



IEEE Aerospace Electronic Systems VP Finances

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(with thanks to Bob Rassa & Mike Cardinale)

2022 AESSE Strategic Planning Meeting

14-15 February 2022

➤ Strengths:

- We have continuously generated a substantial surplus, primarily from Publications (overlength page charges) and Conferences (profits & post-conference downloads).
- We (and our partners) have reacted well to COVID-19 challenges.
- We have an excellent reserve amount, enabling us to undertake new initiatives that would benefit AES, IEEE, and our technical community at large.
- Our membership numbers are (in my opinion) stable compared to many societies in IEEE.
- We initiated a new Open Access Journal of Systems Engineering with the Systems Council and SMC which will serve to enhance our technical standing in this community.
- We have a share of JMASS, which is iffy right now but should find a niche.
- The Transactions on Radar (24%) should be highly valuable.
- Our Transactions and Magazine are both solid and improving. (The QEB deserves praise too, but likely not in the Finance report.)
- We have a healthy “stable” of productive, popular and valuable conferences.
- Our virtual DL program has been popular, and we have a significant (underpriced) “investment” in recorded lecture material.

➤ Weaknesses:

- We have not been able to identify new initiatives on a wholesale basis where we could effectively use some of our surplus/reserves.
- We have initiated the student scholarship program (which we could expand), the short course program, the mentoring program, increased our level of chapter support and others, and we should continue to seek additional opportunities.
- Both above indicate that we have an opportunity to leverage our investments, for growth and further service to our community.
- Our author community has not embraced OA (open access), which may put us out of step with the at-large IEEE's directions and attention.
- There are other electrical engineering fields that are growing faster than AESS's core technical interests (e.g., quantum, machine-learning & artificial intelligence, flexible electronics) and although we are open to some (e.g., quantum radar and ML for tracking) our publications and conferences are not a community target.

➤ Opportunities:

- We should consider expanding the student scholarship by offering additional scholarships, and perhaps increasing the amounts awarded (which stand at \$10k per scholarship now).
- We have memberships in several IEEE Councils (Sensors Council, Systems Council, Nanotechnology Council) and should consider engaging more with them to see if we could develop additional initiatives.
 - Sponsoring societies do not get indirect income from Councils, even for very successful publications like the Sensors Journal or the Journal on the Internet of Things.
- We are of late becoming open to financial partnership in emerging publications, and, given that that continues, we can expand our footprint and enhance our service to the wider community.
- Even given that we do not envision a wholly-owned open-access publication, we can consider requesting an IEEE Access section on AESS topics.
- We can explore using our reserves in an IEEE Foundation account.

➤ Threats:

- The current COVID-19 situation is impacting our conference revenues. Conducting a hybrid conference is highly risky since we cannot predict how many potential attendees will simply decide to attend virtually instead of in person, impacting the hotel room block guarantee (and thus possibly causing attrition costs) and food/beverage attrition (again, with possible penalties). Our recommendation, if we believe a conference will be impacted by COVID, is to go 100% virtual.
- Our IEEE AUTOTESTCON cannot do this since exhibits and military attendance are critical to its success, and the Aerospace Conference might not be able to readily do this since one of the attractions of this conference is the mid-day skiing break, although it can be conducted virtually just without the skiing. As of this writing, the Radar Conference is in jeopardy of at least some room-block attrition costs.
- In any case, virtual conferences will impact the conference income and profit.
- Movement in the Open Access direction will impact our IEL revenue.
- The upcoming China policy on domestic publication will impact our Transactions revenue.
- There may be a “Plan S” directive regarding Open Access for conferences.

- 2018
 - \$294.6k budgeted surplus
 - \$802.2k actual
 - \$198.8k investment loss, hence net was \$602.4k
- 2019
 - \$184.8k budgeted surplus
 - \$1,059.7k actual
 - \$1,026.6k investment gain, hence net was \$2,086.3k
- 2020
 - \$556.9k budgeted surplus
 - \$1,228.3k actual
 - \$1,007.4k investment gain, hence net was \$2,235.7k
- Start of 2020: “net worth” to \$6,350k

