2021 Q3 (Jul, Aug, Sep)

- 2021 09 29
- 2021 09 22
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- 2021 07 07

2021 09 29

Recording: Zoom recording

- 1. Call for Scribe (minutes owner): Andrea Buldorini
- 2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	х	David Kinsey	
China Mobile	Jinri Huang Co-Chair	х	James Li	
Deutsche Telekom	David Streibl		Ondej Hudousek	
Ericsson	John-Paul Lane	х	John Keeney	
NTT DOCOMO	Masafumi Masuda	х	Anil Umesh	
Nokia	Juha Oravainen	х	Thoralf Czichy	
Orange	William Diego	х	Vincent Danno	
Radisys	Ganesh Shenbagaraman		Manasi Padhy	x
TIM	Andrea Buldorini	х	Scarpina Salvatore	
Wind River	Bin Yang	х	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: Minutes for 09/22/2021 TOC meeting approval: proposed by Andrea, seconded by Juha. The motion is approved
- 4. Review of Today's Agenda
- 5. Release Votes and Approval
 - a. AAL project
 - i. Action point: Trishan to check if your have to sign a new agreement for the repo if TOC decides on BSD license use. Refer to minutes of previous meeting(s) for details.
 - ii. Action point: Jack to present the write up about the AAL project to have a vote.
 - 1. This was put on the table on 2021-07-07 meeting
 - 2. Jack: There is discussion ongoing in WG6 and we're still waiting for some aspects that discussion to be resolved. Some clarifications were made but until we get more information we leave this table for now
 - 3. Update on 08/04/21: This is on hold. WG6 is not having meetings due to vacations. Stage 3 specs are now being targeted for November train.
 - 4. Update on 08/18/21: Jack said there is no update and this item continues to be tabled.
 - 5. Update on 09/01/21: No update in the vacation period. Still waiting for guidance.
 - 6. Update on 09/15/21: No update. To be continued.
 - 7. Update on 09/22/21: No update.
 - b. New Repos, Updates and Cleanup
 - i. Matti proposes the creation of the following new repos for RICAPP:
 - ii. ric-app/ric-sdk-cpp (Matti Hiltunen)
 - 1. 09/22/21: Matti proposes the creation of a new repo for RICAPP
 - a. Thoralf proposed some changes by email to clarify the description. It was commented that RIC SDK in O-RAN is still under discussion and it is not clear
 - b. Matti will propose a review based on suggestions received.
 - 2. (update on 09/29/21) A revised proposal was submitted (see https://lists.o-ran-sc.org/g/toc/message/573)

- a. Motion made by Matti, seconded by Juha. Motion is approved.
- iii. ric-plt/ricctl (Thoralf Czichy)

 - new repo proposed for RICPTL project (see https://lists.o-ran-sc.org/g/toc/message/571)
 a. Principle is to reuse CLI implementation from ONAP by reference (no forking). Work is targeting E release with initial set of commands. To be extended in later releases.
 - 2. Motion made by Juha, seconded by Andrea. Motion is Approved
- iv. inf/pti/o2 (Jackie Huang)
 - 1. a new repo was proposed for INF project (see https://lists.o-ran-sc.org/g/toc/message/572)
 - 2. Motion made by Jackie, seconded by Jinri. Motion is Approved
- 6. Copyright update
 - 1. Update from Jack (08/25/21): The SCCL license is posted on the O-RAN website. A separate CLA is required for contribution under
 - 2. Thoralf asked who is putting the first copy of code from specifications in the repository, Jack confirmed any OSC participant can
 - 3. CLA draft is ready and is due for approval from O-RAN. Trishan informed it takes 2 weeks for implementation of new CLA.
 - 4. Update from Jack (09/01/21): still waiting for feedback from O-RAN Alliance about the material to be used first.
 - 5. 09/15/21: Jinri provided to O-RAN EC a list of examples for candidate material to be shared under SCCL license.
 - 6. 09/29/21: Jack and Jinri will synchup on SCCL licence process with O-RAN legal a dedicated meeting
- 7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 - 1. July train has passed IPR review. November train deadline will be slightly shifted to November 24th (WGs approval)
 - 2. vF2F in October is cancelled. Next (v)F2F will be in February 2022.
 - Budget review before the next O-RAN board (Trishan de Lanerolle). If additional resources are needed, to be raised and discussed before submission to EC
- 8. Old business and Status of Open Action
 - a. "E" Release timeline.
 - b. OSC lab in Taiwan (Prof Ray's lab):
 - i. Update on 08/25/21: Prof Ray talking to Intel and Viavi. Division of work is not complete till lab is up.
 - ii. Potentially integration work can happen in Taiwan lab when sprints complete. By end of the release, they can package it all.
 - iii. Jack suggested a gradual progression in Taiwan lab with a few modules or blocks being integrated first.
 - iv. Update on 09/01/21. Rittwik: Prof Ray got in touch with some PTLs. PTLs interested in collaboration may get back to to coordinate with Prof. Ray
 - v. Update on 09/08/21. Rittwik: work is still ongoing on lab setup.
 - c. 5G Super Blueprint status tabled for D and E, will be re-evaluated for F release.
 - d. "F" Release timeline
- 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
 - i. OSC lab setup still ongoing. PTP grandmaster deployment and configuration under assessment
 - ii. Radysis (Manasi) had sent HW/SW requirements for the O-CU. AP. David to check with Rich if this went through.
 - iii. 09/22/21: Open issue on PM data transfer mechanism from O-DU high. (user-30c9d/ David Kinsey)
 - update on 09/29/21: still open
 - a. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. (TBD) Integration and Testing (INT)
 - 1. James Li indicates interest in contributing/leading INT project. Jack proposes to send the information to the TOC reflector and start a discussion among the interested companies.
 - ii. Mahesh Jethanandani Service Management and Orchestration (SMO)
 - iii. John Keeney Non-Real Time RIC (RAN Intelligent Controller) (NONRTRIC)
 - iv. Matti Hiltunen RIC Applications (RICAPP)
 v. Thoralf Czichy RIC Platform (RIC)

 - vi. (TBD) O-RAN Centralized Unit (OCU)
 - vii. user-30c9d O-RAN Distributed Unit High (ODUHIGH)
 - viii. Zhimin Yuan O-RAN Distributed Unit Low (ODULOW)
 - ix. Martin Skorupski Operations and Maintenance (OAM)
 - x. Alex Stancu Simulations (SIM)
 - 1. NETCONF call home procedure was implemented
 - 2. waiting for YANG model for slicing to be provided in order to start the implementation
 - 3. E2 simulator: lacking of resources. To check with companies which contributed so far and potential new contributors
 - xi. Jackie Huang Infrastructure (INF)
 - 1. Upgrade most of the components from Starlingx to align with the latest release 5.0, and to support both kubernetes and openstack as the infrastructure platform
 - 2. Now most of those components are in a standalone layer meta-starlingx and is has been moved to StarlingX community, which is used as the upstream layer for INF project, so for now, most of the development activity is actually happen in StarlingX community
 - 3. we have completed and verified for AIO-SX with kubernetes deployment, and AIO-DX deployment is in testing and bug fixing
 - 4. For O2 interface implementation, request to create a new repo (see above), and is working on the draft of HLD.
 - xii. weichen ni Documentation (DOC)
 - xiii. (TBD) O-RAN Radio Unit (ORU)
- 2. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items
- 3. Planning for Next Meeting
 - a. Next meeting will be chaired by Jinri Huang. Scribe in October will be Bin Yang (Windriver)
- 4. Any Other Business (AOB)
- 5. Meeting Summary (resolutions, new action items, etc.)

Recording: Zoom recording

- 1. Call for Scribe (minutes owner): Andrea Buldorini
- 2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	x	David Kinsey	
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NTT DOCOMO	Masafumi Masuda	x	Anil Umesh	
Nokia	Juha Oravainen	x	Thoralf Czichy	
Orange	William Diego	x	Vincent Danno	
Radisys	Ganesh Shenbagaraman		Manasi Padhy	х
TIM	Andrea Buldorini	x	Scarpina Salvatore	
Wind River	Bin Yang	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: Minutes for 09/15/2021 TOC meeting approval: proposed by Andrea, seconded by David S. Motion approved.
- 4. Review of Today's Agenda
- 5. Release Votes and Approval
 - a. AAL project
 - i. Action point: Trishan to check if your have to sign a new agreement for the repo if TOC decides on BSD license use. Refer to minutes of previous meeting(s) for details.
 - ii. Action point: Jack to present the write up about the AAL project to have a vote.
 - 1. This was put on the table on 2021-07-07 meeting
 - Jack: There is discussion ongoing in WG6 and we're still waiting for some aspects that discussion to be resolved.
 Some clarifications were made but until we get more information we leave this table for now
 - 3. Update on 08/04/21: This is on hold. WG6 is not having meetings due to vacations. Stage 3 specs are now being targeted for November train.
 - 4. Update on 08/18/21: Jack said there is no update and this item continues to be tabled.
 - 5. Update on 09/01/21: No update in the vacation period. Still waiting for guidance.
 - 6. Update on 09/15/21: No update. To be continued.
 - 7. Update on 09/22/21: No update.
 - b. Repos Updates and Cleanup
 - i. Trishan: The following repos were submitted for TOC consideration to be archived (https://lists.o-ran-sc.org/g/toc/message /549):
 - 1. Submitted by Alex Stancu:
 - sim
 - sim/e1-interface
 - sim/f1-interface
 - sim/fh-interface
 - 2. Submitted by Mahesh Jethanadani:
 - smo
 - smo/a1
 - smo/app
 - smo/o2
 - 3. Submitted by Jackie Huang
 - aal/lib
 - aal/logic
 - aal/mgmt
 - aal/virt
 - 4. "Empty repos" not being updated since the last 12 months (Note: empty repos can be reactivated upon request if the activity resumes)
 - com/sctp (already agreed at the previous meeting)
 - gnb-int/build
 - gnb-int/common
 - gnb-int/src
 - it/int

