IEEE Aerospace and Electronic Systems Society Strategic Plan, 2020

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I.   Executive Summary

This document represents the latest Version of the Strategic Plan for the IEEE Aerospace and Electronic Systems Society (AESS). It is intended be a living document that allows AESS officers and their committees on the AESS Board of Governors (Board) to help guide the Society as we move forward in our quest to serve our members, those of IEEE and the overall community addressed in the AESS Field of Interest.

The mission of the AESS is to provide a responsive and relevant professional society that attracts, engages, aids, and retains a diverse set of members (age, culture, community – theoretical, managerial and applications) worldwide in the areas of our fields of interest as defined in our constitution. AESS will accomplish this through technical, chapter and society activities in the areas of conferences, publications, education, technical operations, industry relations, and member services.

The vision of the AESS is to be essential to the worldwide technical community and be recognized for outstanding contributions in the fields of aerospace and electronic systems.

The strategic plan for each area is led by an AESS officer with the support of a committee on the AESS Board. The following strategic theme and strategic goals represent broad guidance from the executive committee as a basis to develop short-term objectives for each area. We have adopted common terminology and definitions for goals and objectives. Goals describe desired general outcomes of efforts over a long-term timeframe. Objectives describe specific and measurable results progressing toward one or more goals as a result of actions taken in the short-term. We utilize a "SMART" template to develop objectives that are specific, measurable, achievable/assigned, realistic, and timed results produced while implementing strategies.

The Strategic Theme proposed for 2020 is "Growth Through Engagement and Teamwork." Growth refers to the addition of innovative AESS products and services, the expansion of knowledge and abilities of the technical community, and the extension of AESS technical fields-of-interest into emerging technologies. As we grow, we are likely to diversify, strengthen, and achieve better results. Growth will be accomplished through member engagement and teamwork. Engagement and teamwork are important because there is strength in numbers, and more can be accomplished by a team than through individual and uncoordinated efforts. Growth, engagement and teamwork are signs of healthy organizations. The acronym "GET" for "Growth, Engagement, and Teamwork" signifies the strategic theme.

The Strategic Theme is supported by four Strategic Goals:

- Grow – Identify the diverse and evolving professional needs of worldwide technical community. Continually expand technically; add activities, programs, and initiatives; and enhance products and services.
- Invest – Expend time and money to stimulate growth. Innovate and collaborate to implement new initiatives that improve and grow AESS.
- Value – Ensure that the return on investments are worth the expenditures.
- Engage – Develop commitment to goals through engagement and building strong-diverse teams. Inspire, guide and empower professionals to engage in and benefit from AESS activities.

The acronym "GIVE" for "Grow, Invest, Value, and Engage" signifies the strategic goals.

Together, the Strategic Theme (GET) and the Strategic Goals (GIVE) represent the solution to a dichotomy that exists in most volunteer organizations. Members expect that they will **get** valuable products and services in return for their membership in an organization. In order to deliver its products and services, an organization relies on its members to **give** of their financial resources, time, energy, and talents. The solution to the dichotomy is that the more that members **give** to the organization the more they will **get** out of their membership. Members that are engaged in the organization's activities and initiatives inevitably derive more value from their membership than those who simply join but do not get involved. Therefore, the overall thrust of our strategic plan is to stimulate the engagement and teamwork of our members through thoughtful investments in valuable products, services, and initiatives that lead to the professional growth of the technical community and AESS.

In addition to the specific actions and objectives in the following section of this plan, AESS has an overall intent to promote and participate in multi-society/council activities by the following:
- Co-sponsor conferences
- Establish joint publications
- Move to Open Access as appropriate
- Jointly develop standards
- Join Technical Communities that share common interests with AESS
- Establish a joint dues package with select Societies

The economic and cultural environment affecting AESS has been changing over the past decade. AESS has recognized the need for more collaborative initiatives between our Panels and other Societies to maintain growth in our membership and financial positions. The Board has started a planning process to strengthen our financial position, provide more diversity in the Board and increase the outreach to Industry to increase our benefits to this important clientele.

II.   Conferences

The mission of AESS Conferences is to:
- Enable the conduct of high-quality conferences, symposia and workshops
- Produce high-quality technical content to serve AESS members and our technical community
- Facilitate the generation of reasonable surplus while maintaining high overall quality
- Refine and promote Best Practices in planning and managing AESS conferences
- Explore new conference delivery mechanisms

AESS Conferences is focused on refining and promoting best practices in planning, management, publications and financing our existing conferences, and determine whether any new conferences could be initiated to support the AESS membership and our overall technical community.

AESS has identified the following elements as critical to our continued conference performance:
- Strengthen the areas of setting up Conferences to ensure that we preserve the IEEE Name Brand, conduct a quality conference, produce quality proceedings, and provide a financial benefit to the Institute and Society. Key elements of these practices include:
  - Make sure that a competent Memorandum of Understanding exists where we have co- sponsors that clearly delineate the responsibilities of each party.
  - Generate a budget that is realistic and produces a minimum of 20% surplus.
  - Produce Conference Publications for inclusion in the IEEE Xplore, that are of high quality and maintain the reputation of the Conference, AESS and IEEE.
- Create and maintain a conference operations guide as a supplement to the IEEE Conference Organizer's Manual, and ascertain that our conferences follow the IEEE and AESS conference guides.

