1.0 GENERAL

This charter establishes the objectives and operating procedures for SAE International (SAE) G-32 Cyber Physical Systems Security (CPSS) Committee.

The G-32 Committee and all subcommittees shall operate according to the provisions of this charter and the procedures established by the Aerospace Council of SAE International as reflected in the Aerospace Council Organization and Operating Guide.

2.0 SCOPE AND OBJECTIVES

2.1 Scope

The SAE G-32 CPSS Committee and all subcommittees will develop and maintain technical documents (Standards, Handbooks, Recommended Practices and Information Reports) to further CPSS including analyses of the system operating environment defined by the operational, functional, and architectural systems engineering elements. Though the G-32 this committee is chartered under the SAE Aerospace Council’s authority, its documents are intended for broad industry use (commercial, defense, and other high reliability and/or critical systems in aerospace, transportation, medical, etc.).

Staff and industry/regulatory stakeholders have evaluated existing standards and confirmed the need for this committee. The committee will recognize existing or ongoing work including liaison with the SAE Vehicle Cybersecurity Systems Engineering Committee, EUROCAE WG-72 and other relevant entities as appropriate. It is not intended for this committee’s documents to replace or conflict with the existing and developing body of guidance for Information Technology Network applications.

2.2 Objectives

SAE G-32 shall utilize and coordinate the knowledge, experience, and skills of technical experts in the field of CPSS to:

1. Characterize and address the risk to CPSS, assess vulnerabilities, and recommend System Engineering focused mitigation actions.
2. Share the knowledge of how vulnerabilities are introduced and exploited in cyber physical systems.
3. Document best practices for addressing areas of concern utilizing existing processes, procedures, and standards.
4. Develop a taxonomy for CPSS.
5. Establish standard methods for identifying vulnerabilities in cyber physical systems introduced at any point in the CPSS life cycle and mitigating impacts.
6. Develop validation and verification methods to ensure requirements are addressed.

3.0 ORGANIZATION

3.1 Technical Committee Structure

The Committee and all subcommittees consist of technical experts from industry, government and other experts.

3.2 Officers

The Committee and all subcommittees shall have Co-Chairpersons and may have a Vice Chairperson and Secretary.

3.2.1 Co-Chairpersons

The G-32 Co-Chairpersons will be individuals who have demonstrated support for the committee and the field of Cyber Physical Systems Security. The Co-Chairpersons are nominated by the Committee and the nomination is forwarded to the Aerospace Council for review and approval.

Duties of the Co-Chairpersons include:

- Plan and conduct meetings in conjunction with SAE Staff
- Coordinate meeting agendas and forward to SAE for distribution
- Manage and assign projects to balance and expedite the work of G-32
- Review membership annually to maintain an active and balanced committee
- Appoint the Vice Chairperson and Secretary
- Establish subcommittees or working groups, appoint their chairperson, and supervise their operation
- Ensure the committee operates within its defined scope and according to SAE policies and procedures
- Monitor committee ballots
- Elevate issues, concerns, problems or Opportunities to Aerospace Council

3.2.2 Vice Chairperson

The Vice Chairperson is appointed by the G-32 Co-Chairpersons to assist in the management duties of the committee.

Duties of the Vice Chairperson include:

- Assist the Chair
- Chair meetings in the absence of the Chair
- Assume the Chair’s responsibilities in the event of prolonged absence or resignation of Chair
- Identify potential candidates for offering or revoking membership based upon participation
3.2.3 Secretary

Appointed by the Co-Chairpersons, the Secretary is responsible for recording all meeting minutes and such other functions as may be directed by the Co-Chairpersons.

Secretary responsibilities include:

- Prepare minutes of meetings and forward to SAE for distribution
- Assists SAE in maintaining records of disposition on committee matters
- Monitor and record meeting attendance
- Draft technical correspondence as agreed by the committee

3.3 SAE Staff Representative

An SAE Staff Representative shall be assigned to G-32 to assist in accordance with Aerospace Council Guidelines.

