IVI *Interchangeable Virtual Instruments*

IVI-1.2: Operating Procedures

July 6, 2004 Edition
Revision 1.0

Important Information

IVI-1.2: Operating Procedures is authored by the IVI Foundation member companies. For a vendor membership roster list, please visit the IVI Foundation web site at www.ivifoundation.org, or contact the IVI Foundation at 2515 Camino del Rio South, Suite 340, San Diego, CA 92108.

The IVI Foundation wants to receive your comments on this specification. You can contact the Foundation through email at ivilistserver@ivifoundation.org, through the web site at www.ivifoundation.org, or you can write to the IVI Foundation, 2515 Camino del Rio South, Suite 340, San Diego, CA 92108.
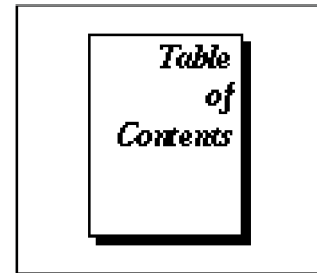
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IVI Operating Procedures Revision History

This section is an overview of the revision history of the IVI Operating Procedures.

Table 1-1. IVI Operating Procedures Revisions

Revision Number	Date of Revision	Revision Notes
Revision 1.0	July 6, 2004	Initial version

1. Overview of the IVI Operating Procedures

1.1 Introduction

IVI-1.2 *Operating Procedures* describe IVI Foundation rules and practices for conducting business. All discussions and business conducted in any forum within the foundation shall conform to these procedures.

In general the foundation by-laws are the ultimate authority on foundation procedures. If they are found to conflict in any way with anything appearing in this document, the by-laws take precedence.

Where procedures are not defined by the document or the by-laws, the IVI Foundation uses *Robert's Rules of Order (Revised).*

1.2 Audience of Specification

This document is intended for members of the IVI Foundation.

1.3 References

See www.robertsrules.com/ for Roberts Rules of Order
See www.ivifoundation.org for IVI Foundation by-laws

2. Procedures Used When Running Meetings

The following procedures are used to guide the meetings of committees and sub-committees of the IVI Foundation.

Note: The terms sub-committee and working group are interchangeable. Committees, which the by-laws only permit the Board of Directors to create, also follow these operating procedures.

Meetings will be run with Roberts Rules of Order as a guiding principle.

2.1 Chairperson and Purpose

Each committee or sub-committee of the IVI Foundation shall have a chairperson and a written charter the clearly describes the purpose of the group

2.2 Phone Meetings

Meetings by Phone Conference, Web-ex or other electronic means shall be considered as fully valid face-to-face meetings, and shall follow the same rules except as noted.

- Votes should be conducted by role call
- Timetable for these meetings does not need to follow the guidelines *above*
- 7 days notice of the meeting with agenda and call details

2.3 Notice

Sufficient notice (where and when) will be given prior to each physical meeting, giving location, time and date. Since physical meetings require travel, they shall be announced with at least 1-month notice with details posted on the organization web site so that reasonable travel plans can be made.

Phone meetings shall be announced with 1-week notice.

Note that meetings may be scheduled with less notice, but binding decisions can not be made at these meetings.

2.4 Quorum and Voting

A quorum shall be established at each meeting. All voting is conducted with one vote per member company with voting privileges. If more than one representative is attending from a single company, the voting representative should be clearly identified when establishing quorum.

Sub-committees generally make decisions by consensus. If they are unable to reach a conclusion by consensus they should bring the issue to their parent committee.

See section 3 of this document for details regarding how many members must be present to establish a quorum for various groups and business items and the majority necessary to pass a resolution.

2.5 General practices

The following sections describe general practices.

2.5.1 IVI Foundation Large Group Meetings

Meeting notices including meeting schedule shall be sent to the membership not less than 10 or more than 60 days before the meeting. Generally we do this by sending out e-mail announcement to the IVI list server and posting details on the web.

The IVI Foundation shall:
- o Plan tentative meeting dates two meetings in advance.
- o At any given meeting finalize the location and dates for the following meeting, typically 3-4 months hence.
- o Distribute an overall meeting schedule (topics, days, and times) 30-60 days in advance
- o Committee and sub-committee chairpersons provide detailed agendas for their meetings one week before the first day of the meeting.

