

FIRA CONSORTIUM, INC.
INTELLECTUAL PROPERTY RIGHTS POLICY

As approved on June 26, 2019 and amended on March 4, 2020

1. IPR Generally

1.1 Purpose

FiRa Consortium (the "Consortium") has adopted this Intellectual Property Rights Policy (this "IPR Policy" or "Policy") and related rules of procedure (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 Consortium Standards.

1.2 Applicability

All Members and all Member Representatives are subject to this Policy and the Rules of Procedure.

1.3 Software Scope

In addition to text documents, this IPR Policy applies to any (a) Software developed by a Working Group for inclusion in a Draft Standard or Standard, and (b) any Software Reference Implementation of all or part of a Draft Standard or Standard. To the extent that any Working Group develops any other Software (e.g., tools or other stand-alone Software), the submission and licensing terms relating to such Software shall be determined at the time that the Working Group is created and reflected in a charter approved by the Board of Directors.

2. Definitions

Term	Definition
Defensive Revocation	A term in a License entitling the licensor to revoke a License if the licensee (i) refuses to offer the licensor a License to any Necessary Claims under the same Standard Owned by it or any of its Related Parties for purposes of implementing the same Standard, or (ii) asserts a Necessary Claim under the same Standard Owned by it or any of its Related Parties against any Implementer (including the Licensor), where infringement of such Necessary Claim results solely from the implementation of such Standard.
Draft Standard	A technical Standard or other material that is produced by a Working Group 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 that desire to use or implement a Standard.

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 Participant and Member's licensing obligations.
License	Either (a) an agreement to license Necessary Claim(s) to any Implementer, either with or without RAND compensation, and otherwise on a RAND, perpetual, irrevocable (except as provided in this IPR Policy), non-exclusive basis, with such license permitting the licensee to make, have made, use, market, import, export, offer to sell and sell, and to otherwise distribute products that implement such Necessary Claim(s), or (b) a binding, perpetual, irrevocable (except as provided in this IPR Policy), commitment not to assert Necessary Claim(s) against any Implementer of the Standard to which such commitment relates.
Member	A Consortium member of any class.
Necessary Infringement	Unavoidable infringement of claims under patents and/or patent applications anywhere in the world resulting from the implementation of the Required Elements of a Standard or Reference Implementation, there being no technically feasible approach currently available to avoid such infringement. For the avoidance of doubt, Necessary Infringement does not result from the implementation of any third-party standard or specification, or any portion thereof, even though such implementation may be called for by a Required Element of a Standard or Reference Implementation.
Necessary Claims	Those claims under patents and/or patent applications anywhere in the world that are subject to Necessary Infringement by the implementation of the Required Elements of a Standard. Necessary Claims do not include claims covering reference implementations or implementation examples other than Reference Implementations. In the case of Software for inclusion in a Draft Standard or Standard, or of material for inclusion in a Reference Implementation, Necessary Infringement refers to unavoidable infringement of claims under patents and/or patent applications anywhere in the world Owned by the Submitter or any of its Related Parties resulting from the use or distribution of such Submission to the extent it becomes incorporated in a Standard or Reference Implementation.
Non-discriminatory	Available to an Implementer under terms that are substantially identical to the terms made available to other substantially similar Implementers of the same Standard under similar circumstances.

Owned	With respect to any Necessary Claim(s), the word “Owned” includes any Necessary Claim(s) that are owned, controlled, or licensable (without any payment obligation to or permission from a third party other than a Related Party), even if not registered in the name of the Member.
Other Work Product	Any Working Group deliverable that is not a Draft Standard, Standard, or Reference Implementation. 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.
Participant	Any Member, including an Educational and Academic Member that designates an Observer, that enrolls to take part in a Working Group that has not withdrawn from such Working Group within 45 calendar days of its enrollment.
RAND	Reasonable and Non-discriminatory.
Reasonable	License terms relating to Necessary Claims that are not more onerous (including as to price) than could be obtained by the Owner of such claims in the open market absent their inclusion in a Standard.
Reciprocity	A License term requiring a licensee to provide a License back to the licensor with respect to any Necessary Claim(s) Owned by the licensee under the same Standard.
Reference Implementation	A program representing a compliant implementation of some or all of the Required Elements of a Draft Standard or Standard, which has been formally adopted by the Consortium.