- log (already agreed at the previous meeting)
- o-cu/e2
- o-cu/sim
- o-du
- o-du/sim
- o-ru/sim
- ric-nrt/a1ric-nrt/oam
- ric-plt/sdl/config (already agreed at the previous meeting)
- tracelibgo (already agreed at the previous meeting)
- 5. Motion to archive the above repos made by Jack, seconded by Ganesh. The motion is approved
- 6. Matti proposes the creation of the following new repos for RICAPP:
 - a. ric-app/rc (https://lists.o-ran-sc.org/g/toc/message/545)
 - i. it is commented that O-RAN would probably publish the E2SM-RC specification by October, but the project can start working earlier
 - ii. Motion to approve the creation of ric-app/rc repo made by Jack, seconded by Andrea. The motion is approved.
 - b. ric-app/ric-sdk-cpp
 - i. Thoralf proposed some changes by email to clarify the description. It was commented that RIC SDK in O-RAN is still under discussion and it is not clear ii. Matti will propose a review based on suggestions received.
- 7. Change of PTL in RICAP (https://lists.o-ran-sc.org/g/toc/message/548)
 - a. Matti will step down from PTL role, while keeping on supporting the new PTL and the group for some time. SUNIL SINGH (HCL) has been voted by the group as the new candidate.
 b. Motion to approve Sunil Sing as new PTL for RICAPP made by Jack, seconded by Juha. The motion is
 - approved.
- 6. Copyright update
 - 1. Update from Jack (08/25/21): The SCCL license is posted on the O-RAN website. A separate CLA is required for contribution under SCCL license.
 - 2. Thoralf asked who is putting the first copy of code from specifications in the repository. Jack confirmed any OSC participant can initiate.
 - 3. CLA draft is ready and is due for approval from O-RAN. Trishan informed it takes 2 weeks for implementation of new CLA.
 - 4. Update from Jack (09/01/21): still waiting for feedback from O-RAN Alliance about the material to be used first.
 - 5. 09/15/21: Jinri provided to O-RAN EC a list of examples for candidate material to be shared under SCCL license.
- 7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 - 1. Status of PR for "D" Release to be checked
- 8. Old business and Status of Open Action
 - a. "E" Release timeline.
 - i. Status of implementation and call for contributions
 - ii. OSC lab
 - Update on 09/22/21 David K.: O-FH Gateway almost ready to be shipped. Still working on a permanent solution for the clock.
 - b. OSC lab in Taiwan (Prof Ray's lab):
 - i. Update on 08/25/21: Prof Ray talking to Intel and Viavi. Division of work is not complete till lab is up.
 - ii. Potentially integration work can happen in Taiwan lab when sprints complete. By end of the release, they can package it all.
 - iii. Jack suggested a gradual progression in Taiwan lab with a few modules or blocks being integrated first.
 - iv. Update on 09/01/21. Rittwik: Prof Ray got in touch with some PTLs. PTLs interested in collaboration may get back to to coordinate with Prof. Rav
 - v. Update on 09/08/21. Rittwik: work is still ongoing on lab setup.
 - a. 5G Super Blueprint status tabled for D and E, will be re-evaluated for F release.
 - b. "F" Release timeline
- 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
 - i. (Status on 09/22/21 provided by David K.) We havent addressed Slicing use case timeline in RSAC yet. We mainly worked on the O1 CR to meet the O-RAN submission deadline by Oct 11th.
 - ii. Open issue on PM data transfer mechanism from O-DU high. (user-30c9d/ David Kinsey)
 - a. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. (TBD) Integration and Testing (INT)
 - ii. Mahesh Jethanandani Service Management and Orchestration (SMO)
 - 1. VES flow is the major use case impacting SMO project we are working on. No issues to raise
 - iii. John Keeney Non-Real Time RIC (RAN Intelligent Controller) (NONRTRIC)
 - 1. Focus for Rel-E is on rApps and R1.
 - 2. Looking ad the relation with control loop definition and management in ONAP, to ensure consistenty with rApp approach. Possibly harmonized contributions to ONAP anche OSC
 - 3. Since specification of R1 services is not yet mature, we will focus and expand the generic service exposeure (already started in Rel-D)
 - iv. Matti Hiltunen RIC Applications (RICAPP)
 - 1. Wiki page on release status has been updated
 - 2. New RC xApp will be started. Mavenir agreed to implement it
 - 3. Extending Anomaly detection and traffic steering use cases. RC xApps fits into that as well, but need to also include load prediction xApp already developed in previous release. Accuracy will be improved by including geolocation (info from VIAVI simulator into Influx DB)
 - 4. Demo xApp "hello world" will be extended to show the functionalities.
 - v. Thoralf Czichy RIC Platform (RIC)

- 1. implementation is ongoing as planned.
- 2. IT support request in https://jira.linuxfoundation.org/plugins/servlet/theme/portal/2/IT-22326
- 3. Plan to implement a A1 mediator and enhance E2 subscriptiom mechanism.
- vi. (TBD) O-RAN Centralized Unit (OCU)
 - 1. No open implementation so far, just a test fixture
 - Manasi: this will be enhanced with O1 functionality by end of October. How to deploy O-CU in OSC lab is TBD. Check with David Kinsey
- vii. user-30c9d O-RAN Distributed Unit High (ODUHIGH)
 - 1. Support for multiple bearers (60% completion) per UE and multiple UEs for scheduling (20% completion).
 - 2. Closed loop slicing (40%): implementation according to 3GPP Rel-15
 - 3. Clarified that relation with O-CU for pairing is limited to the support of slice configuration over O1 NETCONF
- viii. Zhimin Yuan O-RAN Distributed Unit Low (ODULOW)
 - 1. Mansi: working on testing and integration with O-DU high. The problems is end-to-end due to missing FHGW and p2p grandmaster
- ix. Martin Skorupski Operations and Maintenance (OAM)
 - 1. Implementing selected OAM functionat the EDGE
 - 2. Support to ODUHIGH to implement VES and NETCONF for O1 interface
 - 3. Pre-spec implementation of PM streaming with VES (while working on the O1 CR to O-RAN)
 - 4. Update to the next Open Daylight version
- x. Alex Stancu Simulations (SIM)
- xi. Jackie Huang Infrastructure (INF)
- xii. weichen ni Documentation (DOC)
- xiii. (TBD) O-RAN Radio Unit (ORU)
- 2. New Agenda Items (New Business): New Items Submitted (+speaker) & Open Call to TOC For Additional Items
- 3. Planning for Next Meeting
- 4. Any Other Business (AOB)
 - a. On behalf of TOC and OSC community, Jack thanks Matti for the great job as PTL of RICAPP project.
- 5. Meeting Summary (resolutions, new action items, etc.)

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 - 1. This was put on the table on 2021-07-07 meeting
 - Jack: There is discussion ongoing in WG6 and we're still waiting for some aspects that discussion to be resolved.Some clarifications were made but until we get more information we leave this table for now

