



2024 Annual Report

Amateur Radio Digital Communications



AMATEUR RADIO DIGITAL COMMUNICATIONS

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Cover Photo: Hornet Amateur Radio Club (HARC). Credit: HARC



Letter from the Executive Director



Hello ARDC Community –

At the beginning of each year, I always enjoy the ritual of taking a moment to reflect on the recently completed orbit around the sun, and to look forward and set some intentions for the next one. For ARDC, our annual report is a key part of this ritual.

2024 was a year that came with some big shocks that honestly rocked our boat. The biggest one, of course, was [the sudden loss of our colleague and friend John Hays K7VE](#), which occurred at a moment when we were already understaffed. Around the same time, we launched our new [Portal](#) – a long anticipated feat unto itself! – but definitely encountered some hiccups as a result.

Despite it all (including another loss – [Dewayne Hendricks WA8DZP](#)), our staff, board, and volunteers pulled through. Our Grants team managed to make nearly [~\\$4 million in grants](#). They also launched our inaugural Grants Evaluation Team (GET), which reviewed 99 final reports from our grantees and [published their findings](#). We started to [more actively engage with our regional coordinators](#), working with them as we finalized some important policies for 44Net. We brought on new members to our Tech Team to help support this work – [Adam Lewis KC7GDY](#), [Schuyler Erle N0GIS](#), and [John Burwell KI5QKX](#) – as well as [Adam Zimmer WOZML](#) to support our grants and operations team. And of course none of this would have been possible without our board of directors – including new members [Bob Witte K0NR](#) and [Ashhar Farhan VU2ESE](#) – who graciously supported our staff as we rode the waves in 2024. Along with our volunteers, this was a year where we demonstrated that, together, we are truly greater than the sum of our parts.

Thank you to everyone who has been a part of our journey, and here's to the journey ahead – no matter what it throws our way.

73,

Rosy

Rosy Schechter – KJ7RYV
Executive Director
Amateur Radio Digital Communications (ARDC)
ardc.net



In Memoriam

As mentioned in the letter above, in 2024 ARDC lost multiple team members: John Hays K7VE, Pat Nelson KE0QXD, and Dewayne Hendricks WA8DZP.



John Hays K7VE, Outreach Manager

Starting in 2019, John was first a volunteer on our Grants Advisory Committee (GAC) before becoming a key member of ARDC's staff in 2021. Though his title was Outreach Manager, his work touched every part of ARDC – from grants and operations to IT and 44Net. He truly shaped ARDC into the organization that we are today. We lost him in April 2024 and spent the rest of the year recovering both emotionally and operationally.

<https://www.ardc.net/remembering-john-hays-k7ve-sk/>



Pat Nelson KE0QXD, Conduct Review Committee

Pat had a rich background that included participation in local and statewide Human Rights Commissions. She was also a member of [ARRL](#), the [Aurora Amateur Radio Group \(AARG\)](#), an Area Director at [OMIK](#), and also had vast experience as a broadcaster and instructor. We are saddened that we never actually got to work with Pat, who had signed up to be a member of our Conduct Review Committee before she passed in January 2024. The world lost a powerful woman when it lost Pat.



Dewayne Hendricks WA8DZP, Grants Evaluation Team, formerly of the Grants Advisory Committee

Like John, Dewayne was an important part of the ARDC family, volunteering with us from 2021 until his passing in September 2024. He had also served for 30 years on the organizing committee of the [Asilomar Microcomputer Workshop](#), was a leader in wireless technology, flew planes, and was all around one of the most passionate and talented humans to ever walk the face of the earth, period.

<https://www.ardc.net/remembering-dewayne-hendricks-wa8dzp-sk/>





Outreach Manager John Hays K7VE SK gives an overview of ARDC at the opening of the 2024 HamSCI Workshop at Case Western Reserve University, Cleveland, OH.

ARDC Mission

The mission of Amateur Radio Digital Communications (ARDC) is to support, promote, and enhance digital communication and broader communication science and technology, to promote Amateur Radio, scientific research, experimentation, education, development, open access, and innovation in information and communication technology.

ARDC Values

Our staff, contractors, and volunteers strive to uphold the following values:

- Curiosity
- Experimentalism
- Respect
- Accountability
- Openness & Transparency
- Inclusiveness
- Fairness
- Generosity & Gratitude

Read more about our values here: <https://www.ardc.net/about/values/>



2024 Organizational Highlights

ARDC Welcomes New Staff Members Schuyler Erle N0GIS, Adam Lewis KC7GDY, John Burwell KI5QKX, and Adam Zimmel W0ZML

Schuyler Erle N0GIS, Technology Director



ARDC welcomed Schuyler Erle N0GIS as our new Director of Technology on October 1. With a strong background in open-source development, wireless technology, and engineering management across corporate and nonprofit sectors, Schuyler is well-equipped for this role. Since the late '90s, he has contributed to open-source software, co-founding NoCat.net to bring high-speed internet to rural communities, and led key projects in wireless networking and geographic information systems. A co-author of [Mapping Hacks](#) and a founder of the [OpenLayers](#) projects, he has played a pivotal role in advancing F/OSS mapping tools. Licensed as a General class amateur

radio operator since 2011, Schuyler has been active in emergency communications and now looks forward to reconnecting with his passion for Open Source innovation and technical community development.

Adam Lewis KC7GDY, IT & Development Manager



After consulting with ARDC since March 2024, we onboarded Adam Lewis KC7GDY as our IT & Development Manager on July 8. Adam brings extensive experience in IT infrastructure, network design, and software development. An amateur radio operator since 1994, he co-founded the [Amateur Radio Internet Exchange \(ARIX\)](#) and played a crucial role in ARDC's [Technical Advisory Committee \(TAC\)](#), developing the Point-of-Presence (PoP) project to automate 44Net IP address allocation. Passionate about open-source innovation and community building, Adam continues to drive collaboration in the tech and amateur radio worlds.



John Burwell KI5QKX, 44Net Program Manager



ARDC brought in John Burwell KI5QKX as our 44Net Program Manager on November 4. John brings experience from startups, established companies, and community organizations, with a background in building infrastructure and software across industries. His role at ARDC focuses on leading 44Net communications, developing documentation and training, and overseeing services like the Portal and Point-of-Presence (PoP) project. A lifelong tech enthusiast, John's first exposure to amateur radio was as a Scout, eventually leading him to get licensed in 2021 after discovering 44Net. Passionate about digital modes and networking, he is excited to enhance 44Net's operations and collaborate with its talented community.

Adam Zimmel W0ZML, Grants & Administrative Associate



ARDC introduced Adam Zimmel W0ZML as our Grants & Administrative Associate on October 28. Adam brings a background in IT policy and cybersecurity, with a B.A. in Network and Security Administration from Dakota State University, where he is also pursuing a master's part time in Cyber Defense. His experience as a grant-funded researcher gave him valuable administrative experience and exposure to the significance of grantmaking, making him a great fit for supporting ARDC's grantees and internal operations. Adam's amateur radio journey was inspired by his late uncle, leading him to get licensed before college. On the air, he enjoys VHF SSB, HF, and repeater maintenance, while off the air, he [collects vintage computers](#) and restores classic cars.

