

LoRa Alliance, Inc.
Intellectual Property Rights Policy (the “IPR Policy”)
Revision approved by the Board of Directors on July 15, 2021

1. Background

1.1 Background. The LoRa Alliance, Inc. (the “Alliance”) is a nonprofit non-stock Delaware Corporation formed for purposes including, but not limited to, bringing technology companies, device manufacturers, application developers, and other entities together to define one or more specifications, best practices, reference architectures, implementation guidelines and certification programs to enable connected devices to extend their range to a wide area telecommunications network. LoRa™, LoRa Alliance® and LoRaWAN® are the exclusive trademarks of Semtech Corporation (“Semtech”) and are used herein pursuant to a license between Semtech and LoRa Alliance.

1.2 Intellectual Property Basis. The Alliance will initially adopt the LoRaWAN 1.0 Initial Specification as developed jointly, and submitted, on an “as is” basis, to the Alliance, by the Founding Sponsor Members. The Alliance may also develop Successor LoRaWAN Specifications (as defined below). This IPR Policy is intended to maximize the likelihood of widespread adoption of the LoRaWAN 1.0 Initial Specification and Successor LoRaWAN Specifications.

1.3 Legal Compliance. Members are bound to the terms of this IPR Policy (to the extent this IPR Policy explicitly recites obligations of Members) by virtue of their membership in the Alliance.

2. Definitions

Unless defined explicitly in this IPR Policy, the capitalized terms used in this IPR Policy shall have the meanings given in the Bylaws of the Alliance. Other capitalized terms below shall have the meanings defined in this Section 2.

“**Affiliate**” means a corporation, company or other entity that owns or controls Member or Implementer, or is owned or controlled by a Member or Implementer, or is under common control with a Member or an Implementer, but such corporation, company or other entity shall be deemed to be an Affiliate only so long as such ownership or control exists. For the purposes of this definition “own or controls” means owning or controlling, directly or indirectly, more than fifty percent (50%) of the outstanding shares or securities (representing the right to vote for the election of directors or other managing authority) or more than fifty percent (50%) of ownership interest representing the right to make the decisions for such corporation, company or other entity.

“**Contribution**” means a submission by a Member proposed for incorporation in: (a) an existing Draft Specification or portion thereof, (b) an existing Final Specification or (c) a future Final Specification or Draft Specification or portion thereof, provided that the submission is either (i) submitted in writing (including a writing in electronic medium) or (ii) stated orally, memorialized with specificity in the written minutes of a meeting, and correctly attributed in the meeting minutes to the submitting Member, provided that the minutes are promptly provided to the

individual representing the submitting Member, unless in either case, the submitting Member withdraws its submission in writing as soon as practicable and in any event, no later than thirty (30) days of receipt of such written minutes.

“Copyrights” means copyrights of a Member pertaining to a Contribution of that Member, a license to which is necessary to develop, copy, reproduce and distribute the LoRaWAN 1.0 Initial Specification, and/or to develop, copy, reproduce and distribute a Successor LoRaWAN Specification.

“Draft Specification” means a set of documents developed in an Alliance authorized Work Group, designated as an Alliance “Draft Specification,” which are either based on and contain elements of the existing "LoRa Specification" or which are protocols used to communicate between different servers in LoRaWAN network deployments including without limitation, draft Successor LoRaWAN Specifications, and all Contributions included in the Draft Specification. Except as provided above with respect to communication protocols, no Draft Specification will contain any elements outside of the technology domains of the baseline LoRa Specification.

“Essential IPR” means one or more claims of one or more patents or patent applications throughout the world (jointly referred to as “Patents”) that absent a license, would be directly infringed by making, having made, using, marketing, importing, offering to sell, selling, distributing (directly or indirectly), or otherwise commercially exploiting in products and services the Required Portions of a Final Specification. For purposes of the application of this definition of Essential IPR, a Patent is only considered to cause direct infringement absent a license if there is no commercially reasonable non-infringing alternative for making, having made, using, marketing, importing, offering to sell, selling, distributing (directly or indirectly), or otherwise commercially exploiting in products and services the Required Portions of a Final Specification.

Explicitly excluded from “Essential IPR” are (i) any claims of any Patent (even if other claims of that Patent are Essential IPR) directed to technology that may be used to develop, design, manufacture, sell or use any product or portion thereof that complies with the Final Specification but which technology is not expressly set forth therein (examples of such technologies include, without limitation, semiconductor manufacturing technology, compiler technology, object oriented technology, and basic operating system technology) and (ii) any patent that is not otherwise essential to either the LoRaWAN 1.0 Specification or any Successor LoRaWAN Specification, but that is essential to any specification and/or standard not made by the Alliance that is referenced by LoRaWAN 1.0 Specification or any Successor LoRaWAN Specification.

