TPC Transaction Processing
Performance Council

TPC Policies
Version 6.4

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TPC Membership
(as of April 2015)
Full Members

Associate Members

Document Revision History

Date	Version	Description
September 12, 2013	6.0	Benchmark Class, TPC Enterprise and TPC Express changes
February 6 , 2014	6.1	Clause 6 Supporting Files changes, Clause 8 Fair Use update and conversion to new format
March 27, 2014	6.2	Clause 8.1 Use of TPC material, Clause 10 & 11 changes to differentiate an Express Benchmark vs. an Enterprise Benchmark
February 19, 2015	6.3	Clause 3.5.1 defining Benchmark Subcommittee, added 3.5.2 defining Working Group, added Clause 10 Pre-Publication Certification, changed Clause 6, Clause 9 and Clause 12 for new Express Audit rules.
April 23, 2015	6.4	Added clause 2.2.7 and updated 9.3.2.1

Typographic Conventions

The following typographic conventions are used in this specification:

Convention	Description
Bold	Bold type is used to highlight terms that are defined in this document
Italics	Italics type is used to highlight text that should be used in TPC documents verbatim
UPPERCASE	N/A

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Section 0: Terms, Notation, and Policy Modification

0.1   Notation

0.1.1   A reference to a specific clause in the **Bylaws** or **Policies** is written as "**Bylaws** § x.y.z" or "**Policies** § x.y.z", respectively, where x.y.z is the clause number.

0.1.2   Throughout the body of this document, defined terms (see **Policies** § 0.2) are formatted in the same style as used in the term definition to indicate that the term has a precise meaning. For example, "**Members**" specifically refers to voting members of the **TPC**, whereas "members" does not have any special meaning.

0.2   Defined Terms

0.2.1   **ACB**. Abbreviation for an Auditor Certification Board. See **Policies** § 9.3.4.1.

0.2.2   **Accepted**. Status of a **Result** after successfully completing review period. See **Policies** § 6.11.

0.2.3   **Administrator**. The **TPC** Administrator is responsible for day-to-day operation of the **TPC** and other responsibilities as defined in the **Policies**. See **Policies** § 3.2.2.5.5.

0.2.4   **Affiliate**. A **TPC** Professional Affiliate. See **Policies** § 2.3.

0.2.5   **Alert Message**. An e-mail message sent to the TPC's alert message alias by a **Test Sponsor** when a **Result** is submitted, modified, or withdrawn. See **Policies** § 6.6.

0.2.6   **All Members**. The entire body of members including both **Members** and **Associate Members**.

0.2.7   **Associate Members**. Associate Members as defined in the **Bylaws** § 2.1.

0.2.8   **Auditor**. An individual certified by the **TPC** to verify that **Results** meet the requirements of the appropriate **TPC Benchmark Standard**. See **Policies** § 9.2.

0.2.9   **Benchmark Class.** A **Benchmark Class** is a set of **Benchmark Standards** that have the same characteristics and the same rules for creation, maintenance, publication, etc.

0.2.10   **Benchmark Standard**. A **TPC** Benchmark **Specification** approved by the **Members**.

0.2.11   **Benchmark Subcommittee:** A **Benchmark Subcommittee** is the working forum within the **TPC** for development and maintenance of one or more **Benchmark Standards**.

0.2.12   **Bylaws**. The Bylaws of the **TPC**.

0.2.13   **Cluster**. A cluster is a distributed environment where the database workload is executing on more than one node. A node consists of one or more processors executing a single instance of an OS and one or more instances of the DBMS.

0.2.14   **Compliance Challenge Document**. Document containing the information required by the TAB Compliance Template. See **Policies** § 3.3.3.1.

0.2.15   **Core**. **Execution Unit** that is capable of running one or more **Processor Threads**. See **Policies** § 6.2.1.

0.2.16   **Council**. The **Members** at a **General Meeting**.

0.2.17   **Distribute** (also **Distribution**). Active dissemination of a document. This is typically done electronically, but may also be accomplished by facsimile, conventional mail, courier, or other comparable means.

0.2.18   **Execution Unit**. The electronic circuits necessary to implement the semantics of all possible instructions in a computer architecture. See **Policies** § 6.2.2.

0.2.19   **Executive Summary**. A two to four page summary of a **Result** that shows the configuration, **Primary Metrics**, performance data, and pricing details. The exact requirements for the **Executive Summary** are defined in each **Benchmark Standard**.

0.2.20   **Fair Use Policy**. The **TPC** policies governing the use of **Results** in publicity. See **Policies** § 8.2.

0.2.21   **FDR**. Abbreviation for a Full Disclosure Report, which must be submitted to the **TPC** when a **Result** is submitted for review.

0.2.22   **Filing Fee**. A fee that must be paid by a **Test Sponsor** to file a **Result**. See **Policies** § 6.10.

0.2.23   **General Meeting**. A meeting of the general membership as defined in the **Bylaws** § 3.5.

0.2.24   **Historical Result**. A **Result** that has been **Accepted** and is no longer required to meet the pricing and availability criteria of the TPC Pricing Specification, (see **Policies** § 6.11.3.2**)**.

0.2.25   **Mail Ballot**. A formal, written vote by the **Members**. See **Policies** § 4.8.

0.2.26   **Members**. Voting members as defined in the **Bylaws** § 2.1.

0.2.27   **Non-member Test Sponsor**. A **Test Sponsor** who is not a **Member**.

0.2.28   **Notify** (also **Notification**). Active communication of information. This is typically done by e-mail, but may also be accomplished by facsimile, conventional mail, courier, or other comparable means. In the case where the **Policies** call for notification of the **Council**, notification is typically done verbally as part of the appropriate committee report.

0.2.29   **Optional Metric**. A metric defined within a **Benchmark Standard** that is publishable at the option of the **Test Sponsor**. An **Optional Metric** may be designated as a **Primary Metric**.

0.2.30   **Policies**. The Policies of the **TPC**, i.e., this document.

0.2.31   **Post**. The action of making information (typically a document) readily accessible through the stated medium. For example, "**posted** to the **Web Site**" means the information is accessible in an appropriate location with normal hyperlinks and cross-references (i.e., not hidden or disguised).

0.2.32   **Posting Date**. Date on which a **Result** is **posted** to the **Web Site**.

0.2.33   **PRC**. Abbreviation for the Public Relations Committee. See **Policies** § 3.4.

0.2.34   **Primary Metrics**. The primary metrics as defined in each **Benchmark Standard.**

0.2.35   **Primary Representative**. A person designated by a **Member** as a Director of the Corporation as defined in the **Bylaws** (Article III) or by an **Associate Member** as a primary contact.

0.2.36   **Privacy Policy**. The **TPC** policy governing personal information collected from the public. See **Policies** § 7.5.2.

0.2.37 **Private Web Site**. The **TPC** Internet web site located at www.tpc.org containing **TPC Confidential** information available only to **Members**, **Associate Members**, and **Affiliates**. Access to the **Private Web Site** is restricted by a password.

0.2.38 **Processor**. A component that contains one or more **Cores**. See **Policies** § 6.2.3.

0.2.39 **Processor Thread**. The hardware necessary to maintain the state of a **Software Thread**. See **Policies** § 6.2.4.

0.2.40 **Public Information** includes: press releases, advertisements, commercials, and all materials, literature, and collateral that are obtainable without a nondisclosure agreement. **Public Information** includes spoken as well as written communication; e.g., a spokesperson speaking in an open forum such as a press conference.

0.2.41 **Rebadged Result**. A **Result** published using the same performance tests as an existing **Result** on a **SUT** which is electronically equivalent to the **SUT** used in that existing **Result**. See **Policies** § 6.17.

0.2.42 **Result**. A performance test submitted to the **TPC** attested to meet the requirements of a **TPC Benchmark Standard** at the time of submission. A **Result** is documented by an Executive Summary and, if required, a **FDR**.

0.2.43 **Review Period**. The period of time when compliance issues can be raised against a **Result**. See **Policies** § 6.12.2**.**

0.2.44 **SC**. Abbreviation for the Steering Committee. See **Policies** § 3.2.

0.2.45 **Secondary Representative**. A person designated by a **Member** or **Associate Member** as a secondary representative of the **Member** or **Associate Member**.

0.2.46 **Simple Majority**. Greater than 50% of **Members** present.

0.2.47 **Software Thread**. An instruction sequence that performs operations within an address space and is scheduled by software. See **Policies** § 6.2.5.

0.2.48 **Specification**. A written document that describes a workload, including implementation, execution, auditing and reporting requirements. A **Specification** may require the use of **TPC-Provided Code**.

0.2.49 **Spokesperson**. The **TPC** Spokesperson is the primary contact with the press concerning **TPC** public relations. See **Policies** § 3.2.2.5.4.

0.2.50 **Standing Committee**. A permanent committee of fixed size and consisting of specific elected individuals. See **Policies** § 3.1.

0.2.51 **Submitted for Review**. Status of a **Result** while subject to review and challenge. See **Policies** § 6.11.

0.2.52 **SUT**. A System Under Test as defined in the applicable **Benchmark Standard**.

0.2.53 **TAB**. Abbreviation for the Technical Advisory Board. See **Policies** § 3.3.

0.2.54 **Test Sponsor**. A company that submits a **Result**. Although multiple companies may sponsor a **Result** together, for the purposes of the **TPC**'s processes the **Test Sponsor** must be a single company. A **Test Sponsor** need not be a **Member**. See **Policies** § 6.1.

0.2.55 **TPC Confidential**. Information that may not be disclosed outside of the **TPC**, **Members**, **Associate Members**, and **Affiliates**. See **Policies** § 7.1.

0.2.56   **TPC-Provided Code**.   Code provided by the **TPC** that implements specific functionality for a **Specification**. Code may be source, executable binaries, or a combination of both. Note that source code may be provided without matching executable binaries and executable binaries may be provided without matching source code, as appropriate to each **Specification**. See **Policies** § 5.4.

0.2.57   **TPC-Provided Kit**. A set of binaries, scripts and documentation which implements a benchmark workload on one or more platforms. See **Policies** § 12.1.4.

0.2.58   **TPC Results List**. The list of submitted **TPC Results**, including **Results** that are **Submitted for Review**, **Accepted**, **Historical**, or have been recently withdrawn. See **Policies** § 6.3.

0.2.59   **TPC**. Abbreviation for Transaction Processing Performance Council. **TPC** is synonymous with "the Corporation" as used in the **Bylaws**.

0.2.60   **Web Site**. The **TPC** Internet web site located at www.tpc.org containing **TPC** information available to the public.

0.3   Treatment of time in these Policies

Many of these **Policies** reference a span of time based on a number of days. Unless explicitly stated otherwise, the following clauses define how time periods are determined when referenced in these **Policies**.

0.3.1   **Business day and working day**. Business days or working days are Monday-Friday, except for national and declared holidays, commencing at 8:00 a.m. and completing at 5:00 p.m. Pacific Civil Time. Policy requirements for business days require complete days. That is, for any day to count as a business day for a specific item, the item must be initiated prior to 8:00 a.m.

0.3.2   **Calendar Day**. A calendar day is a complete 24-hour period**,** commencing at 12:00 a.m. Pacific Civil Time. Policy requirements for calendar days require complete days. That is, for any day to count as a calendar day for a specific item, the item must have been initiated on the prior day.

0.3.3   **Day.** If **Policy** wording uses the word "day" without qualifying it as a business day or a working day, a calendar day is assumed. For example, if the **Council** passed a motion at 11:00 a.m. on March 15 that will take effect in 60 days, then it goes into effect on May 15. (The 1st day starts on March 16 and the 60th day completes at the end of day on May 14.)

0.4   Policy Modification

The following outlines the steps for modifying the **Policies**.

0.4.1   Step 1: A policy modification may be proposed by any **Member** or **Standing Committee**. The proposal shall be submitted to the **SC** for review. The proposal must include the complete wording for the policy change.

0.4.2   Step 2: The **SC** shall review the proposed change and prepare a recommendation for the **Council**.

0.4.3   Step 3: The proposal is added to the agenda for the next **General Meeting**. At least four (4) working days prior to the next **General Meeting**, the proposal and recommendation is distributed to all **Members** for review.

0.4.4   Step 4: At the next **General Meeting**, the **SC** presents the proposal and its recommendation for a vote by the **Council**. If approved by the **Council**, the policy modification is effective immediately unless specified otherwise.

Section 1: TPC Mission

1.1   **Mission Statement**

The **TPC** is a non-profit corporation founded to define transaction processing benchmarks and to disseminate objective, verifiable performance data to the industry.

Section 2: Membership

2.1   **Qualifications of Membership**

The **Bylaws** (Article II) contain the formal definitions and requirements for membership in the **TPC**.

2.1.1   **Payment of Dues**

For new **Members**, the requirements for payment of dues is established in **Bylaws** § 2.3 and § 2.5**.**

For existing **Members**, an annual dues notification will be mailed to the **Primary Representative** at least 60 days before the end of the calendar year. The notification will specify the amount and times of payment, as determined by the **Council**. Individual bills will be mailed for each payment.

The payment is due on January 1st, but not less than 60 days after notification is sent.

If payment becomes more than 30 days past due at any time, the following membership rights and privileges will be suspended: (1) vote in subcommittees and **General Meetings**, (2) serve as chairman of a committee or **General Meetings**, and (3) run for committee positions. The **Member** is allowed to attend meetings, access **Private Web Site**, and **Distribution** of materials.

If payment becomes more than 60 days past due at any time, all membership rights and privileges will be terminated. Membership rights and privileges will be reinstated when the **TPC** receives payment for all past due charges.

Member dues are not refundable, regardless of changes in status of the **Member** (e.g. resignation, expulsion, merger, acquisition). Once a commitment has been made to pay dues, they are required to be paid in full, regardless of changes in status of the **Member**.

2.1.2   **Pro-Rating Dues**

If a company joins the **TPC** in the first half of the calendar year, it must pay the full annual membership dues. If a company joins the **TPC** in the second half of the year, it will be assessed a prorated percentage of the dues depending on how many months remain in the year. For example, if a company joins in September, they will be assessed a prorated or proportional percentage of the annual dues for the months Sept-Dec. The prorated dues process applies only to companies who were not members in the prior calendar year**.**

2.2   **Rights of Members**

A **Member** of the **TPC** is entitled to the following:

2.2.1   Right to appoint a Director to the Board of Directors, also referred to as the **Primary Representative**. For all intents and purposes, **Primary Representative** and Director are synonymous.

2.2.1.1   If the **Steering Committee** or **General Council** determines that the validity of an individual to serve as a **Primary Representative** is in question, membership privileges are suspended. The **Administrator** will notify the legal department of the **Member** in question. Membership privileges will remain suspended until an officer of the **Member** designates the appointment of the **Primary Representative** in writing to the **Administrator**.

2.2.2   Right to designate any number of **Secondary Representatives**. A **Member** designates a **Secondary Representative** by **notifying** the **Administrator** in writing with the individual's contact information. **Secondary Representatives** shall have all the rights granted to the **Primary Representative** with the following exceptions:

2.2.2.1 A **Secondary Representative** may not act as a legal Director of the **TPC**.

2.2.2.2 A Secondary Representative may not cast the Member's vote in a Mail Ballot.

2.2.2.3 In cases where the **Bylaws** or **Policies** require formal communication (e.g., dues notice, mail ballot, etc.) between the **TPC** and a **Member**, such communication shall be sent to the **Primary Representative**.

2.2.2.4 Certain **TPC Confidential** documents may be restricted to the **Primary Representative**.

2.2.3 Right of access to all internal **TPC** documents, including access to the **Private Web Site**. A **Primary Representative** or **Secondary Representative** may request that additional persons in the member company be added to **TPC** distribution lists or given access to **TPC** documents. When it is in the best interest of the **TPC**, some **TPC Confidential** documents may be restricted to **Primary Representatives** and only be available upon written request to the **SC**.

2.2.4 Right to vote on final approval of any and all proposed **TPC Benchmark Standards**.

2.2.5 Right to participate as a voting member of technical subcommittee activities as set forth in the **Policies**. Participation in technical subcommittees is voluntary and at the discretion of the **Member**.

2.2.6 Right of the **Primary Representative** or **Secondary Representatives** to serve on **Standing Committees** if duly elected.

2.2.7 Right to change the designated Director to the Board of Directors during the initial roll call of a **General Meeting**. The newly designated Director will only remain in effect through the end of that **General Meeting**.

2.3 Rights of Associate Members

An **Associate Member** of the **TPC** is entitled to the following:

2.3.1 Right to designate a **Primary Representative**.

2.3.2 Right to designate any number of **Secondary Representatives**. An **Associate Member** designates a **Secondary Representative** by **notifying** the **Administrator** in writing with the individual's contact information. **Secondary Representatives** shall have all the rights granted to the **Primary Representative** with the following exceptions:

2.3.2.1 In cases where the **Bylaws** or **Policies** require formal communication (e.g., dues notice, etc.) between the **TPC** and an **Associate Member**, such communication shall be sent to the **Primary Representative**.

2.3.2.2 Certain **TPC Confidential** documents may be restricted to the **Primary Representative**.

2.3.3 Right of access to all internal **TPC** documents, including access to the **Private Web Site**. A **Primary Representative** or **Secondary Representative** may request that additional persons in the member company be added to **TPC** distribution lists or given access to **TPC** documents. When it is in the best interest of the **TPC**, some **TPC Confidential** documents may be restricted to **Primary Representatives** and only be available upon written request to the **SC**.

2.3.4 Right to participate as a non-voting member of technical subcommittee activities as set forth in the **Policies**. Participation in technical subcommittees is voluntary and at the discretion of the **Associate Member**.

2.4 TPC Professional Affiliates

2.4.1 **Definition**. **TPC** Professional Affiliates (**Affiliates**) are those individuals designated by the **TPC** as engaged in business activity that complements or helps fulfill the **TPC**'s mission.

2.4.2 **Qualifications**. **Affiliates** cannot be **Members** or **Associate Members**, or appointed representatives of **Members** or **Associate Members**, and must be engaged in business activity that complements or helps fulfill the **TPC**'s mission. Appointment of **Affiliates** is at the complete discretion of the **TPC**.

2.4.3 **Types of Affiliates**

2.4.3.1 **Auditors** and consultants are automatically granted **Affiliate** status when they are certified or hired, respectively.

2.4.3.2 The **SC** may grant **Affiliate** status to certain qualified individuals. The **SC** shall **notify** the **Council** at the next **General Meeting** of this action.

2.4.4 **Privileges and Status, Rights, and Restrictions**

Affiliates can participate in all teleconferences and meetings.

Affiliates, by default, have open access to the **TPC Confidential** information that they require to conduct the activities relevant to the **TPC**'s mission, but have no standing as **TPC** members to have access to all meeting and **TPC Confidential** information.

Affiliates have no standing in the **TPC** as **Members** and, therefore, cannot make motions or vote on motions.

Affiliates are restricted from access to **TPC Confidential** information and discussions, such as budgets, contracts, and other matters as deemed appropriate by the **SC** or **Council**.

2.4.5 **Responsibilities**. **Affiliates** accept the responsibility to maintain all **TPC Confidential** information as confidential.

2.4.6 **Termination of Status**. The **SC** may revoke **Affiliate** status at any time. Also, when **Auditors** are de-certified or when a **TPC** consultant's contract expires, their **Affiliate** status is automatically terminated. The **SC** shall **notify** the **Council** at the next **General Meeting** of this action.