We are excited to have these folks join our team, and you can learn more about them in the respective blog posts below:

- October 2, 2024: [Meet Schuyler Erle N0GIS, ARDC's New Director of Technology](#)
- November 21, 2024: [ARDC Introduces IT & Development Manager Adam Lewis KC7GDY](#)
- November 12, 2024: [ARDC Welcomes 44Net Program Manager John Burwell KI5QKX](#)
- November 21, 2024: [ARDC Welcomes Grants & Administrative Associate Adam Zimmel W0ZML](#)



ARDC Welcomes Bob Witte K0NR and Ashhar Farhan VU2ESE to ARDC's Board of Directors!



L to R: Bob Witte K0NR and Ashhar Farhan VU2ESE, new ARDC board members as of 2024.

Bob Witte K0NR has been a part of the ARDC community since 2021, where he was on the Grants Advisory Committee (GAC) for three terms, with two of those terms serving as Chair. During his time on the GAC, staff had great experiences working with Bob and definitely expressed enthusiasm about him joining the Board. Licensed since 1977, Bob developed an interest in amateur radio while pursuing his undergraduate studies. He is actively involved in [Summits on the Air \(SOTA\)](#) and [Parks on the Air \(POTA\)](#). He is the author of *VHF, Summits and More*, related to SOTA and contributed a chapter of [The Parks on the Air[®] Book](#). He also founded the [Colorado 14er Event](#), a major SOTA weekend in August.

Ashhar Farhan VU2ESE was initially licensed at the age of 15 as VU2FAX. "Fascinated with electronics as a child," Farhan became interested in amateur radio after being "hooked" following a local club coming to his school to perform a ham radio demo. Following a hiatus, he returned to the hobby in 2002 and obtained his general grade license as VU2ESE. Throughout his career, Farhan has worked in the fields of Internet telephony, free software, and voice codecs. His technical contributions to amateur radio have also earned him inductions into both the [QRP Amateur Radio Club International \(QRPARCI\) Hall of Fame](#) (2016), and the [CQ Ham Radio Hall of Fame](#) (2018).

ARDC is so pleased to have these talented individuals join our leadership team! You can learn more about each of them in the related blog posts below:

- January 29, 2024: [Bob Witte K0NR joins ARDC's Board of Directors](#)
- June 11, 2024: [Ashhar Farhan VU2ESE joins ARDC's Board of Directors](#)



Highlights by Department

Grantmaking

- The GAC reviewed 198 proposals, of which 59 were ultimately funded.
- ARDC approved about [\\$3.9 million](#) to organizations whose projects and programs align with our goals.
- The inaugural Grants Evaluation Team (GET) reviewed all final reports that we had received from grantees to determine which projects were most effective, and what learnings and information we could pass on to others. You can read about their findings [here](#).
- Open Tech Strategies (OTS) continued development on our open-source grants management software, [Hypha](#).

More information available in the [Detailed Look at Grants](#) section.

44Net and Technical Advisory Committee (TAC) Work

- The 44Net Portal refresh was launched – many thanks to Chris Smith G1FEF and Tim Požar KC6GNJ.
- The TAC has begun work on policies and procedures for improving the workflow of 44Net administration and coordination activities, which will continue in 2025 with input from the community.

Outreach & Communications

- The ARDC team attended multiple amateur radio events, including [HamCation](#) and [Dayton Hamvention](#), as well as regional events, such as [Gwinnett TechFest](#) and [Stone Mountain Hamfest](#). In addition to hamfests, we were present at conferences celebrating grantee milestone events, such as the [ARISS 40th Anniversary Conference](#) and the [W3USR Station Dedication](#). Finally, we attended the [Nonprofit Technology Conference \(NTC\)](#) to connect with other folks in the nonprofit sector.
- Our [newsletter](#) remained steady at more than 1000 subscribers (1024).
- [ardc.groups.io](#) grew to just over 1100 subscribers.
 - To ensure our [44Net Portal](#) ticket handlers have a place to collaborate, we also established the [ticket handlers subgroup](#) in October.



- We have grown our social media presence on [Facebook](#) (694 followers), [Twitter / X](#) (831 followers), and [LinkedIn](#) (1034 followers). We also established our presence on [Reddit](#) in October.
- We have expanded our video content on [Vimeo](#) to include grantee interviews at many of the hamfests / events we attend.



2024 Financial Overview

In 2024, we awarded 59 grants and 23 charitable gifts, valued at approximately \$3.9 million, and distributed approximately \$4 million. More exact numbers will be provided with our 2024 audited financial statement and associated IRS filing, which will be shared later in 2025.

The approved and distributed amounts roughly align with the accrual and cash distribution calculations, as shown on our 990-PFs.

How does this year’s giving compare with previous years?

Yearly Grants & Gifts Distribution		
Year	Accrual	Cash
2024	~\$3.9M	~4M
2023	\$6,345,764	\$5,880,342
2022	\$6,904,678	\$8,004,191
2021	\$10,798,573	\$9,247,203
2020	\$3,155,532	\$3,004,625

2024’s grants expenditure was notably lower than in previous years, wherein we had averaged ~\$6.7 million per year. The tightening of our spending followed an evaluation of our excess distribution – which, going into 2024, was about [\\$5.3 million](#) – in combination with unknown market fluctuations amid rising inflation. In service of maintaining our endowment and its spending power for the long-term, we have decided to target a 4.5% annual distribution over the next few years. 2024 was the first year that we put this into practice. This will help balance our average of ~6.2% distribution rate and bring us back to an average distribution percentage that’s closer to the 5% requirement.

While the shift may seem stark, it has forced some necessary re-focusing of our grant proposal evaluation efforts to those that are both excellent and most closely aligned with our mission. Additionally, in 2024 ARDC put some additional person-power and tooling into managing 44Net, a key part of our mission.

More exact values for 2024 will be available after we complete our yearly audit and file our 2024 990-PF. For past 990s and financial statements, please visit: <https://www.ardc.net/about/legal/ardc-finances/>.

To get a deep dive into our most recent tax return (2023) and learn more about how cash and accrual accounting apply to our yearly distribution, check out this [blog post](#).



