The Graphics and Workstation Performance Group (SPEC/GWPG) Policies and Procedures Document

Version 1.20 Last Updated: 4/26/2022

1. GWPG Charter

Our vision is to empower users with tools to discover their workstation's full performance potential.

Our mission is to build robust benchmarks measuring the most relevant use-cases for popular workstation applications.

Graphics and Workstation Performance Group (GWPG)

The GWPG steering committee manages and supervises the development of SPEC's GWPG benchmarks. The GWPG steering committee is responsible for reviewing and approving new project proposals. Three committees are under the umbrella of the GWPG:

- Graphics Performance Characterization committee (henceforth SPECgpc[®])
- Application Performance Characterization committee (henceforth SPECapc[®])
- Workstation Performance Characterization committee (henceforth SPECwpc[®])

1.1. Scope of Rules

a. The rules contained in this document shall apply to the GWPG steering committee and all three GWPG committees: SPECgpc, SPECapc, and SPECwpc.

b. Each committee shall maintain a benchmark run rules document for each released benchmark, which shall apply in conjunction with this document. The benchmark run rules document shall include the following sections to guide the user to create a valid benchmark result:

- Benchmark Overview
- Benchmark System Requirements
- Benchmark Initialization Requirements (if applicable)
- Benchmark Execution
- Benchmark Results
- Benchmark Results Submission

c. Should a new committee be approved or an existing one dissolved, this document shall be updated accordingly.

d. In the event of disagreement between this document and <u>SPEC's Bylaws</u>, <u>SPEC Policy</u>, or disagreement between this document and decisions by the SPEC Board of Directors, said Bylaws, SPEC Policy or decisions shall take precedence over this document.

1.2. Joining GWPG

1.2.1. Members

Per SPEC Policy 2.1: Members are dues-paying members of their respective groups and accrue all the rights, privileges, and responsibilities that membership entails, as specified in the Bylaws.

Per SPEC Policy 2.3: A member shall be a manufacturer of general purpose computing systems based on its own computer architecture, or a manufacturer or marketer of computer systems, or a marketer of software for computer systems, or a user of such systems.

Members may become active participants in any committee of GWPG.

Members are eligible to stand for election for the committees, nominate candidates for offices and the Board of Directors, and to champion proposed benchmarks.

Members have the opportunity to review and comment on all benchmarks developed by GWPG. This can be done through active participation in the committee developing the benchmark during any phase of development from design to testing to release. This participation is expected but not required.

Members are entitled to secure access to benchmark development source code.

Members are entitled to unlimited publication rights, including benchmark result submissions for publication on the SPEC website.

1.2.2. Associates

Per SPEC Policy 2.1: Associate is a non-member category to encourage participation from universities and other non-profit institutions to enable limited participation in SPEC processes. Associates pay fees and dues that are determined by the Board of Directors.

To encourage participation from educational and non-profit institutions interested in its work, GWPG maintains an Associate category that enables these organizations to share in the GWPG process, but not to participate in the general member voting.

Associates are entitled to access to development source code.

Associates do not have voting rights.

1.2.3. Supporting Contributors

Per SPEC Policy 2.1: The role of a Supporting Contributor is available by invitation to a not-forprofit organization or to an individual. Organizations normally obtain access to SPEC through membership or by becoming an associate. In exceptional circumstances, the work of a subcommittee may make it appropriate for the subcommittee to request that an organization be invited to be a supporting contributor to, at most, one subcommittee of a SPEC group. An individual may be a supporting contributor to multiple subcommittees of a SPEC group or to the SPEC Board of Directors. If an individual or organization is invited to become a supporting contributor to more than one SPEC group or subcommittee, the application, definition of required contributions, and tracking of contributions shall be done separately for each subcommittee.

Supporting contributors have no voting rights and pay no dues. Supporting Contributors may help develop new benchmark suites or tools, provide expertise to the subcommittee, or help provide other support within the subcommittee. Supporting Contributor's applications must be approved by the subcommittee committee, the Group, and by the Board of Directors.

