



Committee Charter
A-6 Aerospace Actuation, Control and
Fluid Power Systems Committee

Policies and Procedures

Revised July 2012

Contents

- 1.0 Introduction**
 - 2.0 Scope/Organization of Committee A-6**
 - 3.0 Committee Leadership**
 - 4.0 Membership Policy & Procedure**
 - 4.1 Voting Members**
 - 4.2 Special Membership**
 - 4.3 Membership Procedure**
 - 4.4 A-6 Voting Membership Balance**
 - 5.0 Meeting Policy & Procedure**
 - 5.1 Meeting Policy**
 - 5.2 Meeting Procedure**
 - 6.0 Project Policy & Procedure**
 - 6.1 Project Policy**
 - 6.2 Project Documentation Procedure**
 - 6.3 Documentation Approval Policy**
 - 6.4 Balloting Procedure**
 - 6.5 Existing Documents Review**
 - 7.0 ISO Documents & Procedures**
 - 7.1 Background**
 - 7.2 Standards Stages**
 - 7.3 Role of Committee A-6 in the ISO Process**
 - 7.4 ISO Review Process in Committee A-6**
 - 7.5 ISO Project Logs**
- Appendix A – Lessons Learned Process**

1.0 Introduction

The enclosed policies and procedures are specific to SAE Committee A-6. The Rules and Regulations, applicable to all organizations within the jurisdiction of the SAE Technical Standards Board, also apply to Committee A-6 and are stated separately in publication form available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001. The Committee A-6 Policies and Procedures are intended to supplement SAE Technical Standards Board Governance Policy, and the Aerospace Council Organization and Operating Guide and are subservient to the same.

2.0 Scope/Organization of Committee A-6

SAE Committee A-6 is a service organization to promote the advancement of actuation, control and fluid power in sciences, technologies, engineering practices, and standards associated with the design, manufacture, operation, and support of aerospace vehicles.

Committee A-6 is comprised of a parent committee, subcommittees, panels, and a Steering Council. The Steering Council may from time to time create or dissolve subcommittees and panels and amend their responsibilities.

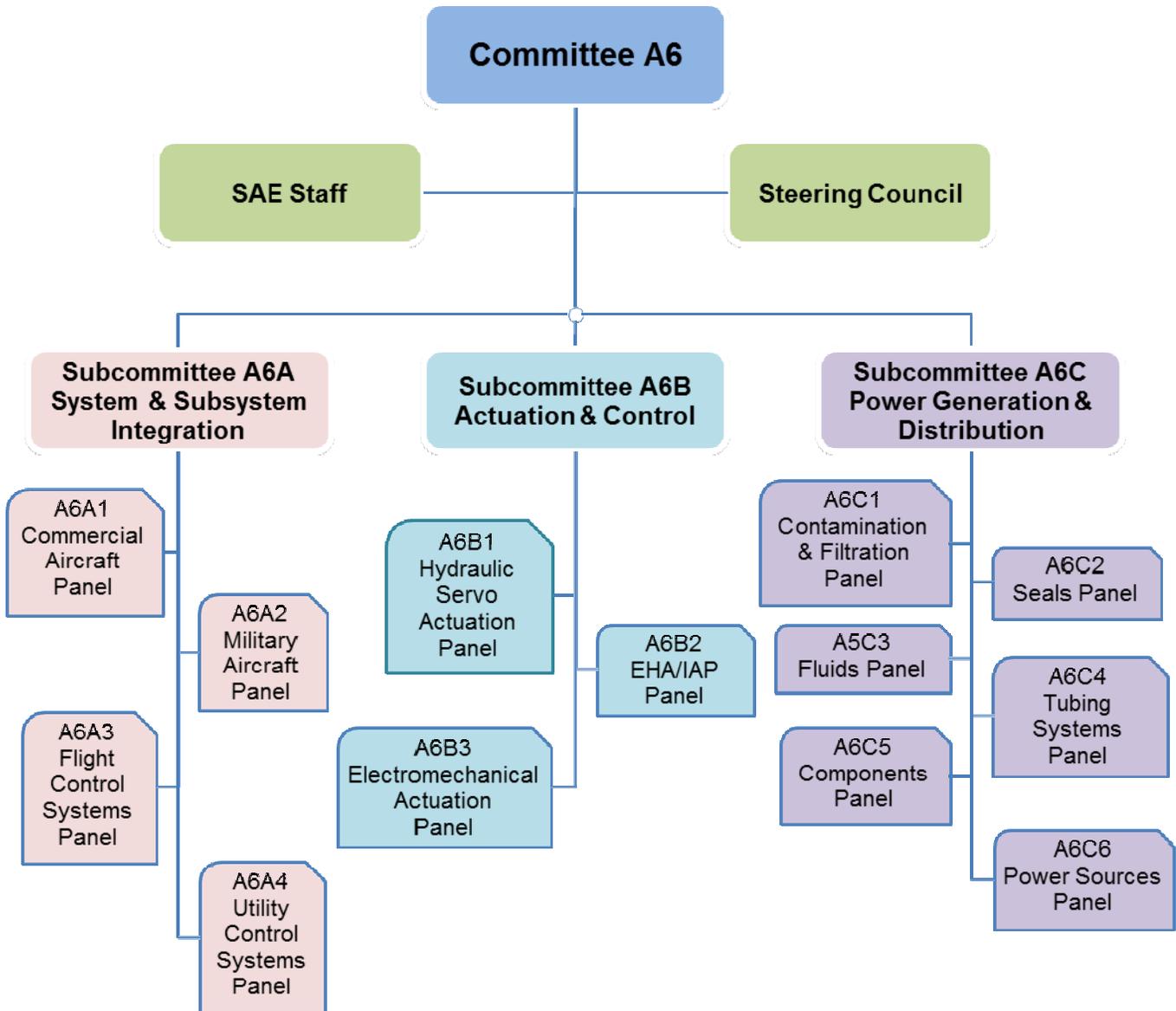
Committee A-6 is currently organized as shown in the following organizational chart as the parent committee for three subcommittees and 13 panels that:

- Create and maintain Aerospace Information Reports (AIRs), Aerospace Recommended Practices (ARPs), and Aerospace Standards (ASs).
- Recommend original and or revised editions of Government Standards and Specifications.
- Provide the forum for the technical interchange of engineering knowledge related to aerospace actuation, control and fluid power systems.
- Support the work of ISO/TC20/SC10, including voting, with respect to Aerospace Actuation, Control and Fluid Power technologies.
- Perform as the primary US technical consultative body in its field and assist Government agencies and departments, and other industry groups by providing impartial advice and counsel on technical, operational, safety, and other related matters. In such cases, the Committee Chairman is the authorized spokesperson for Committee A-6.

Committee A-6 is the approval body for all documents developed by its subcommittees and panels.

SAE COMMITTEE A-6

AEROSPACE ACTUATION, CONTROL & FLUID POWER SYSTEMS



Steering Council, in addition to the subcommittees, is the administrative body for Committee A-6 and develops and maintains the strategic objectives of the committee. The Steering Council can create permanent and/or limited assignment subcommittees and panels to maintain a current relationship to the needs in the aerospace industry. This group selects the topics for committee wide symposia on technical subjects, R&D projects, new aerospace developments, problems experienced in service, etc.; and appoints a chairman, pro tem to organize and facilitate such presentations. In addition, the Steering Council establishes, interprets and disseminates general policies and procedures for committee operation. The Steering Council recommends and approves committee officers, makes recognition awards and is an advisory body to the Committee Chairman.

Subcommittee A-6A – System/Subsystem Integration is responsible for standards, procedures, and practices related to activities that address commercial, military, and flight and utility control systems. The activities and documents addressed by the subcommittee panels relate to the air vehicle level integration of systems, subsystems, and system components.

Subcommittee A-6B – Actuation and Control is responsible for standards, procedures, and practices related to the utilization of power in aerospace applications. The subcommittee panels address issues and conduct activities related to hydraulic servo actuation, electrohydrostatic actuators, integrated actuator packages, and electromechanical actuation for aircraft motion control.

Subcommittee A-6C – Power Generation and Distribution is responsible for standards, procedures, and practices related to all facets of generating, conditioning, storing and distributing fluid power. Subcommittee panels address hydraulic pumps, motors, contamination/filtration, seals, fluids, tubing, and distribution system components including reservoirs, accumulators and valves.

Each of the above subcommittees is also responsible for conversion and revision of documents under its control into appropriate ISO standards, or ISO recognized standards, in support of ISO/TC20/SC10B activities through SAE.

3.0 Committee Leadership

The Committee Chairman is responsible for the overall leadership of Committee A-6. Responsibilities include:

- Plan and conduct Steering Council and committee meetings
- Ensure that Committee A-6 operates within its defined scope and according to SAE policies and procedures
- Maintain an active and balanced committee membership
- Recommend revisions of committee charter/guidelines as needed
- Supervise the operation of the subcommittees
- Coordinate with other committees on related projects

Committee A-6 Policies & Procedures – Revised July, 2012

- Approve Recognition Awards
- Review and Approve meeting minutes
- Act as sole spokesperson for Committee A-6 to external bodies including the media.
- Elevate issues, concerns, problems and opportunities to the Aerospace Council in a timely manner as needed
- Continuously improve the health and operation of Committee A-6 and actively collect, monitor and utilize Aerospace Council approved metrics.

The Committee Vice-Chairman assists the chairman in the management duties of the committee. Specific responsibilities include:

- Coordinate information flow from the Systems Group Head and Aerospace Council
- Explore and recommend International Initiatives to chairman
- Develop and recommend committee growth initiatives
 - Explore new technology
 - Address industry issues
 - Identify special projects
 - Support and encourage membership growth and continued participation
- Fulfill the obligations of the chairman in his absence.

The Committee Secretary is responsible for recording all meeting minutes and recording all information regarding voting results as well as performing other functions as may be directed by the chairman.

Subcommittee Chairman's responsibilities include:

- Oversight of panel activities
- Approve panel recommendations for new projects and present to Steering Council for review and approval
- Coordinate and approve panel agendas
- Approve panel minutes
- Propose candidates for recognition awards
- Represent Panels in the Steering Council

The Panel Chairman's responsibilities include:

- Establish panel's meeting agenda
- Recommend and approve presentations for panel meetings
- Ensure that project sponsors conduct working group meetings, make timely status reports and move projects along in a timely fashion (Two years or less from start to finish should be the goal for new projects.)
- Monitor and assess 5 year reviews, document revisions and new documents for timely progress
- Conduct and control panel meetings

- Actively solicit new work items and lessons learned for panel discussion and review
- Assess member participation, attendance and voting records
- Maintain active panel membership
- Review and ratify panel meeting minutes

The Panel Vice-Chairman's responsibilities include:

- Monitor activities related to panel charter
- Assess new technology trends and symposium presentations related to panel's activities
- Monitor issues related to industry problems
- Review technology trends and industry problems and recommend plans for new projects and relevant presentations
- Coordinate the technical presentations for the panel
- Collect and process lessons learned information
- Provide/facilitate liaison with other panels
- Assist Panel Chairman as required
- Fulfill the obligations of the Panel Chairman in his absence.

The Panel Secretary's responsibilities include:

- Take roll call at Panel Meeting
- Acknowledge the presence of members' alternates and determine if a quorum exists
- Record all meeting minutes
- Collect all electronic copies of presentations to be included with the meeting minutes
- Record all information regarding voting results
- Provide chairman with member attendance and member voting records
- Prepare minutes and project logs for chairman's review and acceptance
- Perform other functions as may be directed by chairman

The Committee, Subcommittee, and Panel Chairmen can serve a maximum term of office of six years, and if determined by the A-6 Steering Council, the term can be extended pending selection of a suitable replacement.

