# Working Group Charter

This Working Group Charter establishes the Scope and intellectual property terms used to develop the materials identified in the Working Group Charters for the Project. Only Project Members and Promoters that execute this Working Group Charter will be bound by its terms and be permitted to participate in the Working Groups identified below.

1. <u>Working Group Name(s)</u>. Select the Working Groups you are joining. Working Group Charter terms are set forth in Appendix D. (Please note that this list may change as groups are added or retired.)

   □   Royalty Free Video Codec Working Group.
   □   AOM Storage and Format Working Group.
   □   AOM Software Implementation Working Group.
   □   AOM Ecosystem Exploration Working Group.
   □   Technical Advisors for Patent Aspects [TAPAS]. Participation in TAPAS requires the execution of an additional agreement with AOM counsel.
   □   Volumetric Visual Media Working Group
   □   Audio Codec Working Group

2. <u>Non-Working Group Participant Feedback and Participation</u>. Upon a Supermajority Vote of the Working Group Participants, the Working Group can request feedback from and/or allow Non-Working Group Participant participation in a Working Group, subject to each Non-Working Group Participant executing the Feedback Agreement set forth in <u>Appendix B</u>.

   By executing this Agreement, the signatory agrees to be bound by the terms of the Working Groups it joins, including Working Groups it joins in the future.

**By the Project**

| | |
|---|---|
| *Signature:* | |
| *Print Name:* | Matt Frost |
| *Title:* | AOM Chairman |
| *Company Name:* | **Alliance for Open Media (AOM)** |
| *Email:* | mfrost@google.com |
| *Address:* | 2810 N Church St, PMB 57274, Wilmington, Delaware 19802-4447 USA |
| *Date:* | |

**By the Working Group Participant**

| | |
|---|---|
| *Signature* | |
| *Print Name:* | |
| *Title:* | |
| *Company Name:* | |
| *Email:* | |
| *Address:* | |
| *Date:* | |

# Appendix A

Joint Development Foundation Projects, LLC Intellectual Property Policy Options

This Joint Development Foundation Projects, LLC Intellectual Property Policy Option document sets for the various options that a Working Group may select via its Working Group Charter. Working Group Participants are only subject to the options selected for that particular Working Group as designated in the Working Group Charter, and no other rights are granted.

## COPYRIGHT POLICY OPTIONS.

Copyright Policy Option 1:  Copyright Grant to Alliance for Open Media.

1. <u>Copyright Grant</u>. Each Working Group Participant grants to the Alliance for Open Media a perpetual, worldwide, non-exclusive, no-charge, royalty-free, copyright license, without any obligation for accounting, to reproduce, prepare derivative works of, publicly display, publicly perform, sublicense, and distribute any Contribution made by the Working Group Participant to the full extent of the Working Group Participant's copyright interest in the Contribution.

2. <u>Ownership of Collective Works</u>. By participating in a Working Group, the Working Group Working Group Participant agrees that all copyright created in the collective work belongs to the Alliance for Open Media.

3. <u>Alliance for Open Media Copyright Stewardship</u>. The Alliance for Open Media will hold all copyright rights granted under this agreement on behalf of the Project and will exercise those copyright rights only in accordance with the Project's instructions. In addition, the Alliance for Open Media grants the Project Executive Director the rights to exercise these copyright rights on behalf of the Project.

Copyright Policy Option 2:  Creative Commons Attribution 4.0.

Each Working Group Participant agrees that its Contributions are subject to the Creative Commons Attribution 4.0 International license - http://creativecommons.org/licenses/by/4.0/legalcode.

## PATENT POLICY OPTIONS.

Patent Policy Option 1:  RAND Mode.

1. <u>Licensing Commitment</u>. Each Working Group Participant agrees that it will offer to all applicants a nonexclusive, worldwide, non-sublicensable, patent license to its Necessary Claims on fair, reasonable, and non-discriminatory terms to make, have made, use, import, offer to sell, sell, and distribute conformant implementations of any Final Deliverable developed by this Working Group.

2. <u>Patent Disclosure Obligations</u>. When a Draft Deliverable is ready to be considered as a Final Deliverable, the Working Group chair will initiate a "Patent Notification Period." To initiate a Patent Notification Period, the Working Group chair will notify the Working Group Participants via email of the commencement of the Patent Notification Period. That notification will include a statement that identifies the Draft Deliverable subject to the Patent Notification Period, and that Patent Notification Period will be at least 30 days from its initiation. A Draft Deliverable may not become a Final Deliverable until the completion of its Patent Notification Period. During a Patent Notification Period, if a Working Group Participant's representative to the Working Group has actual personal knowledge that the Working Group Participant or its Affiliates' patents or published patent applications contain Necessary Claims, then the Working Group Participant shall disclose, in writing (which may be delivered via e-mail) to the Working Group chair the existence of those patents or published patent applications. The Working Group chair will make those declarations available to Working Group Participants. Any disclosure made by a Working Group Participant pursuant to this section does not impose any obligation on a Working Group Participant or its representatives to conduct any patent or other intellectual property searches of any kind or take any action other than as expressly stated above.