2.5.2 Chairperson Neutrality

In order to maintain order in the meeting it is helpful for the chairperson to maintain a neutral position. When the chairperson is unable or unwilling to do this, he/she should request someone from the group that has not committed to a position on the issue to temporarily act as chairperson (per Roberts Rules of Order).

2.6 Distribution Of Documents

For all major technical documents to be discussed at a meeting, said documents should be available to all committee members, either distributed or posted on the organization web site with notice of their availability at least two weeks prior to the meeting at which they are to be discussed. This time is necessary for the individuals to study the technical documents, and perhaps get input from colleagues in their organization that will not attend the meeting. Votes shall not be taken on documents that are not made available by this deadline.

2.6.1 Other Supporting Materials

It may be appropriate to distribute short documents (one or two pages) at the meetings, but it is recommended that for controversial subjects all documents comply with the two week deadline.

2.7 Minutes

All meetings shall have minutes. It is recommended that the chairperson select someone other than him/herself to take the minutes. However, it is the chairperson's responsibility to make sure the minutes are taken and fairly reflect the discussions at the meetings.

Minutes should be based on a ***standard foundation template*** (see www.ivifoundation.org) and should include:
- List of attendees
- Date of meeting
- Person taking minutes & chairperson
- Location
- Agenda
- Record of discussion – primarily: key decisions, issues, reasoning behind decisions. It is appropriate for the minute taker to interrupt the discussion to ensure they have accurately captured comments.
- Action items with owners and due dates

3. Quorum and General Voting Requirements

This section describes general voting requirements. In general, per the by-laws of the foundation, business is conducted in accordance with Robert's Rules of Order (revised).

Because the IVI Foundation is especially concerned about the maintenance of technical specifications, certain extraordinary rules apply to some resolutions as indicated in section 3.2.

3.1 Quorum

The following table describes the criteria needed for a quorum at various IVI Foundation meetings. Note that this only applies to live meetings. Note that "Live Meetings" include both face-face meetings and meetings conducted telephonically.

Table 3-1. Quorum Criterion

Body Taking Action	Quorum Requirements
Technical Committee	*25% of those entitled to vote or 2, whichever is more*
Board of Directors	*A majority (that is, greater than 50%) of the directors in office*
Voting Membership (Annual Meeting)	*25% of those entitled to vote or 2, whichever is more*

3.2 Necessary Majority To Pass Various Resolutions

The following table describes the criteria needed for a vote to pass on various types of resolutions. Note that "Live Meetings" include both face-face meetings and meetings conducted telephonically. Electronic votes are those that are conducted via e-mail.

NOTE: All decisions are based on the number of "Yes" votes cast in comparison with the total eligible. *This eliminates the traditional interpretation of an "abstain" as supporting the majority that express a preference.*

Table 3-2. Number of Votes Required to Pass a Resolution

Body Taking Action	Type of Action	Live Meetings	Electronic
Technical Committee	General actions	>50% of those present[†]	>50% of voting members
Technical Committee	Initiate new technical work	2/3 of voting members	2/3 of voting members
Technical Committee	Change a specification	2/3 of voting members	2/3 of voting members
Technical Committee	Approve a new or modified piece of technical work	>50% of those present[†]	>50% of voting members
Board of Directors	General actions	>50% of those present[†]	>50% entire BoD
Board of Directors or	Change by-laws or change the number of Directors	2/3 of those present[†]	2/3 of those entitled to vote

Annual Meeting (Voting Membership)			
Technical Committee or Board of Directors	Any resolution that modifies the rules of order or prevents some other resolution from being considered	2/3 of voting members	2/3 of voting members

†   *Provided a quorum is present at a properly convened meeting.*

Note that for resolutions that require 2/3 of those present that if 30 (or 29 or 28) members are present and 20 vote in favor of a resolution it passes.

Note that for resolutions that require 2/3 of voting members that if 30 (or 29 or 28) members are entitled to vote (present or absent) and 20 vote in favor of a resolution is passes.

Note that for resolutions that require >50% of those present, that if 30 (or 31) members are present a minimum of 16 votes is necessary to pass the resolution.