2.4.7 **Payments**. **TPC** Professional Affiliate, as the name suggests, is a privileged status granted to certain qualified individuals. In and by itself, an **Affiliate** is not a **TPC** employee or paid consultant, and the **TPC** will not pay, or reimburse expenses, for anyone acting in the role of affiliate. **Affiliates** will not pay the **TPC** for the appointment to **Affiliate** status.

2.5 Procedure for Expulsion of a Member

If the grounds appear to exist for expulsion of a **Member** or **Associate Member** under the **Bylaws** § 2.13(a), the procedure set forth below shall be followed.

2.5.1 Only a **Council** vote can initiate the expulsion process. The motion and vote to initiate the expulsion procedure is conducted under the **TPC**'s normal voting procedures.

2.5.2 Once the **Council** votes to initiate the procedure, the **SC** will be asked to study the issue and make a recommendation at the next **General Meeting**. The affected member shall be given an opportunity to be heard before the **SC**, either orally or in writing. The affected member may also send a letter or presentation to **All Members** via the **Administrator**.

2.5.3   Before the next **General Meeting**, **All Members** will be given 15 days prior notice of the proposed expulsion and the reasons for proposed expulsion by the **Administrator**. Notice shall be given by any method reasonably calculated to provide actual notice. Any notice given by mail shall be sent by first-class or registered mail to the **Primary Representative**.

2.5.4   At the next **General Meeting** after the expulsion process is initiated, the **SC** will present its recommendation and the **Council** shall discuss whether or not the member should be expelled, suspended, or sanctioned in some other way. The affected member shall be given the opportunity to be heard, either orally or in writing. The **Council** will then vote on whether to send out a **Mail Ballot** to determine whether the affected member shall be expelled.

2.5.5   If the **Council** votes to send out a **Mail Ballot**, the **Members** will have 30 days to respond. A decision to expel shall have immediate effect. To pass, a **Mail Ballot** for expulsion requires at least two-thirds of the **Members** to vote in favor.

2.5.6   In the event of expulsion, dues are not refunded.

2.6   **Mergers, Acquisitions, Divestitures**

2.6.1   **Non-transferability**. Memberships may not be sold, donated or otherwise transferred to another corporation. The named entity associated with a membership may change, based on an acquisition, merger or divestiture, as described in **Policies** § 2.6.2 and 2.6.3.

2.6.2   **Mergers and Acquisitions**

2.6.2.1 **Only one Member is involved**: When only one of the companies involved is a **Member**, all rights associated with the membership and associated positions on both technical subcommittees and **Standing Committees** are retained. The parent company has the right to designate whether the parent company or a subsidiary is to be the named **Member**.

2.6.2.2 **Two or more Members are involved**: When more than one **Member** is involved in a merger or acquisition, at most one **Member** from the set remains on the TPC Board of Directors, as stipulated in the **Bylaws**. The remaining or new **Member** is responsible for all outstanding financial obligations of the **Members** that are dropped. It is the responsibility of the remaining or new **Member** to designate a **Primary Representative**. Any conflicts are resolved per **Policies** § 2.2.1.1.

2.6.2.3 Committee participation is resolved as follows:

2.6.2.3.1 The existence of either **Member** on a technical subcommittee results in the existence of the joined company on that subcommittee, retaining at most one vote.

2.6.2.3.2 Individuals from either **Member** who were elected to **Standing Committee** or chair positions will retain their positions, except as defined in **Policies** § 2.6.2.3.3.

2.6.2.3.3 If the merger or purchase would result in two individuals from the same **Member** being in a single **Standing Committee**, only one may remain on the committee. Neither individual will have voting privileges until a designation of a single committee member is made by the **Primary Representative**.

2.6.3   **Divestitures**. When a Member company divests a portion of its business, the rights and privileges associated with membership and individual participation on committees may be retained by at most one company.

Section 3: TPC Organization

3.1   Standing Committees

3.1.1   Membership

Membership on all **Standing Committees** consists of **Primary Representative** and/or **Secondary Representatives** of **Members** who are formally nominated and elected in a closed ballot in the first **General Meeting** in a given calendar year. A **Member** can only have one representative on any particular **Standing Committee**.

Membership on all **Standing Committees** is based on individuals and not companies. A member company can only have one seat on a **Standing Committee**, with only one individual (elected by the **Council**) representing that company. An individual can belong to multiple **Standing Committees** concurrently. The **Standing Committees** are **SC**, **TAB**, and **PRC**.

3.1.2   Voting for Membership on Standing Committees

Representatives on all **Standing Committees** are determined by a closed ballot in which the nominee(s) receiving the most votes is (are) chosen. In no case shall a representative be elected with less than a **Simple Majority**. In the event a run-off is necessary, the candidate with the fewest votes will be eliminated and the vote will be repeated. A **Standing Committee** has a chairman, elected by **Simple Majority** at the first **General Meeting** of each year. In the event a run-off is necessary, the candidate with the fewest votes will be eliminated and the vote will be repeated.

3.1.3   Membership Based on Member Company Affiliation

Membership on all **Standing Committees** is based on the election of particular individuals affiliated with the **Members**. If an individual's affiliation with a **Member** terminates, the individual's position on the committee becomes vacant. The resulting vacancy is filled through a new election at the next **General Meeting**.

3.1.4   Attendance for Standing Committees

Standing Committee meetings shall be either conducted in-person or through the use of telephone conference or similar communications equipment, as specified in the meeting notice. For in-person meetings, physical attendance by **Standing Committee** members at the designated location is required for purposes of establishing quorum and voting. For meeting by telephone conference, all **Standing Committee** members participating must be able to hear one another for purposes of establishing quorum and voting.

3.1.5   Attendance Requirement

A **Standing Committee** member must be present for at least 50% of **Standing Committee** meeting time during the five month period prior to a **General Meeting**, unless the **Standing Committee** has not met for more than 10 hours within the last 5 months or the individual was first elected to the position during the five month period. Failure to do so will cause the individual's position on the **Standing Committee** to become vacant as of the beginning of the **General Meeting**. The resulting vacancy is filled through a new election at the **General Meeting**. If the same individual who lost the position is elected to the **Standing Committee**, the individual's attendance time is set at 50%.

Meeting time includes both face-to-face meetings and telephone conferences. **Policies** § 3.1.4 defines attendance for the purpose of this clause. The **Standing Committee** chairman is responsible for maintaining attendance records and determining compliance with this clause, subject to review of the **Standing Committee** in the event of any disagreement. Attendance will be recorded in ½ hour increments. To encourage participation, the **Standing Committee** chairman may require a **Member** be present for the majority of the ½ hour to be credited for the time.

3.2   **Steering Committee**

As defined by the **Bylaws**, the Steering Committee (**SC**) consists of five (5) representatives from the **Members**. The **SC** is a **Standing Committee.**

3.2.1   **Steering Committee Operating Rules**

3.2.1.1 **Quorum**. At least three (3) **SC** members must be present for the **SC** to conduct business.

3.2.1.2 **Voting**. All motions in the **SC** are passed by a **Simple Majority**.

3.2.1.3 **Non-recusal**. A member of the **SC** can vote on any motion in the **SC**, even if the member's company is involved in the issue/request.

3.2.1.4 **Meetings**. Regular teleconference meetings will be scheduled every week, or as necessary to meet the current workload requirements.

3.2.2   **Duties of the Steering Committee**

3.2.2.1 **Direction**. The **SC** assures that an overall direction is in place for the **TPC**. The **SC** will propose for **Council** approval implementation plans for achieving the direction. Tracking **TPC** activities against implementation plans will be an ongoing responsibility of the **SC**. Annual direction statement and implementation plans are to be in place by the end of each calendar year for the upcoming year.

3.2.2.2 **Subcommittees**. The **SC** may propose subcommittees and workgroups, as needed with their task assignments and select members for the subcommittees, but the definition, duration, and selection must be approved by the **Council**. In order to drive subcommittee activity, the **SC** may require task definition from the subcommittee chairman within 30 days of initiation of a subcommittee. Each subcommittee will present a brief report at each **General Meeting** and a formal written subcommittee report can be requested by the **SC** on an annual basis at the final **General Meeting** each year.

3.2.2.3 **Officers of the TPC**. As defined in the **Bylaws**, the duties of officers of the **TPC**, President and Chief Executive Officer, Secretary, and Chief Financial Officer, resides in the **SC**. The chairman of the **SC** is the legal representative of the **TPC**. Therefore, **SC** duties include responsibilities for assuring the minutes of all **General Meetings** are published and that accurate financial records are maintained.

3.2.2.4 **Banking**. The **SC** is responsible for establishing banking agreements and practices for money management for the **TPC**.

3.2.2.5 **Support Organizations**. The **SC** selects and recommends support organization(s) for the **TPC** to accomplish administrative, legal and accounting functions. Each of the support activities will be managed directly by the **SC**. The **SC** is to assure that the following minimal functions are accomplished by itself or these support organizations:

3.2.2.5.1 **Administrative**. Provide day-to-day administrative support for the **TPC**, including: meeting preparation, arrangement, and logistics; recording and **posting** of minutes of **General Meetings**; mail ballots; teleconference preparation and logistics and minutes; maintenance of records of all **TPC** activities and transactions; maintenance of master copy of any **TPC** **Specification** and **Benchmark Standard**; **distribution** of materials internally to the members; contact point for all **TPC** correspondence; chairing **General Meetings**; collecting membership dues and retaining in **TPC** account; paying external organizations and receiving payment from external organizations; and maintaining accurate financial records of expenses and income.

3.2.2.5.2 **Legal**. Represent the legal interests of the **TPC**, including: securing of corporate status; tax exemption; reviewing all legal agreements between members and the **TPC**; and reviewing all legal agreements between the **TPC** and other outside organizations.

3.2.2.5.3 **Accounting**. Compile accounting reviews and reports, including: preparing and submitting tax returns; publishing financial report; and compiling financial statements of corporate income and expenses.

3.2.2.5.4 **Spokesperson**. The **TPC** Spokesperson (**Spokesperson**) is the primary contact with the press concerning **TPC** public relations. This person is also responsible for public relations and coordinating with the **SC** and the **PRC**.

3.2.2.5.5 **Administrator.** The TPC Administrator (**Administrator**) is the primary contact for business within the TPC. The role of **Administrator** shall be carried out by either an individual or an organization.

3.2.3 **Steering Committee Operating Procedures**

The **SC**'s operating procedures are:

3.2.3.1 All **SC** meetings are open to **Members**. An agenda is **posted** to the **Private Web Site**.

3.2.3.2 The **SC** maintains a running list of issues for **SC** consideration. This list is attached with minutes of the **SC** meetings.

3.2.3.3 Each **SC** meeting has minutes **posted** to the **Private Web Site**. The minutes capture actions taken and decisions reached in the **SC** meetings.

3.2.3.4 **SC** decisions and/or actions that require **Council** approval are **posted** to the **Private Web Site** at least five working days prior to presentation at a **General Meeting**.

3.2.3.5 Input on any open issues and/or suggestions for items to be considered by the **SC** is open to **All Members** at all times. Use of facsimile, mail, or e-mail is sufficient to allow input to be received by any or all members of the **SC**. Each **General Meeting** will have a session devoted to discussing **SC** status and issues.

3.2.3.6 The above formalization is not intended to limit the **SC**. Some issues will require resolution within the one week between an announced agenda and the next **SC** meeting. These items will be documented after decisions are reached, since time does not allow input in the mode of formal agenda and open issues as described. The intent is to keep these actions to a minimum, but the **SC** must have flexibility to react when needed.

3.3 Technical Advisory Board

The Technical Advisory Board (**TAB**) consists of seven (7) representatives from the **Members**. The **TAB** is a **Standing Committee**. The **TAB** hears arguments on both sides of interpretation and compliance issues and makes recommendations in the form of motions to the **Council**. The **Council** then makes binding decisions.

The **TAB** shall provide to the **Council** a statement of the issues brought to the **TAB** as well as recommendation(s) for resolution with rationale for the recommendations.

3.3.1 **TAB Charter.** The **TAB** is responsible for providing analysis, definition and recommended resolution to requests for interpretations and compliance questions to **Benchmark Standards**.

3.3.2 **TAB Operating Rules**

3.3.2.1 **Quorum**. At least four (4) **TAB** members must be present for the **TAB** to conduct business.

3.3.2.2 **Voting**. All motions in the **TAB** are passed by a **Simple Majority**.

3.3.2.3 **Non-recusal**. A member of the **TAB** can vote on any motion in the **TAB**, even if the member's company is involved in the issue/request.

3.3.2.4 **Meetings**. Regular teleconference meetings will be scheduled every two weeks, or as necessary to meet the current workload requirements. The **TAB** will meet concurrently with technical subcommittees during regular business meetings.

3.3.3 **TAB Operating Procedures for Compliance Challenges**

The **TAB** will conduct business using the following procedures when handling compliance challenges.

3.3.3.1 Receive (by **TAB** chairman) the **Compliance Challenge Document** containing information dictated by the Compliance Template provided on the **Private Web Site**.

3.3.3.2 The member company raising the compliance issue (challenger) **distributes** the **Compliance Challenge Document** to both the **TAB** chairman and the **Primary Representative** of the **Test Sponsor** involved. The **TAB** chairman will note and log the submission of the issue but will not immediately schedule the issue for **TAB** review.

3.3.3.3 The **Test Sponsor** whose benchmark **Results** are in question has seven days to respond in writing to the member who submitted the issue.

3.3.3.4 If the challenger and the **Test Sponsor** agree that more than seven days are needed to respond to the issue, the challenger must **notify** the **TAB** chairman of the new schedule. The **TAB** chairman will extend the seven-day period appropriately.

3.3.3.5 If the issue is resolved via the above communication without changes to the **FDR**, the challenger **notifies** the **TAB** chairman that the issue has been resolved and provides the specific details. The issue is not added to the **TAB** work list.

3.3.3.6 If the **Test Sponsor's** response to the issue does not resolve the issue to the satisfaction of the challenger or changes were made to the **FDR**, the issue will be scheduled for the review process of the **TAB**. The initial response to the issue will be forwarded to the **TAB** for inclusion in the review process. The **Compliance Challenge Document** will also be **posted** to the **Private Web**. When the issue is schedule for discussion, the **Primary Representatives** will be **notified** of the agenda and web site location of the **Compliance Challenge Document**. Any interested **Members** may request of the **TAB** chairman that they be included in communications sent to the **TAB** on this issue.

3.3.3.7 If the **Test Sponsor** does not respond to the issue within the agreed period of time (see **Policies** § 3.3.3.3 and 3.3.3.4), the issue will be scheduled for the review process of the **TAB**.

3.3.3.8 If the issue is not resolved, the **TAB** will review the issue for merit and vote on accepting or rejecting the request at the next conference call/meeting.

3.3.3.9 A conference call/meeting time will be scheduled for discussion of the issue. At this discussion, the challenger and the **Test Sponsor** will be requested to present their arguments.

3.3.3.10 Further discussion by the **TAB** (if needed) will occur until a recommendation for resolution vote passes by the **TAB**. The **TAB** will **post** the recommendation to the **Private Web Site** and **notify All Members** and **Auditors**. This recommendation(s) will be presented to the **TPC** for vote at a **General Meeting**.

3.3.3.11   If the challenger fails to attend the scheduled **TAB** conference call/meeting, the question of compliance will be dropped. If the **Test Sponsor** fails to attend, the **TAB** will develop the recommendation resolution based on the information available to the **TAB**.

3.3.3.12   The procedure and rules for the **TAB** processing a challenged **Result** is described in the **Policies** § 6.12 and 6.13.

3.3.4   **TAB Operating Model for Interpretation Requests**

The **TAB** will conduct business under the following model when handling interpretation requests.

3.3.4.1   Receive (by **TAB** chairman) request containing information dictated by the Interpretation Template provided on the **Private Web Site**.

3.3.4.2   **Distribute** request to **TAB** members, post to the **Private Web Site**, and **notify All Members**.

3.3.4.3   Add the issue to the **TAB** work list and schedule discussion.

3.3.4.4   The **TAB** will provide a ruling, which will be binding until the **Council** votes on the **TAB** recommendation. The **TAB** will **post** the ruling to the **Private Web Site** and **notify All Members**.

3.3.4.5   The **TAB** will present the ruling at the next **General Meeting** as a recommendation to the **Council** for ratification. If the **Council** does not approve the recommendation, the **TAB** ruling expires.

3.3.5   **TAB Compliance Recommendations**

3.3.5.1   If the **TAB** finds that a **Result** failed to satisfy one or more **Benchmark Standard** requirements, the **TAB** will recommend to the council that either: (1) the **Result** has an insignificant deviation from the **Benchmark Standard** or (2) the **Result** is non-compliant.

3.3.5.2   Non-compliance is recommended to the council if and only if the **TAB** finds that at least one of the following conditions is applicable:

- Failure to satisfy one or more requirements of the **Benchmark Standard** that results in incorrect operation of the functions in the business environment the benchmark represents (e.g. Transparency, ACID) regardless of the impact on the primary metrics.

- Failure to meet any of the following items: Audit, Availability, Orderability, Clause 0.2, and requirements applied to any Numerical Quantities listed in the Executive Summary.

- The aggregate effect of one or more violations results in more than a 2% difference in price/performance or performance metrics.

- There is an excessive number of clauses violated even though the aggregate difference in price/performance or performance primary metrics is less than or equal to 2%.

- A violation against the same clause language has been voted twice before for the same **Test Sponsor** within the two year period prior to the result's submission date.

3.3.5.3   If a non-compliance or insignificant deviation recommendation does not result from the **TAB** review, the **Council** will be informed of the **TAB** findings during the next **General Meeting**. Any **Member** who disagrees with the **TAB's** findings may move that the **Result** is in non-compliance or insignificant deviation. This motion from the floor must be made at the time of the **TAB** report to the **Council**. Only information presented during the **TAB** discussion may be used during the **General Meeting**.

3.3.5.4   The **TAB** shall make its recommendation on compliance objections filed against a **Result** as expeditiously as possible; the **Council** must be able to vote on the **TAB** recommendation no later than the second **General Meeting** after the challenge was submitted. If there is no vote, the **Result** achieves **Accepted** status.

Comment: The intent of this clause is that a **Test Sponsor's Result** receives expeditious **Council** attention, and that there be a limited time during which a **Result** remains in review.

3.3.6   TAB Option for Immediate Correction or Withdrawal

To prevent harm to the integrity and acceptance of **Results**, the **TAB** can encourage prompt corrective action on the part of a **Test Sponsor** through the following actions.

3.3.6.1   Immediate Correction

3.3.6.1.1   Whenever the **TAB** determines that a **Result** is in "non-compliance", it has the option of stipulating a deadline for the **Test Sponsor** to correct the problem. The **TAB** selects the deadline to be reasonably attainable based on the information it has heard and its own assessment, but as early as possible in order to protect the integrity of **Results**.

3.3.6.1.2   If the **Test Sponsor** meets the deadline and the **TAB** is satisfied with the correction, the **TAB** reports this at the next **General Meeting**.

3.3.6.1.3   Should the **Test Sponsor** not meet the deadline, or if it does but the **TAB** is dissatisfied with the correction, the **TAB** will vote to recommend that the **Test Sponsor** be found to have committed a Level 3 ("Major") policy violation, as described in the **Policies** § 8.4.1.6.

3.3.6.1.4   In accordance with standard policy procedures, the **Council** will vote on the **TAB**'s recommendation on "non-compliance", and also conduct a separate vote on the **TAB** recommendation on the policy violation.

