

AMATEUR RADIO DIGITAL COMMUNICATIONS

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2020 Annual Report

Rosy Wolfe, Feb. 2021

Letter from the Executive Director



Hello, and welcome to ARDC's inaugural annual report. Along with ARDC Board Members, Staff, and Advisory Committee Members, I am excited to share it with you.

For ARDC, 2020 was a year of firsts – our first full year of grantmaking, our first year with a Grants Advisory Committee, and our first year with a new Executive Director. It was also ARDC's first year without founder Brian Kantor (WB6CYT) at the helm, following his unexpected passing in November 2019. He left giant and unique shoes for us to fill; as we celebrate our accomplishments of the past year, we also celebrate his memory. With this in mind, I could not write this letter without giving credit to the ARDC Board of Directors, who jumped in to pick up many of the pieces Brian left behind, all while experiencing the heartache of a lost friend. It's not an easy thing to do.

Looking back, I'm proud to say that – through heartache and a pandemic and everything else 2020 brought with it – we not only accomplished a lot, we've also set the stage for some tremendous grantmaking efforts and 44net improvements in 2021. The pages that follow contain some of the highlights from the past year, as well as a report on our grantmaking expenditures.

Looking forward, all of us are eager to get back to attending conferences and field days, and we're excited for another year of supporting scholarships, amateur radio projects, digital communications innovation, and 44net. Luckily, we can accomplish quite a bit remotely, and it's not lost on any of us that we have digital communication technology – built on the back of innovations in amateur radio – to thank for making it possible.

All the best and 73,

Rosy

Rosy Wolfe – KJ7RYV
Executive Director
Amateur Radio Digital Communications (ARDC)
ampr.org

2020 in a Nutshell





At a high level, here's what ARDC accomplished in 2020:

- Developed a Grants Advisory Committee (GAC), comprised of well-respected and professionally accomplished individuals, all well-regarded in the amateur radio community.
- Distributed 22 grants, distributing nearly $2.7 million USD.
    - These resulted in the funding of 120+ scholarships! A sampling of ARRL Foundation Scholarship Recipients are shown above.
- Surveyed 44net and had our first community video call with the group (Oct. 10, 2020)
- Began recruiting for 2021 Technical and Grants Advisory Committees
- Started a blog!
- Saw something that we funded end up on the International Space Station (the repeater shown above)!
- Hired our first Executive Director and brought on two new board members (more about the latter on Page 7).

Grants

Total grants distributed: 22
Total amount distributed: $2,690,312

2020 was a year full of grantmaking – something that is new for ARDC. Even though we were still getting our systems set up, we still managed to fund a variety of projects – from an open source multiplexing transponder program, to scholarships and internships, to an emergency wireless mesh network in San Francisco.

Grants Distribution & 2020 Granting Goals

Here's how these grants distributed across our 2020 granting goals:

- Growth of Amateur Radio,
- Amateur Radio Technology & Experimentation,
- Internet Technologies,
- Digital Communications,
- Communication Science & Technology,
- Education,
- Open Access, and
- Innovation

