

Minutes of the 2024 AMSAT Board of Directors Meeting
Held at the DoubleTree by Hilton Tampa, Rocky Point Waterfront, Tampa, FL
October 24-25, 2024

1. Pursuant to due notice, the Board of Directors of the Radio Amateur Satellite Corporation (AMSAT) convened at the DoubleTree by Hilton Hotel in Tampa, FL, at 9:03 am Eastern Daylight Time with President Robert Bankston, KE4AL, in the chair and the following Directors present:

Mr. Barry Baines, WD4ASW
Mr. Jerry Buxton, N0JY, Vice President - Engineering
Mr. Andrew Glasbrenner, KO4MA, Vice President - Operations
Dr. Mark Hammond, N8MH
Mr. Frank Karnauskas, N1UW, Vice President - Development
Mr. Bruce Paige, KK5DO
Mr. Paul Stoetzer, N8HM, Executive Vice President
Mr. Douglas Tabor, N6UA, (Alternate)

The following Directors were not present:
Mr. Zach Metzinger, N0ZGO - online

The following Officers and guests were also present:
Mr. Burns Fisher, WB1FJ
Dr. Alan Johnston, KU2Y, Vice President – Educational Relations
Mr. Dave Taylor, W8AAS, AMSAT US Delegate to ARISS International
Mr. Dave Bowman, G0MRF
Mr. Graham Shirville, G3VZV
Mr. Dennis Veselka, KI4KNC
?? Dave/Linda
?? Perry [online]

The following Officers were not present:
Mr. Steve Belter, N9IP, Treasurer - online
Mr. Jeff Davis, KE9V, Secretary

2. The first order of business was the election of the corporate officers. President Bankston presented the following proposed slate of officers:

President: Mr. Robert Bankston, KE4AL
Executive Vice President: Mr. Paul Stoetzer, N8HM
Vice President – Engineering: Mr. Jerry Buxton, N0JY
Vice President – Operations: Mr. Drew Glasbrenner, KO4MA
Vice President – Educational Relations: Dr. Alan Johnston, KU2Y
Vice President – Development: Mr. Frank Karnauskas, N1UW
Treasurer: Mr. Steve Belter, N9IP
Secretary: Mr. Douglas Tabor, N6UA

3. Mr. Paige moved that the current slate of officers be elected by acclamation. The motion was seconded by Mr. Glasbrenner and was adopted unanimously. The officers, as listed in Minute 2, were declared elected.

4. Mr. Dave Taylor, W8AAS, AMSAT US Delegate to ARISS International, joined the meeting at 9:08 am.

5. The Secretary, Mr. Jeff Davis, was thanked for his service to AMSAT. No report was delivered.

6. Mr. Belter presented the Treasurer's Report online. The total unencumbered balance is \$1.9M. The IRS has not moved on the Form 990 business filings for 2023, but has been filed by the Treasurer in time for the November 15th due date. Mr. Bankston gave details on the financials and history for filings. Mr. Buxton requested information about the forms required by foreign material acquisition. (EIN versus 990). The EIN is the appropriate response and that can be found on the AMSAT website.

7. Mr. Thompson, Dr. Hammond, and Mr. Glasbrenner delivered the Operations update. The ME-SAT1 (now MO-122) report included a question about which RF components were used to construct the satellite. AMSAT tested the onboard camera. Of the three operational modes, transponder mode is the normal operating mode. MO-122 is a 3U satellite. Transponder use often exceeds battery capacity and requires a power reduction. There was a discussion on how to manage that task. The University of Maine is developing a ground control station. Mr. Burns, Dr. Hammond, Mr. Glasbrenner, and Mr. Buxton gave an update on AO-7, which mainly operates in its Mode B. AO-91 intermittently operates (1 of 3 passes) while SO-50 works well. Mr. Baines asked about the use of the University of Maine ground control station. Dr. Hammond replied that many of the students had graduated and the University has most of the needed equipment. The issue of licenses being issued to students that graduate. The use of LTM may need an MOU with the universities. Further discussion on the IO-117, GreenCube was had.