- 3. Update on 08/04/21: This is on hold. WG6 is not having meetings due to vacations. Stage 3 specs are now being targeted for November train.
- 4. Update on 08/18/21: Jack said there is no update and this item continues to be tabled.
- 5. Update on 09/01/21: No update in the vacation period. Still waiting for guidance.
- 6. Update on 09/15/21: No update. To be continued.
- b. Repos to be archived
 - i. Repos belonging to the following categories:
 - 1. managed/owned repos PTLs request to archive
 - 2. unmanged/unused repos
 - 3. repos with missing info.yaml files
 - ii. 09/08/21 Action point: Trishan de Lanerolle will collect proposals from PTLs to vote on at the next meeting.
 - iii. 09/15/21
 - the following repos are proposed to be archived as no longer active:
 - 1. ODU_Dev_Bronze_Rel
 - 2. E2AP
 - 3. com/asn1c
 - 4. log
 - ric-plt/sdl/config
 - 6. tracelibgo
 - 7. com/sctp
 - 8. ric-plt/resource-status-manager
 - 9. ric-plt/resource-status-processor
 - 10. ric-app/admin
 - 11. ric-app/kpimon
 - 12. ric-app/ml
 - 13. ric-app/qp-driver
 - Motion proposed by Jack, seconded by Juha. <u>Motion approved</u>.
 - The following additional repose are proposed for archiving (Martin):
 - porta
 - Motion proposed by Jack, seconded by Andrea. Motion approved.
- 6. Copyright update
 - 1. Update from Jack (08/25/21): The SCCL license is posted on the O-RAN website. A separate CLA is required for contribution under SCCL license.
 - 2. Thoralf asked who is putting the first copy of code from specifications in the repository. Jack confirmed any OSC participant can initiate
 - 3. CLA draft is ready and is due for approval from O-RAN. Trishan informed it takes 2 weeks for implementation of new CLA.
 - 4. Update from Jack (09/01/21): still waiting for feedback from O-RAN Alliance about the material to be used first.
 - 5. 09/15/21: Jinri provided to O-RAN EC a list of examples for candidate material to be shared under SCCL license.
- 7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
- 1. Status of PR for "D" Release to be checked 8. Old business and Status of Open Action
 - - a. "E" Release timeline.
 - i. Rittwik: Tracking of Slicing use case need to have access to the jira tickets from the SMO / Non RT RIC and O-DU high projects in order to ensure the closed loop is achievable.
 - Open issue on PM data transfer mechanism from O-DU high. To be continued in SMO project (David).
 - ii. Mahesh flagged the disaggregated VES implementation. David Kinsey is investigating this.
 - 1. Update on 09/01/21:
 - a. Rittwik: to check ONAP viewpoint about potential enhancement to VES coming from OSC Rel-E requirements
 - Martin: there is a debate in ONAP about PM streaming and potential enhancements wrt. 3GPP standardized solution, but this should not be of impact for OSC
 - c. Martin and John have reported the status of disaggregated VES to ONAP-OSC alignment team. The discussion is at an early stage but ONAP PTLs are now informed and alignment will go on.
 - 2. Update on 09/08/21 (David):
 - a. to discuss with ONAP at the forthcoming meeting; main task for SMO project could be to ensure that DMaaP also work for other projects while Inlfux and Logstash collect data from O1
 - 3. Update on 09/15/21 (David): Aligned with ONAP was achieved and the principle for an updated VES flow (to ensure support for multiple clients with minimal impact) was agreed. Wrt O1 interface, it was also agreed to submit a CR to O-RAN (and possibly harmonize with 3GPP). Closed
 - iii. Action point: Ganesh Shenbagaraman Provide an update, if O1 is going to be available anytime soon in Radisys O-CU test fixture?
 - 1. Radisys team working on the update for O-CU O1. No date is confirmed yet.
 - 2. update on 09/08/21: CNF implementation still to be confirmed. Info expected in a couple of weeks.
 - iv. Action point: Jinri Huang to raise with EC on the projects dwindling with low contributions.
 - Update on 09/15/21 (Jack): the current status was reported to EC. It is expected that more recent projects and
 activities will get into a more mature state. Also new feature under specification in O-RAN Alliance (e.g. R1
 interface) will provide more input for further activities in OSC. If members have inputs or issues to raise towards O-RAN alliance, they can bring to Architecture team. <u>Closed</u>
 - v. Status of implementation and call for contributions
 - 1. Jack, Rittwik: need to document the current status and areas where contributions are needed to fill the gaps. First target could be on O-RAN protocols and interfaces
 - 2. Thoralf: agree. We should also invite for contributions on integration activities.
 - 3. Action point Trishan de Lanerolleto create a wiki section to document and keep track of the progress.
 - 4. update on 09/15/21. Trishan provided a new page with title "Participate". Closed
 - vi. Action point: user-59b16 to add status page. PTLs will update the progress on use cases approval and new features.
 - Rittwik provided the Release E status page. This is being updated by PTLs. Target is to have an initial version from all the PTLs for the next meeting on 09/22/21. <u>Closed</u>

- vii. OSC lab is still lacking of some Open Front-haul equipment. Action Point David Kinsey to check the status and report
- b. OSC lab in Taiwan (Prof Ray's lab):
 - i. Update on 08/25/21: Prof Ray talking to Intel and Viavi. Division of work is not complete till lab is up.
 - ii. Potentially integration work can happen in Taiwan lab when sprints complete. By end of the release, they can package it all.
 - iii. Jack suggested a gradual progression in Taiwan lab with a few modules or blocks being integrated first.
 - iv. Update on 09/01/21. Rittwik: Prof Ray got in touch with some PTLs. PTLs interested in collaboration may get back to to coordinate with Prof. Ray
 - v. Update on 09/08/21. Rittwik: work is still ongoing on lab setup.
- c. Jack (08/25/21): Challenges in test and integration activities. Looking for volunteers to fill this gap.
 - i. Update on 09/01/21 (Jack) new contributors may be interested (e.g. also Prof Ray). Need for a leadership to take the role of coordination.
 - ii. Update on 09/15/21: this is still missing. Reopen when volunteers show up.
- d. Action point: Trishan de Lanerolle to follow up on participation in ONES summit.
 - i. O-RAN SC presence in ONES summit. Trishan brought up the option of OSC booths and demos.
 - ii. Trishan highlighted the opportunity to interact with other networking projects.
 - iii. Nokia has an OSC-related presentation at ONES2021. Thoralf noted travel restrictions make it difficult to have in-person contributions from Nokia.
 - iv. Decision to participate to be made before end of August.
 - v. Trishan to follow up on interest on logistics.
 - vi. 09/01/21 Trishan: the event will be fully virtual. We have material (demos and proposals) to be presented.
 - vii. 09/15/21 Trishan: We have demo provided by Tracy and the preparation was done. No open issues. Closed
- e. 5G Super Blueprint status tabled for D and E, will be re-evaluated for F release.
- f. "F" Release timeline
 - i. no items
- 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)
 - i. 09/01/21 Rittwik:
 - 1. VES agent SMO, OAM PLTs are engaged. Network Slicing: three-way testing is foreseen. Need to document the
 - 2. Multiparty coordination may be supervised by RICAPP project
 - 3. Action Point: user-59b16to document the above in the status page. Done in 09/15/21. Closed
 - d. Report out from PTL: Stand-Up & Report Out on Blockers
 - i. TBD Integration and Testing (INT)
 - ii. Mahesh Jethanandani Service Management and Orchestration (SMO)
 - iii. John Keeney Non-Real Time RIC (RAN Intelligent Controller) (NONRTRIC)
 - iv. Matti Hiltunen RIC Applications (RICAPP)

 - v. Thoralf Czichy RIC Platform (RIC)
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 - xi. Jackie Huang Infrastructure (INF)
 - xii. weichen ni Documentation (DOC)
 - xiii. (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.)

Recording: Zoom Recording

- 1. Call for Scribe (minutes owner): Andrea Buldorini
- 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		Thoralf Czichy	x
Orange	William Diego	х	Vincent Danno	

Radisys	Ganesh Shenbagaraman	x	Manasi Padhy	
TIM	Andrea Buldorini	x	Scarpina Salvatore	
Wind River	Bin Yang	х	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: Minutes for 09/01/2021 TOC meeting approval: proposed by Andrea, seconded by John-Paul. Motion approved.
- 4. Review of Today's Agenda
- 5. Release Votes and Approval
 - a. AAL project
 - i. Action point: Trishan to check if your have to sign a new agreement for the repo if TOC decides on BSD license use. Refer to minutes of previous meeting(s) for details.
 - ii. Action point: Jack to present the write up about the AAL project to have a vote.
 - 1. This was put on the table on 2021-07-07 meeting
 - 2. Jack: There is discussion ongoing in WG6 and we're still waiting for some aspects that discussion to be resolved. Some clarifications were made but until we get more information we leave this table for now
 - 3. Update on 08/04/21: This is on hold. WG6 is not having meetings due to vacations. Stage 3 specs are now being targeted for November train.
 - 4. Update on 08/18/21: Jack said there is no update and this item continues to be tabled.
 - 5. Update on 09/01/21: No update in the vacation period. Still waiting for guidance.
 - b. Disabling anonymous comments on OSC Wiki
 - i. John Keeney proposed to disallow the feature allowing anonymous comments, in order to prevent spam on the OSC wiki pages. Motion by John Keeney, seconded by David Streibl. Motion approved.
 - ii. Action point: Trishan de Lanerolle to ensure anonymous comments are disabled by wiki admin. <u>Done. Action point closed</u> (09/08/21)
 - c. Repos to be archived
 - i. Repos belonging to the following categories:
 - 1. managed/owned repos PTLs request to archive
 - 2. unmanged/unused repos
 - 3. repos with missing info.yaml files
 - ii. 09/08/21 Action point: Trishan de Lanerolle will collect proposals from PTLs to vote on at the next meeting
- 6. Copyright update
 - 1. Update from Jack (08/25/21): The SCCL license is posted on the O-RAN website. A separate CLA is required for contribution under SCCL license.
 - 2. Thoralf asked who is putting the first copy of code from specifications in the repository. Jack confirmed any OSC participant can initiate
 - 3. CLA draft is ready and is due for approval from O-RAN. Trishan informed it takes 2 weeks for implementation of new CLA.
 - 4. Update from Jack (09/01/21): still waiting for feedback from O-RAN Alliance about the material to be used first.
- 7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
- 8. Old business and Status of Open Action
 - a. "E" Release timeline.
 - i. Update on 08/25/21 on E release plan.
 - 1. Rittwik to follow up on INF project. Alex updated SIM project info. v4 of release plan to be updated on RSAC wiki.
 - ii. Update on 09/01/21 (Rittwik)
 - 1. INF project; new items were added to include some new O2-DMS approved in the O-RAN WG6 July train
 - 2. SIM project also added new features
 - 3. Network Slicing and Disaggregated VES use cases were agreed
 - iii. Mahesh flagged the disaggregated VES implementation. David Kinsey is investigating this.
 - 1. Update on 09/01/21:
 - a. Rittwik: to check ONAP viewpoint about potential enhancement to VES coming from OSC Rel-E requirements
 - Martin: there is a debate in ONAP about PM streaming and potential enhancements wrt. 3GPP standardized solution, but this should not be of impact for OSC
 - c. Martin and John have reported the status of disaggregated VES to ONAP-OSC alignment team. The discussion is at an early stage but ONAP PTLs are now informed and alignment will go on.
 - 2. Update on 09/08/21 (David):
 - a. to discuss with ONAP at the forthcoming meeting; main task for SMO project could be to ensure that DMaaP also work for other projects while Inlfux and Logstash collect data from O1
 - iv. Action point: Ganesh Shenbagaraman Provide an update, if O1 is going to be available anytime soon in Radisys O-CU test fixture?
 - 1. Radisys team working on the update for O-CU O1. No date is confirmed yet.
 - 2. update on 09/08/21: CNF implementation still to be confirmed. Info expected in a couple of weeks.
 - v. Action point: Jinri Huang to raise with EC on the projects dwindling with low contributions.
 - vi. Status of implementation and call for contributions
 - 1. Jack, Rittwik: need to document the current status and areas where contributions are needed to fill the gaps. First target could be on O-RAN protocols and interfaces
 - 2. Thoralf: agree. We should also invite for contributions on integration activities.
 - 3. Action point Trishan de Lanerolleto create a wiki section to document and keep track of the progress.
 - vii. Action point: user-59b16 to add status page. PTLs will update the progress on use cases approval and new features.
 - b. OSC lab in Taiwan (Prof Ray's lab):
 - i. Update on 08/25/21: Prof Ray talking to Intel and Viavi. Division of work is not complete till lab is up.
 - ii. Potentially integration work can happen in Taiwan lab when sprints complete. By end of the release, they can package it all.
 - iii. Jack suggested a gradual progression in Taiwan lab with a few modules or blocks being integrated first.
 - iv. Update on 09/01/21. Rittwik: Prof Ray got in touch with some PTLs. PTLs interested in collaboration may get back to to coordinate with Prof. Ray