Grantee	Project	YYYY-MM	Award (USD)	Support & Growth of AR	AR Tech + Experimentation	Internet Tech	Digital Comm	Comm Sci + Tech	EDU	Open Access	Innovation
Network Time Protocol	General	2020-01	$100,000								
ARRL Foundation	2019-2020 Scholarships 1:1 Matching	2020-02	$200,000								
Foundation for Amateur Radio	2019-2020 Scholarships	2020-02	$200,000								
GNU Radio Project	General	2020-02	$50,000								
Karuk Tribe	Amateur Radio Equipment Support	2020-02	$110,000								
UC San Diego Foundation	Alan Turning Memorial Scholarship	2020-02	$225,533								
Yasme Foundation	General	2020-02	$50,000								
Open Research Institute	ITAR and EAR strategy	2020-06	$15,263								
TAPR Inc	TangerineSDR	2020-06	$42,500								
Outreachy	Paid Mentored Internships Countering	2020-07	$100,000								
Software Freedom Conservancy	Firmware Liberation Project	2020-07	$150,000								
Software Freedom Conservancy	Strategic GPL Enforcement Initiative	2020-07	$100,000								
Reproducible Builds	Deterministic protection against attacks in	2020-07	$75,000								
Open Research Institute	AmbaSat Inspired Custom Sensors	2020-09	$4,200								
Open Research Institute	P4XT Phase 2	2020-09	$507,020								
Yurok Tribe	Comprehensive Communications Strategy	2020-09	$159,319								
Hoopa Valley Tribe	Comprehensive Communications Strategy	2020-10	$161,795								
ARRL Foundation	2020-2021 Scholarships	2020-11	$149,817								
Chippewa Valley Amateur Radio Club	Emergency Trailer and Equipment	2020-11	$25,165								
Foundation for Amateur Radio	2020-2021 Scholarships	2020-11	$400,000								
San Francisco Wireless Emergency Mesh	San Francisco Wireless Emergency Mesh	2020-11	$100,000								
UCSD SysNet	Automated Capture and Decoding on	2020-11	$73,836								
			$2,690,312								

Grants Distribution & 2021 Grantmaking Categories

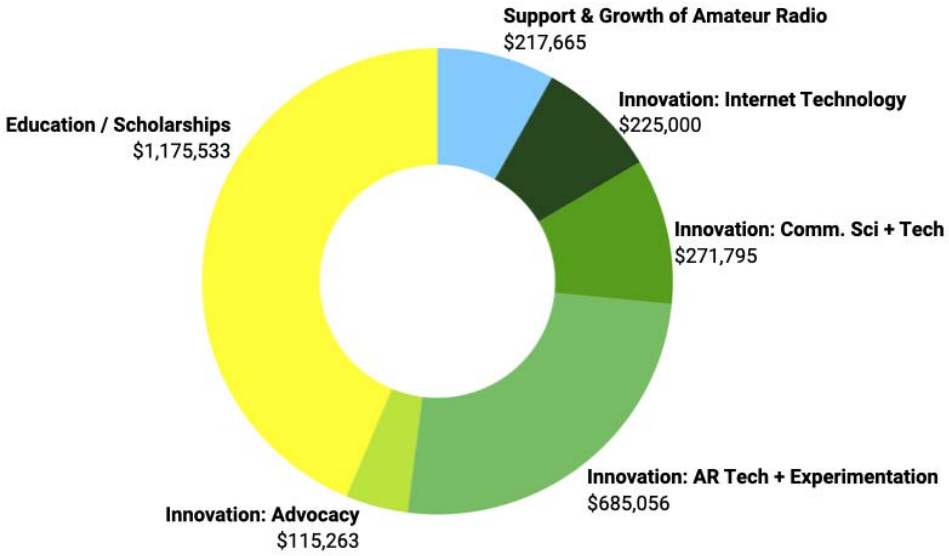
In an effort to offer a more simplified view into our grants distribution, for 2021 we have reorganized our grantmaking efforts into three main categories:

- Support & Growth of Amateur Radio,
- Education, and
- Technical Innovation.

Our Innovation category falls into a few key categories:

- Amateur Radio Science & Technology,
- Internet Technologies,
- Digital Communications, and
- Communication Science & Technology.

The below charts show how funded projects distribute across our 2021 Grantmaking Categories, with an additional category for Innovation: Advocacy.



