consider engaging with WG10 for the IM / DM modelling tool chain discussion.
 - m. **Action Point:** [John Murray](#) to work with O-RAN SFG to create a procedure for reporting bugs found during security badging in OSC.
8. Old business and Status of Open Action Items.
- a. Update from TIFG meeting with OSC.
 - i. William is supporting this activity on a limited time availability.
 - ii. **Action Point:** All to TOC members to consider working with TIFG on an ongoing basis to represent OSC. [William DIEGO](#) offered to support this activity with help from others.
 - b. **Action Point:** TOC members and whole community to indicate what do we really need to deliver in D- and E-releases to be successful and useful?
 - c. Collaboration between OSC and O-RAN Alliance on an SMO project definition.
 - i. Jack: Who owns the MVP in the O-RAN Alliance?
 - ii. Rittwik: MVP-C co-chairs but there is a lack of dedicated SMO responsible(s) in the Alliance.
 - d. 5G Super Blueprint status - tabled for D and E, will be reevaluated for F release
 - e. Old business: CII badging
 - i. Jack: We are at the stage where all projects should hit 100% for CII badging.
 - ii. SMO: We know this project has certain challenges which will take us past our deadline.
 - iii. RICAPP: [Matti Hiltunen](#) will look at this over the coming days.
 - iv. Near RT RIC: Great job. Passing.
 - v. O-CU: No active code. Only a test fixture.
 - vi. O-DU (High): 81%. Marked incorrectly as 'Incomplete' in the wiki. [Sachin Srivastava](#) to follow up with Trishan to update.
 - vii. O-DU (Low): Progress looks good. [Zhimin Yuan](#) is working to close out the remaining issues.
 - viii. OAM: [Alex Stancu](#) to talk with [Martin Skorupski](#) to close out the remaining issues.
 - ix. SIM: Passing.
 - x. INFRA: [Jackie Huang](#) to follow up with [Xiaohua Zhang](#) and team to get the remaining issues closed out. Will follow-up with Trishan offline for additional support.
 - xi. Non-RT RIC:
9. Standing Agenda Items (Brief Status of Ongoing Activities)
- a. Release Manager [Trishan de Lanerolle](#) / [Release Planning](#): Weekly TOC Scheduling
 - b. [D Release Timelin](#)
 - c. [user-59b16](#) Requirements Software Architecture Committee
 - i. Jack: Do you have any sense on how the MVP will influence our OSC E requirements?
 - ii. Dave: Not at this stage. MVP is working at a higher level and we need more detailed information. We also need the basics in place before we can discuss advanced use case support.
 - iii. Rittwik: Agree. Raised this issue with Hank. Need to get the basics in place before we look at more advanced use cases. For SMO, our ask is to get the minimum needed for FM, PM and O1 across all functions in the O-RAN architecture. Which WG should coordinate SMO top down perspective?
 - iv. Jack: Can we put together a capabilities list per project so we can identify gaps and track progress towards achieving delivery of the building blocks?
 - v. Rittwik: If there is consensus in this group to focus on the basics then we can work to deliver the basics in OSC.
 - vi. David: Yes, once we have identified the capabilities we can track technical debt across the projects.
 - vii. Mahesh: I would add CM to the list:
 - viii. David: Absolutely, FCAPS is the ask here.

- ix. Jack: If we had a couple of slides it would help to focus attention.
 - x. Rittwik: Yes.
 - xi. Jack: There is pressure to maintain interest outside of this group. We can help maintain focus by identifying higher level uses which demonstrates value to the overall industry. However, the basics must be delivered. Without this, it is hard to generate and keep external interest.
 - xii. Jinri: Do you wish to bring to O-RAN TSC? Next meeting in Friday next week, then 2 weeks afterwards.
 - xiii. Jack: Next week may be too soon.
 - xiv. Rittwik: Could discuss at the O-RAN Virtual F2F?
 - xv. Jack: Introduce the topic in the F2F and then go in more detail to a subsequent TSC meeting.
 - xvi. Rittwik: Can O-DU (High) and O-DU (Low) engage on testing?
 - xvii. Zhimin: Yes, we are talking with Alex Han to try to progress this issue.
 - xviii. Jack: This is one of the blocking issues so it would be great if we could get this closed out.
 - xix. **Action Point:** All PTLs to amend the OSC [D highlights section](#) for their project by May 26th.
 - 1. Near-RT RIC: done (highlights sections includes what is done; status section includes what has been dropped from original plans)
- d. Integration and Test (*PTL needed*)
- i. Felix: Who can help with the OSC D release readout?
 - ii. Jack: We need this by end of June. Each PTL has been updating the OSC D highlights for their projects. We can look to re-use this list.
 - iii. Felix: I can coordinate with PTLs to prepare instructions for E2E testing which can also be included in the OSC D release readout.
 - iv. Jack: We should only focus on what has been delivered for OSC release. The highlights from PTLs can help guide this.
 - v. **Action Point:** [user-59b16](#) will reach out from SMO to identify any support which can be offered. PTLs are also key to this.
 - vi. **Action Point:** Adding PTLs as committers to the INT project could help to expedite the integration and verification progress for OSC D release. PTLs to follow up with [Trishan de Lanerolle](#) providing LF IDs to be added to the relevant YAML file.
- e. Report out from PTL: Stand-Up & Report Out on Blockers
- i. [Mahesh Jethanandani](#) Service Management and Orchestration (SMO)
 - ii. [John Keeney](#) Non-Real Time RIC (RAN Intelligent Controller) (NONRTRIC)
 - iii. [Matti Hiltunen](#) RIC Applications (RICAPP)
 - iv. [Thoralf Czichy](#) RIC Platform (RIC)
 - v. [@gusu](#) O-RAN Centralized Unit (OCU)
 - vi. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIG)
 - vii. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
 - viii. [Martin Skorupski](#) Operations and Maintenance (OAM)
 - ix. [Alex Stancu](#) Simulations (SIM)
 - x. [Xiaohua Zhang](#) Infrastructure (INF)
 - xi. [weichen ni](#) Documentation (DOC)
 - xii. (TBD) O-RAN Radio Unit (ORU)
10. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items
11. Planning for Next Meeting
12. Any Other Business (AOB)
13. Meeting Summary (resolutions, new action items, etc.)
- a. **Motion passed** to allow editing of the SonarQube Java var rule for the Non-RT RIC, SIM and OAM projects. **Action Point:** [John Keeney](#) to follow up with Trishan to disable the rule. Need to agree a process for handling these types of rules going forward.
 - b. **Action point:** [user-59b16](#) to post link to OSC sessions at the upcoming O-RAN vF2F meeting schedule. Trishan asked if we can get a version of the OSC sessions posted on OSC wiki. Not all OSC participants can access O-RAN alliance wiki.
 - c. **Action Point:** All PTLs (except SMO) to ensure the CII badging is at 100% in time for the OSC D release.

2021 05 19

Recording: [TOC 20210519](#)

Agenda

1. Call for Scribe (minutes owner): John-Paul Lane
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x	David Kinsey	
China Mobile	Jinri Huang Co-Chair		James Li	x
Deutsche Telekom	David Streibl		Ondej Hudousek	
Ericsson	John-Paul Lane	x	John Keeney	
NTT DOCOMO	Masafumi Masuda	x	Anil Umesh	
Nokia	Juha Oravainen	x	Thoralf Czichy	
Orange	William Diego	x	Vincent Danno	
Radisys	Ganesh Shenbagaraman	x	Sachin Srivastava	
Wind River	Xiaohua Zhang	x	Jackie Huang	

*Quorum: 50% or more of total TOC voting members unless excluded due to attendance.