3.3.6.2   Immediate Withdrawal of Result

After the **TAB** has found a **Result** to be non-compliant, the **TAB** may take a separate action to initiate immediate withdrawal of the **Result**. If the **TAB** votes that the **Result** should be immediately withdrawn, this recommendation will be forwarded to the **SC**. The **SC** must vote to approve the immediate withdrawal. If the **TAB** and **SC** both vote in favor of immediate withdrawal, the result will be immediately withdrawn by the **Administrator** as a category #3 withdrawal (see **Policies** § 6.14.2.3).

3.4   Public Relations Committee

The Public Relations Committee (**PRC**) consists of five (5) representatives from the **Members**. The **PRC** is a **Standing Committee**. The **PRC** makes recommendations in the form of motions to the **Council**. The **Council** then makes binding decisions.

3.4.1   **PRC Charter**. The **PRC** is responsible for promoting the **TPC**, its charter, and its activities in the public arena; encouraging use of **TPC** benchmarks; working with the press for the advancement of the **TPC** and its public image; and helping to recruit new members.

3.4.2   **PRC Operating Rules**

3.4.2.1   **Quorum**. At least three (3) **PRC** members must be present for the **PRC** to conduct business.

3.4.2.2   **Voting**. All motions in the **PRC** are passed by a **Simple Majority**.

3.4.2.3   **Non-recusal**. A member of the **PRC** can vote on any motion in the **PRC**, even if the member's company is involved in the issue/request.

3.4.2.4   **Meetings**. Regular teleconference meetings will be scheduled every two weeks, or as necessary to meet the current workload requirements.

3.4.3   **PRC Operating Model**. The **PRC** will conduct business under the following model.

3.4.3.1   Interact with the **Administrator** and/or the **Spokesperson** on behalf of **All Members**.

3.4.3.2   Provide initiative in dealing with the press and the public.

3.4.3.3   Work out the details on implementing publicity items delegated by the **Council**, the **SC**, or on items recommended by the **Administrator** or the **Spokesperson**.

3.4.3.4   **Voting on PRC recommendations**. Any materials produced by the **PRC** that are intended to be viewed by the public must be presented to the **Council** for approval.

3.5   **Technical Subcommittees**

3.5.1   **Benchmark Subcommittees**

3.5.1.1   **General.** A **Benchmark Subcommittee** is the working forum within the **TPC** for development and maintenance of one or more **Benchmark Standards**. Throughout the benchmark development and approval process, the subcommittee owns the **Specification** and drives it to be an approved **TPC Benchmark Standard.**

Once a **Specification** is approved as a **TPC Benchmark Standard**, the **Benchmark Subcommittee** becomes the working forum within the **TPC** for developing and recommending changes to an approved **Benchmark Standard**. If a **Test Sponsor** has a suggested change to the wording of a **Benchmark Standard** that would help clarify the **Benchmark Standard** in the next revision and is not a compliance issue, the **Benchmark Subcommittee** will handle this suggestion. If the **Test Sponsor** wants a ruling whether a certain implementation is compliant with the current **Benchmark Standard**, the **TAB** will handle this request.

A **Benchmark Subcommittee** may make recommendations to the **Council** to change the **Benchmark Standard**. **Benchmark Subcommittee** recommendations may include changes in wording of the **Benchmark Standard** for clarity, interpretations, closing a "loophole" or actual change in intent.

The **Benchmark Subcommittee** will have the final responsibility for creating a new version of a **Specification** to be submitted to the **Council** for approval as a **Benchmark Standard**. The **Benchmark Subcommittee** may also document any implementations of the benchmark it considers valid. This documentation will be attached to the **Benchmark Standard.**

The number of active **Benchmark Subcommittees** or whether an existing **Benchmark Subcommittee** handles more than one **Specification** and/or **Benchmark Standard** is determined by the **Council** based on need.

3.5.1.2   **Auditor Exam.** The **Benchmark Subcommittee** is responsible for developing and maintaining an auditor exam for the **Benchmark Standard** (see **Policies** § 9.3.2).

3.5.1.3   **TPC-Provided Code.** The **Benchmark Subcommittee** is responsible for developing and maintaining the **TPC-Provided Code** that is part of a **Benchmark Standard**. This work must be performed in accordance with the procedures outlined in **Policies** § 5.4.

3.5.1.4   **Authorization to conduct work**: The **Benchmark Subcommittee** will continue to conduct work on behalf of the proposed or completed **Benchmark Standard** until it is disbanded by the act of the **Council**.

3.5.1.5   **Minimum Membership**: At the time of creation at least eight **Members** must be represented on a **Benchmark Subcommittee**.

3.5.1.6   **Chair**: At the time of creation the chairman is elected by **Simple Majority** of the **Council.** At the first **General Meeting** of each year the chairman is elected by **Simple Majority** of the **Council**. In the event a run-off is necessary, the candidate with the fewest votes will be eliminated and the vote will be repeated.

3.5.2   **Working Groups**

3.5.2.1   **General**. A working group is a technical subcommittee that is created by the **Council** to complete a specific task. The working group is the forum within the **TPC** for researching or investigating an issue. The **Council** may give a specific time in which the working group must report its findings to the **Council**. Once the working group has completed its task, it is disbanded.

3.5.2.2   **Minimum Membership**: At the time of creation at least four **Members** must be represented on a working group.

3.5.2.3   **Chair**: At the time of creation, the chairman is elected by **Simple Majority** of the **Council.**

3.5.3   **Membership**

Membership on a technical subcommittee is voluntary with approval by **Simple Majority** of the **Council**. Subcommittee membership requires commitment by the member company to provide a working representative throughout the life of the technical subcommittee. Each **Member** is entitled to one voting representative on each technical subcommittee.

3.5.4   **Technical Subcommittee Operating Rules**

3.5.4.1   **Quorum**. At least one-third of the voting members of a technical subcommittee must be present to conduct business.

3.5.4.2   **Voting**.   All technical motions in technical subcommittees must pass by a two-thirds majority of the "yes" and "no" votes cast, with abstentions not counting. At least a quorum of the subcommittee must vote "yes" or "no" or the motion fails. All procedural motions in the subcommittee are passed by **Simple Majority**.

   Comment: Using two-thirds majority of yes and no votes with abstentions not counting in technical subcommittee ensures that technical subcommittees proceed with a strong consensus among subcommittee members concerned with the issue. If a strong consensus cannot be generated, the subcommittee should keep working until that consensus is gained. Motions to discuss technical content are procedural and are passed by **Simple Majority**.

3.5.4.3   **Meetings**. Technical subcommittee meetings occur in conjunction with **General Meetings**, or by conference call or in face-to-face meetings between **General Meetings**.

3.5.4.4   **Attendance at Meetings.** Technical subcommittee meetings shall be conducted in one of the following forms:

- Face-to-face only: Physical attendance by technical subcommittee members at the designated location is required for purposes of establishing quorum and voting. Meeting time will be counted towards the technical subcommittee meeting time requirements described in **Policies** § 3.5.4.5.

- Face-to-face with remote presence**:** Physical attendance by technical subcommittee members at the designated location is required for purposes of establishing quorum and voting. Meeting time for technical subcommittee members participating remotely will be counted towards the technical subcommittee meeting time requirements described in **Policies** § 3.5.4.5 provided they can hear the discussions (through the use of telephone or similar communication equipment) and see the presentations (through the use of TPC approved web conferencing tools).

- Telephone conference: All technical subcommittee members must be able to hear one another (through the use of telephone or similar communication equipment) for purposes of establishing quorum and voting. Meeting time will be counted towards the technical subcommittee meeting time requirements described in **Policies** § 3.5.4.5.

3.5.4.5 **Suspension of Voting Rights**. A technical subcommittee **Member** must be present for at least 50% of the technical subcommittee meeting time during the five month period prior to a technical subcommittee meeting, unless the technical subcommittee has not met for more than 10 hours within the last 5 months or the **Member** obtained membership during the five month period. Failure to do so will cause the **Member** to lose the right to vote on technical subcommittee matters. The **Member**'s voting rights are reinstated when the technical subcommittee **Member**'s attendance is at least 50% of the technical subcommittee meeting time over the prior five months.

Meeting time includes both face-to-face meetings and telephone conferences. **Policies** § 3.5.4.4 defines attendance for the purpose of this clause. The technical subcommittee chairman is responsible for maintaining attendance records and determining compliance with this clause, subject to review by the technical subcommittee in the event of any disagreement. Attendance will be recorded in ½ hour increments. To encourage participation, the technical subcommittee chairman may require a **Member** be present for the majority of the ½ hour to be credited for the time.

3.5.4.6 **Substantial Work Outside of Technical Subcommittee Meetings.** Substantial work outside of the technical subcommittee meetings is credited to the **Member** attendance requirements as specified in **Policies** § 3.5.4.5. The work must be beyond the typical work of the technical subcommittee. Examples of typical work are specification review, general software validation, specification wording creation or general committee communications. The work must be a substantial contribution relevant to the technical subcommittee effort, e.g. software development, specification ownership, detailed workload analysis or workload prototyping. After the work has been presented to the technical subcommittee, the **Member** and subcommittee chairman agree on the number of hours required for the work. The technical subcommittee chairman credits the outside work hour for hour to the **Member**'s attendance time as specified in **Policies** § 3.5.4.5. Any disagreement on the number of credited hours is resolved by a technical subcommittee vote.

3.5.4.7 **Voluntary Termination of Membership.** At any time a **Member** can voluntarily terminate membership in a technical subcommittee. The **Primary Representative** must notify the technical subcommittee chairman and the **TPC Administrator** in writing that the **Member** is terminating membership in the technical subcommittee. If the technical subcommittee chairman is voluntarily terminating membership, a temporary chairman is chosen by **Simple Majority** vote of the subcommittee.

3.5.4.8 **Involuntary Termination of Membership.** If at the time of a **General Meeting,** a **Member**'s attendance time has fallen below 20% of the technical subcommittee meeting time, the subcommittee chairman must notify the **Council**. Upon notification to the **Council**, the **Member** will lose membership in the technical subcommittee. A **Member** may request to remain on the technical subcommittee with approval by a **Simple Majority** vote of the **Council**. The **Member** attendance time is set at 20%.

3.5.5 **Minimum Membership Requirements**

When the membership of a technical subcommittee falls to three or fewer **Members**, the subcommittee chairman must notify the **Council** at the next **General Meeting**. Upon notification by the subcommittee chairman to the **Council** that the subcommittee membership is three or fewer **Members**, the **Council** must authorize the subcommittee to continue work; failure to do so will result in the termination of the subcommittee.

Section 4: Meetings and Mail Ballots

4.1   Frequency of General Meetings

The time and location of meetings of the Board of Directors, called **General Meetings**, shall be determined and approved by a **Simple Majority** of the **Council**. In general, the **Council** will attempt to meet on a bimonthly schedule with six (6) meetings each year and attempt to set the time and location at least six months in advance.

4.2   Attire

Attire at all **TPC** meetings is informal.

4.3   Location

The **TPC** will attempt to rotate meetings between locations in the west, center and east portions of the United States, with one international meeting scheduled per year.

4.4   Meeting Costs

Travel, lodging, and all other costs associated with attendance at **TPC** meetings are the responsibility of the attendees. The **TPC** may, at the discretion of the **SC**, pay for some meetings expenses on an exceptional basis.

4.5   Conduct of General Meetings

General Meetings shall be conducted in accordance with documented **Bylaws** and **Policies**. In situations not covered by documented **Bylaws** and **Policies**, Robert's Rules of Order shall apply.

4.5.1   Meeting Minutes

The **Administrator** is responsible for recording and posting the minutes of the **General Meetings**. Any written presentation, visual aid, or document presented by a **Member** at a **General Meeting** must be provided to the **Administrator** prior to presentation for inclusion in the meeting minutes. Any **Member** may request the exclusion of material from the minutes; a decision by the **Council** to exclude material from the minutes shall be determined by a **Simple Majority** vote. Adobe Acrobat PDF and HTML are common formats for exchange of such documents; however, arrangements can be made with the administrator for alternate formats such as Microsoft PowerPoint, if convenient for both parties. Materials updated during presentation must also be provided by the end of the meeting.

4.6   Duties of Chairman

This section refers to the duties and conduct of chairmen elected within the **TPC**.

4.6.1   **Participation of Chairman in Discussion**. The chairman must tell the group when he is placing himself on the list of people to be recognized. If there are restrictions imposed on the number of times or length of time a person may speak on an issue, the chairman must adhere to the same restrictions. The chairman and the **General Meeting** chairman in particular, facilitates group discussion and should be very selective in participating in discussion.

4.6.2   **Motions from Chairman**. A chairman, other than the chairman of the **General Meeting**, may recognize himself to make a motion, but should encourage the motions to come from the subcommittee. The chairman of the **General Meeting** may not make a motion.

4.6.3   **Summary of Group Decisions**. The chairman may summarize the decisions of the group to facilitate discussion in his role as chairman.

4.6.4   **Voluntary Temporary Replacement of Chairman**. The chairman may voluntarily step down during discussion of an issue. The temporary replacement (chairman pro tem) shall be nominated and elected by the group. The chairman pro tem is elected by **Simple Majority**. In the event a run-off is necessary, the candidate with the fewest votes will be eliminated and the vote will be repeated. At the conclusion of the discussion of the issue, the chairman pro tem will transfer the chairmanship back to the normal group chairman.

4.6.5   **Involuntary Temporary Replacement of Chairman**. The chairman may be temporarily replaced by the group when there is a real or perceived conflict of interest by the chairman in the issue being considered. This shall be a **Simple Majority** decision. The temporary replacement (chairman pro tem) shall be nominated and elected by the group. The chairman pro tem is elected by **Simple Majority**. In the event a run-off is necessary, the candidate with the fewest votes will be eliminated and the vote will be repeated. At the conclusion of the discussion of the issue, the chairman pro tem will transfer the chairmanship back to the normal group chairman.

4.7   **Voting Rules at General Meetings**

The following voting rules shall apply at a **General Meeting**:

Motion Pertains To	Voting Rule	Reference
election of individuals to Standing Committees	Candidates receiving most votes, but at least a **Simple Majority**	**Policies** § 3.1.2
approval of members on Technical Subcommittees	**Simple Majority**	**Policies** § 3.5.3
election of chairman for Standing Committees and Technical Subcommittees	**Simple Majority**	**Policies** § 3.1.2 and **Policies** § 3.5.3
time and location of **General Meetings**	**Simple Majority**	**Policies** § 4.1
revocation of **Auditor** certification	**Simple Majority**	**Policies** § 9.3.5
non-compliance of a **Result**	**Simple Majority**	**Bylaws** § 3.5 (e)(1)
policy violation	**Simple Majority**	**Bylaws** § 3.5 (e)(1)
exclusion of presentation material from meeting minutes	**Simple Majority**	**Policies** § 4.5.1
authorization for a **Mail Ballot**	**Simple Majority**	**Policies** § 4.8.2.1
All other motions	Two-thirds as defined as a **Super Majority** in **Bylaws**	**Bylaws** § 3.5 (e)

For convenience, the following definitions are included from **Bylaws** § 3.5(e):

A **Super Majority** is defined as two-thirds of the Directors present and voting, excluding abstentions. A **Simple Majority** is defined as greater than 50% of **Members** present and voting. Except as otherwise provided in the Articles, in these Bylaws, or by law, every act or decision done or made by a **Super Majority** at a meeting duly held at which a quorum is present is the act of the Board.

4.8 Mail Ballots

4.8.1 Certain decisions require a **Mail Ballot**, specifically: adoption of a **TPC-Enterprise Benchmark Standard** (**Policies** § 11.3.1) or a major revision to a **TPC-Enterprise** standard (**Policies** § 11.3.1), amendment of the **Bylaws** (**Bylaws** § 6.4), and expulsion of a member (**Policies** § 2.5.4). Other decisions may be put to a **Mail Ballot**, at the discretion of the **Council**.

4.8.2 **Process for Conducting a Mail Ballot**

4.8.2.1 **Authorization.** A **Mail Ballot** is authorized by a **Simple Majority** of the **Council**. The **Council** motion to authorize a mail ballot must include the complete and final text of the ballot in accordance with **Policies** § 4.8.2.4.

4.8.2.2 **Eligibility.** Only **Members** at the time the **Council** authorizes a **Mail Ballot** are eligible to vote. The number of votes needed to approve a **Mail Ballot** is relative to the number of eligible **Members** at the time the ballot is authorized and does not change after that.

4.8.2.3 **Distribution.** The **Administrator** shall **distribute** the **Mail Ballot** in written form to the **Primary Representatives** of all **Members** within seven days of authorization. In addition, the **Mail Ballot** shall be posted on the **Private Web Site.**

4.8.2.4   **Format**. A **Mail Ballot** shall follow the form and structure shown below.

TPC Mail Ballot	
Title of ballot measure:	<title>
Purpose of Mail Ballot:	
☐ Adoption of a New Standard	
☐ Adoption of a Major Revision to an existing Standard	
☐ Amendment of the Bylaws	
☐ Expulsion of a Member	
☐ Other: <describe purpose if not one of the above choices>	
Question:	<question being put to the membership; must be in the form of a yes or no question>
Date authorized:	*Month Day, Year*
Voting closes at:	Month Day, Year, 11:59PM Pacific Civil Time (Comment**:** for Adoption or Revision of a Standard, voting will close early when at least two-thirds of eligible members have voted in favor or more than one-third have voted against)
Number of Members eligible to vote:	<number>
Number of votes required for ballot to be valid:	<number> - or - "N/A" (See Policies § 4.8.3)
Number of YES votes needed for approval:	<number> - or - "two-thirds of votes cast" (See Policies § 4.8.3)
Members eligible to vote:	<list of all Members eligible to vote>
Voting Form	
To cast your ballot, complete the following and send to the TPC administrator. **TPC Member _____ votes _____ (YES / NO / ABSTAIN) on the Mail Ballot titled "<title>".** **Signature of Primary Representative:** _____ (if sent by email, signature is replaced by sending from primary rep's email account on record with the TPC) **Date and time:** _____	

4.8.2.5 **Voting.** Votes must be cast in written form, including, but not limited to, hardcopy, fax, or email. Votes must be received by the **Administrator** before the closing date and time specified in the ballot. Votes must be cast by the **Primary Representative**. In the case of hardcopy or fax, the ballot must be signed. In the case of email, the ballot must be sent from the **Primary Representative**'s email account on record with the TPC. A **Primary Representative** may change his company's vote at any time before the ballot closes by submitting another ballot. The **Member**'s vote will be based on the last valid ballot submitted. The **Administrator** will acknowledge receipt of each vote cast by the end of the next business day by sending email to the **Primary Representative** indicating how the ballot was cast or that there was a problem with the ballot that invalidated it.

4.8.2.6 **Confidentiality.** Prior to the vote closing, certain information is secret; specifically, who has voted, how they have voted, and the current tally shall be kept secret by the **Administrator**. Other information is not secret; specifically, the total number of qualified ballots received is not secret and shall be made available upon request and posted on the **Private Web Site**.

4.8.2.7 **Certification.** The results for a **Mail Ballot** are certified by the **SC**. After the vote closes, the **Administrator** shall announce the results, including how each **Member** voted, to **All Members**. Any **Member** who believes that his vote was incorrectly recorded may file a protest with the **SC**. A protest must be filed within seven days of announcement of the results. The **SC** will resolve protests by examining the record of ballots. The **SC** will certify the **Mail Ballot** results as soon as practical after the protest period ends. Once certified by the **SC**, the **Mail Ballot** result is final. The **SC** will inform **All Members** of the final result once it is certified.

