Open AFC

TIP Board of Directors Approval Date: August 04, 2021

1. SOFTWARE PROJECT GROUP NAME

Open Automated Frequency Coordination (Open AFC)

2. PURPOSE

The Open AFC project is a dedicated open-source community for the design, development, testing, and potentially certification of Automated Frequency Coordination (AFC) software for unlicensed services (e.g., Wi-Fi) in the 6GHz band.

3. SOFTWARE PROJECT SCOPE

The Open AFC software project group will focus on the iterative development, validation, and contribution of open software for cloud-based AFC services and devices by focusing on the following:

- Define and contribute software requirements, design artifacts, architectures, APIs, data models, and workflows
- Reference to existing industry standards and available components as appropriate
- Develop, build, and test software components
- Validate AFC services and devices interoperability and ability to protect the incumbents through direct engagement in TIP lab and field trials
- Support a rich AFC ecosystem that is well integrated, curated, & tested

General Deliverables

- Source Code, supporting software including test software, scripts, and system validation source code
• Requirements documents, design documents, configurations, and test process documentation

Delivery Process

• Software development will be managed, tracked, and delivered by industry standard, open-source practices including defined roadmap, feature backlog, defined delivery sprints
• System design and validation artifacts will be managed, tracked, and delivered via industry standard, open source practices and published in the project group tools

4. COLLABORATION

The group will be structured and managed as a single Project Group, with the option to create additional sub work streams as appropriate to meet community needs.

The Open AFC Working Group (WG) will engage and collaborate with any TIP Project Group as appropriate. A key driver of this collaboration will be the public availability of the software, validation code, and documentation artifacts contributed to the Open AFC group.

This group will conduct its activity via:

• Co-chair and member collaboration by individuals that join and participate in the group
• Quarterly general meeting of the Open AFC WG

In addition, the project group may collaborate with other industry groups related to software and infrastructure.

5. GROUP CHAIRS AND CO-CHAIRS

• Chris Szymanski, Broadcom
• Peiman Amini, Cisco
• Michael Tseytlin, Facebook

These individuals will serve as the initial Maintainers.
6. SOFTWARE PROJECT MAINTAINER

The Co-Chairs will appoint one or more Maintainers subject to the approval of the TIP Board in accordance with Section 7.1 of the TIP IPR Policy. The Authorized Representative of the Participant employing the Maintainer must execute this Software Project Group Charter. The TIP Board of Directors may replace the Maintainer at their sole discretion, and at any time.

The Maintainer, according to the Telecom Infra Project IPR Policy, has the following responsibilities:

- The Maintainer will coordinate the Contributions of Contributors (including accepting or rejecting proposed Contributions), the hosting of the Software Project, and handling of pull requests in accordance with the then-current TIP Guidelines for Maintainers for TIP Software Projects
- The Maintainer will determine practices for releases of updates subject to approval by the Board of Directors or an Administrative Committee formed in accordance with the TIP Bylaws

The Maintainer has the additional responsibilities described in this Charter and as may be delegated to him or her from time to time by the TIP Board of Directors, including:

- Ensuring that all Contributors’ Authorized Representatives have executed the TIP Software Contribution and License Agreement attached hereto in Appendix A
- Tracking all Contributions submitted including the date of submission, the entity responsible for the submission, and whether the Contribution was accepted, with or without modification, or rejected
- Appointing and managing Committers, if any, in accordance with the then-current TIP Guidelines for Maintainers for TIP Software Projects
- Coordinating with TIP legal counsel to ensure compliance with all third-party software licenses including free and/or open source software licenses, as necessary

7. SERVICES PROVIDED BY TIP

- GitHub repository
• Atlassian Suite (Jira, Confluence)
• Slack

8. INITIAL SOURCE CODE CONTRIBUTION
• Facebook AFC source code submitted under the TIP CLA
• Facebook AFC supporting source code documentation under TIP Document IPR Policy

9. SOFTWARE PROJECT TERMS
This Software Project Group Charter establishes the purpose, project scope, and intellectual property license terms applicable to the Software Project described herein ("Software Project"). Only Participants whose Authorized Representative executes this Project Group Charter are permitted to participate in this Project Group in accordance with the TIP Bylaws.

Term: The Project Group shall commence on the date this Charter is approved by the Board ("Formation Date") and shall terminate automatically one year from the Formation Date unless the TIP Board of Directors votes to extend the Term for a subsequent 1-year term. The TIP Board of Directors may extend the Term an unlimited number of times.

9.1 LICENSE TERM
The license terms applicable to the Software Project shall be as follows:

___ Limited copyright-only license as approved by the TIP Board of Directors.
___X___ Standard 3-clause BSD License.
___ ___ BSD License plus patent grant.