Category	Sum	% ($)	Count	% (#)
Support & Growth of Amateur Radio	$217,665	8.1%	4	18.2%
Education & Scholarships	$1,175,533	43.7%	7	31.8%
Innovation – AR Technology & Experimentation	$685,056	25.5%	4	18.2%
Innovation – Communication Science & Technology	$496,795	10.1%	5	13.6%
Innovation – Internet Technology	$225,000	8.4%	2	9.1%
Innovation – Advocacy	$115,263	4.3%	2	9.1%
TOTALS	**$2,690,312**		**22**	

Here's how each project granted in 2020 was categorized in the above charts:

Date	Grantee	Project	Award (USD)
Support & Growth of Amateur Radio			
2020-02	GNU Radio Project	General	$50,000
2020-06	TAPR Inc	TangerineSDR	$42,500
2020-11	Chippewa Valley Amateur Radio Club	Emergency Trailer and Equipment	$25,165
2020-11	San Francisco Wireless Emergency Mesh	San Francisco Wireless Emergency Mesh	$100,000
Education / Scholarships			
2020-02	ARRL Foundation	2020 Scholarships 1:1 Matching Grant	$200,000
2020-02	Foundation for Amateur Radio	2020 Scholarships	$200,000
2020-02	UC San Diego Foundation	Alan Turning Memorial Scholarship	$225,533
2020-02	Yasme Foundation	General	$50,000
2020-07	Outreachy	Paid Mentored Internships Countering Systemic Bias and Underrepresentation in Tech	$100,000
2020-11	Foundation for Amateur Radio	2021 Scholarships	$400,000
2020-11	ARRL Foundation	Scholarships	$149,817
Innovation – AR Technology & Experimentation			
2020-01	NTPsec project	Network Time Protocol	$100,000
2020-09	Open Research Institute	AmbaSat Inspired Custom Sensors	$4,200
2020-09	Open Research Institute	P4XT Phase 2	$507,020
2020-11	UCSD SysNet	Automated Capture and Decoding on Modest Wideband SDRs	$73,836
Innovation – Communication Science & Technology			
2020-02	Karuk Tribe	Amateur Radio Equipment Support	$110,000
2020-09	Yurok Tribe	Comprehensive Communications Strategy	$159,319
2020-10	Hoopa Valley Tribe	Comprehensive Communications Strategy	$161,795
Innovation: Internet Technologies			
2020-07	Reproducible Builds	Deterministic Protection Against Attacks in Free Software	$75,000
2020-07	Software Freedom Conservancy	Firmware Liberation Project	$150,000
Innovation – Advocacy			
2020-06	Open Research Institute	ITAR and EAR strategy	$15,263
2020-07	Software Freedom Conservancy	Strategic GPL Enforcement Initiative	$100,000

Information about many of these projects can be found in Appendix A: Grant Reports.

2020 Financial Overview

At a high level, here are our total expenses for 2020. Thanks to some good luck and a prudent investment strategy, our endowment increased in value despite those distributions.

Expenses	
Grants	$2.7 million
Operations	$97,000

Balance	
Beginning-of-year	$109.1 million
End-of-year	$128.2 million

More exact values will be available post completion of our yearly audit and filing of our 2020 990-PF.

Scholarship Highlights:
FAR Scholarship Recipients

Donations from ARDC resulted in the creation of over 120 scholarships, many of whom were selected by the Foundation for Amateur Radio (FAR). Here is a small sampling of FAR scholarship recipients, and you can see more in the Grant Reports at the end of this document.



Allan J. Baum, III – K2AJB

“I believe that amateur radio is entering a new phase, ushered in by younger hams and their love for digital modes as well as other new, cutting-edge, wireless technologies. [...] As a relatively new ham, and a student just entering the Ramapo College of New Jersey as a freshman computer science major, it is extremely heartening to receive this gift. Thank you!”



Catherine Hong – KC1MFU

“I have joined the MIT Volunteer Examiner Team under W5YI, and let me tell you we’ve been breaking records. The most recent session I was in was close to the New Year, with 39 applicants and 31 VEs. It broke our previous record in W5YI, I had the pleasure to sign off on an 11 year old’s passed technician’s exam. I work these exams at least monthly ever since passing my general and extra exams, so I could help with the uptick in demand for remote examinations during the pandemic.”