- v. Update on 09/08/21. Rittwik: work is still ongoing on lab setup.
- c. Jack (08/25/21): Challenges in test and integration activities. Looking for volunteers to fill this gap.
 - Update on 09/01/21 (Jack) new contributors may be interested (e.g. also Prof Ray). Need for a leadership to take the role of coordination.
- d. Jack and Rittwik (08/25/21): Nokia equipment (fronthaul gateway) getting shipped to OSC lab. Follow up with Viavi needed for PTP grandmaster.
- e. Action point: Trishan de Lanerolle to follow up on participation in ONES summit.
 - i. O-RAN SC presence in ONES summit. Trishan brought up the option of OSC booths and demos.
 - ii. Trishan highlighted the opportunity to interact with other networking projects.
 - iii. Nokia has an OSC-related presentation at ONES2021. Thoralf noted travel restrictions make it difficult to have in-person contributions from Nokia.
 - iv. Decision to participate to be made before end of August.
 - v. Trishan to follow up on interest on logistics.
 - vi. 09/01/21 Trishan: the event will be fully virtual. We have material (demos and proposals) to be presented.
- f. 5G Super Blueprint status tabled for D and E, will be re-evaluated for F release.
- 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)
 - i. 09/01/21 Rittwik:
 - VES agent SMO, OAM PLTs are engaged. Network Slicing: three-way testing is foreseen. Need to document the call flow validation.
 - 2. Multiparty coordination may be supervised by RICAPP project
 - 3. Action Point: user-59b16to document the above in the status page
 - 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. (TBD) O-RAN Centralized Unit (OCU)
 - vi. user-30c9d O-RAN Distributed Unit High (ODUHIGH)
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- 3. Review and Agree to Minutes of Previous Meeting
 - a. Decision: Minutes for 08/25/2021 TOC meeting approval: proposed by Ganesh, seconded by Masafumi. Motion approved.
- 4. Review of Today's Agenda

- 5. Release Votes and Approval
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 - i. Jinri's update (08/11/21): EC approved content but text is still being refined. Quotes from companies mentioned in previous releases are not accepted. The other criterion is level of contribution. PR expected next week.
- 8. Old business and Status of Open Action Items
 - a. Action point: PTLs help is needed to provide a list of files, which will use SCCL license. This is closed.
 - b. D Release
 - i. Action point: Mahesh Jethanandani to add SMO to D-release image list page: D Release Docker Image List Integration and Testing Confluence (o-ran-sc.org). Mahesh to follow up.
 - ii. Action point: Jinri Huang to follow up with Intel on O-DU-Low representation.
 - c. D Release Maintenance (Update on 09/01/21)
 - i. Jack: D Release Maintenance was approved and projects are expected to make the respective branches available
 - ii. Manasi: O-DU High is aligning with OAM and Non-RT RIC PTLs on the process.
 - d. "E" Release timeline.
 - i. Update on 08/25/21 on E release plan.
 - 1. Rittwik to follow up on INF project. Alex updated SIM project info. v4 of release plan to be updated on RSAC wiki.
 - ii. Update on 09/01/21 (Rittwik)
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 - 1. Radisys team working on the update for O-CU O1. No date is confirmed yet.
 - v. Action point: Jinri Huang to raise with EC on the projects dwindling with low contributions.
 - 1. Rittwik flagged lack of progress in certain projects (Infra, O-DU-Low, O-CU) and asked Jinri to highlight to EC. Standing up on O-Cloud is still not happening. Jinri to discuss with Rittwik offline.
 - 2. Jinri to follow up with Prof Ray (Taiwan Uty) on their participation in lab setup and integration. Rittwik to share the email ID of Prof Ray.
 - vi. Action point: user-59b16 to add status page. PTLs will update the progress on use cases approval and new features.
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 - g. Jack and Rittwik (08/25/21): Nokia equipment (fronthaul gateway) getting shipped to OSC lab. Follow up with Viavi needed for PTP grandmaster.
 - h. Repo clean-up:
 - i. Action Point: Trishan de Lanerolle to close all not active repos.
 - 1. All PTLs to follow up on repos not active and communicate to Trishan.
 - ii. Matti raised the point of legacy repos to be archived. Jack: this need formal approval by TOC at the next meeting
 - i. Update on scorecard: Consolidating the scorecards of sub projects will lead to new analytics. No action needed from anyone.
 - i. 09/01/21 Trishan: new charts will come up in the next month in the analytics platform.
 - j. Action point: Trishan de Lanerolle to follow up on participation in ONES summit.

- i. O-RAN SC presence in ONES summit. Trishan brought up the option of OSC booths and demos.
- ii. Trishan highlighted the opportunity to interact with other networking projects.
- iii. Nokia has an OSC-related presentation at ONES2021. Thoralf noted travel restrictions make it difficult to have in-person contributions from Nokia.
- iv. Decision to participate to be made before end of August.
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 - 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. Vote on Archiving of legacy repos to take place at the next TOC meeting
- 11. Planning for Next Meeting
- 12. Any Other Business (AOB)
- 13. Meeting Summary (resolutions, new action items, etc.)

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- 1. Call for Scribe (minutes owner): Ganesh Shenbagaraman
- 2. Roll Call & Quorum Check

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- 4. Review of Today's Agenda
- 5. Release Votes and Approval
 - a. AAL project
 - i. Action point: Trishan to check if your have to sign a new agreement for the repo if TOC decides on BSD license use. Refer to minutes of previous meeting(s) for details.

- ii. Action point: Jack to present the write up about the AAL project to have a vote.
 - 1. This was put on the table on 2021-07-07 meeting
 - Jack: There is discussion ongoing in WG6 and we're still waiting for some aspects that discussion to be resolved. Some clarifications were made but until we get more information we leave this table for now
 - 3. Update on 08/04/21: This is on hold. WG6 is not having meetings due to vacations. Stage 3 specs are now being targeted for November train.
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 - i. Jinri's update (08/11/21): EC approved content but text is still being refined. Quotes from companies mentioned in previous releases are not accepted. The other criterion is level of contribution. PR expected next week.
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 - i. Action point: Mahesh Jethanandani to add SMO to D-release image list page: D Release Docker Image List Integration and Testing Confluence (o-ran-sc.org). Mahesh to follow up.
 - ii. Action point: Jinri Huang to follow up with Intel on O-DU-Low representation.
 - c. D Release Maintenance (Update on 08/18/21)
 - i. Ganesh and Manasi updated on the status of testing with O-DU-Low. Testing currently blocked by PTP clock
 - ii. Manasi: O-DU-High and O-DU-Low pair-wise testing is completed.
 - iii. John Keeney (Non-RT RIC), Martin confirmed code freeze.
 - iv. Maintenance release approval. Motion proposed by Jack and seconded by David. Motion approved with the mention that O-DU-High and O-DU-high were only pair tested.
 - d. "E" Release timeline.
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- 6. Copyright update
 - 1. Update from Jack (08/18/21): ASN definitions and models from O-RAN spec to be brought in OSC repos under SCCL. EC to approve the list.
 - 2. List of requests to be compiled. Thoralf emailed TOC group for near RT RIC ASN requests.
 - 3. Jinri: EC requested a list of examples first to facilitate the process. Request to other PTLs to provide examples.
 - 4. Martin: Submitted in email a list of the YANG models we are interested in. Will add models from 2 more specifications.
 - 5. Tracy, Martin: We also have a list of YANG models under discussion and not approved yet.
- 7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 - a. Action point: Jinri to organize release statement and PR for "D" Release
 - i. Jinri's update (08/11/21): EC approved content but text is still being refined. Quotes from companies mentioned in previous releases are not accepted. The other criterion is level of contribution. PR expected next week.
- 8. Old business and Status of Open Action Items
 - a. Action point: PTLs help is needed to provide a list of files, which will use SCCL license
 - i. Jinri brought this up with O-RAN TSC. EC ready to review example files to facilitate the definition. The example files could be specification sections/tables/charts that we plan to use in OSC.
 - ii. Thoralf highlighted example from O-RAN WG3 E2AP spec (Section 9.3). He will initiate a new discussion in the mailing list.
 - iii. John Keeney requested more clarity on SCCL license and its use for existing files in repos. Should it be used if code uses specs or if we generate code from specs? Need more guidance from TOC or legal team.
 - iv. Trishan asked if code files will be stored separately under this license.
 - v. Jinri will work with Stefan to provide some example files and guidance.
 - b. D Release
 - i. Action point: Mahesh Jethanandani to add SMO to D-release image list page: D Release Docker Image List Integration and Testing Confluence (o-ran-sc.org). Mahesh to follow up.
 - ii. Action point: Jinri Huang to follow up with Intel on O-DU-Low representation.
 - iii. O-DU-High PTL (Manasi) to update release download information. Completed during the meeting.
 - c. D Release Maintenance