8. A recess was called at 09:53 am.

9. The meeting reconvened at 10:04 am, with Dr. Johnston giving an update on Education Relations. A short slide presentation on the status of CubeSatSim was delivered. Version 2 of the hardware and software were released. FoxTelem 1.13e1 is the current software. The material costs for the populated boards is \$297 and will be sold for \$400. The survey of early users was largely positive and deemed a good learning experience. Survey question 7 provided good information on what was not liked. One enhancement request was to add an RTL-SDR to the kit build. Version 2 is to be made available on the AMSAT store in November 2024. The ARISS is using CSS Lite (radio only) in the STAR mBOT robot. Mr. Metzinger made a comment about securing satellite assets when performing command/control.

10. A recess was called at 10:50 am.

11. The meeting reconvened at 10:55 am with Mr. Bankston, acknowledging that the VP of User Services position is presently vacant.

12. Via a remote presentation, Mr. Karnauskas gave an update on Development. The contributions for the 2024 year to date are down from last year. Last year, 54 contributors donated \$54K, while this year is \$37K from 41 contributors. A suggestion was made to add new Life Members to the President's Club for one year. The [AMSAT.COM](https://amsat.com) website needs a more vital landing page to obtain outside contributors. There was a discussion on how to get more, smaller contributions from members. A refresh on the Youth Initiative - 1. Online curriculum, 2. Fleet of Ground Stations + CubeSatSim (goal of 235), and 3. Education Payload curriculum (STEM-related). AMSAT Ambassador Program kits (currently 14) - \$3.6K was budgeted, and only \$2K was spent. There is a goal for 40. 25% of the Life Members have no

email or current contact information. This is a continuing cleanup task. The email forwarding service transition is going smoothly.

13. Mr. Stoetzer gave an AMSAT News Service update. The transition to an HTML-based email has been successful. There are four ANS editors (Mr. Stoetzer, Mr. Karnauskas, Mr Ahrenstorff, and Mr. Johns.) Mr. Kornowski is providing the Keps and the AMSAT Journal.

14. Although IT was absent, Mr. Bankston gave an update. Noted that emails from amsat.org are being blocked as SPAM by some email handlers (Gmail, ATT, and Outlook). The standard operating practice for AMSAT is to reply quickly to confirm an email was received if it were a request.

15. Mr. Paige gave an update on contests, awards, and the webstore. The webstore had 632 orders for 811 products with total sales of \$71K. Awards netted \$453 income.

16. A recess for lunch was called at 11:48 am.

17. The meeting reconvened at 1:07 pm with Mr. Buxton giving an engineering update. In addition to his slides, he discussed EAR/ITAR requirements and AMSAT involvement. FoxPlus and PACSAT are utilizing OpenProject with the intent to publish. It was agreed that OpenProject is not subject to EAR/ITAR.

Status update - on GOLF-TEE and FoxPlus. ASCENT and partnerships - LTM, PACSAT, and Opportunity Payloads. GOLF-TEE with an RT-IHU (Radiation Tolerant), 10 GHz SDR, deployable solar panels, and ADCS are all predicates for GOLF-1. 43 tasks/system updates make a 12/2025 launch possible (including 60 days margin). Gantt charts were reviewed. FoxPlus has 37 tasks with 8 people assigned to achieve a 9/2025 launch date. At present, private launches are scheduled one year out. A new Falcon launch company (Bootstrap) provides a 37° communications orbit. We should aim to have 5 LTMs on the shelf by the second quarter of 2025.

18. A recess was called at 3:24 pm.

19. The meeting reconvened at 3:34 pm with Mr. Bankston presenting a review of his Update presentation for the general AMSAT meeting. It was noted that 50% of AMSAT members are Life Members. The future vision of AMSAT after GOLF was included. A portion of the presentation was about the new generation of CubeSatSim for education. The final bit was discussing future Hamvention participation.

20. At 4:48 pm, the meeting was recessed until 9:00 am on October 25th.

21. The meeting reconvened at 9:10 am with President Robert Bankston, KE4AL, in the chair and the following Directors present:

Mr. Barry Baines, WD4ASW

Mr. Andrew Glasbrenner, KO4MA, Vice President - Operations

Dr. Mark Hammond, N8MH

Mr. Jerry Buxton, N0JY, Vice President - Engineering

Mr. Bruce Paige, KK5DO

Mr. Paul Stoetzer, N8HM, Executive Vice President

Mr. Douglas Tabor, N6UA, Secretary

The following Officers and guests were also present:

Dr. Alan Johnston, KU2Y, Vice President – Educational Relations

Mr. Dave Taylor, W8AAS, AMSAT US Delegate to ARISS International

Mr. Burns Fisher, WB1FJ
Mr. Dennis Veselka, KI4KNC
Mr. Lou McFadin, W5DID
Mr. Chris Thompson, VE2TCP/G0KLA
Dr. Joseph DiVerdi, K0NMR
Mr. Rich Kennedy,
Karsten Glasbrenner,
Mr. Perry ??