Related Party	<p>With respect to a Member, any past, present or future Person (defined below) that (a) is owned or controlled, directly or indirectly, by that Member; or (b) owns or controls that Member (either directly or indirectly); or (c) is under common ownership or control, directly or indirectly, with that Member. For purposes of the foregoing: (i) “owned”, “owns”, and “ownership” mean, with respect to a Person, the beneficial ownership of fifty percent (50%) or more of the voting equity securities or other equivalent voting interests of the Person (or less if the country of incorporation or the country of domicile of the entity requires that foreign ownership be less than fifty percent (50%)); (ii) “controlled”, “controls” and “control” means (A) the ability to elect a majority of the board of directors, (B) in relation to a partnership or other unincorporated association, the right to a share of more than half of its net assets or net income, (C) the power to direct or control the management and affairs of a Person (e.g., a subsidiary), or (D) the ownership of securities or other instruments representing fifty percent (50%) or more of the outstanding voting power of a particular Person, which shall conclusively constitute control for purposes of this definition (or less if the country of incorporation or the country of domicile of the entity requires that foreign ownership be less than fifty percent (50%)); and (iii) “Person” means a trust, corporation, partnership, joint venture, limited liability company, association, unincorporated organization or other legal or governmental entity. Any Member or potential Member that finds it impossible to secure the agreement of its ultimate parent company to be bound by this Policy, or otherwise believes that the application of this definition to its Related Parties would result in unfairness, as applied in its unique circumstances, may apply for a limited and fact-specific exemption on such form as the Consortium may from time to time make available for that purpose.</p>
Representative	<p>Any individual that acts on behalf of a Member in connection with a Working Group, or in the completion of any form to be delivered to the Consortium pursuant to the Policy or the Rules of Procedure.</p>
Required Element	<p>Any element of a Draft Standard or Standard that has not been identified as “Optional.” For the avoidance of doubt, when a Draft Standard or Standard requires an Implementer to implement one of two or more alternative elements, then all such elements shall be deemed to be “Required Elements.”</p>

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.).
Standard	A Draft Standard that has been formally adopted by the Consortium. Unless the context otherwise requires, any reference to the adoption of a Standard shall also be deemed to apply to the adoption of an amendment to a Standard as well.
Submission	An affirmative and knowing contribution of material with the intention that such material be considered for inclusion in a Standard, Reference Implementation, or Other Work Product that is (a) accompanied by a Submission of Technology form in the form attached to the IPR Policy as Appendix A, or (b) made at any time during a Working Group meeting (even if the Submitter subsequently withdraws from the Working Group within 45 calendar days of its enrollment), where such contribution has been recorded in the minutes of such meeting, and where the maker of the contribution has not objected to such text after the minutes have been posted for review by all Working Group Participants. Submissions of Software or software for inclusion in a Reference Implementation must additionally be accompanied by a completed Software Submission form in the form attached to this IPR Policy as Appendix B.
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.
Working Group	A formally chartered Consortium technical process that is intended to produce a Standard or Other Work Product.

3. Patents

The terms of this Section 3 apply to Draft Standards, Standards, Software and Reference Implementations, but not to Other Work Product.

3.1 Elections by Submitters at Time of Submission

(a) Any Submitter, by making a Submission, agrees that if the Draft Standard in connection with which the Submission is made is finally approved by the Consortium, 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), either with or without RAND compensation and otherwise on a RAND basis, to all Implementers. A Submitter may, if it wishes, irrevocably commit at the time of making a Submission not to charge any compensation in exchange for Licenses.

(b) If the Submitter wishes to make a commitment not to charge compensation in exchange for a License, its Submission must be made pursuant to a written declaration in the form of [Appendix A](#) to this Policy.

3.2 Elections by Participants

(a) Every Member, by becoming a Participant in a Working Group, agrees that if the Draft Standard produced by such Working Group is finally approved by the Consortium, it and each of its Related Parties will provide a License to all Necessary Claims Owned by it under such Standard, either with or without RAND compensation and otherwise on a RAND basis, to all Implementers. Subject to any commitment made by it under Section 3.1(a) above with respect to its Submissions, a Participant's default obligation with respect to the related Standard is a RAND License with right to charge RAND compensation. A Participant may, if it wishes, irrevocably commit not to charge a License fee in relation to some or all of its Necessary Claims by submitting a written declaration in the form of [Appendix C](#) to this Policy.

