

**BROADBAND FORUM INTELLECTUAL
PROPERTY RIGHTS POLICY** As approved

on April 20, 2016

1. IPR Generally

1.1 Purpose

Broadband Forum (the "Forum") has adopted this Intellectual Property Rights Policy (the "Policy") and related Policies and Procedures (the "Rules of Procedure") in order to minimize the possibility of inadvertent infringement of the IPR of Members and third parties using or implementing any Forum Specifications.

1.2 Applicability

All Members, all Member Representatives, and all third parties attending any technical process meeting are subject to this Policy and the Rules of Procedure.

1.3 Scope

This IPR Policy does not apply to any Software developed by a Project, except to the extent such Software is included in a Draft Specification or Specification. To the extent that any Project develops other Software (e.g., a reference implementation of a Specification or other stand-alone Software), the submission and licensing terms relating to such Software shall be determined at the time that the Project is created.

2. Definitions

<u>Term</u>	<u>Definition</u>
Draft Specification	A technical specification or other material that is produced by a Project that could, if used or implemented as intended, infringe a claim(s) under an issued patent or a patent application anywhere in the world.
Implementers	Those Members and non-Members who desire to use or implement a Specification.
IPR	An abbreviation of "Intellectual Property Rights". As used in this Policy, IPR means claims in patents and patent applications and copyrights, but excludes trademarks and trade secrets, which are not included in a Member's licensing obligations.
License	Either (a) an agreement to license Necessary Claim(s) to any Implementer, on a perpetual, non-exclusive and worldwide RAND basis (either with or without compensation), permitting the licensee to make, have made, use, reproduce, market, import, offer to sell and sell, and to otherwise distribute products that implement such Necessary Claim(s), or (b) a binding, perpetual, irrevocable commitment not to assert Necessary Claim(s) against any such Member or non-Member Implementer.
Member	A Forum member of any class.

Necessarily Infringed	Unavoidable infringement by an implementation of a Required Element of a Specification, there being no reasonable alternative way to implement that element of the Specification without resulting in such infringement.
Necessary Claims	Those claims under patents and/or patent applications anywhere in the world that would be Necessarily Infringed by the implementation of the Required Elements of a Specification.
Owned	With respect to any Necessary Claim(s) and a given Member or any of its Related Parties, the word "Owned" includes any Necessary Claim(s) that are (a) applied for by or registered in the name of such Member or Related Party, anywhere in the world, and (b) controlled but not so registered or applied for by such Member or Related Party, provided that such Member or Related Party is (i) entitled to sublicense such Necessary Claim(s), and (ii) would not incur an obligation to pay any royalty or other compensation to the person or entity in whose name such Necessary Claim(s) are registered or were applied for in connection with a sublicense.
Other Work Product	Any Project deliverable, in draft or final form, that is not a Draft Specification or Specification. Unless the context otherwise requires, any reference to the adoption of Other Work Product shall also be deemed to apply to the adoption of an amendment to that Other Work Product as well.
Project	A formally chartered Forum technical process that is intended to produce a Specification or Other Work Product.
RAND	Reasonable and Non-discriminatory.
Related Party	Any entity that is directly or indirectly controlled by the subject party. For this purpose, "control" means beneficial ownership or the right to exercise more than 50% of the voting power for the entity.
Representative	Any individual that acts on behalf of a Member in connection with a Project, or in the completion of any form to be delivered to the Forum pursuant to this Policy or the Rules of Procedure.
Required Element	Any element of a Draft Specification or Specification, including elements identified as "Optional." For the avoidance of doubt, when a Draft Specification or Specification requires an Implementer to implement one of two or more alternative elements, then all such elements shall be deemed to be "Required Elements."
Software	Any combination of text listing of commands to be interpreted or to be compiled, translated, or assembled into an executable computer program; text listings that describe data structures; text listing that specifies an Application Programming Interface (API) used to interact with some executable computer service (including access from an executable computer program, library, or remotely via a telecommunications interface); binary data files; executable, object, or other intermediate executable code files; and text listings that describe the behavior of modeled devices or objects (e.g., XML, YANG, etc.).

