OPEN NETWORKING FOUNDATION

FAQ REGARDING
LICENSING & INTELLECTUAL PROPERTY TERMS FOR
SOFTWARE PROJECTS AND SPECIFICATIONS

1. What is the difference between a Final Specification and a software project?

A Final Specification is a document that has been adopted by the ONF Board of Directors in accordance with the procedures set forth in Section 2 of the ONF Intellectual Property Rights Policy (the "**IPR Policy**"), after an ONF Technical Working Group has recommended it for adoption and the ONF Members have been provided with sixty days to review the document. A list of ONF published Final Specifications is available at www.opennetworking.org/software-defined-standards/specifications/. ONF's work on OpenFlow® and on Reference Designs are being published as Final Specifications. More on Reference Designs can be found here: www.opennetworking.org/reference-designs/.

An ONF software project is the ongoing development of one or more software programs by a community of developers hosted by ONF. ONF software projects include (but are not limited to) Aether™, COMAC™, CORD®, ODTN™, OIM&T™, ONOS®, OTCC™, P4®, SD-RAN™, SEBA™, Stratum™, Trellis™, VOLTHA™ and XOS™. New ONF software projects typically are started under the Member-Only License, and then are released to open source under the Apache License Version 2.0 ("**Apache License 2.0**"). Projects can be found at www.opennetworking.org.

2. What IP-related terms govern Final Specifications?

Final Specifications are governed by the ONF IPR Policy and ONF Bylaws. In general, Final Specifications are not software projects, and therefore are not governed by the Apache License 2.0, the ONF Member-Only License or the ONF Individual or Institutional Contributor License Agreement (the "**CLA**"). However, please see *FAQ 4 - Can software projects and Final Specifications overlap?*

3. What IP-related terms govern ONF software projects?

All ONF software projects are governed by one of two licenses:

- Open Source software projects are governed by the Apache License 2.0

- Member-Only software projects are governed under the Member-Only License

Contributions to both open source and member-only software projects are further governed by the CLA that each Contributor is required to agree to in order to submit Contributions to software projects. The output of software projects is not usually subject to the IPR Policy because software projects are not usually adopted as "Final Specifications" in accordance with the IPR Policy. However, please see *FAQ 4 - Can software projects and Final Specifications overlap?*

4. Can software projects and Final Specifications overlap? If so, what IP-related terms are they governed by?

ONF software projects and Final Specifications can overlap. For example, some portions of software projects (e.g., code or documentation) may be incorporated into a Final Specification. Conversely, portions of ONF software projects may implement Final Specifications. Portions that are common to both a software project and a Final Specification would be subject to the IPR Policy, the CLA, and to the applicable software license (either Apache License 2.0 or Member-Only License).

5. What are key similarities and differences between the IP-related terms governing specifications and software projects?

COMPARISON CHART

	ONF Bylaws and IPR Policy	ONF Member-Only License and CLA	Apache License 2.0 and CLA
Scope and Application	"Final Specifications" adopted in accordance with ONF IPR Policy	ONF software projects released under the Member-Only license	ONF open source software projects
Contracting Parties	ONF, ONF Members, and their Affiliates	ONF, ONF Member companies and their Affiliates	Contributors, ONF, and anyone who receives a copy of the software
Patent License	A royalty-free patent license under patent claims that are necessarily infringed by implementation of the Final Specification is granted by all ONF Members and their Affiliates to other ONF Members and their Affiliates.	A royalty-free license under patent claims that are necessarily infringed by a Contributor's Contribution (alone or combined with the rest of the software project) are licensed by each Contributor to ONF Members who receives a copy of the software.	A royalty-free license under patent claims that are necessarily infringed by a Contributor's Contribution (alone or combined with the rest of the software project) are licensed by each Contributor to anyone who receives a copy of the software.
Copyright License	A royalty-free copyright license for the sole purpose of developing and publishing copyrightable works on behalf of ONF is granted by Members and their Affiliates to ONF and other Members and their Affiliates.	ONF Members receive a limited license during the project incubation period to review and test the code base internally for the purpose of making further contributions to the applicable project. ONF Partner-Level Members receive an additional license during the Partner Commercialization Phase of the applicable project to use the code base for the purpose of developing commercial products for sale to third parties.	A broad royalty-free copyright license is granted by Contributors to anyone who receives a copy of the software.
Access Rights	"Draft Specifications" are available only to ONF Member companies. Once approved by the ONF Board, "Draft Specifications" are designated as "Final Specifications", at which point they are made publicly available	Member-Only software projects are only available to ONF Member companies and their Affiliates.	ONF Open Source Software Projects licensed under the Apache License 2.0 are publicly accessible.