3.3 Conducting Votes Electronically

The foundation allows all business to be conducted electronically. Unless a specific exception is declared by the chairperson, electronic votes are conducted by e-mail. The only requirement for the respondent is that they clearly indicate their preference on the vote. Generally an e-mail reply with either "in favor" or "opposed" is adequate.

3.3.1 Posing a Resolution Electronically

Since the electronic medium does not provide a convenient way to introduce a motion or debate a resolution, the following guidelines shall be followed:

1. *Chairperson posing a resolution*: If the resolution is not expected to be contentious, the chairperson is authorized to compose the resolution and call for a vote without second or debate. *The resolution must be composed in a way that does not bias the respondents.* Once the chairperson calls for a vote, any member authorized to vote may assert their right to debate the resolution at which point the resolution and the vote are declared invalid by the chairperson and process three below may be used.

2. *Sub-Committee posing a resolution:* If the resolution is being posed to a parent committee by a sub-committee, then the sub-committee or its' chairperson shall compose the resolution (note that this policy should be followed for face-to-face meetings as well) and the chairperson of the parent committee shall call for a vote without a second or debate. If any member authorized to vote wishes to debate the resolution, the chairperson of the parent committee will withdraw the current call for a vote and provide ample time for an e-mail based discussion after which the chairperson of the sub-committee may again call for a vote.

3. ***Member posing a resolution:*** If a member would like to pose a resolution, the usual requirement of a second and debate is required. The following process shall be followed:

   a. Any member may compose a resolution and send it to the chairperson.

   b. The chairperson should send to the membership and request a second in a timely fashion.

   c. If a second is received, the chairperson should allow a reasonable amount of time for electronic based discussion.

   d. Once electronic discussion has come to a close, as evidenced by a lack of e-mail traffic, the chairperson should call for a vote.

   Throughout the discussion process, all members authorized to vote on the resolution shall be included on any official electronic correspondence regarding the resolution.

The process for members posing resolutions is by necessity lengthy and awkward. Therefore this process should be avoided. Where practical, it is preferable to form subcommittees to meet telephonically and following process two above.

3.3.2 Form of the Electronic Call for Vote

When the chairperson of a committee calls a vote electronically, the following should be included in the e-mail:

- Text of the resolution

- Instructions for casting a vote (should be a simple reply)

- Details of the process (1,2, or 3 above) being followed

- Requirements for passing the resolution

- Names and e-mail addresses of members authorized to vote

- Subject line clearly indicating the need for a response

- Deadline for the response

See appendixes A and B for sample e-mail messages.

3.3.3 Recording of Resolutions

At the next regular meeting of any body that passes a resolution electronically, the passed resolution shall be incorporated into the minutes of that meeting.

3.3.4 Multiple Resolutions

It is permissible to incorporate multiple resolutions into a single e-mail. Respondents need to clearly indicate which resolutions their votes correspond to.

4. Procedures Regarding Creating a New Specification

This section details the procedures that are to be followed when a member wishes to propose the creation of a new specification. This section summarizes in one location the guidelines and rules that are presented in the IVI Foundation by-laws and intellectual property policy.

4.1 Proposing New Technology

Any member in good standing may propose that the IVI Foundation adopt a new technology as an official IVI Foundation specification. This proposal may be done:

?? In response to a request for proposal (RFP) from the IVI Foundation Technical Committee; or

?? Unsolicited if the member deems it appropriate.

The member may make their proposal to the IVI Foundation Technical Committee in writing, in person at any face-to-face meeting of the Technical Committee. The proposal shall outline the details of the proposed technology, the member's willingness to participate in creating the specification, and most importantly, any potential intellectual property issues related to the technology.

The submission shall be adequately discussed at a Technical Committee meeting or by email communication for a period set by the Technical Committee chairperson but not to be less than 2 weeks.

Once the discussion is exhausted, the Technical Committee shall vote whether to proceed with the new technology process. If approved, the submitting member must then complete the **IVI Foundation Submission of Technology Form** available from the IVI Foundation's website, stating what intellectual property relating to the technology they own and indicating their willingness to license that technology to the IVI Foundation, including sub-licensing rights, on either a fee-free basis or under reasonable terms.

Although not officially required to do so, until actually voting on the specification, other members of the IVI Foundation should, in accordance with the IP Policy, notify the foundation of any IP related to the submitted technology as early in the process as possible.