Notwithstanding the foregoing, “Essential IPR” shall not include any Patent claims which describe any physical layer devices or methods, as the physical layer is defined in Layer 1 (Physical Layer) of the Open Systems Interconnection (OSI) model. Notwithstanding anything to the contrary in this IPR Policy, or Membership Agreement, or any other Organizational Documents, in the case of IBM or any of its Affiliates as the Member, Patents excludes all patents and patent applications throughout the world, including reissues, continuations, divisionals and continuations-in-part, utility models and typeface design patents and registrations, in each case which IBM or any of its Affiliates has a conditional or unconditional obligation to transfer, or does transfer, to Global Foundries U.S. Inc. or any of its affiliates in connection with the transfer of IBM's global commercial semiconductor technology business announced on October 20, 2014 (such patents and patent applications are herein referred to as "Subject Patents").

“Final Specification” means a Draft Specification that has been adopted by the Board of Directors in accordance with the Bylaws and this IPR Policy as a Final Specification. Such Final Specification may carry the marking ‘LoRaWAN 1.X Specification,’ ‘LoRaWAN 2.0 Specification,’ or other similar marking as established by the Board of Directors.

“Granting Member” means a Member granting a RF License to Essential IPR to other Members and to Implementers.

“Implementer” means a non-Member that makes, has made for it, uses, markets, imports, offers to sell, sells, distributes (directly or indirectly), or otherwise commercially exploits in products and services the Required Portions of a Final Specification.

“Licensed Material” means only those specific portions of a product (hardware, software, or combinations thereof) that (a) implement and are compliant with all the Required Portion(s) of the applicable Final Specification; and (b) to the extent that the product implements one or more optional portions of such Final Specification, those portions of the product that implement and are compliant with all Required Portions that must be implemented to comply with such optional portions of the Final Specification.

“LoRaWAN 1.0 Initial Specification” means the initial Draft Specification for LoRa, as developed outside the Alliance by the Founding Sponsor Members and contributed to the Alliance.

“Member” means a member in good standing of the Alliance, and includes Institutional, Adopter, Contributor and Sponsor Members as those terms are defined in the Bylaws. In all cases, the term Member includes Affiliates of a Member.

“Required Portion” means a portion of a Final Specification that must be implemented to comply with such Final Specification. If such Final Specification defines optional parts, Required Portions include those portions of the optional part that must be implemented if the implementation is to comply with such optional part.

“RF License” means a nonexclusive, royalty free, worldwide, non-transferrable, non-sublicensable (except to Affiliates), patent license under Essential IPR (including all Essential IPR which is obtained in the future) on fair, reasonable and nondiscriminatory terms, to make, have made for, use, market, import, offer to sell, and sell, and to otherwise directly or indirectly distribute, or otherwise commercially exploit in products and services, Licensed Material. The RF License shall be void *ab initio* with respect to any party that commences legal action against the Granting Member for infringement by the Granting Member of any of such party's Essential IPR. The RF License shall survive any resignation, termination, expiration or non-renewal of membership in the Alliance of the Granting Member.

“Subcontractor” means any individual not directly employed by a Member or the Alliance, but who does work for a Member or the Alliance under contract.

“Successor LoRaWAN Specification” means a Final Specification either providing additions to, deletions from or modification of the LoRaWAN 1.0 Initial Specification or a previous Final Specification or portion thereof or providing a protocol used to communicate between different servers in LoRaWAN network deployments, or additions to, deletions from or modifications of such protocols or portion thereof, in each case as adopted by the Board of Directors.

3. LoRaWAN 1.0 Specification Intellectual Property Licensing

3.1 LoRaWAN 1.0 Initial Specification. The LoRaWAN 1.0 Initial Specification will be contributed to the Alliance by Founding Sponsor Members as a Draft Specification, and submitted to the Board of Directors for adoption of the LoRaWAN 1.0 Initial Specification as a Final Specification in accordance with the process set forth separately by the Board of Directors. The LoRaWAN 1.0 Initial Specification will be contributed to the Alliance subject to all necessary downstream license and copyright terms related to its development including, without limitation, the Copyright and RF license terms and conditions to which Contributions are subject to in this IPR Policy.