3. Review and Agree to Minutes of Previous Meeting
 - a. **Decision:** For the 05/12/2021 TOC meeting minutes, Motion by John-Paul, seconded by Ganesh. Motion passed.
4. Review of Today's Agenda
 - a. Trishan: Testing framework project would like to remove certain files. Added to release votes and approval.
 - b. John K: Swami (SPOC between ONAP and OSC) has stepped down from that role. Process ongoing to recruit representative. Could someone from TOC / RSAC act as representative back to ONAP? Add to O-RAN related business. William can try to help liaising with ONAP. Not as SPOC but can assist with others.
5. Release Votes and Approval.
 - a. Jack: We got a request from the test framework to remove files which shouldn't be part of open source.
 - b. Trishan: There are 3 config files which were accidentally published into the Gerrit repo. Looking for permission to purge them from the repo. Impact is minimal as OTF is not an architectural component in OSC and the files are not actively used by the OSC software components.
 - c. Jack: I make a motion to remove these files. Jinri: Seconded. No objections. Motion passed.
6. Copyright update
 - a. No meeting last week due to public holiday in Europe. Meeting scheduled this week to finalise FAQs and other issues of process. Working towards getting this proposal approved at the upcoming O-RAN board meeting.
 - b. **Action Point:** Each company legal team should review the license and provide feedback through TOC.
7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 - a. Jinri: Mahesh has requested to include SMO session at upcoming O-RAN vF2F.
 - b. Jinri: Working on OSC inputs to O-RAN white paper. Currently working on draft and will send it to TOC for review and comments. May 27th is deadline for OSC input.
 - c. Jack: Anything which you need for vF2F?
 - d. Rittwik: We would like to include an agenda item for OSC E release. Tie it with the OSC D release update. 1 hour total should suffice.
 - e. Jinri: I will include.
 - f. Xiaohua: Does OSC wish to consider submissions for O-RAN Plugfest?
 - g. Jack: Submissions comes from company representatives. OSC has faced challenges with the integration activity in D release. Need to see if there are any sponsors to drive contributions into plugfest.
 - h. Tracy: Third plugfest is coming up in November. There will be demonstrations of the latest OSC release (or even pre-release software). Still gathering a list of contributions for November. PoC plugfest is early November so it doesn't align with the formal OSC E release but that should not be a blocker to make demos. Sophisticated E2E behaviour and use cases building on previous plugfest topics of O1, A1 etc.
 - i. Rittwik: For MWC Barcelona we are trying to put something together for traffic simulators, anomaly detection etc. We could re-use / extend some of this work for November's plugfest. Is there something we should do for November now?
 - j. Tracy: It's still early in the process. Currently looking for interested parties. Email containing more information will be distributed by the O-RAN TIFG soon.
 - k. Juha: Here is a [Link](#) to plugfest timeline
 - l. Rittwik: Can someone please distribute the white paper so we can understand the input from OSC?
 - m. Jack: **Action point:** James to share white paper and clarify process for making contributions.
 - n. **Action Point:** RSAC co-chairs and PTLs to follow-up with Jinri on suggestions for O-RAN Virtual F2F agenda items. Target date for submissions 05/14/2021.
 - o. **Action Point:** Jinri to follow up with RSAC and PTLs on suggested OSC input into version 3 of O-RAN White Paper.
 - p. **Action Point:** All to review the SMO Feature Package(s) currently under discussion by the MVP-C.
 - i. Rittwik: We've been discussing in RSAC. Reviewing IM/DM models work to date from WG10. Trying to understand what is needed for SMO models from the November. Train Tracy, myself, Martin, Dave, Mahesh are keeping an eye on trying to identify minimum requirement for SMO. It's important that each WG contributes some of the models to stitch together the end to end view. May be challenging to get agreement across WGs, however we continue to engage in the discussion.
 - q. **Action Point:** All to consider engaging with WG10 for the IM / DM modelling tool chain discussion.
 - i. Rittwik: We would like a badging process for IM/DM models which will allow each component in OSC to build on top of usable models from the Alliance.
 - ii. Tracy: The model is contribution driven. We need each WG and OSC to engage in the process.
 - iii. Jack: This links back to the O-RAN copyright discussions. I expect OSC to establish a repo to hold models which will be used by OSC under the terms of the O-RAN Alliance copyright license. OSC will have permission to copy the models and modify them. O-RAN Alliance will have the right to take any modifications to the O-RAN specifications back to the Alliance. Of course, 3GPP models are a different issue...for now.
 - iv. Tracy: All O-RAN models, up to now, have been verified / validated with OSC releases within the O-RAN PoC / plugfest.
 - v. Rittwik: We would like to formalise this verification / validation to show value from the OSC E release.
 - r. **Action Point:** Jack to work with O-RAN SFG to create a procedure for reporting bugs found during security badging in OSC.
8. Old business and Status of Open Action Items.
 - a. Update from TIFG meeting with OSC.
 - i. **Action Point:** Request for a TOC member to work with TIFG on an ongoing basis to represent OSC.
 - ii. Jack: TIFG is not really considering OSC in its plans. It is more WG focused for working through its verification approaches. I think OSC has an important role in interoperability. OSC should be the normalised "standard" for some of this interoperability. We need someone from TOC to be more involved in that activity.
 - iii. William: I might be able to give some support to this activity. However, I would need support from others in the TOC.
 - iv. Jack: That's good. We would like to broaden the involvement of the TOC members in these types of activities. Thank-you, William, for joining that discussion.
 - b. **Action Point: TOC members and whole community** to indicate what do we really need to deliver in D- and E-releases to be successful and useful?
 - i. Jack: Bring things to RSAC which promotes OSC value to operators. More complete functionality is a focus. Getting the stack more operational is a must. Please engage with RSAC on any requirements / models / ideas you may have which brings value to OSC.
 - c. Collaboration between OSC and O-RAN Alliance on an SMO project definition.
 - i. Jack: Covered by Rittwik above.
 - d. 5G Super Blueprint status - tabled for D and E, will be reevaluated for F release
 - e. Old business: CII badging

- i. Jack: This has been discussed in recent weeks. Expectation is that all teams (except SMO) meets CII badging goals in OSC D.
- 9. Standing Agenda Items (Brief Status of Ongoing Activities)
 - a. Release Manager [Trishan de Lanerolle](#) /[Release Planning](#): Weekly TOC Scheduling
 - b. [D Release Timelin](#)
 - c. [user-59b16](#) Requirements Software Architecture Committee
 - i. Rittwik: Started to put some items together for E release. Need to understand full picture for OSC D progress so we can include at the vF2F. Can PTLs update the regular release wiki to summarise their projects'
 - ii. Jack: Do all PTLs know where to publish OSC D status?
 - iii. Rittwik: Go to Releases - D Release - [link](#).
 - iv. Jack: **Action Point:** All PTLs to amend the OSC D highlights section for their project by May 26th.
 - v. Jack: The OSC E release requirements planning should be kicked off in early July. We need to know where our gaps are in capabilities. I will publish an E release calendar.
 - d. Integration and Test (*PTL needed*)
 - i. Jack: Felix has kindly offered some time to help us over the OSC D release line. Will work with James. **Action Point:** Rittwik will reach out from SMO to identify any support which can be offered. PTLs are also key to this.
 - ii. John K: Could the PTLs be made committers in INT project to expedite the process?
 - iii. Jack: Any concerns over this?
 - iv. Rittwik: This would definitely help to expedite matters.
 - v. Jack: How do we add PTLs to committer for INT?
 - vi. Trishan: There is a process to update the YAML file with the names and LF IDs of the interested parties. Send me the names and I will follow-up.
 - e. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [Mahesh Jethanandani](#) Service Management and Orchestration (SMO)
 - ii. [John Keeney](#) Non-Real Time RIC (RAN Intelligent Controller) (NONRTRIC)
 - iii. [Matti Hiltunen](#) RIC Applications (RICAPP)
 - iv. [Thoralf Czichy](#) RIC Platform (RIC)
 - v. [@gusu](#) O-RAN Centralized Unit (OCU)
 - vi. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIGH)
 - vii. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
 - viii. [Martin Skorupski](#) Operations and Maintenance (OAM)
 - ix. [Alex Stancu](#) Simulations (SIM)
 - x. [Xiaohua Zhang](#) Infrastructure (INF)
 - xi. [weichen ni](#) Documentation (DOC)
 - xii. (TBD) O-RAN Radio Unit (ORU)
- 10. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items
- 11. Planning for Next Meeting
- 12. Any Other Business (AOB)
 - a. Trishan: New project / seed code guidelines are lacking on the wiki. I updated the OSC Wiki with [guidelines](#) (from ONAP). TOC members, please review the material and revert with any feedback.
- 13. Meeting Summary (resolutions, new action items, etc.)
 - a. **Action Point:** Each company legal team should review the O-RAN Software license and provide feedback through TOC.
 - b. **Action point:** James to share O-RAN white paper with the TOC and clarify process for suggesting contributions.
 - c. **Action Point:** All PTLs to amend the OSC D highlights section for their project by May 26th.
 - d. **Action Point:** Rittwik will reach out from OSC SMO to identify any support which can be offered to the INT project. PTLs also central to integration for OSC D release.

2021 05 12

Recording: [TOC 20210512](#)

Agenda

1. Call for Scribe (minutes owner): John-Paul Lane
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x	David Kinsey	
China Mobile	Jinri Huang Co-Chair		James Li	x
Deutsche Telekom	David Streibl	x	Ondej Hudousek	
Ericsson	John-Paul Lane	x	John Keeney	
NTT DOCOMO	Masafumi Masuda	x	Anil Umesh	
Nokia	Juha Oravainen	x	Thoralf Czichy	
Orange	William Diego		Vincent Danno	
Radisys	Ganesh Shenbagaraman		Sachin Srivastava	
Wind River	Xiaohua Zhang		Jackie Huang	

*Quorum: 50% or more of total TOC voting members unless excluded due to attendance.

