O-RAN SC Technical Oversight Committee (TOC)

- Technical Charter for O-RAN Software Community
- TOC Voting Members
- TOC Meeting Info
- 2020-05-06
- 2020-04-29

Technical Charter for O-RAN Software Community

TOC Voting Members

<table>
<thead>
<tr>
<th>Company</th>
<th>Name</th>
<th>Alternate</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT&amp;T</td>
<td>Jack Murray Co-Chair</td>
<td>Lusheng Ji</td>
</tr>
<tr>
<td>China Mobile</td>
<td>Jinri Huang Co-Chair</td>
<td>Weichen Ni</td>
</tr>
<tr>
<td>Deutsche Telekom</td>
<td>David Streibl</td>
<td>Ondej Hudousek</td>
</tr>
<tr>
<td>NTT DOCOMO</td>
<td>Masafumi Masuda</td>
<td>Anil Umesh</td>
</tr>
<tr>
<td>Orange</td>
<td>William Diego</td>
<td>Vincent Danno</td>
</tr>
<tr>
<td>Verizon</td>
<td>Viswanath Kumar Skand Priya</td>
<td>Kristen Young</td>
</tr>
<tr>
<td>Nokia</td>
<td>Juha Oravainen</td>
<td>Thoralf Czichy</td>
</tr>
<tr>
<td>Radisys</td>
<td>Ganesh Shenbagaraman</td>
<td>Sachin Srivastava</td>
</tr>
<tr>
<td>Ericsson</td>
<td>John-Paul Lane</td>
<td></td>
</tr>
</tbody>
</table>

Available (10) Available (10)

Available (11) Available (11)

Available (12) Available (12)

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

TOC Meeting Info

Technical Oversight Committee meetings are open to the public and held on Wednesdays at 8 AM Eastern Time USA. [World Time Zone Map]

Zoom 2 Info:

- Join from PC, Mac, Linux, iOS, or Android: https://zoom.us/j/6540568082
- Or Telephone: Dial (for higher quality, dial a number based on your current location)
  - 855 880 1246 (Toll Free), 877 369 0926 (Toll Free)
  - Meeting ID: 654 056 8082
  - International numbers available: https://zoom.us/u/aczy3hy9Qi

<table>
<thead>
<tr>
<th>City</th>
<th>Time</th>
<th>Zoom/Audio Bridge</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTC-time</td>
<td>Wednesday 12:00</td>
<td><a href="https://zoom.us/j/6540568082">https://zoom.us/j/6540568082</a></td>
</tr>
<tr>
<td>New York (EDT / UTC-4)</td>
<td>Wednesday 08:00</td>
<td>+1 669 900 6833 +1 646 558 8656 855 880 1246 (Toll Free) 877 369 0926 (Toll Free) Meeting ID: 654 056 8082</td>
</tr>
</tbody>
</table>
2020 05 06

Agenda

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

<table>
<thead>
<tr>
<th>Company</th>
<th>Contact Name</th>
<th>Attendance</th>
<th>Alternate Contact</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT&amp;T</td>
<td>Jack Murray Co-Chair</td>
<td></td>
<td>Lusheng Ji</td>
<td></td>
</tr>
<tr>
<td>China Mobile</td>
<td>Jinri Huang Co-Chair</td>
<td></td>
<td>Weichen Ni</td>
<td></td>
</tr>
<tr>
<td>Deutsche Telekom</td>
<td>David Streibl</td>
<td></td>
<td>Ondej Hudousek</td>
<td></td>
</tr>
<tr>
<td>NTT DOCOMO</td>
<td>Masafumi Masuda</td>
<td>Anil Umesh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td>William Diego</td>
<td>Vincent Danno</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verizon</td>
<td>Viswa Kumar</td>
<td>Kristen Young</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nokia</td>
<td>Juha Oravainen</td>
<td>Thoralf Czych</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radisys</td>
<td>Ganesh Shenbagaraman</td>
<td>Sachin Srivastava</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ericsson</td>
<td>John-Paul Lane</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