A subcommittee sponsoring a supporting contributor must:

- establish, in meeting minutes or in a separate document, the contribution requirements;
- track the Supporting Contributor's contributions to determine whether contribution requirements have met; and
- reaffirm the supporting contributor's status on an annual basis.

If the expected contribution requirements are not met, the committee shall terminate the supporting contributor status. When supporting contributor status is terminated, access to SPEC information and resources ends and the supporting contributor must return or destroy all copies of SPEC material, including code and confidential information.

Supporting Contributors may participate in GWPG committees and attend GWPG committee meetings by invitation only.

	MEMBER	ASSOCIATE	SUPPORTING		
Dues	Full	Discounted	None		
General Membership Voting	Yes	No	No		
Participate in Face-To-Face Meetings, Conference Calls, Special Meetings	Yes	Yes	By invitation		
Benchmark Repo	Yes	Yes	No		

Contributor Benefits

Copies Of GWPG Benchmarks	All	All	Yes, if providing support for benchmark; otherwise No			
Elect GWPG Officers	Yes	No	No			
Eligible For GWPG Office	Yes	No	No			
Vote for Board Members	Yes	No	No			
Participate GWPG Committees	All	All	By invitation			
GWPG Email Alias	Yes	Yes	No			
Access To SPEC intranet	Yes	Yes	No			
Result Publication on SPEC website	Unlimited	Unlimited	No			
Participation Period	While in good standing	While in good standing	GWPG may terminate at any time			
Results Review	Yes	Yes	No			

1.3. Membership Dues

a. **Dues Structure**: Dues paid to the GWPG authorize membership in all GWPG committees. Dues for the GWPG are determined by the SPEC Board of Directors with input from the GWPG.

b. **Dues Payment**: Per the SPEC Policy 2.1: *Members are expected to remain members in good standing by the prompt remittance of annual dues. All member and associate privileges will be suspended if dues for the current year have not been received by the SPEC administrator by March 31st. Such privileges will be restored once all outstanding dues have been paid.*

c. **Membership Fees**: Membership fees are documented on the public SPEC website: <u>https://gwpg.spec.org/membership/</u>

1.4. Organization and Voting

1.4.1. Officers

Officer elections: On an annual basis, at the first face to face meeting of the year, the GWPG steering committee and the committees will elect the following officers from their eligible voting members: chair, vice-chair, and secretary. Officer positions are held by individuals. When there are multiple nominee for an officer role, they will step out of the meeting while the rest of the committee discusses and the candidates will all return before the vote takes place.

Conflict of Interest: If a conflict of interest affects an officer in pursuance of his or her duties, and if any defined succession of responsibility fails to resolve the conflict of interest, the committee may appoint a committee member to fulfill the officer's duties for the scope of the matter in which the conflict of interest exists. For example, the chair is a party in a re-review or appeal occurrence.

Vacancy: An election will be held to fill a vacancy if an officer steps down during their term.

Chair Responsibilities

- Conduct meetings
- Send out an agenda prior to the meetings
- Conduct votes and elections
- Manage interactions with outside organizations such as the press or customers
- Represent and respond on behalf of the steering committee to external question and queries
- Interact with the GWPG steering committee
- Ensure the benchmark checklist is completed before each benchmark release.
- GWPG Chair represents GWPG with the Board, attends Board meetings, presents monthly Board reports, works with Treasurer on budget, coordinates GWPG face-to-face meetings

Vice-chair Responsibilities

- Perform the chair's role when the chair is unavailable, or if the chair is subject to a conflict of interest
- Create and maintain benchmark run rules
- Create and maintain benchmark test matrix, including features to test
- Manage the submission, review and appeal process, including assigning members to reviews and appropriate documentation for submissions review
- Manage the mock submission reviews, included in the benchmark release process
- Additional duties as delegated by the Chair

Secretary Responsibilities

- Record notes from all meetings
- Record attendance and ensure quorum for voting right
- Maintain a record of current members, associates, and supporting contributors and voting right status for each member, posted on the SPEC wiki (<u>https://pro.spec.org/private/wiki/bin/view/GWPG/WebHome</u>)
- Post and manage each Benchmark Checklist that is included with the benchmark release process
- Storing, versioning, agreements of all types of documents, such as signed beta agreement, signed permission to use documents, supporting contributor contribution requirements

• Maintain a history of submission violations with cross reference to meeting minutes on SPEC's private server as outlined in the <u>SPEC Violations Determination</u>, <u>Penalties and Remedies</u> document

1.4.2. Meetings

GWPG steering committee and committee meetings are conducted in accordance with general parliamentary procedures under direction of the chair.