Specification	A Draft Specification that has been formally adopted by the Forum. Unless the context otherwise requires, any reference to the adoption of a Specification shall also be deemed to apply to the adoption of an amendment to a Specification as well. For the avoidance of doubt, a reference implementation or other stand-alone Software developed by a Project is not a Specification.
Submission	An affirmative and knowing contribution of material (including Software) with the intention that such material be considered for inclusion in a Specification or Other Work Product. A Submission, in written or electronic form, may occur: as a result of an unsolicited offer to the Forum of existing technology by a Member or third party; in response to a general Forum request for proposals; or from a Member at any time during a Project.
Submitter	Both a Member as well as any representative(s) of a Member, and any other person or entity making a Submission.
Technical Committee	At any relevant time, the most senior technical committee involved in the technical process.

3. Patents

The terms of this Section 3 apply to Draft Specifications and Specifications, but not to Other Work Product.

3.1 Obligations of Submitters

By making a Submission, a Submitter will be deemed to have agreed, on behalf of it and all of its Related Parties at the time of making a Submission, that if the Draft Specification in connection with which the Submission is made is finally approved by the Forum, the Submitter and each of its Related Parties will provide a License to all Necessary Claims Owned by it or any of its Related Parties and included in its Submission that become Necessary Claim(s), at its option either with or without compensation and also on a RAND basis, to all Implementers.

3.2 Member Disclosure and Identification Obligations

(a) If at any time prior to the time that a Draft Specification is declared to be at Final Ballot readiness (as defined in the Rules of Procedure) a Member shall become aware that either it, or one of its Related Parties, Owns a Necessary Claim or Claims that it is unwilling to License (which shall not include any Necessary Claim or Claims under its own Submission(s)), it shall identify such Necessary Claim(s), and the portion(s) of the Draft Specification that would result in such infringement. In the case of Necessary Claims under non-public patent applications, the disclosure of such claims need not be in such detail as would disclose any trade secrets.

(b) All such identifications by Members shall be made pursuant to a written election in the form of **Appendix A** to this Policy.

(c) In the event such Draft Specification is adopted, each Member, and each of its Related Parties, will be bound by an obligation to License All Necessary Claims Owned by it that are not identified in the manner described above prior to the declaration of Final Ballot readiness relating to such Draft Specification.

A Member may, but is not required to, use the same **Appendix A** form to disclose Necessary Claims that it is willing to License.

3.3 Patent Calls

At the beginning of every in-person meeting and teleconference that occurs as a part of the technical process, and at any other appropriate time in the course of electronic collaboration as may be provided for under the Rules of Procedure, the following patent call shall be read:

Please be aware that this meeting is being held under the Intellectual Property Rights Policy adopted by the Forum.

At this time, I would ask that anyone in attendance inform me if they are aware of any claims under any patent applications or issued patents that have not been declared previously and would be likely to be infringed by an implementation of the Specification which is the subject of this meeting. You need not be the inventor under such patent or patent application, nor will you be held responsible for expressing a belief that turns out to be inaccurate.

Disclosure of Necessary Claims a Member is not willing to License is required under the IPR Policy, together with a reference to the related portion(s) of the Specification. A Member may, but is not required to, disclose the same information relating to Necessary Claims it is willing to License, and also whether it will or will not require payment of a royalty or other fee in connection with such License. In all cases, the disclosure must be made using Appendix A to the IPR Policy.

3.4 Ownership of Collaborative Work

(a) Each Member agrees that if: (i) a Draft Specification is finally approved by the Forum, (ii) any Representative of such Member is named as a co-inventor with one or more other co-inventors affiliated with one or more other Member(s) in any patent anywhere in the world, then if such patent contains a Necessary Claim(s) under such finally adopted Specification, each such Member shall be required to license such Necessary Claim(s) on RAND terms, which can, at the Member's option, include a compensation obligation or be compensation-free.