Access to the code and permission to use it are offered by TIP to any TIP Participant who agrees to the terms of this Charter. There is no fee to join TIP for the sole purpose of participating in the Open AFC PG. You agree that you will not share any Contributions of other PG members, or any draft or final PG Deliverables with any party who is not a member of this PG. A roster of PG member entities is available on the project group Confluence page.
A copy of the complete license for the Project is attached hereto as Schedule 1 (the “Project License”).

### 9.2 CONTRIBUTION TERMS

Organizations and individuals that execute this Software Project Charter will be bound by its terms, will be permitted to participate in the project.

Contributions to the Software Project for must be made pursuant to the TIP Software Contribution and License Agreement (CLA)

___ Check here if Contributions must also be accompanied by the Developer Certificate of Origin as set forth in Annex B of the Telecom Infra Project IPR Policy

### 9.3 SOFTWARE PROJECT LICENSING POLICIES

Contributions to Deliverables and any license to use the Deliverable upon its finalization are governed by TIP’s **Organizational Documents.** The IPR policies and agreements referenced below are TIP Organizational Documents unless otherwise specified and attached to this Charter.

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>IPR Treatment</th>
<th>Approval Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software, test automation, and system validation source code as defined in section 3 Deliverables</td>
<td>AFC Software Contribution and License Agreement (see Appendix A)</td>
<td>Version(s) approved by consensus of the Maintainers and project group Chairs</td>
</tr>
<tr>
<td>Test automation, system validation, and open hardware documentation artifacts as defined in section 3 Deliverables</td>
<td><strong>Document IPR Policy</strong></td>
<td>Final approval by Technical Committee</td>
</tr>
</tbody>
</table>

The undersigned Authorized Representative hereby agrees to the terms of this PG Charter and represents, warrants, and covenants that any contractors, sub-contractors, or employees thereof (“Contractors”), participating on behalf of the identified Participant is participating with the same rights and obligations as employees of the Participant, and that the
Participant is responsible for such Contractor’s adherence to the PG Charter and any applicable TIP Organizational Document.

**Charter Update**: This Charter will be updated to reflect any changes as set forth in the [Project Group Charter Revision Policy](#).
SCHEDULE 1

Project License

Copyright <YEAR> <COPYRIGHT HOLDER>

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY TIP AND ITS CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
TIP Software Contribution and License Agreement

Thank you for your interest in the Telecom Infra Project, Inc. ("TIP"). In order to clarify the intellectual property license granted with software contributions ("Software Contributions") from any person or entity, TIP must have a Contributor License Agreement (CLA) on file that has been signed by each Contributor, indicating agreement to the license terms below. This license is for your protection as a Contributor as well as the protection of TIP and its users; it does not change your rights to use your own Software Contributions for any other purpose.

This version of the CLA allows an entity ("Corporation") to submit Software Contributions to the Open Automated Frequency Coordination (Open AFC) Project Group of TIP in connection with the Open AFC ("Software Project"), to authorize Software Contributions submitted by its designated employees to the Software Project, and to grant copyright and patent licenses thereto.

If you have not already done so, please complete and sign, then scan and email a pdf file of this Agreement to support@telecominfraproject.com.

Please read this document carefully before signing and keep a copy for your records.

Corporation name: ____________________________________________

Corporation address: _________________________________________

__________________________________________________________

__________________________________________________________

Authorized Representative as set forth in Your Participation Agreement:

__________________________________________________________

E-Mail: _________________________________________________

Telephone: ____________________________

---

1 This CLA is derived and differs from the Corporate Contribution and License Agreement provided by the Apache Software Foundation. See https://www.apache.org/foundation/license-faq.html#CLA-Usage for explanation of permissions.
You accept and agree to the following terms and conditions for Your present and future Software Contributions submitted to the Software Project. In return, TIP shall not use Your Software Contributions in a way that is contrary to the public benefit or inconsistent with TIP’s nonprofit status and bylaws in effect at the time of the Software Contribution. Except for the license granted herein to TIP and recipients of the Software Contribution as may be distributed by TIP, You reserve all right, title, and interest in and to Your Software Contributions.

1. Definitions.

"You" (or "Your") shall mean the copyright owner or legal entity authorized by the copyright owner that is entering into this CLA with TIP. For legal entities, the entity making a Software Contribution and all other entities that control, are controlled by, or are under common control with that entity are considered to be a single Contributor. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares of such entity, or (iii) beneficial ownership of such entity.

"Software Contribution" shall mean the code, documentation or other original works of authorship expressly identified in Schedule B, as well as any original work of authorship, including any modifications or additions to an existing work, that is intentionally submitted by You to the Software Project for inclusion in, or documentation of, any of the products owned or managed by the Software Project (the "Work").