3. Review and Agree to Minutes of Previous Meeting
 - a. **Decision:** For the 05/05/2021 TOC meeting minutes, Motion by John-Paul, seconded by Jinri. Motion passed.
4. Review of Today's Agenda
5. Release Votes and Approval.
6. Copyright update
 - a. Jack: Last week's copyright meeting worked on FAQ to produce more clarity. No updates to the license itself. Next steps are to present to O-RAN EC and Board. Also, some are interested in presenting to ETSI. O-RAN Alliance will follow a process for releasing specifications under this license. OSC will create a repo under OSCP for code contributed under this license.
 - b. Jack: Just want to provide some background. The TOC is responsible for two separate activities each with their own unique charters - 1) The OSC under LF and; 2) the O-RAN Specification Code Project under O-RAN. Each activity has its own license (OSC uses Apache 2.0 and OSCP uses an O-RAN license). The new O-RAN Software Copyright license comes under OSCP.
 - c. Matti: Does O-RAN have permission to publish 3GPP software e.g. ASN.1 code?
 - d. Jack: Not yet. They are working on trying to get agreement with ETSI 3GPP. This will take a little longer to discuss and conclude.
 - e. Jack: One of the first things we will have to do is create a new repo under OSCP. The TOC will be asked to approve this process once O-RAN Alliance signs off.
 - f. John-Paul: Will Friday's O-RAN copyright meeting proceed as planned? It is a public holiday in many European countries which may affect participation.
 - g. Jack: I wasn't aware it was a public holiday. I will talk with Hank and see if we push the invitation to next week.
 - h. Juha: Is it ok to have a mix of code repos under different licenses? Does it cause any issues?
 - i. Jack: It will require some discipline from contribution teams to ensure the appropriate license has been copied over and the process has been followed. In terms of combining different licenses in the code, the general principle is that the most restrictive license applies.
 - j. **Action Point:** Each company legal team should review the license and provide feedback through TOC.
7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 - a. Jinri: There are a few things to share:
 - i. Jinri gave an OSC report to TSC last Friday. May require some follow up, especially in relation to AMD interest.
 - ii. Jinri reported the proposed TOC membership structure to O-RAN EC. The EC has canvassed interest from Reliance Jio and TIM about replacing Verizon on the TOC. Reliance Jio are not in a position to explore at the moment.
 - iii. The next O-RAN Virtual F2F meeting is scheduled for June. At last Friday's TSC call, the WG co-chairs were asked to consider a list of cross-WG topics for discussion at the F2F. OSC will have at least one slot at F2F. Looking to RSAC co-chairs and PTLs for suggested agenda items. One suggested agenda item is to present status of OSC D release as well as the current planning activity for OSC E. **Action Point:** RSAC co-chairs and PTLs to follow-up offline with suggestions to Jinri. First round of feedback is needed by end of this week (05/14/2021).
 - iv. Three years ago O-RAN published the first version of its white paper. Last year, version 2 of the white paper was released where the content was quite different (led by UCTG and WG1). Now, version 3 of white paper (still led by UCTG) shall be created with a view to publishing during MWC Barcelona timeframe (internal O-RAN approval end June, publish early July). TSC puts a lot of importance on this version of the white paper. Content will not simply focus on use cases or deployment scenarios. MVP-C, open source and test & integration will also be included. Purpose of the paper is to demonstrate O-RAN progression to the overall industry. OSC needs to provide input to this white paper. **Action Point:** Jinri will follow up with RSAC and PTLs on suggestions for OSC input.
 - v. Juha: Is white paper draft (version 3) visible in O-RAN Alliance?
 - vi. Jinri: Not yet. I will distribute preliminary version shortly.
 - b. **Action Point:** All to review the SMO Feature Package(s) currently under discussion by the MVP-C.
 - i. Rittwik: There will be a meeting later today with the MVP-C to discuss SMO. We will ask the MVP team to focus on specifying feature packages for O1 YANG models across all WGs. Getting a working set of O1 models from every WG is perhaps THE most important activity for OSC SMO. The target is to run models through pyang validator by November. From O2 perspective, cloud discovery and registration should be available in time for the July train. These are the minimum set of SMO activities we would like to agree with Alliance.
 - ii. Jack: Functional O1 and O2 interfaces are critical for SMO. I would like to see something on data management too. So, you have your basic communications and your basic data management components in place. Then, you can build your use cases on top. As a question, how do you gauge success in terms of O1 model coverage? Need some measure of success.
 - iii. Rittwik: Agree. We will approach this in phases. This needs to come from the individual working groups in the O-RAN Alliance. The specification needs to be usable by OSC.
 - iv. Tracy: How soon do you need November train models to deliver to SMO for OSC E?
 - v. Rittwik: September is the deadline OSC SMO is working towards.
 - vi. Tracy: Quality of model content is driven by engagement from O-RAN members.
 - vii. Rittwik: Good models are 'a must'. Sometimes we think we have good content but then we try to integrate E2E and find that it doesn't stand up. It's important that we agree an E2E view and plan for model deliverables from WGs.
 - c. **Action Point:** All to consider engaging with WG10 for the IM / DM modelling tool chain discussion.
 - d. **Action Point:** Jinri to include an agenda item on the O-RAN Alliance TSC meeting for reporting security badging bugs back to the SFG.
 - i. Jinri: This item was reported to the O-RAN TSC last Friday. A further meeting with O-RAN EC needed.
 - ii. Jack: Also need to work with SFG to put in place a procedure for reporting bugs found during the security badging activity in OSC.
 - iii. Jinri: Can some of the TOC membership take an action to drive this?
 - iv. Jack: I'll take this **action point**.
8. Old business and Status of Open Action Items.
 - a. Update from TIFG meeting with OSC.
 - i. Jack: TIFG meeting 10am EST 05/05/2021. The main discussion was how OSC could / should participate in the TIFG activities. TIFG is currently busy with establishing criteria for OTICs and badging. It is requesting input from the WGs for these items. Participation from OSC in these activities was raised. Ideally, OSC should have someone to act as point of contact here. **Action Point:** Request for a TOC member to work with TIFG on an ongoing basis to represent OSC. Please think about it and I will raise again next week.
 - ii. Tracy: Is there also interest in seeing if OTIC site could double up as an integration & testing site for OSC?
 - iii. Jack: I just need someone to represent OSC in these types of discussions.

- iv. Jack: I also talked to Chi Lin (CMCC) on some activities they are doing. CMCC is looking at setting up a lab and will look to bring some resources to support the integration and test activity in OSC. More people are needed in the integration and test processes to pull together OSC releases.
 - v. Tracy: Is this CMCC lab being used by others outside of CMCC?
 - vi. James: No. It is something similar to the OSC community lab.
 - vii. James: We are looking for a developer who can give some time to support this activity.
 - viii. Jack: This is a small but much needed step. More continued participation is needed.
- b. **Action Point: TOC members and whole community** to indicate what do we really need to deliver in D- and E-releases to be successful and useful?
 - i. Jack: OSC E release is the focus. The virtual F2F should provide some direction and input. However, we need OSC membership involvement to make suggestions about areas where OSC can bring value.
- c. Jinri: to take the **Action Point** to prepare a briefing report for TOC membership renewal
 - i. Jinri has presented to TSC. Reliance Jio and TIM were approached about the vacant service provider position on the TOC. Verizon has also expressed their desire to retain / regain their TOC seat. Follow up meeting to be scheduled.
- d. Collaboration between OSC and O-RAN Alliance on an SMO project definition.
 - i. The status of the MVP-C plans for SMO Feature Package(s) was presented above by Rittwik.
- e. 5G Super Blueprint status - tabled for D and E, will be reevaluated for F release
- f. Old business: CII badging
 - i. Jack: You sent an email about progress of the OSC SMO badging, Mahesh.
 - ii. Mahesh: OSC D is the first full release which SMO has gone through. The teams working on SMO are based in India and they have been affected by the serious Covid situation there. This has impacted the team's ability to deliver on the badging in OSC D. Badging will be an ongoing task for SMO spanning multiple OSC releases.
 - iii. Jack: We are all concerned about the public health situation in India. Safety of people should be the main priority. We will work through the badging for SMO on a multi-release basis.
 - iv. Trishan: The badging table in the [Best Practices](#) section of the OSC wiki is updated in real time. Updates to CII Badge Status are reflected in the wiki as soon as the underlying code has been processed.
 - v. Jack: Goal is that all projects (with the exception of SMO) should be completing their CII badging process and passing by June 4th.
- 9. Standing Agenda Items (Brief Status of Ongoing Activities)
 - a. Release Manager [Trishan de Lanerolle](#) /[Release Planning](#): Weekly TOC Scheduling
 - b. [D Release Timelin](#)
 - c. [user-59b16](#) Requirements Software Architecture Committee
 - d. Integration and Test (*PTL needed*)
 - e. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [Mahesh Jethanandani](#) Service Management and Orchestration (SMO)
 - ii. [John Keeney](#) Non-Real Time RIC (RAN Intelligent Controller) (NONRTRIC)
 - iii. [Matti Hiltunen](#) RIC Applications (RICAPP)
 - iv. [Thoralf Czichy](#) RIC Platform (RIC)
 - v. [@gusu](#) O-RAN Centralized Unit (OCU)
 - vi. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIG)
 - vii. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
 - viii. [Martin Skorupski](#) Operations and Maintenance (OAM)
 - ix. [Alex Stancu](#) Simulations (SIM)
 - x. [Xiaohua Zhang](#) Infrastructure (INF)
 - xi. [weichen ni](#) Documentation (DOC)
 - xii. (TBD) O-RAN Radio Unit (ORU)
- 10. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items.
 - a. Verizon expressed an interest in retaining their TOC seat. Follow up meeting to be scheduled to discuss.
 - b. Viavi expressed an interest in attaining a TOC seat. Jack & Jinri explained the process.
- 11. Planning for Next Meeting
- 12. Any Other Business (AOB)
- 13. Meeting Summary (resolutions, new action items, etc.)
 - a. **Action Point:** RSAC co-chairs and PTLs to follow-up with Jinri on suggested OSC agenda items for the ORAN virtual F2F. First round of feedback is needed by end of this week (05/14/2021).
 - b. **Action Point:** Jinri will follow up with RSAC and PTLs on suggestions for OSC input into version 3 of O-RAN white paper.
 - c. **Action Point:** Jack to follow up with O-RAN SFG (Security Focus Group) on the process for reporting bugs found in OSC CII badging activity.
 - d. **Action Point:** All - consider the request for a TOC member to work with TIFG on an ongoing basis to represent OSC.