4.0 Membership Policy & Procedure

There are six types of membership in Committee A-6, and panels grouped into two categories; "voting" membership category and "special" membership category. The six types are voting member, associate member, liaison member, consultant member, member emeritus, and mailing list recipient. Each type of membership carries a responsibility for participation, attendance, and ballot voting on document approvals as depicted, and discussed in the following.

	Participation	Attendance	Ballot Voting
Voting Member	Active	Minimum 1 time/year	Minimum 75% response
Associate Member	Active	Minimum 1 time/2 years	Minimum 75% response
Liaison Member	Liaison	Minimum 1 time/year	Optional vote, no minimum
Consultant Member	Partial	Minimum 1 time/2 years	Optional vote, no minimum
Member Emeritus	Inactive	No Minimum	Optional vote, no minimum
Mailing List Recipient	Inactive	No Minimum	No vote

4.1 Voting Member

Voting members of the voting membership category have active participation in SAE Committee A-6 and its panels and are expected to attend the meetings at least once per year and respond to ballot voting at least 75% of the time.

Balance shall be maintained among the different interest groups of voting members (user, producer, general interest).

Voting members who are unable to attend a meeting in person may appoint an alternate in their place if:

- The absent member has notified the committee and panel chairmans in advance of the meeting, providing all contact information for the alternate
- The absent member has pre-briefed the alternate on all topics, documents, and actions planned to be covered during the meeting so that the alternate is prepared to act in the absent member's stead
- The alternate is only representing the committee/panel member who made the appointment (i.e., a committee member may not ask another committee member to represent both themselves and the member unable to attend, which means no person can have more than one vote)
- A liaison member can be designated as an alternate for a specific meeting when a member is unable to attend or send another person from the organization.

Alternates are counted towards committee/panel quorums and allowed to vote in the original member's place.

Voting members who are absent without alternate representation for three consecutive committee meetings may be dropped from voting membership unless the chairman determines that other circumstances warrant retention. Failure to respond to 75% of the ballots can also result in being dropped from voting membership. The chairman shall notify any voting member of a change in their participation classification and direct SAE staff to make the appropriate roster change.

4.2 Special Membership

There are five types of members in the *Special Membership* category. These are Associate Member, Liaison Member, Consultant Member, Member Emeritus, and Mailing List Recipient. These types allow membership for special situations where voting membership is not suitable, and to provide the committee the means to extend and continue the valued relationship with participants who cannot sustain voting membership status.

Associate Members are like voting members and can vote except that, due to special circumstances, cannot attend at least once per year, but wish to remain active in committee activities. Associate members are expected to attend committee meetings at least once in a two-year period, and are required to abide by the voting requirements of voting members for document balloting.

A **Liaison Member** acts in a capacity of liaison between Committee A-6 and other SAE Committees, other technical societies, or military and government service organizations for the purpose of coordination and integration of related activities and reporting of relevant information to the appropriate A-6 organization level. Liaison members may serve in an advisory capacity on specific projects. A liaison member is required to meet membership requirements of a voting member and can vote except a liaison member is not required to abide by the voting requirements for voting members on document balloting. The presence or absence of a ballot from a liaison member is not included in establishing the majority return required from the committee on balloting. Although ballot comments are not required from a liaison member, such comments must be addressed as if they were from a full member when those comments are provided with a disapproval vote.

A **Consultant Member** is one who is under contract to SAE and serves in an advisory capacity on specific projects, and can vote. Consultant members are not required to abide by the voting requirements on document balloting. The presence or absence of a ballot from a consultant member is not included in establishing the majority return required from the committee on balloting. Although ballot comments are not required from a consultant member, such comments with

a disapproval vote must be addressed as if they were from a voting member when those comments are provided.

Member Emeritus is a special membership reserved for those experienced and knowledgeable members who have retired and are unable to regularly attend meetings, but have the desire and commitment to regularly respond to document reviews. They are appointed by the Steering Council and can vote. The presence or absence of a ballot from a member emeritus is not included in establishing majority return required from the committee on balloting. Although ballot comments are not required from a member emeritus, such comments with a disapproval vote must be addressed as if they were from a voting member when those comments are provided.

Mailing List Recipients are persons who receive information on A-6 meetings only. They do not receive information related to Technical Report ballots. Mailing list recipients who have not attended a meeting in two years shall be considered not active and shall be removed.

4.3 Membership Procedure

Membership in a Subcommittee Panel of Committee A-6 is the result of the following two actions:

- The nominee is willing to participate and abide by the membership criteria stated above.
- The chairman of the subcommittee panel acknowledges the support and approves the nominee.

Membership in Committee A-6, or selection as an officer of the committee (Panel Chairman, Subcommittee Chairman, and Committee Chairman, Vice Chairman or Secretary, member of the Steering Council), results from the following actions:

- The nominee is recommended for membership by a current member based upon participation and contributions made to the Committee.
- The nomination is approved by the committee chairman and the Steering Council.
- The nominee is willing to abide by the membership criteria stated above.
- The approval of the nominee's support to the committee is given by the nominee's employer, as appropriate.
- The nomination of committee chairman, vice-chairman, and committee members shall be subject to review and approval by the Aerospace Council.