3.4 Technical Document Sponsor(s)

Appointed by the Co-Chairpersons, the Document Sponsor is responsible collecting and recording Committee participants’ inputs and developing draft document format and language for the Committee’s consideration. The Sponsor is also responding for maintaining configuration control of the draft document and being the technical lead for moving the document through the SAE’s voting and approval process via Standard Works.

4.0 MEMBERSHIP

4.1 Committee Participation

Committee and all subcommittees membership shall be in accordance with Aerospace Council guidelines. The Committee / subcommittees will strive for an equitable balance of representation of technical experts SAE membership is strongly recommended, but it is not a requisite for committee membership.

The primary classifications of participants include: Voting Member, Liaison, and Mailing List Recipient.

4.1.1 Voting Member

Voting Members are to contribute to the work of G-32, vote on all ballots in a timely manner, and maintain active participation. Balance among the different interest groups of voting members (user, producer, general interest) shall be maintained.

Individuals who have interest and expertise in the activities of the G-32 Committee may request voting membership. Requests should be submitted to the Committee Co-Chairpersons, who determines the voting membership interest group and notifies SAE Staff. Names are forwarded to the Aerospace Council for approval.
4.1.2 Liaison

Liaisons coordinate with parallel activities occurring in the government, other associations, and related SAE Technical Committees and may serve in an advisory capacity on specific projects. Liaisons receive ballots and may provide comments; however, they do not have an approval / disapproval vote.

4.1.3 Mailing List Recipient

Mailing List Recipients receive information on Technical Committee meetings. They do not receive information related to Technical Report ballots.

4.2 Member Responsibilities

In discharging their responsibilities, members function as individuals dedicated to the objectives of the G-32 Committee and not as representatives of any organization with which they may be associated. Governmental employees participate in accordance with government regulations.

Members are expected to actively support the work being accomplished within the committee by supporting telecons, attending meetings, sponsoring projects, participating in discussion forums, and reviewing and responding to ballots.

Members may provide technical or informational comments during the balloting process. Technical comments must include suggested text revisions, otherwise they will be considered informational comments.

A member who is absent from three or more consecutive committee meetings may have his/her voting membership revoked by the G-32 Co-Chairpersons. A member, who fails to vote on three consecutive ballots without justification, may have his/her voting privileges revoked.

5.0 OPERATION

5.1 Project Authorization

Each proposed project document, including document revisions, must be approved by the Committee Co-Chairpersons. The Committee Co-Chairpersons assign a sponsor for proposed new documents or revisions to existing documents. The sponsor is responsible for all coordination necessary to prepare the new document or revision for ballot to the committee membership.

5.2 Voting

Aerospace Standards, Recommended Practices, and Information Reports are voted on by the Committee members following the process outlined in the Aerospace Council Organization and Operating Guide. Resolution of the comments will be coordinated by the document sponsor. After resolution of the comments, a letter ballot is circulated to all members of the committee for final approval. Only Committee members may vote on ballots. Vote results are tabulated in accordance with Aerospace Council Guidelines.
Voting on ballots shall be monitored by the Committee Co-Chairpersons and Document Sponsor and the results reported to the Committee when a specification is approved by the Committee membership.

5.3 Meetings

The Committee holds periodic (typically twice a year) face-to-face meetings. Virtual meetings of the Committee will be scheduled when the need exists to conduct committee or individual specification business in between face-to-face meetings.

The Committee meeting agenda shall be prepared by the co-chairpersons and disseminated with the next meeting announcement by SAE staff.

All Committee meetings shall be conducted in accordance with established SAE procedures and practices.

Meeting minutes shall be recorded by the Secretary and posted on the committee website.

5.4 Attendance

Attendance at the meetings is open to anyone with an interest in Cyber Physical Systems Security. Attendance shall be monitored and recorded by the Secretary.

6.0 Revisions to Charter

Amendment of this charter is accomplished by a member submitting a written proposal to the committee. The proposal will be forwarded to the Co-Chairpersons at least 30 days prior to the meeting where it will be reviewed. Proposed amendments require a two thirds approval of the members present. A quorum of greater than 50% of the eligible voting membership must be present. Any comments submitted to the Co-Chairpersons by the committee members prior to the meeting must be discussed by the committee prior to a vote on the amendment.