3. "<u>Necessary Claims</u>" means claims of a patent or patent applications, other than design patents and design registrations, that are: (i) owned or controlled by a Member or its Affiliate now or at any future time; and (ii) are infringed by implementation of normative portions, including the normative elements of optional portions, of the applicable Final Deliverable that is within Scope, where that infringement cannot be avoided by another technically reasonable non-infringing alternative for implementing that Final Deliverable.  Necessary Claims do not include any claims: (a) that read solely on an implementation example included in that Final

Deliverable; (b) other than those claims set forth above, even if contained in the same patent as Necessary Claims; (c) that are infringed by any enabling technologies that may be necessary to make or use any product or portion thereof that complies with that Final Deliverable, but are not themselves expressly set forth in that Final Deliverable; (d) that are infringed by the implementation of other technologies developed elsewhere but referred to in the body of that Final Deliverable; (e) that are infringed by any portions of any product and any combinations thereof the purpose or function of which is not required for conformance with the applicable Final Deliverable; or (f) that are infringed by any software code set out in that Final Deliverable.

Patent Policy Option 2: RAND-RF (Royalty-Free) Mode.

1. Licensing Commitment. Each Working Group Participant agrees that it will offer to all applicants a royalty free, nonexclusive, worldwide, non-sub licensable, perpetual patent license to its Necessary Claims on fair, reasonable, and non-discriminatory terms to make, have made, use, import, offer to sell, sell, and distribute conformant implementations of any Final Deliverable adopted by that Working Group only to the extent it implements the Final Deliverable and so long as all required portions of the Final Deliverable are implemented.

2. Exclusion. Prior to the adoption of a Draft Deliverable as a Final Deliverable, a Working Group Participant may exclude Necessary Claims from its licensing commitments under this agreement by providing written notice of that intent to the Working Group chair ("Exclusion Notice"). The Exclusion Notice for issued patents and published applications must include the patent number(s) or title and application number(s), as the case may be, for each of the issued patent(s) or pending patent application(s) that the Working Group Participant wishes to exclude from royalty-free licensing commitment set forth in Section 1 of this patent policy. If an issued patent or pending patent application that may contain Necessary Claims is not set forth in the Exclusion Notice, those Necessary Claims shall continue to be subject to the licensing comments under this agreement. The Exclusion Notice for unpublished patent applications must provide either: (i) the text of the filed application; or (ii) identification of the specific part(s) of the Draft Deliverable whose implementation makes the excluded claim a Necessary Claim. If (ii) is chosen, the effect of the exclusion will be limited to the identified part(s) of the Draft Deliverable. The Executive Director will publish Exclusion Notices.

3. "Necessary Claims" means claims of a patent or patent applications, other than design patents and design registrations, that are: (i) owned or controlled by a Member or its Affiliate now or at any future time; and (ii) are infringed by implementation of the normative portions, including the normative elements of optional portions, of applicable Final Deliverable that is within Scope, where that infringement cannot be avoided by another technically reasonable non-infringing alternative for implementing that Final Deliverable. Necessary Claims do not include any claims: (a) that read solely on an implementation example included in that Final Deliverable; (b) other than those claims set forth above, even if contained in the same patent as Necessary Claims; (c) that are infringed by any enabling technologies that may be necessary to make or use any product or portion thereof that complies with that Final Deliverable, but are not themselves expressly set forth in that Final Deliverable; (d) that are infringed by the implementation of other technologies developed elsewhere but referred to in the body of that Final Deliverable; (e) that are infringed by any portions of any product and any combinations thereof the purpose or function of which is not required for conformance with the applicable Final Deliverable; or (f) that are infringed by any software code set out in that Final Deliverable for purposes of illustration, sample implementation, or reference.

Patent Policy Option 3: ITU-T Mode.

All Contributions are subject to then current terms of the Common Patent Policy for ITU-T/ITU-R/ISO/IEC, the Guidelines for Implementing the Common Patent Policy for ITU-T/ITU-R/ISO/IEC (including the Common Guidelines and Specific Provisions for ITU-T only), and Patent Statement and Licensing Declaration Form, which are available at http://www.itu.int/en/ITU-T/ipr/Pages/default.aspx. References in these documents to ITU, ISO, and IEC are deemed replaced by references to the Project, references to Study Groups are deemed replaced by Working Groups, references to Recommendations and/or Deliverables are deemed replaced by references to Final Deliverables, and all other ISO/IEC/ITU-T terms replaced with applicable Project terminology.

