



SEMI®
International
Standards

Third Edition
May 2006

SEMI STANDARDS MEMBER HANDBOOK



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Third Edition

May 2006

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Table of Contents

Preface	ii
1. About SEMI and the Standards Program	1
<i>Organizational Structure of the SEMI Standards Program.....</i>	<i>1</i>
2. The SEMI Standards Process.....	3
<i>Approval Path of a Document</i>	<i>4</i>
3. Membership	5
<i>Establishing and Maintaining Your Membership Data.....</i>	<i>5</i>
4. Meeting Participation	6
<i>Meeting Attendance and Voting Privileges.....</i>	<i>6</i>
<i>Making Motions</i>	<i>6</i>
5. Task Forces	9
<i>Global Task Forces</i>	<i>9</i>
6. Technical Committees	10
<i>Technical Committee Structure</i>	<i>10</i>
<i>Minutes of Meetings</i>	<i>10</i>
7. Letter Ballots	12
<i>Technical (Yellow) and Intercommittee (Lilac) Ballots.....</i>	<i>12</i>
<i>Line Items.....</i>	<i>12</i>
<i>Informational (Blue) Ballots</i>	<i>12</i>
<i>Auxiliary Ballots.....</i>	<i>12</i>
<i>Five-Year Review.....</i>	<i>12</i>
8. Voting On Ballots	13
<i>Voting Responsibilities</i>	<i>13</i>
<i>Types of Votes</i>	<i>13</i>
<i>How Votes are Counted</i>	<i>13</i>
9. About Standards	15
<i>Types of Standards</i>	<i>15</i>
<i>Status of a Standard.....</i>	<i>15</i>
<i>The Standards Designation.....</i>	<i>16</i>
Appendices	18
<i>A. Tools for Your Reference.....</i>	<i>19</i>
<i>B. Policy Reminders (Required Elements)</i>	<i>19</i>
<i>C. Voting By Interest</i>	<i>24</i>
<i>D. Special Purpose Groups.....</i>	<i>25</i>
<i>E. Appeals.....</i>	<i>24</i>

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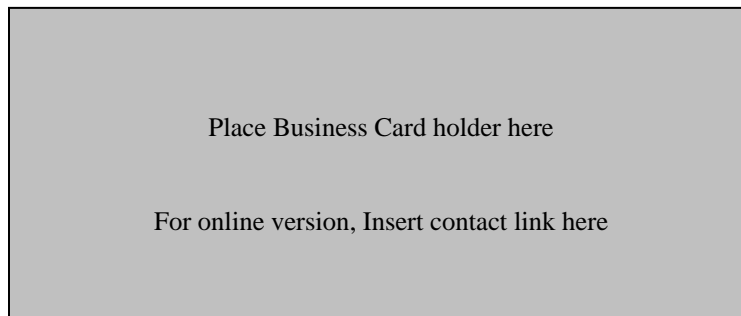
Preface

The SEMI International Standards Program has a complex structure. This handbook is designed to be a guide for the new member in understanding and participating in the program.

This handbook references three documents that define the SEMI Standards Program in detail. These references are the Regulations Governing SEMI Standards Committees (the “Regs”), the SEMI Standards Procedure Guide (the “Guide”), and the SEMI Standards Style Guide (the “Style Guide”). All three documents are available through SEMI and the SEMI Standards web pages.

Contributions to and collaboration between you (the volunteer) and the International SEMI Standards staff are essential for all standard development projects. Industry volunteers worldwide provide the technical expertise that is incorporated into a standard. In turn, SEMI standards staff provides process support and guidance in a system designed to produce timely quality products to meet the industry’s needs.

This handbook is always open for improvement. Your suggestions on how to make it a more useful tool are welcome at any time. Please send them to:



**“Standards are written
to be used.”
- Murray Bullis**

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1. About SEMI and the Standards Program

SEMI is an international industry association whose member companies produce materials, equipment, and related technology for manufacturing semiconductor, flat panel display (FPD), and micro-electromechanical systems (MEMS) products. Its Standards Program, established in 1973, has grown from a small group in the U.S. that developed the first silicon wafer specification into a global activity with a global staff. SEMI Standards international staff includes Europe, Asia and North America, and a portfolio of over 700 standards covering a wide range of technical topics.

Any interested person may participate in the SEMI Standards Program. Over 1300 individuals currently participate in the SEMI Standards Program. Open participation provides broad technical input and a strong foundation for global consensus. Open participation also means standards volunteers can come from device makers (customers), industry consortia, academic and government institutions, and other areas of interest. This diversity adds value to the standards for those who use them, by providing a consensus of technical input. Technical value is important, because the use of SEMI Standards is voluntary and SEMI cannot compel anyone to use them.

Standards also provide significant economic values. For example, there is an economic benefit of having standard wafers in standard cassettes that fit standard openings in process tools. Standards with global participation are internationally accepted. Suppliers benefit from a global market for standardized products. Customers benefit from worldwide availability of those products.

Your participation in the SEMI Standards Program provides benefits to your company. This Handbook is designed to enable your participation.

Organizational Structure of the SEMI Standards Program

The organizational structure of the SEMI Standards Program is divided into two parts, administrative and technical. The administrative portion includes the SEMI Board of Directors (BOD), International Standards Committee (ISC), and Regional Standards Committees (RSCs). The technical portion consists of the global technical committees, Subcommittees (SCs) and Task Forces (TFs). The program leadership is made up of SEMI Standards members. All leadership positions are filled with individuals from participating companies, who are either appointed or elected by their peers. SEMI Standards staff provides the forum, tools and guidance. Staff is prohibited from voting in the program and takes its guidance from the SEMI Board of Directors and the International Standards Committee.

At present, there are three distinct regions (Europe, Japan, and North American) that manage standards activities in those areas. The ISC governs the program and has the ability to significantly influence the direction of the program through two of its subcommittees:

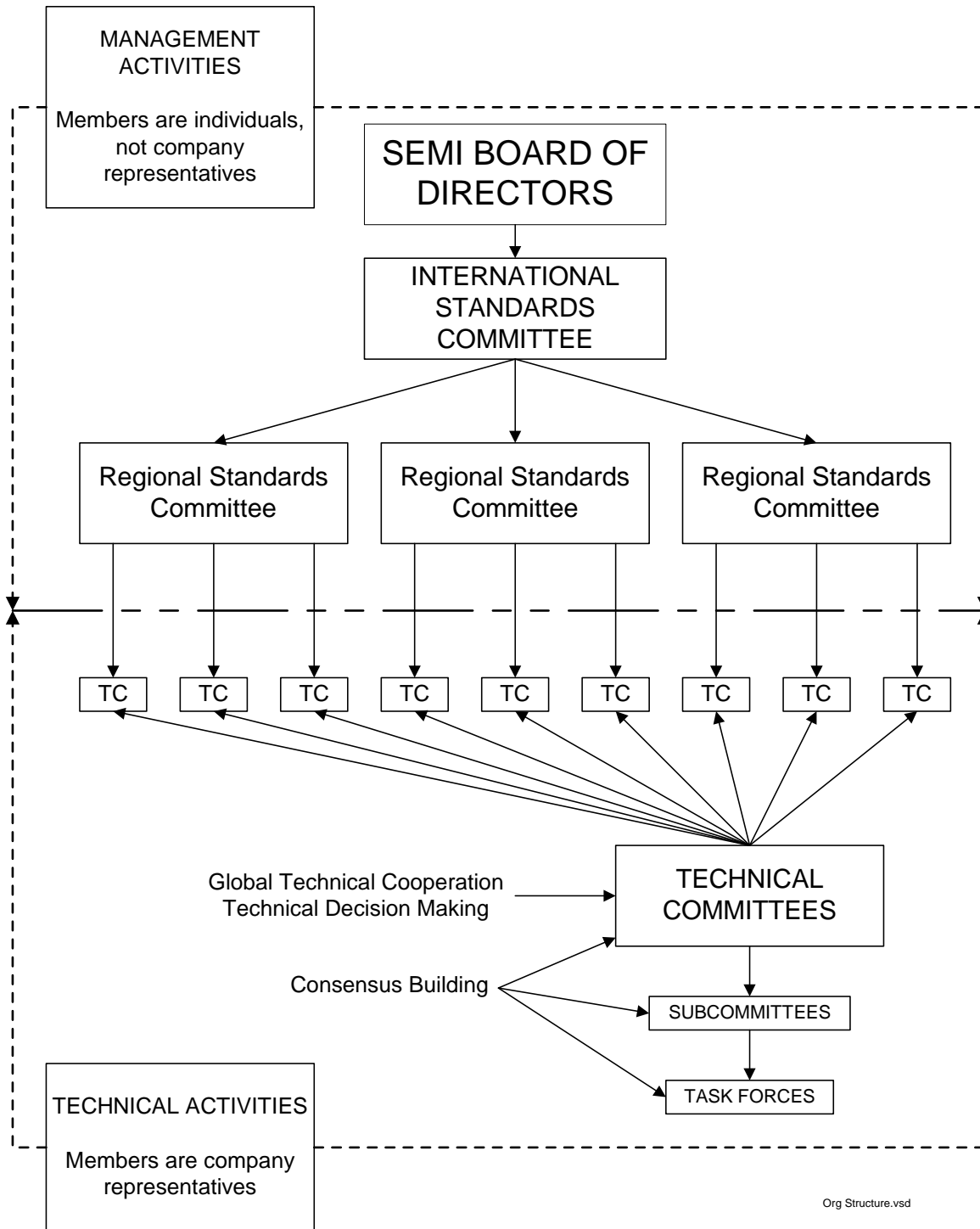
- The Regulations Subcommittee develops and maintains the *Regs*.
- The Audits and Reviews Subcommittee evaluates all letter ballots adjudicated and approved by technical committees, to ensure that those actions conform to the *Regs*. This process is also known as “procedural review.”

Each region with technical committees has a Regional Standards Committee made up of either the division chairs (if any) in that region, or the committee chairs of technical committees if there is no division structure. The RSC responsibilities are to settle disputes and to report regional activities to the ISC.

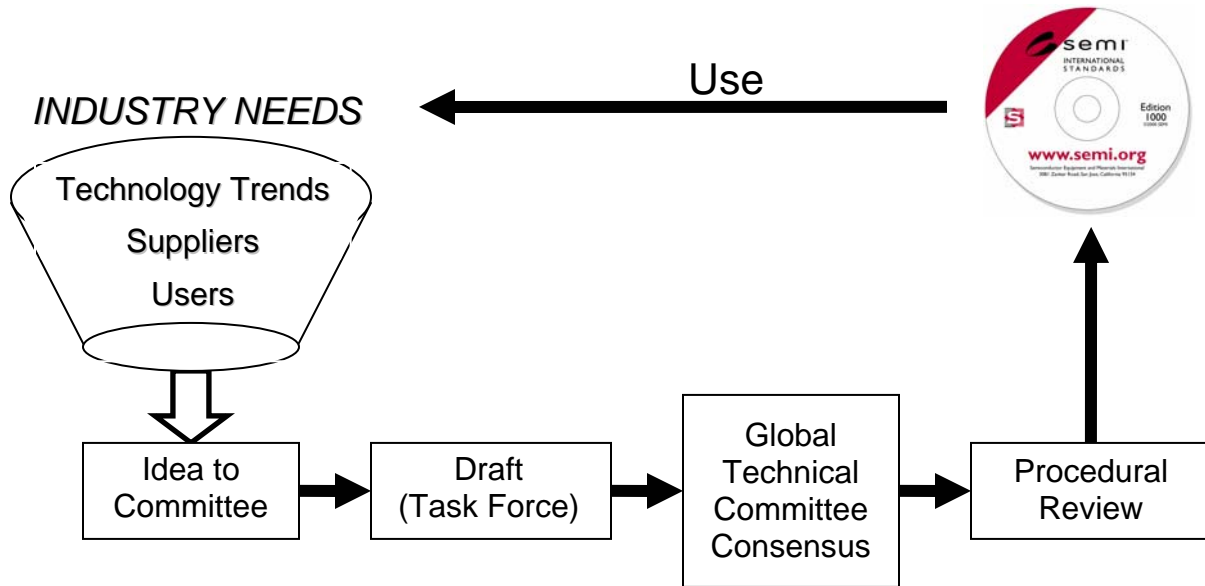
The technical committees in each region are actually global committees, with all members in all regions for that committee involved in ballots, reports, and liaison activities. Technical consensus and approval are established by the technical committee. Each technical committee reviews and passes or fails their own ballots, but develops ballots with cooperation of the other regions. The technical committee reports all activities and projects to the RSC in that region.

Task forces are working groups that develop the actual standards and report to the technical committee. Most standards development starts in task forces. These small groups of experts are more efficient at writing draft standards than large groups.

Organizational Structure of the SEMI Standards Program



2. The SEMI Standards Process



The main function of the SEMI Standards Program is to create useful, generic technical standards for the semiconductor, FPD, MEMS, and related industries. The main focus of the program is on materials and equipment specifications. The following paragraphs describe how an initial idea makes its way to publication as a standard.

A technical committee approves the formation of a task force to develop a standard, monitors the progress in the task force, and approves the resulting document to be balloted to the industry.

After the task force has developed a consensus document, the technical committee reviews the document through the letter ballot. The *Regs* dictate the distribution, timing, and tallying procedures to the SEMI staff. After this is complete, the committee is ready to review the document as well as all comments and negatives.

In the SEMI Standards system, all negative votes must be resolved before a document can go forward to be considered for publication. If all negatives are not resolved to the satisfaction of the committee, the document fails the review and is sent back to the task force for further consideration. If all negatives on the document are resolved, the committee checks for patent/intellectual property issues and safety issues (see Appendix B). Assuming no issues exist or all existing issues have been appropriately resolved, the committee then approves the document for publication.

