Khronos Working Group Guidelines

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1. Change History

- December 2002 – First Release
- June 2004 – clarified wording for abstentions in Working Group votes and distribution of marketing and review materials
- October 2004 – added guidelines for discussing IP-sensitive issues, clarified confidentiality and outreach guidelines, refined issue resolution process, expanded online resource section, clarified Chair selection and general wording clean-up
- March 2006 – added details on Steering Committee and Technical Sub-Groups, updated Confidentiality and IP discussions to reflect updated Participation Agreement, added details of Ratification process
2. Introduction

This document recommends discussion, outreach, consensus-building, election and decision-making practices to be used in Khronos Working Groups to encourage active participation with appropriate accountability. Working Groups ideally build consensus under the guidance of the Chair but can otherwise use the processes in this document to avoid deadlock. The success of a Working Group is strongly influenced by the leadership of the Chair, the responsibilities of which are described below.

3. Responsibilities of the Chair

The Chair's primary role is to facilitate consensus-building among Group members. Other responsibilities of the Chair include:

- Ensuring the Working Group's activities are compliant with the Khronos Membership Agreement and IP policy;
- Ensuring that all Contributions and draft materials are kept confidential within Khronos and made equally available online to all Working Group members, including management of the organization of online materials so they may be easily located;
- Recording and posting the list of meeting attendees for every meeting on the Working Group web-site;
- Ensuring the Working Group follows the Khronos Ratification Process for major specification releases and obtains Board approval for major specification releases;
- Creating and posting a meeting/call schedule with appropriate advance notice;
● Defining meeting agendas;
● Ensuring minutes are taken, posted in due time and approved at each subsequent meeting;
● Driving election of Specification Editors, Working Group Secretaries that assist with minute taking, and other delegates;
● Soliciting contributions and encouraging participation and ensuring that actions are followed up in good time;
● Overseeing and recording the voting and decision-making process within the Working Group in an open and transparent way;
● Generally staying neutral in discussion but can participate in technical discussions if announces in advance that will remove his or her chair "hat" at that time;
● Guiding the Working Group to delegate specific work to a TSG and help that TSG elect a chair;
● Driving membership of the Working Group’s External Advisory Panel;
● Coordinating the marketing and outreach activities of the Working Group including ensuring the Working Group public home page is kept up to date with the support of the Khronos webmaster;
● Ensuring that any publicly accessible projects and repositories managed by the Working Group are covered by appropriate, Khronos-agreed contribution and usage licenses;
● Coordinating subcontractors undertaking work for the Working Group;
● Providing regular Working Group updates to the TAP and Board of Directors including updating Promoters on deliverable timelines as needed.

4. Mandated Practices

These guidelines should not prevent a Working Group finding its own most effective operating methods. However, some core practices are mandated by the Khronos bylaws and by legal necessity:

● All members are entitled to participate in any Working Group at any time as long as their company has not filed a Working Group Exclusion Certificate;
● All members, if in good standing, are entitled to one vote per company in Working Group decisions with the exception of Academic Contributors, Associate, Non-Profit, and Individual Contributors;
● All Khronos information must be kept confidential;
● Contributions and Khronos materials must be equally distributed to all members;
● Compliance to the Khronos IP Framework must be maintained using the IP Committee process, Ratification process, and through keeping a complete attendance record for every meeting that is accessible to all members;
● Elections must be held for the Chair and other official Working Group positions.

5. Elections

Appointment of Chair:

● A Chair pro tem for the Working Group is designated by the Board of Directors when the Working Group is created. After a reasonable period, the Working Group should elect a Chair from among Working Group members who wish to stand for consideration. If the role of Chair cannot be filled, or cannot be filled by an individual from a company other than that of the Specification Editor, the Board shall be immediately notified and Individual Members may be considered for the role.
● Term: Routine elections for all elected positions within a Working Group shall be held within 60 days of each release of the primary Working Group specification (not including maintenance or provisional releases). If the Working Group releases a primary specification less than twelve months since the last election, a new routine election need not be held at that release. If the Working Group does not plan to release a primary specification during a period of 24 months, a routine election shall be held between 18-24 months after the previous election, at a time selected by the working so as to minimize Working Group disruption. An existing Chair may stand again.