4.4 A-6 Voting Membership Balance

To ensure a competent and authoritative stature, the chairman continuously aims to achieve an equitable balance of representation by interest. Committee and subcommittee panel members shall be classified into one of three classifications

based on the organization from which they come, or the industry interest from which they will most draw their technical basis. The goal is that the members from no one classification dominate the others. The three classifications are:

- **Producer:** A member whose technical views are drawn from an organization that produces or sells materials, products, systems, or services covered in the committee or subcommittee scope.
- **User:** A member whose technical views are drawn from an organization that purchases or uses materials, products systems, or services covered in the committee or subcommittee scope, provided that the member would not also be classified as a producer as it relates to the work of the committee.
- **General Interest:** A member whose technical views are drawn from an organization that cannot be classified as either a Producer or a User. Examples include members whose technical views are drawn from consumer interest, academic, regulatory, or laboratory communities, or who are individuals whose participation is not being sponsored in any way by any other interest.

5.0 Meeting Policy & Procedure

5.1 Meeting Policy

Meetings of Committee A-6 are held semi-annually. Locations are selected on a rotating basis, usually between cities located east of the Mississippi River in the Spring, and west of the Mississippi River in the Fall. A minimum of two cities is proposed by the Steering Council to the SAE staff for negotiation and final location selection. Recommendations for meeting locations are initiated at least 2 years in advance of the scheduled meeting. Since Committee A-6 is an international organization both in scope and membership, international meeting sites are considered on a periodic basis. The Steering Council reviews potential locations, their relevance to the aerospace industry, and the accessibility of the location for Committee A-6 members and may decide to select the international site for either a Spring or Fall meeting.

Dates for the semi-annual meetings are generally in the April/May period for the Spring meeting and in October for the Fall meeting. Every effort is made to avoid conflict with religious and national holidays, and government fiscal travel budget approvals (the week prior to or immediately following October 1st).

5.2 Meeting Procedure

Agendas: Preparation of the agenda for each meeting is the responsibility of the Steering Council, or a delegate selected by the committee chairman. The schedule for the next meeting agenda submittals is published in the minutes of the meetings. The

procedure begins with the panel chairmen submitting their agendas to their subcommittee chairmen. Subcommittee chairmen submit their agendas, including the subordinate panel agendas to the committee agenda delegate within 2 weeks following the panel chairman's due date. Also at this time, the committee chairman submits the final committee meeting agenda and Steering Council meeting agenda. Symposium agendas are submitted through the Symposium Coordinator who has organizational responsibility for the symposium as approved by the Steering Council. The completed agenda is provided to SAE staff for distribution to the mailing list for the committee at least one month prior to the meeting.

Mandatory Topics to be Covered During the Meeting: Topics to be covered at the beginning of each meeting include:

- Self Introductions of new attendees
- Disclaimer Announcement – “SAE Technical Committee Members act as individuals and not as agents or representatives of their employers.”
- Disclaimer Announcement – “Audio or video recording of meetings is not permitted.”
- Agenda Approval
- Circulation of Attendance Roster which shall include a statement of commitment to the SAE IP policies
- Approval/confirmation of minutes from the previous meeting
- Lessons Learned Presentations (See Appendix A).
- Unfinished Business and New Business

Minutes: The minutes of completed meetings are published as committee and subcommittee summary reports with subordinate panels reporting within their respective subcommittees. The committee secretary has responsibility for preparing the minutes for the committee chairman's approval. Draft inputs to the minutes are to be provided to the secretary at the meeting being reported. Individuals submitting inputs to the minutes must provide brief summaries stating significant issues, decisions, results and/or conclusions to the meeting secretary during or immediately following the meeting sessions. Copies of presentations to be included in the minutes must be provided at the meeting in final electronic form. Presentations distributed at the meeting are not included in the minutes. A sample outline for standardization of the format for the minutes of a panel is shown below. The completed minutes are provided to the SAE Staff for distribution to the mailing list for the committee within six weeks following the completion of the meeting being reported.

Individuals identified in minutes should only be referred to by their first and last name without any company or organizational affiliation. Minutes shall be prepared in accordance with the agenda.

PANEL TITLE, A-6X1

Subcommittee A-6X (X = Subcommittee Code from Org Chart)

Date of meeting

X1.1 Opening Remarks and Membership Review

X1.2 Project Status (refer to project log)

X1.2.1 Project # (# = A-6 project number and title)
(Use this subsection where significant or unusual comment, action, assignment is warranted beyond the content of the project log) (Use subparagraphs 1.2.2, etc. as needed)

X1.3 Lessons Learned (Title, author and summary of Panel's action) (Use subparagraphs 1.3.1, etc. as needed)

X1.4 Liaison Reports (Use subparagraphs 1.4.1, etc. as needed)

X1.5 New Business (Use subparagraphs 1.5.1, etc. as needed)

X (n) Use as needed for additional Panels (See Figure 1 for Panel codes)

PROJECT LOGS FOR ALL PANELS (See Policy & Procedures Section 6.1 for instructions related to Project Logs)

ATTACHMENTS, A-6x1-1, A-6x1-2, etc.

6.0 Project Policy & Procedure

6.1 Project Policy

Projects are assigned to major technical issues and document development activities within the committee, subcommittees, and their working panels, and to any special initiatives assigned by the Steering Council. Projects are established, tracked, and monitored until they are completed and documented. Committee, subcommittee, and panel members will make every effort to anticipate the needs of the aerospace community and produce best in class aerospace fluid power standards and practices in a timely manner. It is expected that all projects will be completed in less than 2 years.

Project Assignment: All technical issues and document development activities that carry-over between Committee A-6 meetings are tracked and reported by panels under assigned project numbers. Project numbers have the following format: xxxx-yy-z. The

four-digit (x) identifies the panel having responsibility for the project: i.e., A6A1, A6C5, etc. (See Org Chart.) The two-digit (y) is the last two digits of the year the project is initiated. The one digit (z) is sequential, beginning at 1, to identify the number of projects started in a given year within a given panel.