Patent Policy Option 4: Open Web Foundation 1.0 Mode.

1. Open Web Foundation CLA 1.0 ("OWF CLA 1.0"). Each Working Group Participant will be deemed to have executed the OWF CLA 1.0 for its Contributions (as defined in the OWF CLA 1.0) to the Working Group. The OWF CLA 1.0 is available at https://sites.google.com/site/openwebfoundation/legal/the-owf-1-0-agreements/owf-contributor-license-agreement-1-0---copyright-and-patent.

2. <u>Open Web Foundation Final Deliverable Agreement 1.0 ("OWFa 1.0")</u>. Upon a Draft Deliverable being declared a Final Deliverable, the Working Group chair will request in writing that all Working Group Participants execute the OWFa 1.0 with respect to that Final Deliverable. Pursuant to the terms of the OWF CLA 1.0, it is anticipated that the Final Deliverable will be subject to the OWFa 1.0, but neither this agreement nor the CLA 1.0 imposes a binding legal obligation on any Working Group Participant to execute the OWFa 1.0. The Open Web Foundation Final Specification Agreement is available at https://sites.google.com/site/openwebfoundation/legal/the-owf-1-0-agreements/owfa-1-0.

3. <u>Patent Disclosure</u>. Any Working Group Participant that does not execute the OWFa 1.0 for the Final Deliverable within 30 days after the Working Group chair's written request to do so must disclose, in writing or via e-mail to the chair and all Working Group Participants, whether any of the Working Group Participant's individual Participants has personal knowledge that a Bound Entity, or any entity it Controls, has patents or published patent applications that contain Granted Claims as defined in the OWFa 1.0. Patent disclosures must provide the registration or application number/serial number for the applicable patent or published patent application to the Chair. No patent searches are required.


Patent Policy Option 5:  W3C Mode.

1. <u>Licensing Commitment</u>. Each Working Group Participant agrees to make available any of its Essential Claims, as defined in the W3C Patent Policy (available at http://www.w3.org/Consortium/Patent-Policy-20040205), under the W3C RF licensing requirements (http://www.w3.org/Consortium/Patent-Policy-20040205), in Final Deliverables adopted by that Working Group as if that Final Deliverable was a W3C Recommendation.

2. <u>Exclusion</u>. Prior to the adoption of a Draft Deliverable as a Final Deliverable, a Working Group Participant may exclude Essential Claims from its licensing commitments under this agreement by providing written notice of that intent to the Working Group chair ("Exclusion Notice"). The Exclusion Notice for issued patents and published applications must include the patent number(s) or title and application number(s), as the case may be, for each of the issued patent(s) or pending patent application(s) that the Working Group Participant wishes to exclude from the licensing commitment set forth in Section 1 of this patent policy. If an issued patent or pending patent application that may contain Essential Claims is not set forth in the Exclusion Notice, those Essential Claims shall continue to be subject to the licensing comments under this agreement. The Exclusion Notice for unpublished patent applications must provide either: (i) the text of the filed application; or (ii) identification of the specific part(s) of the Draft Deliverable whose implementation makes the excluded claim an Essential Claim. If (ii) is chosen, the effect of the exclusion will be limited to the identified part(s) of the Draft Deliverable. The Executive Director will publish Exclusion Notices.

# Appendix B

Feedback Agreement

The Alliance for Open Media is developing the **AOMedia Specifications** (the "Materials"). The Alliance for Open Media would like to receive input, suggestions and other feedback ("Feedback") on the Materials. By signing below, you (on behalf of yourself if you are an individual and your company if you are providing Feedback on behalf of the company) grant the Companies under all applicable intellectual property rights owned or controlled by you or your company a non-exclusive, non-transferable, worldwide, perpetual, irrevocable, royalty-free license to use, disclose, copy, publish, license, modify, sublicense or otherwise distribute and exploit Feedback you provide for the purpose of developing and promoting the Materials and in connection with any product that implements and complies with the Materials. You warrant to the best of your knowledge that you have rights to provide this Feedback, and if you are providing Feedback on behalf of a company, you warrant that you have the rights to provide Feedback on behalf of your company. You also acknowledge that the Alliance for Open Media is not required to incorporate your Feedback into any version of the Materials. By signing below you further agree that you and your company will not disclose it or distribute drafts of the Alliance for Open Media Materials to third parties. Unless the parties agree otherwise, this obligation of non-disclosure will expire five (5) years from the date the material was disclosed to you.

In addition, you grant a license to any source code you provide under this Feedback Agreement under the BSD Clear License and the Alliance for Open Media Patent License 1.0.

# Appendix C

Alliance for Open Media Patent License 1.0

1. <u>License Terms</u>.