● Replacement: If the Chair wishes to step down, the Working Group will elect a new Chair from its own members. The Chair may be changed at any time by a vote of the Working Group participants. If any elected official of the Working Group changes their company representation – either through a change of employment, company acquisition, or other circumstances – that individual shall offer their position for re-election. All source documents controlled by the Chair will be transferred completely to the new Chair. The past Chair will be available for guidance for at least one month after the replacement occurs.

All routine Working Group elections should be held anonymously and administered by non-member Khronos personnel.

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● At any time, any Working Group member can elevate concerns about the operation of the Working Group or the conduct of its Chair to the Board or Managing Director.

Appointment of Specification Editor

● If the Working Group is working to produce a specification then it should hold an election for Specification Editor. The Chair should not assume the role of Specification Editor and the Specification Editor should not be from the same company, or a company majority owned by the same company as the Chair. If the role of Specification Editor cannot be filled, or cannot be filled by an individual from a company other than that of the Chair, the Board shall be immediately notified and Individual Members and contractors may be considered for the role.

● The Working Group may choose to elect multiple Specification Editors, if a specification can be easily partitioned or candidates wish to share the duties.

Additional Working Group Officer Positions

● The Working Group may decide to add additional roles at its discretion (for example Secretary, Conformance Test Lead, Build Manager, Marketing Lead). The Working Group should finalize roles to be filled before calling for nominations or volunteers.

Election Process

● Current Working Group Chair puts forth a call for self-nominations to the entire Working Group. This nomination must include a deadline to nominate, the description for the Working Group Officer position, and a request for the nominees to include a short biography and reason for their interest in the position.

● Nominees submit their interest before the stated deadline to the Working Group mailing list.

● After the deadline has past, Khronos’ Managing Director will be notified of the candidates and will create an electronic, anonymous ballot.

● Companies in good standing at time of the ballot being sent will be eligible to vote

● Electronic ballots will include the options to vote “yes”, “no”, “none of the above” or “abstain”.
● In the case there are more than two candidates running and none receive a majority of affirmative votes, the vote is rerun with only the candidates receiving the two highest vote counts eligible (this may result in more than two candidates being eligible). The vote is retaken in the case of a tie (either for first or second place on the result). The vote is taken to the Directors if the tie persists after the second vote. A new call for candidates is made and the voting process restarts in the case where there is a single candidate but that candidate does not receive enough affirmative votes.

● All votes will remain anonymous among Khronos staff. Results will be published to Working Group summarizing only total votes, not company names.

● The minutes shall record the candidates nominated for each position and the elected candidate. Starting term date for the new Working Group Officers will be determined by the Working Group.

6. **Statement of Work**

Each Working Group must have a maintained and Board-approved Statement of Work (SOW) that is clearly published on the Member site. A SOW must include at least the following sections:

a. Background and context  
b. Target market  
c. Relationship to other Khronos initiatives  
d. Scope of Work  
e. Structure – including any TSGs and interaction with IP Zones  
f. Deliverables with notional schedule  
g. Financial model - including proposed project funding and revenues  
h. Measurable goals, including industry Adoption, with clear success criteria  
i. Change & Board approval history  

● Each Working Group should update their SOW any time a section of the SOW become outdated or the Working Group wishes to make changes. Working Groups would normally take care not to expand the scope of design that would cause members to need to license additional areas of IP upon ratification. In this case, once agreed by the Working Group, the updated SOW should be submitted to the Board for review and approval in parallel with Working Group activities;

● If there is an agreed need for the SOW update to expand the area of licensable IP or the Working Group is considering a new domain, then no detailed design work may commence in the new area until the SOW is approved by the Board. Such an ‘additive’ SOW must be accompanied by a list of objections to the expansion of IP commitments from any Working Group members that wish to express an objection. The Board may take two meetings to review and approve an ‘additive’ SOW, will alert the general membership for additional objections, and will consider appropriate remedies for objecting companies so that their IP in the new design areas are not licensed;