Once the document is approved for publication by the committee, it is submitted to the ISC Audits & Reviews Subcommittee, (A&R SC). The A&R SC reviews a report prepared by staff that includes all requirements of the *Regs*; including the ballot review portion of the committee minutes; all tallies and editorial changes; and any safety, copyright, or patent information. If the A&R SC determines that the committee followed proper procedure in the review of the ballot, the document is approved and forwarded to the SEMI Publications department for processing and release.

If the A&R SC finds a procedural error and fails the document, it is sent back to the technical committee, and a repeat of the review can be done, or the technical committee may send the document back to task force, or they may decide to discontinue the document development. If the technical committee repeats a review, they may submit the document again to the A&R SC.

The complete procedure is detailed in the *Guide* and *Regs*.

Approval Path of a Document

The SEMI Standards process involves many details. These details have been found necessary to encourage cooperation among regions, to avoid surprises, to work in a legal manner, and to produce a high-quality product promptly. When necessary, this process can be carried from the start of a SNARF (Standards New Activity Report Form) to publication in a year.

The approval process includes the submission of the document to the technical committee, the approval of the technical committee, the distribution by staff and subsequent collection of votes, tallies and other pertinent information required by the technical committee to review the ballot.

All Letter ballots must be approved with documentation of that approval in the committee minutes. This is called 'authorization for ballot.'

After the votes have been tallied, before the committee meeting, the task force should contact any negative voters and discuss the negatives in terms of the intent of the task force. If the negative voter was not clear on certain aspects of the document, the task force may be able to secure a withdrawal of a negative before the committee meeting.

After all pre-meeting discussions have taken place, the task force should meet to determine recommendations to the committee on any remaining negatives or comments received on the ballot. The task force recommends the disposal of negatives using motions with reasons during the technical committee meeting.

The Technical Committee then votes on the motions. If all negatives are disposed of, the task force may then suggest editorial corrections to the document. The editorial changes must be approved by the committee before being forwarded to the ISC Audits and Reviews subcommittee for procedural review.

Staff prepares a procedural review form to the ISC A&R subcommittee, including all decisions, motions, votes and any additional information required to determine procedural validity. If the A&R SC agrees that the Technical Committee followed proper procedure, the document is approved and sent to SEMI Publications for processing. The author is then responsible for proofing the final product before release. Line items or the entire document, whichever was on the ballot, are the only portions of the document subject to change. No existing technical information may be added, deleted, or changed either in editorial changes or through the proofing process.

3. Membership

SEMI Standards meetings are open forums where anyone may attend, participate, and vote. However, you must file a Standards membership application form, if you wish to vote on formal letter ballots (see “Letter Ballots”) as a voting member of the committee. This information allows SEMI to e-mail balloting information to you.

SEMI needs to know which technical committee(s) you wish to join as a voting or non-voting member.

NOTE: If you choose to be a voting member of a technical committee, you are required to vote on every letter ballot issued by that committee. If you do not vote on three successive letter ballots of that technical committee, your membership status on that committee will be automatically changed to non-voting.

SEMI records votes on all technical ballots by company. In the SEMI Standards Program, one company has one vote. This prevents large companies from dominating the voting process and gives smaller ones a voice. SEMI also needs to know whether your company is a supplier of equipment or materials, a user of them, or neither, for each committee of which you are a member. If neither, you are considered a general interest member. This topic is further explained in the *Regs*.

As a SEMI Standards member, you need to keep your membership data up to date. Your membership is terminated if you change employers without notifying us because SEMI will not be able to communicate with you. You must file a new membership application if you want to join a new technical committee, resign from one that you currently belong to, or correct your membership data for any reason. There are both online and downloadable membership forms available in English and Japanese on the SEMI website.

Establishing and Maintaining Your Membership Data

To maintain communication with a global membership, it is necessary to register our members. By maintaining your membership information, you guarantee that you will be notified of updates, minutes, and ballots developed in your committee.

Depending on the type of membership you choose, you will be a voting or non-voting member. Voting members receive notifications about ballots and voting, along with messages and regular reports. Voting members are required to vote on all ballots within that particular committee. This allows the required 60% minimum return for all ballots to be met. If a voting member does not vote on three consecutive ballots, he or she will be removed from the voting roster.

All members are required to sign a copyright agreement that grants SEMI ownership of the content of all its standards. This is necessary to protect the members volunteering their time and energy to develop international, industry-wide standards.

4. Meeting Participation

SEMI operates the Standards Program and provides meeting venues as a service to SEMI member companies and the semiconductor, FPD, and MEMS industries. SEMI also establishes policy requirements that must be accepted by everyone who participates in the program.

Many of these policies are found in the *Regs*. Other policies are brought to everyone’s attention at every SEMI Standards meeting. These include the *Antitrust Reminder*, *Guidance for the Development of SEMI Standards and Safety Guidelines That May Involve Patentable Technology*, and *SEMI International Effective Meeting Guidelines*(see Appendix B).

Meeting Attendance and Voting Privileges

While there are many different types of meetings held in the SEMI Standards Program, they all fall into one of two categories: technical and administrative.

All SEMI Standards technical meetings are open forums. This means they are open to all who wish to attend. Technical meetings include committee, subcommittee, and task force meetings that are engaged in the development of technical standards.

Voting in technical meetings is usually done by all, but the chair may call for a vote by interest, which means that only one vote per company will be counted. This option is at the discretion of the chair and is used to prevent an excessive number of voters from one company influencing the outcome.

Administrative meetings are closed sessions, restricted to members or invited guests. Administrative meetings are those of RSCs, ISC *Regs* SC, ISC A&R SC and the Board of Directors Standards Committee. In administrative meetings, only voting members of the group are allowed to vote.

To keep proper records of meeting attendance, all attendees should sign the attendee roster.

	<i>Administrative</i>	<i>Technical</i>
Attendance	By Invitation or Membership	Open
Voting	By Member	Open or by Interest
Examples	ISC, RSC, BOD Standards committee, GCS,	Technical Committee, Technical Subcommittee, Task Force, Working Group

Making Motions

Most SEMI Standards meetings use a “motion and second” process that provides an orderly and efficient way to conduct business. The process may be modified somewhat to adapt it to the social customs of a region.

In technical committee meetings and administrative meetings, motions are used as a means to record proposals and approvals. Since the entire global committee cannot attend every meeting, motions and votes provide a responsible way to record and report those decisions to the rest of the committee.

A motion may be made after the chair calls for one, or if no other motion is “on the floor” (is in discussion). The chair calls for someone to second the motion, validating it. If a second is made, the chair will call for discussion where the group may discuss any concerns or issues related to the motion. The chair then calls for a vote, asking for votes to accept or reject the motion, and according to the requirements for the type of motion, counts the votes and announces the results.

In small task forces or where there are not too many diversified interests, making motions is not necessary when the group has consensus. Consensus is defined as general agreement, but common practice is to achieve complete agreement in a task force.