3.2 LoRaWAN 1.0 Initial Specification Review Period. Prior to adopting the LoRaWAN 1.0 Initial Specification as a Final Specification, the Board of Directors shall distribute the LoRaWAN 1.0 Initial Specification to all Members and allow for a review period of not less than ten (10) ten days or more than fifteen (15) days (“Specification Review Period”) during which each Member can review the LoRaWAN 1.0 Initial Specification with respect to any intellectual property licensing issues including, without limitation, consideration of such Member’s licensing obligations with respect to any Essential IPR that may be contained therein. Any Member that has an objection due to a potential Essential IPR claim owned by it and not made essential by its own Contribution, shall so notify the Work Group chair, and the process of Section 3.4 shall be invoked. If a Member does not object according to Section 3.4, then all Members agree that failure to resign from the Alliance prior to the end of the Specification Review Period will subject the Member and its Affiliates to the licensing provisions of Section 3.5 as to such Member’s and its Affiliates’ disclosed and undisclosed Essential IPR for the LoRaWAN 1.0 Specification, regardless of knowledge thereof by any individual participating on behalf of such Member. Where a Member elects to resign rather than have its intellectual property deemed Essential IPR, that Member must identify the patent and/or patent application by number that the Member elects not to license as Essential IPR and which is not removed according to Objecting Member (as defined below) Section 3.4. Notwithstanding the foregoing, a Member cannot avoid the obligation to grant licenses to Essential IPR under the terms of this IPR Policy pertaining to a Contribution that the Member made to the LoRaWAN 1.0 Initial Specification and such licensing commitment shall continue notwithstanding the resignation, termination, expiration or non-renewal of membership in the Alliance of such Member.

3.3 Resignation Rights. Any Member may resign from membership in the Alliance during the Specification Review Period if (a) that Member determines that the LoRaWAN 1.0 Initial Specification contains Essential IPR which that Member is unwilling to license pursuant to Section 3.5, and (b) that Member discloses its Essential IPR pursuant to Section 6.1. In the event that a Member does not resign with required disclosure prior to the expiration of the Specification Review Period, the licensing provisions of this Section 3 shall apply and such Member shall be obligated to grant licenses to Essential IPR with respect to the LoRaWAN 1.0 Initial Specification. Only in the event that a Member resigns as a Member prior to the expiration of the Specification Review Period will the Member not be required to grant licenses to Essential IPR under the terms of this IPR Policy. Where a Member elects to resign rather than have its intellectual property deemed Essential IPR, that Member must identify the patent and/or patent application by number that the Member elects not to license as Essential IPR.

3.4 Objecting Member. Where a Member makes a Contribution (“Contributing Member”) in a Work Group session that would cause the intellectual property of any other Member (“Objecting Member”) to become Essential IPR, the Objecting Member can request that the Contribution not be included in the Draft and/or Final Specification. The Objecting Member must identify the patent and/or patent application by number and claims that would be considered Essential IPR if the Contribution of the Contributing Member were to be included in a Final Specification. The request should be made in writing to the chair of the Work Group. The other Work Group Members will work to eliminate the section of the Draft Specification that would make the Objecting Member’s patent an Essential Claim. If this cannot be done, the Draft Specification will be reworked or abandoned. If the Work Group includes the Contribution after the request for removal by the Objecting Member, then the Objecting Member has the right to take its request for removal to the Board of Directors for approval and enforcement. If the Objecting Member is unsatisfied with the decision of the Board of Directors, the Objecting Member can choose to resign its membership in accordance with the Bylaws and the Objecting Member’s patent will not be subject to Section 3.5.

3.5 RF License. Each Member (on behalf of itself and its Affiliates) hereby grants each other Member and Implementer a RF License as defined above under its Essential IPR for the Final Specification for the LoRaWAN 1.0 Initial Specification provided that the other Members and Implementers each grant reciprocal licenses of the same scope to the Granting Member under their Essential IPR.

3.6 License Limitation. Such RF License need not extend to features of Licensed Material that are not required to comply with the Required Portions of the LoRaWAN 1.0 Initial Specification.

4. Successor Specification Intellectual Property Licensing

4.1 Notice to Members. Upon resolution by the Board of Directors to develop a Draft Specification for a Successor LoRaWAN Specification, the Alliance shall provide all Members with not less than thirty (30) days’ prior notice (notice may be via email to all Members and via a publication on the Alliance’s official website, or such other method as the Board of Directors directs) of the initiation of a new activity for the development of a Successor LoRaWAN Specification. Such notice shall include the scope of the intended specification as approved by the Board of Directors in accordance with the Bylaws.