Project Logs: The status and progress of each active Committee A-6 project is reported on a project log for the panel that has responsibility for that project. Data on the log includes the project number, title of the activity or document, sponsoring individual, summary of the project objective and status of progress toward completion. An example of a panel project log is given below. Similarly, the status of each project related to development of an ISO/TC20/SC10 document is reported on a Subcommittee International Standards Project Log. Data on this log includes the definition of the related Committee A-6 document, the status toward ISO document completion, the sponsor, and the assigned ISO/TC20 number (if applicable). An example of a subcommittee International Standards Project Log is also shown below. An update of project logs to show current status is required as a formal part of the minutes of each A-6 meeting. If the project log adequately covers the status of the documents, it is not necessary to report the status in the text of the minutes.

SAE COMMITTEE A-6 PROJECT LOG

TECHNICAL SUBCOMMITTEE A-6X (X = A, B, or C)

PANEL TITLE (A6Xx) (x = 1,2,3,4, 5 or 6)

Chairman: _____

Date: _____

<u>Project Number Doc. No., Title</u>	<u>Sponsoring Individual</u>	<u>Brief Summary and Objective</u>	<u>Project Status Est. Completion Date</u>
A6Xx-yy-z AIR, ARP, AS Title	-----	New Document, 5-year Review, etc.	Draft Preparation, Committee Balloting, etc.
next project			

INTERNATIONAL STANDARDS PROJECT LOG

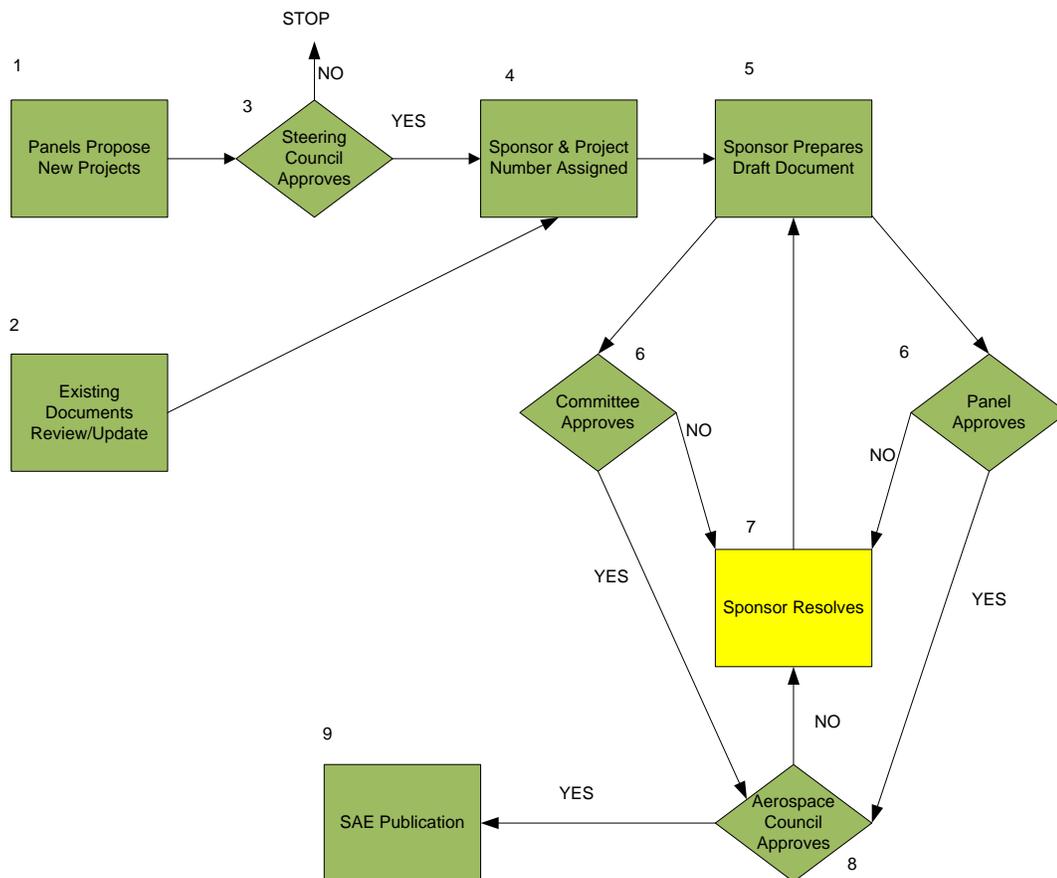
SUBCOMMITTEE A-6X (X = A, B, or C)

<u>ISO/TC20/SC10 Number</u>	<u>Sponsoring Individual</u>	<u>Brief Summary and Objective</u>	<u>Project Status Est. Completion Date</u>
ISO xxxx	-----	_____	_____
next project			

6.2 Project Documentation Procedure

The procedure for initiating projects and developing subsequent documentation is depicted in the following process flow diagram. Each step in the process is further described in the following discussion.

A-6 DOCUMENT PROCESS FLOW



1. Panels Propose New Project: Panels initiate the new project and identify a sponsor to coordinate the project. The sponsor will complete the “A-6 New Project Request Form” for panel approval. Once the panel approves the project, the panel chairman will submit the completed form to the subcommittee chairman for Steering Council review and approval. The request form should

include the scope and purpose of the project. Once Steering Council approves the project, the scope cannot be changed without Steering Council approval.