● SOW changes are typically initiated by a Working Group after a major release or other significant ecosystem events. If the Working Group does not submit an updated SOW for an extended period, the Board will initiate a SOW to ensure it is current with no deviations and that goals are being met and tracked. The Managing Director will be responsible for scheduling SOW Board reviews;

● If an SOW is not initially approved by the Board, the Board will work with the Working Group to address any issues until the Working Group and Board agree on a modified SOW;

● All members are encouraged to flag to the Board at any time if they believe a SOW is not being followed;

● The Board may place a Working Group in and out of dormancy at its discretion. A dormant Working Group can meet to update its SOW in order to request reactivation;
● Working Groups should consider the use of a detailed Philosophy Document that captures key design decisions alongside the SOW to ensure a consistency of design and to prevent basic design directions being repetitively discussed. This document is intended as a tool to track and document design decision within the scope of the SOW and can be updated without Board approval.

7. **Exploratory Groups**

Any Khronos member may propose a new initiative to the Board at any time. Khronos also welcomes non-members making new initiative proposals. If the Board agrees that there is potential interest, it will vote to establish an Exploratory Group to gather and document requirements and use cases from interested members and create a new SOW.

The Exploratory Group must NOT undertake any detailed design work until the SOW is approved by the Board. This enables members to participate in the Exploratory Group to determine if they wish to participate or exclude BEFORE they have any IP licensing commitments.

- New working group proposals can be sent to the Board via the managing Director. Such a proposal should typically include an overview of the market opportunity, industry need, competing or complimentary standards, potential adopters and participants, and how the proposed activity would be a good fit for Khronos;
- The proposal will then be discussed at a TAP meeting, open to all members, to gather general member interest and feedback via a straw poll with optional comments to be passed to the Board. If the proposal comes from a non-member, they must execute an NDA if they wish to attend;
- After the TAP meeting, a straw poll will be sent via email to all members to gather additional feedback and comments. Members will be given a minimum of one week to respond;
- If the Exploratory Group is approved by the Board, an internal mailing list will be created and a call for participation will be sent to all members;
- The Exploratory Group then attempts to form consensus on the creation of a SOW, following normal Working Group participation and voting rules.
- The Exploratory Group may communicate externally to establish and gather wider industry interest and feedback;
- If the Exploratory Group votes to submit an agreed SOW for approval, it must also outline recommendations on IP Zones as well as how it is recommended to relate to other Working Groups. The Board will then review and conduct a vote on the approval of a Working Group to execute that SOW or may suggest that the SOW be done as a TSG under an existing Working Group. In this case, the existing Working Group must approve to accept this additional work;
- If approved, the Exploratory Group will be disbanded and a Working Group or TSG will be formed and design work started. All members will be notified and may attend or exclude themselves as they wish. Khronos will also then issue an industrywide call for participation.

8. **Online Resources**

Each Working Group will use an associated email list for group discussion. The method for subscribing and unsubscribing to this list will be published on the Khronos member web-site.

The Working Group Chair will manage and organize online resources containing meeting minutes, attendance records, written contributions, proposal revisions, and other documents. The Working Group may also use online resources such as GitLab and GitHub repositories at its discretion.
Working Groups are encouraged to use GitLab to log specification decisions and discussion threads to improve issue tracking and to enable members to easily understand Working Group rationale without the need to reconstruct email discussion threads.

All confidential Working Group online resources will be hosted on the Khronos password-protected secure server using https to enable access by Khronos members only. The Working Group may enable public GitHub repositories for Working Group projects, which must be covered by Khronos-agreed contribution and usage licenses.

9. Meetings

The Working Group may use any combination of face-to-face and teleconference meetings at its discretion. Telephone dial-in will always be provided for face-to-face meetings. Each Working Group will define its meeting schedule well in advance, preferably covering the next 3-6 months.