2021 05 05

Recording: [TOC 20210505](#)

Agenda

1. Call for Scribe (minutes owner): John-Paul Lane
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x	David Kinsey	
China Mobile	Jinri Huang Co-Chair	x	James Li	

Deutsche Telekom	David Streibl	x	Ondej Hudousek	
Ericsson	John-Paul Lane	x	John Keeney	
NTT DOCOMO	Masafumi Masuda	x	Anil Umesh	
Nokia	Juha Oravainen		Thoralf Czichy	x
Orange	William Diego	x	Vincent Danno	
Radisys	Ganesh Shenbagaraman		Sachin Srivastava	
Wind River	Xiaohua Zhang	x	Jackie Huang	

*Quorum: 50% or more of total TOC voting members unless excluded due to attendance.

3. Review and Agree to Minutes of Previous Meeting

- a. **Decision:** For the 4/28/2021 TOC meeting minutes, Motion by David, seconded by Thoralf. Motion approved.

4. Review of Today's Agenda

- a. Rittwik would like to discuss plans for SMO MVP. Include this under O-RAN related business.
b. John-Paul raised a problem logging in to OSC Wiki with LF credentials. Raise with Trishan.

5. Release Votes and Approval.

6. Copyright update

- a. Jack: Progress is being made. Copyright legal team has reached a milestone. They have produced a preliminary license (version 0.9). Main focus is to address OSC licensing issues but also to act as the basis for discussion with 3GPP. To be presented at O-RAN EC meeting today and, pending comments, it will be presented to O-RAN board for approval at the June meeting.
b. Jack: Main tenets of license is that you can copy and where necessary modify for the purposes of open source. Any re-distribution of open source software and documentation must include this license. Goal here is to ensure that O-RAN Alliance maintains control over the overall body of work. You can modify O-RAN specs and once you publish, these modifications can be contributed back to the Alliance.
c. Jack: License only provides rights under copyright. This should give us the ability to take content from standards and use it in OSC, subject to the agreed procedures. There are a set of FAQs to accompany the license explaining how to use the license. **Action Point:** Each company legal team should review the license and provide feedback through TOC.
d. Jack: There are some examples on how the license should be used by code contributors.
i. O-RAN Alliance will separate out software (YANG code, ASN.1, artefacts that are targeted at open source) into a separate repo / directory.
ii. OSC will create a space in the OSC repo and will copy / fork the software artefacts from the O-RAN Alliance.
iii. OSC will work to keep the O-RAN software separate from other OSC code artefacts.
iv. OSC code can be "pulled down" to other public repos. This implies that any updates to the code which is under the O-RAN Software license can be taken and contributed back to the O-RAN Alliance.
e. Thoralf: Does the O-RAN Alliance understand their obligation to publish machine readable artefacts in a separate repo / directory?
f. Jack: Yes, that is the ask to O-RAN Alliance.
g. Thoralf: Will this apply to pre-existing O-RAN specifications?
h. Jack: O-RAN Alliance will be asked to apply this to existing specs.
i. Jack: The intent is that we can adopt a similar approach to use, for example, 3GPP software artefacts. Very early in that process and at the moment there is no commitment from other SDOs to adopt this license and its processes. Follow up needed. There is nothing preventing other open source communities from participating in this process.
j. Jack: Next step is to seek approval to put these mechanisms in place and re-work the pre-existing contributions in O-RAN Alliance and OSC to support this structure. This will likely take some time.
k. Jinri: Can you share the supporting slide material?
l. Jack: I am not the originator but once the material has been updated / finalized it will be posted on the website. Need to figure out how much approval is needed before sharing.

7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)

- a. Jack: Any general O-RAN updates?
b. Jinri: Several things I want to share.
i. The O-RAN Alliance is preparing for an industry briefing which is expected to be co-located with MWC Barcelona. Main focus is to engage with media and audience and provide an update on O-RAN progress. It will be in hybrid form – physical and virtual - and consist of keynote speeches from O-RAN leadership and panel discussion with vendors and operators. Expected duration is no more than 60 mins.
ii. O-RAN Alliance has proposed 39 demos for the virtual exhibition for MWC Barcelona. Gate 1 review is 5th May. Gate 2 review is scheduled for 21st May.
iii. WG10 Co-Chair (Cagatay) is assembling a team with a task to create a proposal for a modelling tool for Information Model & Data Models. This proposal will be presented to O-RAN TSC. Cagatay is asking WG delegates (and OSC too) for input. Maybe Tracy might want to consider being the OSC representative?
c. Rittwik: OSC has submitted a demo to item ii (O-RAN virtual exhibition) to include traffic steering, anomaly detection, Viavi traffic simulator...
d. Thoralf: Any links to first two items?
e. Jinri: I don't have any.
f. Tracy: There was a previous initiative to automate modelling but the tooling is "incomplete". Due to these gaps the current process of modelling is a manual one. A sub-team will be created to revisit the automated modelling initiative to evaluate if it can support the modelling tool requirements.
g. Jack: Would this evaluation include a workflow where the modelling would be part of a CI/CD toolchain?
h. Tracy: Yes, that is the idea...assuming it's feasible.
i. Jack: Should that be done in OSC?
j. Tracy: Yes, assuming it's feasible. We need ongoing support from David Kinsey.
k. David: I'm all for everything you have said. The tool selection is a critical aspect to get good data models.
l. Jack: I do strongly suggest that other companies (other than AT&T) get involved in the process. Need to diversify and broaden the knowledge.
m. Tracy: We absolutely welcome more participation.
n. David: Yes, we need broad participation. However, the challenge is to develop tooling competence across a number of people. Modelling can create apprehension among some people.

- o. Rittwik: SMO MVP team met on Monday. They have posted a request for feedback – a survey: https://st1.zoom.us/web_client/sjstu3/html/externalLinkPage.html?ref=https://oranalliance.atlassian.net/wiki/spaces/MVPC/pages/1748926895/MVP-C+SMO+-+Inputs+and+Feedback Architecture & framework, who is responsible? At what level should we contribute? Which teams from OSC should provide feedback? OSC OAM and SMO at least and others too.
 - p. Jack: Can we get comments from OSC RSAC and also from AT&T?
 - q. David: Yes, I'll take an action to follow up and secure feedback.
 - r. Jack: Let's get some help from interested parties to develop structure around the SMO.
8. Old business and Status of Open Action Items.
- a. Update from TIFG meeting with OSC.
 - i. Rittwik spoke to Ian Wong. TIFG meeting 10am EST today. Invitation forwarded to Jack.
 - b. **Action Point: TOC members and whole community** to indicate what do we really need to deliver in D- and E-releases to be successful and useful?
 - i. Jack: Pretty much closed with OSC D, right in the middle of planning for OSC E. Dave / Rittwik, how are we shaping up with E requirements?
 - ii. Dave: Proposed to raise OSC E requirement plans at the O-RAN Alliance Virtual F2F in June.
 - iii. Jack: Try to suggest some items. Better not to leave things too open ended.
 - iv. David: Or too closed ended either.
 - v. Rittwik: Package descriptor and runtime catalogue are some of the main items on the list for SMO in OSC E release. Working to secure some developers who will contribute to OSC SMO. There are a couple of other issue to be discussed in more detail at RSAC this week.
 - vi. Jack: It might be beneficial to request some of the contributors to participate in CI/CD tool chain and integration process.
 - c. Jinri: to take the **Action Point** to prepare a briefing report for TOC membership renewal
 - i. Jack: We have moved forward with renewal of existing TOC members, added Windriver and removed Verizon pending guidance from O-RAN EC on 6th service provider member. Any word on when O-RAN EC will fill that gap?
 - ii. Jinri: Not yet. The action point remains open on the O-RAN EC to secure an interested party.
 - iii. Jack: Can we set up a side conversation meeting to brief O-RAN EC on OSC open issues? E.g. progress on D and plans for E release, licensing, etc.
 - iv. Jinri: Yes. I will forward mail with arrangements.
 - d. Collaboration between OSC and O-RAN Alliance on an SMO project definition.
 - i. The status of the MVP-C plans for SMO Feature Package(s) was presented above by Rittwik.
 - e. 5G Super Blueprint status - tabled for D and E, will be reevaluated for F release
 - f. Old business: CII badging
 - i. **Action Point:** discuss <https://lists.o-ran-sc.org/g/toc/message/402> LFX security for OSC subprojects // CII badging
 - ii. **Action Point:** Trishan to come up with a presentation regarding certified badge from other projects e.g. ONAP. In this context we also need to discuss the usage of the LF Security tool (as raised in this mail: <https://lists.o-ran-sc.org/g/toc/message/402>)
 - iii. **Action Point:** Trishan to send a short email to the TOC list or Jack and Jinri, regarding certified badge from other projects and/or usage of LF security tool, so that OSC could forward it to the security focus group and give them an update on our progress.
 - iv. Jack: Close to finishing out badging. How does someone raise a security issue which they find back to the O-RAN Alliance? Need a formal process on O-RAN Alliance for security escalations and document this as part of the CII badging process.
 - v. Trishan: As part of the badging process this should be documented on the OSC Wiki.
 - vi. Jack: Sure but we need to notify someone on the O-RAN Alliance about any issues to close the loop. Need to work with Zbynek on email notification process. **Action Point:** Jinri, please include this on the agenda for the meeting with the O-RAN Alliance TSC.
 - vii. Trishan: Anyone looking for access to their badge just reach out.
 - viii. Thoralf: Security bugs are being reported as Jira tickets (tagged: security bug). We currently expect all security bugs to be reported publicly as JIRA issue of type "Security Bug". They are managed in the JIRA tool the same way as other bugs. You can use this filter (requires login) to view all security bugs: <https://jira.o-ran-sc.org/issues/?filter=10701>
9. Standing Agenda Items (Brief Status of Ongoing Activities)
- a. Release Manager [Trishan de Lanerolle](#) /Release Planning: Weekly TOC Scheduling
 - b. [D Release Timelin](#)
 - c. [user-59b16](#) Requirements Software Architecture Committee
 - d. Integration and Test (*PTL needed*)
 - e. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [Mahesh Jethanandani](#) Service Management and Orchestration (SMO)
 - ii. [John Keeney](#) Non-Real Time RIC (RAN Intelligent Controller) (NONRTRIC)
 - iii. [Matti Hiltunen](#) RIC Applications (RICAPP)
 - iv. [Thoralf Czichy](#) RIC Platform (RIC)
 - v. [@gusu](#) O-RAN Centralized Unit (OCU)
 - vi. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIGH)
 - vii. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
 - viii. [Martin Skorupski](#) Operations and Maintenance (OAM)
 - ix. [Alex Stancu](#) Simulations (SIM)
 - x. [Xiaohua Zhang](#) Infrastructure (INF)
 - xi. [weichen ni](#) Documentation (DOC)
 - xii. (TBD) O-RAN Radio Unit (ORU)
10. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items.
11. Planning for Next Meeting
12. Any Other Business (AOB)
13. Meeting Summary (resolutions, new action items, etc.)
- a. **Action Point:** Each company legal team should review the preliminary O-RAN software license and provide feedback through TOC.
 - b. **Action Point:** All to consider engaging with WG10 for the IM / DM modelling tool chain discussion.
 - c. **Action Point:** All to review the SMO Feature Package(s) currently under discussion by the MVP-C.