6. Am I bound by the software license and CLA if I do not contribute to an open source software project?

If you do not contribute to a particular open source software project, you would not be bound as a "Contributor" by the CLA or the software license with respect to such software project, and you would not be obligated to grant the licenses set forth in the CLA or software license with respect to such software project. If you do not contribute to a software project but you download and use software associated with that project, you would be bound by the Apache License 2.0 or Member-Only license solely as a licensee.

7. Am I bound by the IPR Policy if I do not contribute to a Final Specification?

The IPR Policy applies to all Members and their Affiliates, regardless of whether they make contributions to Final Specifications. If a Member or their Affiliate is unwilling to grant the licenses set forth in Section 3 of the IPR Policy with respect to any Draft Specification, they must provide notice of a licensing objection or notice that they are withdrawing from ONF membership during the sixty-day review period for such Draft Specification prior to it being adopted as a Final Specification. If notice of a licensing objection or withdrawal is not filed during such sixty-day review period, the Member and its Affiliates will be bound by the licensing provisions of the IPR Policy if and when the Draft Specification is adopted as a Final Specification.

8. ONF and Standard Essential Patents (SEPs)

Standard Essential Patents (SEPs) are patents that are unavoidable for the implementation of a standardized technology.

The majority of ONF's work takes place in open source (rather than as standardization activities), and ONF's CLA requires all software code contributions be covered by a royalty free license by the contributor.

Where ONF engages in standardization activities, ONF requires RAND-Z licensing (Reasonable and Non-Discriminatory Zero-fee licensing) by all ONF member companies who may hold patents deemed essential under ONF's standardization activities. Specifically, a RAND-Z license obligation exists between all ONF member companies for any technologies that are or may become essential under any ONF 'Final Specification'. See the ONF IPR policy for more details.

Certain Standard Development Organizations (SDOs), notably 3GPP in the mobile space, require FRAND (which stands for Fair, Reasonable and Non-Discriminatory) licensing assurance from their members, in essence requiring all member organizations to commit to license any patents that are or may become essential to the implementation of a standard at a reasonable fee.

Should ONF's open source software require the use of other standards (e.g. 3GPP standards) that are subject to SEPs, it is the responsibility of any commercial entity using ONF's software to work directly with any patent holders to resolve any commercial issues. With this view, it is ONF's position that ONF's work does not alter any SEP relationships between commercial entities or introduce new FRAND SEP obligations into the ecosystem.

DISCLAIMER - this FAQ answer shall not supersede any of ONF's IPR and licensing terms, and ONF does not make any warranty as to the accuracy of these statements as they apply to other organizations' IPR, licensing SEP policies.

9. Where can I find out more about the ONF IPR Policy and the ONF Member-Only Software License

Both the IPR policy and the Software License documents and additional information can be found at: http://www.opennetworking.org/organizational-documents/

10. Where can I find out more about the Apache License 2.0?

Additional FAQs regarding the Apache License 2.0 are available at www.apache.org/foundation/license-faq.

Questions Specific to
ONF Member-Only Software License

Q. What constitutes "commercialization" under the ONF Member-Only License?

The license grants ONF Partner-Level Members limited rights to commercialize a project once it has entered the 'Partner Commercialization' phase, with an expectation that this will promote additional contributions back to the project (see the license for details).

Commercialization includes building, developing, testing, marketing, offering for sale and selling commercial products and services to third parties. Any activity that involves the exchange of money for products or services that leverage the use of Project Works source code is considered 'commercialization' for the purposes of interpreting the License, with the sole exception of contract labor services.

ONF policy is for there to be no requirement for a company to be a Partner to sell contract labor services related to a Member-Only Project to a third-party as long as the services meet two criteria:
- All fees are based on the effort to perform a task billed on a time-and-materials or project milestone basis, and
- Intellectual property rights are not retained by the seller but instead are either retained by the customer or granted to the Project.

Note, since non-member companies cannot access the source code, contractors must be an ONF member where source code access is required. Contractors cannot use their customer's ONF membership as a basis for accessing a Member-Only Project.

Q. When using software covered by the Member-Only License, can an ONF Partner-Level Member sell a solution to a customer (or operator) who is not an ONF member?

Yes. If there is no need for the customer (operator) to access the source code, then there is no requirement that the customer (operator) be an ONF member. Therefore, ONF Partners who create and sell turn-key solutions (in binary form) do not need to be concerned that their customers need to be ONF members.

However, if and when the customer (e.g. a network operator) wants or needs access to the Project source code, the customer needs to be an ONF member. If the customer (operator) wants to commercialize and sell to their own end-users before the Project has been open sourced (and they need source code access to do so), they need to be an ONF Partner-level Member.

Q. What is the governance for deciding when a project is put under the Member-Only license, when it transitions from Incubation to Partner Commercialization phase under the license, and when it is released as open source?

Governance resides with the ONF board. Virtually all of ONF's projects (including ONOS, CORD, OMEC and Stratum) started as private projects and were later released under the Apache 2.0 license, and the Board plans to continue this practice.