Cristine Graham – KE8KSN

“I am a homemaker and homeschooling mother to nine children, currently ages 9 to 26, with four still living at home, and two are in college. I love music and consider myself an amateur musician. I sing as well as play several instruments (keyboard, guitar, drums, clarinet). I have been on the worship team at my church for many years and was promoted to Worship Director in 2019. As a student, I am currently pursuing a BS in Ministry Leadership through Cornerstone University’s Professional and Graduate Studies division. [...] Yes, 50-year-olds can complete a college degree!”



Faith Hannah Lea – KD3Z

“I am 15 years old and [...] my siblings and I have a YouTube channel called Ham Radio (dot) World. In this channel, we teach people about amateur radio and the fun they can have with it. We have gotten over a million views and over 11.9 thousand subscribers. [...] Currently, I attend Stetson University and I am majoring in Molecular and Cellular Biology as well as Management before I go to medical school in four years. I started attending college at the age of 12, and I graduated with my A.A. and a 4.0 GPA at 15 in May 2020.”

Grants Advisory Committee
& New Board Members

ARDC succeeded in making these grants thanks in no small part to the GAC:

- John Hays – K7VE (Chair)
- Robert (Bob) McGwier – N4HY
- Hank Magnuski – KA6M
- Jann Traschewski – DG8NGN
- Tim Pozar – KC6GNJ





In December, we also added two new members to the Board of Directors: Bob McGwier (N4HY, left) and Keith Packard (KD7SQG, right). You can read more about these brilliant humans here:

https://www.ampr.org/ardc-welcomes-bob-mcgwier-n4hy-and-keith-packard-kd7sqg-to-our-board-of-directors/

The Board of ARDC now has the following directors:

- Phil Karn – KA9Q (President)
- Bdale Garbee – KB0G (Treasurer)
- John Gilmore – W0GNU (Secretary)
- kc claffy – KC6KCC
- Bob McGwier, N4HY
- Keith Packard, KD7SQG

New GAC members will be announced in early Q1 2021.

Looking ahead: 2021

Much got done in 2020, and 2021 has a great deal more in store for us! Here's a quick look:

Grantmaking

- Experiment with Grant Windows for Education and Ham Club projects
- Finalize legal frameworks for grantmaking to non-501(c)(3)s and non-US entities (early Q1)
- Create frameworks for grantmaking to individuals, including beginning IRS approval process (Q1-Q2)

44net

- Initiate Technical Advisory Committee (TAC), whose job is to advise on 44net-related technology, including estimating and prioritizing feature improvements (early Q1)

Technology

- Decide on and implement improved grant tracking technology solution (early Q1)

Communications

- Send more general survey to ham clubs and organizations around the world (Q1)
- Update website design

HR Expansion

- Hire additional staff to support administrative and communications components
- Determine professionals to support 44net development

And that's just a start!

To get involved, ask a question, or share your thoughts about something you'd like to see in 2021, reach out any time: contact@ampr.org

Visit ampr.org/giving to learn more about ARDC grantmaking.

Appendix A: Grant Reports

Reports: Scholarships

2020-02-01
UC San Diego Foundation
Alan Turing Memorial Scholarship
***$225,533**

We received the following letter about this year's Alan Turing Memorial Scholarship Recipient, Eustaquio Aguilar Ruiz, on 23 Dec. 2020:

> Dear Phil,
>
> The passing of Brian Kantor greatly saddened all of us. Brian continues to serve as an inspiration, and this year we are grateful to the Amateur Radio Digital Communications' Board of Directors for fulfilling Brian's wish to endow the Alan Turing Memorial Scholarship.
>
> We have awarded scholarships to seven well-deserving UC San Diego undergraduate students since the inception of the scholarship in 2015. Each recipient has overcome significant challenges in their lives and receiving the Alan Turing Memorial Scholarship has been impactful in many ways.
>
> It has been wonderful to get to know this year's recipient, Eustaquio Aguilar Ruiz. He has overcome many challenges and has expressed great appreciation for the scholarship. Ruiz said, "I feel that many who are LGBT+, along with other marginalized identities, struggle with finding a welcoming place. The Alan Turing Memorial Scholarships represent hope and opportunity for students with complex and diverse identities in the LGBT+ communities."
>
> This article will hopefully give you a sense of Ruiz's motivation and drive: https://cns.ucsd.edu/eustaquio-aguilar-ruiz-named-alan-turing-memorial-scholarship-recipient/
>
> Thanks to Brian and the ARDC Board of Directors, the impact of this scholarship will continue for many lives to come.
>
> [Link to the initial news about the endowment: https://cns.ucsd.edu/amateur-radio-digital-communications-completes-turing-scholarship-endowment/]
>
> Kind regards,
> Jennifer Folkestad

2020-02-15
Foundation for Amateur Radio
2020 Scholarship program
$200,000

Here are all of the FAR scholarship recipients for the 2020-2021 school year. The amount totals to $219,000, as FAR included some additional funds into the distribution.

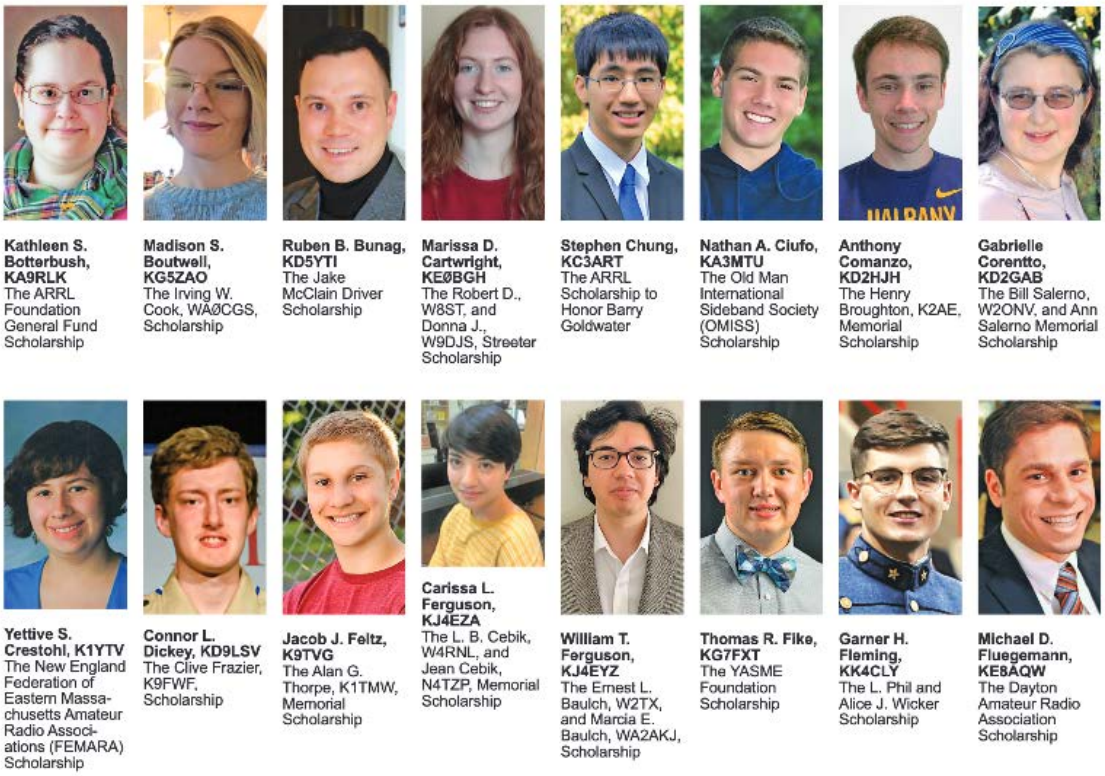
Name	Call Sign	Scholarship Amount
Ruth Willet	KM4LAO	$27,000
Faith Hannah Lea	KD3Z	$25,000
Gary Pike	KA4KBX	$25,000
Skyler Fennell	W0SKY	$25,000
Allan Baum	K2AJB	$17,000
Jonathan Keiser	AG5SY	$17,000
Sarah Keiser	AG5TJ	$17,000
Valerie Lehmann	KC3HPJ	$15,000
Britney Cawrse	W7BNC	$5,000
Catherine Hong	KC1MFU	$5,000
Cristine Graham	KE8KSN	$5,000
Eryn Wagoner	KE0WEY	$5,000
Joseph Pepe-Phelps	KL3JY	$5,000
Julie Knappik	KB1YTT	$5,000
Kyle Lowery	KC3EXP	$5,000
Alexandra Houston-Ludlam	KB3EZL	$2,000
Catherine Deskur	KD2IDD	$2,000
Jacob Feltz	K9TVG	$2,000
Jesse Banister	KD4ONN	$2,000
Logan Lamar	KJ7DDI	$2,000
Trey Lodge	KC3DAY	$2,000
Virginia Smith	NV5F	$2,000
Zachary Martin	KC3EWK	$2,000