3. Review and Agree to Minutes of Previous Meeting
4. Review of Today’s Agenda
   a. Add O-RAN Distributed Unit Low (ODULOW) May 31st Bronze delivery request to the top of the agenda because we ran out of time last week.
5. Release Votes and Approval
6. Marketing of the current release (WG, LF, PR)
   1. Virtual Exhibition.
7. Status of Open Action Items (Old Business)
   a. **Action:** William Diego Maza update on the coordination with the O-RAN test group
   b. **Action:** Lusheng Ji add the longer term test strategy to the agenda.
8. Standing Agenda Items (Brief Status of Ongoing Activities)
   a. Release Manager Trishan de Lanerolle /Release Planning: Weekly TOC Scheduling
      i. **Project Bronze Release**
      b. Rittwik Jana Requirements Software Architecture Committee
      c. Lusheng Ji Integration and Test
         i. Gernt review process improvement
ii. Integration and testing status report
d. Report out from PTL: Stand-Up & Report Out on Blockers - next week we will start to cover this list. Are there any major items that anyone would like to raise to the TOC this week?

i. John Keeney Non-RealTime RIC (RAN Intelligent Controller) (NONRTRIC)
ii. Matti Hiltunen RIC Applications (RICAPP)
iii. Thoralf Czichy RIC Platform (RIC)
iv. Yingying Wang O-RAN Centralized Unit (OCU)
v. Sachin Srivastava O-RAN Distributed Unit High (ODUHIGH)
vi. Zhimin Yuan O-RAN Distributed Unit Low (ODULOW)

1. status update

vii. Martin Skorupski Operations and Maintenance (OAM)

viii. Alex Stancu Simulations (SIM)

ix. Xiaohua Zhang Infrastructure (INF)

x. weichen ni Documentation (DOC)

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


a. OAI purposed Meeting
b. OSC Logo

10. Planning for Next Meeting
11. Any Other Business (AOB)
12. Meeting Summary (resolutions, new action items, etc.)

2020 04 29

Recording: 2020-04-29_toc.mp4

Agenda

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

<table>
<thead>
<tr>
<th>Company</th>
<th>Contact Name</th>
<th>Attendance</th>
<th>Alternate Contact</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT&amp;T</td>
<td>Jack Murray Co-Chair</td>
<td>x</td>
<td>Lusheng Ji</td>
<td></td>
</tr>
<tr>
<td>China Mobile</td>
<td>Jini Huang Co-Chair</td>
<td>x</td>
<td>Weichen Ni</td>
<td>x</td>
</tr>
<tr>
<td>Deutsche Telekom</td>
<td>David Streibl</td>
<td>x</td>
<td>Ondej Hudousek</td>
<td></td>
</tr>
<tr>
<td>NTT DOCOMO</td>
<td>Masafumi Masuda</td>
<td>x</td>
<td>Anil Umesh</td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td>William Diego</td>
<td>x</td>
<td>Vincent Danno</td>
<td></td>
</tr>
<tr>
<td>Verizon</td>
<td>Viswa Kumar</td>
<td></td>
<td>Kristen Young</td>
<td></td>
</tr>
<tr>
<td>Nokia</td>
<td>Juha Oravainen</td>
<td></td>
<td>Thoralf Czichy</td>
<td>x</td>
</tr>
<tr>
<td>Radisys</td>
<td>Ganesh Shenbagaraman</td>
<td>x</td>
<td>Sachin Srivastava</td>
<td></td>
</tr>
<tr>
<td>Ericsson</td>
<td>John-Paul Lane</td>
<td>x</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

3. Review and Agree to Minutes of Previous Meeting
   a. Clarify comments about questions about 9.iii.a needed clarity so Farheen updated minutes.
   b. The minutes of the prior meetings were reviewed, and there were no comments, questions or corrections.
   c. i. Vote to approve minutes for 22 Apr 2020
       ii. On motion made by David Streibl
       iii. Seconded by weichen ni
       iv. VOTE: Vote taken, item passed