(b) In the event that any such inventor or Member(s) shall breach the foregoing obligation, the Forum shall have no obligation to intervene, but such Implementer shall be entitled to claim protection, and assert a complete defense against such action, under this Section 3.4 as a third party beneficiary.

3.5 Patent Searches

In no event shall the Forum, Representative or Member be obligated to conduct any patent searches regarding any Necessary Claims that may be infringed by any implementation of a Draft Specification or Specification.

3.6 Confidential and Proprietary Information

For the avoidance of doubt, the disclosure obligations set forth in this Section 3 shall not require a Member to violate the terms of any written non-disclosure agreement with a third party that is not (i) a Related Party of such Member, or (ii) controlled by, or under common control with, a Related Party of such Member, provided that (a) such agreement has not been entered into with the purpose, in whole or in part, of avoiding disclosure under this IPR Policy, and (b) the Member makes such disclosure as it is able to make without violating such agreement, and at minimum discloses (x) the fact that it has knowledge of a patent claim that it would otherwise be obligated to disclose, and (y) the portion of the Draft Specification that would result in infringement of such patent claim.

3.7 Transfers of Necessary Claims

(a) Each Member agrees that it will not transfer, and has not transferred, patents or patent applications having Necessary Claims for the purpose, in whole or in part, of circumventing such Member obligations under this IPR Policy.

(b) No party bound by this Policy shall transfer any patent or patent application having Necessary Claims, except to a successor that agrees in writing to (i) be bound by all commitments previously made by the direct or indirect transferor(s) under this Policy with respect to such patent or patent application, and (ii) include the obligations set forth in this Section 3.7 in any document of transfer relating to such patent or application in the event that it later transfers the same.

3.8 Patent Claims Revealed After Publication

In the event that a Necessary Claim is first revealed by a third party following adoption and publication of a Specification, such holder will be asked to License the Necessary Claim in the manner outlined in Section 3.1 above. If such request is refused, the Specification in question shall be referred back to the Technical Committee for consideration and possible action.

3.9 Document Notations

All electronic and tangible copies of Draft Specifications that are subject to public comment, and all Specifications, shall include the relevant notations specified on **Appendix C**.

4. Copyrights

4.1 Copyright in Specifications

Subject to Section 4.3 below with respect to Software, the copyright for all Draft Specifications, Specifications and Other Work Product as derivative works shall belong to the Forum.

4.2 Contributions of Copyrighted Materials

Subject to Section 4.3 below with respect to Software, each Submitter who contributes copyrighted materials to the Forum shall retain copyright ownership of its original work, while at the same time granting the Forum a non-exclusive, irrevocable, worldwide,

perpetual, royalty-free license under the Submitter's copyrights in its Submission to reproduce, distribute, publish, display, perform, and create derivative works of the Submission based on that original work for the purpose of developing a Draft Specification, Specification or Other Work Product, and for the purpose of distributing, promoting, maintaining and updating such materials, under the Forum's own copyright.

4.3 Software

(a) Prior to or at the time of making a Submission of Software to a Project for inclusion in a Draft Specification, the Submitter shall complete and submit a Submission Form (**Appendix B** to this Policy).

(b) Each Submitter who makes a Submission of Software to a Project for inclusion in a Draft Specification shall retain copyright ownership of such Software, while at the same time granting the Forum and all other Members a non-exclusive, irrevocable, worldwide, perpetual royalty-free license under the Submitter's copyrights in such Software to redistribute and use in source and binary forms, with or without modification, for the sole purpose of developing the Specification.

(c) Once any Draft Specification including Software is declared to be at Final Ballot readiness, each Submitter who made a Submission of Software to that Draft Specification shall, in accordance with the election it made in its Submission Form, either:

(i) transfer its copyright ownership in such Software to the Forum; or

(ii) grant to the Forum and any Implementer a BSD 3-clause License to its copyright interest in such Software.