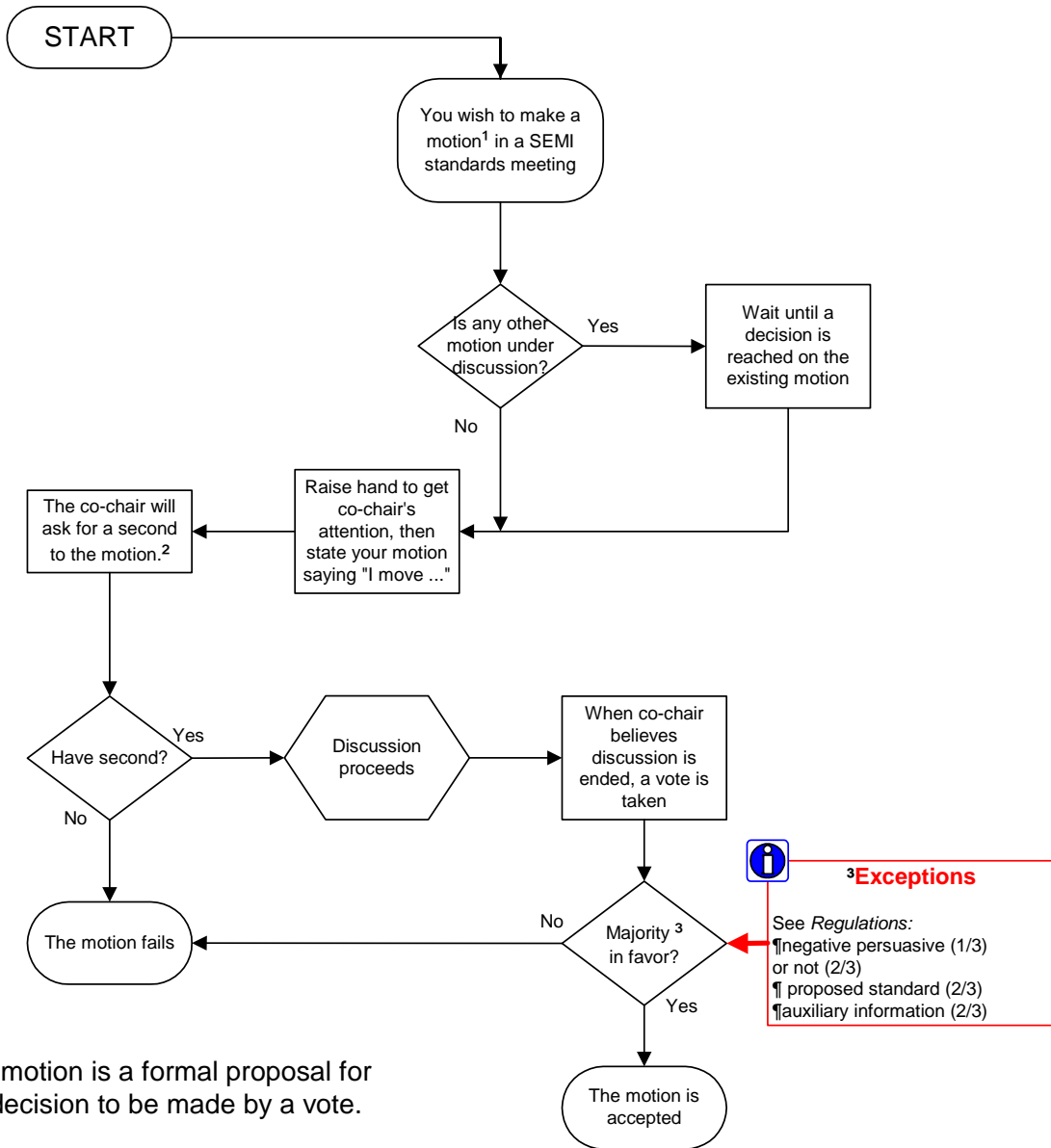
NOTE: Motions should deal with only one decision. Mixing different decisions in one motion is not proper. For example:

PROPER: "I move to find the negative from XYZ company related, but not technically persuasive because the suggested change is the subject of another, referenced standard."

IMPROPER: "I move to find the negative from XYZ company related, not technically persuasive, and that the editorial changes be accepted and the document forwarded to the RSC."

This flowchart describes how (and when) you may make a motion. This process is also described in detail in the *Guide*.

Making Motions in a SEMI Standards Meeting



¹A motion is a formal proposal for a decision to be made by a vote.

²In some parts of the world, it may be customary for the chair to ask if the participants wish to discuss the motion further. The final result is the same.

5. Task Forces

You can join any task force just by attending a meeting and asking one of the co-chairs to add you to their mailing list. Task forces do most of the standards development and maintenance work, but they don't make official decisions on accepting standards. Technical committees make official decisions, by using the letter ballot process (see *Letter Ballots*). Technical committees have the large global membership necessary for broad consensus on standards, and for their general acceptance and use.

Your contributions to the work of a task force will be significant, especially because the number of people on the task force may be small. Each member contributes in his or her own way. Most members work hard, attend regularly, and form a productive team.

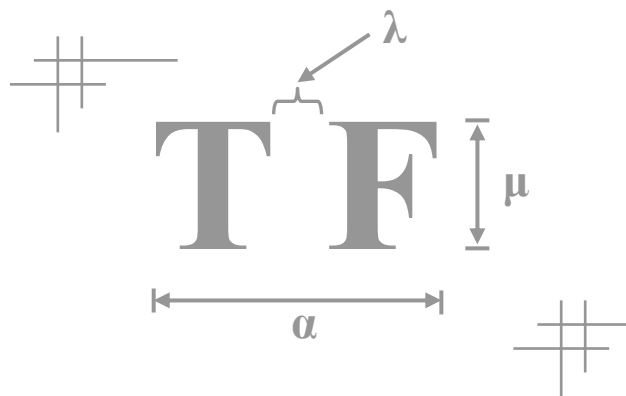
Global Task Forces

Frequently the regional parts of a technical committee have task forces on the same topics. Existing task forces can be merged into a global task force, or, if no task forces exist, a new global task force can be created.

The advantages of a global task force are improved communication and quicker progress during the development of new or revised standards. Leaders of the regional portions of a technical committee are involved in the creation of a global task force as members of the global coordinating subcommittee. Consensus at this level assists in bringing together the global co-chairs of the task force.

Typically there is a task force co-chair from each participating region who chairs the task force meetings in his or her home region. As the task force meets successively in different regions in the course of a year, each regional co-chair needs to know in detail about the actions taken by the task force at its last meeting.

Furthermore, global task forces usually have some members who are able to be with the task force wherever it meets. This continuity of leadership and membership, from one meeting to the next, provides the improved communication and rate of progress mentioned above.



6. Technical Committees

All formal technical decisions in the SEMI Standards Program are made by technical committees. Task forces and subcommittees do most of the writing of standards, but they may only make technical recommendations to a committee. Higher levels in the organization (Divisions; Regional, International, and Board of Directors Standards Committees) provide management oversight and procedural approval, but may not make technical decisions. (See the “Organizational Structure of the SEMI Standards Program” and “Technical Committee Structure” charts.)

Technical committees are global in nature, containing the largest pool of technical experts in the program. They provide the consensus base for approving the publication of a standard.