Unless regularly scheduled, no Working Group meeting may be held with less than two weeks’ notice unless with the agreement of the Working Group members. If a meeting is held with less than two weeks’ notice, the Working Group may agree to designate that meeting as an ‘ad hoc meeting’ that does not enter into the calculation of good standing. If more than 50% of regularly scheduled meetings for a Working Group are cancelled, at least one week’s notice shall be provided of confirmation of a meeting being held.

10. Consensus and Voting Policy

The notion of consensus is integral to the Khronos process and while unanimous consensus is strongly preferred for issue resolution, it is not practical that Working Groups reach unanimous consensus on all issues. The process for introducing and resolving issues is as follows:

- **Issue Formulation and Documentation** - any participant may call for a vote by fully documenting/articulating a specific issue and framing a proposal for voting;
- **Straw Poll** – the Chair can hold informal straw polls to gauge whether or not there is unanimous consensus on an issue. At the discretion of the Chair, members not in good standing may vote in a straw poll to gather the broadest range of opinions on a particular topic. If there is unanimous consensus on issue resolution the Chair may record in the minutes that the issue is resolved;
- **Debate** - if there is no consensus, arguments can be presented in a limited time defined in advance and enforced by the Chair;
- **Formal vote** – each member’s vote being recorded by the Chair in the minutes;
- If the vote passes, record any dissent and consider the issue resolved;
- If the vote does not pass, return to the debate stage. If the issue is not resolved in the second vote, the Chair must work with the various sides to reformulate the problem so the Working Group can achieve a decision in a reasonable time.

Any participant may open a resolved issue by obtaining unanimous consensus support, or if necessary calling for a vote, to open the resolved issue. The Chair should encourage the Working Group to consider whether there is new information relevant to the issue that would significantly change the opinions of participants before the Working Group decides to open a resolved issue. Once re-opened, the issue should be resolved using the standard resolution process above.
11. Participation and Voting Rights

Any Khronos Promoter, Contributor, Associate, Non-Profit, Academic Contributor or Individual Contributor may attend any Working Group meeting. Promoters and Contributors have Working Group voting Privileges as defined below. Associate, Non-Profit, Academic Contributor and Individual Contributor do not have Working Group voting Privileges.

To encourage active participation, rights to take part in a Working Group vote is limited to members in good standing, which is defined as Promoters and Contributors that have attended two of the last three Working Group meetings in person or by phone, counting the current meeting. Each participating Promoter and Contributor present at the meeting and in good standing may cast one vote. When a Working Group is founded all attendees are deemed to be in good standing in the first meeting. For second and subsequent meetings the good standing rules above apply. New members may vote on their second meeting – if they are in good standing. The Chair should enumerate and verify the current members in good standing before the first vote of any meeting.

The Chair should clearly confirm the constituency of members in good standing before any votes or decisions by consensus are taken so the quorum and super-majority requirements are clearly established before voting commences and clearly record results of all votes on a per company basis in the minutes or meeting attendance sheet.

Any Working Group vote (with the one exception of voting to pass a specification for ratification) is passed when a super majority of votes of at least 2/3 of the non-abstaining votes cast are in favor of an issue with a quorum requirement of at least 50% of participants in good standing voting for, against or abstaining. The vote to pass the Final Draft Specification to the Board for ratification must be passed with a super majority of votes of at least ¾ of the non-abstaining votes cast with the same quorum requirement.

If it is apparent that the Working Group has reached unanimous consensus on a vote the Chair may, in the interests of time, call for a ‘decision by unanimous consensus.’ If there are no objections, and there is quorum in the meeting, the Chair may announce and record the decision as a unanimous vote of those in good standing. Decisions by consensus should be highlighted in the minutes so any questions or objections may be raised by any member in the review of minutes in the subsequent meeting. If there are any objections to a decision by consensus raised during the vote, or in the review of minutes in the subsequent meeting, a full per-member vote should be held.

It is strongly advised that full per member recorded votes are held for significant decisions, such as agreeing to enter a draft specification into Ratification, even if the group appears to be in unanimous consensus. If important votes are scheduled for upcoming meetings the Chair is encouraged to circulate the wording of the vote as early as possible and remind the Working Group of the voting schedule as appropriate.