4.8.3 The following table summarizes the timeline and voting thresholds for **Mail Ballots**:

Mail Ballot Pertains To	Time to respond to mail ballot	Responses needed for ballot to be valid	Votes needed to pass
Expulsion	30 days (**Policies** § 2.5.5)	N/A	Two-thirds of the **Members** (**Policies** § 2.5.5)
Approval of **TPC-Enterprise** standard or major revision	As soon as votes are decisive, but not more than 60 days. (**Policies** § 11.3.1)	Two-thirds of the eligible directors (**Policies** § 11.3.1)	Two-thirds of those submitting a ballot (**Policies** § 11.3.1)
Amendment of **Bylaws**	As specified by the **Council**	N/A	Two-thirds of the directors (**Bylaws** § 6.4)
Any other matter	As specified by the **Council**	As specified by the **Council**, but not less than quorum for a meeting. (**Bylaws** § 3.5 (d))	As specified by the **Council**, but not less than the thresholds set in **Policies** § 4.7.

4.9 Calendar of Recurring Events

Following is the calendar of the **TPC** recurring events. These periodic events are collected here for ease of reference; in case of a conflict precedence is given to the referenced clauses:

Event	Due Date or Frequency	Calendar Date	Reference
Election of individuals to **Standing Committees**	First **General Meeting** of the calendar year	Typically February	**Policies** § 3.1.1
Annual budget	Before the dues are set and **Members** notified	October meeting	**Policies** § 2.1.1
Annual report	No more than 120 days after the close of the fiscal year	May 30*	**Bylaws** § 5.2
Statement of transaction or indemnification	With annual report	May 30*	**Bylaws** § 5.3
Dues **notification**	60 days before the end of the calendar year	November 1	**Policies** § 2.1.1
Written subcommittee Report	Final **General Meeting** of the calendar year	Typically December	**Policies** § 3.2.2.2
Annual direction statement and implementation plans	By the end of the calendar year	December 31	**Policies** § 3.2.2.1
Notification of the **Members**' right to receive a financial report	Annually	December 31	**Bylaws** § 5.2
Time and location of each **General Meeting**	At least 6 months in advance		**Policies** § 4.1

* assumes close occurs at the end of the fiscal year on December 31

Section 5: Benchmarks

5.1   **Benchmark Class**

A **Benchmark Class** is a set of **Benchmark Standards** that have the same characteristics **Policies** § 5.1.1. The characteristics of the **Benchmark Classes** approved by the TPC are set forth in the **TPC Policies**. The addition, removal or modification of a **Benchmark Class** occurs with the approval of the changes to the **TPC Policies** in accordance with **Policies** § 4.7.

5.1.1   **Benchmark Class Characteristics**

5.1.1.1   **Performance Metrics**: The minimum required performance metrics reported by the Benchmark Standards. Additional optional performance metrics may be specified for the Benchmark Class by creating a Benchmark Standard for the optional metrics.

5.1.1.2   **Validation Requirements**: The minimum required validation of the benchmark result as defined by the Benchmark Standards in the Benchmark Class. The validation may be a formal third party audit or as simple as the review of a log file.

5.1.1.3   **Disclosure Documentation Requirements**: The minimum required documentation for the disclosure of the benchmark result for the Benchmark Standards in the Benchmark Class.

5.1.1.4   **Benchmark Deliverables**: The minimum required deliverables to be created by the **Benchmark Subcommittee**s.

5.1.1.5   **Benchmark Development Process**: The minimum required process for the creation of a Benchmark Standard.

5.1.1.6   **Voting Rules**: The minimum required voting rules for the Benchmark Development process.

5.1.1.7   **Benchmark Submission Rules**: The minimum required process for submission of a Benchmark Standard Result to the TPC.

5.1.1.8   **Benchmark Acceptance Rules**: The minimum required process for acceptance of a Benchmark Standard Result by the TPC members.

5.1.1.9   **Benchmark Fair Use Rules**: The minimum required rules for using a Benchmark Standard Result in public information.

5.2   **Benchmark Standard**

At a minimum a **Benchmark Standard** is a specification that describes the benchmark requirements sufficiently for a Test Sponsor to run the benchmark and submit a result to the TPC. A **Benchmark Class** may require that the **Benchmark Standard** additionally include TPC-Provided Code or TPC-Provided Binaries.

5.2.1   **Name**. The name of any benchmark standard shall begin with the letters "TPC" to clearly identify the standard as belonging to the Transaction Processing Performance Council. A suffix is then added to uniquely identify the **TPC Benchmark Class** and **Benchmark Standard**.

5.2.2   **Benchmark Versions**. The first version of a **Benchmark Standard** is Version 1.0.0. New versions of a **Benchmark Standard** will use the versioning methodology defined in **Policies** § 5.3.

5.2.3   **Umbrella Specifications** (**Pricing, Energy and Glossary).** Separate **Specification**s that are included in the **Benchmark Standard** or applied to **Benchmark Standard**s per the **Benchmark Class** policies.

5.2.4   All **Benchmark Standard**s and Umbrella Specifications must identify the **Benchmark Class** governing the **Benchmark Standard** or **Specification**.

5.3   **Revisions to a TPC Benchmark Standard**

          Results on different versions of a **TPC Benchmark Standard** are considered comparable unless the **Council** stipulates to the contrary. If the **Council** stipulates that **Results** on a new version are not comparable to **Results** on an older version, the **Council** will also stipulate any restrictions for publicly comparing older version **Results** with newer version **Results**.

5.3.1   If a **Specification** includes **TPC-Provided Code**, the **TPC-Provided Code** must use the same major and minor version numbering as the **Specification** and the major and minor version numbers must match for a published result.

5.3.2   There are three types of revisions:

5.3.2.1   **Third Tier Revision**. Third tier changes are only those changes that clarify some confusing or ambiguous area of the **Specification** but do not change the workload or **Specification's** intent or meaning. A new version with third tier revisions is denoted by incrementing the value in the second decimal place after the major revision number. For example, a third tier revision to Version 1.2.3 is Version 1.2.4. Third tier revisions include the following:

          • Insignificant editorial changes (i.e., changes that don't change the meaning of the specification)
          • **TAB** interpretations
          • Variants (like TPC-H SQL variants)

          Voting rules for the acceptance of a **Third Tier Revision** of a **Benchmark Standard** are specified in the **Benchmark Class** requirements.

5.3.2.2   **Minor Revision**. Minor revision changes are those which alter the workload, intent, and/or meaning of the **Specification**, but in such a way that new **Results** are still comparable to the prior version. A change is defined as "minor" or "major" depending on whether the **Results** are comparable with the older version of the **Specification**. A new version with minor revision changes is denoted by incrementing the value in the first decimal place after the major revision number and setting lower order positions to zero. For example, a minor revision to Version 1.2.3 is Version 1.3.0. Minor revisions include the following:

          • Changes to the **Specification** that have an impact on how **Test Sponsors** implement the benchmark
          • Additional requirements

          Voting rules for the acceptance of a **Minor Revision** of a **Benchmark Standard** are specified in the **Benchmark Class** requirements.

5.3.2.3   **Major Revision**. Major revision changes are those which are so significant to the workload or intent of the **Specification** as to make **Results** from this new version incomparable with the older version. A new version with major revision changes is denoted by incrementing the value in the left most position of the version number and setting lower order positions to zero. For example, a major revision to Version 1.2.3 is Version 2.0.0.

          Voting rules for the acceptance of a **Major Revision** of a **Benchmark Standard** are specified in the **Benchmark Class** requirements.

5.3.3   **Obsolescence of Older Versions of a Benchmark Standard.** For some period of time an older version of a **Benchmark Standard** and a new version of the **Benchmark Standard** will co-exist. The time period and voting rules to obsolete the older version of the **Benchmark standard** are specified in the **Benchmark Class Requirements**. Once a **Benchmark Standard** is deemed to be obsolete, no further **Results** may be published using that **Benchmark Standard**.

5.3.4   Changes to a **TPC** specification are to be **posted** to the **Web Site** and **All Members**, **Auditors**, and benchmark subscribers notified. The Maintenance subcommittee will produce a document listing the changes from the prior version.

5.4   TPC-Provided Code & TPC-Provided Binaries

5.4.1   Development and maintenance activities for **TPC-Provided Code and the code used to generate TPC-Provided Binaries** must follow the process outlined in the following clauses.

5.4.2   To facilitate bug tracking, the TPC provides a bug tracking tool via a web based interface accessible to Members. Non-Members can submit problems to the TPC via email to the TPC administrator (or through other mechanisms as defined by the Council).

5.4.3   Members are encouraged to report problems to the TPC in a timely fashion.

5.4.4   Problem reports will be classified as one of the following:

- Portability: A problem that prevents the operation of a benchmark on a specific platform. This includes any problem that arises out of a change in platform (compiler, OS, hardware), (i.e. v1.0.0 compiles fine on OS v1.x but fails on OS v2.x)

- Logic error: A problem that prevents the proper operation of the benchmark. This includes any problem that arises out of a change in the version of the **TPC-Provided Code** (i.e. v1.0.0 works fine, but v1.0.1 fails to operate properly).

- Feature/Enhancement: A request for new (or enhanced) functionality.

5.4.5   Changes to **TPC-Provided Code** by the subcommittee will follow the process outlined:

5.4.5.1   A document describing the requirements for a code change is produced. The change must be linked to one or more bugs entered in the bug tracking system (see **Policies** § 5.4.2).

5.4.5.2   The subcommittee must vote to accept the documented requirements before considering any code changes. The committee may modify the requirements during the acceptance process. The subcommittee is encouraged to develop a test case for any proposed changes.

5.4.5.3   The code change and any potential test case(s) will be made available for evaluation and a **notification sent** to the subcommittee.

5.4.5.4   Code changes must be accepted by a vote of the subcommittee.

5.4.6   All **TPC-Provided Code** must be tested on a representative set of platforms with the assistance of **Member** companies. The type and amount of testing performed on each platform must be sufficient to ensure proper operation of the **TPC-Provided Code**. The following categories provide guidelines for the types of testing which is expected:

5.4.6.1   Platform testing of source code: Simple tests that validate the quality of the source code and compliance with coding best practices. This includes verifying that the source code compiles without warnings on a representative set of platforms, as well as testing with third-party code analysis tools used to validate the code for best practices (e.g., memory leaks, exception handling, etc.).

5.4.6.2 Platform testing of executable code: Tests that validate the required functionality of code. Tests also verify that exception handling is correct and check for memory leaks and other unintended side effects.

5.4.6.3 Unit testing: Tests for specific functionality, on a routine or method basis. Test cases are generally simple (input X produces output Y). Examples include random number and date/time generation.

5.4.6.4 Functional testing: Tests designed to exercise specific functionality on a subsystem basis. Test cases are more complicated, and may require specialized code to simulate the operation of the benchmark and/or validate the results of the simulation. Examples include input generation and mix control.

5.4.6.5 End-to-End testing: Tests of the entire operation of the benchmark, performed by **Members** in their environment(s). Test cases are designed to validate the data generated by a revision of the code are comparable to previous versions and verify no functional differences have been introduced.

5.4.7 To create a revision of **TPC-Provided Code**, the subcommittee must:

5.4.7.1 Collect all approved code changes to include in the revision (**Policies** § 5.4.5).

5.4.7.2 Perform appropriate testing to ensure the collection of code changes are properly addressed, and ensure that no new problems are introduced (**Policies** § 5.4.6).

5.4.7.3 If any previously approved code changes cannot be included in the beta release for any reason, exclusion requires a committee vote.

5.4.7.4 Release a "beta" revision of the code with sufficient lead time to allow **Member** companies to integrate the code into their environment for verification of the proposed changes.

5.4.7.5 Ensure that at least one **Member** company tests the proposed changes and report back in a timely manner. Test completion must be documented in subcommittee meeting minutes.

5.4.7.6 Resolve any reported issues with the proposed changes to the satisfaction of the subcommittee.

5.4.7.7 The voting requirements to approve the type of revision level for the changes to **TPC-Provided Code** are specified in the Benchmark Class requirements.

Comment: The determination of the revision level for the **TPC-Provided Code** changes must be evaluated based on the effect of the changes to the benchmark implementation and any additional requirements. The intent is to allow for separate Third-Level revisions of the **TPC-Provided Code** or the **Benchmark Standard** specification when the changes meet the requirements in **Policies** § 5.3.2.

5.4.7.8 Vote to release an official revision of the code for approval by the **Members**.

5.4.8 **TPC-Provided Code** is subject to the conditions and terms in the EULA that is distributed with the code.

5.4.9 All processes and procedures outlined in **Policies** § 5.4 are the responsibility of the benchmark development and maintenance subcommittees (**Policies** § 3.5.1 and **Error! Reference source not found.**). The subcommittee may assign some or all of these tasks to an individual, a subset of the subcommittee, or to an outside third party.

5.4.10 **TPC-Provided Code** and TPC-Provided Binaries are provided "as-is". The **TPC** will provide support as outlined in **Policies** § 5.4.

Section 6: Results Publishing

6.1 Test Sponsor

The **Test Sponsor** is the company officially submitting the **Result** and will be charged the **Filing Fee**. The **Test Sponsor** is responsible for maintaining the **Result** with any necessary updates or corrections. The **Test Sponsor** is also the name used to identify the **Result**. Only the **Test Sponsor** can withdraw a **Result**, unless withdrawn by the **Administrator** based on a decision of the **Council**.

6.2 Reporting Processor Information

All benchmark **Specifications** must require disclosure of the number of **Cores**, **Processors**, and **Processor Threads** in the **Executive Summary** and/or the **FDR**. The reporting must use the following rules.

6.2.1 **Core**. **Execution Unit** that is capable of running one or more **Processor Threads**. If a hardware unit can run more than one concurrent **Processor Thread** without requiring the **Processor Threads** to share execution resources, it is more than one **Core**. It may rely on other "assist" units, such as cache, hardware accelerators, and the like - some or all of which may be shared by multiple **Cores**. The reported number of **Cores** must be the number of **Cores** that are enabled for the benchmark.

6.2.2 **Execution Unit**. The electronic circuits necessary to implement the semantics of all possible instructions in a computer architecture.

6.2.3 **Processor**. A component that contains one or more **Cores**. The number of processors claimed by the test sponsor must be consistent with the way the product is represented in the test sponsor's marketing collateral, including that which is not related to TPC benchmark results. The reported number of processors must be the number of processors that are enabled for the benchmark.

6.2.4 **Processor Thread**. The hardware necessary to maintain the state of a **Software Thread**. The reported number of processor threads must be the number of concurrent processor threads that are enabled for the benchmark.

6.2.5 **Software Thread**. An instruction sequence that performs operations within an address space and is scheduled by software.

6.3 Pre-Publication Certification

Before a **Result** can be added to the **TPC Results List** (**Policies** § 6.4.1), the **Result** must be certified to be compliant with the spirit and letter of the **Benchmark Standard** by either a **TPC** certified **Auditor** (**Policies** § 9.3) or by a **Pre-Publication Board** (**Policies** § 10.2). The **Benchmark Class** determines the pre-publication certification requirements.

6.3.1 If a **Benchmark Standard** references an **Umbrella Specification**, the pre-publication certification requirements of the **Umbrella Specification** supersedes the **Benchmark Standard** pre-publication certification requirements for the benchmark results governed by the **Umbrella Specification**. For example, if a **Benchmark Standard** only requires **Pre-Publication Board** certification but references the **Pricing Specification** which requires certification by a **TPC** certified **Auditor**, then at a minimum the pricing of the **Result** must be audited by a certified **TPC** Auditor.

6.4 TPC Results List

The TPC will maintain a list of current and recently withdrawn **Results** (**TPC Results List**) for each active **Benchmark Standard**.

6.4.1 The **Administrator** will add a new **Result** to the **TPC Results List** as soon as the **Test Sponsor** submits the required documentation as defined in **Policies** § 6.5 and 6.6. A **Result** remains on the **TPC Results List** until it is withdrawn. While on the **TPC Results List**, a **Result** cannot be withheld from **TPC** Press Releases, Results Summaries, etc.

Results may exist with one of the following status categories:

- Submitted for Review
- Accepted
- Historical
- Withdrawn

6.4.2 The **TPC Results List** will show, for each **Result** listed, columns indicating the **TPC Benchmark Class** and **Benchmark Standard** version(s) with which it is compliant.

6.4.3 **Withdrawal of a Result**. A **Result**, whether in **Submitted for Review** or **Accepted** status, can be removed from the **TPC Results List** in the following cases:

- Withdrawn by the **Test Sponsor**. (See **Policies** § 6.14)
- By a vote of the **Council**. (See **Policies** § 6.13)
- By a vote of the Steering Committee (See **Policies** § 3.3.6.2 and **Policies** § 6.8.4)

6.4.3.1 Withdrawn **Results** will include a notation on the **TPC Results List** to indicate the withdrawal category. Corresponding to the categories defined in **Policies** § 6.14.2, the following notations will be included on the **TPC Results List**:

- Category #1: "Withdrawn without prejudice."
- Category #2: "Withdrawn by test sponsor after compliance to technical specifications of the benchmark was challenged. This does not imply any admission of error by the test sponsor or judgment by the TPC."
- Category #3: "Withdrawn by the TPC after the TPC ruled result was non-compliant with technical specifications of benchmark."
- Category #4: "Withdrawn by the Administrator in accordance with TPC Policies."

6.4.3.2 A withdrawn **Result** in Category #1 will be retained on the **TPC Results List** for 120 days from date of withdrawal and will be marked with a withdrawn status. **Members** may publicize a Category #1 withdrawn **Result** as being withdrawn in accordance with the **Fair Use Policy** as long as it is on the **TPC Results List**.

6.4.3.3 A withdrawn **Result** in any of Categories 2, 3, or 4 will be retained on the **TPC Results List** for 120 days from date of withdrawal, but may not be used for any new publicity.

6.4.3.4 A withdrawn **Result** is not a currently valid **Result** after it is removed from the **TPC Results List**, and may no longer be publicized. A members-only list of withdrawn results will be retained for TPC-confidential use.

6.4.4 **Historical Results**. It is understood that the availability and/or pricing of components used to create a **Result** are time sensitive. A **Result** that is in **Accepted** status is eligible to be designated as a **Historical Result** if it has been posted on the **TPC Results List** for at least 185 days past the submission date and at least 60 days past the availability date. Once so designated, it is no longer required to meet the pricing and/or availability criteria of the **Benchmark Standard**.

6.4.4.1   For **Results** that meet the criteria above, **Test Sponsors** may elect to change the status of a **Result** to a **Historical Result**.

6.4.4.2   For a **Result** that has been **Accepted** for at least three years, the **Administrator** will notify the **Test Sponsor** that the **Result** will be marked as **Historical** by the **Administrator**. The **Test Sponsor** may request within 90 days of notification that a **Result** remain on the **Accepted Results** list for an additional year by informing the **Administrator** that the tested configuration satisfies all availability and pricing (if applicable) requirements of the **Benchmark Standard**. If the **Test Sponsor** does not make such a request within 90 days, the **Administrator** will change the **Result** to **Historical** status.

6.4.4.3   Once a **Result** has been designated as a **Historical Result**, it may only be removed by specific action of the **Council**.

6.4.5   Obsolescence of Benchmark Standards

6.4.5.1   **Obsolete Version of the Benchmark Standard.** The status of **Results** based on an obsolete version of the **Specification** that is not comparable to the current version will be changed to **Historical** by the Administrator six months after the obsolescence date. This is an administrative action which does not require any action by the **Council**.

6.4.5.2   **Obsolete Benchmark Standard.** The status of **Results** based on an obsolete **Benchmark Standard** will be changed to **Historical** by the Administrator six months after the obsolescence date. This is an administrative action which does not require any action by the **Council**.