Once the technical committee has received the IVI Foundation Submission of Technology Form from the submitting member, it shall vote whether to initiate the new technical work (this vote requires a 2/3 super-majority).

The member's proposal as well as submission of technology form are then passed on to the board of directors for final approval.

4.2 Creating the Specification

Once the board grants approval, a sub-committee of the Technical Committee is created to draft the specification. This sub-committee shall be chaired by a representative of an IVI Foundation member, preferably a representative of the member originally proposing the technology.

The sub-committee shall present a charter as well as a proposed timeline for creating the specification to the Technical Committee within 3 months of its establishment.

The sub-committee then proceeds to create the specification document and shall operate according to the requirements of the IVI Foundation as set in the by-laws and this document.

Once the sub-committee has created the specification and is comfortable with its contents, it submits its final draft to the Technical Committee for approval.

4.3 Adopting a Specification

The chairperson of the Technical Committee shall submit the completed draft specification to the general membership and allow a period of review of no less than two weeks. During that time, any members reviewing the specification shall submit comments and errata to the sub-committee chairperson.

The sub-committee then addresses the comments and within its discretion accepts or rejects each of them. Once the specification draft has been revised, the sub-committee chairperson and the Technical Committee chairperson shall determine whether a new review period is required, and if so repeat the process outlined above.

Once the specification is ready for vote, the Technical Committee chairperson submits the specification for approval by the technical committee for a period of time that spans two calendar weeks and includes no less than 6 business days (for instance Wednesday of one week through Wednesday of the following week). Each member voting on the specification is required to complete and submit the **IVI Foundation Voting Participation Form** available from the IVI Foundation's website, stating what intellectual property relating to the technology they own and indicating their willingness to license that intellectual property to the IVI Foundation, including sub-licensing rights, on either a fee-free basis or under reasonable terms, or their unwillingness to license the intellectual property.

The outcome of the vote is determined according to the voting procedures set forth in section 3 above, including any requirements on quorums, voting eligibility, and super-majority requirements. If there are any intellectual property licensing issues that relate to the specification, they are to be resolved, and the appropriate licenses obtained prior to the posting of the completed specification.

If a member is to license its intellectual property to the IVI Foundation, the appropriate **Generic License Agreement (With License Fee** or **No Licence Fee)** shall be obtained from the IVI Foundation offices and adapted to the specific intellectual property rights being granted and the license fees agreed upon.

5. Required Deliverables from Class Committees

In order to complete a new class specification, the following need to be provided by the class sub-committee before the final vote is called for:

Written Specification   The written specification shall be a Microsoft Word file based on the standard foundation boilerplate available in the Operating Procedures section of the IVI Foundation web site Assigning a Revision Number to a Specification

IDL Files   The IDL files that describe the interface to the class from COM. These files are used by the shared components committee to generate a type library. One file contains the interface definition, the other contains the corresponding help strings. *Note that this file shall be equivalent to the corresponding appendix in the specification.*

.h File   The .h file that describes the interface to the class from C. *Note that this file shall be equivalent to the corresponding appendix in the specification.*

Help Files   A .chm and .chi file that provide the standard foundation help. The style of these help files shall be consistent with other IVI help files.

XML IntelliSense File   This is the IntelliSense file that the shared components committee will compile into the Portable Interop Assembly (PIA).

Web Site Summary   A summary of the specification suitable for posting on the IVI Foundation web site as explanatory text for the class specification.

6. Assigning a Revision Number to a Specification

There are three version levels that are possible for a specification – Major, Minor, and Editorial:

Major – The major version is the integer before the radix in the version number of a specification. The major version number increments if a change to the specification is no longer backwards compatible. In general, there is a bias towards not changing the major revision since it could indicate to users that they need all new drivers.

Minor – The minor version is the integer after the radix in the version number of the specification. The minor version number increments if the changes alter either the syntax or the semantics of a defined API, or add new requirements, or capabilities to the specification.

Editorial – Editorial changes do not change the citation for a spec (e.g., 3.1). Editorial changes are typically made to correct an error in the specification or to improve the ease-of-use of the specification. Editorial changes are displayed as the date that the Editorial change was made.

If a specification contains unapproved changes that require the Major or Minor version number to increment, then the specification title page shall prominently display the text "DRAFT REVISION".