- d. **Action Point:** Jinri to include an agenda item on the O-RAN Alliance TSC meeting for reporting security badging bugs back to the SFG.

2021 04 28

Recording: [TOC 20210428](#)

Agenda

1. Call for Scribe (minutes owner): David Streibl
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x	David Kinsey	
China Mobile	Jinri Huang Co-Chair		James Li	x
Deutsche Telekom	David Streibl	x	Ondej Hudousek	
Ericsson	John-Paul Lane	x	John Keeney	
NTT DOCOMO	Masafumi Masuda	x	Anil Umesh	
Nokia	Juha Oravainen	x	Thoralf Czichy	
Orange	William Diego	x	Vincent Danno	
Radisys	Ganesh Shenbagaraman	x	Sachin Srivastava	
Wind River	Xiaohua Zhang	x	Jackie Huang	

*Quorum: 50% or more of total TOC voting members unless excluded due to attendance.

3. Review and Agree to Minutes of Previous Meeting
 - a. **Decision:** For the 4/21/2021 TOC meeting minutes, Motion by David, seconded by John-Paul. Motion approved.
4. Review of Today's Agenda
5. Release Votes and Approval.
6. Copyright update
 1. Meeting happened last thursday and will happen next Friday. Still gathering consensus and trying to fulfill goals. Should be resolved in couple of weeks.
7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 1. Last week Jack had meeting with LF and James Crawshaw from OMDIA, formerly from Heavy Reading. It was discussion on general background on OSC, O-RAN and LF. Providing information for background research. No article planned right now.
8. Old business and Status of Open Action Items.
 - a. Update from TIFG meeting with OSC.
 - i. Moved to next week.
 - b. **Action Point: TOC members and whole community** to indicate what do we really need to deliver in D- and E-releases to be successful and useful?
 - i. Jack asked other TOC members to provide feedback.
 - c. Jinri: to take the **Action Point** to prepare a briefing report for TOC membership renewal
 - d. 5G Super Blueprint status - tabled for D and E, will be reevaluated for F release
 - i. Tracy: There is work on whitepaper and there are several O-RAN members involved. Draft available here: https://wiki.o-ran-sc.org/download/attachments/3604609/5G_Super_Blueprint_Whitepaper.pdf?api=v2
 - e. Old business: CII badging
 - i. **Action Point:** discuss <https://lists.o-ran-sc.org/g/toc/message/402> LFX security for OSC subprojects // CII badging
 - ii. **Action Point:** Trishan to come up with a presentation regarding certified badge from other projects e.g. ONAP. In this context we also need to discuss the usage of the LF Security tool (as raised in this mail: <https://lists.o-ran-sc.org/g/toc/message/402>)
 - iii. **Action Point:** Trishan to send a short email to the TOC list or Jack and Jinri, regarding certified badge from other projects and/or usage of LF security tool, so that OSC could forward it to the security focus group and give them an update on our progress.
9. Standing Agenda Items (Brief Status of Ongoing Activities)
 - a. Release Manager [Trishan de Lanerolle](#) /Release Planning: Weekly TOC Scheduling
 - b. [D Release Timelin](#)
 - i. We are in final dev. sprint. Standalone Integration & Testing PTL is missing. Jack will escalate this with EC as it presents problem for smooth release D and future releases.
 - c. [user-59b16](#) Requirements Software Architecture Committee
 - i. MVP-SMO
 1. Rittwik had meeting with CMCC about MVP-SMO. Chih-Lin proposed for OSC to co-lead the MVP-SMO initiate and would like to know opinion on community and TOC.
 2. Tracy: Rittwik with me as alternate is probably already written as OSC representatives for this activity.
 3. Rittwik: That for monitoring all the MVPs. This is new and they would like to closer interaction on MVP-SMO.
 4. Jack: I would like broader participation from community of such a big topic. Even definition of SMO itself may not be aligned.
 5. Mahesh would like to be part of the discussion.
 6. Rittwik: Also lifecycle of MVP is 18 month with potential 3 phases in it. 1 for priority topics and alignment with D release.

7. Jack: Is there SMO target provided by WG1? We need to approach this methodically.
8. Tracy: There is high-level description in WG1 Arch. WG10 will focus on SMO in future. MVP Committee in O-RAN is here: <https://oranalliance.atlassian.net/wiki/spaces/MVPC/pages/1492058589/MVP-C+Team+Members>.
9. John-Paul: The package in WG10 also contains nonRT RIC so it is not only SMO.
10. Jack: There is broader issue that work done in OSC has to be in the open so we would have to establish OSC page where the work is done. If OSC is partner in the MVP that part has to be done in the open. OSC cannot participate in closed O-RAN activity. Members can but OSC is open. We would need to figure out guidelines on what is done in the open and what is under O-RAN specification and how to bridge the gap.
11. *For the presentation from Rittwik see recording of the meeting @ 22:15.*
12. Jack: If part of the work on the spec. is done by OSC than it becomes open and O-RAN can use it but they do not own the copyright. I would like to see what is overall goal of the MVP SMO so it is clear what core capabilities are accomplished by end of the 18month window.
13. Tracy: The idea for MVP is that it is based on operator survey and then we have specifications that preset requirements that would be traced to OSC release as it is for example for nonRT RIC. Is this what we have here or is it different?
14. Jack: Should be different process here.
15. John: There is not plan to have SMO spec. in O-RAN Alliance. R1 is north of SMO, A1, O1, O2 is south of SMO. There are also use cases that would travel to MVP discussion. The information would be informative only as technical report and not spec. There is no plan for interface between nonRT RIC and SMO. There would be resistance from some parties. Question is what is MVP-SMO trying to achieve as MVP of component that is not defined by standards.
16. Rittwik: We can give them feedback on Monday that is SMO is not in charter of O-RAN so why are we releasing MVP package for it.
17. John: I imagine such request should come via O-RAN TSC.
18. Tracy: I think we need a specification within the working group 10 that talks about SMO normatively and informatively.
19. Rittwik will try to clarify this topic.
- d. Integration and Test (*PTL needed*)
- e. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. Mahesh Jethanandani Service Management and Orchestration (SMO)
 - ii. John Keeney Non-Real Time RIC (RAN Intelligent Controller) (NONRTRIC)
 - iii. Matti Hiltunen RIC Applications (RICAPP)
 - iv. Thoralf Czichy RIC Platform (RIC)
 - v. @gusu O-RAN Centralized Unit (OCU)
 - vi. Sachin Srivastava O-RAN Distributed Unit High (ODUHIGH)
 - vii. Zhimin Yuan O-RAN Distributed Unit Low (ODULOW)
 - viii. Martin Skorupski Operations and Maintenance (OAM)
 - ix. Alex Stancu Simulations (SIM)
 - x. Xiaohua Zhang Infrastructure (INF)
 - xi. weichen ni Documentation (DOC)
 - xii. (TBD) O-RAN Radio Unit (ORU)
10. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items.
11. Planning for Next Meeting
12. Any Other Business (AOB)
13. Meeting Summary (resolutions, new action items, etc.)

2021 04 21

Recording: [TOC 20210421](#)

Agenda

1. Call for Scribe (minutes owner): David Streibl
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x	Rittwik Jana	
China Mobile	Jinri Huang Co-Chair		James Li	x
Deutsche Telekom	David Streibl	x	Ondej Hudousek	
Ericsson	John-Paul Lane	x	John Keeney	
NTT DOCOMO	Masafumi Masuda	x	Anil Umesh	
Nokia	Juha Oravainen	x	Thoralf Czichy	
Orange	William Diego	x	Vincent Danno	
Radisys	Ganesh Shenbagaraman	x	Sachin Srivastava	
Verizon	Viswa Kumar		Kristen Young	
Wind River	Xiaohua Zhang	x	Jackie Huang	

*Quorum: 50% or more of total TOC voting members unless excluded due to attendance.