6.5   Result Documentation Disclosure Requirements

Disclosure of a **Result** requires accompanying documentation that describes the details of the benchmark **Result.**

6.5.1   **Executive summary.** All **Benchmark Classes** must include the requirement for an **Executive Summary.** The Executive Summary summarizes the **Results** key information (metrics, configuration, and performance data). The contents of the Executive Summary are specified by the **Benchmark Class** requirements and/or in the **Benchmark Standard**. The format must be 10x7.25 inches. The dates on the submission must be correct and any revision dates need to be included. The dates must be in the proper format dd-mon-yyyy. The system configuration information must be correctly listed, including whether the configuration is of a particular type, e.g. c/s or cluster. The **Executive Summary** is required to be attached to the **Alert Message** (see **Policies § 6.6**) and is required to be submitted to the **TPC** by close of business on the day of the initial **Alert Message.**

6.5.2   **FDR.** The contents and requirements for disclosure of details beyond those found in the **Executive Summary** are defined by the **Benchmark Class** and/or **Benchmark Standard**. The full disclosure report and the Supporting Files (Policies § 6.5.3) describes the benchmark in sufficient detail such that the **Result** could be recreated by another **Member**. The FDR must be delivered in PDF format. The **FDR** is required to be submitted to the **TPC** by close of business on the day of the initial **Alert Message.**

6.5.3   **Supporting Files.** The contents and requirements for disclosure of any Supporting files are defined by the **Benchmark Class** and/or **Benchmark Standard**. The FDR (**Policies** § 6.5.2) and the Supporting Files describe the benchmark in sufficient detail such that the **Result** could be recreated by another **Member**. The Supporting files must be delivered in a machine readable format. The Supporting files are required to be submitted to the **TPC** by close of business on the day of the initial **Alert Message**.

6.5.4   **Result Log Files.** The contents and requirements for disclosure of any Result log files are defined by the **Benchmark Class** and/or **Benchmark Standard**. The Result log files provide benchmark output information used to validate compliance with the **Benchmark Standard**.

6.5.4.1   For Result Log Files whose total size is less than or equal to 2 gigabytes, the files must be submitted to the **TPC** by close of business on the day of the initial **Alert Message**.

6.5.4.2   For Result Log Files whose total size is greater than 2 gigabytes, the files need not be submitted to the **TPC** by close of business on the day of the initial **Alert Message**. The **Test Sponsor** is required to place the Result Log files on a storage device (e.g. USB device, DVD media) and forward the device to the **TPC Administrator** within 5 business days of the **Result** being added to the **TPC Result List**. If the Result Log Files are not received within 5 business days, the **TPC Administrator** will notify the **Steering Committee**.

6.5.5   **Copyright Permission**. By submitting the **Result** Documentation to the **TPC**, the **Test Sponsor** grants the **TPC** permission to copy, **post** to the **TPC Web Site**, and **distribute** the submitted **Result** Documentation.

6.6   Alert Message

To alert **All Members** of a new **Result** in a timely manner, a **Test Sponsor** must send an **Alert Message** prior to a **Result** being released into the public arena (e.g., by newswire, press release, or press conference). This summary of the new **Result** provides **All Members** with the information they need to respond to questions that may be posed to them by people inside or outside their company.

An **Alert Message** must contain a summary of the **Result** being released, formatted in accordance with the template provided by the **Administrator**. In addition, the **Test Sponsor** must attach an Adobe Acrobat PDF file of the **Result's Executive Summary** to the **Alert Message**. The maximum allowable size of the PDF file is 500 KB. The **Alert Message** will be forwarded to the membership via an automatic electronic mailing mechanism provided by the **TPC**.

Test Sponsors must also send an **Alert Message** if there is any change in a **Result's** status or pricing. This includes but is not limited to the following type of changes:

- Withdrawing a **Result**
- Re-pricing a **Result**
- Changing a **Result's** availability date
- Making any other significant change to the **Result** or **FDR**

The **Alert Message** must clearly summarize what has changed and the extent of the change, particularly in regards to pricing changes. The **Test Sponsor** is encouraged but not required to provide any rationale or further explanation for the change. If the change affects the details provided in the **FDR**, the **Test Sponsor** must also submit a new **Executive Summary** and **FDR** to the **Administrator** prior to the **Result** being released into the public arena.

6.6.1   A compliant **Alert Message** must be sent via e-mail to the **TPC's** alert alias (tpcalert@tpc.org) for each submission, modification, and withdrawal of a **Result**. Without a compliant **Alert Message**, the **Administrator** will not register the **FDR** as an official **Result** or withdraw an existing **Result**. The contents of the Alert Message are defined by the Benchmark Class.

6.6.2   When submitting a replacement **FDR**, the **Test Sponsor** must explicitly state whether the **FDR** (or any portion of the **FDR**) is, in the **Test Sponsor's** opinion, subject to review or is accepted and does not require review.

6.6.3   When withdrawing a **Result**, the **Test Sponsor** must explicitly state whether the withdrawal qualifies as category 1 or 2, as defined in **Policies** § 6.14.2. Note that categories 3 and 4 do not apply to **Results** withdrawn by the **Test Sponsor**.

6.7 Results

The following categories define the actions that apply to a **Benchmark Standard Result**. Additional actions may be required by the Benchmark Class.

6.7.1   **New Result**. A new **Result** is a **Result** with a system/model number that is not on the current **TPC Results List**. This means that if a **Test Sponsor** submits a **Result** with a new model/system number based on an old benchmark test cited in an existing **FDR** -- and has not withdrawn the existing **Result** -- then it is considered a new **Result**.

6.7.2   **Replacement FDR**. If a Benchmark Class or Benchmark Standard requires a FDR, a replacement **FDR** is used to update information in the **FDR** for an existing **Result**. If the **Result** is in **Accepted** status, then the **FDR** does not have to pass through the **Submitted for Review** cycle, but the updated information is subject to the normal review process.

6.7.3   **Result Withdrawal**. The removal of a **Result** from the **TPC Results List**.

6.7.4   **Status Change**. If eligible (see **Policies** § 6.4.4)**,** the **Result** can be changed from **Accepted** status to **Historical** status.

6.8 Non-delivery of an Result Documentation

If a **Test Sponsor** issues an Alert Message (**Policies** § 6.6) but fails to deliver to the **TPC** the **Result** Documentation as required by **Policies** § 6.5, the following actions will ensue:

6.8.1   The **Administrator** will send the **Test Sponsor** a letter regarding their violation of the **Policies**.

6.8.2   At the next **General Meeting**, the **Council** will vote to cite the company as having violated the **Policies**.

6.8.3   If non-delivery of **Result** Documentation occurs again within a six month period from the day of the violation, the **SC** is authorized to meet with the **Test Sponsor** to discuss the matter, and if appropriate, issue a press release.

6.8.4   If for any reason a **Result** is added to the **TPC Result List** (**Policies** § 6.4.1) without the **Result** Documentation as specified in **Policies** § 6.5, the Steering Committee will review the issue at its next regular meeting. The Steering Committee shall vote on a motion whether to remove the **Result** from the **TPC Result List**.

6.9 Use of Disclosed Implementation

To facilitate an even playing field between **Test Sponsors** and lower the overall cost of benchmarking, the application code, database schema and definition, and tuning and optimization schemes documented in the **FDR** can be copied and implemented by any **Test Sponsor** for the sole purpose of **TPC** benchmarking. This precludes the reuse of **TPC** implementations in publicly disclosed non-**TPC** benchmarks.

6.9.1   **Scope of Use**. Strictly prohibited is any copying or use of any hardware/software component that lies outside the above stated definition. This includes, but is not limited to, any hardware/software component, which, by its nature, is an integral part of a **Test Sponsor**'s product and which is protected by copyright and intellectual property laws.

6.9.2   **Legal Responsibility**. If a **Test Sponsor** is uncertain whether copying is allowed or not, the **Test Sponsor** should contact the **SC** to secure the **SC's** advice before proceeding. The final legal responsibility, however, for what may be copied rests with the **Test Sponsor**, and the **Test Sponsor** should take all appropriate actions to ensure that all copying is done within lawful bounds.

6.10 Result Filing Fee

The **Test Sponsor** will be assessed a **Filing Fee** for each **Result** submitted to the **TPC.**

6.10.1 **Multiple Models Submission**. Though one **FDR** can be used to submit **Results** on two or more system models, the fee assessed will be on each system model (the fee times the number of system models submitted). A **Filing Fee** invoice will be issued quarterly by the **TPC** accountant to the **Primary Representative** of the **Test Sponsor**. At the request of the **Primary Representative** the **Filing Fee** invoice may be issued monthly or per **Result**. Payment to the **TPC** is due within 90 days from receipt of the invoice. In the event of non-payment of a **Filing Fee**, the **Result** will be withdrawn from the **TPC Results List** as a category #4 withdrawal (see **Policies** § 6.14.2.4) and no further **Results** will be accepted until payment in full has been made.

6.10.2 **Filing Fee Amount**. The amount of the **Filing Fee** for each **Benchmark Class** shall be established as part of the formulation of the **TPC** budget. When the budget is approved by the **Council**, the new **Filing Fee** is established. This does not preclude changing the **Filing Fee** at other times, as the **Council** deems necessary. The **Filing Fee** shall be documented on the **Web Site**. Different filing fees may be assessed for **Members** and **Non-member Test Sponsors**.

6.11 Status of Results

6.11.1 When a **Result** is submitted to the **Administrator**, it is given the status of **Submitted for Review**.

6.11.2 Once a **Result** has completed review by the TPC, it is given a status of Accepted.

6.11.3 **Accepted Status Cannot Be Revoked**. Once given, the **Accepted** status cannot be revoked or abrogated by later **Council** decisions or rulings for any reason, except for the following:

Comment: This clause (**Policies** § 6.11.3) recognizes the pragmatic principle that **Results** have a limited competitive lifespan and market relevancy, and that the **TPC** should spend its limited resources reviewing current **Results**.

6.11.3.1 When fraud or serious violations of the **Benchmark Standard** are involved.

6.11.3.2 When challenged on the basis of non-compliance with the pricing sections of the **Benchmark Standards**.

6.11.3.3 When challenged on the basis of non-compliance with the availability sections of the **Benchmark Standards**.

6.12 Review Process

The purpose of the review process is to enable **All Members** to examine the **FDR** and understand the implementation of a **Result**. During the **Review Period** a **Result** may also be scrutinized as to its compliance with the **Benchmark Standard**.

6.12.1 The review process begins when a **Result** is **posted** to the **Web Site**. When a waiver of requirement has been issued for a **Result** in accordance with **Policies** § 9.6.2.5, a bug report must be opened to describe the issue (§ 5.4.2).

6.12.2 A **Result** is subject to challenge for a period of time defined as the **Review Period**. The **Benchmark Class** defines the time of the **Review Period**.

A **Result** is subject to review even if it is withdrawn during the **Review Period**. (This prevents a **Test Sponsor** from submitting an invalid **Result** and then preventing the normal review process by immediately withdrawing the **Result**.)

6.12.3   A **Result** remains in **Submitted for Review** status during the **Review Period**. If no challenge is submitted to the **TAB** within the **Review Period**, the **Result** is automatically given the status of **Accepted**.

6.12.4   The **Result** is **posted** on the **Web Site** for review by **All Members**, who may, at their option and during the **Review Period**, submit to the **TAB** specific objections related to compliance with specific clauses of the **TPC Benchmark Standard**.

6.12.5   The **TAB** will evaluate any challenges as per the process described in the **Policies** § 3.3.3. The **TAB** meeting to discuss the challenge may occur after the **Review Period** has expired.

6.12.6   In the event a **Test Sponsor** submits documentation to the **TAB** in response to a challenge accepted by the **TAB**, that documentation is subject to the standard **Review Period**. Specifically, the submitted documentation is subject to challenge as if it were a new **Result**.

6.12.7   After the **Review Period**, any new challenge filed with the **TAB** must pertain to an objection already filed with the **TAB** or must pertain solely to issues specified in **Policies** § 6.11.3; members may not raise entirely new technical compliance issues missed during the original **Review Period**.

6.12.8   If an **Accepted Result** is challenged for non-compliance (see **Policies** § 6.11.3), the **Test Sponsor** has the option of withdrawing the **Result** (see **Policies** § 6.4.3.1) if it is not eligible to be **Historical** (see **Policies** § 6.4.4) or changing the status of the **Result** to **Historical**, if it is eligible.

6.12.9   Once one or more challenges are filed and accepted by the **TAB**, the **Result** remains in **Submitted for Review** status until all matters are heard by the **Council**. The **Result** passes into **Accepted** status when the following conditions are met:

6.12.9.1 All challenges accepted by **TAB** have been closed.

6.12.9.2 The **Council** has not voted that the **Result** is non-compliant.

6.12.9.3 No challenges are pending.

6.12.9.4 The **Review Period** has expired for the original **Result** and for all documentation submitted in response to challenges, respectively.

6.12.10   **Test Sponsors** are allowed to promote their **Submitted for Review Results** in the press. **Test Sponsors** are required to cite the **TPC** trademark in their public relations materials.

6.13   **Results of Council Vote on TAB Recommendations**

6.13.1   If the **Council** votes that a **Result** is in "non-compliance" with the **Benchmark Standard** solely for pricing and/or availability and the **Result** is eligible for **Historical** status (see **Policies** § 6.4.4), the status of the **Result** will be changed to **Historical** unless the **Council** votes to withdraw the **Result**.

6.13.2   Except for the case of **Policies** § 6.13.1, if the **Council** votes that a **Result** is in "non-compliance" with the **Benchmark Standard**, the **Administrator** shall immediately withdraw that **Result** from the **TPC Results List** as a category #3 withdrawal (see **Policies** § 6.14.2.3). The **Test Sponsor** must stop using this **Result** in any of its marketing, sales, or press materials in a timely manner.

6.13.3 If the **Council** votes that a **Result** is in "insignificant deviation" with the **Benchmark Standard**, the **Result** remains on the **TPC Results List**. The **Test Sponsor** must, within 30 days, update the **Result**. The update must include an Explanatory Statement in the notes section of the **Executive Summary**. If a violation can be resolved without rerunning the benchmark, the update must also include the correction(s) for that violation. The **Test Sponsor** may request the **Administrator** to withdraw the **Result** as a category #4 withdrawal.

6.13.3.1 The Explanatory Statement must describe the affected clause(s) in the **Benchmark Standard**, explain how the **Result** does not conform to it, and assess -- as well as quantify -- the impact of the nonconformance.

6.13.3.2 The **Test Sponsor** must submit the updated **Result** within 30 days of the official date of the **Council** ruling of "insignificant deviation" or the **Result** will be withdrawn by the **Administrator** as a category #4 withdrawal (see **Policies** § 6.14.2.4).

6.13.3.3 An updated **Result** (based on insignificant deviation) is subject to an additional review period (see **Policies** § 6.12) for those clauses affected by the insignificant deviation.

6.14 Withdrawing a Result

6.14.1 **Test Sponsors** may withdraw a **Result** at any time prior to when the **Result** becomes eligible to be changed to a status of **Historical** (see **Policies** § 6.4.4), by so **notifying** the **Administrator** by sending an **Alert Message**. (See **Policies** § 6.6)

Comment: If a **Test Sponsor** wishes to remove a **Result** from the list of **Accepted Results** after the **Result** has been posted long enough to achieve eligibility to be marked as **Historical,** withdrawal is no longer an option for the **Test Sponsor.** The status of the **Result** may only be changed to **Historical.**

6.14.2 A withdrawn **Result** will fall into one of following categories:

6.14.2.1 Category #1: Withdrawn by the **Test Sponsor** without prejudice. This means a **Test Sponsor** voluntary withdraws a **Result** that has had no compliance challenge brought and upheld against it.

6.14.2.2 Category #2: Withdrawn by the **Test Sponsor** during the review period after being challenged as non-compliant.

6.14.2.3 Category #3: Withdrawn by the **Administrator** after the **Council** ruled a **Result** is non-compliant.

6.14.2.4 Category #4: Withdrawn by the **Administrator** in accordance with the **Policies**. For example, if a **Result** that is ruled to contain insignificant deviations is not corrected within 30 days, the **Administrator** will withdraw it.

6.14.3 New **Result** Documentation (**Policies** § 6.5) is required to resubmit a withdrawn **Result**.

6.15 Impact upon Existing Results of Changes to a TPC Specification

This policy describes what happens to **Results** when changes are made to a **TPC Benchmark Standard**, thereby creating a new version of it.

6.15.1 After a new version of a **TPC Benchmark Standard** becomes effective, a **Test Sponsor** with an existing **Result** for a prior version of the **Benchmark Standard**, whether in the **Submitted for Review** or **Accepted** status, has the following options:

6.15.1.1 The **Test Sponsor** can submit an entirely new **Result**, without necessarily having to rerun the test that is stated by the **Test Sponsor** to be in full compliance with the new version. Normal

review procedures apply as specified by the **Benchmark Class**. All aspects of the **Result** are subject to review.

6.15.1.2   The **Test Sponsor** can upgrade the **Result** to the new version using the appropriate method as determined by the **Council**.

6.15.1.3   The **Test Sponsor** can do nothing, in which case, a **Result** stays on the **TPC Results List** for 6 months and is then changed to the status of a **Historical Result**.

Comment: The intent of this clause is to encourage **Test Sponsors** to perform a positive action, if they wish to claim compliance with a new specification version. Previously submitted **Results** do not automatically achieve recognition under the new version.

6.15.2   A **Test Sponsor** may continue to use a **Result** that is compliant with a previous version of a **Benchmark Standard**, but the version must be indicated.

6.15.3   A **Result**, when submitted, must be compliant with either or both of: (1) the version of the **Benchmark Standard** in effect at the date of submittal; (2) a new version of the **Benchmark Standard**, in those cases when it was already officially approved to take effect at a future date. A **Test Sponsor** must state in the **FDR** and/or **Executive Summary** the version or versions of the **Benchmark Standard** with which a **Result** complies. Usual review procedures then apply.

Comment: It may not be possible to comply with both the current and new versions. For example, if the number of districts per warehouse in the database is changed from 10 to 100, a test could not be compliant with both versions. A **Test Sponsor** might want to run tests with 10 districts per warehouse right up until the time the new specification is effective in order to be able to compare **Results** with previous tests.

6.16   Results Submitted on Another Vendor's Product

A special case occurs when a **Result** is published on a vendor's system or software by a sponsor who does not benefit from achieving the best possible result. This special case must be governed by a special policy. When a **Test Sponsor** wishes to publish a **Result** on a competing company's product, the following policy is invoked.

6.16.1   If the **Test Sponsor** wishes to publish a **Result** on Vendor Y's system/software and the **Test Sponsor** has Vendor Y's permission, the **Test Sponsor** can do so according to the standard policies outlined in this document.

6.16.2   If the **Test Sponsor** does not have Vendor Y's permission, then the policies to handle review and challenge of the **Result** are specified in the **Benchmark Class**.

6.17   Rebadged Results

For an existing **Result**, the **SUT** tested in that **Result** may be sold in other forms including but not limited to different names, models, brands, and/or companies. In this situation, a **Test Sponsor** may publish a new **Result** under a new designation using the performance tests done for the existing **Result**. This is defined as a **Rebadged Result**. The following rules apply to **Rebadged Results**.

6.17.1   All **Policies** for publishing a **Result** apply to **Rebadged Results**, except as otherwise provided in this clause (**Policies** § 6.17).

6.17.2   No performance or functional characteristics of the **SUT** can change from the **SUT** as used in the original **Result**. The **SUT** used in the **Rebadged Result** must be electronically equivalent to the **SUT** used in the original **Result**.