- i. Update from Manasi (08/18/21): Further e2e testing is blocked due to lack of local GM clock. Rittwik said Viaivi is working on providing this to OSC lab.
- ii. Decision of pending code changes and release readiness to be closed in TOC meeting on 8/25.
- iii. Non-RT RIC: John Paul Lane to confirm if there are any open issues.
- iv. OAM: Martin: OAM code is good to go.
- v. O-DU High: Manasi updated code is ready.
- vi. O-DU Low: Manasi updated that some testing is pending based on the latest fixes.
- vii. SIM: Alex said no fixes needed.
- viii. Maintenance release cannot be approved due to lack of updates from other PTLs.
- d. "E" Release timeline.
 - i. Jack: After the "D" Release is out, let's get a short presentation to make sure we understand how the architecture looks like.
 - 1. Action point: user-59b16 to make an overview presentation together with PTLs in E-release timeframe
 - ii. Action point: Ganesh Shenbagaraman Provide an update, if O1 is going to be available anytime soon in Radisys O-CU test fixture?
 - 1. Radisys team working on the update for O-CU O1. No date is confirmed yet.
 - iii. Action point: user-59b16will reach out every PTL and go through necessary E release content items. Action closed.
 - 1. Rittwik presented E release contents in detail. Disaggregated VES and network slicing.
 - Disaggregated VES agent with decoupling of transport and Pub/sub mechanism. FM/PM coordination work in WG10 (Nov release train).
 - 3. Mahesh raised a point on dependency on Nov train spec release for OSC E release.
 - 4. Networks slicing feature proposed by Radisys. Closed lop slice assurance.
 - 5. SMO, Non-RT RIC, OAM and O-DU-High project teams have reviewed call flows.
 - 6. Jinri: Is this targeted for an video quality kind of application? Rittwik said this is defined generically for any such
 - Jack: Are notifications to SMO standardized? Mahesh said E release implementation will be pre-spec. Discussion ongoing in WG5.
 - 8. Rittwik: PM counters and r1 APIs will be pre-spec as well.
 - 9. Manasi: we can use basic counters already available in July train.
 - 10. Discussed other minor work items of E release from each component.
 - 11. RICAPP: Discussed LP, AD, QP, Bouncer xApps. Exploring intetest from xApps from Mavenir, Viavi and CMCC.
 - 12. O-DU-High: Network slicing, L2 specific features, scaling for multi-UE and multi-bearer. E2 enhancments as stretch goal.
 - 13. OAM: NW slicing, ODL Silicon upgrade, deployment and automation aspects in a CNF/K8s environment.
 - 14. Rittwik again highlighted the projects in trouble as they are lagging: INF, O-DU-Low and O-CU
 - 15. Bin Yang: INF PTL will come up with a plan. Action Point: Bin Yang /WindRiver will provide plan for INF.
 - 16. SMO and other project o add to slides shared by Rittwik.
 - 17. Jinri: New PTL from O-DU-Low wil be Luis (Intel).
 - 18. Jack: Intel PTL should go to RSAC to represent O-DU-Low.
 - 19. Rtittwik: Projects are ready to start the sprints in E release. **Action Point**: Rittwik to set up a page for release item list update by PTLs.
 - 20. Mahesh: SMO team will discuss to waht extent the disaggregation requirements can be met.
 - iv. Action point: Jinri Huang to raise with EC on the projects dwindling with low contributions.
 - Rittwik flagged lack of progress in certain projects (Infra, O-DU-Low, O-CU) and asked Jinri to highlight to EC. Standing up on O-Cloud is still not happening. Jinri to discuss with Rittwik offline.
 - 2. Jinri to follow up with Prof Ray (Taiwan Uty) on their partcipation in lab setup and integration. Rittwik to share the email ID of Prof Ray.
 - v. Rittwik to add status page
- e. OSC lab in Taiwan (Prof Ray's lab):
 - i. Rittwik discussed with Prof Ray (Taiwan). The lab is ready and the Prof Ray's team is volunteering for more work. Prof Ray to attend next TOC meeting.
- f. Repo clean-up:
 - i. Action Point: Trishan de Lanerolle to slose all not active repos.
 - 1. All PTLs to follow up on repos not active and communicate to Trishan.
- g. Update on scorecard: Consolidating the scorecards of sub projects will lead to new analytics. No action needed from anyone.
- h. Action point: Trishan de Lanerolle to follow up on partcipation in ONES summit.
 - i. O-RAN SC presence in ONES summit. Trishan brought up the option of OSC booths and demos.
 - ii. Trishan highlighted the opportunity to interact with other networking projects.
 - iii. Nokia has an OSC-related presentation at ONES2021. Thoralf noted travel restrictions make it difficult to have in-person contributions from Nokia.
 - iv. Decision to participate to be made before end of August.
 - v. Trishan to follow up on interest on logistics.
- i. 5G Super Blueprint status tabled for D and E, will be re-evaluated for F release.
- 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. (TBD) O-RAN Centralized Unit (OCU)
 - vi. user-30c9d 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. Jackie Huang 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. Discussion on copyright and E release prioritized
- 11. Planning for Next Meeting
- 12. Any Other Business (AOB)
- 13. Meeting Summary (resolutions, new action items, etc.)

Recording: Zoom recording

- 1. Call for Scribe (minutes owner): Ganesh Shenbagaraman
- 2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair		David Kinsey	x
China Mobile	Jinri Huang Co-Chair	х	James Li	
Deutsche Telekom	David Streibl		Ondej Hudousek	
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NTT DOCOMO	Masafumi Masuda	х	Anil Umesh	
Nokia	Juha Oravainen		Thoralf Czichy	x
Orange	William Diego		Vincent Danno	
Radisys	Ganesh Shenbagaraman	х	Manasi Padhy	
TIM	Andrea Buldorini		Scarpina Salvatore	
Wind River	Bin Yang		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 08/04/2021 TOC meeting minutes to be approved next week as minutes were published just before the meeting
- 4. Review of Today's Agenda
- 5. Release Votes and Approval
 - a. AAL project
 - i. Action point: Trishan to check if your have to sign a new agreement for the repo if TOC decides on BSD license use. Refer to minutes of previous meeting(s) for details.
 - ii. Action point: Jack to present the write up about the AAL project to have a vote.
 - 1. This was put on the table on 2021-07-07 meeting
 - Jack: There is discussion ongoing in WG6 and we're still waiting for some aspects that discussion to be resolved.
 Some clarifications were made but until we get more information we leave this table for now
 - 3. Update on 08/04/21: This is on hold. WG6 is not having meetings due to vacations. Stage 3 specs are now being targeted for November train.
- 6. Copyright update
- 7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 - a. Action point: Jinri to organize release statement and PR for "D" Release
 - i. Jinri's update (08/11/21): EC approved content but text is still being refined. Quotes from companies mentioned in previous releases are not accepted. The other criterion is level of contribution. PR expected next week.
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 - ii. OAM: Martin: OAM code is good to go.
 - iii. O-DU High: Manasi updated code is ready.
 - iv. O-DU Low: Manasi updated that some testing is pending based on the latest fixes.
 - v. SIM: Alex said no fixes needed.