Short-Term Actions:
- Update and publish the AESS conference guidelines to all AESS conference organizers, to reflect recent IEEE Policies and automated procedures.
- Review all conference budgets for opportunities to reduce expenses and/or leveraging corporate partnerships for increased attendance.
- Strengthen AES Conference Liaison for Financial Sponsorship – encourage new AESS Board members to participate in Conferences in their area of interest.

Three-Year Goals:
- Work with IEEE Meetings, Conference & Events (MCE) to assure that the information provided in the conference application process (budgets, peer review procedures, MOUs) being created by the ICX process are meeting the AES Strategic Objectives.
- Increase the Conference Surplus returned to AES by increasing the number of Financial Sponsorships through new Conferences and regional Workshops in the AES Fields of Interest.
- Ensure that all conference chairs are cognizant of the current AESS conference guidelines and examining the historical results on publications quality, cooperation with other IEEE Operating Units, and maintaining

surpluses through effective governance.

III. Education

The mission of AESS Education Committee is to:
- Coordinate the educational activities of the Society to provide timely, relevant and interesting educational topics and delivery methodologies to our members and other members of the aerospace/defense community.
- Provide the means to deliver high quality Distinguished Lectures, Tutorials and Short Courses to our audience.
- Address the needs of emerging engineers.

Three-Year Goals:
- Strengthen the Distinguished Lecturer (DL) Program and Services:
  - Establish/reinvigorate Education activities where there are concentrations of members.
  - Increases DL usage by and support to chapters.
  - Expand tutorial offerings and access online and through AESS conferences and publications.
  - Promote virtual distinguished lecturers and virtual short courses.
  - Establish clear engagement/disengagement rules for the Distinguished Lecturer program.

- Develop and improve programs that support Young Professional (YP) and student members:
  - Work with and for YP and student projects and events, including undergraduate projects, interaction with IEEE-HKN, educational activities aligned with the Radar Systems Panel.
  - Develop fundamentals tutorials relevant to YP members.
  - Support region IEEE student conferences and conference activities for students
  - Promote the "Engineering Scholarship Award"

- Increase awareness and opportunity for educational programs:
  - Establish a mechanism for funding DL-like educational events that do not involve approved Distinguished Lecturers.
  - Mentoring efforts involving large base of volunteers.
  - Ensuring on-line presence is well supported and current.
  - "Chapter's First DL" program to encourage chapter participation.
  - Regular support and coverage in AESS publications, including Systems Magazine and QEB.
  - Promoting AESS education activities to YP and students at AESS conferences.
  - Offer recorded Distinguished Lectures, Tutorial and Short Courses online, either in the AESS Resource Center or the IEEE Learning Network.

IV. Finance

The Mission of the Finance Committee is to develop and manage a budget that will:
- Allow AESS to deliver the types of services and benefits to our members and members of our professional community that are in keeping with the overall goals and objectives of the Society and IEEE.
- Generate a reasonable surplus to keep the Society solvent and vibrant, and allow for expansion of AESS strategic activities as needed.
- Provide adequate funds for new initiatives to better serve the members.
- Provide timely financial assessment to assist officers in managing their area.
- Provide feedback to the AESS Board regarding IEEE financial operations and information.
- Work in close cooperation with AESS VPs

Short-Term Actions:
- Strengthen Budgeting Process for establishing the annual budget.
- Strengthening the AESS liaison to Conferences and Publications to understand financial risk and upside investment funds potential for AES Initiatives.
- Develop a feedback mechanism regarding AESS investments.

Three-Year Goals:
- Understand publication moves (Magazine and Xplore -- Open Source) and their impact on future financial flows.
- Increase Transaction publications from 4 to 6 issues per year.
- Work with Conferences to Increase the surplus returned to AESS as required.
- Put checks and balances in the process to improve the AESS Initiative planning, and protect our surplus.
- Seek additional sources of revenue such as corporate partnerships.
- Select a preceptor/Mentee.

V.   Industry Relations

The mission of industry relations is to provide technical and career support for our society members that are part of the aerospace electronics systems industry, specifically to:

- Help assure that the AESS services the needs of our industry/practitioner members throughout their career.
- Develop products/services that enhance professional development in industry.
- Develop and maintain professional relationships throughout industry for the mutual benefit of AESS, IEEE and individual members

Three-Year Goals:

- Establish active Industry Relations activities and collaborations through individual AESS Chapters, tying into Chapter technical activities and promoting AESS engagement with industry.
- Generate and maintain current, industry-focused content on the AESS website, as well as providing on-line links to specific Industry-focused features in the AES Systems Magazine.
- Establish and demonstrate strategic partnerships with relevant industry and industrial organizations worldwide.
- Develop new strategies for attracting industry advertisements in *Systems* Magazine, the AESS Web Site, etc., specifically investigating and implementing opportunities enabled by the acquisition of IEEE GlobalSpec.
- Position AESS in a pro-active role with the IEEE global industry strategy, leveraging the initiatives of the IEEE Industry Advisory Board Ad Hoc Committee through their reach out to the society chapters.
- Promote opportunities for Young Professionals in our industry fields of interests.