In the event that a Submitter has elected the first option above, the Forum shall grant the following copyright grant-back license to the Submitter:

The Forum hereby grants to Submitter a non-exclusive, irrevocable, perpetual, worldwide, royalty-free, sublicenseable and transferable copyright license to use, copy, prepare derivative works of, modify, distribute directly or indirectly through multiple tiers, publicly perform and publicly display by all means now known or later discovered, and/or otherwise fully exploit its Software Submission(s) and any derivative works thereof or modifications created thereto for any purpose or use.

(d) Necessary Claims contained in any Software submitted to a Project shall be subject to the patent licensing requirements of Section 3.1 and transfer requirements of Section 3.7 (above). Notwithstanding the preceding sentence, no other express or implied licenses to any party's patent rights are granted by this Section 4.3.

(e) Unless otherwise approved by the Board, all Software included in any Draft Specification or Specification shall be licensed by the Forum under the BSD 3-clause License, as maintained by the Open Source Initiative at opensource.org/licenses/bsd-3-clause.

5. Trade Secrets

Members will not be expected to reveal trade secret information in the course of participation in any Forum activity, nor will they be asked by the Forum to sign non-disclosure agreements. The Forum will not be held responsible for the disclosure of any Member's or non-Member's trade secrets, regardless of the circumstances.

6. Trademarks

6.1 Forum Trademarks

Trademarks created by the Forum, registered or otherwise, are the property of the Forum. Use of Forum trademarks shall be governed by such policies, procedures and guidelines as may be established and approved by the Forum from time to time, and applicable law.

6.2 Non-Forum Trademarks

The Forum's use of third-party trademarks, registered or otherwise, shall be governed by such policies, procedures and guidelines as may be established and approved by the owners of such trademarks, and applicable law.

7. Irrevocability and Binding Nature of Commitments

All commitments made under this Policy shall be irrevocable, except that the owner of a Necessary Claim may include a "reciprocity" term in its License. For purposes of this Policy, reciprocity shall mean that a Licensor may revoke a License granted to an Implementer if that Implementer asserts a Necessary Claim (without first offering a License to such Necessary Claims) against the Licensor in connection with the implementation of the same Specification.

8. Survival of Obligations

(a) Any License obligations and other obligations that a Member incurs under this Policy shall continue in force after the Member ceases to be a Member for any reason. However, no Member shall become subject to any new License obligations or other obligations under this Policy after it ceases to be a Member.

(b) The Forum shall have the right to assign all of its rights under this Policy, and the right to enforce all obligations incurred by Members under this Policy, to any successor to the mission of the Forum.

(c) All persons and entities that are intended third party beneficiaries of rights and obligations incurred under this Policy shall remain entitled to enforce the same, notwithstanding any termination, dissolution or winding up of the Forum.

Appendix A

Broadband Forum

INTELLECTUAL PROPERTY RIGHTS IDENTIFICATION FORM

This form MUST be used by a Representative required or desiring to make a disclosure of IPR at any time prior to the date that a Project declares a Draft Specification to be at Final Ballot readiness. Disclosure of Necessary Claims that will not be Licensed is REQUIRED and disclosure of Necessary Claims that will be Licensed is elective.

NOTE: All blanks must be completed in order for this form to be given consideration. This form is subject to the Intellectual Property Rights Policy (the "IPR Policy") of Broadband Forum (the "Forum"), and the related Policies and Procedures document of the Forum (the "Rules of Procedure"). *All capitalized terms used in this form are intended to have the meanings given to them in the IPR Policy or the Rules of Procedure.*

Name of Member:	
Name of Representative Completing this Form on Behalf of Member:	
Mailing Address of Representative:	
Email Address of Representative:	
Draft Specification to which this Identification Form relates:	