Technical committees and their leaders therefore have a great responsibility. The technical actions and decisions of a technical committee are the actions and decisions of the entire SEMI Standards Program in the committee’s field of expertise and significantly influence the materials, tools, and economics of a major global industry.

Technical Committee Structure

The technical committee structure in each functioning region follows the Regulations for task force formation, technical ballot review, and development of standards activities. However, operation of the global structure depends on cooperation, coordination and communication between the volunteer leaders and members internationally.

A Global Coordinating Subcommittee (GCS), made up of the technical committee co-chairs in all regions for that particular committee, makes decisions on task force formation and approval of ballots between regularly scheduled committee meetings. The GCS can coordinate activities, prevent conflict and duplication of efforts, and promote better communication between regions.

Regional task forces develop documents that are, in turn, balloted to all members of the technical committee globally. A global task force operates in the same way, but has international members from the other regions. Global task forces hold meetings in all regions, either at the larger SEMI Exhibitions or Standards Meetings, or between meetings of the technical committee by electronic means.

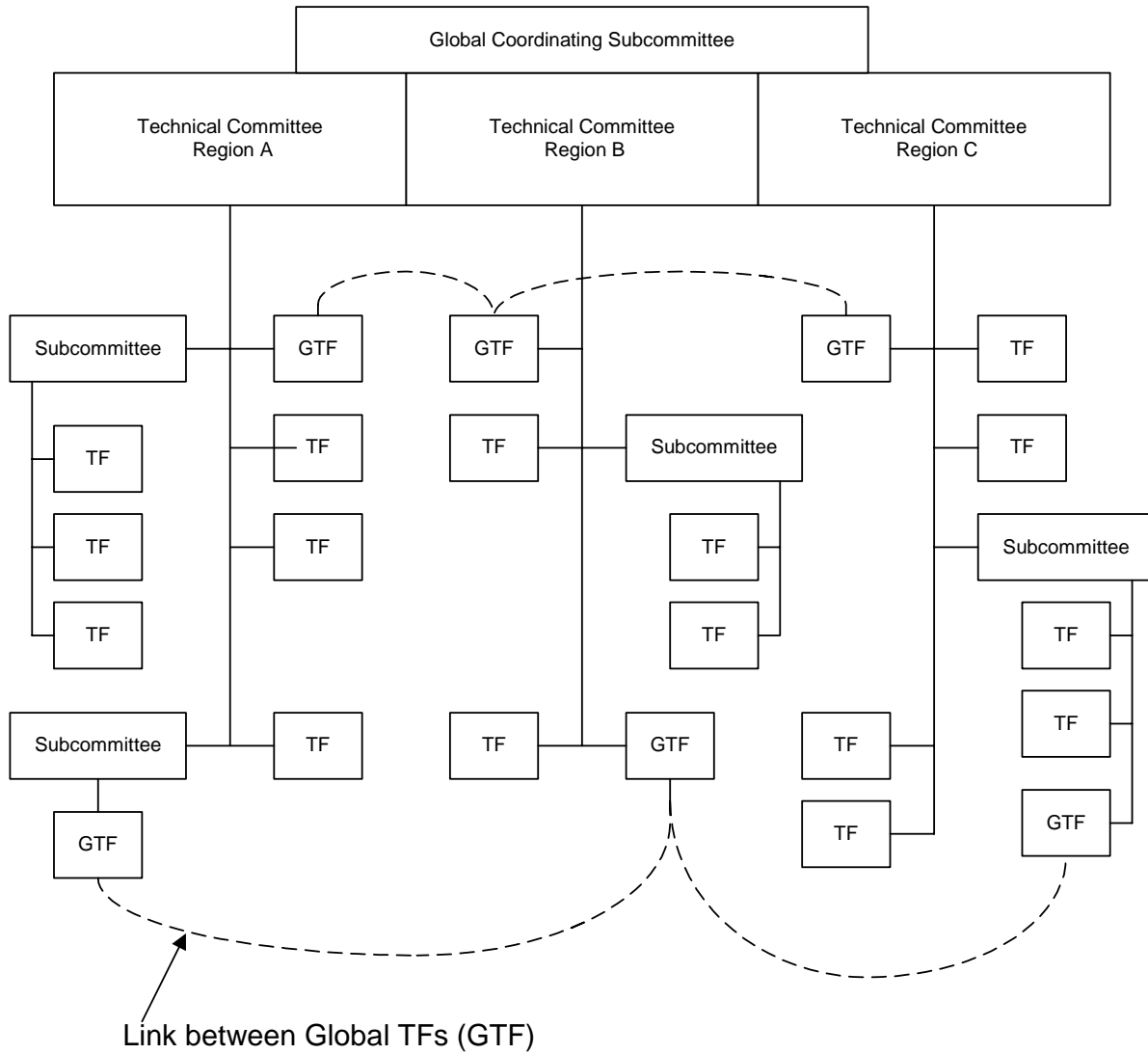
Minutes of Meetings

The minutes of the technical meetings in SEMI Standards are the proof and documentation of all decisions made, actions taken, and proposals discussed. The rule is: “If it is not in the minutes, *it didn’t happen.*” This is a good rule to follow, so all members should review minutes carefully before distributing to make sure all elements are recorded properly.

Minutes of technical committee meetings are recorded by SEMI staff members. If no SEMI staff member is present, a committee meeting cannot take place. Subcommittee and task force meeting minutes may be recorded by anyone, but they must be made a part of the TC minutes as attachments. Official minutes must be in English, although working versions may be in local languages for convenience.

For committee meetings, the staff also publishes a Committee Express Report (CER) that consists of balloting results, updates and announcements, and pertinent decisions of the committee, within two weeks of the committee meeting. This CER is posted on the SEMI Standards web site to allow members to see committee decisions within a short time after the meeting. The full set of minutes is distributed later.

Structure of a SEMI Standards Technical Committee



Technical Committees are global by definition.

Subcommittees and Task Forces may or may not be global.

Global coordination is required of Global Subcommittees and Global Task Forces and strongly encouraged for all other activities.

Tech Comm Structure.vsd

7. Letter Ballots

This section describes the different kinds of ballots in the Standards Program. Letter ballots are a separate topic, even though they are primarily the responsibility of a technical committee.

Technical (Yellow) and Intercommittee (Lilac) Ballots

The technical ballot is the approval device for publishing SEMI Standards. Technical ballots (also called yellow ballots) are distributed automatically to all voting members of the originating committee. The Regulations require a 60% minimum return from all companies included in a committee. Evidence that this requirement was met is established from the technical ballots received by staff.

If the task force decides that additional input from another committee is needed, an intercommittee or 'lilac' ballot is issued to the additional committee.

All votes are counted. However, only ballots returned by the original committee (the individuals who receive the Technical Ballot) are used to determine whether or not the requirements of the *Regs* have been met. The returns from the intercommittee ballots are added for the committee to consider as well, but do not affect the 60% minimum return rule.

Both technical ballots and intercommittee ballots are subject to the same 30-day required voting period, and all responses are subject to the same deadlines.