3. Review and Agree to Minutes of Previous Meeting

- a. **Decision:** For the 4/14/2021 TOC meeting minutes, Motion by David, seconded by John-Paul. Motion approved.
- 4. Review of Today's Agenda
- 5. Release Votes and Approval.
 - a. New OAM repo request: oam/nf-oam-adopter
 - i. Martin has pending request for repo creation for NF OAM Adapter code from AT&T
 - ii. The seed code has the capability to act as protocol and model translator from REST and SNMP interface to NETCONF /YANG and VES messages (heartbeat, fault, perf3gpp).according to the O-RAN OAM interface specification.
 - iii. **Decision:** Repository request for oam/nf-oam-adopter, Motion by Martin, Motion approved.
- 6. Copyright update
- 7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 - 1. LF approached Jack to join meeting with James Crawshaw from OMDIA, formerly from Heavy Reading. He's writing a report about the service management and orchestration of the O-RAN architecture and the nonRT-RIC component. They've set up a briefing with him and TSC chair of ONAP. They would like to have O-RAN representative. Jack forwarded the request to O-RAN EC.
- 8. Old business and Status of Open Action Items.
 - a. **5G Super Blueprint status**
 - i. **Action Point:** [Trishan de Lanerolle](#) to provide for info on super blueprint content and relationship of the super blueprint with 5G OPS from Linux Foundation perspective.
 - 1. Trishan: The super blueprint blueprint is a community driven integration project between all the different Open Source projects.
 - ii. Juha asked to clarify what as requested from OSC.
 - iii. Jack: We have not committed to super blueprint. RSAC needs to understand requirements of super blue print and also interaction with our existing plans and O-RAN MVP. This needs to be analyzed before we can take any position because have primary mandate from O-RAN on MVP. We are asking for more clarification. What would really be necessary at what timeframe. We need to understand what is gap from our MVP scope.
 - iv. Rittwik: MVP Plan also not clear. MVP goal is to align our OSC components and make them work together. Until that happens we don't have full blueprint just from a OSC perspective, then you can talk about integrating with other external components like LFN components.
 - v. Rittwik: Maybe we could monitor phase 1 & 2 of super blueprint and we will work in OSC on our MVP anyway.
 - vi. Trishan: If anyone is interested in the project. There is biweekly meeting of the group that you can join and even perhaps report back to RSAC,
 - vii. We will monitor the super blueprint project for D and E releases and evaluate as we plan for F release.
 - viii. John-Paul: Does this impact our alignemnt with other LF projects like ONAP.
 - ix. Jack: Alignment between OSS projects is always P2P activity and super blueprint does not intersect with our plans for D & E in specific fashion.
 - b. **Action Point:** **TOC members and whole community** to indicate what do we really need to deliver in D- and E-releases to be successful and useful?
 - c. Jinri: to take the **Action Point** to prepare a briefing report for TOC membership renewal
 - d. **Old buisness: CII badging**
 - i. **Action Point:** discuss <https://lists.o-ran-sc.org/g/toc/message/402> LFX security for OSC subprojects // CII badging
 - ii. **Action Point:** Trishan to come up with a presentation regarding certified badge from other projects e.g. ONAP. In this context we also need to discuss the usage of the LF Security tool (as raised in this mail: <https://lists.o-ran-sc.org/g/toc/message/402>)
 - iii. **Action Point:** Trishan to send a short email to the TOC list or Jack and Jinri, regarding certified badge from other projects and/or usage of LF security tool, so that OSC could forward it to the security focus group and give them an update on our progress.
 - iv. Trishan: One project pass and one is over 80%.
- 9. Standing Agenda Items (Brief Status of Ongoing Activities)
 - a. Release Manager [Trishan de Lanerolle /Release Planning](#): Weekly TOC Scheduling
 - b. [D Release Timelin](#)
 - c. [user-59b16](#) Requirements Software Architecture Committee
 - i. Jack: I see potential issue if MVP is split into 3 separate miniMVPs. It is contradiction of MVP.
 - ii. Rittwik: Minimal operation system can be done by D release.
 - iii. Manasi: There is issue with resource allocation, it needs to by addressed by O-DU High. When fixed we can continue with initial access procedures.
 - iv. Rittwik: Can the message reach the RU?
 - v. Zhimin: I will check with Viavi team.
 - vi. Rittwik: Goal is to to have working UE attachment. Then we have system where we can bring in nearRT-RIC and nonRT-RIC. In total this is kind of MVP for D release with close loop procesing. In E release we need to see how to push SMO requirements. I do not know if can put the MIMO and Slicing into OSC yet.
 - d. Integration and Test (*PTL needed*)
 - e. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [Mahesh Jethanandani](#) Service Management and Orchestration (SMO)
 - ii. [John Keeney](#) Non-Real Time RIC (RAN Intelligent Controller) (NONRTRIC)
 - iii. [Matti Hiltunen](#) RIC Applications (RICAPP)
 - iv. [Thoralf Czichy](#) RIC Platform (RIC)
 - v. [@gusu](#) O-RAN Centralized Unit (OCU)
 - vi. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIGH)
 - vii. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
 - viii. [Martin Skorupski](#) Operations and Maintenance (OAM)
 - ix. [Alex Stancu](#) Simulations (SIM)
 - x. [Xiaohua Zhang](#) Infrastructure (INF)
 - xi. [weichen ni](#) Documentation (DOC)
 - xii. (TBD) O-RAN Radio Unit (ORU)
- 10. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items.
 - a. Update from TIFG meeting with OSC.

- i. Meeting did not happen yet. It will be re-planned for following TIFG conf call.
- b. For clarification, positions in RSAC are community controlled including co-chair and anyone is free to contribute. This is different only for TOC where positions are tied to companies.
- 11. Planning for Next Meeting
- 12. Any Other Business (AOB)
- 13. Meeting Summary (resolutions, new action items, etc.)

2021 04 14

Recording: [TOC 20210414](#)

Agenda

1. Call for Scribe (minutes owner): David Streibl
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x	Rittwik Jana	
China Mobile	Jinri Huang Co-Chair	x	James Li	
Deutsche Telekom	David Streibl	x	Ondej Hudousek	
Ericsson	John-Paul Lane	x	John Keeney	
NTT DOCOMO	Masafumi Masuda	x	Anil Umesh	
Nokia	Juha Oravainen	x	Thoralf Czichy	
Orange	William Diego	x	Vincent Danno	
Radisys	Ganesh Shenbagaraman	x	Sachin Srivastava	
Verizon	Viswa Kumar		Kristen Young	

*Quorum: 50% or more of total TOC voting members unless excluded due to attendance.

3. Review and Agree to Minutes of Previous Meeting
 - a. **Decision:** For the 4/7/2021 TOC meeting minutes, Motion by David, seconded by Jinri. Motion approved by all TOC members present.
4. Review of Today's Agenda
 1. Release Votes and Approval.
5. Copyright update
 1. Jack: There still points to resolve. I hope we will resolve it before current SW release comes out.
6. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 1. Jinri: OSC progress was reported to O-RAN TSC last week
 2. Jinri: O-RAN TSC agreed that we can continue with TOC vendor members from Ericsson, Nokia, Radisys and Wind River. Different telco operator will be on TOC instead of Verizon but not decided which.
 3. Jinri: TelcoDR offered to physically host OSC demo on their booth at MWC Barcelona 2021. If interested contact Jinri or Paul Smith from O-RAN Alliance ASAP.
 1. This does not preclude creating virtual demos for O-RAN Alliance like it was done for previous MWC.
 2. Gate 1 review in O-RAN Alliance is April 22nd. gate 2 is May 21st
7. Old business and Status of Open Action Items.
 - a. **5G Super Blueprint status**
 - i. Rittwik: Super blueprint was discussed in RSAC. It has 3 phases and we think 3rd phase could be demonstrated with E release by validation the blueprint. It is LF Networking project. Result of blueprint will be consumed by US GOV OPS 5G project.
Phase 1 & 2 targets October 2021, it could be little ambition to get phase 3 with OSC working by Nov., Dec.
 - ii. Trishan: More information on <https://www.lfnetworking.org/5g-super-blueprint/>
 - iii. Jinri: Which project in OSC will do the integration?
 - iv. Rittwik: All project will have to participate.
 - v. David Kinsey: it would be LFN project that would do the blueprint and upstream to others.
 - vi. Jinri: Which project has the ownership of the integration across LF?
 - vii. Trishan: It will coordinate under LFN.
 - viii. Rittwik: We can put requirements for release E towards Phase 3 and monitor phases 1 & 2. I would like to get some guidance from TOC on this activity. If it is something we would like to do and get more info from Trishan on what is included in the blueprint. Result would be well tested blueprint that anyone can use.
 - ix. Jack: I am concerned about the expectations on the level of maturity of our components that we would support in the blueprint. We should manage the expectation that they would get full running RAN stack from OSC.
 - x. Jack: TOC member should try to formulate their opinion on the G super blue so we can discuss it more next week.
 - xi. Jinri: Rittwik, At beginning of your introduction you mentioned that this blueprint will be consumed by DOD 5G OPS? What does it mean?
 - xii. Jack: DOD stands for US Department of defense.
 - xiii. Rittwik: Yes, They want to use as much open source as possible to be able to have clear transparency as to what the protocols are doing, how the desegregated RAN is behaving, how the desegregated Core is behaving. They want to stand up some of these demonstrations as a proof of concept, I think, in the initial stage.