A Working Group may hold votes on the Working Group mailing list with a clearly defined deadline that is at least one week from the call to vote. The list of members in good standing for an email vote is that of the Working Group meeting preceding the email vote and should be enumerated in the call to vote email. Members that do not vote before the deadline are deemed not present for the purposes of calculating quorum. Any member may raise an objection to an email vote. If any objections are raised by members, the Chair shall cancel the vote and address the objection on the Working Group email list or at the next Working Group meeting. Once any objections are addressed, the vote may be restarted at a meeting or on the Working Group mailing list.

12. Intellectual Property (IP) Sensitive Discussions

All members should be aware of inevitable IP issues related to creating an open standard. The Working Group should maintain an environment in which members can work together without fear of putting themselves on notice of possible patent claims, or without fear of making lay statements that may be held against them or the Working Group at a later stage.
If the Working Group decides it wishes to discuss IP issues the Working Group Chair shall arrange an IP Committee session following the IP Committee Process contained in the Membership Agreement where any Working Group members are free to not participate without affecting their good-standing and the session is not minuted.

13. IP Disclosures and Encumbered Specifications

Although IP encumbered specifications are permitted by the Khronos Membership Agreement, Khronos was founded on the belief that royalty-free standards maximize market growth and reduce adoption uncertainty. Consequently, the Khronos Board will carefully examine the rationale for ratifying any specification that has related IP Disclosures or may necessitate the payment of royalties to any member or third party. Working Groups are urged to find alternatives to potential royalty-bearing encumbrances unless a non-encumbered specification will suffer impediments that are likely to substantially damage market acceptance.

In general, the Khronos Board of Directors are unlikely to ratify a core specification that is encumbered or subject to a significant IP Disclosure. The Promoters are more like to ratify an optional extension that is encumbered or subject to a significant IP Disclosure, particularly if: a) the IP licensing terms are known to be fair, reasonable and non-discriminatory, b) market fragmentation might otherwise occur amongst multiple encumbered solutions.

14. Ratification Process

Unless specifically agreed by the Board, all major releases of Khronos specifications need to be ratified by the Promoters before public release. The Promoters will ensure that the Working Group has delivered a specification within the agreed Working Group mandate, that Khronos processes have been followed and that the specification is meeting broad market needs.

Ideally, when a specification is submitted for ratification the Working Group will be aware of at least two independent conformant implementations of the specification and have Conformance Tests ready for immediate integration into an Adopters Program.

Pragmatically, final conformant implementations and conformance tests are interdependent and insisting on conformant implementations and proven tests before ratification could delay the specification to the extent of damaging market acceptance. So, the Promoters typically look for the following milestones to be met before ratification:

- The Working Group is confident that all areas of the specification have been independently implemented twice so that ‘spec bugs and flaws that become obvious through implementation’ have been discovered. The implementations don’t have to be complete in themselves - multiple partial implementations from different members can be used to generate specification coverage, additionally, the implementations don’t have to be released, or announced or conformant – or even available to the Working Group – we work on trust and take implementers at their word;
- Conformance Tests are nearing completion and can be released within three months of ratification to enable timely shipment of conformant implementations.

When a Working Group votes to pass a major release of a specification to the Promoters for ratification it should:

- immediately upload all specifications to be ratified to the designated SVN location defined at https://cvs.khronos.org/svn/repos/promoters/README.html;
- indicate when the Working Group wishes to take the specification public, including any marketing launch plans and venues, with as much lead time as possible to enable planning of an effective marketing launch and following current marketing guidelines;
send the candidate specification links and launch plan to the President who, as chair of Board, will distribute the specification to the Promoters and Khronos membership, start the Ratification Period and schedule a vote to ratify at the first Board meeting following the Ratification period;

- minor updates to the specification with no IP ramifications are allowed during the Ratification Period with clean and redline versions of the spec being distributed to the Promoters and members to clearly highlight any updates;
- Significant functional updates or updates that materially affect the IP content of the specification during the Ratification Period could cause the Promoters to refuse to ratify the specification and ask the Working Group to re-submit another candidate specification and to restart or extend the Ratification Period. This decision is at the sole discretion of the Promoters;
- similarly, if the Working Group discovers an issue with a specification in its Ratification Period, it may request that the Promoters cancel, restart or extend the Ratification Period;
- the Board will immediately notify the Working Group of the result of the Ratification Vote and confirm agreement with the Working Group launch plans if the vote was successful, or indicate remedies if not.