Summary 2020 Budget



	2018	2019	2020	2020
	Actuals	Budget	Target	Final
00380 TRANS ON AEROSP & ELECT SYS	631.6	614.5	587.8	648.8
00381 AEROSPACE & ELECT. SYS. MAGAZINE	139.5	122.8	114.4	132.8
00382 AEROSPACE & ELECT. FEES	85.8	80.8	78.3	78.3
00383 AEROSPACE & ELECT DIGITAL LIBRARY	0.0	0.0	0.0	0.0
01499 PERIODICAL RELATED - OTHER	0.0	0.2	0.2	0.2
01600 NON PERIODICAL	0.0	0.0	0.0	0.0
01700 MEETINGS/CONFERENCES	2,320.1	1,776.0	2,142.2	2,061.3
01701 CONFERENCE RELATED - OTHER	38.0	10.3	10.5	10.5
01900 COMMITTEE & OTHER	0.0	0.4	0.0	0.0
TOTAL REVENUE	3,215.0	2,605.0	2,933.4	2,931.9
00380 TRANS ON AEROSP & ELECT SYS	186.3	327.3	301.6	302.1
00381 AEROSPACE & ELECT. SYS. MAG.	306.5	344.0	149.7	150.2
00382 AEROSPACE & ELECT. FEES	0.1	0.0	0.0	0.0
00383 AEROSPACE & ELECT DIGITAL LIBRARY	0.0	5.9	6.0	6.4
01499 PERIODICAL RELATED - OTHER	(2.4)	(3.5)	(5.0)	(7.5)
01600 NON PERIODICAL	11.4	8.2	8.2	8.2
01700 MEETINGS/CONFERENCES	1,325.6	1,095.2	1,254.1	1,216.0
01701 CONFERENCE - RELATED	25.0	18.8	19.1	19.1
01800 ADMINISTRATION	303.4	348.0	345.7	344.4
01900 COMMITTEE & OTHER	256.8	276.3	271.9	336.1
TOTAL EXPENSE/RMBSVC (excl Projects)	2,412.7	2,420.2	2,351.3	2,375.0
TOTAL FROM OPERATIONS (excluding Projects)	802.2	184.7	564.1	556.9



AES 2021 Budget Summary

SUMMARY BY COST CENTER	2019	2020	2021	2021
	Actuals	Budget	Target	FirsPass
00380 TRANS ON AEROSP & ELECT SYS	775.6	648.8	503.3	503.3
00381 AEROSPACE & ELECT. SYS. MAGAZINE	167.2	132.8	107.3	107.3
00382 AEROSPACE & ELECT. FEES	85.5	78.3	70.5	70.5
00383 AEROSPACE & ELECT DIGITAL LIBRARY	0.0	0.0	0.0	0.0
01499 PERIODICAL RELATED - OTHER	1.7	0.2	0.2	0.2
01600 NON PERIODICAL	0.1	0.0	0.0	0.0
01700 MEETINGS/CONFERENCES	2,332.8	2,061.3	1,220.1	1,140.5
01701 CONFERENCE RELATED - OTHER	11.8	10.5	16.6	16.6
01900 COMMITTEE & OTHER	0.0	0.0	0.0	0.0
TOTAL REVENUE	3,374.9	2,932.0	1,918.1	1,838.5
00380 TRANS ON AEROSP & ELECT SYS	178.3	302.1	204.5	207.7
00381 AEROSPACE & ELECT. SYS. MAG.	236.1	150.2	45.0	45.4
00382 AEROSPACE & ELECT. FEES	0.2	0.0	0.2	0.2
00383 AEROSPACE & ELECT DIGITAL LIBRARY	5.4	6.4	6.2	6.2
01499 PERIODICAL RELATED - OTHER	(10.1)	(7.5)	(5.3)	(5.3)
01600 NON PERIODICAL	9.9	8.2	9.9	9.9
01700 MEETINGS/CONFERENCES	1,272.3	1,216.0	912.0	622.8
01701 CONFERENCE - RELATED	31.0	19.1	48.5	48.5
01800 ADMINISTRATION	309.2	344.4	328.4	328.4
01900 COMMITTEE & OTHER	282.8	336.1	214.9	302.1
TOTAL EXPENSE/RMBSVC (excl Projects)	2,315.2	2,375.1	1,764.3	1,565.9
TOTAL FROM OPERATIONS (excluding Projects)	1,059.7	556.9	153.8	272.6