Note: A Member may elect different options above with respect to different Necessary Claims, but its elections, taken together, must apply to all Necessary Claims Owned by it or any of its Related Parties.

3.3 Elections by Non-Participant Members

(a) Every non-Participant Member agrees, as of the time that a Draft Standard is posted for final comment, that if the Draft Standard is finally approved by the Consortium, it and each of its Related Parties will provide a License to all Necessary Claim(s) Owned by it under such Standard, either with or without RAND compensation and otherwise on a RAND basis, to all Implementers; subject to the following:

(i) a non-Participant Member may, if it wishes, irrevocably commit not to charge a License fee in relation to some or all of its Necessary Claims by submitting a written declaration in the form of [Appendix D](#) to this Policy; and/or

(ii) a non-Participant Member may elect to withhold a License to some or all of its Necessary Claims under the Draft Standard in question by timely submitting a written declaration in the form of [Appendix D](#) prior to the expiration of the review period.

Note: A Member may elect different options above with respect to different Necessary Claims, but its elections, taken together, must apply to all Necessary Claims Owned by it or any of its Related Parties.

(b) Unless otherwise provided in any individual case by vote of the Board of Directors, the deadline for submitting elections under this Section 3.3 shall not be less than 45 calendar days from the date that electronic notice has been sent to each Member that a Draft Standard has been posted for final approval.

(c) In the event that a non-Participant Member fails to timely return a signed and completed election form as required by Section 3.3 (a) (ii) above, then such Member shall be deemed to have elected to License all its Necessary Claims under the Standard in question, either with or without RAND compensation and otherwise on a RAND basis, to all Implementers. In the event that such non-Participant Member shall later bring an infringement action against any Implementer with respect to such a Necessary Claim(s), the Consortium shall have no obligation to intervene, but such Implementer shall be entitled to claim protection, and to assert a complete defense against such action, under this Section 3.3 as a third party beneficiary.

(d) If one or more Non-Participant Member elects to withhold under Section 3.3(a)(ii), the Draft Standard in question shall be referred back to the Board of Directors for consideration and possible action before it is finally approved by the Consortium.

3.4 New Members

Each applicant for membership to the Consortium shall, by reason of becoming a Member, become automatically bound to extend a License to all Necessary Claims under all previously approved Consortium Standards Owned by it or any of its Related Parties to all would-be Implementers of any such Standard. If at any time any Standard is not publicly accessible, an applicant for membership shall have not less than sixty calendar days to review such Standard on a confidential basis prior to submitting its application.

3.5 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 Consortium. If you do not have a copy of this policy, please see me during this meeting. You may also view and download a

copy of that policy at the FiRa Governing Documents section of the Consortium website.

At this time, I would ask that anyone in attendance inform me if they are personally aware of any claims under any patent applications or issued patents that would be likely to be infringed by an implementation of the Standard or Other Work Product which is the subject of this meeting. You need not be the inventor under such patent or patent application anywhere in the world in order to inform us of its existence, nor will you be held responsible for expressing a belief that turns out to be inaccurate.

3.6 Ownership of Working Group Work Product

As regards any portion of a Draft Standard that is collaboratively created in a Working Group (i.e., a portion that was not a formal Submission), the following rules shall apply:

(a) Each Member that was a Participant in a Working Group agrees that if: (i) the Draft Standard of that Working Group is finally approved by the Consortium, (ii) any Representative of such a Participant in such Working Group is named as an inventor in any patent and/or patent application anywhere in the world, where such patent and/or patent application contains a Necessary Claim(s) Owned by the Participant or any of its Related Parties under such finally adopted Standard, and (iii) that claim was developed or discovered as a result of such collaboration; then neither such Participant nor any of its Related Parties shall assert such Necessary Claim(s) anywhere in the world against any Implementer with respect to its implementing of such Standard.

(b) In the event that any such inventor or Participant or any of its Related Parties shall breach the foregoing obligation, the Consortium 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 3.6 as a third-party beneficiary.

3.7 Patent Searches

In no event shall the Consortium, Representative, Participant or non-Participant Member, or any of their Related Parties be obligated to conduct any patent searches regarding any Necessary Claims (whether Owned by such entity or by third parties) that may be infringed by any implementation of a Draft Standard, Standard or Reference Implementation.

3.8 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 Standard that would result in infringement of such patent claim.