   1.1. <u>Patent License</u>. Subject to the terms and conditions of this License, each Licensor, on behalf of itself and successors in interest and assigns, grants Licensee a non-sublicensable, perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as expressly stated in this License) patent license to its Necessary Claims to make, use, sell, offer for sale, import or distribute any Implementation.

   1.2. <u>Conditions</u>.

      1.2.1. <u>Availability</u>. As a condition to the grant of rights to Licensee to make, sell, offer for sale, import or distribute an Implementation under Section 1.1, Licensee must make its Necessary Claims available under this License, and must reproduce this License with any Implementation as follows:

         a. For distribution in source code, by including this License in the root directory of the source code with its Implementation.

         b. For distribution in any other form (including binary, object form, and/or hardware description code (*e.g.*, HDL, RTL, Gate Level Netlist, GDSII, etc.)), by including this License in the documentation, legal notices, and/or other written materials provided with the Implementation.

      1.2.2. <u>Additional Conditions</u>. This license is directly from Licensor to Licensee. Licensee acknowledges as a condition of benefiting from it that no rights from Licensor are received from suppliers, distributors, or otherwise in connection with this License.

   1.3. <u>Defensive Termination</u>. If any Licensee, its Affiliates, or its agents initiates patent litigation or files, maintains, or voluntarily participates in a lawsuit against another entity or any person asserting that any Implementation infringes Necessary Claims, any patent licenses granted under this License directly to the Licensee are immediately terminated as of the date of the initiation of action unless 1) that suit was in response to a corresponding suit regarding an Implementation first brought against an initiating entity, or 2) that suit was brought to enforce the terms of this License (including intervention in a third-party action by a Licensee).

   1.4. <u>Disclaimers</u>. The Reference Implementation and Specification are provided "AS IS" and without warranty. The entire risk as to implementing or otherwise using the Reference Implementation or Specification is assumed by the implementer and user. Licensor expressly disclaims any warranties (express, implied, or otherwise), including implied warranties of merchantability, non-infringement, fitness for a particular purpose, or title, related to the material. IN NO EVENT WILL LICENSOR BE LIABLE TO ANY OTHER PARTY FOR LOST PROFITS OR ANY FORM OF INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER FROM ANY CAUSES OF ACTION OF ANY KIND WITH RESPECT TO THIS LICENSE, WHETHER BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), OR OTHERWISE, AND WHETHER OR NOT THE OTHER PARTRY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

2. <u>Definitions</u>.

2.1. <u>Affiliate</u>. "Affiliate" means an entity that directly or indirectly Controls, is Controlled by, or is under common Control of that party.

2.2. <u>Control</u>. "Control" means direct or indirect control of more than 50% of the voting power to elect directors of that corporation, or for any other entity, the power to direct management of such entity.

2.3. <u>Decoder</u>. "Decoder" means any decoder that conforms fully with all non-optional portions of the Specification.

2.4. <u>Encoder</u>. "Encoder" means any encoder that produces a bitstream that can be decoded by a Decoder only to the extent it produces such a bitstream.

2.5. <u>Final Deliverable</u>. "Final Deliverable" means the final version of a deliverable approved by the Alliance for Open Media as a Final Deliverable.

2.6. <u>Implementation</u>. "Implementation" means any implementation, including the Reference Implementation, that is an Encoder and/or a Decoder. An Implementation also includes components of an Implementation only to the extent they are used as part of an Implementation.

2.7. <u>License</u>. "License" means this license.

2.8. <u>Licensee</u>. "Licensee" means any person or entity who exercises patent rights granted under this License.

2.9. <u>Licensor</u>. "Licensor" means (i) any Licensee that makes, sells, offers for sale, imports or distributes any Implementation, or (ii) a person or entity that has a licensing obligation to the Implementation as a result of its membership and/or participation in the Alliance for Open Media working group that developed the Specification.

2.10. <u>Necessary Claims</u>. "Necessary Claims" means all claims of patents or patent applications, (a) that currently or at any time in the future, are owned or controlled by the Licensor, and (b) (i) would be an Essential Claim as defined by the W3C Policy as of February 5, 2004 (https://www.w3.org/Consortium/Patent-Policy-20040205/#def-essential) as if the Specification was a W3C Recommendation; or (ii) are infringed by the Reference Implementation.

2.11. <u>Reference Implementation</u>. "Reference Implementation" means an Encoder and/or Decoder released by the Alliance for Open Media as a Final Deliverable.

2.12. <u>Specification</u>. "Specification" means the specification designated by the Alliance for Open Media as a Final Deliverable for which this License was issued.