Optional extensions should have one implementation and Conformance Tests before submission for ratification. Optional extensions can be ratified separately to the related core specification. This can be useful for decoupling extension specification and Conformance Tests timelines from core specification major releases.

A minor dot release specification that is limited to clarifications and bug fixes that have no IPR ramifications does not need to be ratified by the Promoters. The Working Group Chair should notify the Promoters of an imminent minor specification release with a short brief on why the Working Group considers there to be no IPR impact. The specification can be released after Board approval.

15. **Provisional Specification Guidelines**

A Provisional Specification is ratified by the Promoters through the normal process – but is publicly released to gain industry feedback and so may be updated before being finalized. Working Groups need to be careful to not erode member value and cause potential industry confusion by needlessly releasing provisional specifications – and so a Working Group should use a provisional spec release ONLY if the specification will genuinely benefit from broad public review and it is a clear positive for API momentum and market adoption. In addition:

- Provisional Specifications should be clearly marked with: the rationale for issuing a Provisional Specification; a warning that states that functionality might change before finalization; the mechanisms by which the Working Group can receive feedback;
- Provisional specifications should be complete and final - modulo feedback – NOT partial specifications;
- Where possible there should be one layer of implementation coverage but this is not necessary if external feedback is needed as much or more than implementation experience;
- Wherever possible there should be Conformance Tests and these may be released into an Adopters Program if required. When the specification is finalized, any tests for provisional specifications should be removed from the finalized Adopters Package and provisional submissions removed from the Adopters web-site;
- Changes can be made to provisional specifications before final release - but changes should be limited to reaction to feedback or spec fixes. Unprompted new functionality should be deferred to a later specification version.
16. Confidentiality and Outreach

All Contributions to a Working Group are confidential within Khronos, but all Participants may freely discuss any Contributions with any other Working Group member. Unless specifically agreed by the Board, all documents and draft specifications produced by the Working Group are Khronos confidential to prevent possible marketing and IP issues before Ratification.

Draft specifications can be made available to non-members only if they have signed the Khronos Reviewers or Advisory Panel Agreement that contain non-disclosure and reciprocal IP license agreement terms identical to the Membership Agreement.

Working Groups will typically create marketing or other materials to communicate its high-level roadmap, high-level technical direction and participation opportunities to non-members. These materials must not include excerpts from draft specifications and must not represent that any aspect of the specification is finalized before Ratification. Working Groups must coordinate marketing activities with the Marketing Advisory Panel (MAP). When marketing topics come up, the Working Group will coordinate with the MAP Chair or Marketing Director to designated a time and advertise this clearly to both lists to discuss further. The MAP will coordinate with the appropriate Working Group for any marketing or event decisions. Press releases or public statements issued by the MAP concerning an API must also be reviewed by the appropriate Working Group.

Guidelines for members producing Khronos external materials are:

- Any member is welcome to produce any marketing piece that promotes Khronos activities;
- The materials should be Khronos branded (following Khronos marketing and trademark guidelines) except that members are free to insert short company specific information at the beginning and end of the materials;
- Any Khronos-branded materials must be approved by the appropriate Working Groups for appropriate branding and messaging before being distributed by Khronos;
- Khronos reserves the right to distribute or refuse to distribute any Khronos-branded marketing material entirely at its sole discretion.