- xiv. Jack: Let's be clear that they have no involvement with OSC. They are a part of the Community that's asking Linux foundation to do some of these items, but not the only one. O-RAN doesn't you work directly with any government entities and if we supported this we would support it as a pure Open Source activity In Linux foundation.
 - xv. Trishan: That's right, to clarify there's no development actually going to be in 5G OPS. It'll be within the upstream projects and the communities, so the more concrete, they are like end-user coming in with the use-case.
 - xvi. John: Next week, when this is discussed further maybe the Linux foundation, and TOC themselves could make it fairly clear statement on the relationship with the US military on this activity.
 - xvii. Jack: Just to be clear, The OSC has has no relationship with the military. Trishan you need to come back with some clarification about the broader project because the LFN is the one asking to do this from our perspective right.
 - xviii. Trishan: I'll check on that, but as I said the 5g OPS project is looking at some of these use cases that would come in. The actual development would be done upstream. Treat them like any other end user. I'll circle back with the team internally and back to you with additional details.
 - xix. John-Paul: To clarify, what is the exact task towards OSC? I mean, is it that we align our roadmaps so that we can deliver some of the integration or functionality, which would be integrated into 5g blueprint and their timelines that they're looking for, or do we have some other activities that we need to consider here? Is it not just business as usual from OSC point of view with maybe some requirements in terms of use cases that we need to prioritize or is it something else will be asked for?
 - xx. Rittwik: I think it's the larger ecosystem integration that will come out of this. How do we exactly do it and see what components need to change to reflect that integration.
 - xxi. Jack: Our principles are that we're implementing the O-RAN Alliance interfaces. We want to be sensitive to additional work /effort that is not aligned with O-RAN Alliance initiative and specifications. On other hand we are part of LF and this could drive more usability and adoption of our software across the community.
 - b. **Action Point:** [Tracy Van Brakle, user-59b16](#) to set up a meeting with TIFG Co-Chair.
 - i. Tracy organized calls with TIFG, it will be on regular call TIFG has next week. They are interested in discussion of different labs working also as INT sites.
 - c. **Action Point:** **TOC members and whole community** to indicate what do we really need to deliver in D- and E-releases to be successful and useful?
 - d. Jinri: to take the **Action Point** to prepare a briefing report for TOC membership renewal
 - e. **Old business: CII badging**
 - i. **Action Point:** discuss <https://lists.o-ran-sc.org/g/toc/message/402> LFX security for OSC subprojects // CII badging
 - ii. **Action Point:** Trishan to come up with a presentation regarding certified badge from other projects e.g. ONAP. In this context we also need to discuss the usage of the LF Security tool (as raised in this mail: <https://lists.o-ran-sc.org/g/toc/message/402>)
 - iii. **Action Point:** Trishan to send a short email to the TOC list or Jack and Jinri, regarding certified badge from other projects and/or usage of LF security tool, so that OSC could forward it to the security focus group and give them an update on our progress.
8. Standing Agenda Items (Brief Status of Ongoing Activities)
- a. Release Manager [Trishan de Lanerolle /Release Planning](#): Weekly TOC Scheduling
 - b. [D Release Timelin](#)
 - c. [user-59b16](#) Requirements Software Architecture Committee
 - i. Rittwik is leaving ATT and joining vmware. He will remain active in RSAC and may also contribute to SMO project together with Mahesh.
 - d. Integration and Test (*PTL needed*)
 - e. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [Mahesh Jethanandani](#) Service Management and Orchestration (SMO)
 - 1. Mahesh: No issues. Currently testing O1 VES interface. It is currently working with cloud infra reports as test data to verify. O1 implementation is under way. ,Working on it with Martin.
 - 2. Jack: What is the status of O2 in Radisys O-CU?
 - 3. Ganesh: The is basic Netconf support. Radisys team is working on improvements.
 - 4. Jack: We should try to get whole chain of components working together.
 - 5. Thoralf: For NR-RIC there is minimal Netconf support from C release. Alarms as VES events should also work.
 - 6. Jack: For E relapse we should have discussion in RSAC on what should be next step for O1 features and how to get to common level of functionality across the elements.
 - 7. All elements should supports Netconf in D release as baseline and O1 features will be addressed by RSAC to get demonstratable O1 functionality in future releases.
 - ii. [John Keeney](#) Non-Real Time RIC (RAN Intelligent Controller) (NONRTRIC)
 - iii. [Matti Hiltunen](#) RIC Applications (RICAPP)
 - iv. [Thoralf Czichy](#) RIC Platform (RIC)
 - v. [@gusu](#) O-RAN Centralized Unit (OCU)
 - vi. [Sachin Srivastava](#) O-RAN Distributed Unit High (ODUHIGH)
 - vii. [Zhimin Yuan](#) O-RAN Distributed Unit Low (ODULOW)
 - viii. [Martin Skorupski](#) Operations and Maintenance (OAM)
 - ix. [Alex Stancu](#) Simulations (SIM)
 - x. [Xiaohua Zhang](#) Infrastructure (INF)
 - 1. Xiaouha: No issues to report. I am preparing road map from INF perspective on what should be supported, tested etc for next release.
 - xi. [weichen ni](#) Documentation (DOC)
 - xii. (TBD) O-RAN Radio Unit (ORU)
9. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items.
- a. [Martin Skorupski](#) API modification process after M3 - The intent is to align all projects, RSAC and ToC. Requesting 10 minutes ([email](#))
 - i. Martin sent email to explain this problem.

- ii. Martin: We are working on last change of the models and I want to make sure that this is the last change which we should have on that API and I also want to make sure that everybody who is involved can cover the change at this point in time. Every PTL should vote by +1 in Gerrit of O-DU HIGH project. It is rework of the YANG so the attributes are more in line with 3GPP. It is not big functionality change. Requisites comes from O-DU teams.
 - iii. Mahesh: The changes make sense and the approach looks good.
 - b. Manisi: Concern about timing of E2E RAN slicing with regard to ORAN Alliance specification release.
- 10. Planning for Next Meeting
- 11. Any Other Business (AOB)
- 12. Meeting Summary (resolutions, new action items, etc.)

2021 04 07

Recording: [TOC 20210407](#)

Agenda

1. Call for Scribe (minutes owner): David Streibl
2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x	Rittwik Jana	
China Mobile	Jinri Huang Co-Chair		James Li	x
Deutsche Telekom	David Streibl	x	Ondej Hudousek	
Ericsson	John-Paul Lane	x	John Keeney	
NTT DOCOMO	Masafumi Masuda	x	Anil Umesh	
Nokia	Juha Oravainen	x	Thoralf Czichy	
Orange	William Diego		Vincent Danno	
Radisys	Ganesh Shenbagaraman	x	Sachin Srivastava	
Verizon	Viswa Kumar		Kristen Young	

*Quorum: 50% or more of total TOC voting members unless excluded due to attendance.

3. Review and Agree to Minutes of Previous Meeting
 1. **Decision:** For the 3/31/2021 TOC meeting minutes, Motion by James, seconded by David. Motion approved by all TOC members present.
4. Review of Today's Agenda
 1. Release Votes and Approval.
5. Copyright update
 1. Jack: We did not have a meeting last week. Hopefully we're getting close to being able to move forward. The target is the next the upcoming board meeting.
6. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 1. John-Paul: Is there update on discussion with ONAP TSC?
 2. Jack: ONAP and Linux Foundation have broader activity to drive 5G innovation.
 3. Jack: LF coordinates the activity between different project and wants to make sure OSC is aware it. The goal is to stay aligned, try not to duplicate work and look for where reusing things makes sense.
 4. See recording at 0:10:48 for presentation from Trishan
 5. Trishan: More detailed discussion will be at next RSAC meeting.
 6. Jack: There is opportunity to use work from this activity in OSC and also to bring in more resources. It is also good opportunity to align goals between different LF projects.
 7. Jack: We need to start discussion how to approach this activity and what is our role in it.
 8. John: Why in NonRT RIC kicked out of SMO?
 9. Jack: This is picture drawn by the project without our feedback yet. It is focusing on alignment between Magma and ONAP.
 10. Trishan: Yes, it is just high level. They are still refining it.
 11. Jack: It would be good to align it with our work. It would be good if John and Mahesh could get involved. LF encourages us to join in and improve it. Trishan is running point on this activity.
 12. Trishan: Feel free to reach out to me.
 13. Trishan: More details on RSAC meeting next Tuesday 9pm eastern time.
 14. Brian: The diagram did not show the O-Cloud layer. We and others in this space could contribute to it also.
7. Old business and Status of Open Action Items.
 - a. **Action Point:** [Rittwik Jana](#) to set up a meeting with TIFG Co-Chair.
 - i. Jack: One of our big gabs. It will be major issue for D release. I plan to escalate it to EC.
 - ii. Tracy: Evolving definition in TIFG allows for OTICs to serve as testing and integration centers for OSC and there are some moving along in that direction.
 - iii. Jack: We currently do not have enough people in this effort to make sure that the OSC SW builds and pair-wire testing is happening between OSC subproject. If OTICs want to participate it this, it would be great. I am happy for any discussion on this topic.
 - iv. Jack: We really need team of people working on this to manage release process as were Lusheng and Felix in the past.
 - v. Tracy: We should have quick call with co chairs of TIFG who are aware of the work that we're doing. That's not entirely what you're looking for, but mostly consistent right, you can you can put my name next to that one.