# Appendix D

Alliance for Open Media Working Group Terms

Royalty Free Video Codec Working Group

1. <u>Working Group Name</u>.  Royalty Free Video Codec Working Group

2. <u> Working Group Scope</u>. **Code, specifications and tools in support of Royalty Free Video Codecs**. The Working Group deliverables are expected to include one or more deliverables that are a source code Reference Implementation. In furtherance of the goal of developing royalty free codec technology, in addition to the source code licensing commitment set forth in Section 5, working Group Participants also agree to the Alliance for Open Media Patent License 1.0 set forth in Appendix C for Final Deliverables developed by this Working Group.

3. <u>Copyright Policy</u>. Each Working Group must specify the copyright mode under which it will operate prior to initiating any work on any Draft Deliverable or Final Deliverable. The copyright mode for this Working Group is: *[Check one box]*

    ✓ <u>Copyright Grant to Alliance for Open Media</u>, as set forth in Appendix A, Copyright Policy Option 1.

    ☐ <u>Creative Commons Attribution 4.0</u>, as set forth in Appendix A, Copyright Policy Option 2.

    ☐ <u>Open Web Foundation 1.0</u>. (only for those Working Groups selecting the Open Web Foundation mode for patent licensing).

4. <u>Final Deliverable Patent Licensing</u>. Each Working Group must specify the patent mode under which it will operate prior to initiating any work on any Draft or Final Deliverable. The patent mode for this Working Group is: *[Check one box]*

    ☐ <u>RAND Mode</u>, as set forth in Appendix A, Patent Policy Option 1.

    ☐ <u>RAND Royalty-free Mode</u>, as set forth in Appendix A, Patent Policy Option 2.

    ☐ <u>ITU-T Mode</u>, as set forth in Appendix A, Patent Policy Option 3.

    ☐ <u>Open Web Foundation Agreement 1.0 Mode</u>, as set forth in Appendix A, Patent Policy Option 4.

    ✓ <u>W3C Mode</u>, as set forth in Appendix A, Patent Policy Option 5.

    ☐ <u>No Patent License</u>. No patent licenses are granted for the Draft Deliverables or Final Deliverables developed by this Working Group.

5. <u>Source Code</u>. Working Group Participants contributing source code to this Working Group agree that those source code contributions are subject to the license indicated below. Only Working Group Participants contributing source code will have the licensing obligations to source code produced by the Working Group. A Final Deliverable may not include source code as a required element of a Final Deliverable.

    ✓ BSD Clear License, available at  http://aomedia.org/license/software-license/bsd-3-c-c/
    ✓ Alliance for Open Media Patent License 1.0, attached as Appendix C.

**Storage and Transport Formats Working Group**

1. <u>Working Group Name</u>.  Storage and Transport Formats Working Group

2. <u>Working Group Scope</u>. The WG is the group within AOM where discussions on the opportunity to standardize and on the standardization around the following topics happen:
   - Storage and transport formats for media data and time-aligned media-associated metadata
   - Signaling for the combination of media, including synchronization
   - Signaling for protection of media
   - Signaling for rendering of media
   - Management of ITU-T T.35 AOM payloads for codec-agnostic, time-aligned media-associated metadata

   The following topics are out of scope:
   - Definition of audio, visual (video, image, ...) or text (subtitles, captions, ...) signals
   - Definition of delivery protocols for media (e.g. RTP)

   The WG will communicate with other AOM groups to coordinate and capture the synergies that exist between these groups. For example, the WG can discuss system/application-level aspects with other WGs defining the media payload.

   The WG will not engage in standardization activities when a standard already exists that addresses the same identified requirements in a manner that is satisfactory to AOM both in technical terms (performance criteria) and licensing terms (e.g. if a standard is not structurally royalty free but is de facto royalty free).

   When producing a standard that overlaps with the scope of the relevant external organizations, the WG will liaise with these organizations and determine the best course of action.

3. <u>Copyright Policy</u>. Each Working Group must specify the copyright mode under which it will operate prior to initiating any work on any Draft Deliverable or Final Deliverable. The copyright mode for this Working Group is: ***[Check one box]***

   ✓ <u>Copyright Grant to Alliance for Open Media</u>, as set forth in Appendix A, Copyright Policy Option 1.

   ☐ <u>Creative Commons Attribution 4.0</u>, as set forth in Appendix A, Copyright Policy Option 2.

   ☐ <u>Open Web Foundation 1.0</u>. (only for those Working Groups selecting the Open Web Foundation mode for patent licensing).

4. <u>Final Deliverable Patent Licensing</u>. Each Working Group must specify the patent mode under which it will operate prior to initiating any work on any Draft or Final Deliverable. The patent mode for this Working Group is: ***[Check one box]***

   ☐ <u>RAND Mode</u>, as set forth in Appendix A, Patent Policy Option 1.