Guidelines for meetings:

- The chair controls the meeting
- Members participate and aim to reach a consensus
- Members do not interrupt each other or dominate the proceedings
- Members keep an open mind and listen to the opinions of others

GWPG committees have three types of meetings: quarterly face to face meetings, weekly conference call meetings, and special meetings.

Face to face meetings are the only meetings with required attendance for voting rights privileges. A member loses their voting rights upon missing 2 consecutive quarterly face to face meetings. Members shall attend all committee meetings that take place during the quarterly face to face meetings to count as attendance.

If circumstances outside of GWPG's control do not allow for quarterly meetings to take place in person (e.g., global pandemic), GWPG may decide to hold these meetings as virtual meetings. When this occurs, attending all committee meetings of the virtual quarterly meetings satisfies the requirement of attendance in order to retain voting rights.

Face-to-face meetings are scheduled at least one month in advance. Meetings by conference call are scheduled every week unless otherwise stated due to conflicts that prohibit quorum or holidays. Special meetings must be scheduled with at least one week notice.

For a meeting for which attendance in person is required, for example quarterly face to face meetings, attending by conference call does not count as attendance, in order to retain voting rights.

1.4.3. Voting

a. **Voting**: Issues may be designated for resolution by casting a vote by eligible voting members of the GWPG or committees. Votes may be made by conference call, in person at a face-to-face meeting, email, or a combination of the three. Each member and its affiliates shall have one vote on each committee matter.

b. **Voting Process**: GWPG drives towards consensus among its participants whenever possible. However, to ensure progress, formal member votes will need to be taken. An active member may vote 'yes', 'no', 'abstain', or 'pass' when the vote is first called. If the member votes 'pass', the chair will return to that member to finalize their vote as either 'yes', 'no', or 'abstain' after the remaining members have voted. Votes for 'abstain' count only toward establishing quorum. The reasons for voting 'no' or 'abstain' shall be recorded in the minutes. Such recording can help with the drive for consensus, as it allows others to respond to the specific concerns of those who did not vote 'yes'.

c. **Quorum**: A valid vote requires a quorum. A quorum is met if at least 66% of eligible voting members respond, i.e., with 5 voting members, 4 must be present to vote. It is also required that quorum not drop below 3 members.

d. **Proxy voting**: GWPG does not allow use of proxy voting, that is, the authorization of an individual who is not an employee of a member institution to vote on behalf of that member.

e. **Voting method**: GWPG and its committees use the simple-majority voting rule, except for the adoption of new or modified benchmark components or design document approval, which requires a 2/3-majority vote of GWPG eligible voting members. Simple majority means the highest number of votes of 'yes' or 'no' wins the vote. If there is a tie, the motion fails. 2/3-majority means that at least 2/3 (rounded up) of GWPG eligible voting members must vote 'yes'. If there are not sufficient 'yes' votes, the motion fails.

Changing GWPG voting rules requires 2/3-majority vote of GWPG eligible voting members.