Detailed Look at Grants

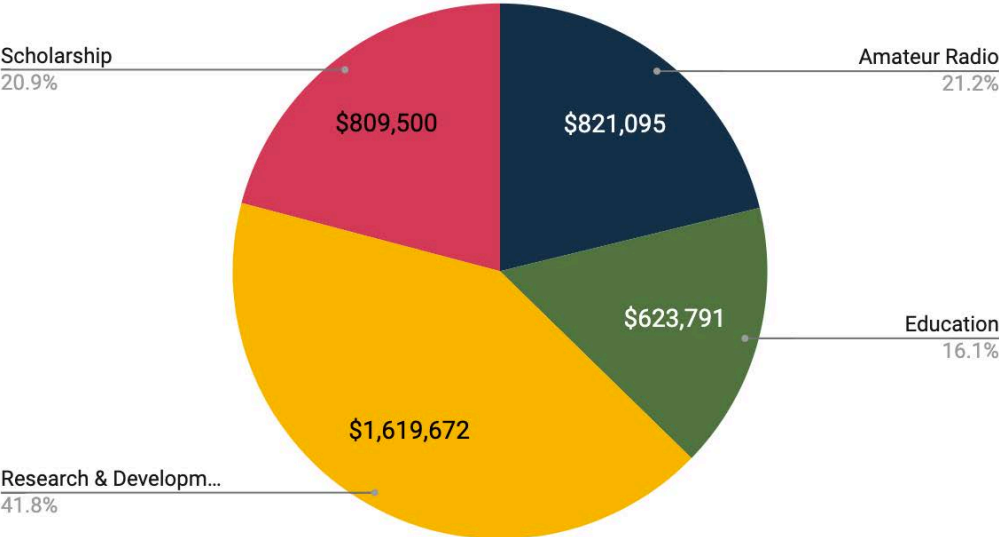
Total amount approved in 2024: about \$3.9 million
Total grants distributed in 2024: about \$4 million

See previous page for more information about these totals.

Since the ARDC grantmaking program's inception, we have impacted over 94,000 people worldwide. You can read full descriptions of our 2024 awarded grants [on our website](#). In 2024, we continued to see an increase in demand for ARDC grants. Ultimately, 28% of proposals submitted to us were selected for funding.

The below charts show how funded projects are distributed across ARDC's 2024 Categories: Amateur Radio, Education, Scholarships, and Research & Development.

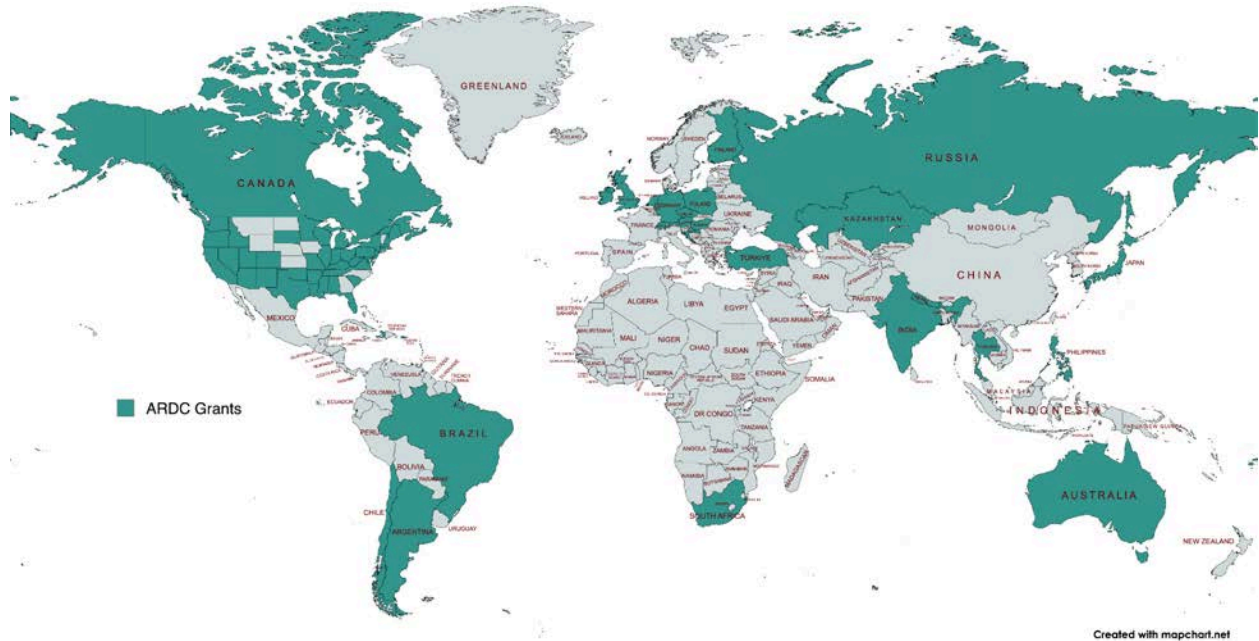
2024 Grants by Category - Dollars



Granting Category	Dollars Given	No. Grants	Percent of funding
Amateur Radio	\$821,095	28	21.19%
Education	\$623,7919	16	16.1%
Scholarships	\$821,095	4	20.9%
Research & Development	\$1,619,672	11	41.81%



In 2024, our international grantmaking represented 16 out of 59 (27%) of our funded projects. This is a substantial increase over previous years, in which our international funding maxed out at 13% of our grant making. We made new connections to organizations based in the Czech Republic, Chile, Netherlands, South Africa, and Thailand among other places. In the spirit of amateur radio's international nature, we will continue to emphasize international outreach in 2025.



Countries impacted by ARDC Grants (2019-2024)

Amateur Radio

Amateur radio projects include network build-outs, equipment upgrades and repairs, and licensing programs. Projects involving repeater and club equipment repairs, upgrades, or installations were particularly popular. Our most common grantees for these projects remain K-12 schools, college amateur radio clubs, and community amateur radio clubs. In addition to funding clubs directly, we also provided some funds to the ARRL for their own [club grants program](#).

In 2024, ARDC saw even more groups incorporate educational elements into their amateur radio focused grant projects. New equipment was often used for educational public demonstrations, or in classes to get new hobbyists on the air or teach active hobbyists new skills. Strong outreach plans remained a priority for ARDC when selecting which projects to fund.



Highlight: USS Hornet



NB6GC operating station on the USS Hornet. Image credit: Geoff Abreu K6ERA.

One project we're especially proud to support is the [USS Hornet Amateur Radio Club \(HARC\)](#). [With funding from ARDC](#), HARC is restoring and modernizing the radio equipment and facilities aboard the historic [USS Hornet](#). Their work includes repairing original antennas, upgrading the NB6GC station with modern radios, and ensuring all improvements comply with preservation requirements for this [National Landmark](#). These upgrades help HARC continue its mission of promoting amateur radio education and preserving history. You can read more about the group's progress in our related [blog post](#) published in December 2024.