4.2 Contribution Process. A Work Group, to be chartered by the Board of Directors, shall have the responsibility for drafting and developing a Draft Specification for the Successor LoRaWAN Specification, which shall be submitted to the Board of Directors to consider as a Final Specification. Each Member may at its discretion submit Contributions and exchange with other Members any information the submitting Member deems useful to develop a Draft Specification for the Successor LoRaWAN Specification. No Member shall be compelled to submit any such Contributions, nor will the submission of any such Contributions affect the Member’s intellectual property rights in any manner other than as explicitly set forth in this IPR Policy.

4.3 Objecting Member Process. Where a Member makes a Contribution (“Contributing Member”) in a Work Group session that would cause the intellectual property of any other Member (“Objecting Member”) to become Essential IPR, the Objecting Member can request that the Contribution not be included in the Draft and/or Final Specification. The Objecting Member must identify the specific technology and portion of the Contribution that Objecting Member believes would be considered Essential IPR if the Contribution of the Contributing Member were to be included in a Final Specification including patent(s) and/or patent application(s) by number and claims. The request should be made in writing to the chair of the Work Group. The other Work Group Members will work to eliminate the section of the Draft Specification that could make the Objecting Member’s patent Essential IPR. If the Work Group decides to nonetheless include the Contribution after the request for removal by the Objecting Member, then the Objecting Member has the right to take its request for removal to the Board of Directors for further action. If the Objecting Member is unsatisfied with the decision of the Board of Directors, the Objecting Member can choose to resign its membership and the Objecting Member’s patent(s) will not be subject to the licensing obligations of Section 4.

4.4 License Review Period. Prior to accepting a Draft Specification for a Successor LoRaWAN Specification as a Final Specification, the Alliance shall distribute the Draft Specification to all Members and allow for a review period of not less than sixty (60) days (the “License Review Period”) during which each Member can review the Draft Specification with respect to any intellectual property licensing issues including, without limitation, consideration of such Member’s licensing obligations with respect to any Essential IPR that may be contained therein. All Members agree that failure to resign from the Alliance prior to the end of the License Review Period will subject the Member and its Affiliates to the licensing provisions of Section 4.7 as to such Member’s and its Affiliate’s disclosed and undisclosed Essential IPR, regardless of knowledge thereof by any individual participating on behalf of such Member.

4.5 Resignation Rights. Any Member may resign from membership in the Alliance during the License Review Period for any reason including if that Member determines that the Draft Specification contains Essential IPR which that Member is unwilling to license pursuant to Section 4.7. In the event that a Member does not resign prior to the expiration of the License Review Period, the licensing provisions of this Section 4 shall apply, and such Member shall be obligated to grant licenses to Essential IPR with respect to such Draft Specification in the event such Draft Specification is adopted as a Final Specification. Only in the event that a Member resigns as a Member prior to the expiration of the Specification Review Period will the Member not be required to grant licenses to Essential IPR under the terms of this IPR Policy with respect to the Draft Specification in the event such Draft Specification is adopted as a Final Specification. Where a Member elects to resign rather than have its intellectual property deemed Essential IPR, that Member may at its option identify the patent and/or patent application that the Member elects not to license as Essential IPR but such disclosure is not mandatory. Notwithstanding the foregoing, a Member cannot avoid a commitment to grant licenses to Essential IPR under the terms of this IPR Policy pertaining to a Contribution that the Member made to a Successor LoRaWAN Specification and such licensing obligation shall continue notwithstanding the resignation, termination, expiration or non-renewal of membership in the Alliance of such Member.

4.6 Board Process Following Specification Review Period. Upon completion of the Specification Review Period, the Board of Directors shall consider information received from withdrawing Member(s), if any, regarding Essential IPR that such withdrawing Member(s) elects not to license as Essential IPR. The Board of Directors shall have the option of sending the Draft Specification back to the Working Group or other technical committee designated by the Board of Directors for further consideration and possible changes of the Draft Specification in accordance with the feedback, proposed revisions, or suggested processes requested by the Board of Directors. If the Draft Specification is changed and resubmitted to the Members of the Alliance by action of the Board of Directors, the Draft Specification, as revised, will be subject to a new License Review Period subject to the provisions of Section 4.4. If the Board of Directors elects not to make further changes to a Draft Specification, the Board of Directors may take action in its discretion to either approve or reject the Draft Specification as a Final Specification.

4.7 RF License. Each Member (on behalf of itself and its Affiliates) hereby grants each other Member and Implementer a RF License as defined above under its Essential IPR for the Final Specification for each Successor LoRaWAN Specification provided that each other Member and Implementer grants a reciprocal license of the same scope to the Granting Member under their Essential IPR.

4.8 License Limitation. The RF License under Section 4.7 need not extend to features of Licensed Material that are not required to comply with the Required Portions of the Final Specification for a Successor LoRaWAN Specification.