17. Public Specification Drafting

The Board may agree that a Working Group may develop drafts in public prior to Ratification: for example, a Web-related standard being developed with the cooperation of the wider Web community. In the case of a publicly developed specification:

- the Working Group must exercise great caution not to adopt IP laden contributions that may not be covered by the Khronos IP Framework;
- the specification should be ratified using the standard Khronos process as soon as possible after finalization, so that the Khronos reciprocal license is triggered to IP provide protection for the specification in the market.

Specification drafts may not be publicly developed unless the Working Group has received explicit permission from the Board.

18. Task Sub Groups

Any Working Group may delegate specific work items to a subset of the Working Group membership, termed a formalized Task Sub Group (TSG) as a logistical convenience. The scope of work, duration and other constraints and guidance for the TSG is dictated by the Working Group and is not subject to approval by the Board. However, the creation of a TSG should not extend the Working Group scope of work beyond that agreed by the Board. Attendance at any TSG meeting is deemed as attendance at the Working Group for the purpose of Working Group Exclusion Certificates.
Once formed, each TSG shall elect its own chair and shall decide its own meeting schedule, and maintain minutes and record of good-standing in the same way as a Working Group. All decisions within a TSG shall be made by members in good standing in that TSG. The TSG may vote to pass recommendations and deliverables to the Working Group at any time. The Working Group may accept, reject or modify recommendations from the TSG for incorporation into its deliverables. Only the Working Group may pass completed specifications to the Promoters for Ratification.

Dynamic TSGs:

- There are many topics that each Working Group go through that require very intense conversations where the majority of the Working Group is not involved. A dynamic TSG is a sub-committee that meets and comes back to the main Working Group with recommendations.
- Dynamic TSGs must have parameters of how long they would meet at the start and clear invites to the sessions. They need to be public and open with a structured discussion that is advertised with an agenda of items to be discussed. Meeting minutes should be maintained.
- Dynamic TSGs do not contribute to good standing, unless it’s a formalized TSG. In the dynamic TSG, if there is a vote, it must go to the parent Working Group.

19. Extension Guidelines

All Khronos APIs are extensible and there is a Khronos API registry where all extensions can be logged and publicized [http://www.khronos.org/registry/](http://www.khronos.org/registry/). Each API registry consists of a single public GitHub repository which is used as the backing store for the website. To create a new API registry, contact Jon Leech (gl-speceditor@khronos.org).

There are a number of types of specifications and extensions in rising order of collaboration:

- Vendor Extension - any vendor can issue a vendor extension at any time - no collaboration or permissions needed - often used for exposing proprietary capabilities or meeting specific customer needs. A vendor extension is not ratified by Khronos - and have no implementations or conformance requirements but should be entered into the registry through requesting registry enumerants from the registry maintainer;
- Multi-Vendor Extension - essentially the same thing as a single vendor extension - but supported by multiple companies - possibly using some Working Group time to collaborate. A multi-vendor extension is not ratified by Khronos - and so have no implementations or conformance requirements but should be entered into the registry through requesting registry enumerants from the registry maintainer;
- Khronos Optional Extension - created and agreed by the Working Group. Ratified by Khronos - needs one implementation and conformance tests;
- Core Specification or mandatory extension - created and agreed by the Working Group. Ratified by Khronos - and needs two implementations and conformance tests

Vendor and Multi-Vendor Extension Discussion Flow:

Members are welcome to explore Working Group interest in collaboration, and distribute vendor and multi-vendor extensions within Khronos, however, as these extensions are not ratified, they do not have reciprocal IP licensing.

- Vendor and Multi-Vendor Extension Specifications (EXT) – external discussion (outside of Khronos Working Groups):
  - Members can discuss and create their own designs outside Khronos to create EXT extensions at any time. Discussions and specifications are NOT covered by Khronos IP Framework or NDA
- Vendor and Multi-Vendor Extension Specifications – internal discussion (using the Khronos Working Group as a forum):
If members wish to use a working group as a forum to create EXT specifications then all such discussions must be clearly delimited and with the following conditions:

- Members may decline participation without loss of good standing
- Designs, discussions and joint works are under the Khronos NDA
- No IP licensing commitments are triggered on specification release
- Any Member may object to their design contributions being used and may voluntarily raise a Design Disclosure at any time.
- Design Disclosures are similar to IP Disclosure but independent of the ratification process. Lists Patents that may be essential to a draft EXT specification. Not needed to prevent licensing – but may guide EXT design. Does not put Working Group on notice of potential infringement

- Khronos Extensions – If the Working Group decides to not take an extension specification to Ratification, Working Group Members may use their original designs for the creation of an EXT specification. A notice must be sent to the Working Group mailing list clearly outlining the change in intentions and allowing time for involved members to raise an objection. Joint works may only be used if no member involved in their creation raises an objection. If an involved member objects, that company’s design contributions may not be used, however, the EXT may still continue.

20. External Advisory Panel Guidelines

An External Advisory Panel is a group of invite-only expert companies and individuals that can provide a Working Group with valuable insights into use cases and requirements and provide draft specification feedback. Panel members are NOT Khronos members, and do not enjoy the attendance, full information access and voting privileges of Khronos members. However, Advisors sign the Khronos Advisor Agreement that includes an NDA and commitment to the Khronos IP Framework.

External Advisory Panels are intended to be light-weight and pragmatic. The Working Group will interact with it under the following guidelines.
● Membership in the Panel is by invitation only. Any Working Group member may propose any person or company for membership; once approved by the Working Group, that member or the chair can contact the candidate and provide a copy of the Advisor Agreement. Advisorship only becomes active when Khronos receives the signed agreement.

● The existence and membership of the Panel is not Khronos confidential information, but to avoid creating conflict with those who have not been invited to participate, the membership list of the panel is typically not publicized.

● All Working Group related communications between Advisors and Working Group members will be through a dedicated email list that is separate to the main Working Group email list e.g.: opencl_advisory_panel@khronos.org and a dedicated file or SVN repository. All Working Group members can subscribe to the panel mailing list, and will have access to the panel file repository. Advisors do not have access to any of the other Working Group information resources (wiki, svn, file repo, or mailing list).

● The Working Group decides what information or questions are sent to the Panel. Working Group members who want to get panel feedback on some issue will propose it to the Working Group, optionally with a draft query. If the Working Group approves, it can then be posted to the Panel mailing list. Once the topic has been raised, it can be discussed freely on the panel mailing list.

21. Wikipedia Updates
Khronos members are encouraged to post to Wikipedia wherever appropriate to create materials relating to Khronos activities.

Members should not delete any topics from Khronos-related pages, but should correct inaccuracies if found.

There should be no duplicates of Khronos reference materials on Wikipedia, entries should canonically link to resources on Khronos.org.

22. External Non-Member Contractors
Khronos contractors that are not members must have an active contractor’s agreement in place that includes the standard Khronos NDA and IP Agreement provisions. Non-member contractors may participate in Working Group teleconferences, but only for the Working Groups that they are contracting for. Chairs should request Board permission for non-member contractors to attend F2F with specific attendees and the meetings that will be attended specifically identified. Khronos will waive F2F fees for non-member contractors and so their registration should typically be processed manually.

23. Principles of Conduct
Khronos expects all members to extend respect and courtesy to their colleagues at all times.

Khronos members come from diverse origins and backgrounds and are equipped with multiple capabilities and ideals. Regardless of these individual differences, participants treat their colleagues with respect as persons - especially when it is difficult to agree with them. Seeing from another's point of view is often revealing, even when it fails to be compelling.

English is the de facto language used for all Khronos processes, communication, and documentation. However, English is not the native language of many Khronos members. Native English speakers will attempt to speak clearly and limit the use of slang in order to accommodate the needs of all listeners, and the Chair shall ensure that non-English speakers are given sufficient time and support to speak if they wish.

Khronos members develop and test ideas impartially, without finding fault with the colleague proposing the idea. We dispute ideas by using reasoned argument, rather than through intimidation or ad hominem attack. "Reduce the heat and increase the light."
Khronos expects all members to promote Khronos and its activities positively when communicating externally. If there are disagreements, members are encouraged to work internally with Khronos and other members for positive resolution.