- As opposed to the spreadsheets that I used to know and understand, IEEE has moved to a web-based “NextGen” system.
 - I don’t presently know how to use it.
 - But our Treasurer (Bob Rassa) does know how to use it.
- “3 Percent Rule” (for new initiatives) for budgeting:
 - A Society or Council can budget for projects/initiatives, using up to 3% of their reserve balance, provided:
 - The IEEE reserve levels meet the minimum criteria
 - The S/C reserve to expense ratio meets the required level (typically 50%)
 - The total for all of TAB is less than or equal to 1% of the aggregate of TAB/S/C reserves
- “50 Percent Rule” (also for new initiatives) for forecasting:
 - Qualifying S/Cs can spend up to 50% of their prior year operating surplus (before investment returns) subject to overall IEEE reserves being OK
 - this spending should be identified in their current year forecast
 - To qualify, a S/C Reserve to Expense ratio must be equal to or greater than 50%

- AESS Magazine expense reduction (from EJPRESS to ScholarOne) is very significant, and the integration to publication is tighter.
 - also now have preprint posting at no extra charge
- AESS Transactions budget increased due extra 500 pages.
- Presumably due to COVID, conference expense is reduced, but conference income is reduced even more.
- The COVID impact on AESS administrative (travel) expense is surprisingly small.
- AESS membership (and membership income) is rather stable.
 - My thought is that our printed and delivered Magazine is a reason for this.
- IEEE overhead is now in technical operations, as opposed to having been hidden in the publications budget as it was before.

- As COVID wanes and IEEE Conferences and Meetings return to in-person, will the attendees return?
 - IEEE February 2022 meeting, which should have been in San Antonio, is virtual.
 - IEEE Aerospace Conference, March 2022 in Big Sky, is in-person.
 - IEEE Radar Conference, March 2022 in NYC, will be “hybrid.”
- My thoughts:
 - IEEE and sponsors may be “addicted” to lower expenses.
 - Attendee experience in a virtual format is negatively affected.
 - Attendees (and volunteers) may become disengaged.
 - The hybrid experience bears watching but is likely to be expensive and may be too attractive/unattractive for sponsors/participants.
- IEEE is examining Open Access for conferences
 - This will almost certainly be a significant budgetary negative for IEEE Societies, since it will be a loss of IEL income, and it is doubtful that OA fees will be much.

➤ New Publications:

- AESS sponsors the ~~proposed~~ upcoming IEEE Transactions on Radar (24%)
- AESS sponsors IEEE Journal on Miniaturization for Air and Space Systems (5%)
- AESS sponsors the upcoming Open Journal on Systems Engineering (20%)
- These are not likely to be large (at first), but should be contributory
- Journal of Lightwave Technology – total 2020 net is \$757k, AESS share is 2.5%: \$19k

➤ Does a Council Member get income from that Council?

- Systems Council, Sensors Council, Nanotechnology Council

➤ Extra publications income for AESS:

- Overlength Page Charges for AES Transactions: \$210k in 2020
- Open Access Fees for AES Transactions: \$20k in 2020
- Voluntary Page Charges for AES Transactions: not sure

➤ AES Magazine does not charge OA fees nor page charges

- IEEE policy

- If Plan S proceeds and OA gains momentum, we may need to “flip” our Transactions to Open Access.
 - page charges are not permitted
 - there is a thought for “Diamond OA” for certain articles
- IEL income will decrease as library customers are less apt to buy for the prices they currently pay
 - impact of “transformative agreements” is unknown but AESS should watch
 - under these, organizations pay a fixed price for researchers to access IEL and also to have unlimited (?) OA submissions
- China’s rules for its internally supported researchers are changing
 - 33% of their publications must be in domestic journals, this will impact all IEEE income but AESS no less than other societies

- Linkage of conference fees to AESS membership
 - positive for our numbers, but perhaps such members are unengaged and expensive (probably not a good idea!)
- We can spend up to 3% of reserves (outside of budget) on “initiatives”.
- Suggestion (useful information from being SPS representative to Sensors Council):
 - Budget extra money to contribute to an AESS Foundation account.
 - This could be used for:
 - Funding awards at larger levels to increase impact.
 - Funding talks to accompany awards, like the Weiner Lecture at ICASSP for SPS.
 - Encouraging diversity, for example conference attendance support for students from Region 9.

- We are partnering with several societies on T-RS: GRSS, MTTTS, SPS, VTS, Sensors, IMS, APS.
- We can (perhaps) leverage our Council memberships (Sensors, Systems, Nanotechnology).
- We can (perhaps) work with IEEE Access.

- None from Finance.