5. New Member Specification Review

If a prospective Member shall apply for membership in the Alliance, then subject to the execution of such confidentiality and/or nondisclosure agreements as the Alliance may determine necessary, such prospective Member shall be permitted sixty (60) days to review any Draft Specification then under review, in accordance to Section 4.4, and any previously adopted Final Specifications of the Alliance for any and all Essential IPR. In the event that such prospective Member in good faith believes that the implementation of Essential IPR in such Draft Specification then under review or in any previously adopted Final Specifications would require a license from such prospective Member, and that such prospective Member would be unwilling to provide a license under such Essential IPR in accordance with Section 3.5, and Section 4.7, as applicable, or if the Prospective Member otherwise decides to terminate its membership for any reason within such 60-day period the prospective Member shall withdraw its membership application and may, at its option, identify patents and/or patent applications that it is unwilling to license but such disclosure is not mandatory. Such Member shall not be required to grant licenses under the identified Essential IPR pursuant to Section 3.5 and Section 4.7, as applicable, if it withdraws its membership application within the 60-day review period. In the event that a prospective Member does not withdraw its membership application within the 60- day review period, the licensing commitments of Section 3.5 and Section 4.7, as applicable, shall apply to such Member without exception.

6. Additional IPR Clauses

6.1 Disclosure. Where patent disclosure is required under this IPR Policy, the following minimum disclosure efforts shall be undertaken and the following minimum information shall be provided in order to comply with the various disclosure requirements: With respect to issued and published pending patent applications, the disclosure must include (a) the identity of the patent right holder and/or applicant; (b) the patent number or application number of the patent rights; and (c) the actual claims of patent within the filed or issued patent which may be Essential IPR. With respect to unpublished pending patent applications, no disclosure is mandatory but disclosure regarding the existence of the application which may contain the Essential IPR is encouraged. Nothing herein precludes broader disclosure of unpublished pending patent applications on a voluntary basis or pursuant to a non-disclosure agreement. Where patent disclosure is not required under this IPR Policy, disclosure on a voluntary basis of the following information is encouraged but not mandatory: With respect to issued and published pending patent applications (a) the identity of the patent right holder and/or applicant; (b) the patent number or application number of the patent rights; and (c) the actual claims of patent within the filed or issued patent which may be Essential IPR. With respect to unpublished pending patent applications, disclosure is also not mandatory but disclosure regarding the existence of the application which may contain the Essential IPR is encouraged.

6.2 Intellectual Property Rights of Third Parties. Each Member agrees that to the best knowledge of their representatives they will not use as part of any material or information supplied to any Work Group or Committee pursuant to this IPR Policy or as part of any Contribution, any work product subject to any copyright of a third party, including Subcontractors, except in the event that the copyright is disclosed clearly in writing to all the other Members at the time it is initially introduced.

6.3 Specification Notice Requirement. Each Final Specification shall include this notice: THIS DOCUMENT AND THE INFORMATION CONTAINED HEREIN ARE PROVIDED ON AN "AS IS" BASIS AND THE ALLIANCE DISCLAIMS ALL WARRANTIES EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO (A) ANY WARRANTY THAT THE USE OF THE INFORMATION HEREIN WILL NOT INFRINGE ANY RIGHTS OF THIRD PARTIES (INCLUDING WITHOUT LIMITATION ANY INTELLECTUAL PROPERTY RIGHTS INCLUDING PATENT, COPYRIGHT OR TRADEMARK RIGHTS) OR (B) ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE OR NONINFRINGEMENT. IN NO EVENT WILL THE ALLIANCE OR ANY MEMBER BE LIABLE FOR ANY LOSS OF PROFITS, LOSS OF BUSINESS, LOSS OF USE OF DATA, INTERRUPTION OF BUSINESS, OR FOR ANY OTHER DIRECT, INDIRECT, SPECIAL OR EXEMPLARY, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY KIND, IN CONTRACT OR IN TORT, IN CONNECTION WITH THIS DOCUMENT OR THE INFORMATION CONTAINED HEREIN, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE.

6.4 Transfer of Essential IPR. All licenses granted under this IPR Policy shall be interpreted as surviving any transfer of any patent containing Essential IPR. For the purpose of this provision, a transfer of ownership shall include any means of transferring control by the owner of

Essential IPR regardless of the legal means and includes granting exclusive licenses and assigning ownership.