3.9 Transfers of Necessary Claims

(a) Each Member and Participant agrees that it will not transfer, and has not transferred, Ownership of any patents or patent applications having Necessary Claims solely for the purpose of circumventing such Member's or Participant's obligations under this IPR Policy.

(b) No party bound by this Policy shall transfer Ownership in 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 3.9 in any document of transfer relating to such patent or application in the event that it later transfers the same.

3.10 Patent Claims Revealed After Publication

In the event that a Necessary Claim is first revealed by a third party Owner of such claim following adoption and publication of a Standard, 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 Standard in question shall be referred back to the Technical Committee for consideration and possible action.

3.11 Document Notations

All electronic and tangible copies of Draft Standards that are subject to public comment, and all Standards, shall include the relevant legend specified on [Appendix E](#).

3.12 Resignation as a Member

Any (i) Participant that resigns or terminates its membership while a Draft Standard is under development, and (ii) any Member that resigns or terminates its membership after a Draft Standard is exposed to all Members for review, shall be bound by a continuing License obligation with respect to such Draft Standard in the event it is finally adopted, provided that such obligation shall only extend (A) in the case of a Member, to any Necessary Claims such Member did not withhold under Section 3.3(a)(ii) above, and (B) in either case, to patent claims that (x) were Necessary Claims under the Draft Standard at the time of such Participant's or Member's resignation or termination, and (y) remain Necessary Claims under the final Standard. At the election of the resigned or terminated Member, such License maybe conditioned on payment of a Reasonable and Non-discriminatory royalty or be offered without charge pursuant to a written declaration in the form of Appendix A, C. or D, as applicable.

4. Copyrights

4.1 Copyright in Standards

Subject to Section 4.3 below with respect to Software, the copyright for all Draft Standards, Standards, Reference Implementations and Other Work Product shall belong to the Consortium.

4.2 Contributions of Copyrighted Materials

Subject to Section 4.3 below with respect to Software, each Submitter who contributes copyrighted materials to the Consortium shall retain copyright ownership of its original work, while at the same time granting the Consortium 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 Standard, Standard or Other Work Product under the Consortium's own copyright.

4.3 Software

(a) Prior to or at the time of making a Submission of Software to a Working Group for inclusion in a Draft Standard or making a Submission for inclusion in a Reference Implementation, 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 Working Group for inclusion in a Draft Standard or makes a Submission for inclusion in a Reference Implementation shall have the right, at its election, to retain copyright ownership of such Software, while at the same time granting the Consortium 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 the same in source and binary forms, with or without modification, for the sole purpose of developing the Standard or Reference Implementation, as appropriate.

(c) Once any Draft Standard including Software or any Reference Implementation is declared ready for final comments, each Submitter who made a Submission of Software to that Draft Standard shall, in accordance with the election it made in its Submission Form, either:

- (i) transfer its copyright ownership in such Software to the Consortium; or
- (ii) grant to the Consortium 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 Consortium shall grant the following copyright grant-back license to the Submitter:

The Consortium 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 covering any Software submitted to a Working Group for inclusion in a Draft Standard or Standard, or any Submission submitted to a Working Group for inclusion in a Reference Implementation, shall be subject to the patent licensing requirements of Section 3.1 and transfer requirements of Section 3.5 (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 of Directors, all Software included in any Draft Standard or Specification shall be licensed by the Consortium under the BSD 3-clause License, as maintained by the Open Source Initiative at opensource.org/licenses/bsd-3-clause.

5. Trade Secrets

Participants and other Members will not be expected to reveal trade secret information in the course of participation in any Consortium activity, nor will they be asked by the Consortium to sign non-disclosure agreements. The Consortium 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 Consortium Trademarks

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

6.2 Non-Consortium Trademarks

The Consortium'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 or Defensive Revocation term in a License to its Necessary Claims.

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. To the extent that a Member or any of its Related Parties files a continuation, continuation in part, divisional or other patent instrument based upon a patent or patent application filed prior to the Member's resignation or termination that included a Necessary Claim or included disclosure sufficient to support the filing of a Necessary Claim, and such new instrument includes a new patent claim that would result in Necessary Infringement by a Standard that was under development (by a Working Group intending to develop the Standard and in which such Member was a Participant), posted for approval, or approved prior to or while such entity was a Member, then any such patent claim shall be deemed to be a Necessary Claim subject to the terms of this IPR Policy, and such Member and each of its Related Parties shall be under an obligation to offer a License to such Necessary Claim under the Standard, either with or without RAND compensation and otherwise on a RAND basis, to all would-be implementers of such Standard with respect to such patent claims. Except as stated in this paragraph, 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 Consortium shall have the right to assign all of its rights under this Policy, and the right to enforce all obligations incurred by Members and Participants under this Policy, to any successor to the mission of the Consortium.