The table that follows details the number of 'yes' votes required to pass a 2/3-majority vote:

Eligible voting	3	4	5	6	7	8	9	10	11	12	13	14	15
voting													
members													
'Yes'	2	3	4	4	5	6	6	7	8	8	9	10	10
votes													
required													

f. **New members**: New members are eligible for voting rights at the second consecutive quarterly face to face meeting is attended after becoming a member.

g. **Voting rights and eligibility**: A member maintains voting rights by attending at least every other face to face meeting. For a qualified meeting for which attendance in person is expected, attending by conference call does not count as qualified attendance. A member regains voting rights at the second consecutive qualified (face to face) meeting.

h. **Voting representative**: Each member institution shall designate one voting representative per committee and one alternate. If the designated voting representative is absent from a meeting, another person employed by the member institution, or its affiliates, may temporarily represent the member. In the event of a lack of clarity as to who has the vote, the chair may refuse to accept a vote until the designated voting representative appoints a substitute in writing.

1.5 Benchmarks

1.5.1. Guiding Principles

The GWPG committees collectively focus on developing an objective series of tests, which can serve as a common reference and be considered as a part of an evaluation process.

Each GWPG committees takes a different perspective to help form a full picture of performance or to allow users to focus in on their area of interest.

- SPECwpc focuses on creating benchmarks for measuring system performance running algorithms used in popular workstation applications, but without requiring the full application and associated licensing to be installed on the system under test.
- SPECapc focuses on creating benchmarks that are application-based, where the actual application is installed and used to run the benchmarks.
- SPECgpc focuses on creating benchmarks for measuring graphics performance running traces from workstation applications.

GWPG committees seek to develop benchmarks for generating accurate workstation performance measures in an open, accessible, and well-publicized manner.

GWPG committees wish to contribute to the coherence of the field of graphics and application performance measurement and evaluation so that vendors will be better able to present well-defined performance measures and customers will be better able to compare and evaluate vendors' products and environments.

When GWPG incorporates non-SPEC owned materials (source, models, etc.) in a GWPG benchmark that is made public by release or a beta program, we shall obtain permission from the owner using the following form before the benchmark is made public: <u>Permission to Use & Distribute Computer Program</u> <u>Permission to Use Materials, e.g. app models</u>

GWPG committees shall provide formal beta benchmarks to members and final benchmark releases to the public in a timely fashion.

If approved by GWPG steering committee and the GWPG committee, pre-release versions of a benchmark in development may be provided to a non-member, such as ISV partner where Supporting Contributor memberships is not appropriate, for testing and feedback. The user shall sign a beta agreement before gaining access. An existing licensee may forgo the requirement for a signature and the agreement is provided to the user.

Beta agreement with signature

Beta agreement without signature

If approved by GWPG steering committee and the GWPG committee, final versions of a benchmark may be provided to press in advance of the public launch so they may prepare publications that will be concurrent with the launch. Press members will be informed of the

embargo details that they must abide by to remain in good standing. Press members are not required to sign a Beta Agreement in this situation since it is not a pre-production benchmark.

Hardware and software used to run the GWPG benchmarks must provide a suitable environment for running typical workloads for the applications that are directly or represented in the GWPG benchmarks.

GWPG committees reserve the right to adapt its benchmarks as it deems necessary to preserve its goal of fair and useful benchmarking, e.g. remove benchmark, modify benchmark code or data, etc. If a change is made to the suite, GWPG will notify the appropriate parties (i.e., GWPG members and licensed users of the benchmark) and GWPG will re-designate the benchmark by changing its name and/or version. In the case that a benchmark is removed in whole or in part, the GWPG reserves the right to republish in summary form "adapted" results for previously published systems, converted to the new metric. In the case of other changes, such a republication may necessitate re-testing and may require support from the original test sponsor.

1.5.2. Optimizations

GWPG committees are aware of the importance of optimizations in producing the best system performance, and that it is sometimes hard to draw an exact line between legitimate optimizations that benefit GWPG benchmarks and optimizations that specifically target GWPG benchmarks. GWPG committees wishes to increase awareness to implementers and end-users to issues of unwanted benchmark-specific optimizations that would be incompatible with GWPG's goal of fair benchmarking.

To ensure that results are relevant to end-users, GWPG expects that the hardware and software implementations used for running GWPG benchmarks adhere to the Rules for Optimizations.