Line Items

A line item ballot is a type of technical ballot used when only a few parts of a standard need to be changed. These changes may be balloted selectively using line items. Line item balloting helps avoid receiving negative votes on parts of the standard that have been previously approved. All line items receive separate votes, so some items may pass and others may fail. However, there are limitations on the use of line items.

Informational (Blue) Ballots

Informational ballots are issued by a task force or a technical committee to get opinions on a document under development from a broad range of interests. These ballots can be issued at any time.

Informational ballots may also be sent to other committees if there is any overlap or the task force believes that expertise resides in another committee and wishes to draw on that knowledge to develop a better standard. This process prevents duplication in different committees.

Informational ballots are **not** subject to the 30-day required voting period. After the ballot has been distributed and a closing date has been announced (the closing date is on the ballot itself), the staff will collect the responses and forward them to the task force with copies to the committee chairs. The task force can then use the responses to refine the document and prepare it for technical ballot.

Auxiliary Ballots

Auxiliary ballots are ballots which, if approved, create auxiliary documents rather than official standards. These do not have to go through the standard voting procedure, but can be approved by 2/3 majority during a technical committee meeting.

Five-Year Review

Every SEMI standard that has been published for five years without technical revision or re-approval is required to be reviewed.

8. Voting On Ballots

If you are a voting member of a technical committee, you must vote on technical ballots.

Anyone may request and vote on SEMI Standards ballots, members and non-members alike. The votes are counted and tallies prepared by staff. Any negatives must be adjudicated during a committee meeting.

Please submit your votes within the established voting cycle for a document. Late votes delay the balloting process.

Voting Responsibilities

If you are a voting member of a committee and receive a Letter Ballot from your committee, voting is mandatory. If you do not vote, you may lose your voting rights.

If you receive an intercommittee Ballot from another committee, you should respond if you have knowledge about the subject, but voting is optional.

If you are notified that there is an informational ballot online, you should vote to assist the task force if you have knowledge about the subject, but voting is optional.

Types of Votes

There are five possible vote choices for each ballot or line item. When voting, select the choice that reflects your view on the document or line item being voted upon:

- Accept – You agree with the proposed document in its current form.
- Accept with Comments – You agree with the proposed document in its current form, but you have editorial suggestions or wish to offer related items for future consideration.

NOTE: All Accept with Comments votes that are not accompanied by comments will automatically be changed to Accept votes.

- Abstain – You are not sufficiently familiar with the topic area of the proposed document, or have insufficient interest to provide a technical opinion.
- Abstain with Comments – You are not sufficiently familiar with the topic area of the proposed document, or have insufficient interest to provide a technical opinion, but you have editorial suggestions or wish to make a general observation.

NOTE: All Abstain with Comments votes that are not accompanied by comments will automatically be changed to Abstain votes.

- Reject – You disagree with some or all of the technical content of the proposed document, or have observed a procedural violation, or otherwise have a serious concern with the document.

NOTE: All Reject votes must be accompanied by an explanation. Reject votes that are not accompanied by an explanation will automatically be changed to Abstain votes if SEMI Staff is not successful in contacting the voter for the missing explanation.

How Votes are Counted

Although there may be multiple voting members in a committee from the same company, only one vote is counted per company per ballot. Staff counts the company vote as follows:

- Any negatives: Company vote is negative
- Abstains and accepts, no negatives: Company vote is accept

- All Abstains: Company vote is abstain.

All individual comments and negatives are forwarded to the committee, regardless of how many are received from any one company. Each must be dealt with separately unless they are exactly the same negative or comment.

NOTES:

- If you vote multiple times on the same committee ballots, your latest vote is considered official.
- If you belong to multiple committees, you may occasionally receive duplicate ballots for technical (yellow) and intercommittee (lilac) ballots. Always respond to the technical ballot. Do not send duplicate responses.
- Always use your user name and password when voting, or your vote will not be valid and staff must contact you for verification.

9. About Standards

This section contains information about the standards published as the result of efforts by SEMI Standards Program volunteers. There are two major attributes of a standard: its type, and its status. Each of this is explained in its own subsection. There is also a subsection explaining how the parts of a standards designation is determined, and how its filename is created based on its designation.

Types of Standards

The types of standards are:

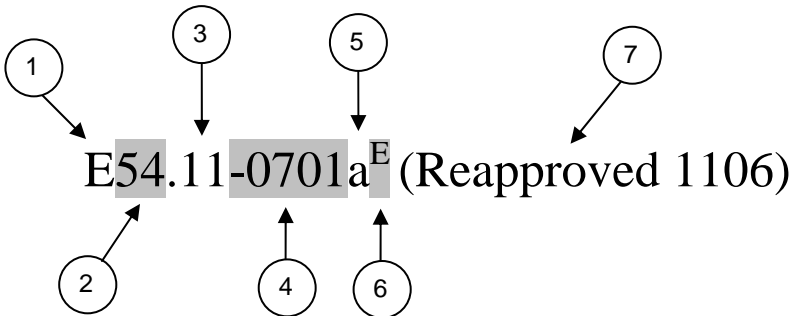
- Specification (requirements for a product or service; imperative language – “shall”)
- Guide (options or instructions with guidance as to choices; non-imperative language – “should”)
- Test Method (procedure with a numerical result; imperative language – “shall”)
- Practice (procedure without a numerical result; non-imperative language – “should”)
- Terminology (definitions of terms, explanations of symbols, abbreviations, or acronyms)
- Classification (systematic arrangement or division of materials, products, systems, or services into groups based on similar characteristics such as origin, composition, properties, or use)
- Safety Guideline (advisory safety in nature; follows the requirements of the Regulations; non-imperative language – “should”)
- Miscellaneous (formats, charts, reference photographs, etc.)

Status of a Standard

The status of a standard is dependent on the level of approval it has received:

- Preliminary standards have been approved by a single regional part of a technical committee for publication for information and comment prior to balloting for its adoption as a Standard. Preliminary standards are only published for two years and may not be modified. They can be replaced by interim or full consensus standards.
- Interim standards have been approved by all of the regional parts of a technical committee, but considered by the technical committee to be in need of further development. Interim standards are only published for two years and may not be modified. They can be replaced by full consensus standards.
- Full consensus standards are developed within the consensus principles of SEMI that meets the highest level of approval in the Regulations. They have been approved by full letter ballot procedures.
- Reapproved standards have undergone 5-year review by the responsible technical committee and have been approved to remain in publication without any content change.
- Withdrawn standards have undergone review by the responsible technical committee and are considered obsolete. However, those standards shall continue to be published for a period of one year.
- Superseded standards are older versions of currently published standards. Although these standards are not considered current by SEMI Standards members or users, the standards are provided as reference material for equipment, materials, and processes that may still utilize these older specifications.
- Obsolete standards are older versions of currently published standards that have been declared by the responsible technical committee as no longer to be supported by SEMI.