The following Officers were not present:

Mr. Steve Belter, N9IP, Treasurer - online
Mr. Frank Karnauskas, N1UW, Vice President – Development - online
Mr. Zach Metzinger, N0ZGO - online

22. Mr. Bankston opened with Old Business. The first item was the disposition of a pick-and-place machine. The person who had it was located, and the machine was missing again. The fixed asset was not in Maryland, so the \$1,962 machine will be written off. After five years, it was fully depreciated. This is now a closed issue, and no board action is needed.

23. AO-7 - Fifty Years in Space. Mr. Karnauskas presented. Jan King's original contribution of a 33,688-word scientific paper was edited to 5,500 words with photos added. It will be included in the next issue of the AMSAT Journal. The next article will focus on AO-7's second life and the findings of survivability in space. The QST deadline was missed for a two-page article. Mr. Perry asked about press releases to NASA and other space agencies. Mr. Stoetzer asked about submitting an article to space.com and other online publications.

24. New Business. Mr. Glasbrenner brought up the topic of future symposiums. The dates keep getting later and there are concerns about volunteer continuity and cost issues of holding events. A suggestion about free presentations to get more involvement from local communities. A suggestion is to include outside activities that provide more attraction to increase attendance. Including volunteer perks and pricing for paid items (meals, seats, etc.) Presently, AMSAT subsidizes the costs of meals (50%) in combination with other organizations. Attendance has changed post-COVID. A suggestion of a three-year cycle for volunteers which would be learning in the first year, doing the next, and training the third year.

25. Mr. Karnauskas received a call from Weber State University (Bill in Cocoa Beach, FL) to pick up a satellite. Mr. Glasbrenner or Mr. Veselka could drive over for the MicroSat. Presently the AO-40 mockup is in Mr. Glasbrenner's truck.

26. The meeting recessed at 10:06 am.

27. The meeting reconvened at 10:16 am with additional New Business being presented by Mr. Stoetzer. It was suggested that the organization of AMSAT administrative documents go into OneDrive, with Mr. Stoetzer producing a guide on its use. There was a discussion about document retention, for which there is no policy on handling old documents. There is presently, the cost of two storage units in the Washington DC area is borne by AMSAT. Mr. Karnauskas mentioned DLARC.

28. Mr. Bankston noted that ride-share opportunities have been missed because of no launch-ready satellites. Mr. Buxton, Mr. Glasbrenner, and Mr. Bankston are discussing how to leverage these launches in the future. The goal is to have operational equipment in orbit as quickly as possible.

29. Mr. Bankston brought up increasing the priority of getting a satellite to HEO. We need to demonstrate GOLF to show AMSAT commitment to MEO/GEO. Mr. Glasbrenner stated that the best choice to achieve that is a hosted opportunity.

30. The meeting recessed at 10:56 am before the closed session.

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31. The meeting reconvened at 11:06 am with only board and leadership present. Rough notes:

31. Mr. Bankston stated that the perception is that FM satellites have been abandoned for entry-level HAMs. Mr. Buxton noted there is little support from engineering to take on other projects. Other statements were made about FoxPlus which was to have been FM. Options were discussed - LTM, organize a working committee to move FM forward. ISIS or (Mark K) for an FM radio.

32. Mr. Bankston talked about our export policy. He also mentioned that this will be his last term as AMSAT President. Significant time involved in the day-to-day operation of AMSAT. We need to have a clear definition of the president's job description as well as a clear idea of how to be more effective with volunteers. Remove some administrative duties (Martha). The big picture is what should be done in-house versus being outsourced. Dr. Hammond and Mr. Baines to head an informal search committee.

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33. Mr. Paige moved that the meeting adjourn, seconded by Mr. Buxton. The motion was adopted and the meeting adjourned at 11:58 am.

Respectfully submitted,

/s/ Douglas Tabor

Douglas Tabor, N6UA
Secretary