- 2. Existing Documents Review/Conversion:** The panel chairman monitors and assesses 5 year reviews and takes appropriate action.
- 3. Steering Council Approves:** The Steering Council acts on the submittals via e-mails or at its next regular meeting, and either approves or disapproves. Approvals are assigned to appropriate subcommittee chairman. If a project is disapproved, the panel chairman along with the subcommittee chairman will work to resolve the disapproval.
- 4. Sponsor & Project Number is Assigned:** The subcommittee chairman assigns the project to the appropriate panel where the sponsor is confirmed and project number are assigned. A co-sponsor and/ or working group should also be assigned. One principal sponsor is identified as the focal point for the project. This individual acts in the traditional sponsor's role. The co-sponsor assists the principal sponsor and acts in the principal sponsor's behalf when the principal sponsor cannot attend a working group or panel meeting.
- 5. Sponsor Prepares Draft Document:** The sponsor(s) prepares draft document. Progress on the project (and draft document) from the time it is defined by a number, until it is completed, will be on Panel agendas for each biannual meeting. The working group identified to support the project reviews the progress of the project, offers suggestions and information to speed the project along. The sponsor, co-sponsor and working group are encouraged to use web conferencing and other communication means to facilitate and expedite the development of the draft document between Committee A-6 meetings. Project progress is reported at the panel meetings using the format shown below. The information is placed on Power Point slides for easy review at the panel meeting. The project working group aids in the completion of the draft document which matures to a final document status and is submitted to the panel and Committee A-6 for approval. Any change in Scope or document type that occurs during the working sessions must be approved by the Steering Council before the document can be considered ready for ballot. The sponsor posts the document for ballot on the panel and Committee A-6 web sites. Any background information, which will be useful for balloting, should also be provided with the document. If it is a revised document, the changes should be identified per the SAE document guidelines. For subsequent ballots the sponsor must provide the Disapproval and Comment Resolution Form that has been coordinated with the individual making the comments and disapproving the document."

SAE A-6XY PANEL

<u>Project Number</u>	<u>Document Number</u>
<u>Title</u>	
Document status/schedule:	Document issues:
Document needs:	Document Actions:

A copy of the template for the reporting slide can be found in the A-6 work area and most panel work areas on the SAE website.

6. Panel Approves: The panel approves or disapproves the document in accordance with the criteria (see 6.4 below) for panel balloting. The panel approved document will comply with SAE Guide for Preparation of SAE Documents. The panel approved document will be complete and show where changes have been made, if it is a revision.

7. A-6 Approves: Committee A-6 approves or disapproves the document in accordance with the criteria (see 6.4 below) for committee balloting which is done in parallel with panel balloting. Disapprovals are handled as in 6.4. below. If technical changes are required for the resolution, the panel and committee must ballot those changes. *Note: SAE does not forward a document for Aerospace Council ballot until the sponsor informs SAE that all committee comments have been addressed and disapprovals have been resolved.*

8. Sponsor Resolves: The sponsor resolves all disapprovals and addresses all approvals with comment in accordance with 6.4 below.

9. Aerospace Council and Systems Group Approve: The Aerospace Council and Systems Group Chair approve or disapprove the document in accordance with the criteria for Aerospace Council and Systems Group balloting. SAE will administer the Aerospace Council and Systems Group approval balloting. The Aerospace Council approves or disapproves the document in accordance with the criteria for Aerospace Council balloting. The Systems Group Chair is balloted simultaneously with the committee level ballot. A response from the Systems Group Chair is encouraged but not required.

10. SAE Publishes: SAE will publish the document and provide copies to the sponsor(s) and to the chairman. A certificate of completion will be presented to the sponsor for each completed project document.

6.3 Documentation Approval Policy

The panel members will approve documents in accordance with the Technical Standards Board Governance Policy striving to achieve full agreement among the members and in no case shall a document be approved which does not have consensus support. Full agreement means that all dissenting or objecting viewpoints have been considered and resolved to the mutual satisfaction of the members and participants. Consensus support means existence of a substantial agreement but at least 50% of the members must respond with an approval or disapproval and at least 75% of the approval/disapproval respondents must approve.

A waive response to vote for approval or disapproval from a panel member who feels lack of relevant knowledge is permitted. Waive responses are counted in the response total but not counted in the total approval/disapproval responses. Following panel and committee approval the document will be submitted to Aerospace Council and Systems Group for approval.

6.4 Balloting Procedure

Committee A-6 utilizes two levels of approval balloting; one at the panel level and one at the committee level. “The following shows the primary responsibilities and criteria at each level of document review relative to approval voting. The document sponsor has the responsibility to coordinate the balloting activity with support, as needed, from the SAE staff to conduct the documentation process.

Voting Members of A-6 should either approve or disapprove based upon the criteria shown below. A waive vote implies that the Voting Member has not reviewed the document to see if it conforms to A-6 policies and standards of excellence. A waive vote by a Voting Member shall be construed as the Voting Member not participating in the ballot process.

Panel members and A-6 voting members can have an “Approval with comment” response. In these instances, the voting member is pointing out simple editorial changes such as:

- Instances where there are duplicate words ‘the the’
- Instances where words are run together ‘runtogether’
- A simple spelling error ‘errar’.

These minor editorial corrections can be made by the sponsor prior to sending the document on to Aerospace Council ballot. All other editorial changes require a re-ballot.

Re-ballotting can be done via a 14 day reaffirmation ballot or 28 day ballot depending upon the changes made to the document as a result of the initial ballot and comments.

1. 14 – Day Affirmation Ballot

A 14 – Day Affirmation ballot provides a means to inform all members of additional changes to a document that has already gone through a 28 – day Committee A-6 and panel ballot. The conditions for a 14 – Day Affirmation ballot are:

- The document has already gone through the 28 – day Committee A-6 and panel ballot process.
- All technical comments from disapprovals must be discussed and resolved between the sponsor and the person(s) disapproving the document.
- Technical changes resulting from comment resolution and discussion must be few in number (typically fewer than five changes) and of sufficient clarity to communicate directly in a “Change From Change To” fashion.

For this type of ballot:

- Only the changes need to be posted, not the entire document.
- Members are to respond with a disapproval if they have a concern with the proposed changes.
- At the end of the 14 days, the ballot summary is reviewed by the sponsor. If no comments are received, the document will proceed to the next level of ballot. If there are comments, these will then need to be resolved and/or taken back to the committee.