6.17.3   Component substitution must follow the procedures and restrictions for substitution found in the current **Benchmark Standard** for that benchmark.

6.17.4   The **Rebadged Result** is published under the benchmark version of the original **Result**.

6.17.5   The **Result** may be rebadged whether or not the version of the **Benchmark Standard** used in the original **Result** is still the current version of the **Benchmark Standard**.

6.17.6   The review process defined in **Policies** § 6.12 applies to a **Rebadged Result**.

6.17.7   At the time a **Rebadged Result** is published, the status of the original **Result** must be **Submitted for Review** or **Accepted**.

Comment: Pending compliance challenges against the original **Result** does not prevent publication of a **Rebadged Result.**

Section 7: Public Relations

7.1 Confidentiality Rule

7.1.1   All internal **TPC** communications, whether in the form of verbal discussions or hard copy or electronic media, including **Council, Standing Committee,** and subcommittee discussions, minutes, and memorandum, as well as **Member's** and **Associate Member's** discussions and memorandum, must be treated as **TPC Confidential**. **TPC Confidential** information must not be disclosed to any individual, company, or organization other than **Members**, **Associate Members**, and **Affiliates**.

7.1.2   With the exception noted in **Policies** § 7.1.3, **All Members** are encouraged to share all **TPC Confidential** information with individuals or divisions within their own company, but must not release any of the above to organizations outside the **TPC** without approval from the **SC** or **Council**.

7.1.3   **Exceptions to Confidentiality Rules**

7.1.3.1   Rulings or interpretations of **TPC Benchmark Standards** shall be disseminated to all affected parties, including members, users, and **Auditors**. However, these interpretations shall not be released to the public unless specifically approved by the **SC** or **Council**.

7.1.3.2   The **SC** must authorize any disclosure of **TPC Confidential** information beyond that allowed by the **Policies**. The requestor should first consult with the **Administrator**, who will pass on the request and make a recommendation to the **SC**.

7.1.3.3   All non-member guests wishing to attend **General Meetings** must be screened by the **Administrator**, who will pass on the request and make a recommendation to the **SC** on whether to invite them. The **SC** will approve any non-member guests and stipulate any restrictions on their involvement in meeting discussions.

7.1.3.4   Non-member guests to subcommittee or **Council** meetings will be required to sign a non-disclosure agreement stating that they won't publicly disclose anything they see or hear at **TPC** meetings.

7.1.3.5   To further the public relations goals of the **TPC** (i.e., increase **TPC** visibility, recruit new members), the **PRC** will extract highlights of the technical subcommittee reports from **General Meetings**. The **PRC** will send these extracts to the chairmen of the technical subcommittees for their review and approval. Once these highlights are reviewed and approved by the subcommittee chairmen, the **PRC** will publish these on the **Web Site**. Excluded in these publicized highlights are all **TPC** fair use, **TAB**, and administrative issues.

7.1.4   The **Council** reserves the right to take appropriate action when breaches of confidentiality occur.

7.1.5   To enforce the **Privacy Policy,** personal information collected from the public is confidential to the **TPC**. This information is not available to any **Member**, **Associate Member**, **Affiliate**, or any other entity, except as needed to operate the **TPC**'s electronic infrastructure.

7.2 Communications with the Press and Public at Large

The **Spokesperson** is authorized to speak to the press or the public at large on behalf of the **TPC**. No member may speak to the press or the public at large on behalf of the **TPC** other than the **Spokesperson**, except for the following circumstances:

7.2.1   **Speaking to Customers**. Member companies may speak to their customers about their own participation in the **TPC**.

7.2.2 **Speaking at Conferences**. Member companies can represent the **TPC** as conference speakers if authorized by the **SC**.

7.3 TPC Press Releases

The **Council** will approve any **TPC** press release, except for the standard quarterly press release, which the **PRC** is authorized to issue without **Council** approval.

7.4 Member Press Releases

All Members are encouraged to publicize their involvement in the **TPC**, including the publishing of **Results**. However, **All Members** must follow the **Fair Use Policy**. All references to **TPC** benchmark names must be accompanied by the **TPC** trademark (e.g., TPC Benchmark A, TPC-A, or derivative).

7.5 TPC Web Site

The design and layout of the **Web Site** is under the control of the **PRC**. The **PRC** will maintain the design and layout of the **Web Site** in a manner consistent with the **TPC** mission and **Policies**. The **PRC** will **notify All Members** of any major design and layout changes. **All Members** will have a two-week period to review the changes and file any objections with the chairman of the **PRC**. At the end of the two-week period, if there are no objections filed, the **PRC** will implement the changes. If any objections cannot be resolved, the **PRC** will defer the changes until approved by the **Council.**

7.5.1 Documents posted on the **Web Site** and **Private Web Site** should be in a generic HTML format viewable by at least two types of browsers (Internet Explorer and Netscape). In the event that content is not available as generic HTML (e.g., because the native format is not HTML or converting to HTML would be unnecessarily burdensome), a generic interchange format shall be added. The preferred non-HTML format is Adobe PDF (Portable Document Format). In addition to HTML or PDF, the content may also be provided in other formats (e.g., native) at the discretion of the webmaster.

Comment: The intent of this policy is to ensure that content is broadly accessible to all users regardless of origin or destination platform while at the same time facilitating its usefulness.

7.5.2 The **TPC** shall have the following **Privacy Policy** governing personal information collected from the public.

Your privacy is important to the TPC. We follow the industry practices to let you know how our privacy policy answers the following questions:

1.   What information does the TPC gather/track and how is it used?

2.   With whom does the TPC share the information it gathers/tracks?

3.   What is the TPC's unsubscribe and data-removal policy?

4.   How can I correct and update my personal information?

5.   What is the TPC's policy on deleting or de-activating my name from its database?

6.   Whom can I ask if I have any additional questions?

In general, you can visit the TPC on the Web without telling us who you are and without revealing any information about yourself. There are times, however, when we may need information from you. We do not collect personal information about you unless you voluntarily provide it to us. We collect, process and use personal information only for providing relevant services to you. That information will be gathered when you come onto our site to: provide feedback in an online survey; and/or request certain reports.

The personal information that may be gathered includes your name, fax, telephone number, street address and e-mail address. You may also be asked for further information about yourself such as your job category, your industry type, your company name and job title, and the number of people in your company.

We will use our best efforts not to transfer information that personally identifies you to anyone else without your knowledge and approval at the time it is collected from you. Please note, however, that in addition to sending you periodic status reports we may contact you about matters that affect your use of our site such as the status of your subscription to our reports.

Upon your request, we will assist you to review, delete, correct, or update your personal information that you have previously provided. If at any time you believe that we have not adhered to our policy with respect to protecting your privacy, or if you have questions regarding the collecting and/or use of your personal information or regarding our privacy policy, please contact us. We will use all commercially reasonable efforts to promptly address your concern. You may contact us by email at privacy@tpc.org.

Section 8: Use of TPC Results and Specifications

8.1 Use of TPC Material

TPC Benchmark is a trademark of the **TPC**.

8.1.1 TPC Copyright Notice

All parties are granted permission to copy and **distribute** to any party without fee all or part of public **TPC** copyrighted material provided that: (1) copying and **distribution** is done for the primary purpose of disseminating **TPC** material; (2) the **TPC** copyright notice, the title of the publication, and its date appear, and notice is given that copying is by permission of the Transaction Processing Performance Council.

8.1.2 TPC Provided Code End User License Agreement

All parties wishing to use **TPC** provided code must adhere to the **TPC** Copyright Policies (**Policies** § 8.1.1) and the TPC End User License Agreement (EULA) for the code.   The **TPC** provided code EULA must appear with the **TPC** provided code and/or the code derived from **TPC** provided code. Parties wishing to use TPC provided code in derived work must secure the TPC's written permission.

8.1.3 Use of the TPC Benchmark Name

If a party wishes to use the **TPC Benchmark** name in public material to describe work that is derived from **TPC** material, the prefix "Derived from" must appear before all instances of the TPC Benchmark name, e.g. "Derived from TPC-DS Query 82". The derived work must be a subset or clearly be different from the **TPC Benchmark**. If the derived work is judged to be too similar to the **TPC Benchmark**, it will be subject to the **TPC** Fair Use rules (**Policies** § 8.2) For this reason, parties wishing to use the **TPC Benchmark** name in relation to derived work must secure the **TPC**'s written permission.

8.1.4 TPC Benchmark Disclaimer

All work derived from **TPC Benchmark**s must have the following disclaimer: The <name of derived work> is derived from the <**TPC Benchmark** name> and as such is not comparable to published <**TPC Benchmark** name> results.   For example, "the XYZ workload is derived from the TPC-E Benchmark and as such is not comparable to published TPC-E Benchmark results".

8.2 Fair Use of TPC Results

The **TPC** actively encourages **Test Sponsors** to widely **distribute** their **Results** in **Public Information**. The **TPC** also actively encourages the publicizing of **Results** by the press, market researchers, financial analysts, and non-profit organizations.

The **TPC** requires that **All Members** and **Test Sponsors** follow both the general and specific rules detailed in this section of the **Policies**. To ensure that users and readers of **Results** are given a fair and complete representation of **TPC** data, the **TPC** requests that all non-members, including the press, market researchers, financial analysts and non-profit organizations also follow these rules when publishing or re-publishing **Results**. The **Administrator** will actively encourage them to follow the **Fair Use Policy**, and where appropriate, to issue retractions or corrections. The **TPC** may also initiate various public relations activities to correct distortions of **Results** created by non-members.

The **TPC** will defend and protect all of its copyright and trademark rights to any published **TPC** information, whether by members or non-members.

This **Fair Use Policy** states how **Results** may be fairly used in **Public Information**. The **TPC** label may be applied to only fully legitimate **Results**, used in a fair manner.

Comment: These policies for fair use apply to **Public Information** that is actively in use. For example, if a press release was issued a year ago, is clearly dated, and contained information that was considered compliant with the **Fair Use Policies** at the time of publication, that information is likely not actively in use, even though it is still accessible with web searches. However, if that same press release is referenced as supporting information in new announcement materials, it would still be considered to be active **Public Information**.

When **Results** are used in **Public Information**, the use is expected to adhere to basic standards of fidelity, candor, and due diligence, the qualities that together add up to, and define, Fair Use of **Results.**

- Fidelity: Adherence to facts; accuracy
- Candor: Above-boardness; needful completeness
- Due Diligence: Care for integrity of **Results**
- Legibility: Readability and clarity

Because **Results** are protected by the **TPC** Trademark, this policy applies to all parties who use **Results**, including but not limited to members of the **TPC**. The intent is simple: if you want to use the **TPC** name, you are requested to follow this policy. Otherwise, do not mention or imply the **TPC.**

Violations will be dealt with by the **Council** in a manner appropriate to the pattern, seriousness, and impact of the violations.

Grandfathering Rule: Revisions to the Fair Use Policies do not apply to existing publicity materials in use prior to the effective date of those revisions.

8.2.1 **Fair Use**

Specifically,

8.2.1.1 Claim(s) must be truthful.

8.2.1.2 Claim(s) must include sufficient qualifications and context to be unambiguous and verifiable.

8.2.1.3 Claims must be verifiable by a person knowledgeable, but not expert, in the subject using publicly available information.

Comment: An estimated result is, by its nature, not verifiable.

8.2.1.4 Claims must include an "as of" date and the URL to the TPC page for each referenced result (e.g., www.tpc.org/1234). The existence of the required information must be readily apparent to the reader, such as the use of referenced footnotes, hyperlinks, etc. It must be clear from context that the "as of date" is the date when the claim is current.

8.2.1.5 Claims may not make **TPC**-related competitive comparisons of numerical data disclosed in **FDRs** unless that data is also included in the **Executive Summary**.

8.2.1.6 The following types of competitive comparisons are not allowed:

- **Result**(s) published without **TPC** Price/Performance metrics in a comparison or claim related to Price or Price/Performance.
- Price or Price/Performance metrics based on a direct conversion of different currencies.
- **Result**(s) published without TPC-Energy metrics in a comparison or claim related to electrical energy.

8.2.1.7 Any implementations that are expressly declared as noncomparable in the **Policies, the Benchmark Class** (see **Policies** 11.7 & 12.6) or the **Benchmark Standards**.

8.2.1.8 **Corollaries**

8.2.1.8.1 There is no requirement to include additional information provided that **Policies** § 8.2.1.1 - 8.2.1.4 are satisfied.

8.2.1.8.2 The information required by clauses **Policies** § 8.2.1.2 and 8.2.1.4 must be reasonably legible in a manner comparable to the claim to which it refers.

8.2.1.8.3 Claims that combine **TPC**-related information with information that does not come from a **TPC Result** must clearly identify which information is not from an official **Result**.

8.3 Fair Use of TPC Specifications

If **TPC Benchmark Standards** or parts of **TPC** specifications are used to develop other non-**TPC** benchmarks, then:

8.3.1 The **TPC**'s copyright (**Policies** § **Error! Reference source not found.**) and **Fair Use Policy** must not be violated.

8.3.2 All variations from the **TPC** specifications in question must be explicitly noted.

8.3.3 Results based on the non-**TPC** benchmark must be clearly identified as not being comparable to an official **TPC Result**.

8.4 Review and Response to Policy Violations

If the **Council** votes that a violation of **Policies** has occurred, the **Council** may take appropriate response measures, as detailed in the **Policies**. In its deliberations, the **Council** will seek a fair, appropriate, and reasonable response according to the seriousness of the violation. There are two phases to this process: (1) review and (2) response.

8.4.1 Review Phase

8.4.1.1 **Challenge Submitted to SC.** Before a violation may be discussed at a **General Meeting**, the alleged policy violation must be submitted to the sc-info@tpc.org distribution, copying the **Member** or **Non-member Test Sponsor** being challenged (challengee) and the **Administrator**. A **Member** (the challenger) filing a policy violation challenge, fair use or other violation, must complete the Policy Violation Challenge template (available on the **Private Web Site**) and submit this document to the **SC.**

8.4.1.2 **Waiting Period.** Before the **SC** will accept a policy violation challenge as valid and put it on the **SC** agenda, there will be a waiting period after the challenge is filed. The waiting period is three calendar days, beginning on the first business day following the challenge. During this period, the challenger and challengee are encouraged to resolve the challenge between the two parties. If, after the waiting period has expired, the **SC** has not received any notice from the challenger that the issue has been resolved, the **SC** will add the issue to the **SC** agenda.

8.4.1.3 **SC Review.** The **SC** will investigate the issue and make a recommendation to the **Council** only if it believes a minor or major violation has occurred. Non-violations and insignificant violations will not be brought forward by the **SC**, although any member may introduce such a motion.

> Comment: This exclusion clause recognizes the limited resources the **SC** and **Council** can spend investigating, discussing, and enforcing its policies but does not, in any way, sanction or approve violations, no matter how insignificant.

8.4.1.4 **Notice of Council Review.** The **Administrator** will **notify** the challengee at least seven calendar days in advance of a **General Meeting** that the matter may be discussed by the

Council. The seven calendar-day period can overlap the three-day waiting period identified in **Policies** § 8.4.1.2. The **Administrator** will also email, mail, or fax any documents that pertain to the alleged violation. Once having been notified, it is the responsibility of the challengee to be in attendance at the next **General Meeting**. The **Council** will discuss and rule on the alleged violation whether the challengee is in attendance or not.

Comment: The effect of this clause is that a challenge that is brought forward within seven days of a **General Meeting** may not be addressed at that meeting, unless the challengee waives their right to the seven-day requirement. However, a challenge that is brought forward more than seven days prior to a **General Meeting** may be addressed at that meeting, even if the **SC** Review of the challenge is less than seven days from the **General Meeting.**

8.4.1.5   **Council Review.** During the review phase at **General Meetings**, the **Council** will assess the specific violation(s) in question and determine (vote) if a violation has occurred and its severity (see **Policies** § 8.4.1.6). During the review phase of the **Council**'s proceedings, the **Council** will not consider past violations in making the determination of the severity of the violation. However, the **Council** will consider the following criteria in its deliberations.

8.4.1.5.1 If the violation pertains to publicity or to public information, the **Council** will determine the extent of publicity. Who was affected or who knew of the violation: one person, a small group, one trade magazine, several trade magazines, a national newspaper or business magazine, or national network television?

8.4.1.5.2 If the violation pertains to publicity or to public information, how prominent or significant was the violation in the context of the event or publication? For example, if a violation of the **Fair Use Policy** appeared in a news article, was the violation in the headline and repeated throughout the text or was it a passing reference buried in the middle of an article?

8.4.1.5.3 If the violation pertains to **TPC** data, **Policies**, or **Results**, was the violation a significant departure from the facts or **Policies**. For example, a company claiming a 40,000 tpmC estimate and later providing a **FDR** with a 41,000 tpmC **Result** would be evaluated differently than a company claiming a 40,000 tpmC estimate and later providing an **FDR** with only a 35,000 tpmC **Result**. Both companies violated the **Policies** by disseminating estimated **TPC** results, but in the latter case, there was obviously a far more significant departure from the facts and therefore a more serious impact on the credibility of the **TPC** and its **Results**.

8.4.1.6   **Violation Severity.** In its review phase the **Council** will categorize violations according to the following:

- **Insignificant violations**: Violation(s) with a non-existent or negligible impact on the credibility of the **TPC**, its trademarks, or on the competitive environment.
- **Minor violations**: Violation(s) with a small but non-trivial impact on the credibility of the **TPC**, its trademarks, or on the competitive environment.
- **Major violations**: Violation(s) with significant impact on the credibility of the **TPC**, its trademarks, or on the competitive environment.

8.4.2   **Response Phase**

In formulating its response measure, the **Council** may take into account the history of violations or recent pattern of violations, excluding insignificant violations.

Comment: This exclusion clause recognizes the limited resources the **Council** can spend investigating, discussing, and enforcing its policies but does not, in any way, sanction or approve violations, no matter how insignificant. The **Council** may also take into account what corrective or remedial actions the challengee has taken.

These response measures are intended to specify how, under most circumstances, the **Council** will respond to policy violations. However, the **Council** retains the right to take other response measures if, under extra-ordinary circumstances, it deems it necessary and appropriate. These measures will be consistent with the general principles of fairness, reasonableness, and appropriateness established in this policy. Also, the **Council** may take no response measure to a policy violation, if it deems that course of action to meet these same principles.

8.4.3 Responses to violations

If the **Council** determines that a violation has occurred, the **Council** may take any or all of the response measures outlined under each response level:

8.4.3.1 Level one response - insignificant violation

The **SC**/**Council**, via the **Administrator**, will **notify** the **Primary Representative** of the **Member** in question that it has committed an insignificant violation. No further **SC** or **Council** action will be taken. It is the responsibility of the **Primary Representative** to take further action if he/she deems it necessary.

8.4.3.2 Level two response - minor violation

8.4.3.2.1 Instruct the secretary of the meeting to record that the **Member** committed a minor violation. In most such cases, it is assumed that the **Member** has already taken corrective or remedial action, or that further instruction to the **Member** in question is unnecessary.

8.4.3.2.2 Instruct the **Administrator** to send the **Member** a letter outlining the nature of the violation, and, if appropriate, asking for appropriate remedial or corrective action.

8.4.3.3 Level three response - major violations

8.4.3.3.1 Instruct the **Administrator** to send the **Member** a letter as cited in **Policies** § 8.4.3.2.2.

8.4.3.3.2 Ask the **Member's Primary Representative** to take corrective or remedial action and provide the **Council** with an official report of those actions at the next **General Meeting.**

8.4.3.3.3 Assess the company a fine commensurate and reasonable with the seriousness of the violation. A fine in the range of $1,000 – $10,000 will be applied in the case of a member who has had a major fair use violation in the previous 4 years. In all other cases, a fine in the range of $500 – $2,000 will be applied. The date of the violation for this purpose is the date when the General Council passed the violation motion.