Amateur Radio Projects	Amount USD
<p>USS Hornet - Hornet Amateur Radio Club (HARC) <i>Historic WWII US Navy Ship's Antenna Restoration</i></p> <p>Restoration and modernization project of the ship's radio equipment and facilities to continue its work in amateur radio promotion, education, and historical preservation.</p>	\$80,438
<p>New England Sci-Tech <i>Attracting More Youth, SCOUTS, and Home School Communities to Amateur Radio</i></p> <p>Plans to continue previous work bringing more youth into Amateur Radio and other STEM learning. Offering after school and summer classes/workshops for youth to learn about Amateur Radio and get their operators license.</p>	\$39,850
<p>Emergency Preparedness in Calabasas <i>Santa Monica Mountains Digital Network</i></p> <p>Enhance emergency preparedness by expanding digital communications and providing training.</p>	\$19,000
<p>Irvine Valley College Foundation on behalf of the Irvine Valley College Amateur Radio Club <i>ARYO: Amateur Radio Youth Outreach</i></p> <p>Creates a base station at the school, provides a portable HF set up for offsite events, and puts up a repeater.</p>	\$23,038
<p>Open Collective Europe on behalf of JARL Kyoto Club <i>Paving the Way for Young People to the World of Amateur Radio</i></p> <p>Focus on growing the interest and participation of amateur radio among individuals under the age of 20 in Japan through education and licensing exam assistance.</p>	\$26,748
<p>VRZA (Vereniging van Radio Zendamateurs) <i>HAMNET Expansion in the Netherlands</i></p> <p>Secure future HAMNET wireless network capacity, increase stability, and increase bandwidth requirements to prepare for more demanding network applications and improved repeater systems.</p>	\$8,000



<p>VRZA (Vereniging van Radio Zendamateurs) <i>National Repeaters System Upgrade</i></p> <p>Update software and repeater network across the Netherlands.</p>	\$23,710
<p>East Tennessee Repeater Association <i>Tri-County Repeater Upgrades</i></p> <p>Repeater system upgrade and expansion to service a large community and provide emergency communications support.</p>	\$59,781
<p>University of Louisiana EECE Department <i>Improvements to the University of Louisiana at Lafayette's CAPE and Amateur Club Radio Station (W5UL)</i></p> <p>Update radio club equipment, including HF and satellite capabilities. Club expansion plans include outreach to college and high-school students.</p>	\$10,719
<p>San Diego Repeater Association WB6WLV <i>Radio Catalog: Ham Radio Software Preservation and Restoration</i></p> <p>Builds a library catalog to hold and preserve open source ham radio software projects created by individuals.</p>	\$11,518
<p>Voice of Idaho Amateur Radio Club <i>Valley Linking Project</i></p> <p>Update repeaters and link them together for better club communications.</p>	\$8,950
<p>Friends of Yavapai County ARES RACES, Inc. <i>MARC/EOC upgrades</i></p> <p>Upgrade to ARES emergency communication equipment, including radios and antennas.</p>	\$15,028
<p>Allina Health Foundation on behalf of Courage Kenny Rehabilitation Institute <i>Courage Kenny Rehabilitation Institute Handiham Program</i></p> <p>Supports the Handiham project for three years by purchasing equipment and adding program staff. The Handiham program enables people with disabilities to participate in amateur radio.</p>	\$224,871
<p>Deutscher Amateur-Radio-Club e. V. on behalf of Český radioklub z.s./Czech Radio Club <i>Youngsters On The Air (YOTA) Summer Camp 2024 - Czech Republic</i></p> <p>Supports the Youth on the Air summer camp in the Czech Republic.</p>	\$20,847



<p>Utah State University <i>USU GAS Team Amateur Radio S-Band Ground Station</i></p> <p>Funding to update a ground station so it can communicate with a CubeSat. The group will conduct outreach by providing hands-on demonstrations.</p>	\$11,529
<p>Open Collective Foundation on behalf of Thammasat University <i>Empowering Emergency Communications: New Packet Radio and Go Box Deployment in Thailand</i></p> <p>Builds 50 packet-radio boxes (at 70cm) and trains 500 hams across Thailand to use New Packet Radio to provide internet during emergencies.</p>	\$30,000
<p>Amateurfunkgruppe Burgdorf HB9BE <i>A 5GHz AREDN based Mesh Network for the City and Area of Burgdorf</i></p> <p>Provides access to an AREDN network to the hams living in the city of Burgdorf.</p>	\$11,550
<p>Contest University, Inc. (CTU) <i>Contest University Audio-Visual Project</i></p> <p>Purchases A/V equipment to improve the quality of training classes and events.</p>	\$5,000
<p>Hancock County ESDA Support Association <i>Elvaston Illinois Repeater Project</i></p> <p>Enhance emergency communication capabilities by acquiring portable HF, VHF, and UHF go boxes.</p>	\$6,650
<p>Great South Bay Amateur Radio Club <i>Emergency Communications upgrades</i></p> <p>Upgrade the club communications trailer with new batteries and additional solar panels to enhance its role as a mobile command post.</p>	\$15,985
<p>Artisans Asylum <i>Amateur Radio Community Outreach & Support</i></p> <p>Fostering amateur radio engagement by integrating radio curriculum into their programs.</p>	\$19,097
<p>Cross Roads Ham Radio Club <i>Go-Box portable operating equipment to demonstrate effectiveness of amateur radio during natural disasters</i></p> <p>Acquire portable HF, VHF, and UHF equipment for Go-Boxes</p>	\$9,505



<p>Valencia County Amateur Radio Association, Inc. <i>Handicap Ramp and Parking for VCARA Clubhouse and KC5OUR Shack</i></p> <p>Enhance accessibility and participation in amateur radio by constructing a handicap ramp at their clubhouse.</p>	\$32,881
<p>Hot Springs Amateur Radio Club <i>Support for Fall River County South Dakota Amateur Radio</i></p> <p>Establish a Youth Licensing Sponsorship and Mentorship Program to cover costs and bolster engagement in rural western South Dakota.</p>	\$2,700
<p>Cascade Amateur Radio Society <i>AREDN Mesh for the Forgotten Areas</i></p> <p>Installation and maintenance of ARDEN in underserved rural communities outside Portland.</p>	\$58,067
<p>New Jersey Institute of Technology <i>The 2025 HamSCI Workshop hosted by NJIT</i></p> <p>Support for supplies, participant travel, and catering for the Ham Radio Science Citizen Investigation (HamSCI) workshop.</p>	\$34,625
<p>The Museum of Information Explosion <i>A state-of-the art operating position for SIGNALS - The museum of Information Explosion, PHASE B</i></p> <p>Purchase new equipment to upgrade the museum ham shack, enhancing its functionality.</p>	\$7,008
<p>The Richardson Wireless Klub <i>Satellite Station Upgrades and Replacements</i></p> <p>Modernize the club's satellite station by upgrading the transceiver and antennas to address performance issues and enhance satellite telemetry research support.</p>	\$4,000

Education

ARDC's education grants engage the community in general learning about amateur radio and mission-aligned STEAM activities. A major goal is to reach youth and bring them into the hobby, and thus 92% of our 2024 education grants targeted children or college students. Education grants employ a wide range of program strategies, including museum displays, youth camps, mentoring programs, equipping school clubs, and funds for college senior capstone projects that incorporate amateur radio.