4. Review of Today’s Agenda

5. Release Votes and Approval

1. Jack: we will need to vote on how to support the Viavi simulator as a part of our test environment. At some point we will have to bring to vote a decision to request for funding to support a part of the bronze activity. We are looking at it as a rental fee on the open source side. People from Viavi are on the technical side.
2. If people are interested in this topic reach out to Lusheng Ji or Rittwik Jana. One of our challenges working in the RAN at some point we have to have devices and radios to simulator. We have a small effort on simulating protocols but RAN simulator is more active. The short term activity is how do we deal with this in Bronze without a full operating stack.
3. We need more participation in the test department. There is a lot of activity going on there.
4. ORAN Alliance and O-RAN SC are two different leadership.
   1. Open source focus group in O-RAN Alliance.
   2. TOC is focus group in O-RAN SC.
   3. OSFG is asked to take a vote. There are recommendations of the OSFG group in the O-RAN Alliance and there are votes for the TOC for the O-RAN SC.
4. John-Paul Is there any information about the specification project?
   1. Jack: The O-RAN SC has a charter under the LF. We follow LF guidelines. O-RAN Alliance funds the LF for the O-RAN SC to operate under 2 licenses.
   2. Apache open source initiative.
   3. O-RAN Alliance license. I am not a lawyer it is managed by the software alliance entity. We use the Apache license. Documentation is slightly different. The O-RAN license is managed by the O-RAN Alliance. We do not call this an open source license. In this forum I refer to it as a FRAND license. We're an open source community we have the Apache license and the FRAND license from the O-RAN Alliance.
   4. Jack: Look at the charter. The charter for the OSC is an LLC founded in the USA under a series of LLC under the Linux Foundation. We also have the O-CU and O-DU High.
   5. Jack: It is intended to mimic 3GPP and the O-RAN FRAND policy. I am not a lawyer.

6. Marketing of the current release (WG, LF, PR)
   1. Virtual Exhibition.
   2. Status of Open Action Items (Old Business)
      a. **Action** / Jinri Huang work with Farheen to add the MWC demos and presentations to the O-RAN SC wiki once posted to the O-RAN Alliance.
      b. **Action** / William Diego Maza update on the coordination with the O-RAN test group
         i. William we are working with Viavi to establish a date. Planning to integrate into the Cherry release timeline.
         ii. Jack: I try to give people more time. I encourage people to work ahead of the next release. People should be thinking about participating the requirements for Cherry. This way when we start talking full time about Cherry we are ready.
         iii. We will need both long and short term
      c. **Action** / William Diego Maza send John Murray the dates from the TIFG slide deck so he can add it to the Cherry Release timeline.
      d. **Action** / TOC Martin: We want to have data modeling on the wiki in a broader way.
         i. Martin will add a new page and link to the Program Developer Guide.
      e. **Action** / Zhimin Yuan Sachin Srivastava come up with a timeline of your activities with Lusheng Ji because you are not going to make the timeline for the Bronze release. Try to come up with a plan that will be able to be delivered in the Bronze Maint release for the FAPI and the O-DU Low and High.
         i. Zhimin: we did a lot of time on this.
         ii. Sachin: sharing slide deck. Adding points. We are discussing integrating plan. We talk to Viavi about O-RU and O-CU.
   1. Trying to break into pieces. Each piece has less dependecies. We can do the P5 message integration using our own O-RU and O-CU stack. But the dependency is properly installed and configured. For O-DU high and O-DU low we got some agreement.
   2. Test Cases Profile For Example is very important for RAN Integration. We need guidance of which section we should start.
   3. We have had discussions with Lusheng and Rittwik to move forward with the Cherry and Dawn release. We have had a few gaps with O-DU High and O-DU Low. We are targeting the P5 messages exchanged between High and Low. We will be using the third dependency we will be using the L1 and L2 loss because there is no FAPI detector. From a target perspective we will be targeting the P5 messages using the stub from O-CU. Going forward we will need to define the use case call flows test plan where we can use O-RU and O-CU.
   4. Jack: Aknowledges and appreciates everyones effort. Getting the P5 messages are a positive step forward. P5 is something that will work in the Bronze release or the Cherry Release?
   5. Sachin:
      a. When we will hve the O-DU server to start testing. I will need help with Lusheng.
      b. Configure the O-DU low and O-DU high.
      c. Once we have agreement on these two points we will be able to provide a time estimate. We will be using the Intel software in the lab to save time.
      d. Jack: We have had the Intel software reviewed by the O-RAN legal team. You can use it. It will be discussed at the TSC meeting and no one raises concerns we can move forward with using it. Since it has passed legal review it should be OK. We are setting up the lab with the servers. I am making sure that the servers will be available. I am in charge of that. Delays are due to everyone working from home.
      e. **Action** / Lusheng Ji add the longer term test strategy to the agenda. Get it from Lusheng.
      f. Jack: The binary software should never be loaded into the LF repos. It is built and deployed into the machines. We have legal clearance to use it but I still have to get the TSC to approve. We can start a second O-DU software to use a different approach. Our goal is not to limit ourselves to one only.
      g. Rittwik: Intel can only give permission by the end of May. Does this mean we can start working in the lab and have phase 1 tested.
      h. Jack: We have been given legal clearance that we can use it. As a risk item you can use it but it can't become a part of the official release policy.
      i. Sachin: O-DU High we had a discussion. It can be used to do the initial integration.
      j. Lusheng: It can be a part of Bronze. It can be integrated with the near Real Time RIC.
      k. Jack: How are we tracking the completeness in a release. Are we planning to deliver 20% - 50%. At some time we want to state that success when we do the interoperability testing.
   6. O-RAN Alliance Copyright update
      a. We are working the issue in detail. Lawyers and board work approvals are ongoing. It is a logistical issue. There are no concerns about doing it but how to do it properly. Part of the challenge is asking for approvals by paragraphs for specifications so we are trying to find out the implementation details.
   8. Standing Agenda Items (Brief Status of Ongoing Activities)
      a. **Release Manager Trishan de Lanerolle /Release Planning**: Weekly TOC Scheduling
         i. **Project Bronze Release**
         ii. Does the time extension apply to all repos?
         iii. No only the ones that request extenstion.
         iv. Lusheng: We have 4 tracks. for healthcheck we have to find out what can be delivered and what needs to be tested. We need to have discussion with Martin, John, and Thoralf.
      b. **Rittwik Jana Requirements Software Architecture Committee**
      c. **Lusheng Ji Integration and Test**
i. Gerrit review process improvement
ii. Integration and testing status report
d. Report out from PTL: Stand-Up & Report Out on Blockers - next week we will start to cover this list. Are there any major items that anyone would like to raise to the TOC this week?