This assessment must be paid within 90 days of **notification** to the **Member**. Failure to pay the assessment within 90 days results in the loss of voting privileges in all technical subcommittees and **General Meetings**, but not Standing Committees or **Mail Ballots**. Upon payment of the assessment, all privileges are restored. Failure of a **Non-member Test Sponsor** to pay the assessment within 90 days may result in the removal of one or more **Results**.

8.4.3.3.4 Instruct the **Administrator** to issue a press release outlining the nature of the policy violation.

8.4.3.3.5 Vote to initiate expulsion proceedings as outlined in the **Policies** § 2.5.

Section 9: Auditor Policies

9.1 Purpose of an Auditor

The purpose of the Auditor is to certify a **Result** for publication by verifying the **Result** is compliant with the spirit and letter of the **Benchmark Standard**. The pre-publication certification (Audit) requirements are defined by the **Benchmark Class**.

9.2 Auditor Qualifications

The **TPC** has the responsibility to ensure that an adequate number of **Auditors** is available to provide coverage in a timely manner, but the **TPC** has the authority to restrict the number of **Auditors** to ensure high quality. It is at the discretion of the **TPC** to certify those individuals who best meet the following criteria:

9.2.1 Prior familiarity and extensive knowledge of the **TPC** organization and **TPC** benchmarks.

9.2.2 Capability to provide adequate auditing coverage (e.g., time, location, benchmark types).

9.2.3 Extensive knowledge and experience in transaction processing and computer systems.

9.2.4 Ability to perform the duties of the job in an independent manner (i.e., free of conflicts-of-interest).

9.3 Auditor Certification Process

The following defines the certification process for audit candidates. Only individuals can be candidates.

9.3.1 Stage I – Application

A prospective candidate applies to the **TPC** indicating his/her desire to become an apprentice auditor. The application contains information on the candidate's background (education, work experience, other related skills), familiarity with benchmarking, the **TPC**, performance work, and on which benchmarks the candidate is seeking apprentice standing. The **SC** reviews the application and decides if the candidate is appropriate for further consideration. If rejected the candidate must wait at least six months before reapplying, except if this decision is overruled by the **Council**. The goal of this process is to accept candidates that the **SC** believes can become **Auditors** in a reasonable period. Furthermore, the **SC** may take into consideration the number and qualifications of the existing **Auditors** in deciding whether to accept a particular candidate. If the **SC** approves the candidate based on the application, the candidate then progresses to Stage II.

9.3.2 Stage II – Exam and Interview

9.3.2.1 A new Auditor candidate or existing TPC Auditor candidate may be required by the **SC** to take a written exam specific to each benchmark for which they are seeking certification. The purpose of the written exam is to establish that the individual has basic understanding of the benchmark, the operation of the **TPC**, and the auditing process. It should be possible to pass the exam by studying publicly available documents such as the benchmark spec and the **Policies**. The exam is administered in person, at a time and place designated by the **SC.**

Exception: The **SC** may determine that a written exam is unnecessary if the candidate can show that he/she has previous **TPC** auditing experience.

Benchmark development and maintenance subcommittees are required to develop and maintain an auditor exam for each benchmark. The benchmark development and maintenance subcommittees provide the questions and answers for the auditor exam.

At least 50 questions must be maintained. At least 15 questions are chosen for a given auditor candidate. The SC at its discretion may require the candidate to answer more than 15 questions. The intention is to avoid having "known" questions and answers. A passing score for the exam is at least 85% of the maximum score.

9.3.2.2   The **SC** reviews the exam results and, at its discretion, may choose to interview the candidate. The **SC** then votes to accept the candidate as an apprentice auditor. If a candidate fails to pass the exam, the **SC** will inform the candidate in writing within seven days. A second, different exam may be scheduled no sooner than four weeks within the first exam. A subsequent failure will result in an automatic disqualification at which point the **SC** will withdraw its support for the candidate. Normally, it is expected that the **SC** will approve a candidate who successfully completes stage one and two as an apprentice auditor.

9.3.3   **Stage III – Apprenticeship**

9.3.3.1   An apprentice auditor must work with an **Auditor** to gain hands-on experience with the audit process and/or the particular benchmark in question. It is incumbent upon **Auditors** to provide reasonable opportunities for apprentices to gain such experience.

Exception: The **SC** may determine that an audit internship is unnecessary if the candidate can show that he/she has previous **TPC** auditing experience.

9.3.3.2   When the **Auditor** feels that the apprentice has demonstrated that he/she is capable of working independently as an **Auditor**, the **Auditor** provides a written endorsement of the candidate. The endorsement must indicate how long the apprentice worked with the **Auditor** and the work performed during the apprenticeship.

9.3.4   **Stage IV – Certification**

9.3.4.1   An Auditor Certification Board (**ACB**) will review the candidate's credentials and make a recommendation to the **SC.** The **ACB** is either the **Benchmark Subcommittee** or an ad hoc subcommittee designated by the SC to process the application for certification of a specific benchmark. The **ACB** will schedule an individual interview with each candidate at least two weeks in advance and will inform the candidate of the intent of the interview. The interview process will include technical questions to verify that the candidate has a solid understanding of the specific benchmark and the technologies and products that can potentially be used in the benchmark implementation. In addition, the interview will include specific questions on the audit requirements of the benchmark. Following the interview the **ACB** shall notify the candidate and the **SC** of its recommendation within three days of the interview.

9.3.4.1.1 If an ad hoc subcommittee, the **ACB** will consist of five (5) representatives of the **Members** and will operate with the same rules as the **SC** (see **Policies** § 3.2.1) excluding **Policies** 3.2.1.4, all votes will be by closed ballot. The ad hoc **ACB** should include at least one member of the **SC**, **TAB**, and **Benchmark Subcommittee**, unless circumstances prevent such a membership. The **SC** will designate the chairman for the ad hoc **ACB**.

9.3.4.2   If the **ACB** does not recommend the candidate to be an **Auditor,** it must provide the reason for its finding as part of the notification to the candidate and the **SC**. After a two-week waiting period following the interview, the **SC** at its discretion, may form a new **ACB** for a second interview and review of the candidate's qualifications.

9.3.4.3   If the **ACB** decides to recommend the candidate to be an **Auditor**, it will then present a brief summary of its findings with regard to the candidate at the next **General Meeting** and it will bring forward a recommendation to this effect to the **Council**.

9.3.4.4   The **Council** will vote to accept the candidate as an **Auditor**, contingent upon the person signing a pledge to fulfill the responsibilities outlined in **Policies** § 9.4.

9.3.5   Stage V – Maintaining Certification

9.3.5.1   An individual who has been certified by the **TPC** will retain his or her status as an **Auditor** unless that status is explicitly revoked or reduced by the **TPC**.

9.3.5.2   A party who wishes to have an **Auditor's** certification revoked or reduced to the level of apprentice must submit a written complaint with adequate supporting evidence to the **SC**. The **SC** will examine the complaint and the evidence and make a recommendation to the **Council** regarding the matter. In the course of these proceedings, the **Auditor** will have the option to provide input in his or her defense. A decision by the **Council** to either revoke the certification or reduce to apprentice status shall be determined by a **Simple Majority** vote.

9.4   Auditor Responsibilities

Certification requires that the individual pledge to fulfill the following responsibilities:

9.4.1   To work with and review the work of apprentice auditors.

9.4.2   To stay current with changes in the **Policies** and **Benchmark Standards** of the **TPC.**

9.4.3   To work closely with other **Auditors** in order to maintain consistency between audits.

9.4.4   To provide adequate auditing coverage (e.g., time, location, benchmark types).

9.4.5   To perform the duties of the job in an independent manner.

9.4.6   Attend at least one (1) **General Meetings** per 12 month period and regularly participate in **TAB** teleconferences to retain certification.

9.5   Audit Process

An audit is a review of a result. The audit encompasses more than just the benchmark test and includes a review of items that can affect the compliance of the benchmark.

The audit does not guarantee compliance. In addition, there is a formal review process and a mechanism for determining compliance or non-compliance (see **Policies** § 6.12). The audit minimizes the probability that a **Result** will be found non-compliant in the review process. The **Auditor** is responsible for due-diligence in review of the result.

9.5.1   Overview

9.5.1.1   The audit process is composed of the following steps:

9.5.1.1.1   Verify the compliance of all components of the implementation (e.g., software programs, hardware configurations, purchase and maintenance pricing, etc.).

9.5.1.1.2   Obtain a reasonable confidence level that the methodology used to implement the benchmark related tests produces documented results that demonstrate compliance.

9.5.1.1.3   Verify the compliance of each benchmark execution by examining the results produced during that execution.

Comment: The establishment of an audit protocol is highly recommended. The purpose of such a protocol is for the test sponsor and the auditor to document in detail the required set of steps to follow during the execution of the series of tests that produce the benchmark results. The protocol also documents the automation level of the test methodology and the resulting test data to be captured and communicated to the auditor.

9.5.1.1.4 Verify the compliance of the result based on applicable **TAB** and **General Council** rulings. This may require additions to the audit process to address issues not previously covered.

9.5.1.2 It is the responsibility of the **Test Sponsor** to attest to the veracity of all information disclosed to the **Auditor** and in the **FDR**.

9.5.1.3 The **Auditor** should focus on verifying the methodology used for reaching compliance, rather than verifying the information disclosed by the **Test Sponsor**. The **Auditor** may choose to examine and test disclosed information at his/her discretion.

9.5.2 **Auditor Selection**. **Test Sponsors** select an **Auditor** from the list of **Auditors** maintained by the **Administrator**.

9.5.3 **Level of Audit**

Upon review of the environment and configuration of a planned benchmark, and in accordance with the audit process defined in **Policies** § 9.5.1.1, the **Auditor** determines the level of audit required (see **Policies** § 9.5.4) and decides whether the audit or a portion of the audit requires his/her on-site presence at the test site. The following are the major levels of auditing:

9.5.3.1 **Full Audit.** A full audit makes no assumption of prior audits and requires full direct access to personnel and benchmark environment. This may require an on-site presence.

9.5.3.2 **Updated Audit.** An updated audit leverages previous audits to a significant degree. This review is targeted at those components of the benchmark environment that have changed since the last implementation review. It requires a highly automated test environment. To audit the components which have changed, the auditor may require full direct access to personnel and benchmark environment.

Comment: The intent of this clause is to encourage **Test Sponsors** to automate the test environment and develop an audit protocol (see **Policies** § 9.5.1.1.3).

9.5.4 **Auditing Level Criteria**

Determine whether the **Test Sponsor** has an automated process for producing the collateral for an audit. An automated process is one which requires the least amount of vendor intervention to collect the necessary information needed to comply with the audit requirements. For example, in TPC-C, the beginning of the checkpoint interval is logged and inserted into the driver log for verification against the "guard zones" by the driver system, without prompting by the **Test Sponsor**. This determination will include the following criteria.

Comment: The intent of this section is to leave the determination of the level of audit required to be determined by the **Auditor** with input from the **Test Sponsor**. No set of rules can define all of the possibilities and appropriate actions.

9.5.4.1 Whether the **Test Sponsor** has an automated methodology that includes a scripted process that produces an audit trail of actions.

9.5.4.2 Whether the SUT has sufficient reporting tools to disclose the system and database configurations.

9.5.4.3 Difference from previously audited benchmark environments.

9.5.4.4 Level of changes in the audit methodology.

9.5.4.5   Consideration of projected performance results. For example, the **Auditors** will consider performance results substantially above previously results as criteria for determining audit level.

9.5.4.6   Consideration of past experiences and relationship with **Test Sponsor**.

9.5.5   **Auditor's Decision and Appeal Process**

9.5.5.1   The **Auditor** has the authority to make all compliance-related decisions during the course of an audit.

9.5.5.2   If a **Test Sponsor** disagrees with an **Auditor's** decision, the **Test Sponsor** has the option of completing the test, obtaining the **Auditor's** documentation, and submitting the documentation for appeal.

9.5.5.3   The **Test Sponsor** can request from the **Auditor** that selected decisions be elevated to "major" status. The **Auditor** is required to document all major decisions in writing, including a detailed description of the issue and the process used to make the decision. This document must be communicated to the **Test Sponsor**, who, in turn, can choose to communicate it to the **TAB** for information or to appeal the decision.

9.5.5.4   Appeals of **Auditors'** decisions are resolved by the **TAB** bringing a recommendation to the **Council** for a vote.

9.5.6   **Confidentiality of Information**

9.5.6.1   All information disclosed to an **Auditor** during the course of an audit must be kept confidential until released by the sponsor. Confidential information may be communicated under appropriate confidentiality agreements with the sponsor by the **Auditor** to other **Auditors** as required to perform the auditing function.

9.5.6.2   When an FDR is filed with the **Administrator**, the **Test Sponsor** automatically releases the **Auditor** from confidentiality concerning all information contained in the FDR and all information related to the verification of compliance. All other information remains bound by any confidentiality agreements between the **Auditor** and sponsor.

9.5.6.3   To help the **Auditors** fulfill their responsibilities as outlined in **Policies** § 9.4, the **TPC** strongly encourages **Test Sponsors** to release **Auditors** from non-disclosure agreements (NDA) regarding all non-compliance issues that might arise during the course of an audit, whether the benchmark is published or not. The decision to release the **Auditor** from the NDA for this purpose is solely up to the **Test Sponsor**.

9.5.7   **Payment**

9.5.7.1   **Rate of Pay.** The audit rate charged by an **Auditor** is determined by negotiation between the sponsor and the **Auditor**.

9.5.7.2   **Mechanism of payment. Test Sponsors** pay **Auditors** directly for the audit services provided.

9.6   **General Audit Rules**

9.6.1   **Interpretation of Specification**

In case of a benchmark implementation where the letter and the spirit of a **Benchmark Standard** are found to be ambiguous and no preponderance of evidences or opinions can be established to resolve the ambiguity, the **Auditor** should decide in favor of a conservative, rather than liberal, interpretation of the **Benchmark Standard**.

9.6.2   **Waiver of Requirement**

In cases where a **Benchmark Standard** calls for a requirement which, in the context of the audited implementation, is characterized by the following:

9.6.2.1   It has no effect, whatsoever, on the reported metrics.

9.6.2.2   It does not affect compliance with any other requirement.

9.6.2.3   Sufficient proof of the above is obtained.

9.6.2.4   Its compliance would represent a significant financial or operational burden on the part of the **Test Sponsor**.

9.6.2.5   When the use of unmodified **TPC-Provided Code** is waived, the code changes must:

(a)   Meet all the requirements of **Policies** 9.6.2.1 through 9.6.2.4.

(b)   Resolve a problem with the **TPC-Provided Code** that would be classified as a portability issue (**Policies** § 5.4.4).

The **Auditor** may waive the requirement and report such waiver in his/her attestation letter included in the **FDR**.

The **FDR** must include a list of waived requirements, along with the proof provided that all reported metrics would have otherwise been the same, and that there is no effect on compliance with other requirements. The **FDR** must also include an explanation of the nature of the burden that was relieved by the waiver.

9.6.3   **Communication of Auditing Decisions**

To increase the consistency of the audit process, **Auditors** should share on a regular and frequent basis all new decisions made during the course of an audit. This sharing should not be limited to major decisions, as defined in **Policies** § 9.5.5.3, but include all decisions that might apply to subsequent audits of the same or other **Test Sponsors**. These decisions must be kept confidential by all **Auditors** according to **Policies** § 9.5.6.

Section 10: Pre-Publication Board

10.1   Purpose of an Pre-Publication Board

The purpose of the **Pre-Publication Board** is to certify a **Result** for publication by verifying the **Result** is compliant with the spirit and letter of the **Benchmark Standard**. The pre-publication certification requirements are defined by the **Benchmark Class**.

10.2   Pre-Publication Board

The **Pre-Publication Board** is one or more knowledgably individuals that have been chosen by the **Benchmark Development or Maintenance Subcommittee** to certify **Results** for publication.

10.2.1   The **Pre-Publication Board** size and length of member service is determined by the **Subcommittee**.

10.2.2   Rotation of a **Pre-Publication Board** member cannot occur once the member has started the review of a **Result.**

10.3   Pre-Publication Board Member Qualifications

The **Benchmark Subcommittee** has the responsibility to ensure that an adequate number of board members are available to provide coverage in a timely manner, but the **Subcommittee** has the authority to restrict the number of board members to ensure high quality. It is at the discretion of the **Subcommittee** to certify those individuals who best meet the following criteria:

10.3.1   Prior familiarity and extensive knowledge of the **TPC** benchmark.

10.3.2   Capability to provide adequate certification coverage (e.g., time, location, benchmark types).

10.4   Result Confidentiality

A **Result** is confidential to the **Pre-Publication Board** until the **Result** has been certified for publication.

10.5   Certification Time

The Subcommittee determines the time allowed for a **Pre-Publication Board** to certify a **Result.**

10.5.1   The maximum amount of time for certification of a **Result** is 10 **Business days**.

10.5.2   If the **Pre-Publication Board** fails to perform their duty (**Policies** § 10.1) in the allotted time, the **Result** is considered certified for publication.

10.6   Conflict of Interest

A **Test Sponsor** cannot sit in review of his own publication. A **Test Sponsor** must recuse himself from the **Pre-Publication Board**. A replacement of the recused **Test Sponsor** is determined by the **Benchmark Subcommittee.**

10.7 Conflict Resolution

Conflict resolution between the **Pre-Publication Board** and the **Test Sponsor** is resolved by the TAB (**Policies** § 3.3).

Section 11: TPC-Enterprise Class Benchmarks

11.1   TPC-Enterprise Benchmark Standards Requirements

11.1.1   **Primary Metrics**. Each **TPC-Enterprise Benchmark** Standard must define **Primary Metrics** selected to represent the workload being measured. The **Primary Metrics** must include both performance and price/performance metrics.

11.1.2   **Pre-Publication Certification Requirements**. All **TPC-Enterprise Benchmark Standards** must include the requirement that **Results** are attested by a **TPC** certified **Auditor** (**Policies §** 9.3).

11.1.3   **Disclosure Documentation Requirements**. All **TPC-Enterprise Benchmark Standard**s must include **Executive Summary** and **FDR** requirements.

11.1.4   **Deliverables**. At a minimum a **Specification** is required for a **TPC-Enterprise Benchmark Standard**. **TPC-Provided Code** and/or **TPC-Provided Binaries** are optional requirements. A **TPC-Enterprise Class Benchmark** shall not require a **Test Sponsor** to run a specific **TPC Provided Kit**.

11.1.5   The null string is the suffix added to TPC (Policies 5.2.1) to specify a TPC-Enterprise Class Benchmark, (e.g. TPC-C, TPC-E, TPC-H).

11.2   TPC-Enterprise Benchmark Development Cycle

The following outlines the steps for submitting a benchmark proposal and securing approval.

11.2.1   **Step 1: Benchmark Submittal**

Member companies will submit a draft standard specification in a format similar to **TPC Benchmark Standards**. The proposal is submitted to the **Council** and is forwarded to the **SC** for consideration. The **SC** will review the contents, applicability and potential of the proposal and present a recommendation back to the **Council**, identifying advantages/disadvantages and proposed course of action. The **Council** must then vote to formally accept the proposal for future work.