6.5 Copyright License. Each Member hereby grants to the Alliance, a worldwide, irrevocable, nonexclusive, nontransferable, fully-paid up and royalty-free, Copyright license to reproduce, create derivative works, distribute, copy, display, perform and sublicense the rights to reproduce, distribute, copy, display and perform each Final Specification solely for the purposes of developing, publishing and distributing the Final Specification and related certification materials. Further, each Member hereby grants to the Alliance a worldwide irrevocable, nonexclusive, nontransferable, fully-paid up and royalty-free Copyright license to reproduce, create derivative works, distribute, display, perform and sublicense the rights to reproduce, distribute, display and perform related Alliance promotional material. Effective as of the approval of each Final Specification, each Member hereby conveys to the Alliance a non-exclusive, undivided, and equal ownership in the Copyrights in the Final Specification which shall for the purpose of Copyrights be deemed ownership of a collective work under 17 USC 201(c) (collectively, “Materials”) while retaining ownership of the Copyrights in any Contribution made by such Member. The Alliance may exercise any and all rights of copyright ownership and sublicense such rights in the Materials as if such rights were solely owned by the Alliance, without permission of the granting Member(s) and without any duty to account. This Section 6.5 will survive any resignation, termination, expiration or non-renewal of membership in the Alliance of such granting Member.

6.6 Copyright Notice. Each Final Specification shall contain an appropriate copyright notice in the name of the Alliance.

6.7 License Rights of Members. Without limitation of the RF Licenses hereunder, this IPR Policy shall not supersede, modify or prevent any licensing agreements or arrangements by or between Members, by or between the Alliance and one or more Members, or by or between Members, the Alliance and any other third parties including without limitation, Implementers. In addition, this IPR Policy shall not be construed to imply any separate obligation or agreement by or between Members.

6.8 Ownership of Rights. All intellectual property rights held by Members in their Contributions contained in the Draft Specifications and Final Specification shall be retained by the Members who made the Contribution. Such Members shall have the right to obtain in their own name patents, Copyrights, registrations, and similar other protections, in such intellectual property rights but without any obligation to do so.

6.9 No Other License. The Members agree that no patent license, immunity or other right is granted under this IPR Policy by any Member either directly or by implication, estoppel or otherwise, other than the agreements to grant licenses expressly set forth in this IPR Policy.

6.10 Affiliates. Any rights granted under, and obligations arising out of, this IPR Policy to a Member extend to its Affiliates whether or not the term Affiliate is specifically included in the provision, but under no circumstances can an Affiliate claim more rights arising out of this IPR Policy than a Member. Any rights granted to Affiliates of a Member under this IPR Policy terminate without any notification when the Affiliate ceases to be an Affiliate of that Member or

when the rights of the Member terminate. Any obligations arising out of this IPR Policy of an Affiliate of a Member shall continue when the Affiliate ceases to be an Affiliate of a Member to the full extent of the obligations arising under this IPR Policy prior to the cessation of Affiliate relationship. Each Member shall be responsible for ensuring the compliance of its Affiliates with respect to obligations of such Member and its Affiliates under this IPR Policy.

6.11 Subject Patents. Notwithstanding anything to the contrary in this IPR Policy, or Membership Agreement, or any other Organizational Documents, no rights or licenses are granted or agreed to be granted by IBM or any of its Affiliates with respect to Subject Patents.

7. Alliance Developed Intellectual Property

7.1 Intellectual Property Developed By or For the Alliance. Any intellectual property developed or created: (a) by any of the Alliance's employees, if any, alone; or (b) by a Subcontractor to the Alliance performing work for the Alliance on a "work made for hire" basis; or (c) otherwise solely assigned to or procured by the Alliance (collectively, "Alliance Intellectual Property"), that is patented shall be owned exclusively by the Alliance. Any intellectual property jointly developed or created during any meetings of the Alliance Members as the collective work product thereof and which is patented shall be jointly owned by the Alliance and all contributing Members, with no obligations of accounting to the other joint owners. Notwithstanding any other clauses in this Section 7.1, a Member shall own all sole inventions and other intellectual property developed or created solely by such Member. Except with respect to the Alliance's Trademarks, which will be licensed to Members pursuant to a separate license agreement, each Member shall have an irrevocable, royalty-free, worldwide, unlimited patent license in any Alliance Intellectual Property created during that Member's membership in the Alliance for use in any and all commercial purposes.

7.2 Notification and Delivery. The Alliance shall notify each Member of the adoption of all Alliance Intellectual Property promptly upon its adoption by the Board of Directors, or in the event that a committee of the Board of Directors is delegated the task of adopting intellectual property, upon its adoption by such committee. Each Member may receive a copy of such Alliance Intellectual Property as may be comprised of Alliance Trademarks, service marks, and corresponding logos connoting membership in the Alliance, in document or electronic form, upon request to the Secretary of the Alliance, and after execution of a license agreement governing its use. Any other Alliance Intellectual Property shall be licensed to Members on a non-discriminatory case by case basis, on terms established and approved by the Board of Directors.