(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 Consortium.

9. Amendment

This IPR Policy may only be amended by the affirmative action of not less than eighty percent of the then-serving members of the Board of Directors. No such change shall have retrospective effect, nor take effect less than sixty calendar days prior to the date upon which the notice of such change has been sent to each Member.

Appendix A

FIRA CONSORTIUM, INC.

SUBMISSION OF TECHNOLOGY FORM

NOTE: If a Submitter wishes to disclaim the right to charge a License fee in connection with a Submission in the event it is included in a Standard, it must submit this form at the time of making its Submission. All blanks must be completed in order for this Submission to be given consideration. This submission is subject to the Intellectual Property Rights Policy (the "IPR Policy") of FiRa Consortium, Inc. (the "Consortium"), and related rules of procedure (collectively, both such documents are referred to below as the "Policies and Procedures"). ***All capitalized terms used in this form are intended to have the meanings given to them in the IPR Policy.***

Name of Submitter:	
Name of Representative Completing this Form on Behalf of Submitter:	
Mailing Address of Representative:	
Email Address of Representative:	
Draft Standard and RFP (if any) to which this Submission relates:	

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

1. The Representative is authorized to make the Submission attached as **Exhibit A** on behalf of the Submitter, and to make the following representations and warranties.
2. The Submitter has reviewed the Policies and Procedures and agrees that its Submission is being made in full compliance with the same.
3. The Submitter hereby irrevocably agrees that if the Draft Standard is finally approved by the Consortium, 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, or only those Necessary Claims described in Exhibit A to this form, and included in its Submission that become Necessary Claim(s) without compensation and otherwise on a RAND basis, to all Implementers; A Submitter may, if it wishes, irrevocably commit at the time of making a Submission not to charge any compensation in exchange for Licenses.

4. The Submitter hereby agrees that the Consortium may copy, distribute and otherwise make available this Submission for the purpose of evaluation, and that in the event that the Submission is accepted, in whole or in part, that the Consortium will own the copyright in the resulting Standard and all rights therein, including the rights of distribution. This agreement shall not in any way deprive the Submitter of any patent claims relating to the technology to which its Submission relates.

5. The Submitter is not aware of any Necessary Claim(s) of any third party that might be infringed by the implementation of the Standard referenced above as a result of the incorporation of the Submission into a Standard or any related Referenced Implementation, whether in whole or in part. If the Submitter is aware of any such potential infringement, then the Submitter has described such Necessary Claim(s) on **Exhibit B**, together with any supporting documentation that may be readily available to the Submitter.

B. The Consortium, in accepting this Submission, acknowledges the following:

1. The representation required in paragraph A.5 above is being solicited purely for informational purposes, and the Consortium will not be relying on such representation or otherwise holding the Representative or Submitter responsible for its completeness or accuracy.

2. EXCEPT AS SPECIFICALLY PROVIDED FOR ABOVE, THIS SUBMISSION IS BEING OFFERED WITHOUT ANY WARRANTY WHATSOEVER, AND IN PARTICULAR, ANY WARRANTY OF NON-INFRINGEMENT IS EXPRESSLY DISCLAIMED, EXCEPT TO THE EXTENT OF KNOWING FALSITY IN ANY STATEMENT MADE ABOVE. ANY IMPLEMENTATION OF ANY STANDARD INCORPORATING THIS SUBMISSION IN WHOLE OR IN PART SHALL BE MADE ENTIRELY AT THE IMPLEMENTER'S OWN RISK, AND THE SUBMITTER SHALL HAVE NO LIABILITY WHATSOEVER TO ANY IMPLEMENTER OR THIRD PARTY FOR ANY DAMAGES OF ANY NATURE WHATSOEVER DIRECTLY OR INDIRECTLY ARISING FROM SUCH IMPLEMENTATION, EXCEPT AS A RESULT OF ANY KNOWING FALSITY IN ANY STATEMENT MADE ABOVE.