2. 28 – Day Re-Ballot

If the technical changes are significant or the resolution of comments has substantively changed the document’s intent or presentation, another 28 day technical ballot is required. In this case, the entire document needs to be posted for ballot.

Steering Council	Reviews and approves scope and purpose and initiation of new document.
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Committee A-6 Policies & Procedures – Revised July, 2012

Panel	Reviews and approves that the document is technically correct and in proper format, is consistent with scope and purpose, and is consistent with higher level documentation, associated and referenced documents.
A-6 Committee	Reviews and approves that the document fulfills an industry need, that higher level systems and systems integration have been considered, that there is advancement in the field of aerospace actuation, control and fluid power technologies, and that the document conforms to A-6 policies and standards of excellence.
Aerospace Council & Systems Group	Reviews and approves document for technical content, adherence to SAE policies, and the overall impact to the aerospace community and the public.

The responsibility for providing and for resolving ballot comments is defined below.

Voter Responsibility

- Critique must provide a detailed explanation on a specific issue or issues.
- Critique must suggest remedial action. If it does not, it will not be considered.

Sponsor Responsibility

- Must consider ‘comments’ from “Disapprovals” made on document ballots only if there is a detailed explanation on a specific issue or issues and a remedial action suggested. Disapproval votes with no further information will not be considered.
- Must contact each ‘disapproving’ voter on each issue for:
 - Resolution without change;
 - This allows withdrawal of the non-approval and continuation of the balloting process
 - Resolution with minor editorial changes;
 - This allows withdrawal of the non-approval and continuation of the balloting process
 - Resolution requiring change;
 - This stops the process and requires corrective action on the non-approval
 - No Resolution;

This requires action on the unresolved non-approval to establish rationale for disallowing without change and for Panel approval to continue balloting process

- The sponsor is responsible for resolving all disapprovals and revising the document for approval. The voter who issues a disapproval is required to provide an alternative suggestion to resolve the disapproval. The sponsor should then use a Disapproval and Comment resolution form to summarize all resolutions. Any unresolved issue must have a panel resolution documented in the panel minutes. This resolution is binding as a panel position on the issue. All panel disallowed non-approvals must have Committee A-6 resolution documented in the committee minutes. The resolution is binding as a committee position on the issue.
- While it is not required to address comments from approval with comment votes, the sponsor should at least review and consider these minor editorial comments and determine if they should be made prior to revising the document for re-balloting. Comments from approval with comment ballots do not have to be responded to.

Panel Responsibility

- Must act on each unresolved issue from non-approval ballots and document such resolutions in the minutes as:
 - Agree to disallow the non-approval by 75% majority of the members present;
This requires a response to the voter and allows continuation of balloting with an explanation
 - If unable to obtain the 75% majority, then the document shall be withdrawn from balloting, corrective action shall be taken, and a new ballot shall be processed.

Committee Responsibility

- Must act on disallowed non-approvals from document ballots and document such resolutions in the minutes as:
 - Agree to disallow the non-approval by 75% majority of the members present;
This allows continuation of balloting.
 - If unable to obtain the 75% majority then the document shall be withdrawn from balloting, corrective action shall be taken, and a new ballot shall be processed.

6.5 Existing Documents Review

Continued approval of existing published documents is an SAE requirement. Existing published documents are reviewed each 5 years to establish current applicability or need for revision. The documentation procedure in 6.2 is used to reaffirm the continued use of an existing published Committee A-6 document without revision, or revise and approve as an updated version for continued use.

SAE has also initiated a new category: “Stabilized”. If the panel in its review of a document concludes that the document should be stabilized the document needs to be balloted to the panel and Committee A-6 on a 28 day ballot..

Stabilized status is given to a Technical Report that has been frozen at the last active revision level. Stabilized status may be given to a Technical Report for several different reasons:

1. The Technical Report covers technology, products, or processes which are mature and not likely to change in the foreseeable future. The panel and Committee A-6 make a conscious decision not to maintain the document any longer.
2. The Technical Report covers technology, products, or processes for which a panel no longer exists or for which technical expertise no longer resides in the owning committee. Before “stabilizing” the Technical Report, the owning panel should attempt to find a new home for the document where technical expertise does exist. Failing that, the panel makes a conscious decision not to maintain the document any further.
3. The panel can find no users for the Technical Report. Since it is not possible to determine with great assurance whether a Technical Report is being used, how often it may be used, or by whom it may be used, stabilization is a way to alert potential users that the owning panel will no longer be maintaining the Technical Report and that users should employ the standard at their own risk and discretion.
4. The panel determines that the using community is moving towards newer technology and would like to alert users that this newer technology exists which may want to be considered for new design. However, because the panel has no complete visibility of where and how a standard is being used, and because a standard may be necessary to support legacy platforms or design reuse, the standard should not be cancelled but rather stabilized with a Rationale statement that alerts users to new technology.

A Stabilized Technical Report may be revised if users or producers express a need for it. Once revised, the Technical Report no longer carries the Stabilized Status but rather the new revision level and date. A Stabilized action occurs both at the panel and Committee A-6 level. Stabilization is accomplished by issuing a new revision which contains a Stabilization Notice along with a Rationale statement which may contain any recommendations for use that the panel feels are necessary accompanied by the full text of the standard as it appeared at the last active revision level. Stabilization is indicated by a Stabilization date applied to the new Revision level. A Stabilization action requires balloting at both the panel and Committee A-6 levels.