2020-02-17
ARRL Foundation
2020 Scholarships 1:1 Matching Grant
$200,000 (max)

From QST Magazine, where ARRL Foundation Scholarship recipients are listed:

> The ARRL Foundation is pleased to present the students selected to receive scholarship awards for 2020. Scholarships are made possible through the generosity of individuals and clubs. This year, 103 scholarships totaling over $144,000 were awarded. Additionally, the non-profit Amateur Radio Digital Communications (ARDC) has generously awarded The Amateur Radio Digital Communications' Brian H. Kantor, WB6CYT, Memorial Scholarship grant to the ARRL Foundation to match each scholarship on a dollar-for-dollar basis, making the grand total of scholarships awarded $288,900. The ARRL Foundation Board of Directors offers these hams their best wishes for continued success as they pursue their college degrees. The 2021 application period is expected to open on October 1, 2020.
>
> For more information, please visit www.arrl.org/scholarship-program.

Here are some of the scholarship recipients:



Kathleen S. Botterbush, KA9RLK The ARRL Foundation General Fund Scholarship

Madison S. Boutwell, KG5ZAO The Irving W. Cook, WAØCGS, Scholarship

Ruben B. Bunag, KD5YTI The Jake McClain Driver Scholarship

Marissa D. Cartwright, KEØBGH The Robert D., W8ST, and Donna J., W9DJS, Streeter Scholarship

Stephen Chung, KC3ART The ARRL Scholarship to Honor Barry Goldwater

Nathan A. Ciufo, KA3MTU The Old Man International Sideband Society (OMISS) Scholarship

Anthony Comanzo, KD2HJH The Henry Broughton, K2AE, Memorial Scholarship

Gabrielle Corentto, KD2GAB The Bill Salerno, W2ONV, and Ann Salerno Memorial Scholarship

Yettive S. Crestohl, K1YTV The New England Federation of Eastern Massachusetts Amateur Radio Associations (FEMARA) Scholarship

Connor L. Dickey, KD9LSV The Clive Frazier, K9FWF, Scholarship

Jacob J. Feltz, K9TVG The Alan G. Thorpe, K1TMW, Memorial Scholarship

Carissa L. Ferguson, KJ4EZA The L. B. Cebik, W4RNL, and Jean Cebik, N4TZP, Memorial Scholarship

William T. Ferguson, KJ4EYZ The Ernest L. Baulch, W2TX, and Marcia E. Baulch, WA2AKJ, Scholarship