   ☐ <u>RAND Royalty-free Mode</u>, as set forth in Appendix A, Patent Policy Option 2.

   ☐ <u>ITU-T Mode</u>, as set forth in Appendix A, Patent Policy Option 3.

   ☐ <u>Open Web Foundation Agreement 1.0 Mode</u>, as set forth in Appendix A, Patent Policy Option 4.

   ✓ <u>W3C Mode</u>, as set forth in Appendix A, Patent Policy Option 5.

   ☐ <u>No Patent License</u>. No patent licenses are granted for the Draft Deliverables or Final Deliverables developed by this Working Group.

5. <u>Source Code</u>. Working Group Participants contributing source code to this Working Group agree that those source code contributions are subject to the license indicated below. Only Working Group Participants contributing source code will have the licensing obligations to source code produced by the Working Group. A Final Deliverable may not include source code as a required element of a Final Deliverable.

   ✓ BSD Clear License, available at  http://aomedia.org/license/software-license/bsd-3-c-c/
   ✓ Alliance for Open Media Patent License 1.0, attached as Appendix C.

# Software Implementation Working Group (SIWG)

1. <u>Working Group Name</u>.  Software Implementation Working Group (SIWG)
2. <u>Working Group Scope</u>. The Software Implementation Working Group (SIWG) undertakes projects to create software implementations of AOMedia standards, with the intention of (a) identifying areas that are difficult to implement, (b) producing benchmark data, and (c) creating production-grade software implementations that are ready for deployment when the standard is published, or soon thereafter.

Primary objectives:
- To undertake the development of an optimized software encoder and decoder implementation of an AOMedia standard, or evolving standard;
- To document and communicate lessons learned from that activity;
- To produce benchmark performance data for defined common test conditions, where available, or for test conditions agreed upon within the SIWG, otherwise;
- To study the software complexity and implementability of a standard under development including performance analysis, and document the results;
- To produce and make publicly available a "production-ready" software encoder implementation, soon after the publication of the corresponding specification;
- To focus on both the x86 and ARM architectures, but to also investigate other solutions, such as OpenCL/GPU;
- To carry out all development work in an independent open source codebase, made available under standard AOMedia licensing terms.
- To support and maintain optimized production implementations of all AOMedia codecs starting with AV1.

Secondary objectives:
- To engage with the external developer community to encourage contributions to the open source SIWG projects;
- To engage with service providers and application vendors to encourage early integration into their production pipelines, and to gather and communicate feedback from those experiments to the AOMedia community.

Non-Goals:
- SIWG shall not develop any new normative technology;
- SIWG shall not develop, define or publish any standard specification;
- Primary goal of the group is software implementations rather than evaluation of hardware complexity;
- SIWG should not work on non-AOMedia standards.

It is expected that relevant information would be fed back into the associated research project for consideration. There will be no formal engagement model between the SIWG and any other Working Group. Therefore, such feedback will be provided through individual members of those other Working Groups.

3. <u>Copyright Policy</u>. Each Working Group must specify the copyright mode under which it will operate prior to initiating any work on any Draft Deliverable or Final Deliverable. The copyright mode for this Working Group is: ***[Check one box]***

    ✓ <u>Copyright Grant to Alliance for Open Media</u>, as set forth in Appendix A, Copyright Policy Option 1.

    ☐ <u>Creative Commons Attribution 4.0</u>, as set forth in Appendix A, Copyright Policy Option 2.

    ☐ <u>Open Web Foundation 1.0</u>. (only for those Working Groups selecting the Open Web Foundation mode for patent licensing).

4. <u>Final Deliverable Patent Licensing</u>. Each Working Group must specify the patent mode under which it will operate prior to initiating any work on any Draft or Final Deliverable. The patent mode for this Working Group is: ***[Check one box]***

   ☐ <u>RAND Mode</u>, as set forth in Appendix A, Patent Policy Option 1.

   ☐ <u>RAND Royalty-free Mode</u>, as set forth in Appendix A, Patent Policy Option 2.

   ☐ <u>ITU-T Mode</u>, as set forth in Appendix A, Patent Policy Option 3.

   ☐ <u>Open Web Foundation Agreement 1.0 Mode</u>, as set forth in Appendix A, Patent Policy Option 4.

   ✓ <u>W3C Mode</u>, as set forth in Appendix A, Patent Policy Option 5.

   ☐ <u>No Patent License</u>. No patent licenses are granted for the Draft Deliverables or Final Deliverables developed by this Working Group.

5. <u>Source Code</u>. Working Group Participants contributing source code to this Working Group agree that those source code contributions are subject to the license indicated below. Only Working Group Participants contributing source code will have the licensing obligations to source code produced by the Working Group. A Final Deliverable may not include source code as a required element of a Final Deliverable.