VI.   Member Services

The mission of AESS Member Services activity is to provide member services and benefits that attract and retain members.

Short-Term Actions:
- Invite all new AESS members to participate in AESS events and activities via the new member "Welcome Letter" from the AESS President.
- Stem the tide of member drops via a reminder email, which would also ask for feedback on the reasons for the drop if they still do not renew.
- Continue Sending congratulatory letters to all newly elected Senior Members.
- Using the SAMIEEE database, seek new members that have AESS-related TIP Codes.
- Provide AESS Membership Brochure to attendees at all technically and financially sponsored conferences worldwide.

Three-Year Goals:
- Maintain close liaison with Chapters and engage chapter members in AESS events and activities.
- Promote formation of AES-Joint Society Chapters to serve members where no chapter exists.
- If financially feasible, hold a Chapter Summit every three years in conjunction with the Sections Congress meeting to get Chapter officer feedback upon the technical direction of the society and improvements in chapter operations.
- Promote the concept of AES chapter participation in organizing conferences by providing conference planning resources to chapter officers.
- Grow AESS membership by 1% per year.
- Increase member participation in our activities and events.
- Reduce the number of member drops each year.
- Recruit student members to full membership upon their graduation.
- Offer assistance to members for elevating to the next grade.

VII. Publications

The Mission of AESS Publications is to provide AESS members with scholarly, highly-regarded publications that support their professional growth and advancement. Publications will provide venues for publication of scholarly achievements, knowledge for the specialist, tutorials for the non-specialist, and information for our professional community. AESS Publications will pursue the following strategic vision for its publications:

- *Transactions* are relevant, timely, technically advanced, and highly regarded among professionals in our field.
- *Magazines* are attractive and desirable and address timely topics in our field of interest so as to draw members to AESS.
- *Tutorials* are a useful, informative, and timely resource for the professional growth of our members.
- *QEB (*Quarterly Email Blast) provides new and timely information to support our members' involvement in our professional community.
- *AESS Web Site* is a one stop shop for AESS information.

Three-Year Goals:
- Reduce the average submission to-publication delay for the AES transactions to 9 months.
- Achieve an average submission rate of 12 articles per month for the AES Magazine.
- Increase the contributions to AES publications from industry by 2 articles per month.
- Increase Impact Factor of transactions to 2.0.
- Increase Impact Factor of magazine to 1.0.
- Increase readership (opens) of QEB by 25%.
- Increase visits to IEEE AESS Web Site by 25%.
- Move to Open Access as appropriate
- Develop new joint publication on Radar

Publications Initiatives:
- Early posting of accepted articles on IEEE Xplore 2017.
- Implement advertising plan in the magazine.
    - Soliciting advertisers
    - Coordinate content with advertisers.
- Increase the presence of student activities in the magazine.
    - Student editors
    - Student highlights
- Improve the Operations of Editorial Board for the Magazine.
    - Develop Operations Manual for the magazine.
    - Improve training of the editors for the magazine.
- Increase industrial participation in AES publications.
    - New magazine column: "Industry Tips and Insights"
    - Plan special issues around industrial needs.

VIII. Technical Operations

The mission of Technical Operations is to form and maintain Technical Panels (TPs) in the Society's fields of interest to stimulate technological advances and member engagement in technical networking, standards development, publications, conferences, chapter meetings, and other professional development activities.

Three-Year Goals:
- Review all TPs for relevance, activity and leadership.
- Seek revitalization of those TPs that may be dormant or lagging, and drop those TPs whose relevance or currency has expired.
- Identify topics and potential leaders for new areas within our Fields of Interest where technical collaboration would be beneficial.
- In collaboration with Conferences, identify and recruit AESS members from TPs to participate in organizing AESS conferences.
- In collaboration with Member Services, promote interaction between TPs and local AESS chapters to increase AESS member participation in these activities.
- Develop guidance in the form of best practices and recognize outstanding TPs.

IX. Governance

The mission of AESS governance is to:
- Provide a clear operating framework for all Society activities.
- Guide the AESS Board and Officers in managing the Society's business in a professional and transparent manner consistent with IEEE policies.

Three-Year Goals:
- Review AESS governing documents to ensure compliance with IEEE policies.
- Revise and update governing documents to improve AESS operations, as needed.
- Ensure that the Board and Officers understand their responsibilities per the governing documents and abide by all provisions therein.
- Provide AESS members with access to the governing documents and Board meeting records.