

# WI-FI

This Amended and Restated Project Group Charter establishes the scope, intellectual property and copyright terms used to develop the materials identified in this Project Group. Only Participants that execute this Project Group Charter will be bound by its terms and be permitted to participate in this Project Group and shall be considered “Contributors” in the Project Group as defined in the Telecom Infra Project IPR Policy document.

As the TIP Wi-Fi Project Group has a better sense of itself, better direction, and knows the kinds of trials, products and deliverables that it will be delivering, this document “re-charters” the TIP Wi-Fi Project Group from the original Charter which was approved on February 20, 2019.

## 1. PROJECT GROUP NAME

Wi-Fi

## 2. PURPOSE

With the total number of Wi-Fi enabled devices approaching ten billion, Wi-Fi is an established wireless access technology. The increased proliferation and dominance of Wi-Fi has paved the way for its applicability to a diverse range of use cases with equally diverse requirements, including high-definition video delivery requiring high data throughputs, IoT applications requiring power efficiency, AR/VR applications requiring ultra-low latency, mobile data offload (MDO) and neutral host (NH) applications requiring end2end network visibility, intelligence and plug-n-play integration with cellular core backend, and location based services and security of subscriber experiences.

The purpose of the project group is to make Wi-Fi better and less expensive as a solution driven by Open Source for end-users and network owners through fostering collaboration and boosting innovation across vendors, service providers, and other connectivity stakeholders. The project group is focused on: defining and building an open and disaggregated Wi-Fi infrastructure defined by solutions and services to boost innovation and lower the total cost of

ownership (TCO), enabling efficient use of licensed and unlicensed spectrum, developing access point software stack and cloud network operating system (NOS) reference design, defining hardware requirements along with automated compliance regression testing, and combining services and applications to create solutions for key use cases.

### 3. PROJECT GROUP SCOPE

The Wi-Fi project group will foster collaboration among various members to create projects and deploy pilots in order to create open Wi-Fi end-to-end systems in the following sub-groups:

- **Infrastructure & Software (Open Wi-Fi):** This sub-group will focus on defining and building an open Wi-Fi solution which will have the following work streams:
  - develop access point software stack and develop cloud Network Operating System reference design delivering diverse Enterprise and Service Provider features for all major 802.11 standards, offload technologies, RRM and SON features, Security, Network data plane, QoS, and Management;
  - develop a product requirements document defining the access point hardware and gateway hardware working with ODM and OEM group participants spanning indoor and outdoor 802.11 hardware options;
  - develop integration and release automation system and process documents for integration, testing, maintenance, and continuous integration/continuous deployment workflows; with automated unit testing of software assets in addition to WLAN system testing as an end to end function
- **Solutions & Services (Wi-Fi Solutions):** This sub-group will focus on creating solutions for key use cases by combining services, applications, and the infrastructure built by the Infrastructure work stream or commercial off-the-shelf (COTS) Wi-Fi infrastructure elements. This sub-group will have three work streams:
  - develop HetNet, incl. seamless onboarding, seamless handover and optimization by developing and defining system designs, SDKs, DB Schemas, SIM-based authentication, cloud session management, and QoE/QoS based connection management policy controls (e.g., MDO, ABC, LCR, Seamless Session Persistence, Multipath in-between WiFi and mobile cellular technologies);

- develop the Value-Added Services in software through the development of Smart Clients, business analytic frameworks, NH / MNO deployment blueprints, and location & monetization services.
- develop WFA/802.11 standard offload system for non-HetNet, Passpoint based deployments and general nomadic access including Wi-Fi HotSpot solutions that may also include monetization and analytics services
- **Industry Coordination:** Coordinate with other relevant bodies and organizations concerned with Wi-Fi networks, technology and standards. Beside potential others, the project group will coordinate with WFA, WBA, BBF and IEEE.