i. John Keeney Non-RealTime RIC (RAN Intelligent Controller) (NONRTRIC)
ii. Matti Hiltunen RIC Applications (RICAPP)
iii. Thoralf Czichy RIC Platform (RIC)
iv. Yingying Wang O-RAN Centralized Unit (OCU)
v. Sachin Srivastava O-RAN Distributed Unit High (ODUHIGH)
vi. Zhimin Yuan O-RAN Distributed Unit Low (ODULOW)

1. Code is planned to be available on May 31. Can we have O-DU Low for the Bronze release package?
2. Jack: That puts us at the end of any cycle. Can we work to put it into the Bronze maintenance release to give us enough time to test.
3. Zhimin: The testing will be handled before May 31.
4. Jack: We will need to discuss further and we are near the end of the meeting. We don’t release code unless it has gone through the open source testing.
5. Action / Farheen Cefalu add this topic to the top of the agenda next week.

vii. Martin Skorupski Operations and Maintenance (OAM)
viii. Alex Stancu Simulations (SIM)
ix. Xiaohua Zhang Infrastructure (INF)
x. weichen ni Documentation (DOC)
xi. (TBD) O-RAN Radio Unit (ORU)


a. OAI purposed Meeting
   i. Jack OSC wants a discussion with OSC.
   ii. OAI meeting is taking place?
      1. Initial meeting between OSC and OAI TOC. To see if they want to participate as an upstream project and a separate project.
      2. John-Paul: When will the invitation be sent?
      3. Action/ Jack: I will post that. They have suggested some dates.

b. OSC Logo

10. Planning for Next Meeting
11. Any Other Business (AOB)
12. Meeting Summary (resolutions, new action items, etc.)