1.5.2.1 Optimization Rules

a. Optimizations must generate correct images. Correct images are those deemed by the GWPG to be sufficiently adherent to the respective graphics API specification for the targeted application.

b. Optimizations must not reduce system stability. A published SPEC result carries an implicit claim that the performance methods employed are more than just "prototype", "experimental" or "research" methods. It is a claim that there is a certain level of maturity and general applicability in its methods.

c. Optimizations affecting SPEC GWPG benchmarks must improve performance for a class of workloads where the class of workloads must be larger than a single benchmark or benchmark suite.

d. It is not permitted to detect SPEC GWPG benchmarks to invoke an optimization. No precomputed (e.g., driver-cached) intermediate or final images, geometric data, or state may be substituted within a SPEC GWPG benchmark. e. For the SPECviewperf and SPECworkstation benchmarks, the Graphics API stream from the benchmark binary must not be modified.

f. For the SPECviewperf and SPECworkstation benchmarks, Graphics Subsystem implementations must fully process the Graphics and related API streams affecting the frame buffer and Graphics state.

g. Optimizations must be generally available and supported by the providing vendor.

h. It is expected that system vendors would endorse the general use of these optimizations by customers who seek to achieve good application performance.

1.5.3 Benchmark Acceptance

a. The components included in a benchmark are as follows.

SPECapc benchmarks

- Specific version of the application
- Application models and/or scenes
- Benchmark scripts and framework
- Launch GUI and associated benchmark definition files
- Benchmark run rules
- Scoring and reference system definition
- Command line option definition
- Other helpful documentation, e.g., how to interpret or run benchmark
- Note that SPEC WDK-derived workloads are not included nor supported

SPECgpc benchmarks

- Executables included in the benchmark package
- Benchmark run rules
- Launch framework, GUI, and associated benchmark definition file
- Viewsets source or data
- Scoring definition
- Command line option definition
- Other helpful documentation, e.g., how to interpret or run benchmark

SPECwpc benchmarks

- Specific version of the applications
- Launch framework and GUI
- Associated benchmark definition file
- Benchmark run rules, scripts and associated data sets

- Scoring and reference system definition
- Command line option definition
- Other helpful documentation, e.g., how to interpret or run benchmark

b. New or modified benchmark components require a 2/3-majority vote of the GWPG committee eligible voting members to be accepted for publication.

c. A minimum 3-week review period is required for new or significantly modified benchmark components before the committee may vote on acceptance for release

d. At the end of the review period, a vote will be called to approve the proposed changes.

e. An amendment to a benchmark component during the review period must be unanimously accepted. If not, the review period shall be restarted.

1.5.4. Benchmark Naming and Versioning

a. Benchmarks will be named according to the SPEC Policy 6.5.3 Benchmark and Metric Naming. If a GWPG committee determines that the use of an alternate name if desired, the committee will request approval by the SPEC Board.

b. The SPECapc committee benchmarks use the following naming convention, "SPECapc for" followed by the application name and application version, e.g., SPECapc for Creo 3.0. The application developer organization name will not be included in the benchmark name.

c. The version of a SPECviewperf viewset should be incremented in any of the following cases:

- Changes to SPECviewperf base install package (viewperf,exe, etc.) affect the performance of the viewset
- Changes to the viewset benchmark framework or viewset config file affect performance
- Changes to viewset data
- Changes to a benchmark run rule affect the validity of results

1.5.5. Benchmark Release

On the release date of a new benchmark, submissions for the previous benchmark release will be accepted for one submission cycle. The previous version of the benchmark shall be retired. A GWPG committee requires 2/3-majority vote to delay retirement, and the new retirement date must be set at that time.

On the release date of a new major benchmark revision, previous versions of that benchmark will be retired. Submissions for the previous benchmark will be accepted for one submission cycle.

1.5.6 Benchmark Retirement

When a GWPG committee retires a benchmark version, the benchmark information with existing benchmark result submissions will remain publicly available on the SPEC website, however the benchmark is no longer available for download or support.

1.6. GWPG Guidelines for Result Submission and Review

The following sections address the guidelines for submitting benchmark results to the GWPG committees for review and publication on SPEC's website. Each SPECGWPG benchmark shall have a set of specific run and reporting rules that the licensee must follow to produce a publishable result.