A. The Representative hereby represents the following on behalf of him/herself and the Member, as the context requires:

1. The Representative is authorized to complete and submit this Identification Form on behalf of the Member, and to make the following representations and warranties.
2. The Representative and the Member have each reviewed the IPR Policy and Rules of Procedure, and agree that this Identification Form is being completed and submitted in full compliance with the same.
3. The Member hereby asserts that it has become aware that it Owns Necessary Claim(s) (other than under its own Submissions, in the case of the first option below) relating to the Draft Specification under development by the above Project, and asserts:

that no guarantee of License rights is made (or that such rights will in fact be denied in some or all cases) as to the Necessary Claims Owned by it and identified on **Exhibit A**, together with the portions of the Draft Specification that would result in such infringement.

that it is willing to License, and has identified such claims on **Exhibit A**, together with the portions of the Draft Specification that would result in such infringement.

NOTE: You may elect one option for some Necessary Claims and the other option for other Necessary Claims, so long as the attached Exhibit is completed properly.

4. If the Member has become aware of potentially Necessary Claims owned by third parties relating to the Draft Specification under development by the above Project, it has identified such claims on **Exhibit A**, together with the portions of the Draft Specification that would result in such infringement.

This Identification Form has been submitted on _____, 201_.

Name of Member

By: _____
Signature of Representative

Name: _____

Exhibit A

WITHHELD IPR

Jurisdiction and Patent Number	Necessary Claim	Affected Portion of Draft Specification

AVAILABLE IPR

Jurisdiction and Patent Number	Necessary Claim	Affected Portion of Draft Specification

THIRD PARTY IPR

List here all Necessary Claim(s) Owned by third parties, to the extent of your knowledge.

Jurisdiction and Patent Number	Necessary Claim	Affected Portion of Draft Specification

Appendix B

Software Submission

Note: This form is subject to the Intellectual Property Rights Policy (the "IPR Policy") of Broadband Forum (the "Forum"), and the related Policies and Procedures document of the Forum (the "Rules of Procedure"). All capitalized terms used in this form are intended to have the meanings given to them in the IPR Policy or the Rules of Procedure.

By making this Software Submission, Submitter represents and warrants that he/she has the necessary rights and authority to make the commitments set forth below.

A. This form relates to (you must choose one):

All Software the undersigned Submitter may contribute to the _____ Project.

The Software described in an attachment to this form.

B. Copyright elections (you must choose one):

Submitter accepts and agrees to one of the following options for any Software Submitted by it:

Copyright Assignment. Contingent upon Submitter's Submission(s) being included in a Draft Specification that is declared at Final Ballot readiness, Submitter hereby assigns to the Forum all copyright rights and copyright interests in its Software Submission(s). Such assignment is made expressly subject to any pre-existing non-exclusive licenses or other non-exclusive rights already granted with respect to such Software Submission(s). SUCH SOFTWARE SUBMISSION IS PROVIDED TO THE FORUM BY THE SUBMITTER 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 SUBMITTER OR ITS 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 SUBMISSION, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This copyright assignment is subject to the Forum granting the following copyright grant-back license as set forth below:

Copyright Grant-Back License. Upon the Copyright Assignment described above occurring, the Forum hereby grants to Submitter a non-exclusive, irrevocable, perpetual, worldwide, royalty-free, sublicenseable and transferable copyright license to use, copy, prepare derivative works of, modify, distribute directly or indirectly through multiple tiers, publicly perform and publicly display by all means now known or later discovered, and/or otherwise fully exploit its Software Submission(s) and any derivative works thereof or modifications created thereto for any purpose or use.

Copyright License Grant. Contingent upon Submitter's Software Submission(s) being included in a Draft Specification that is declared to be at Final Ballot readiness, Submitter hereby grants to BBF and any Implementer and User a BSD 3-clause License to its copyrights.

IN WITNESS WHEREOF, the Submitter has executed this Submission Form through its duly authorized Representative.

Submitter: _____

By: _____

Name: _____

Title: _____

Date: _____

To be completed by the Forum if the Submitter has selected the Copyright Assignment with Copyright Grant-Back License option above:

IN WITNESS WHEREOF, the Broadband Forum has executed this Submission Form through its duly authorized representatives.