The Standards Designation



<i>Field of Standard</i>	<i>Designation Letter</i>
Process Chemicals; Gases	C
Flat Panel Display	D
Equipment Hardware; Equipment Software	E
Facilities	F
Packaging	G
Materials	M
Silicon Materials and Process Control (former ASTM standards)	MF
MEMS	MS
Microlithography	P
Safety Guidelines	S
Traceability	T
Auxiliary information, published independently	AUX
Proposed Standards, published within other volumes	PR*

* This designation letter is discontinued. It is included solely for reference.

<i>Callout</i>	<i>Item</i>	<i>Explanation</i>	<i>Example</i>
1	Designation Letter(s)	Indicates the field of standard. See table below.	C, D, MF
2	Designation Number	Sequentially assigned for each standard approved for a given field	1, 2, ... 54...144...n
3	Sub-Document Number	Assigned only for sub-documents. Sequentially assigned for each sub-document for a given parent standard. Separated from the designation number by a decimal point	.1, .2,9
4	Designation Date	Indicates the year (yy) or month and year (mmyy) of official publication. Separated from the designation number or sub-document number by a hyphen.	-96, -0301
5	Delayed Revision suffix	Indicates that the document was technically modified but no immediately effective changes were made to the official standard (i.e., delayed revision sections were added to the document)	a, b, c
6	Multiple Publications suffix	Indicates that the document was published 2 or more times during the publication cycle of the most recent technical revision to the standard (A indicates 2 times, B indicates 3 times, etc.).	A, B
7	Status	Indicates status of a currently published standard if anything other than full consensus.	(Preliminary), (Interim), (Reapproved mmyy),

			(Withdrawn mmyy)
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Appendices

- A. Tools
- B. Policy Reminders
- C. Voting By Interest
- D. Special Purpose Groups
- E. Appeals

A. Tools for Your Reference

The full texts of the Regulations Governing SEMI Standards Committees (the Regs), the SEMI Standards Procedure Guide (the Guide), and the SEMI Standards Style Guide (the Style Guide) are available on the SEMI Standards Web pages, along with other useful tools.

Regulations Governing SEMI Standards Committees

The Regs define the legal structure and processes of SEMI Standards development. Its procedures are designed to avoid legal problems for you, for your company, and for SEMI. Because a standards meeting is a meeting among competitors to agree on specific interests, the anti-trust laws of the U.S. define what may legally be discussed in a standards meeting and what may not be discussed. Companies may be fined for violations, and the individual people who committed the violations may (and often do) go to jail. A copy of the SEMI *Antitrust Reminder*, which is an obligatory handout at all SEMI Standards meetings, is in Appendix B of this Handbook.

The SEMI Standards Procedure Guide

The Guide is the instruction book for the SEMI Standards Program. It contains operational details of most aspects of the program that volunteer members need to know. The *Guide* is consistent with the *Regs*, but presents information in more detail. The chapters of the *Guide* draw together in one place topics that are sometimes covered in more than one place in the *Regs*, and include steps performed by both the volunteer members of the program and by SEMI staff. For this reason the *Guide* is maintained by consensus of the global SEMI Standards staff.

The Style Guide

The *Style Guide* defines the content and style of standards. They are the foundation for templates that make writing a first draft standard a less challenging job. The *Style Guide* also establishes a consistent, professional appearance of SEMI Standards. This document is maintained by SEMI headquarters staff in collaboration with volunteer technical editors in many of the Technical Committees.

B. Policy Reminders (Required Elements)

The following pages contain copies of the SEMI Standards policies that must be brought to the attention of everyone at the beginning of every meeting of Technical Committees, Subcommittees, and Task Forces. The reasons for this should be evident. But if you have any questions about the content of any of these policies, either ask it in the meeting or ask any SEMI staff member.

These policies are:

- Antitrust Reminder
- Guidance for the Development of SEMI Standards and Safety Guidelines that may Involve Patentable Technology
- SEMI International Effective Meeting Guidelines

Antitrust Reminder

SEMI activities are a coordinated effort among competitors in the semiconductor, FPD, and MEMS industries and are, therefore, subject to antitrust laws. Although this coordination is perfectly legal under U.S. antitrust laws, we want to make sure that no antitrust risks are raised by the manner in which the SEMI Program is carried out. Accordingly, these guidelines may go somewhat beyond the prohibitions of the law, but that is done in the interest of safety.

The penalties for violating antitrust laws can be quite severe, including large fines and even imprisonment of individuals found guilty of illegal conduct. Contrary to the popular belief that the government has relaxed antitrust enforcement, in recent years the Justice Department has recommended jail sentences for the majority of persons convicted of violating antitrust laws. Moreover, the U.S. Supreme Court has ruled that a trade association may be held legally responsible for the unauthorized, as well as authorized, acts of its members. Accordingly, every effort must be made to avoid even the appearance of impropriety.

LAWFUL ACTIVITIES

As a basic premise, the goals of SEMI are clearly lawful. The proposed activities, if properly conducted, will not be found to violate the antitrust laws because they will not have an adverse effect on the competitive market place.

SEMI relies heavily on the judgment of SEMI staff members to see that topics which may give an appearance of an agreement that would violate antitrust laws are not discussed at SEMI meetings. The presence of a SEMI staff member at a meeting, however, should not invite probing to determine how far a discussion can proceed before it becomes apparent that it is improper and is cut off. Each SEMI member has the responsibility in the first instance to avoid raising improper subjects for discussion. This reminder has been prepared to ensure that participants in SEMI meetings are aware of this obligation.

UNLAWFUL ACTIVITIES

The most common violations of the antitrust laws are agreements among competitors to fix prices or allocate customers. As for SEMI, the most important thing to keep in mind is that its purpose is to promote the semiconductor equipment and materials industry, sponsor education and training, and promote industry standards. SEMI does not market particular semiconductor equipment or materials products. Accordingly, it is not the business of SEMI to consider or discuss matters relating to product development, marketing, purchasing, or pricing decisions of individual companies.

The Do's and Don'ts presented below highlight only the most basic antitrust principles. Participants in SEMI meetings should consult counsel in all cases involving specific situations, interpretations, or advice.

DON'T

1. DON'T IN FACT OR APPEARANCE, discuss or exchange information regarding:

- (a) Individual company current or projected prices, price changes, price differentials, markups, discounts, allowances, terms and conditions of sale, including credit terms, etc., or data that bear on prices, including profits, margins or cost.
- (b) Industry pricing policies, price levels, price changes, differentials, or the like.
- (c) Changes in industry production, capacity, or inventories.
- (d) Individual company bids or intentions to bid for particular products, procedures for responding to bid invitations, or specific contractual arrangements.
- (e) Plans of individual companies concerning the design, characteristics, production, distribution, marketing, or introduction dates of particular products, including proposed territories or customers.
- (f) Matters relating to actual or potential individual suppliers that might have the effect of excluding them from any market or of influencing the business conduct of firms toward such suppliers or customers.

- (g) Individual company current or projected cost of procurement, development, or manufacture of any product.
 - (h) Individual company market shares for any product or for all products.
2. DON'T discuss or exchange information regarding the above matters during social gatherings incidental to SEMI-sanctioned meetings, even in jest.