This submission has been made on _____, 20 .

Name of Submitter

By: _____
Signature of Representative

Name: _____

Exhibit A

SUBMISSION

Insert description of Submission in such detail as may from time to time be required under the Policies and Procedures

Exhibit B**MEMBER AND/OR RELATED PARTY IPR**

Jurisdiction and Patent Number	Necessary Claim(s)	Affected Portion of Standard

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(s)	Affected Portion of Submission or Standard

Appendix B

Software Submission

Note: This form is subject to the Intellectual Property Rights Policy (the "IPR Policy") of FiRa Consortium (the "Consortium"), and the related Policies and Procedures document of the Consortium (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 _____ Working Group.

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 Standard, Submitter hereby assigns to the Consortium 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 nonexclusive rights already granted with respect to such Software Submission(s). SUCH SOFTWARE SUBMISSION IS PROVIDED TO THE CONSORTIUM 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 Consortium granting the following copyright grant-back license as set forth below:

Copyright Grant-Back License. Upon the Copyright Assignment described above occurring, the Consortium 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 by it for any purpose or use.

Copyright License Grant. Contingent upon Submitter's Software Submission(s) being included in a Draft Standard that is declared to be at Final Ballot readiness, Submitter hereby grants to the Consortium 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 Consortium if the Submitter has selected the Copyright Assignment with Copyright Grant-Back License option above:

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

By: _____

Name: _____

Title: _____

Date: _____

Appendix C

FiRa Consortium, Inc.

PARTICIPANT INTELLECTUAL PROPERTY RIGHTS ELECTION FORM

NOTE: If a Member that is a Participant in a Working Group wishes to disclaim the right to charge a License fee in connection with any Necessary Claim(s) Owned by it or any of its Related Parties relating to a FiRa Consortium Standard, it must submit this form at the time of making its Submission. All blanks must be completed in order for this election form to be given consideration. This form is subject to the Intellectual Property Rights Policy (the "IPR Policy") of FiRa Consortium, Inc. (the "Consortium"), and related rules of procedure (collectively, both such documents being referred to below as the "Policies and Procedures"). ***All capitalized terms used in this form are intended to have the meanings given to them in the IPR Policy.***

Name of Member:	
Name of Representative Completing this Form on Behalf of Member:	
Mailing Address of Representative:	
Email Address of Representative:	
Draft Standard to which this Election 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 Election Form on behalf of the Member, and to make the following representations and warranties.
2. The Representative and the Member have each reviewed the Policies and Procedures, and agree that this Election Form is being completed and submitted in full compliance with the same.
3. The Member hereby irrevocably agrees that if the Draft Standard is finally approved by the Consortium, the Member and each of its Related Parties will provide a License to all Necessary Claim(s) Owned by it or any of its Related Parties, without compensation and otherwise on a RAND basis, to all Implementers

Notes:

(a) A Member may limit this disclaimer to the specific Necessary Claims identified in Exhibit A.

(b) 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.

4. The Representative is not aware of any Necessary Claim(s) or other IPR of any third party that might be infringed by the implementation of the Draft Standard referenced above. If the Representative is aware of any such potential infringement, then the Representative has described such Necessary Claim(s) or other IPR on Exhibit A, together with any supporting documentation that may be readily available to the Representative.

B. The Consortium, in accepting this Election Form, acknowledges that the representation required in paragraph A.4 above is being solicited purely for informational purposes, and the Consortium will not be relying on such representation or otherwise holding the Representative or Member responsible for its completeness or accuracy.

This Election Form has been submitted on _____, 20 .

Name of Member

By: _____
Signature of Representative

Name: _____

Exhibit A**MEMBER AND/OR RELATED PARTY IPR**

Jurisdiction and Patent Number	Necessary Claim(s)	Affected Portion of Standard

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(s)	Affected Portion of Standard

Appendix D

FiRa Consortium, Inc.

**NON-PARTICIPANT INTELLECTUAL PROPERTY RIGHTS
ELECTION FORM**

NOTE: This election form is subject to the Intellectual Property Rights Policy (the "IPR Policy") of FiRa Consortium, Inc. (the "Consortium"), and related rules of procedure (collectively, both such documents being referred to below as the "Policies and Procedures"). ***All capitalized terms used in this form are intended to have the meanings given to them in the IPR Policy.***

NOTE: Under the IPR Policy, any non-Participant Member that does not return this form by the end of a review period will be bound, together with each of its Related Parties, to offer a License, either with or without compensation, to all Necessary Claims Owned by it or any of its Related Parties under the Draft Standard under review, to any would-be Implementer of such Draft Standard in the event it is finally approved.