A Technical Report may also be cancelled when it is deemed to be “not fit for use” due to technical reasons or when its technical requirements are totally superseded by another document. A Technical Report shall not be cancelled based only on administrative reasons such as no identified users, no panel expertise, newer technology exists, etc. Determination that a document is not fit for use may be made when there is a clear safety issue with continued use, or when there is a government requirement that can only be accommodated by elimination of the document. Cancellation should be rare and the notice of cancellation should carry a clear Rationale statement and, if at all possible, should direct users to alternative Technical Reports. A Cancellation action requires panel, Committee A-6 and Aerospace Council level ballots. Cancellation is accomplished by issuing a new revision which contains a Cancellation Notice along with a Rationale statement and any supersession information as the first page of the document. The remaining pages contain the last active revision of the document.

Also, to continue ANSI accreditation of documents during the time that revision of such documents is in progress within an SAE A-6 panel, a “reaffirmation pending revision” approval is given. Committee A-6 balloting to approve ‘reaffirmation pending revision’ is conducted by voice vote of A-6 members at a scheduled committee meeting. A record of the balloting is published in the committee minutes.

7.0 ISO Documents & Procedures

7.1 Background

ANSI (American National Standards Institute) has authorized the formation of the U.S. Technical Advisory Groups for ISO/TC 20, Aircraft and Space Vehicles, herein referred to as the TAGs, for coordination with the International Organization for Standardization (ISO). SAE International has been appointed as Administrator. The Aerospace Council has authority pertaining to the supervision of the TAGs including its operation and the appointment of the Chairman of the TAGs, its Members, and the Chairmen of its subcommittees.

Committee A-6 has the responsibility for ISO/TC20/SC10B which is part of the Aerospace Fluid Systems and Components Subcommittee. Committee A-6 Steering Council is the US TAG for TC20/SC10B. The Working Groups which align with Committee A-6’s responsibilities include: Actuators, Hydraulic Fluids, Pumps and Seals. Participation in ISO/TC20/SC10B includes attending meetings, reviewing documents and offering technical comments to assist in developing the official United States’ position on international standards.

In some instances, A-6 documents have come to be internationally recognized standards and the A-6 members of ISO/TC20/SC10B should encourage the adoption or harmonization of these standards on an international level.

7.2 Standards Stages

During its development, an ISO standard progresses through many stages, many of which require technical input or vote. The stages and associated document names are outlined in the table below.

Stage	Document Name(s)	Abbreviation(s)
Preliminary	Preliminary Work Item	PWI
Proposal	New Work Item Proposal	NP or NWIP
Preparatory	Working Draft	WD, AWI, AWI Amd/TR/TS, WD Amd/TR/TS
Committee	Committee Draft	CD, CD Amd/Cor/TR/TS, PDamd, DTR, DTS
Enquiry	Enquiry Draft	DIS, Damd or DAM, FCD, FPDISP
Approval	Final Draft	FDIS, FDamd or FDAM, PRF Amd/TTA/TR/TS/Suppl
Publication	Standard	ISO TR, TS, IWA, Amd, Cor
Review	Systematic Review	ISO TR, TS, IWA, Amd, Cor

7.3 Role of Committee A-6 in the ISO Process

The expertise that resides in Committee A-6 is an invaluable resource for TC20/SC10. As a document proceeds through the various stages of development, the ISO Liaison requests input from the segment of the committee that is versed in and experienced with the subject of the document. These comments, suggestions and recommendations then help form the basis for the US position and vote.

7.4 ISO Review Process in Committee A-6

When TC20/SC10 has a document for which Committee A-6's expertise is required, a request for document review is sent to the appropriate subcommittee chairman by the ISO Liaison (TC20/SC10B Chair). The subcommittee chairman then passes it on to chairman of the panel where the necessary expertise resides. The panel chairman selects a sponsor who then posts the document for review and comment. Depending on the subject of the document, the sponsor may choose to request posting the document on several panel sites. Responses are then reviewed and collated by the sponsor, who may choose to discuss the document and comments at the panel meeting to resolve issues and develop a consensus position which is then passed on to the ISO Liaison. In some cases, there might be an existing Committee A-6 document that adequately addresses the subject at hand or with minor modification can sufficiently cover the requirements set forth in the proposed ISO document. If the panel feels that this is the case, then it can recommend that the ISO Liaison propose ISO recognition of the SAE document. The ISO Liaison then uses the information supplied to develop the US position on the document.

7.5 ISO Project Logs

Any ISO document being worked on or reviewed by a panel is tracked using the ISO Project Log addressed in 6.1. This project log will be used to track the document through the stages identified in 7.2

Appendix A: Lessons Learned

Committee A-6 encourages the sharing of lessons learned among its members. At each meeting of A-6, the membership is provided an opportunity to share lessons learned in the panel meetings. Collected material, which has been approved for publication, appears in document AIR4543.

Each individual lesson learned is approved for publication by an applicable panel. The panels are encouraged to approve lessons learned which do not contain errors of fact or logic and which could provide positive impact to the industry. The panels should not disapprove submittals because more could be said about a given experience. When a sufficient number of lessons learned approved by the panels are accumulated, the AIR4543 Sponsor assembles them into a document which is then balloted to A-6 members. The job of the sponsor for this document is essentially managerial. Unlike with most of our documents, the sponsor is not expected to generate content, but to manage the overall process, promote quality and quantity, apply the minimum editing, and organize the content into publishable form. The sponsor produces a new document when the Steering Council determines that a sufficient number of new lessons learned have been approved by the panels.

A template, approved by the Steering Council and the AIR4543 document sponsor, is provided to contributors for consistency and completeness of form and content. As the process is operated, the lessons learned template, and the included quality criterion, may be adapted and approved by the A-6 Steering Council and the AIR4543 document sponsor.

To recognize excellence, an award is given to the author of the best lesson learned, approved by an applicable panel, at each A-6 meeting. The selection is made by a group appointed by the A-6 Steering Council, consistent with the quality criterion provided to the membership.

The A-6 lessons learned process is illustrated in the following chart.

Committee A-6 Policies & Procedures – Revised July, 2012