11.2.2   **Step 2: Creation of a Benchmark Subcommittee**

Given the acceptance of the proposal for future work, the **Council** will then establish and empower a **Benchmark Subcommittee** to develop a formal benchmark **Specification**. To speed-up the benchmark development cycle, the subcommittee is empowered to brief non-members on their benchmark in order to obtain timely feedback.

11.2.3   **Step 3: Status and Direction**

At each **General Meeting** the **Benchmark Subcommittee** will provide a status update on its work, including a working draft of the **Specification**. During the **General Meeting** the **Council** may provide direction and feedback to the subcommittee to further their work.

11.2.4   **Step 4: Authorizing Public Release of Draft Specification**

If it deems it advisable, the **Council** may authorize the release of a draft **Specification** to the public. The principal goals of releasing a draft specification are to encourage companies to implement the draft **Specification**, to gather more experimental data, and to speed-up the approval of a **Specification**. Companies are strictly prohibited from publicizing results on this draft **Specification** for marketing and/or competitive purposes. Results on a draft **Specification**, whether referencing **TPC** or not, may not appear in any of the company's marketing literature, press releases, press conferences, or advertising. Any violation of this policy will be considered a major violation of the **Fair Use Policy.**

Within the purpose of the procedure as outlined above, companies are encouraged to run the draft **Specification**, document the results, and discuss the results with **All Members** and customers. Companies may also publish technical articles or make presentations to industry conferences in which they discuss results. However, these articles/presentations are bound by the same restrictions as cited above: they cannot be used for marketing or competitive purposes.

Comment: Companies are reminded that this draft **Specification** is not a **Benchmark Standard**, and companies must adhere fully to all the provisions and restrictions of the **Fair Use Policy**. Only results published in accordance with a **Benchmark Standard** are considered **TPC Results** and can be publicized as such.

11.2.5 Step 5: Accepting a Standard for Review

When the **Benchmark Subcommittee** feels that the **Specification** is of sufficient quality to be considered for formal review and approval, it will submit the **Specification** to the **Council** for approval to advance into formal review.

11.2.6 Step 6: Formal Review

During this phase, the **Specification** will be made available to **All Members** and the public for formal review. All comments and proposed changes generated from the review will be **posted** to the **Private Web Site** and considered by the **Benchmark Subcommittee** for resolution.

11.2.7 Step 7: Approval for Mail Ballot

The **Benchmark Subcommittee** will propose resolution of comments from the formal review as an updated **Specification** to **All Members** for approval by the **Council**. The **Council** approves the updated **Specification** by voting to send the **Specification** out for **Mail Ballot**.

11.2.8 Step 8: Mail Ballot Approval

To become a **Benchmark Standard**, the **Specification** must be approved by a **Mail Ballot** in accordance with **Policies** § 4.8 and **Policies** § 11.3.1.

In the event the **Mail Ballot** is not approved, the benchmark development work will automatically cease. If the benchmark development was the only work of the **Benchmark Subcommittee**, the subcommittee will be disbanded at the conclusion of the next **General Meeting** if the **Council** does not authorize continued work.

11.3 TPC-Enterprise Voting Rules

The following outlines the TPC-Enterprise Voting Rules.

11.3.1 Approval of a TPC-Enterprise Benchmark Standard or Major Revision

A **Mail Ballot** in accordance with **Policies** § 4.8 is required to become a **TPC-Enterprise Benchmark Standard** or to approve a **Major Revision** of a **TPC-Enterprise Benchmark Standard**. The **Benchmark Standard** is approved if the following conditions have been met:

1. Two thirds of the eligible Members must return a mail ballot before a ballot measure can be considered valid.

2. The **Mail Ballot** will be closed as soon as the uncast ballots cannot affect the outcome or 60 days have elapsed, whichever occurs first.

3. Two thirds of those who submit ballots must approve the measure.

A new version with major revision changes must be approved by a **Mail Ballot** in accordance with **Policies** § 4.8 and § 11.2.8. A new version with major revision changes is available immediately for publication upon approval by a **Mail Ballot**, unless a later date is set in the **Mail Ballot**. If the version includes significant changes to the audit requirements, or the changes can potentially introduce new technologies and products to the benchmark implementation, the **Council** may choose to require the recertification of the **Auditors** in accordance with **Policies** § 9.3 before they can audit the new version of the benchmark. The **Council** must make the decision to require recertification before or at the time they vote to send the proposed version for **Mail Ballot** approval.

11.3.2   Approval of TPC-Enterprise Benchmark Standard Minor Revision

A **TPC-Enterprise Benchmark Standard Minor Revision** is approved by the **Council** by passing a **Super Majority** vote. The **Benchmark Standard** is available immediately for publication.

11.3.3   Approval of TPC-Enterprise Benchmark Standard Third Tier Revision

A **TPC-Enterprise Benchmark Standard Third Tier Revision** is approved by the **Council** by passing a **Super Majority** vote. The **Benchmark Standard** is available immediately for publication.

11.3.4   Obsolescence of Older Versions of a TPC-Enterprise Benchmark Standard

The version of a **TPC-Enterprise Benchmark Standard** immediately prior to an approved version will become obsolete 60 days after the date the newer version is first available for publication. The **Council** may choose to set a later obsolescence date. **Results** may not be published on an obsolete version of the **Benchmark Standard**.

11.3.5   Approval of TPC-Enterprise Provided Code

Vote to approve the type of revision level for the changes to **TPC-Enterprise TPC-Provided Code** in accordance with the requirements in **Policies** § 11.3.1, 11.3.2 and 11.3.3 for revising the **TPC-Enterprise Benchmark Standard** specification revision levels.

11.4   TPC-Enterprise Benchmark Submission Rules

The following outlines the TPC-Enterprise Benchmark Submission Rules.

11.4.1   TPC-Enterprise Full Disclosure Report Requirements

A **Test Sponsor** must submit an electronic copy of the **FDR** and **Executive Summary** to the **Administrator** the same calendar day the **Result** is publicly disclosed. The details of the required steps in the submittal process are defined in **Policies** § 6.5.1 and 6.5.2.

The administrator will not post the result until all steps are completed and documentation is complete. If a posting must be delayed, the administrator will inform the **Test Sponsor** of the delay and detail the missing components. It is the **Test Sponsor's** responsibility to ensure there is no violation of **Policies** § 6.8 in the case the administrator has withheld publication.

11.4.1.1   Executive summary.   The submitted executive summary must follow the requirements of the **Benchmark Standard** for the benchmark being submitted and the pricing specification for the pricing spreadsheet.

11.4.1.2   FDR.   The full disclosure report must be submitted and follow the requirements of the **Benchmark Standard**. It must include any 3rd party quotes required for the pricing. It must include a copy of the auditor's attestation letter for this submission, source code, configuration files and documentation for all the clauses for the **Benchmark Standard.**

11.4.2   TPC-Enterprise Alert Message

A **TPC-Enterprise Alert Message** must include the following:

(a) Type of submission or withdrawal (See **Policies** § 6.7)

(b) Date submitted to the **TPC**

(c) Primary **Test Sponsor**'s name

(d) Complete name of benchmarked system

(e) **Benchmark Standard** name and version

(f) **Primary Metrics**

(g) Total System Cost

(h) Names and versions of software used (e.g., database, operating system, etc.)

(i) Statement of whether database is implemented on a **Cluster**.

(j) Total # of enabled **Processors** and # of enabled **Processors** per Node/Server

(k) Name and Hz rating of **Processors** in the Server

(l) Total # of enabled **Cores** and # of enabled **Cores** per Node/Server(m)

(m) Total # of enabled **Processor Threads** and # of enabled **Processor Threads** per Node/Server

11.4.3 TPC-Enterprise Results

The following categories define the additional requirements and actions that apply to a TPC-Enterprise Result.

11.4.3.1 **New Result**: A new **Result** must contain a current attestation letter.

11.4.3.2 **Pricing Update**. A pricing update occurs when only the pricing metric is affected and the re-pricing conforms to and meets all the requirements of the applicable specification. Pricing updates must be compliant with the pricing specification in effect on the date of the update.

11.4.3.3 A replacement **FDR** for editorial changes does not require a new auditor's attestation letter. A replacement **FDR** for other changes does require a new attestation letter.

11.4.3.4 **Updates to FDRs.** All **FDR**s published in accordance with the current **Benchmark Standard**, whether in **Submitted for Review** or **Accepted** status, must be updated or removed within 6 months in the event that any priced components are no longer available. The 6 month period begins on the date of last availability of any priced components. Any **FDR**s that are updated to replace a component that is no longer available must follow the procedures and restrictions for substitution found in the current **Benchmark Standard** for that benchmark. After the 6 month period has elapsed, failure to comply with this clause may be brought as a **TAB** challenge per **Policies** § 3.3.3.

11.5 TPC-Enterprise Benchmark Review Period

11.5.1 The **Review Period** consists of two phases. Phase 1 consists of the 60 calendar days following the **Posting Date**. Phase 2 concludes 60 calendar days after the availability date of the **Result**. In the event that the actual availability date is shown to be after the reported availability date, the actual availability date shall be used.

During Phase 1, all aspects of the **Result** are subject to challenge. During Phase 2, the review is restricted to only those aspects of the result which were not available for review at the beginning of Phase 1. To the extent that Phase 2 overlaps with Phase 1, Phase 1 takes precedence.

11.6 Results Submitted on Another Vendor's Product

For a **Result** submitted on another vendor's system/software without the vendor's permission.

11.6.1 The **Test Sponsor's Result** goes into a 60 day internal review period before it can be publicized as an official **TPC** result or appear on the **TPC Results List**.

11.6.2 During this 60 day internal review period, the **Result** may be challenged in the **TAB** for two reasons:

11.6.2.1 That the **Result** does not conform to the **Benchmark Standard**. All standard policies covering this scenario shall remain in force.

11.6.2.2 That the benchmark has not been run in a good faith effort to achieve an optimal result.

Comment: The definition of "optimal" goes beyond meeting the letter of the **Benchmark Standard**. An optimal **Result** must show a diligent, careful effort to maximize the performance and/or price/performance.

11.6.3 If the benchmark is challenged (either as non-optimal or on compliance issues), the challenge shall be handled by the standard TPC policies for compliance challenges.

11.6.4 Following the 60-day internal holding period and the successful resolution of all challenges, the Result follows the normal process for new Results.

11.7 TPC-Enterprise Benchmark Fair Use Requirements

In addition to Fair Use requirements specified in **Policies** § 8.2 the following types of competitive comparisons are not allowed:

- TPC-H results measured against different scale factors
- TPC-DS results measured against different scale factors
- TPC-VMS results measured against different base TPC benchmarks
- TPC-VMS results measured against different scale factors of TPC-H or TPC-DS base benchmarks

Section 12: TPC-Express Class Benchmarks

12.1 TPC-Express Benchmark Standards Requirements

12.1.1 **Primary Metrics**. Each TPC-Express Benchmark Standard must define **Primary Metrics** selected to represent the workload being measured. The **Primary Metrics** must include at least a performance metric.

12.1.2 **Pre-Publication Certification Requirements**. A **TPC-Express Benchmark Standard** may specify either pre-publication certification by a **Pre-Publication Board** (**Policies §** 10.2) and/or by a **TPC** certified **Auditor** (**Policies §** 9.3).

12.1.2.1 The requirement for a **Pre-Publication Board** or a **TPC** certified Auditor is dependent on the type and number of benchmark requirements that are not tested or evaluated by the **TPC-Provided Kit**. The untested requirements may require detailed knowledge of the **TPC-Express Benchmark Standard** and/or access to the Test Sponsor's equipment.

12.1.3 **Disclosure Documentation Requirements**. At a minimum all TPC-Express Benchmark Standards must include an **Executive Summary**.

12.1.4 **Deliverables**. At a minimum all **TPC-Express Benchmark Standards** must include a Specification and at least one **TPC-Provided Kit** that implements the benchmark which can be executed on at least one commercially available system. The **Test Sponsor** is required to run the **TPC-Provided Kit** in order to publish a compliant **TPC-Express** result. The Benchmark must generate result log files that can be reviewed to validate benchmark compliance. A **TPC-Express Benchmark Standard** may optionally provide **TPC-Provided Code** that can be compiled or easily modified for a number of commercially available systems.

12.1.5 The "x" suffix added to TPC (**Policies §** 5.2.1) to specify a TPC-Express Class Benchmark, (e.g. TPCx-E, TPCx-F1, TPCx-F2).

12.2 TPC-Express Benchmark Development Cycle

The following outlines the steps for submitting a benchmark proposal and securing approval.

12.2.1 **Step 1: Benchmark Submittal**

A draft standard specification is submitted to the SC in a format similar to **TPC Express Benchmark Standards**. The **Steering Committee** will review the contents, applicability and potential of the proposal and present a recommendation back to the **Council**, identifying advantages/disadvantages and proposed course of action.

12.2.2 **Step 2: Assignment to a Benchmark Subcommittee**

Given the acceptance of the proposal for future work, the **Council** will then establish and empower a **Benchmark Subcommittee** to develop a formal benchmark **Specification**. To speed-up the benchmark development cycle, the subcommittee is empowered to brief non-members on their benchmark in order to obtain timely feedback.

12.2.3 **Step 3: Status and Direction**

At each **General Meeting** the **Benchmark Subcommittee** will provide a status update on its work, including a working draft of the **Specification**. During the **General Meeting** the **Council** may provide direction and feedback to the subcommittee to further their work.

12.2.4 Step 4: Authorizing Public Release of a Prototype

If it deems it advisable, the **Steering Committee** may authorize the release of a prototype version of the benchmark to the public. The principal goals of releasing a prototype are to encourage companies to gather more experimental data, and to speed-up the approval of the benchmark. TPC-Express prototype benchmarks will be licensed with language that strictly prohibits publicizing results for marketing and/or competitive purposes.

Within the purpose of the procedure as outlined above, companies are encouraged to run the prototype, document the results, and discuss the results with **All Members** and customers. Companies may also publish technical articles or make presentations to industry conferences in which they discuss results. However, these articles/presentations are bound by the same restrictions as cited above: they cannot be used for marketing or competitive purposes.

12.2.5 Step 5: Formal Review

When the **Benchmark Subcommittee** feels that the benchmark is of sufficient quality to be considered for formal review and approval, it will submit the benchmark to the **Council** for formal review. During this phase, the benchmark will be made available to **All Members** and the public for formal review. All comments and proposed changes generated from the review will be **posted** to the **Private Web Site** and considered by the subcommittee for resolution.

12.2.6 Step 6: Final Approval

The **Benchmark Subcommittee** will propose resolution of comments from the formal review as an updated **Benchmark Standard** to the **Council**. The subcommittee will bring forward a motion to the **Council** to approve the **Benchmark Standard**.

In the event the **Benchmark Standard** is not approved by the **Council**, the benchmark development work will automatically cease. If the benchmark development was the only work of the **Benchmark Subcommittee**, the subcommittee will be disbanded at the conclusion of the **General Meeting** if the **Council** does not authorize continued work.

12.3 TPC-Express Voting Rules

The following outlines the TPC-Express Voting Rules.

12.3.1 Approval of a TPC-Express Benchmark Standard or Major Revision

A **Super Majority** of the **Council** is required to approve a new **TPC-Express Benchmark Standard** or to approve a **Major Revision** of a **TPC-Express Benchmark Standard**.

12.3.2 Approval of TPC-Express Benchmark Standard Minor Revision

A **TPC-Express Benchmark Standard Minor Revision** is approved by the **Steering Committee** by passing a **Simple Majority** vote. The **Benchmark Standard** is available immediately for publication.

12.3.3 Approval of TPC-Express Benchmark Standard Third Tier Revision

A **TPC-Express Benchmark Standard Third Tier Revision** is approved by the **Benchmark Subcommittee** by passing a **Super Majority** vote. The **Benchmark Standard** is available immediately for publication.

12.3.4 Obsolescence of Older Versions of a TPC-Express Benchmark Standard

The version of a **TPC-Express Benchmark Standard** immediately prior to an approved version will become obsolete 60 days after the date the newer version is first available for publication. The **Council** may choose to set a later obsolescence date. **Results** may not be published on an obsolete version of the **Benchmark Standard**.

12.3.5 Approval of TPC-Express Provided Code

Vote to approve the type of revision level for the changes to **TPC-Express TPC-Provided Code** in accordance with the requirements in **Policies** § 12.3.1, 12.3.2 and 12.3.3 for revising the **TPC-Express Benchmark Standard** specification revision levels.

12.4 TPC-Express Benchmark Submission Rules

The following outlines the TPC-Express Benchmark Submission Rules.

12.4.1 TPC-Express Full Disclosure Report Requirements

A **Test Sponsor** must submit an electronic copy of the **Executive Summary** and **Result** log files to the Administrator the same calendar day the **Result** is publicly disclosed. The details of the required steps in the submittal process are defined in **Policies** § 6.5.1 and 6.5.2.

The administrator will not post the result until all steps are completed and documentation is complete. If a posting must be delayed, the administrator will inform the **Test Sponsor** of the delay and detail the missing components. It is the **Test Sponsor's** responsibility to ensure there is no violation of **Policies** § 6.8 in the case the administrator has withheld publication.

12.4.1.1 **Executive summary.** The submitted executive summary must follow the requirements of the **Benchmark Standard** for the benchmark being submitted.

12.4.1.2 **Result Log Files.** The log files must be submitted and follow the requirements of the **Benchmark Standard**. The log files will be used to validate the compliance of the Result (**Policies** § 12.4.2).

12.4.2 Pre-Publication Certification

A **TPC-Express Result** must be certified for publication by a **Pre-Publication Board** (**Policies** § 10.2) or by **TPC** certified **Auditor** (**Policies** § 9.3) before an alert message can be posted by the **Test Sponsor** (**Policies** § 12.4.3).

12.4.2.1 If the entire **Result** is certified by a **TPC** Auditor, the **Test Sponsor** can use the **TPC-Enterprise** mechanisms to publish the **Result**. For any part of the **Result** that is not certified by a **TPC** Auditor, the submitted documentation (**Executive Summary** and/or **FDR**) and **Result Log Files** must be reviewed for compliance by a **Pre-Publication Board**.

12.4.3 TPC-Express Alert Message

A **TPC-Express Alert Message** must at least include the following:

   (a)   Type of submission or withdrawal (See **Policies** § 6.7)

   (b)   Date submitted to the **TPC**

   (c)   Primary **Test Sponsor**'s name

   (d)   Complete name of benchmarked system

   (e)   **Benchmark Standard** name and version

   (f)   **Primary Metrics**

   (g)   URL to either the Executive Summary or **TPC** result web page

   (h)   Any other information required by the Benchmark Specification

12.4.4 TPC-Express Results

The following categories define the additional requirements and actions that apply to a **TPC-Express Result**.

12.4.4.1 **New Result**: A new **Result** must comply with the submission rules of the Benchmark Specification.

12.4.4.2 Express results are categorized into products that are generally available and not available. For a **Result** to be categorized in the general available category, at the time of publication all components must meet the definition of Generally Available as specified in the **TPC Pricing Specification**. If any component of the SUT does not meet the General Availability requirements, then the **Result** is categorized in the not available category.

12.4.4.3 Before a **Result** becomes a Historical **Result**, the Test Sponsor can update the **Result** by submitting supporting documentation verifying that all components are Generally Available. A new **Review Period** (**Policies** § 12.5) starts at the time of the update.

12.5 TPC-Express Benchmark Review Period

12.5.1 The Review Period consists of the 60 calendar days following the **Posting Date**. All aspects of the **Result** are subject to challenge during the **Review Period**.

12.6 TPC-Express Benchmark Fair Use Requirements

There are no Fair Use rules specific to the **TPC-Express** Class beyond those specified in **Policies** § 8.2.