Thomas R. Fike, KG7FXT The YASME Foundation Scholarship

Garner H. Fleming, KK4CLY The L. Phil and Alice J. Wicker Scholarship

Michael D. Fluegemann, KE8AQW The Dayton Amateur Radio Association Scholarship

You can see the complete list here:
https://www.ampr.org/wp-content/uploads/2020-QST-Scholarships.pdf

2020-02-15
Yasme Foundation
General
$50,000

From Ward Silver, 18 Nov. 2020 –

> In support of the Global RBN Node Project we discussed, Yasme has spent $19,368 of the $20,000 remaining in the ARDC grant after our $30,000 contribution to Open Research Institute. We will be spending the remaining money over the next couple of weeks along with supplemental funds from Yasme. Thanks – this has been a really good project and the nodes are starting to come on-line, beginning with 3D2AG in Fiji, soon to be followed by nodes in St Croix, Samoa, and northern Finland.

Reports: All Additional

2020-06-05
Open Research Institute
ITAR and EAR strategy
$15,262.50

From Michelle Thompson, 02 Nov. 2020 –

> This grant was a reimbursement for legal costs spent by Open Research Institute. The effort was a complete success, resulting in a final determination letter from the US State Department declaring open source satellite work to be free from ITAR. All of the funds were accounted for in the original proposal to ARDC.
>
> The next step of the process is underway, which frees open source satellite work from EAR. This is distinct from ITAR.
>
> This work has been paid for by Open Research Institute. It is required to completely free open source satellite work from both ITAR and EAR.
>
> The final step will be an Advisory Letter, which provides a summary from the government and further protection for volunteers and open source contributors.
>
> The EAR and Advisory Letter work are both underway.
>
> If successful, we would respectfully present this work to ARDC for a possible reimbursement.
>
> If successful, the EAR and Advisory Letter work would be of significant and enduring benefit to the Amateur Radio Satellite Service and a very large array of commercial, industrial, scientific, experimental, and hobbyist organizations.

2020-06-23
TAPR Inc.
TangerineSDR Prototype Build
$42,500

You can see the full report from Tangerine SDR here:

https://www.ampr.org/wp-content/uploads/TangerineSDR_Proto_Build_Grant_Status_Dec_2020.pdf

At this time, they have not yet used any funds from ARDC, as they are working through another grant from the National Science Foundation (NSF).

2020-07-08
Outreachy
Paid Mentored Internships Countering Systemic Bias and Underrepresentation in Tech
$200,000*

Karen Sandler from SFC has provided the following report on 20 Nov. 2020:

> Since the grant start date of July 8, 2020, we have concluded our May internship round, providing internships to 53 interns. We were responsive to the pandemic crisis and were able to adjust our policies and procedures in addition to making the most recent round one of the largest cohorts in the history of Outreachy, providing even more critical mentorship and development opportunities to the people who need it most. We've seen the pandemic have the harshest impact on people who are the most vulnerable. Remote tech work helps people weather the pandemic safely and comfortably, but that work has been historically inaccessible to people who are subject to systemic bias and impacted by discrimination. Our internships serve to help bridge that gap. During the pandemic period, we revised our policies and procedures to be responsive to the urgent needs of our participants. Given the circumstances with our staff being impacted by covid and wildfires, we're very proud of our maintenance and growth of the program during this period. ARDC's grant is essential to our ability to accomplish this.
>
> We have learned that the remote nature of our program is hugely advantageous during the pandemic and that the demands on our program are likely to continue to increase. While being flexible to respond to the pandemic was very important to us, it increased our already high workload by a substantial margin and forced us to put some of our longer term goals on the back burner for the time being. So, perhaps most significantly, with additional financial support from this and another grant, we were were able to hire one of our part time contractors, Sage Sharp, as a full time employee as well as significantly increased the hours of our other contractor. This will increase the capacity of the program to stabilize and grow the program and to better support mentors and participants. Sage started this week!
>
> Additionally, budget cuts at corporate sponsors meant that some of our sponsors had to pull or diminish their sponsorship. However, we have been able to supplement the internship funding we had lined up we are able to reach into our reserves to fund 8 more interns, with a focus on humanitarian and internet privacy projects. We expect the coming round to have 54 interns accepted.
>
> Thanks very much to ARDC for supporting this program during this critical time!