DO

1. Adhere to prepared agendas for all SEMI meetings.
2. Insist that meeting minutes be prepared and distributed to all participants, and object whenever meeting minutes do not accurately reflect the matters which transpired.
3. Understand the purposes and authority of each SEMI committee or other group in which you participate.
4. Consult with SEMI's legal counsel or your company counsel on all antitrust questions related to SEMI meetings.
5. Protest against any discussions or meetings which appear to violate the antitrust laws, disassociate yourself from any such discussions or activities, leave any meeting in which they continue and report the activity to the SEMI Executive Director so that similar conduct can be avoided in the future.

SEMI's policy is to discuss thoroughly with legal counsel any proposed programs or policy decisions before they are implemented. If any participant has a question as to the legality of a proposed course of action, the matter should be immediately referred to the SEMI Executive Director who will discuss it with legal counsel. In this manner, SEMI can ensure continued pursuit of its legitimate objectives with maximum protection for its participants.

Guidance for the Development of SEMI Standards and Safety Guidelines That May Involve Patentable Technology

When possible, SEMI Standards or safety guidelines should avoid the necessity of using patented technology or copyrighted information in order to comply with the standard or safety guideline. When the inclusion of such items is technically justified, Section 14 of the Regulations Governing SEMI Standards Committees must be followed.

At the present rate of development of both semiconductor technology and new standards, it is evident that many SEMI Standards committees will encounter situations in which potentially patentable technology (that is, technology that might be patented in the future) may be incorporated in documents they are developing. To better anticipate and avoid unknowing incorporation of patented technology or copyrighted information into a SEMI standard or safety guideline, participants in the development of SEMI Standards and safety guideline are requested to observe the following code of behavior.

1. Responsibility to Report Relevant Intellectual Property

All participants in the SEMI Standards Program have the responsibility to make known to the group in which they participate any non-confidential patented technology or copyrighted information, including issued patents and published patent applications, of which they have knowledge and which might be required to be used in order to comply with the standard or safety guideline being developed by the group.

2. Prohibition Against Intentionally Concealing Information

It should be noted that intentional concealing of any intellectual property rights while knowing they could have an effect on the document under development is not only unprofessional, but also it may render the intellectual property rights unenforceable in the future.

3. Recording in Minutes

Contents of discussions relating to intellectual property rights, including patent rights and pending patent applications should be recorded in the minutes of the committee having jurisdiction over the document being developed. If such discussions take place in a subcommittee or task force, they should be recorded in the report of the subcommittee or task force and appended to the minutes of the committee meeting at which the report is made. This provides a public record of the discussions and disclosures as well as a basis for any cautionary notes to be added to the document.

4. Self-Protection

Participants in the SEMI Standards Program should guard against inclusion of technical ideas discussed in these open forums in future applications or in amendments of existing patent applications.

SEMI International Effective Meeting Guidelines

Guidance for Facilitation and Interaction between International Participants in SEMI Standards meetings

In order to facilitate international meetings where all participants do not necessarily speak one language, a suggested set of guidelines are set forth below. Most of these are basic knowledge in meeting facilitation, however courtesy and respect to participants with language skills different from our own will be an essential part of future understanding and efficiency in standards development.

WELCOME: The leader or meeting facilitator should formally welcome any international guests and invite participants to take part in the discussions. Ground rules should be set at the beginning of the meeting:

Treat each other with respect (no interrupting, talking over another, etc.)

Speak slowly and clearly to allow all participants to hear and understand

Try to understand **FIRST**, then to **BE** understood

State your ideas concisely

Summarize your comments with a result or request

FACILITATION: The leader or meeting facilitator has the responsibility to see that:

if a microphone is available, its use is explained thoroughly to the audience

if a translator is used, that their method and needs are explained to the audience and participants

issues, decisions and action items are written clearly for all to see

issues, decisions and action items are explained for all to hear

final decisions and action items are stated before the close of the meeting

MICROPHONES:

If a microphone is placed in an aisle, the meeting facilitator should encourage the use of the microphone so all can hear. If not, the facilitator should encourage those with comments to stand and address the audience, not the speaker.

TRANSLATION:

sequential translation - speaker's words are translated after the sentence, thought or comment has been completed. Usually this takes place with a microphone, so all attendees hear both languages. Speakers please keep sentences short and simple, and stop long enough for the translation to take place.

simultaneous translation - speaker's words are translated at the same time. Usually this takes place with headphones on different channels, but sometimes a translator will whisper to a smaller group or single person without the equipment (called "whisper translation"). Speakers please keep your sentences short and simple, and pause frequently to allow the translator(s) to keep up.

C. Voting By Interest

What is a voting interest?

A business entity and all of its affiliates worldwide having similar business interests constitute a single voting interest. An affiliate of a business entity (the parent) is any other business entity that (i) is majority-owned or controlled by the parent or (ii) is under common majority ownership or control of the parent. If an affiliate deals with different products or services that indicate different interests, the affiliate is also entitled to a vote.

Majority-owned or majority ownership means the parent holds more than 50% of the voting equity securities of another business entity. Control may include a variety of factors that give the parent the right, regardless of whether such right is ever exercised, to materially influence or direct management policies or decisions of another business entity.

When are votes counted by interest?

1. For letter ballots, always.
2. In meetings, if it appears that any voting interest could have a disproportionately large influence on the outcome of a vote. Otherwise, each member or visitor attending a meeting of a Technical Committee, subcommittee, or task force is entitled to one vote.

Who decides when to use voting by interest?

The co-chair of the meeting, at his/her discretion or at the request of any attendee. Each voting interest represented has a single vote.

How can we decide in a meeting who represents a voting interest?

Request each person to identify his or her employer's parent company, if any. An accurate determination may not be possible. Uncertainties should be resolved by consensus among those involved. Decisions of the co-chairs, based on the available information, will be final for the conduct of business at the meeting. Anyone who feels that an error has been made should negotiate later with the committee co-chairs or SEMI staff, as appropriate.

D. Appeals

An appeal is a request in writing from a member who objects to a process or decision that he/she believe was handled incorrectly. It describes a situation that the member feels has affected him adversely, and must be addressed by the ISC in the region where the alleged infraction occurred.

Appeals provide a way to question processes, to request action and to help insure that all procedures are correct and acceptable to all members. Please refer to Section 16 of the Regulations.

E. Special Purpose Groups

The activities described here have been found to be useful in North America. They contribute to effective technical committee operations, and often lead to identifying persons with good leadership skills. In addition, both the technical architects and the technical editors for the various technical committees meet with their counterparts to address topics of interest. These discussions often lead to improvements in the SEMI standards process.

Technical Architects

Technical committee co-chairs may appoint technical architects who assist in planning new standards activities and in coordinating between technical committees having interests in common. Members active in the International Technology Roadmap for Semiconductors can apply that experience to identifying needs for new standards and to getting them developed in time to meet the needs.

Technical Editors

Technical committee co-chairs may appoint technical editors who assist in drafting new or revised standards in the manner defined in the Style Guide. Members skilled in the use of English are particularly valuable in this role.