"Submitted" means any form of electronic, verbal, or written communication sent to the Software Project or its representatives, including TIP representatives authorized by TIP to manage or maintain the Software Project, including but not limited to, communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, TIP for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by You as "Not a Software Contribution."

2. Grant of Copyright License. Subject to the terms and conditions of this Agreement, You hereby grant to TIP and to recipients of software distributed by TIP a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare derivative works of, publicly display, publicly perform, distribute and sublicense any of the
foregoing rights in Your Contributions and such derivatives solely for the purpose of developing the Open AFC software in the Open AFC software project group under the BSD License as set forth in the AFC PG charter (any such sublicense shall hereafter be referred to as a “Software Project License”).

3. Grant of Patent License. The TIP IPR Policy requires software projects use either a BSD license, a BSD license plus patent grant, or a copyright-only license. If the TIP software project uses the BSD license plus patent grant option, the Contributor will grant the RF Patent License as defined below for its Software Contributions and is otherwise subject to the express patent grant added to the BSD license. If the software project uses the BSD license without a patent grant or a copyright-only license, this CLA does not require the Contributor to grant the RF Patent License below.

You hereby grant to TIP and to recipients of software distributed by TIP a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by You that are necessarily infringed by Your Software Contribution(s), in whole or in part, alone or by combination of Your Software Contribution(s) or parts thereof with the Work to which such Software Contribution(s) were submitted (“RF Patent License”). If any entity institutes patent litigation against You or any other entity (including a cross-claim or counterclaim in a lawsuit) alleging that your Software Contribution, or the Work to which you have contributed, constitutes direct or contributory patent infringement, then any patent licenses granted to that entity under this Agreement for that Software Contribution or Work shall terminate as of the date such litigation is filed.

4. You represent that You are legally entitled to grant the above license. You represent further that each employee of the Corporation designated on Schedule A below (or in a subsequent written modification to that Schedule) is authorized to submit Software Contributions on behalf of the Corporation.

5. You represent that each of Your Software Contributions is Your original creation (see Section 7 for submissions on behalf of others).

6. You are not expected to provide support for Your Software Contributions, except to the extent You desire to provide support. You may provide support for free, for a fee, or not at all. Unless required by applicable law or agreed to in writing, You provide Your Software Contributions on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE.

7. Should You wish to submit work that is not Your original creation, You may submit it to TIP separately, identifying the complete details of its source and of any license or other restriction (including, but not limited to, related patents, trademarks, and license agreements) of which you are personally aware, and conspicuously marking the work as "Submitted on behalf of a third-party: [named here]". If you are submitting software in executable form that is not Your original creation and You are contractually prohibited from complying with the foregoing requirement, You may satisfy the foregoing requirement by (i) separately notifying TIP in writing and in advance that Your Software Contribution to be submitted to the Software Project includes executable code that is not Your original creation, and (ii) certifying in writing that you have been authorized (including through a written agreement) by the copyright owner ("Original Owner") of such executable code that You have the right to submit the executable code as part of Your Software Contribution under the terms of this CLA. You agree to indemnify, defend, and hold harmless TIP, its members, and any recipients of Your Software Contribution, in whole or in part, including their respective officers, directors, employees, representatives, successors, assigns and agents for any claims brought by or on behalf of the Original Owner, or its successors or assigns, for the exercise of any right granted in the Software Project License related to Your Software Contribution, in whole or in part.

8. It is your responsibility to notify TIP when any change is required to the list of designated employees authorized to submit Software Contributions on behalf of the Corporation, or to the Corporation’s Authorized Representative to TIP as specified in the Corporations Participation Agreement with TIP.

Please sign: ___________________________ Date: ______________

Title: ___________________________

Corporation: ___________________________
SCHEDULE A

[Initial list of designated employees. Authorization is not tied to particular Contributions.]
SCHEDULE B

List of contributions

Any related documentation and materials other than software contributed to the project are subject to the TIP Document IPR Policy as set forth in the Open AFC project group charter.
# ACCEPTANCE

<table>
<thead>
<tr>
<th>Contact Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Title</td>
</tr>
<tr>
<td>Email Address</td>
</tr>
<tr>
<td>Telephone Number (Include Country Code)</td>
</tr>
<tr>
<td>Company Name</td>
</tr>
<tr>
<td>Company Address, City, State, Country, Postal Code</td>
</tr>
<tr>
<td>Company Web Page URL</td>
</tr>
<tr>
<td>Primary services or products the company provides</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signed by (print name)</th>
</tr>
</thead>
</table>