Results submitted for publication on the SPEC website must undergo peer review by the respective committee for the benchmark.

Benchmark run rules and submission rules shall be documented and maintained for each SPEC GWPG benchmark version, separate from this GWPG policy document.

1.6.1. Submission Process

a. **Privacy**: The SPEC office will not disclose the submitted results until the submission deadline has passed.

b. **Rules**: The rules for the submission and review cycle to be used are those approved by the respective committee prior to the submission deadline. The approved rules must be posted to the respective committee group's webpage by the first publication date for the benchmark.

c. **System declaration**: The information supplied in the submission must reflect the system as tested. All fields in the submission's results file must be supplied with valid entries. The submitter must declare sufficient information in the submission to reproduce the performance claimed.

d. **Submission Schedule**: GWPG benchmark results may be submitted for review each week, by Friday 8:00pm US Pacific Time, except in weeks that include a major holiday.

e. **Publication Schedule**: Benchmark results that are accepted after peer review will be posted on the SPEC website within 10 days after the submission deadline.

1.6.2. Review Process

a. **Review Assignment**: Each Monday, the committee vice-chair assigns reviewers for submissions. Reviewers must acknowledge assignment by email to the committee email alias. If acknowledgement is not received by email on the second day of the review period, the committee vice-chair may reassign reviewers. If possible, do not assign reviews to technology or system providers used in the submission. A committee member shall not be assigned reviews of submissions from partners or subsidiaries of the same GWPG member company. The order for assignment shall be posted on the internal SPEC wiki.

b. **Conflict of Interest**: Members who wish not to review the submission of other specific members due to conflict of interest must submit that list to the committee vice-chair prior to the submission deadline. The committee vice-chair will hold the list in confidence from other members.

c. **Reviewers**: The SPECapc, SPECgpc, and SPECwpc pool of eligible reviewers will be independent of each other.

d. Access: All members will have access to all benchmark submissions once the review period begins.

e. **Review Period**: The review period shall be 5 business days, unless a special revision is voted upon by GWPG committee members.

f. **Withdrawal**: Submissions cannot be withdrawn during the review period without cause and without prior approval of the primary reviewer. A submitter who is granted permission to withdraw a submission must inform the committee by email of the reason for withdrawal. This is to prevent a submitter from withdrawing a submission purely based on the results of other submissions during the same review period.

g. **Review Questions**: If a reviewer has a question regarding a submission's compliance with the run rules, the reviewer must pose the question to the submitter first. General questions may include the committee. If needed, the reviewer may also pose questions to the respective committee's officers or GWPG chair for clarification of rules.

Reviewer questions relating to a submission must do one of the following:

1. With permission of the reviewer, as communicated through the respective committee's email alias, the submitter may request that his or her submission be rejected on stated technical grounds.

2. With permission of the reviewer, as communicated through the respective committee's email alias, a submitter may resubmit a submission to resolve issues found during the review process. The submitter must notify the respective committee's email list with the date and version of the resubmitted file(s).

h. **Reproducibility**: Results should be reproducible based on the configuration details provided in the submission. The submitter must provide the primary reviewer with additional configuration details as requested during the review period so that the results may be reproduced.

i. **Review status**: By the end of the review period, the primary reviewer of a submission must designate the status of the submission with one of the following: "accepted without comment", "accepted with comment", "pending with comment", or "rejected with comment". Any comments for rejection of a submission must be received before the end of the review period.

j. **Pending status**: A submission designated "pending with comment" will not be published and will remain pending until the submitter addresses all comments. Once the comments are addressed, the submission will be published to the public SPEC website.

k. **Proposals of non-compliance**: If there are open issues for a given submission under review that cannot be resolved to the satisfaction of the committee, the formal process for coming to a resolution is outlined in the <u>SPEC Violations Determination</u>, <u>Penalties and Remedies</u> document.