Highlight: W4MSA Station Grant

The [North Middle School Radio Club](#) in Joplin, Missouri, provides students with hands-on experience in radio technology. With support from their [ARDC grant](#), the club established a modern DMR repeater to enhance educational opportunities for students in the Joplin School District. The program made radio and electronics accessible to all students, regardless of financial background, by providing necessary equipment and involving students and local radio club members in the installation process. This initiative helped develop practical skills and deepen students' understanding of radio.

Education Projects	Amount USF
Electronic Applications Radio Service, INC <i>2023 - 2025 Youth on the Air (YOTA-Americas) Camp</i> Second out of three years of funding for YOTA Americas camps, serving 30 campers per year.	\$39,338
Sweet Dreams for Randolph County Kids, Inc. on behalf of Winchester High School/Driver Middle School Club <i>Winchester Community High School/Driver Middle School WF9DHS Club</i> Promote STEM and amateur radio among underserved students in Indiana.	\$5,000
Kwantlen Park School <i>RF Communications Summer School</i> Supports a summer school program to teach high-school students RF communications and Amateur Radio, including helping them to pass the licensing exam.	\$1,928
Alhambra High School Amateur Radio Club, W7AHS <i>Alhambra High School W7AHS: Radio Rising</i> Revive an old radio club at a high school by updating equipment.	\$18,133
Friends of West Bend Library <i>Support and Growth of Amateur Radio Education</i> Provide children aged 10-15 with an interactive, educational experience that enhances their STEM skills and introduces them to the world of amateur radio.	\$1,400
Cal Poly Pomona Bronco Space <i>Project Persephone</i> Student-led university organization located at Cal Poly Pomona aims to democratize space access. This grant funds a CubeSat mission, including launch costs.	\$158,924



<p>Freedom Prep Academy <i>Engaging and Educating Indigenous Youth in Amateur Radio through Hands-on Space Science Activities</i></p> <p>Two amateur radio clubs coming together, working with schools in their area to promote amateur radio, with a focus on including Indigenous students.</p>	\$43,000
<p>TOBB ETU <i>SDR-Powered Education and Research</i></p> <p>Supports the creation of an amateur radio club on University campus that will facilitate SDR-based laboratory projects.</p>	\$48,549
<p>Walters State Community College Foundation <i>HAMtastic Radio Technology Camp: Extending Communication from Tennessee to the World</i></p> <p>Supports Walters State College in Morristown, TN in putting together a radio summer camp for intermediate school students with the intention of having students sit for the Technician license exam.</p>	\$26,971
<p>North Middle School <i>DMR Repeater</i></p> <p>Upgrade equipment for middle school radio club, including a DMR repeater and related equipment.</p>	\$6,200
<p>Case Amateur Radio Club of Case Western Reserve University W8EDU <i>Engineering Undergraduate Senior Project Support</i></p> <p>Funds senior projects related to radio communications for engineering students.</p>	\$3,500
<p>Excellence For All STEAM School Network, Inc <i>"Shades of STEM: Engineering-Is-Us"</i></p> <p>Aims to provide hands-on STEM learning experiences for underrepresented students, enhancing their engineering skills, and engaging the broader community through workshops.</p>	\$30,000
<p>Kwantlen Park School <i>Putting POTA in Public Ed</i></p> <p>Creates POTA go boxes to establish new Amateur Radio clubs at schools within the district.</p>	\$9,000



<p>Brick Store Museum <i>Launching a Museum-Based Amateur Radio Program</i></p> <p>Create an educational interactive amateur radio display and ham shack within the museum to expand outreach.</p>	\$7,275
<p>Sarasota Military Academy, Inc. <i>W4SMA Station Grant Application</i></p> <p>Establish an amateur radio club on a junior high and high school campus with a curriculum for students related to amateur radio.</p>	\$29,875
<p>SETI Institute <i>AGISETI: ARDC-Supported GNU radio-based Interactive SETI Curriculum</i></p> <p>Enhance curriculum by adding hands-on labs that incorporate educational principles and radio communication techniques.</p>	\$194,698

Scholarships

In 2024, ARDC funded scholarships through four programs, bringing our all-time total to 396 ARDC-funded individual scholarship recipients. All of our funded programs make selections based on a mix of need and merit. The [ARRL Scholarships](#) select students who are involved in amateur radio, whereas the other scholarship programs prioritize students pursuing degrees related to amateur radio, such as many of our scholarship recipients from the [Society of Women Engineers \(SWE\)](#). Many students write to us to let us know that they could not attend college without scholarship assistance.

Scholarships	Amount
<p>ARRL Foundation <i>ARRL Scholarships PART 2</i></p> <p>Second payment of \$507,500 for three total years to fund the ARDC Scholarship. Total request is \$1,522,500 over three years.</p>	\$507,500
<p>Native Forward Scholars Fund <i>ARDC STEAM Fund</i></p> <p>Scholarships focused on empowering Native American students pursuing higher education in STEAM fields, particularly in radio communications and related disciplines.</p>	\$100,000
<p>Society of Women Engineers <i>SWE 2024 Programs</i></p> <p>Supports scholarships and educational supports, including new scholarships for students in India.</p>	\$130,000



American Indian Science and Engineering Society <i>ARDC Scholarship Program</i>	\$72,000
Provide scholarships and support for twelve students pursuing STEM degrees related to amateur radio in the 2025-2026 academic year.	



[Native Forward](#) supports Native American and Alaska Native students through scholarships, academic advising, and career counseling. The organization partners with Tribes, schools, and corporations to expand educational access and opportunities. With continued funding from ARDC, Native Forward will offer scholarships and professional development for Native students pursuing STEAM careers, focusing on radio communications, engineering, and emergency management.

Gordon North Piegan III (pictured above) was awarded an ARDC scholarship through Native Forward in 2023. He is from the Blackfeet Tribe in Northwestern Montana and a graduate of Montana State University with a Master’s in Electrical Engineering. Gordon is continuing his education to earn a Ph.D. at George Mason University in Electrical Engineering. He has been an active member of the American Indian Outreach Council at Sandia National Laboratories where he interns, as well as an active member of the American Indian Science and Engineering Society. Gordon exhibits leadership as a teaching assistant, father, husband, and oldest sibling of six.

Research & Development

In 2024, ARDC made 11 grants in the Research & Development category. All of ARDC’s supported research projects are open source. The R&D projects focus on improving or developing new digital communications or amateur radio tools and technology.

Highlight: Space Weather School Observatory for Chile: A low-cost network to study space weather from schools on the longest country of the world

The Scientific Instrumentation Center (CInC) at the Adventist University of Chile is advancing research and education through the development of a space weather analysis network. Leveraging Chile’s unique geographic position, CInC plans to install low-cost instruments, including magnetometers, VLF receivers, and all-sky cameras, across the country. These tools will enhance space weather research while engaging students and teachers in STEM education. By placing observatories in underserved rural schools, the initiative provides hands-on learning opportunities, fosters interest in science, and contributes valuable data to the global understanding of space weather phenomena.