6.1 First Time Approval of a Specification

The first time that a specification is approved:

?? The version number is 1.0

?? The Editorial date is the date that the specification is submitted for approval by the Technical Committee.

?? The revision history is cleared so it only shows changes after 1.0

6.2 Changes to Approved Specifications

All changes to an approved specification (Major, Minor, and Editorial) shall be noted in the Revision History section of the specification.

Changes that require that the Major or Minor version number increment, must be approved by the Technical Committee and the Board of Directors.

If the Major version number is incremented, the Minor version number shall be set to zero and the Editorial version shall be set to the date that the specification is submitted for approval by the Technical Committee.

If the Minor version number is incremented, the Major version remains the same and the Editorial version shall be set to the date that the specification is submitted for approval by the Technical Committee.

Editorial changes do not require a vote of the Technical Committee or the Board of Directors. However, Editorial changes shall be announced to all Foundation members via the list server If no objections are voiced in one week, the Editorial changes are made to the specification and the updated specification is posted. The date on the cover of the specification shall be updated to be the date of the editorial change. The Editorial changes shall be reviewed the next regularly scheduled Technical Committee meeting so that the changes can be logged in official meeting minutes.

6.3 Specifications for Shared Components

The version numbers of a shared component and the specification that defines the shared component are managed independently. That is, there shall be no attempt to make the version numbers of the shared component and its corresponding specification match.

The Shared Component Management working group shall maintain a document that identifies the most recent version of each shared component and the version number of the specification that defines the shared component.

Appendix A: Example: IVI Board of Directors E-Vote

The following is an example of the e-mail used to conduct an IVI Board of Directors Vote.

```
The IVI Technical Committee, following the process outlined in
section 5.5a of our by-laws, has recommended the following
resolution:

    <text of resolution>

To vote, Directors merely need reply to this message before <date>
and indicate either: in favor or opposed.  If you object to voting
on this topic via e-mail please reply by that same date explaining
your objection.  If there are 2 objections the e-mail vote will be
nullified.

We will conduct this vote per the procedures described in sections
5.5a and 4.13 of our by-laws.  According to this, we will pass the
resolution if 50% of the directors vote in favor (note that since
this is an e-mail notification there is no notion of a quorum nor
of abstaining, so it is passed by 50% of the total membership).
You should also be aware, that if any two directors explicitly
object to passing the resolution it will not be passed.

Also, remember that there is not a way to defer to the majority
(usually done with a vote of abstain).  Any votes other than YES
are tallied as NO.  This is a consequence of the fact that an
abstain conventionally counts towards the establishment of a
quorum, but it lowers the number of YES votes needed to pass a
resolution.  For IVI e-mail votes of the Board of Directors, the
number of YES votes needed to pass a resolution is fixed
(currently 6) it does not relate to the number of respondents.

For your reference, the following are the directors of the IVI
Foundation:

<company name>        <director>
<company name>        <director>
<company name>        <director>
<company name>        <director>
<company name>        <director>

Regards,
<Name>
Board of Directors Chairperson
```

Appendix B: Example: IVI Technical Committee E-Vote

The following is a template of for e-mails used to conduct IVI Technical Committee E-Votes.

```
The <working group name> has requested that the Technical
Committee vote on the following resolution:

<text of resolution>

The vote will be conducted as follows:

- The deadline for your voting is midnight on <date of deadline>.
If your vote is received after this deadline, your vote will be
tallied as a NO.

- You may vote YES or NO.  Please send your response to <email
address> indicating either YES or NO.  If you do not respond your
vote will be tallied as a NO.

- The vote must be cast by your company's designated voter.  Below
is the list of voting member companies and their corresponding
designated voter.

<company name>        <designated voter>
<company name>        <designated voter>
<company name>        <designated voter>
<company name>        <designated voter>
<company name>        <designated voter>

- This resolution requires <"two thirds" or "greater than 50%"> of
the voting members to vote YES to pass.  There are currently
<number of voting members> voting members. So, <number of votes
required to pass> YES votes are required to the resolution.

- Since this vote requires a fixed number of the voting members to
pass, there is no notion of quorum, nor of abstaining.  The vote
will be evaluated strictly in terms of the number of YES votes
received.

Regards,
<Name>
Technical Committee Chairperson
```