Name of Member:	
Name of Representative Completing this Form on Behalf of Member:	
Mailing Address of Representative:	
Email Address of Representative:	
Draft Standard to which this Election 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 Election Form on behalf of the Member, and to make the following representations and warranties.
2. The Representative and the Member have each reviewed the Policies and Procedures, and agree that this Election Form is being completed and submitted in full compliance with the same.
3. The Member hereby irrevocably agrees to the following:

Royalty Free RAND License. If the Draft Standard is finally approved by the Consortium, the Participant and each of its Related Parties will provide a License to all Necessary Claim(s) Owned by it or any of its Related Parties, without compensation and otherwise on a RAND basis, to all Implementers; or

Withholding of License as to Identified Necessary Claims. The Member 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 or any of its Related Parties and identified, together with the Draft Standard text that in each case would result in infringement, on **Exhibit A.**

Notes:

- (a) A Member may elect different options above with respect to different Necessary Claims.
 - (b) 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.
4. The Representative is not aware of any Necessary Claim(s) or other IPR of any third party that might be infringed by the implementation of the Draft Standard referenced above. If the Representative is aware of any such potential infringement, then the Representative has described such Necessary Claim(s) or other IPR on **Exhibit A.** together with any supporting documentation that may be readily available to the Representative.



B. The Consortium, in accepting this Election Form, acknowledges that the representation required in paragraph A.4 above is being solicited purely for informational purposes, and the Consortium will not be relying on such representation or otherwise holding the Representative or Member responsible for its completeness or accuracy. This Election Form has been submitted on _____, 20 .

Name of Member

By: _____
Signature of Representative

Name: _____

Exhibit A**MEMBER AND/OR RELATED PARTY IPR**

Jurisdiction and Patent Number	Necessary Claim(s)	Affected Portion of Standard

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(s)	Affected Portion of Standard

Appendix E

DOCUMENT NOTATIONS

1. **Notation when no Necessary Claims have been Identified**

All Draft Standards that are subject to public comment and all Standards 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 Standard set forth in this document, and to provide supporting documentation."

All Standards shall additionally include the following introductory language:

"THIS STANDARD IS BEING OFFERED WITHOUT ANY WARRANTY WHATSOEVER, AND IN PARTICULAR, ANY WARRANTY OF NON-INFRINGEMENT IS EXPRESSLY DISCLAIMED. ANY USE OF THIS STANDARD SHALL BE MADE ENTIRELY AT THE IMPLEMENTER'S OWN RISK, AND NEITHER THE CONSORTIUM, NOR ANY OF ITS MEMBERS OR SUBMITTERS OR THEIR RELATED PARTIES, 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 STANDARD."

2. **Notation when Necessary Claims or other IPR are Identified**

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

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

"The holder of this IPR has assured THE CONSORTIUM 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 Standard to THE CONSORTIUM and those Licensees (Members and non-Members alike) desiring to implement this Standard. 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 Standard may be the subject of IPR other than those identified above. THE CONSORTIUM shall not be responsible for identifying any or all such IPR.

"THIS STANDARD IS BEING OFFERED WITHOUT ANY WARRANTY WHATSOEVER, AND IN PARTICULAR, ANY WARRANTY OF NON-INFRINGEMENT IS EXPRESSLY DISCLAIMED. ANY USE OF THIS STANDARD SHALL BE MADE ENTIRELY AT THE IMPLEMENTER'S OWN RISK, AND NEITHER THE CONSORTIUM, NOR ANY OF ITS MEMBERS OR SUBMITTERS OR THEIR RELATED PARTIES, 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 STANDARD."

(b) In the event that the owner of any IPR has asserted that infringement would result from the implementation of a Draft Standard or Standard, 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 Consortium that it agree to make a License available for the purpose of implementing this Standard. Information may be obtained from:

[Name of Holder of Right]
[Address]"

3. Software

All Software included in Draft Standards and Standards shall:

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

"The above license is used as a license under copyright only. Please reference the Consortium 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."