- b. **Action Point: TOC members and whole community** to indicate what do we really need to deliver in D- and E-releases to be successful and useful?
 - i. Jack : this is just my way of trying to get more going about where people see use of the software, so that we're making sure we're doing the right things as we move forward in the next few releases. An example we were talking about is good alignment with Linux Foundation initiative that promotes the use of our software.
 - ii. Jack: I think it's the mission of every one TOC member to look for opportunities to promote and use the software and then how do we align the software deliverables to meet the needs of those activities. In a broader sense, we need to start promoting. Where and how it's used in other activities
- c. Jinri: to take the **Action Point** to prepare a briefing report for TOC membership renewal
 - i. Jack: We are a bit behind. Jinri is out for a week. It should be resolved in few weeks. Jinri will make presentation to EC.
- d. **Old business: CII badging**
 - i. Jack: First project finished the CII badging.
 - ii. Trishan: That is correct. And there is also progress in O-DU-HI.
 - iii. Jack: Our goal is for all the projects to work through the processes part of the D release.
 - iv. Trishan: As a reminder, if the PTL wants direct access just send me an email, and I can we can add them to the CII badge page.
 - v. Jack: Is there is there, like a image, when you achieve that badge that we could put on the website.
 - vi. Trishan: Yes, we do have badge status on the wiki that tracks real time what your score is.
 - vii. **Action Point:** discuss <https://lists.o-ran-sc.org/g/toc/message/402> LFX security for OSC subprojects // CII badging
 - viii. **Action Point:** Trishan to come up with a presentation regarding certified badge from other projects e.g. ONAP. In this context we also need to discuss the usage of the LF Security tool (as raised in this mail: <https://lists.o-ran-sc.org/g/toc/message/402>)
 - ix. **Action Point:** Trishan to send a short email to the TOC list or Jack and Jinri, regarding certified badge from other projects and/or usage of LF security tool, so that OSC could forward it to the security focus group and give them an update on our progress.
- 8. Standing Agenda Items (Brief Status of Ongoing Activities)
 - a. Release Manager [Trishan de Lanerolle](#) /Release Planning: Weekly TOC Scheduling
 - b. **D Release Timeline**
 - i. Jack: This is where it gets to be difficult for me to without integration testing team to understand what software is progressing and how. I am not sure people are understanding the real ramifications here of not being able to have a release at the end of this work without some more participation.
 - c. [user-59b16](#) Requirements Software Architecture Committee
 - i. Jack: So I have to announce that Rittwik is leaving AT&T. Nnext meeting will be his last meeting as a representative of AT&T.
This has some implications in RSAC. He does intent to continue his activity in OSC but working for a different company. So we won't lose complete access, but until he comes in new position position and shares with the Community what his options are his RSAC role is little bit at risk. I'll continue to have David Kinsey who's not on the call today. Part of the problem with David is he is a West Coast US person and right now, is 538 for him in the morning. Maybe now's the time to step up for few more formal Members as part of the RSAC committee from other companies as well.
Some of the other companies that are involved, maybe take are interested in a little more formal leadership position in the RSAC committee. It would be an opportunity to step up and discuss what what role. Is is not a bad sign of the Community, this is just normal evolution of project.
 - d. [Zhe Huang](#) (Felix) Integration and Test
 - i. Jack: Our D release is at risk because we do not have integration and testing lead. Felix will help but the position of the lead is vacant.
 - e. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. [John Keeney](#) Non-Real Time RIC (RAN Intelligent Controller) (NONRTRIC)
 1. John: We're still prototyping away on micro service onboarding type function and eventually hopefully form part of our up execution environment. In our plans for release D and onwards and we're making progress and not a whole lot to report to stitch no blockers.
 2. Jack: Has ORAN alliance made any progress on more standard interface at the backend of nonRT RIC?
 3. John: It something to be considered in the future.
 4. Jack: It something that should be part of RSAC road-map that needs to be discussed. I think the issue is, we need to make sure we're pushing on the ORAN workgroups to to make some of those decisions right architecturally.
 5. John: And it would be nice to get alignment or guidance from ORAN first, I think.
 - ii. [Matti Hiltunen](#) RIC Applications (RICAPP)
 1. Matti : For XApps we have multiple partner companies working on different accepts and and and that kind of progressing ay different rate.
A lot of things are changing so it's not like we're building XApps on platform that is is well defined and solid. That adds some complexity, but XApps that are related to the traffic steering use-case mostly are moving along. For the portability SDK there's the related effort in WG3 RIC architecture Task Force and we have had discussions with them and we've made contributions to that working group.
In our effort we are looking at SDK for Python because that's good quick prototyping. WG3 Architecture Task Force doesn't think that it makes sense to standardize an SDK. They are talking about standardizing the transport protocol and the information elements, including encoding.
I think they finally agreed on the work item to get that work started. In the OSC in our project we are moving along on our own pace for the Python SDK and, of course, if and whatever we learn, we will feed back to WG3. And, of course we monitor, if WG3 makes any decisions affecting our SDK.
 2. Matti: Jack would this be a right venue to bring up the patent question I raised?
 3. Jack: I sent a note off to the EC but haven't really gotten a response, yet, but please go ahead.
 4. Matti: One of the XApp teams pointed out that the XApp idea that they were pursuing has been patented, so I was wondering how like in ONAP Community have you encountered that kind of issue. This has more long term implications as well. Like can we implement any interesting XApps without needing to do a patent search first?

5. Jack: I need to get you know as guidance from the EC and legal teams, but generally speaking patent infringement from what i've been told doesn't occur, just because you talk about it or write some software about it. It's around implementation utilization. I'll get some clarification.
That's why Apache talks about that the only protection, you get is from the company who worked on the software. I will say that, from an AT&T standpoint, we we will sometimes patent work so that we can then release it. If we own the patent, then we can release it as part of the contributions up with Apache compared to if we don't and someone else does. This is a topic that every company needs to deal with when they make contributions under Apache. Apache does not cover patents protection from intellectual property, if you're not the contributor, so this is always complicated discussion. At some point I'm hoping to get a clear statement.

iii. [Thoralf Czichy](#) RIC Platform (RIC)

1. Juha: Thoralf is out this week.

iv. [@gusu](#) O-RAN Centralized Unit (OCU)

1. Jack: There were question on Radisys OCU test fixture. Ganesh, what are you plans for O1 and what is the timeline?
2. Ganesh: The exact Yang models for more and wg5 are getting published now. What we support today is the O1-like protocol and 3GPP models. But once these are available they will be incorporated. I need to check with engineering team on when we are likely to at least support a partial set of those parameters on the CU side, based on WG5 modes.
3. Jack: This kind of came out of some of the discussions last week with Mahesh on the CSO. In the test environment, how we're connecting all the pieces together and and kind of the ambition to be able to do at least Health Check.
4. Mahesh: I just wanted to confirm with Ganesh that the version of O-CU does support the netconf protocol.
5. Ganesh: Right.

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

1. Sphoorthi: Development Epics are on track.
2. Sphoorthi: As far as the integration is concerned with respect to O-DU-LOW in the radio more so, we are going well, there we did send out the first message. We were facing some other memory related issues and we currently debugging that and we need some more time to resolve that.
3. Sphoorthi: To host the Radisys CU and to start the integration there I did request Rittwik to provide a server. The server details are the same, I had sent a word or certain requirements as well. He said he did find a VM but I don't have the details of the machine yet. Once that is done, we try to host our CU there as well, and try the integration.

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

vii. [Martin Skorupski](#) Operations and Maintenance (OAM)

1. Martin: We are on this use case for O-RU recover for the close loop use case, together with O-DU teams and RIC teams that we defined a young model and agreed on this one. This was also translated into OpenAPI. In addition, the call home to VES message translation was implemented. From OpenFH messages to OAM controller, they are also translated into VES faults, so that they can be handled accordingly.
2. For the D release we were focusing more on the security as in terms of FCAPS, all the interfaces are Netconf over TLS or HTTPS. Together with the same project we are now looking into the Netconf access control. ORAN has special security groups and some security suggestions in their specifications and those will be implemented so that we can also demonstrate those. With addition for centralized user management, we integrated an identity server based on open source and open standards.
3. Interfacing with Acumos we did already several demonstrations to ORAN Members, so we are currently constructing a video, which we then can share.

viii. [Alex Stancu](#) Simulations (SIM)

1. Alex: Like Martin mentioned were working also on DO model. Also on call home where where we can demonstrate the O-RU recovery use case. This is for O1 simulator.
2. Alex: For E2 simulator we still need to see who can contribute nmdications needed the Viavi simulator.

ix. [Xiaohua Zhang](#) Infrastructure (INF)

1. Xiaohua: So far it seems everything's on track. We are doing some major component upgrade. At same time we are following some progress from WG6 about O2 use cases. We'd like to have some basic use cases related to O2 to be implementing the D release. That one has not been started yet, but we are doing the investigation.
2. Jack: Do we have goals and policies for what should be supported by INF project?
3. Xiaohua: It is very good point. In previous release we focused on real time feature to allow DU. Very good good idea, I welcome to doing that and I'd like to have some discussing during RSAC meeting to make sure everyone can understand that and I can collect more information and the requirements to formalize a roadmap, or something similar.
4. Jack: Right, I think that's a bigger activity that's going on in the industry that we ourselves need to come up with at least our plans of how we will leverage that. It may potentially lead to bringing in more partners.

x. [weichen ni](#) Documentation (DOC)

xi. [Mahesh Jethanandani](#) Service Management and Orchestration (SMO)

xii. (TBD) O-RAN Radio Unit (ORU)

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.)