- vi. Maintenance release cannot be approved due to lack of updates from other PTLs.
- d. "E" Release timeline.
 - i. Jack: After the "D" Release is out, let's get a short presentation to make sure we understand how the architecture looks like.
 - 1. Action point: user-59b16 to make an overview presentation together with PTLs in E-release timeframe
 - ii. Action point: Ganesh Shenbagaraman Provide an update, if O1 is going to be available anytime soon in Radisys O-CU test fixture?
 - 1. Radisys team working on the update for O-CU O1. No date is confirmed yet.
 - iii. Action point: user-59b16will reach out every PTL and go through necessary E release content items
 - 1. Rittwik: Details of major use cases captured in RSAC wiki. Disaggregated VES and network slicing.
 - 2. Updates in other components are captured by project PTLs.
 - 3. Rtitwik to present detailed update in the next week on major use cases and key features project wise.
 - 4. Manasi to upload ppt on Wlki page. Near RT RIC information already available. Matti to email update to Rittwik.
 - 5. Martin analyzing the impacts due to network slicing.
 - iv. Action point: Jinri Huang to raise with EC on the projects dwindling with low contributions.
 - Rittwik flagged lack of progress in certain projects (Infra, O-DU-Low, O-CU) and asked Jinri to highlight to EC. Standing up on O-Cloud is still not happening. Jinri to discuss with Rittwik offline.
 - 2. Jinri to follow up with Prof Ray (Taiwan Uty) on their partcipation in lab setup and integration. Rittwik to share the email ID of Prof Ray.
 - v. Rittwik to add status page
- e. Repo clean-up:
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 - 1. All PTLs to follow up on repos not active and communicate to Trishan.
- f. Update on scorecard: Consolidating the scorecards of sub projects will lead to new analytics. No action needed from anyone.
- g. Action point: Trishan de Lanerolle to follow up on partcipation in ONES summit.
 - i. O-RAN SC presence in ONES summit. Trishan brought up the option of OSC booths and demos.
 - ii. Trishan highlighted the opportunity to interact with other networking projects.
 - iii. Nokia has an OSC-related presentation at ONES201. Thoralf noted travel restrictions make it difficult to have in-person contributions from Nokia.
 - iv. Decision to participate to be made before end of August.
 - v. Trishan to follow up on interest on logistics.
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- 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)
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 - vi. user-30c9d O-RAN Distributed Unit High (ODUHIGH)
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- 11. Planning for Next Meeting
- 12. Any Other Business (AOB)
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- 1. Call for Scribe (minutes owner): Ganesh Shenbagaraman
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Nokia	Juha Oravainen	х	Thoralf Czichy	

Orange	William Diego	Х	Vincent Danno	
Radisys	Ganesh Shenbagaraman	х	Manasi Padhy	
TIM	Andrea Buldorini		Scarpina Salvatore	х
Wind River	Bin Yang	х	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 07/28/2021 TOC meeting minutes, motion by Juha Oravainen, seconded by Ganesh Shenbagaraman. Motion passed
- 4. Review of Today's Agenda
- 5. Release Votes and Approval
 - a. AAL project
 - i. Action point: Trishan to check if your have to sign a new agreement for the repo if TOC decides on BSD license use. Refer to minutes of previous meeting(s) for details.
 - ii. Action point: Jack to present the write up about the AAL project to have a vote.
 - 1. This was put on the table on 2021-07-07 meeting
 - Jack: There is discussion ongoing in WG6 and we're still waiting for some aspects that discussion to be resolved.
 Some clarifications were made but until we get more information we leave this table for now
 - 3. Update on 08/04/21: This is on hold. WG6 is not having meetings due to vacations. Stage 3 specs are now being targeted for November train.
- 6. Copyright update
- 7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 - a. Action point: Jinri to organize release statement and PR for "D" Release
 - i. Jinri's update (08/04/21): EC decided to not use quotes from previous release. Quotes from 2 companies could not be accommodated. Further update on- PR status from Jinri over email.
- 8. Old business and Status of Open Action Items
 - a. Action point: PTLs help is needed to provide a list of files, which will use SCCL license
 - i. John Keeney requested more clarity on SCCL license and its use for existing files in repos. Should it be used if code uses specs or if we generate code from specs? Need more guidance from TOC or legal team.
 - ii. Trishan asked if code files will be stored separately under this license.
 - iii. Jinri will work with Stefan to provide some example files and guidance.
 - b. D Release
 - i. Action point: Mahesh Jethanandani to add SMO to D-release image list page: D Release Docker Image List Integration and Testing Confluence (o-ran-sc.org). Mahesh to follow up.
 - ii. Trishan updated that Felix is working on D release page. Issues in the web page (links, incorrect info, tarball downlaod) pointed out by others.
 - c. D Release Maintenance
 - i. Non-RT RIC: A couple of fixes are being incorporated.
 - ii. O-DU High: O-DU low integration ongoing. 1 optimization fix included.
 - d. "E" Release timeline.
 - i. Jack: After the "D" Release is out, let's get a short presentation to make sure we understand how the architecture looks like.
 - 1. Action point: user-59b16 to make an overview presentation together with PTLs in E-release timeframe
 - ii. Action point: Ganesh Shenbagaraman Provide an update, if O1 is going to be available anytime soon in Radisys O-CU test fixture?
 - Radisys team working on the update for O1.
 - iii. Action point: user-59b16will reach out every PTL and go through necessary E release content items
 - 1. Rittwik: I discussed with Thoralf and will discuss with other PTLs as well
 - iv. Rittwik to add status page
 - e. 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.
 - 1. Trishan de Lanerolle: I'll follow up with the Release engineering
 - f. 5G Super Blueprint status tabled for D and E, will be re-evaluated for F release.
- 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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 - viii. Martin Skorupski Operations and Maintenance (OAM)
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 - 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. Streamlining the analytics using Scorecard (Trishan)
- 11. Planning for Next Meeting

- 12. Any Other Business (AOB)
- 13. Meeting Summary (resolutions, new action items, etc.)

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- 1. Call for Scribe (minutes owner): Juha Oravainen
- 2. Roll Call & Quorum Check

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- *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 07/21/2021 TOC meeting minutes, motion by Juha Oravainen, seconded by Ganesh Shenbagaraman Motion passed
- 4. Review of Today's Agenda
- 5. Release Votes and Approval
 - a. New PTL for O-DU High project
 - Decision Nominate Manasi Padhy to the PTL role of O-DU High project. Motion by Ganesh Shenbagaraman, seconded by user-2057e. Motion passed
 - b. AAL project
 - i. Action point: Trishan to check if your have to sign a new agreement for the repo.
 - 1. A clean path forward here would be to have a separate CCLA / ICLA for just the BSD repo(s). The repo(s) for this project would then use BSD-3-Clause as the project's outbound license, as preferred by the WG6
 - 2. That CCLA/ICLA would be substantively based on the Apache Software Foundation's CCLA and ICLA (which are widely used across open source projects), with some administrative changes to better align with how the EasyCLA process works for managing CLAs. The existing O-RAN SC repos would continue to use the existing CLAs, the new one would only be for the BSD repo(s)
 - 3. The decision on whether to take this approach could be voted on and approved by the O-RAN SC's TOC, as part of their responsibilities under the Technical Charter. Note that under section 7(c), it would need to be a 2/3 vote of the entire TOC to grant the project license exception to use BSD-3-Clause here instead of Apache-2.0. Also we would have some administrative and configuration work on the back end to set up and enforce the 3rd CLA
 - ii. Action point: Jack to present the write up about the AAL project to have a vote.
 - 1. This was put on the table on 2021-07-07 meeting
 - 2. Jack: There is discussion ongoing in WG6 and we're still waiting for some aspects that discussion to be resolved. Some clarifications were made but until we get more information we leave this table for now
- 6. Copyright update
 - 1. Jack: I got the approved license and frequently asked questions
 - 2. Jack: Needed info will be updated to O-RAN Software Community O-RAN ALLIANCE page
 - 3. Jack: Everything should be in place for the E Release
- 7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 - a. Action point: Jinri to organize release statement and PR for "D" Release
 - b. Rittwik: There is O-RAN Plugfest coming. Is there any wiki pages for this?
 - c. Jack: I'll take a look
- 8. Old business and Status of Open Action Items
 - a. Action point: PTLs help is needed to provide a list of files, which will use SCCL license
 - b. D Release
 - Action point: Mahesh Jethanandani to add SMO to D-release image list page: D Release Docker Image List Integration and Testing - Confluence (o-ran-sc.org)
 - c. D Release Maintenance
 - i. Jack: The maintenance release is planned to be ready in about two weeks
 - ii. Jack: ODULOW is working on a maintenance release item
 - iii. John: Non RT RIC is pushing couple of small bug fixes
 - iv. Mahesh: SMO is making small changes for measurement events
 - v. Manasi: ODUHIGH is optimizing code a little bit and we are working with ODULOW for the e2e integration to happen
 - vi. Jack: PTLs need to update D-Release pages about the information on the release

- d. "E" Release timeline.
 - i. Jack: After the "D" Release is out, let's get a short presentation to make sure we understand how the architecture looks like.
 - 1. Action point: user-59b16 to make an overview presentation together with PTLs in E-release timeframe
 - ii. Action point: Ganesh Shenbagaraman Provide an update, if O1 is going to be available anytime soon in Radisys O-CU test fixture?
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- 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
 - i. Rittwik: We have two concrete proposals right now. One is disaggregated VES agent where the proposal is to decouple the transport. The goal is to support multiple end consumers and we are discussing this in RSAC
 - ii. Jack: What pieces would be affected by this?
 - iii. Rittwik: SMO and OAM projects for sure and perhaps Simulator project
 - iv. Martin: The question is if ODU and other projects are affected?
 - v. Rittwik: We can check
 - vi. Jack: It is important to make sure you talk to all the PTLs and clearly document which projects are affected and in which magnitude
 - vii. Rittwik: Sure. The other proposal is Network Slicing where ODU is talking with NONRTRIC and assure a particular slice. So, the monitoring will happen and then based on that monitoring the slice level performance metric will get adjusted
 - viii. Jack: is the underlying capability that you need to do this present or is it going to generate some underlying capabilities that have to be extended?
 - ix. Rittwik: The underlying capability has to be extended.
 - x. Ganesh: This will be a multi release commitment
 - xi. Rittwik I also had a call with Thoralf before he left on vacation about O1 support from the near RT RIC. Thoralf had some ideas, which I haven't put to the slides yet
 - xii. Jack: I think you need to put ODULOW support and capability on the agenda for the discussion. Currently we don't get much representation from Intel- Maybe Philippe is somebody we can talk to
 - xiii. Rittwik: There is a lot of specifications that is coming in O2. I was wondering, if Infra project could implement some of these O2-D and O2-M protocols that are being specified
 - xiv. Rittwik: I need to reach out also other PTLs
 - xv. Jack: From overall O1 capability you need to talk with Ganesh about the ODU Low test fixture
 - xvi. Jack: Discuss also with Mahesh what is the roadmap of SMO project
 - 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. (TBD) O-RAN Centralized Unit (OCU)
 - vi. Sachin Srivastava O-RAN Distributed Unit High (ODUHIGH)
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 - viii. Martin Skorupski Operations and Maintenance (OAM)
 - ix. Alex Stancu Simulations (SIM)
 - x. Jackie Huang 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
 - a. William DIEGO will be having vacation in August, Ganesh Shenbagaraman will take care of the scribe role then
 - b. Jack will be out on vacation first two weeks of August. Jinri will cover these weeks
- 12. Any Other Business (AOB)
- 13. Meeting Summary (resolutions, new action items, etc.)