   ✓ BSD Clear License, available at  http://aomedia.org/license/software-license/bsd-3-c-c/
   ✓ Alliance for Open Media Patent License 1.0, attached as Appendix C.

**AOM Ecosystem Exploration Working Group**

1. <u>Working Group Name</u>. AOM Ecosystem Exploration Working Group

2. <u>Working Group Scope</u>. Explore and issue recommendations related to the intellectual property landscape associated with project activities.

3. <u>Copyright Policy</u>. Each Working Group must specify the copyright mode under which it will operate prior to initiating any work on any Draft Deliverable or Final Deliverable. The copyright mode for this Working Group is: *[Check one box]*

   ✓ <u>Copyright Grant to Alliance for Open Media</u>, as set forth in Appendix A, Copyright Policy Option 1.

   ☐ <u>Creative Commons Attribution 4.0</u>, as set forth in Appendix A, Copyright Policy Option 2.

   ☐ <u>Open Web Foundation 1.0</u>. (only for those Working Groups selecting the Open Web Foundation mode for patent licensing).

4. <u>Final Deliverable Patent Licensing</u>. Each Working Group must specify the patent mode under which it will operate prior to initiating any work on any Draft or Final Deliverable. The patent mode for this Working Group is: *[Check one box]*

   ☐ <u>RAND Mode</u>, as set forth in Appendix A, Patent Policy Option 1.

   ☐ <u>RAND Royalty-free Mode</u>, as set forth in Appendix A, Patent Policy Option 2.

   ☐ <u>ITU-T Mode</u>, as set forth in Appendix A, Patent Policy Option 3.

   ☐ <u>Open Web Foundation Agreement 1.0 Mode</u>, as set forth in Appendix A, Patent Policy Option 4.

   ☐ <u>W3C Mode</u>, as set forth in Appendix A, Patent Policy Option 5.

   ✓ <u>No Patent License</u>. No patent licenses are granted for the Draft Deliverables or Final Deliverables developed by this Working Group.

5. <u>Source Code</u>. Working Group Participants contributing source code to this Working Group agree that those source code contributions are subject to the license indicated below. Only Working Group Participants contributing source code will have the licensing obligations to source code produced by the Working Group. A Final Deliverable may not include source code as a required element of a Final Deliverable.

   ✓ No source code will be developed.

## Technical Advisors for Patent ASpects [TAPAS]

1. <u>Working Group Name</u>.  ***Technical Advisors for Patent ASpects [TAPAS]***

2. <u>Working Group Scope</u>. ***Issue recommendations related to patent aspects associated with Alliance for Open Media (AOM) Project activities.***

3. <u>Copyright Policy</u>. Each Working Group must specify the copyright mode under which it will operate prior to initiating any work on any Draft Deliverable or Final Deliverable. The copyright mode for this Working Group is: ***[Check one box]***

   ☑ <u>Copyright Grant to Foundation</u>, as set forth in Appendix A, Copyright Policy Option 1.

   ☐ <u>Creative Commons Attribution 4.0</u>, as set forth in Appendix A, Copyright Policy Option 2.

   ☐ <u>Open Web Foundation 1.0</u>. (only for those Working Groups selecting the Open Web Foundation mode for patent licensing).

4. <u>Final Deliverable Patent Licensing</u>. Each Working Group must specify the patent mode under which it will operate prior to initiating any work on any Draft or Final Deliverable. The patent mode for this Working Group is: ***[Check one box]***

   ☐ <u>RAND Mode</u>, as set forth in Appendix A, Patent Policy Option 1.

   ☐ <u>RAND Royalty-free Mode</u>, as set forth in Appendix A, Patent Policy Option 2.

   ☐ <u>ITU-T Mode</u>, as set forth in Appendix A, Patent Policy Option 3.

   ☐ <u>Open Web Foundation Agreement 1.0 Mode</u>, as set forth in Appendix A, Patent Policy Option 4.

   ☐ <u>W3C Mode</u>, as set forth in Appendix A, Patent Policy Option 5.

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   ☐ Apache 2.0, available at http://www.apache.org/licenses/LICENSE-2.0.html.

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   ☑ No source code will be developed.

**Volumetric Visual Media Working Group**

1. <u>Working Group Name</u>.  Volumetric Visual Media Working Group

2. <u>Working Group Scope</u>.  The Volumetric Visual Media (VVM) working group develops specifications for efficient coding and the support of streaming of Immersive/Volumetric Visual Media considering broadcast, download, and interactive applications. The group will focus mainly on developing compression technologies that could be integrated with any scene graph representation.

   In furtherance of the goal of developing royalty free volumetric visual media codec technology, in addition to the source code licensing commitment set forth in Section 5 of Appendix D of this document, Working Group Participants also agree to the Alliance for Open Media Patent License 1.0 set forth in Appendix C of this document for Final Deliverables developed by this Working Group.