Research & Development Projects	Amount
<p>University of Victoria on behalf of SkyaanaSat Consortium <i>Modular CubeSat Radio</i></p> <p>University of Victoria project to create a Modular Cube Satellite Radio to improve current radio communications.</p>	\$408,239
<p>SETI Institute <i>GNU Radio Hackathon at Hat Creek Radio Observatory</i></p> <p>SETI and GNU Radio will host a three day in-person hackathon at the Hat Creek Radio Observatory. Participants will attend lectures on how to use the Allen Telescope Array and other technologies. This grant will cover transportation, accommodation and food.</p>	\$26,040
<p>Software Freedom Conservancy <i>Proposal for Copyleft Advocacy, Compliance and Enforcement</i></p> <p>The SFC leverages copyleft licensing for the advancement of software freedom. This grant funds copyleft and GPL enforcement efforts.</p>	\$150,000
<p>Deutscher Amateur-Radio-Club e. V. on behalf of Online Amateur Radio Community (OARC) & Localino <i>New Packet Radio Version 3.0 / Seeding UK and Ireland Usage</i></p> <p>Expanding New Packet Radio capabilities in the UK and Ireland.</p>	\$55,456
<p>Scientific Instrumentation Center, Adventist University of Chile <i>Space Weather School Observatory for Chile: A low-cost network to study space weather from schools on the longest country of the world</i></p> <p>Funds a three year project to study the effects of the atmosphere/space weather on radio/satellite communications. The project will involve students across the country for outreach and education.</p>	\$79,280
<p>University of Scranton <i>Post-Doc Funding Request</i></p> <p>Funds a post-doc position at the University of Scranton for the scientific analysis of RBN/WSPRNet/PSKReporter (amateur radio) data.</p>	\$30,954
<p>University of Cape Town <i>SmartSDN: Intelligent Network Management Toolkit for Community Wireless Networks</i></p> <p>A SmartSDN implementation for quality-of-service management for a community network in South Africa, conducted as a research project through a university.</p>	\$124,394

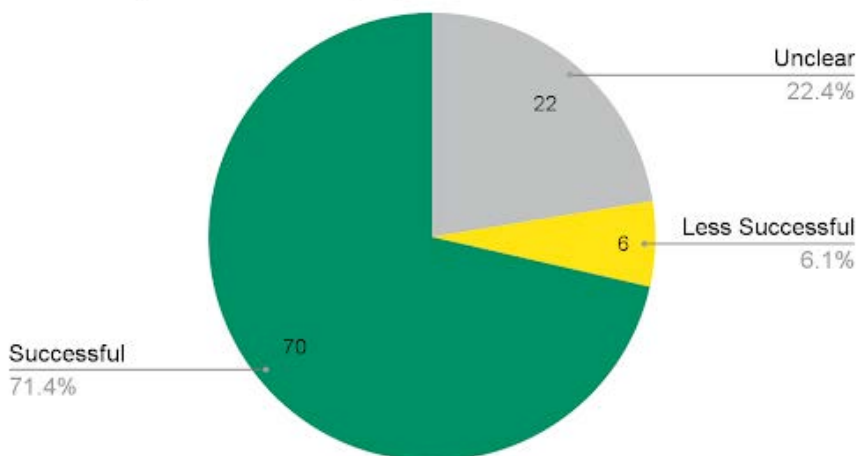


<p>Deep Space Exploration Society <i>DSES-EVE Proposal</i></p> <p>This group focuses on deep space communications and will conduct an experiment as proof of concept for Earth-Venus-Earth communications.</p>	\$50,090
<p>Multimode Digital Voice Modem (MMDVM) <i>Multimode Digital Voice Modem (MMDVM) Project</i></p> <p>Continue full-time development of its open-source digital voice modem, which supports multiple amateur radio modes.</p>	\$180,000
<p>Asociación Civil AlterMundi <i>The new Wi-Fi for Mesh Networks: Advancing Community Connectivity through Innovative Mesh Technology</i></p> <p>Aims to strengthen community mesh networks, with a focus to improve communication access and reliability for communities through innovative solutions.</p>	\$313,970



Grants Evaluation Team (GET) Public Findings

How many ARDC funded projects are successful?



Many in our community ask which ARDC-funded grants have been the most successful. To help answer this, ARDC launched the [Grants Evaluation Team \(GET\)](#) in 2024 to review completed grant projects and compile their findings into a [report](#) that we are pleased to share.

In their analysis, the GET reviewed 99 final reports from projects funded between August 2021 and March 2024, identifying key trends and insights over six biweekly meetings. Rather than conducting a formal evaluation, the team sought to provide multiple perspectives on the grants, highlight important takeaways for the community, and answer three core questions:

- Were these grant projects a good use of ARDC funds?
- Were these grant projects successful?
- What information about these grants should be shared back with our community?

Their findings showed that the majority of ARDC-funded projects successfully advanced our [goals](#), as 71% of grant projects were deemed successful. Another 22% had unclear outcomes, highlighting the need for additional support in reporting results, especially for large projects. The review also confirmed that the [Grants Advisory Committee \(GAC\)](#) effectively predicts which proposals will succeed. Additionally, the insights gathered can help the amateur radio community learn from past projects, avoid common challenges, and maximize impact. Notably, youth education initiatives and small amateur radio club projects proved to be highly effective and cost-efficient in promoting amateur radio.

We look forward to using the GET's findings to improve our evaluation process, including continuing to work with the GET for ongoing grant reviews.

For a deeper dive into the GET's findings, you can check out the full report here: <https://www.ardc.net/wp-content/uploads/GET-Findings-Public-Version.pdf>.



44Net Development & Outreach

2024 was a transformative year for 44Net, marked by significant milestones and renewed focus on community, technology, and collaboration.

Perhaps the most significant milestone was the release of an all-new [Portal](#) in April, the first fully integrated platform for managing 44Net IP space, DNS records, BGP announcements, and more. Its license and location verification systems promote a new degree of trust among users and help protect 44Net's reputation as part of the global Internet. Its group management tools enable organizations to self-administer resources with structure and accountability. Its facilities for ticket handlers allow volunteers to share support and administration duties. With all this and more, the new Portal empowers community members not only to use 44Net more efficiently and effectively, but also to participate in its maintenance and contribute to its growth like never before.

The launch sparked a surge of interest from the community, together with some intense discussion, reflecting both excitement and concern. The launch faced substantial technical challenges. At the same time, it also revitalized positive engagement, with vital user feedback driving immediate improvements. A wave of volunteers stepped up to help handle resource requests, and Regional Coordinators, the Technical Advisory Committee, and other contributors helped collaborate through constructive dialogue. **Thank you to everyone who stepped up during this time!** Though perspectives remain diverse as ever, new voices have brought fresh energy to our community, reflecting optimism about 44Net's potential now and in the future.