Recording: Link to Zoom recording

- 1. Call for Scribe (minutes owner): Juha Oravainen
- Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
AT&T	Jack Murray Co-Chair	Х	David Kinsey	
China Mobile	Jinri Huang Co-Chair		James Li	Х
Deutsche Telekom	David Streibl	Х	Ondej Hudousek	

Ericsson	John-Paul Lane		John Keeney	Х
NTT DOCOMO	Masafumi Masuda		Anil Umesh	
Nokia	Juha Oravainen	Х	Thoralf Czichy	
Orange	William Diego	Х	Vincent Danno	
Radisys	Ganesh Shenbagaraman	Х	Sachin Srivastava	
TIM	Andrea Buldorini	Х	Scarpina Salvatore	
Wind River	Bin Yang	Х	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 07/14/2021 TOC meeting minutes, motion by Juha Oravainen, seconded by user-2057e. Motion passed
- 4. Review of Today's Agenda
 - a. William DIEGO will be having vacation in August, Ganesh Shenbagaraman will take care of the scribe role then
- 5. Release Votes and Approval
 - a. AAL project
 - i. Action point: Trishan to check if your have to sign a new agreement for the repo.
 - 1. A clean path forward here would be to have a separate CCLA / ICLA for just the BSD repo(s). The repo(s) for this project would then use BSD-3-Clause as the project's outbound license, as preferred by the WG6
 - 2. That CCLA/ICLA would be substantively based on the Apache Software Foundation's CCLA and ICLA (which are widely used across open source projects), with some administrative changes to better align with how the EasyCLA process works for managing CLAs. The existing O-RAN SC repos would continue to use the existing CLAs, the new one would only be for the BSD repo(s)
 - 3. The decision on whether to take this approach could be voted on and approved by the O-RAN SC's TOC, as part of their responsibilities under the Technical Charter. Note that under section 7(c), it would need to be a 2/3 vote of the entire TOC to grant the project license exception to use BSD-3-Clause here instead of Apache-2.0. Also we would have some administrative and configuration work on the back end to set up and enforce the 3rd CLA
 - ii. Action point: Jack to present the write up about the AAL project to have a vote.
 - 1. This was put on the table on 2021-07-07 meeting
 - Jack: There is discussion ongoing in WG6 and we're still waiting for some aspects that discussion to be resolved. Some clarifications were made but until we get more information we leave this table for now
- 6. Copyright update
 - 1. Jack is working with Zbynek and Stefan to get SCCL topic to be updated to O-RAN Alliance web pages so that we can have the license published as an option. We also have to get a CLA in place for people contributing underneath that license
- Jack: 3GPP work will most probably continue in September
 O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 - a. **Action point:** Jinri to organize release statement and PR for "D" Release
 - i. Discussion is still ongoing in EC
- 8. Old business and Status of Open Action Items
 - a. Action point: PTLs help is needed to provide a list of files, which will use SCCL license
 - i. Jack: Do we want to have a branch that deals with all the models and another branch dealing with the code and another one with documentation? Do we want to organize this by project? There are different kind of options how we want to organize. If PTLs can think about this, then we'll bring it up again next week
 - b. New PTL for the Infrastructure project is needed. Action point: Xiaohua Zhangwill propose a new PTL via e-mail
 - i. Mail from July 14: toc@lists.o-ran-sc.org | Need step down from the PTL of INF, and propose Jackie Huang to be PTL of INF
 - 1. Bin: I support Xiaohua's proposal to nominate Jackie Huang as a new PTL
 - 2. Jack: Does anyone else have any comments or want to nominate someone for this PTL role?
 - 3. **Decision**: Nominate Jackie Huang to the PTL role of Infrastructure project. Motion by Bin Yang, seconded by Juha Oravainen Motion passed
 - c. D Release
 - i. Action point: Mahesh Jethanandani to add SMO to D-release image list page: D Release Docker Image List Integration and Testing Confluence (o-ran-sc.org)
 - 1. Mahesh: I'll work with Trishan to make sure that link is available
 - d. "E" Release timeline.
 - i. Action point: Jack to create "E" Release timeline and publish.
 - 1. This is now published in the Releases page: Releases Releases Confluence (o-ran-sc.org)
 - ii. Jack: After the "D" Release is out, let's get a short presentation to make sure we understand how the architecture looks like.

 1. **Action point**: user-59b16 to make an overview presentation together with PTLs in E-release timeframe
 - iii. Action point: Ganesh Shenbagaraman Provide an update, if O1 is going to be available anytime soon in Radisys O-CU test fixture?
 - 1. Manasi: We need to have some internal discussion and give update next week
 - 2. Mahesh: Do we have O-CU as a project in E-release?
 - 3. Jack: Radisys has made available a test fixture O-CU, which will be available for testing in the lab. We do not have a code project
 - iv. Action point: user-59b16will reach out every PTL and go through necessary E release content items
 - 1. Rittwik: I discussed with Thoralf and will discuss with other PTLs as well
 - e. 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.
 - 1. Trishan: I'll follow up with the Release engineering. I think they were running an audit to see the list of the empty reports
 - f. 5G Super Blueprint status tabled for D and E, will be re-evaluated for F release.

- g. 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
 - ii. Jack: How you Mahesh see this work is going forward?
 - iii. Mahesh: People who have been working on the project are still committed to continue the work in the E-release
 - iv. Jack: The key question here is what are the E-release requirements and can you come up with a plan to deliver against those
 - v. Jack: If you Mahesh are committed and interested in continuing in the role and there are no other questions then we'll continue and look towards the success of the project
- 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)
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 - viii. Martin Skorupski Operations and Maintenance (OAM)
 - ix. Alex Stancu Simulations (SIM)
 - x. Jackie Huang 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.)

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- 1. Call for Scribe (minutes owner): Juha Oravainen
- 2. Roll Call & Quorum Check

Company	Contact Name	Attendance	Alternate Contact	Attendance
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China Mobile	Jinri Huang Co-Chair	Х	James Li	
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Radisys	Ganesh Shenbagaraman	Х	Sachin Srivastava	
TIM	Andrea Buldorini	Х		
Wind River	Xiaohua Zhang	Х	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 07/07/2021 TOC meeting minutes, motion by Juha Oravainen, seconded by John Paul Lane. Motion passed
- 4. Review of Today's Agenda
 - a. Jack will be out on vacation first two weeks of August. Jinri will cover these weeks
 - b. Bin Yangwill be Wind River's new TOC representative starting next week
 - c. New PTL for the Infrastructure project is needed. Action point: Xiaohua Zhangwill propose a new PTL via e-mail
 - d. John: Does anybody have any comments to this mail "OSC: LF Nexus repo for helm charts. (o-ran-sc.org)" This would make it much easier to reuse OSC components
 - i. Trishan: Can you make a support ticket?
 - ii. Jack: We might need to organize a little bit around it to make it easier for the release engineering to manage them if each project has their own way of where the helm charts sit and how they're organized.
 - iii. Martin: That's a good approach.
 - iv. Jack: So, this should just be an update to the best practices
 - v. Trishan: That would be a question if it's a recommendation or requirement. If it becomes a requirement, then probably a vote would be helpful. Otherwise if it's a recommendation, then update the best practices should be sufficient