   Topics outside this scope will not be addressed by the VVM working group. The following is a non comprehensive list of such out-of-scope topics:
   - The consideration of other media types (e.g. audio, haptic, etc.)
   - Rectangular video coding including stereo, multiview, and 360  video applications
   - Transport and storage formats
   - Content protection
   - 3D Scene description
   - 3D rendering

3. <u>Copyright Policy</u>. Each Working Group must specify the copyright mode under which it will operate prior to initiating any work on any Draft Deliverable or Final Deliverable. The copyright mode for this Working Group is: *[Check one box]*

   ✓ <u>Copyright Grant to Alliance for Open Media</u>, as set forth in Appendix A, Copyright Policy Option 1.

   ☐ <u>Creative Commons Attribution 4.0</u>, as set forth in Appendix A, Copyright Policy Option 2.

   ☐ <u>Open Web Foundation 1.0</u>. (only for those Working Groups selecting the Open Web Foundation mode for patent licensing).

4. <u>Final Deliverable Patent Licensing</u>. Each Working Group must specify the patent mode under which it will operate prior to initiating any work on any Draft or Final Deliverable. The patent mode for this Working Group is: *[Check one box]*

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   ☐ <u>RAND Royalty-free Mode</u>, as set forth in Appendix A, Patent Policy Option 2.

   ☐ <u>ITU-T Mode</u>, as set forth in Appendix A, Patent Policy Option 3.

   ☐ <u>Open Web Foundation Agreement 1.0 Mode</u>, as set forth in Appendix A, Patent Policy Option 4.

   ✓ <u>W3C Mode</u>, as set forth in Appendix A, Patent Policy Option 5.

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   ✓ BSD Clear License, available at  http://aomedia.org/license/software-license/bsd-3-c-c/

   ✓ Alliance for Open Media Patent License 1.0, attached as Appendix C.

**Audio Codec Working Group** (Updated January 31, 2025)

1. <u>Working Group Name</u>.  Audio Codec Working Group

2. <u>Working Group Background</u>.  AOMedia has identified a need for improved audio codecs to support use cases involving the storage and transmission of audio across the full range of bandwidth scenarios. From the ultra-low bandwidth audio that would enable real-time communication in many emerging markets, to the high fidelity, multi-channel audio required to support the fully immersive VR experience, there is a need for codecs that deliver better compression, at lower complexity (i.e. slower battery drain) than existing solutions.  In addition, there are many new use cases emerging that require compelling 3D sound experiences and a need for defined post-processing and rendering technology for these immersive experiences.

3. <u>Working Group Scope</u>: Development of audio codecs, pre- and post- processing technologies and audio rendering technology or full-range bandwidth scenarios focused on bitrate reduction of multi-channel, ambisonics and object-based audio, including coding of the required metadata to support these technologies. Applications especially focused on VR/AR/MR experiences and providing standards that can be used in conjunction with the Immersive Audio Model and Formats (IAMF) standards.

4. <u>Deliverables</u>:  This Working Group will develop normative specifications, additional non-normative documents/deliverables, and source code.

   a. Each Deliverable will have a Requirements document agreed by the working group in advance of work commencing to set the exit criteria for the work.

   b. Non-normative deliverables for each standard should be created such as:
      i. Use case and requirement documents
      ii. Test content
      iii. Common test conditions documents
      iv. Test model description documents
      v. Verification reports
      vi. Conformance bitstreams
      vii. Related source code implementations (e.g., encoding, decoding, and quality/performance evaluation tools)

5. <u>Success Criteria</u>:
   a. Each specification shall have a reference software implementation for both creation and playback and bitstream examples of the main features defined in the specification.
   b. Deliverables shall meet all the requirements specified in the corresponding Requirements document.

6. <u>Copyright Policy</u>. Each Working Group must specify the copyright mode under which it will operate prior to initiating any work on any Draft Deliverable or Final Deliverable. The copyright mode for this Working Group is: *[Check one box]*

   ✓ <u>Copyright Grant to Alliance for Open Media</u>, as set forth in Appendix A, Copyright Policy Option 1.

   ☐ <u>Creative Commons Attribution 4.0</u>, as set forth in Appendix A, Copyright Policy Option 2.

   ☐ <u>Open Web Foundation 1.0</u>. (only for those Working Groups selecting the Open Web Foundation mode for patent licensing).

7. <u>Final Deliverable Patent Licensing</u>. Each Working Group must specify the patent mode under which it will operate prior to initiating any work on any Draft or Final Deliverable. The patent mode for this Working Group is: *[Check one box]*

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   ✓ Alliance for Open Media Patent License 1.0, attached as Appendix C.