Apart from the Portal, staff and volunteers have worked to refresh the gateway at UCSD, prepare the VPN PoP project for launch, and develop new documentation and resources, all slated to emerge in 2025 as further products of this year of transformation.

The pace and scale of these developments helped reveal the need for a staff role dedicated to supporting the 44Net community as it continues to grow. Following the development of the position over the summer, [John Burwell](#) joined as 44Net Program Manager in November. Moving into 2025, the Program Manager will help cultivate a thriving community and drive initiatives to modernize infrastructure, enhance user experience, and establish policies that encourage productive collaboration and experimentation.

The work to bring 44Net where it is has been long and hard. Thanks to the historic efforts of Chris Smith G1FEF, the invaluable insight of contributors like Tim Pozar KC6GNJ, the vital support of the ARDC Board of Directors, and the bright energy of the community and its volunteers, 2024 has been a year of remarkable accomplishments. The path ahead for 44Net has never been clearer or more promising.



Outreach and Engagement

Conferences and Hamfests



L to R: Executive Director Rosy Schechter KJ7RYV, Board Member Phil Karn KA9Q, IT & Development Manager Adam Lewis KC7GDY, Communications Manager Rebecca Key KO4KVG, and Board Member Ashhar Farhan VU2ESE at the ARDC Booth at Dayton Hamvention 2024.

Our participation in conferences and hamfests aims to increase awareness of ARDC and its activities, including both our grants program and 44Net. In addition to presentations, in 2024, we continued demonstrating our 44Net VPN router at our booths throughout the year, while also putting an emphasis on outreach to get more folks interested in leasing our IP addresses for their ham radio projects.

These events give us the chance to engage with our community, including current and prospective grantees. They also connect us with our 44Net members and others interested in leasing addresses. Finally, they provide a chance to build relationships with organizations like the ARRL, DARC, and various national and regional societies.



We attended the following events in 2024:

- [Gwinnett TechFest](#) - January in Lawrenceville, GA ❖ □
- [NTIA Spectrum Policy Symposium](#) - February in Washington, DC 🟡
- [HamCation](#) - February in Orlando, FL ❖ □
- [ARISS 40th Anniversary Conference](#) - February in Orlando, FL
- [Nonprofit Technology Conference](#) - March in Portland, OR
- [HamSCI](#) - March in Cleveland, OH □
- [Hamvention](#) - May in Xenia, OH ❖ □
- [Ham Radio 2024](#) - June in Friedrichshafen, Germany
- [FOSSY 2024](#) - August in Portland, OR 🟡
- [Huntsville Hamfest](#) - August in Huntsville, AL
- [Pacificon](#) - October in San Ramon, CA □
- [W3USR Station Dedication](#) - October in Scranton, PA
- [Stone Mountain Hamfest](#) - November in Lawrenceville, GA ❖

❖ Presentation □ Booth or Table 🟡 Panel

We sponsored the following events in 2024:

- [Big Bear HamEscape](#) - April in Big Bear Lake, CA
- [SEA-PAC](#) - June in Seaside, OR
- [HamCon:Zion 2024](#) - July in St. George, UT
- [GNU Radio Conference](#) - September in Knoxville, TN

You can see a full list of our sponsorships [here](#).

Podcasts and YouTube Channels

We appeared on the following podcasts and YouTube channels in 2024:

- [Kyle - AA0Z](#)
- [Ham Radio Crash Course](#)

Press Releases

Our press releases were published in the following publications:

- [Amateur Radio Newsline](#)
- [This Week in Amateur Radio](#)
- [Amateur Radio Weekly, Amateur Radio Daily](#)
- [Zero Retries](#)
- [TAPR PSR](#)



Monthly Newsletters

We published 10 monthly [newsletters](#), and the number of subscribers has remained consistent at over 1000 (1024). If you haven't subscribed yet, sign up here to stay informed with our latest news and updates: <https://www.ardc.net/about/newsletter/>.

Community Meetings

We had more than 75 people join our [Community Meeting in February 2024](#). Community Meetings are held via Zoom. Anyone interested in ARDC's work is invited to attend and discuss what we've been doing and where we are going. To stay informed about upcoming meetings, follow us on social media, join ardc.groups.io, or subscribe to our newsletter through the link in the *Monthly Newsletters* section above.

Grantee Gatherings

We held a Grantee Gathering in April 2024 with a turnout of more than 30 participants. Participants joined us on Zoom to discuss tips, successes, and challenges with project management, all intending to learn from one another. These gatherings were quite successful, with lots of synergy between grantees, and many were interested in connecting with each other post-gathering to share resources and seek advice. We plan to hold these Gatherings again in 2025.

Regional Coordinator Meetings / 44Net Portal Workshops

In an effort to touch base more regularly, in 2024, we began hosting Regional Coordinator (RC) meetings. These meetings have been a great place for staff to keep RC's apprised of the latest 44Net updates (Portal, policy, etc.) and for the RC's to ask staff questions and share input.

In an effort to train RC's and other interested volunteers to handle Portal tickets, we also hosted workshops and a "Ticket Party". As a result of these volunteers becoming ticket handlers, we have been able to clear and maintain our backlog of Portal tickets!

If you're interested in visiting the topics of past RC meetings, you can find videos, notes, and presentations of said meetings on our Regional Coordinators page [here](#).



Social Media and Groups.io

We have continually posted updates on our social media pages and Groups.io, which has resulted in growing these platforms. At the conclusion of 2024, we have nearly 700 followers on Facebook (3.1x increase from 2023); more than 830 followers on Twitter / X (1.4x increase from 2023); and over 1,000 followers on LinkedIn (1.6x increase from 2023).

Since 2021, we have grown ardc.groups.io to over 1100 subscribers.

We also maintain the following public special interest subgroups within ardc.groups.io:

[44Net](#)

Created: 02/17/22

426 Members

(2.4x increase from 2023)

[ARDC Wiki](#)

Created: 08/25/23

48 Members

(1.8x increase from 2023)

[Community](#)

Created: 04/19/23

1063 Members

(1.6x increase from 2023)

[ARDC Grantees](#)

Created: 4/19/23

67 Members

(1.2x increase from 2023)

[44Net VPN](#)

Created: 07/01/18

399 Members

(1.2x increase from 2023)



2024 Team

None of our work would be possible without a great team. We are lucky to get to work together!

Staff



ARDC's staff as of Dec. 2024. Top row, L to R: Rosy Schechter KJ7RYV, Executive Director; Schuyler Erle N0GIS, Director of Technology; Chelsea Párraga KF0FVJ, Director of Grantmaking; Rebecca Key KO4KVG, Communications Manager. Bottom row, L to R: Merideth Stroh KK7BKI, Operations Manager; Adam Lewis KC7GDY, IT & Development Manager; John Burwell KI5QKX, 44Net Program Manager; Adam Zimmel W0ZML, Grants & Administrative Associate.