- vi. Jack: Let's go and see how it works out
- 5. Release Votes and Approval
 - a. D Release
 - i. Action point: Jinri to organize release statement and PR for "D" Release
 - 1. PR is currently suspended, it will be discussed in the EC meeting
 - ii. SMO is missing from D release docker release image list: D Release Docker Image List Integration and Testing Confluence (o-ran-sc.org)
 - 1. Action point: Mahesh Jethanandani to add SMO to D-release image list page
 - b. AAL project
 - i. Action point: Trishan to check if your have to sign a new agreement for the repo.
 - A clean path forward here would be to have a separate CCLA / ICLA for just the BSD repo(s). The repo(s) for this
 project would then use BSD-3-Clause as the project's outbound license, as preferred by the WG6
 - That CCLA/ICLA would be substantively based on the Apache Software Foundation's CCLA and ICLA (which are
 widely used across open source projects), with some administrative changes to better align with how the
 EasyCLA process works for managing CLAs. The existing O-RAN SC repos would continue to use the existing
 CLAs, the new one would only be for the BSD repo(s)
 - 3. The decision on whether to take this approach could be voted on and approved by the O-RAN SC's TOC, as part of their responsibilities under the Technical Charter. Note that under section 7(c), it would need to be a 2/3 vote of the entire TOC to grant the project license exception to use BSD-3-Clause here instead of Apache-2.0. Also we would have some administrative and configuration work on the back end to set up and enforce the 3rd CLA
 - ii. Action point: Jack to present the write up about the AAL project to have a vote.
 - 1. This was put on the table on 2021-07-07 meeting
 - Jack: There is discussion ongoing in WG6 and we're still waiting for some aspects that discussion to be resolved. Some clarifications were made but until we get more information we leave this table for now
 - iii. Action point: Ganesh to provide an update from ODU point of view.
- 6. Copyright update
 - 1. Jack: We need to work to put together procedures and methods to support SCCL license
- 7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
 - 1. Jinri: SCCL license was approved by the board two weeks ago. As a follow-up, EC is asking a list of files, which will use SCCL license
 - 1. Action point: PTLs help is needed to provide a list of files, which will use SCCL license
 - 2. Jinri: WG6 will release only Stage 1 and Stage 2 in July train but Stage 3 is not in the content because of some legal concerns
 - 1. Jack: We're waiting for clarification from WG6, if we should make new AAL repo or not
- 8. Old business and Status of Open Action Items
 - a. "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.
 - 1. Action point: user-59b16 to make an overview presentation together with PTLs in E-release timeframe
 - iii. Action point: Ganesh Shenbagaraman Provide an update, if O1 is going to be available anytime soon in Radisys O-CU test fixture?
 - 1. Ganesh: Investigation was started and we should be able to give an update on this by next week
 - iv. Action point: user-59b16will reach out every PTL and go through necessary E release content items
 - 1. Rittwik: I discussed with Thoralf and will discuss with other PTLs as well
 - b. 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.
 - 1. Trishan: We ran the report and took an action on archiving the empty ones.
 - 2. Jack: And then making sure that all the other ones are attached to some project, which has a PTL so that we can get track the responsibility
 - 3. Trishan: Yes, and also as a reminder, projects should always have updated info.yaml file with the list of approved committers
 - c. 5G Super Blueprint status tabled for D and E, will be re-evaluated for F release.
 - d. 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.
 - ii. Jack: PTL role belongs to the person, not to the company but the person still have to be able to contribute
 - iii. Jack: We need to have a discussion here, do we need to open it back up for nomination for the PTL role and reconsider opti ons at this point or not
 - iv. John-Paul: Should we have a process around PTL elections generally?
 - v. Jack: The election window is the March timeframe for normal elections. That's the general principle but we have not been doing that because the projects have been so narrowly participated. Meaning that most projects are a single company project and there's not been enough committers to hold an election. To get things started the TOC was voting on the PTLs till there was enough participation in any project to hold an election
 - vi. John-Paul: Should we at least have a nomination and a review once a year until we can get that diversity across the different projects?
 - vii. Jack: Yes, and I think we talked about it briefly in the March window, but I don't think anyone raised the concern of a change
 - viii. Jack: I want to have the discussion is the SMO going to be the first project, where we have a diverse set of contributors enough to hold an election and try to understand how we should move forward
 - ix. Rittwik: should we have secondary PTLs in projects?
 - x. Jack: Committers can take care of this in general
- 9. Standing Agenda Items (Brief Status of Ongoing Activities)
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 - 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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- 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)
 - Intel will be doing ODULOW release as part of the maintenance. There were some items identified by ODUHIGH
 that they need to address
- 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)
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TIM	Andrea Buldorini	Х		
Wind River	Xiaohua Zhang	Х	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 06/30/2021 TOC meeting minutes, motion by MASAFUMI MASUDA, seconded by Jinri Huang. Motion passed
- 4. Review of Today's Agenda
- 5. Release Votes and Approval
 - a. D Release
 - i. Action point; PTLs to branch that can branch and to update the release page.
 - 1. All the projects are ready to branch except O-DU Low. This release there are no changes in O-DU low but they have since found some items to be worked, which will be covered in the maintenance release
 - 2. **Decision:** Close the D release, publish it and make it available. Motion by Jinri Huang, seconded by JP Lane Motion passed
 - ii. Action point: Jinri to organize release statement and PR for "D" Release.
 - b. AAL project
 - i. Action point: Trishan to check if your have to sign a new agreement for the repo.
 - A clean path forward here would be to have a separate CCLA / ICLA for just the BSD repo(s). The repo(s) for this
 project would then use BSD-3-Clause as the project's outbound license, as preferred by the WG6
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 - ii. Action point: Jack to present the write up about the AAL project to have a vote.
 - 1. Message from WG6 co-chairs:
 - a. As discussed on the AAL FEC way forward call today, we would like to initiate a new repo in OSC. This overall proposal will be discussed and approved by WG6 later this week and then we also need to review

it with the TSC, but as our intention is to use the repo for the July specification train, we would request OSC to initiate the creation of the repo so that work can occur in parallel with the discussions.

- b. Why
- i. WG6 is considering splitting its AAL FEC specification into two portions to be published together in the July 2021 train – a) a formal specification document published through the normal O-RAN FRAND process that covers stage 1 and stage 2 specifications, and b) a stage 3 API document that covers data structures and programming language level details specific to open source implementations such as DPDK that would be published in ORAN OSC repo under a BSD license and referenced from the formal AAL FEC specification.
- 2. Jack: Niall Power from Intel is willing to be the PTL Committer
- Jack: There's a request to enable creating this new project and repo. TOC needs to approve that it would be a BSD-3 license and it would need to name Niall Power as the PTL and an initial Committer
- 4. Juha: If we make this BSD exception, is it valid only for this project?
- 5. Jack: Only for this project
- 6. Juha: DPDK is using also GPL license
- 7. Jack: Yes, for the low level code but this is not part what is asked for, only BSD is asked
- 8. John-Paul: Is this a short term fix until some more permanent way of working can be put in place between O-RAN Alliance and DPDK or is this intended to be the the way of handling the stage three for fact going forward
- 9. Jack: This is the way of handling it going forward. O-RAN SC is the place where open source software should be contributed and O-RAN Alliance focus is the specifications
- 10. John-Paul: Do we see that's a clear separation?
- 11. Jack: I'm not been deeply involved in WG6 but they came to to me to ask about the how to handle the BSD license. But if you're going to contribute it under BSD license what's the difference between putting it in OSC and O-RAN Alliance
- 12. John-Paul: There's an outstanding action point at the moment for WG6 to get more clarity from O-RAN legal how the SCCL license and the BSD license might play together and they're waiting on that feedback before they take their vote starting this Friday
- 13. Jack: All I'm trying to do is enable because they want to move quickly. If they chose not to do it, will just fold up the repos and not use them
- 14. John-Paul: But if we wait to next week and take a vote on this. Does that prevent in any way the repo being set up quickly and still meeting the timeframe. Should we wait and have TOC vote next week?
- 15. Jack: If we move forward and approve this, it doesn't enable anything from WG6 until they decide to use it. This just enables to move forward and give them a positive statement that this path is possible and removes one level of uncertainty
- 16. Jack: So, we have a motion in front of us to to do this. Do we have a second.?
- 17. Jack: If nobody is willing to second, then it won't go to a vote at this time. So, that puts that on the table
- iii. Action point: Ganesh to provide an update from ODU point of view.
- 6. Copyright update
- 7. O-RAN-related business (marketing, WG interaction, TSC/EC update etc.)
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 - 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.
 - iii. 2021-07-07 discussion below:
 - iv. Jack: how is the planning for the E-release?
 - v. Rittwik: We will continue with VES disaggregated VES agent, DU and RU radio mode testing was not completed and we are going to start on the network slicing design document use case. These are kind of the three high level items. We will also make sure that SMO MVP requirements are coming into the OSC
 - vi. Jack: there are two items that I'd like to add.
 - 1. One is with the approval of SCCL license. We should work towards getting key parts of the specification into repos that we can work from and modify as needed
 - 2. The other one is the ongoing question about can we validate O1 interaction with each component
 - a. Action point: Ganesh ShenbagaramanProvide an update, if O1 is going to be available anytime soon in Radisys O-CU test fixture?
 - vii. Rittwik: We discussed in RSAC meeting and we're trying to propose for the MVP SMO and essentially I think it can be broken down into O1, O2 and LCM, and so there is work that needs to be done across all of these three categories. O1 specifically is broken down into finer granularity.
 - viii. Jack: it is also important to make sure all the components have a minimum capability
 - ix. Action point: user-59b16will reach out every PTL and go through necessary items
 - x. We need to get copyright items also addressed
 - xi. Jack: how you Mahesh Jethanandanisee the different parties that are interested in SMO are coming together?
 - xii. Mahesh: We did a little bit of testing with O-DU, but I think we need to extend that to all the other components to cover those. Not only from CM perspective but also from FM and PM perspective
 - b. Repo clean-up:
 - Jack: Every repo should be attached to a project with a PTL. House-keeping and due diligence are the responsibility of the PTL.
 - c. $\,$ 5G Super Blueprint status tabled for D and E, will be reevaluated for F release.
 - d. 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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