1. **Confidentiality**: GWPG committee members shall keep all submitted results confidential to the respective committee until those results appear on the public SPEC website. The exception is that members are free to make their own submitted results public at any time, provided the benchmark has been publicly announced.

1.6.3. Publication Rules

1.6.3.1. Fair Use of SPEC Benchmark Results

Consistency and fairness are guiding principles for SPEC. To help assure that these principles are met, any organization or individual who makes public use of SPEC benchmark results must do so in accordance with <u>SPEC's Fair Use Policy</u>.

1.6.3.2. SPEC Published Results

Benchmark results for publication by the SPECgpc, SPECapc, or SPECwpc committees must adhere to all rules for GWPG and the respective benchmark run rules.

A finding of violation is a necessary pre-requisite before SPEC will impose a penalty or require a remedy. The process to determination whether a violation has occurred and appropriate penalty or remedy to be assessed is outlined in the <u>SPEC Violations Determination</u>, <u>Penalties and Remedies</u> document.

1.6.3.3. Independently Published Results

Benchmark results for publication outside of the SPEC website, e.g. industry journals, vendor websites, analyst reports, must adhere to all rules for GWPG and the respective committee.

GWPG and its committees will follow the processes in the <u>SPEC Violations Determination</u>, <u>Penalties and Remedies</u> document when handling proposals of violations for independently published results.

1.6.3.4. System Availability

At the time of publication, the system configuration must be generally available within 90 days. Generally available in this context refers to a system configuration which may be purchased in single-unit quantities by the general public via website, phone or catalog order process.

1.6.4. Non-member submissions

The SPEC/GWPG committee receives submissions from non-members for review and publication on the SPEC public website. Non-member submissions must follow the same rules and procedures as member submissions, except that non-members are not eligible to participate in reviewing results.

a. **Submission Pricing**: Non-members will be charged for their submissions according to an approved fee structure. Any change in hardware or software constitutes a new and unique submission.

b. **Fee Structure**: On an annual basis the GWPG will establish the pricing and periods for nonmember publication. These will be recorded in the GWPG minutes and published on the <u>GWPG</u> web-site.

c. **Fee Payment**: Following acceptance by the assigned reviewers, a non-member's submission will not be published until the SPEC office has received the submission fee in full. The SPEC office will not deposit funds provided by the non-member submitter until the submission has been accepted by the assigned reviewers.

d. **Submission Limit**: There is a limit of eight non-member submissions per 12-month period. If a company joins GWPG, it will receive a credit for all submissions within the 12-month period before becoming a member.

e. **Expiration**: Each GWPG committee may expire published results from its web pages due to benchmark revision. In this case, a non-member submitter will be given notice by the committee and may resubmit once, the identical configuration for the revised benchmark, for a 12-month period after the initial submission.

Adoption

V.1.20 Adopted on 4/26/2022 to combine policies for all GWPG committees into one.

V1.17 Adopted on 12/13/2016 reformat, refresh, and clarify rules. Align with SPEC rules on penalties & remedies. Alter non-member submission terms.

V1.16 adopted on 7/30/2016 minor edits, update of meeting notices, correction of non-member publication information

V1.15 adopted on 9/23/2014 removal of pricing and single/multiple supplier rules, addition of SPECwpc, revision of reviewer assignment responsibility

V1.14 adopted on 05/14/2012 new rule IV.2.a, changed rule IV.2.g, and changed wording IV.2.t/u

- V1.13 adopted on 04/21/2010 edited rule IV.2.p.iii, and removed duplicate rule, was IV.4.m
- V1.12 adopted on 01/27/2010 new rule IV.2.u
- V1.11 adopted on 08/13/2009 new/changed rules IV.2.h, IV.4.b and IV.4.m
- V1.10 adopted on 09/13/2007 to reflect transition from GPC to GWPG
- V1.04 adopted on 10/20/2006
- V1.03 adopted on 08/04/2006
- V1.02 adopted on 04/27/2006
- V1.01 updated on 02/09/2006 to align wording with SPEC policy
- V1.00 adopted on 01/25/2006