Contractors



Chris Smith G1FEF, provides IT services through his company, [The Communication Gateway](#). As a volunteer, he manages 44Net address space.



Tim Požar KC6GNJ, helps ARDC with IT through his company, [Two P](#). He also volunteers with TAC-related projects.



Board of Directors

2024 Officers



Officers of ARDC's Board of Directors as of Dec. 2024. L to R: Bdale Garbee KB0G, President; John Gilmore W0GNU, Secretary; Ria Jairam N2RJ, Treasurer.

In 2024, in addition to adding Directors Bob Witte K0NR and Ashhar Farhan VU2ESE, Ria Jairam N2RJ became Treasurer. This occurred on June 1, 2024, upon the departure of [Founding Board Member kc claffy KC6KCC](#).

Farewell to Founding Board Member kc claffy KC6KCC



kc claffy KC6KCC, a Founding Board Member and recent Treasurer, stepped down on June 1, 2024. She was instrumental in transitioning ARDC into a foundation and is a strong advocate of better utilizing the [44Net address space](#) in support of ARDC's [mission](#). All of us at ARDC thank kc for her invaluable contributions and lasting impact on the foundation!

<https://www.ardc.net/fond-farewells-to-founding-board-member-as-ardc-welcomes-a-new-treasurer/>

2024 Board Members

These are our board members as of Dec. 2024:

- President: Bdale Garbee — *KB0G*
- Secretary: John Gilmore — *W0GNU*
- Treasurer: Ria Jairam — *N2RJ*
- Director: Phil Karn — *KA9Q*
- Director: Keith Packard — *K7WQ*
- Director: Bob Witte — *K0NR*
- Director: Ashhar Farhan — *VU2ESE*



Conduct Review Committee (CRC)

The Conduct Review Committee (CRC) is a group of volunteers who ensure that ARDC spaces, described in the [Code of Conduct](#), are welcoming and productive.

- Keith Packard — *K7WQ*
- Merideth Stroh — *KK7BKI*
- Donni Katzovicz – *W2BRU*

Grants Advisory Committee (GAC)

ARDC succeeded in making these grants thanks in no small part to the Grants Advisory Committee (GAC):

- Staff Lead: Chelsea Párraga – *KF0FVJ*
- Chair: Brian Milesosky – *N5ZGT*
- Leandro Soares Indrusiak – *G5LSI*
- Don Prosnitz – *N6PRZ*
- Dennis Derickson – *AC0P*
- Bill Thomas – *WT0DX*
- Katie Allen – *WY7YL*
- Judi Clark – *KK6ZCU*
- Randy Wilkinson – *W4LKS*
- Jim Idelson – *K1IR*
- Kristin Paget – *NC0DD*
- David Burgess – *KE2DSM*
- Sam Duwe – *WN5C*
- Hillary Ramsey – *AB1CD*
- Kevin McQuiggin – *VE7ZD/KN7Q*

Technical Advisory Committee (TAC)

ARDC is grateful to the Technical Advisory Committee for their part in guiding the development of the 44Net and their hard work on the new Portal and the PoP VPN project.

- Staff Lead: Adam Lewis – *KC7GDY*
- Zach Seguin – *VA3ZTS*
- Chip Eckardt – *W9OQI*
- Dave Gingrich – *K9DC*
- Rich Gopstein – *KD2CQ*
- Álvaro Prieto – *KC2VVE*
- Ian Redden – *VA3IAN*
- Dan Theisen – *KK7OZY*
- Dennis Mojado – *AD6DM*
- Jeff Hochberg – *W4JEW*
- Saquib Ahmed – *VU3HZW*



Grants Evaluation Team (GET)

In 2024, ARDC established the Grants Evaluation Team (GET), who reviews and advises the ARDC Board of Directors and Grants Advisory Committee (GAC) on the results of funded grants.

- Staff Lead: Chelsea Párraga – *KF0FVJ*
- Bob Witte – *K0NR*
- Dewayne Hendricks – *WA8DZP SK*
- Ben Greve – *KO4KVH*
- Willi Kraml – *OE1WKL*
- Scott Czeck – *KC1GHT*
- Darryl Smith – *VK2TDS*
- Lad Nagurney – *WA3EEC*
- Jai Chanda – *VU2YYE*

You can see our whole team listing <https://www.ardc.net/about/who-we-are/>.



Looking ahead: 2025

Grants & Gifts

- Continuing our work with the [Grants Evaluation Team \(GET\)](#). Last year the committee reviewed nearly 100 final reports from our grantees, and in doing so provided us with invaluable insights into how to define the overall success for ARDC projects. They also provided suggestions for how we might do a better job with our own grant evaluation efforts. This year, continuing with their guidance, the GET will be supporting in our grant evaluation process through helping us to review in-progress as well as final reports.
- Continue our four-times/year application review cycle, with proposals due on Feb. 1, April 1, July 1, and Sept. 1 (including scholarships). Applications received after Sept. 1, 2025, will be reviewed on Feb. 1, 2026. See ardc.net/apply for more information.

44Net / Technology

In addition to continuing to improve our IT systems behind the scenes, in 2025 the ARDC Tech Team will be focusing on the following efforts:

- Release the VPN PoP project. This service will provide access to 44Net resources via Wireguard. Work is underway to integrate it with the Portal in time for a wider beta release by the end of the year.
- Produce a comprehensive resource center for 44Net. This will initially include a policy handbook and 44Net user's manual, and it will set the stage to expand to include more learning materials.
- Continue to develop our open-source grantmaking software, Hypha.

Communications & Outreach

- Develop an online resource center specifically for 44Net, updating documentation and other materials related to connecting with the network.
- Continue to facilitate our grantees connecting with and supporting one another through ardc.groups.io as well as 1-2 virtual Grantee Gatherings

To get involved, ask a question, or share your thoughts about something you'd like to see in 2025, reach out any time: contact@ardc.net.



Final Remarks from our President



In this space last year, I talked about how our team had evolved and matured, building solid, repeatable processes for all elements of the work we do in support of our mission. As Rosy mentioned in her opening remarks, various events including the sudden loss of staff member (and for some of us, decades-long friend!) John Hays K7VE, precipitated an unexpected stress-test of the organization in 2024. Through the dedication of our staff, and with strong support from volunteers, we made it through each challenge, and today are an even stronger, more focused organization than we were a year ago.

One of the reasons I feel we're more focused is that, as promised, ARDC's board of directors invested significant time and energy this year revisiting a vision statement, and articulating the strategy we intend to pursue in support of our vision.

As I participated recently in meetings to communicate the vision statement and strategy to ARDC staff and our key volunteer committees, I was reminded again and again what an amazing community of contributors have coalesced in support of ARDC's mission. My profound thanks to all of you. I'm excited to see what we will accomplish together in the coming year and beyond.

73,

Bdale Garbee – KB0G
President
Amateur Radio Digital Communications (ARDC)
ardc.net