7.3 Copyright License to Members and Implementers. As to Final Specifications adopted by the Alliance and other copyrighted materials of the Alliance that are reasonably necessary to develop and commercialize products based upon such Final Specifications, the Alliance grants each Member and Implementer an irrevocable, nonexclusive, non-sublicensable, nontransferable, fully-paid up and royalty-free copyright license to reproduce, distribute, perform, and display such Final Specifications and materials as are reasonably necessary to develop and commercialize products based upon such Final Specifications, procure products based upon such Final Specifications, or design, develop or implement systems and processes based upon such Final Specifications; provided that in the case of each reproduction, distribution, or display of such Final Specifications or materials, that the Final Specification and materials are clearly attributed to the

Alliance and that all Alliance legends, legal notices and indications of authorship required by the current statement of the Final Specification and related materials must be included where the Final Specification or materials is reproduced, distributed or displayed. This license expressly excludes (A) making derivative works for the purpose of developing products not compliant with the LoRaWAN 1.0 Initial Specification or any Successor LoRaWAN Specification, and (B) any license to reproduce, distribute or display such Final Specifications or other materials or creation of derivation work without the required legends and notices. This license shall not be deemed to grant any right under any patent, patent applications or similar intellectual property right.

7.4 Trademarks. In the event that the Alliance proposes to adopt any name or logo as a trademark, certification mark, collective membership mark, or trade name (collectively, “Trademarks”), the Alliance shall notify the Members in writing of the proposal at least thirty (30) days prior to its adoption by the Board of Directors. The Alliance will not adopt any Trademark for which a Member has notified the Alliance of reasonable objections, most notably that the proposed Trademark affects trademarks owned, used or adopted by the Member. Each Member agrees that unless it provides written notice to the Executive Director of that Member’s challenge to the proposed Trademark prior to its adoption by the Board of Directors, then the Member shall not assert against the Alliance or any Member any registered trademark or trade name rights they may have or thereafter possess in the proposed Trademarks. The Alliance shall take such steps as the Board of Directors deems necessary and proper to protect its rights under the Trademarks adopted for use by the Alliance and the Alliance shall own such Trademarks and the goodwill from the Trademarks shall be for the benefit of the Alliance. In furtherance thereof, the Board of Directors shall establish and disseminate reasonable conditions and procedures for the licensing and use of the Trademarks adopted for use by the Alliance, fully-paid up, royalty- free and demonstrably free of any unfair discrimination among the Members. Each Member agrees not to use or adopt any trademarks for any product, service, guideline, specification, or standard likely to cause confusion with any of the Trademarks adopted by the Alliance, unless (a) agreed by the Board of Directors or (b) already used or adopted by the Member prior to adoption of the Trademark by the Alliance.

7.5 Patents. Subject to Section 7.1, the Alliance will not assert claims to ownership of or challenges to the validity or enforceability of any patent held by any Member.

7.6 Defense of Alliance Intellectual Property. Subject to the prior approval of the Board of Directors, the Alliance may initiate legal proceedings, at the Alliance’s cost, to restrain infringement of Alliance Intellectual Property on behalf of the Alliance, upon the terms and conditions agreed to by the Board of Directors.

8. Disclosure of Information

8.1 Public Disclosures; Confidentiality. All public disclosures regarding the existence, membership and activities of the Alliance must be approved by its Board of Directors. Public disclosure of any version or revision of a Final Specification shall be subject to approval by the Board of Directors pursuant to the terms hereof.

8.2 Name, Trademark and Trade Name Use. Nothing in this IPR Policy gives any Member permission to use any other Member's name, trademark or trade name in any publication or in respect of any service or item to be supplied to the public, whether relating to the

Agreement or otherwise and any such use shall be subject to the explicit prior written consent of the other Member.

9. Survival of Agreement to License

Notwithstanding the dissolution of the Alliance or a Member's resignation, termination, expiration or non-renewal of its membership in the Alliance (or its withdrawal from any Work Group), and except as otherwise expressly provided herein, a Member's obligation to grant a license as provided in Section 3 and Section 4 shall remain in full force and effect for (a) any Essential IPR to a Contribution made by such Member or former Member (or its Affiliate) that becomes part of the particular version of the Final Specification for which the Contribution was offered; and (b) any Essential IPR to a Final Specification adopted by the Alliance for which the Specification Review Period or a License Review Period ended prior to the effective date of the Member's resignation, termination, expiration or non-renewal. Notwithstanding the generality of the foregoing, the obligations set forth in (a) and (b) above will additionally survive to the extent such Essential IPR are both (i) necessary for future Final Specifications to be backwards compatible with the prior Final Specifications (i.e., designed to fully interoperate, communicate or connect with or to products that comply with the prior Final Specifications) and (ii) used in a substantially similar manner and to a substantially similar extent with a substantially similar result as the same Essential IPR was used in a prior Final Specification for which the Member is obligated to grant licenses. Except as set forth in this Section 9, a former Member shall not be subject to any additional obligation to license its Essential IPR.