2020-07-24
Reproducible Builds
Deterministic protection against attacks in free software
$75,000

Reproducible Builds already provides monthly reports, which you can see here:
https://reproducible-builds.org/news/

Here is the most recent report: https://reproducible-builds.org/reports/2020-11/

2020-09-10
Open Research Institute
P4XT Phase 2
$507,020

The P4XT project does semi-regular reporting, which you can find here:
https://github.com/phase4ground/documents/tree/master/Management/Weekly_Engineering_Reports

The most recent report can be found here:
https://github.com/phase4ground/documents/blob/master/Management/Weekly_Engineering_Reports/20201211_Weekly_Engineering_Report.md

2020-09-10
Open Research Institute
AmbaSat Inspired Custom Sensors
$4,200

Michelle Thompson provided us with the following report on 02 Nov. 2020:

> Please refer to https://www.openresearch.institute/wp-content/uploads/2019/11/Ambasat-Inspired-Custom-Sensors.pdf for the original proposal document.
>
> A separate bank account dedicated to the project has been set up.
>
> The first work sessions to accomplish the goals of this proposal are scheduled for December 2020 – May 2021. Work will be centered at Villanova University. The Principal Investigator is Dr. Alan Johnston. We are very fortunate to have Dr. Johnston lead the expansion of the number of open source microwave designs suitable for a variety of applications ranging from terrestrial mobile to high altitude balloons to space.
>
> There are some risks here, but they are expected and manageable. All universities are dealing with COVID-19, assistance with lightweight microwave designs is not set in stone, and the current AmbaSat launch may be delayed.
>
> ORI will support Dr. Johnston, recruit resources as needed, and remove any roadblocks going forward.
>
> All AmbaSat designs are open source. All work produced with this grant will be open source. These designs will fill a technology niche that exists in both terrestrial and space amateur radio microwave technology. These designs will be popular and re-used. The AmbaSat platform has gotten highly positive reviews from the people that have received their boards. The sensor extension is powerful, flexible, and standardized. Therefore, the designs produced will be useful even without requiring the main AmbaSat open source satellite host platform.

Reports Containing Confidential Information

The following projects are in the midst of active proceedings; reports will be shared when the proceedings are complete.

2020-07-08
Software Freedom Conservancy
Firmware Liberation Project
$150,000*

2020-07-08
Software Freedom Conservancy
Strategic GPL Enforcement Initiative
$100,000

Report not requested

The following projects were in operation for <2 months at the time of report requests, thus they were not contacted. We will request reports in 2021.

2020-09-23
Yurok Tribe
Comprehensive, Community-Owned Communications for Strategy for the Karuk, Yurok, and Hoopa Valley Tribes
$159,319

2020-10-15
Hoopa Valley Tribe
Comprehensive, Community-Owned Communications for Strategy for the Karuk, Yurok, and Hoopa Valley Tribes
$161,795

2020-11-06
San Francisco Wireless Emergency Mesh
Emergency Infrastructure
$100,000

2020-11-06
University of San Diego (UCSD)
Automated Capture and Decoding on Modest Wideband SDRs
$73,836

2020-11-06
Chippewa Valley Amateur Radio Club (CVARC)
Emergency Trailer and Equipment
$25,165

2020-11-06
ARRL Foundation
2020-2021 Scholarships
$149,817

2020-11-24
Foundation for Amateur Radio (FAR)
2020-2021 Scholarships
$400,000

This report was updated on 5/12/2026