## 4. PROJECT GROUP DELIVERABLES

The project group will build an open Wi-Fi ecosystem enabling solution vendors, operators and other interested parties to create and deploy innovative Wi-Fi solutions. To accomplish this, the proposed deliverables of the group include:

- Requirements documents, data sheets, template RFIs/RFPs
  - Frameworks, Methods, SDKs, and APIs
  - Reference software (source and object code)
  - Hardware requirements documents
  - Reference solution blueprints
  - Hackathons, IoT tests and Plug-fests
  - Defined Lab proof-of-concept trials and demonstrations to support the Solutions & Services workstream use cases
  - Definitions and proposed tests for proposed Field and Market trials
- which demonstrate one or more of the Project Group Scope areas listed above.

## 5. PATENT LICENSING

The patent license for all Contributions, Draft Specifications and Final Specifications within this Project Group shall be:

[Check one box]

- RAND License Option, as set forth in Section 5.2.1 of the Telecom Infra Project IPR Policy.
- Royalty-free License Option, as set forth in Section 5.2.2 of the Telecom Infra Project IPR Policy.

## 6. FINAL DELIVERABLE COPYRIGHT LICENSING

Project Group agrees to grant the following copyright license for the Final Specification:

[Check one box]

- Creative Commons Copyright Attribution 4, Each Project Group Contributor agrees that its Contributions are subject to the Creative Commons Attribution 4.0 International license - <http://creativecommons.org/licenses/by/4.0/legalcode>.
- Full Release of Copyright into the public domain, Each Project Group Contributor agrees to release its Contributions to the public domain and waive all copyrights associated with them.
- TIP Supplemental Copyright Policy, The copyright license for all Contributions, Draft Specifications, and Final Specifications within this project group shall be under the TIP Supplemental Copyright Policy, [https://telecominfraproject.com/wp-content/uploads/Supplemental-Copyright-Policy\\_final.pdf](https://telecominfraproject.com/wp-content/uploads/Supplemental-Copyright-Policy_final.pdf)

## 7. DOCUMENT LICENSING

Each Project Group Contributor agrees to Contribute its contribution to any Document under the TIP document IPR Policy,

[https://telecominfraproject.com/wp-content/uploads/TIP-Document-IPR-Policy-May\\_BODapproved.pdf](https://telecominfraproject.com/wp-content/uploads/TIP-Document-IPR-Policy-May_BODapproved.pdf)

## 8. SOFTWARE LICENSING

Contribution of software to any approved software project to support the scope and deliverables stated in this Charter will be provided to TIP under the TIP Software Contribution and License Agreement noted here:

[https://telecominfraproject.com/wp-content/uploads/TIP-Software-CLA-Final-Form\\_Jul24.pdf](https://telecominfraproject.com/wp-content/uploads/TIP-Software-CLA-Final-Form_Jul24.pdf)

## 9. INITIAL PROJECT CHAMPIONS

- Deutsche Telekom
- Facebook
- Arista Networks
- Cambium Networks
- Edgecore Networks
- Ruckus Networks
- Plume
- Shoelace Wireless
- Think Smarter
- Sterlite Technologies
- Tanaza
- ConnectUs Global

## 8. PROPOSED CHAIR AND(OR) CO-CHAIR

### CO-CHAIRS

- Fritz-Joachim Westphal, Deutsche Telekom
- Paul Monte, Facebook

## 9. PARTICIPATION CRITERIA

The expectations for group members are:

For Operators:

- To actively participate in group meetings
- To assign technical resources to support the needs of the project group
- To share their real requirements

- To publicly endorse the approved Deliverables
- To conduct lab trials, field trials or/and deployments and share the results of those activities

For Vendors:

- To actively participate in group meetings
- To assign technical resources to support the needs of the project group
- To provide open interfaces to the ecosystem based on the approved Deliverables.
- To produce prototypes complying with the approved Deliverables
- To support lab testing, field trials and/or deployments
- To publicly endorse the approved Deliverables.

For Others:

- To actively participate in group meetings
- To assign technical resources to support the needs of the project group
- To contribute to the requirements.
- To integrate disaggregated systems using open interfaces offering a complete Wi-Fi solution
- To support lab testing, field trials and/or deployments
- To publicly endorse the approved Deliverables.

# ACCEPTANCE

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Contact Name

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Contact Title

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Email Address

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Telephone Number (Include Country Code)

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Company Name

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Company Address, City, State, Country, Postal Code

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Company Web Page URL

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Primary services or products the company provides

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Signature

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Date

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Signed by (print name)