10. No Representation or Warranties

EACH MEMBER HEREBY AGREES AND ACKNOWLEDGES THAT: (A) THE ALLIANCE AND EACH MEMBER, INCLUDING WORK GROUP REPRESENTATIVES AND WORK GROUP CHAIRS, TAKE NO POSITION AS TO WHETHER ANY INTELLECTUAL PROPERTY RIGHTS EXIST IN ANY DRAFT OR FINAL SPECIFICATIONS; (B) THE SPECIFICATIONS AND ANY CONTRIBUTIONS THERETO ARE ALL PROVIDED "AS IS" AND "WITH ALL FAULTS"; (C) THE ALLIANCE AND EACH MEMBER, INCLUDING WORK GROUP REPRESENTATIVES AND WORK GROUP CHAIRS, MAKE NO REPRESENTATIONS OR WARRANTIES, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE WITH RESPECT TO THE SPECIFICATIONS OR ANY CONTRIBUTIONS THERETO, INCLUDING, BUT NOT LIMITED TO, ALL IMPLIED WARRANTIES OF MERCHANTABILITY, TITLE, NONINFRINGEMENT AND FITNESS FOR A PARTICULAR PURPOSE, OF REASONABLE CARE OR WORKMANLIKE EFFORT, OR RESULTS OR OF LACK OF NEGLIGENCE; AND (D) NEITHER THE ALLIANCE NOR ANY OF ITS MEMBERS, INCLUDING WORK GROUP REPRESENTATIVES AND WORK GROUP CHAIRS, HAS UNDERTAKEN ON BEHALF OF THE ALLIANCE OR ITS MEMBERS ANY EXTERNAL PATENT SEARCH WITH RESPECT TO THE SPECIFICATIONS OR ANY CONTRIBUTIONS THERETO. NOTHING HEREIN SHALL, HOWEVER, BE CONSTRUED AS A RESTRICTION ON ANY MEMBER CONDUCTING ITS OWN DUE DILIGENCE OR OTHER TECHNOLOGY SEARCH OR SCREENING WITH RESPECT TO THE SPECIFICATIONS.

11. Limitation of Liability

IN NO EVENT SHALL MEMBER BE LIABLE FOR DAMAGES TO ANY OF THE OTHER MEMBERS, IMPLEMENTERS, OR TO THE ALLIANCE, AS APPLICABLE, NOR SHALL THE ALLIANCE OR MEMBERS BE LIABLE TO OTHER MEMBERS, IMPLEMENTERS, OR TO THE ALLIANCE FOR ANY DIRECT DAMAGES, LOSS OF PROFITS, LOSS OF BUSINESS, LOSS OF USE OF DATA, INTERRUPTION OF BUSINESS, OR FOR INDIRECT, SPECIAL OR EXEMPLARY, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY KIND, ARISING UNDER THIS IPR POLICY EVEN IF ADVISED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE.

12. Amendments and Modifications

Any revisions or amendments to this IPR Policy will become effective only upon adoption by the Board of Directors in accordance with the Bylaws and only after: (a) the Board of Directors takes reasonable measures to notify all Members of such revisions with either a copy of, or a link to, the revised IPR Policy with revisions shown; and (b) the Members are afforded at least sixty (60) days from the date of such notice to resign from the Alliance; provided, however, that ministerial changes to this IPR Policy (such as proof-reading corrections or formatting changes) may be unilaterally executed by the Board of Directors. The Board of Directors shall take reasonable measures to communicate all IPR Policy changes to all Members. Any Member that resigns from the Alliance prior to the sixty (60) day period will be subject to the surviving provisions of the IPR Policy in accordance with its terms, but will not be subject to revisions or amendments to the IPR Policy.

13. Applicable Law

All disputes arising under this IPR Policy shall be governed by the law of the State of Delaware, without regard to its conflict of laws' provisions. However, any disputes with respect to the ownership, existence, scope, validity or infringement of intellectual property rights shall be governed by the law of the country in which the intellectual property rights confer protection.