BROADBAND FORUM:

By: _____

Name: _____

Title: _____

Date: _____

Appendix C

DOCUMENT NOTATIONS

1. Notation Regardless of Whether Necessary Claims have been Identified

All Draft Specifications that are subject to public comment and all Specifications shall include the following introductory language:

"Recipients of this document are requested to submit, with their comments, notification of any relevant patent claims or other intellectual property rights of which they may be aware that might be infringed by any implementation of the Specification set forth in this document, and to provide supporting documentation."

All Specifications shall additionally include the following introductory language:

"THIS SPECIFICATION IS BEING OFFERED WITHOUT ANY WARRANTY WHATSOEVER, AND IN PARTICULAR, ANY WARRANTY OF NON-INFRINGEMENT IS EXPRESSLY DISCLAIMED. ANY USE OF THIS SPECIFICATION SHALL BE MADE ENTIRELY AT THE IMPLEMENTER'S OWN RISK, AND NEITHER THE FORUM, NOR ANY OF ITS MEMBERS OR SUBMITTERS, SHALL HAVE ANY LIABILITY WHATSOEVER TO ANY IMPLEMENTER OR THIRD PARTY FOR ANY DAMAGES OF ANY NATURE WHATSOEVER, DIRECTLY OR INDIRECTLY, ARISING FROM THE USE OF THIS SPECIFICATION."

2. Notation when Necessary Claims or other IPR are Identified

(a) In addition to the notation above, when Necessary Claims have been identified for Draft Specifications, or thereafter with respect to already published Specifications, where the owner of such Necessary Claim(s) is willing to provide a License agreement relating to such Necessary Claim(s), such Draft Specification or Specification shall include a notice substantially as follows in the introductory language:

"The Forum draws attention to the fact that it is claimed that compliance with this Specification may involve the use of a patent ("IPR") concerning [section of Specification]. The Forum takes no position concerning the evidence, validity or scope of this IPR.

"The holder of this IPR has assured the Forum that it is willing to License all IPR it owns and any third party IPR it has the right to sublicense which might be infringed by any implementation of this Specification to the Forum and those Licensees (Members and non-Members alike) desiring to implement this Specification. Information may be obtained from:

[Name of Holder of Right]
[Address]

"Attention is also drawn to the possibility that some of the elements of this Specification may be the subject of IPR other than those identified above. The Forum shall not be responsible for identifying any or all such IPR.

"THIS SPECIFICATION IS BEING OFFERED WITHOUT ANY WARRANTY WHATSOEVER, AND IN PARTICULAR, ANY WARRANTY OF NON-INFRINGEMENT IS EXPRESSLY DISCLAIMED. ANY USE OF THIS SPECIFICATION SHALL BE MADE ENTIRELY AT THE IMPLEMENTER'S OWN RISK, AND NEITHER the Forum, NOR ANY OF ITS MEMBERS OR SUBMITTERS, SHALL HAVE ANY LIABILITY WHATSOEVER TO ANY IMPLEMENTER OR THIRD PARTY FOR ANY DAMAGES OF ANY NATURE WHATSOEVER, DIRECTLY OR INDIRECTLY, ARISING FROM THE USE OF THIS SPECIFICATION."

(b) In the event that the owner of any IPR has asserted that infringement would result from the implementation of a Draft Specification or Specification, and such owner has refused to grant a License under the terms of this Policy, then the second paragraph of the above notice shall be replaced or supplemented, as appropriate, with the following:

"The holder of such IPR has refused a request by the Forum that it agree to make a License available for the purpose of implementing this Specification. Information may be obtained from:

[Name of Holder of Right]
[Address]"

3. Software

All Software included in Draft Specifications and Specifications shall:

- a) Be marked as required by the BSD 3-clause License; and
- b) Include the following statements:

"The above license is used as a license under copyright only. Please reference the Forum IPR Policy for patent licensing terms."

"Any moral rights which are necessary to exercise under the above license grant are also deemed granted under this license."