# Open Research Institute, Inc.

# Greetings!

**Open Research Institute** (ORI) is a non-profit research and development organization which provides all of its work to the general public under the principles of **Open Source and Open** Access to Research.



## US 501(c)(3) Board of Directors

### Keith Wheeler KI7PEM

Principal Engineer at Infineon with extensive corporate and engineering experience.

#### Ben Hilburn KJ4DDR

Extensive community organizing experience as GNU Radio Project lead, founding CTO of DeepSig, and currently at Microsoft.

### Steve Conklin Al4QR

Decades of experience in high-availability distributed safety-critical systems engineering and open source.

**Michelle Thompson** 

Co-founder and current CEO

of ORI, telecommunications

executive, information

theorist, and engineer.

W5NYV

### Karen Rucker KG5GAK

An RF Engineer at Ball Aerospace, Karen began a master's degree program at the University of Colorado at Boulder in the fall of 2020 in Aerospace Engineering.

#### **Bruce Perens K6BP**

Co-founder of ORI and President Emeritus.

While not currently on the board, Bruce continues to advise ORI.

# 535

Number of people that have signed up for GitHub, Slack, and the mailing list. These are the most active members of the community. This number has doubled each year over the past two years.

This is distinct from our following on social media. These are people that show up to either do or follow the work.

### Affiliations

ORI ascribes to the Open Space Manifesto from Libre Space Foundation.

JAMSAT, AMSAT-DL, IEEE, NASA, SBMS, a list of Universities and two for-profit space companies, AstroDigital and AIS, are active and supportive collaborators. Open Research Institute is proud to be affiliated with the following organizations.

We are an Affiliate Member of Open Source Initiative.



We are a Member Society of AMSAT-NA



We are a Community Member of RISC-V International

RISC-V®

Associate Memberships in Open Research Institute are available to individuals that are interested in supporting the goals of open source research and development for amateur radio. Contact: w5nyv@arrl.net



### Current Project Matrix: Risk (ய) vs. Maturity(y) vs. Cost(size) vs. Relative Stress Condition(color)





## Timeline

	ORI Incorpo California, Technical commence fundraising open sourc conferenc sales and p donations.	orated in USA. work es, g through ce e badge oersonal	Phil Karn in to apply f grant for o microwave satellite w	nvites ORI or an ARDC digital e digital ork.	ITAR/EAR F regulatory identified a begun.	CC goals and work	ORI joins IP, UCSD for Ar Technical a Funding wo HamCation	ATH at quaPhage and prkshop at held.	YASME Fou Awards \$3 grant. ARDC reim successfu legal work celebratio	undation 0,000 burses I ITAR/EAR (major n!)	ARDC announce awards to AmbaSat a both P4DX grants.	OF de su pr Ha s Pri and Inv ( P4 wo	I work and monstrations ccessfully esented at m Expo. ncipal vestigator for DX illness orsens.
2018	Feb 2018	Mar 2019 IRS grants exempt sta Strenuous commence collaborate legacy gro	Aug 2019 ORI tax atus. efforts e to e with ups.	Sep 2019 P4DX, Rent and Ambas Inspired Se grant appl delivered t	Dec 2019 t-a-GEO, Bat ensors ications to ARDC.	Jan 2020 ORI annour fiscal and I sponsor of Radio Conf 2020. ARDC gram renewed.	Feb 2020 nced as ogistics GNU erence t efforts	May 2020 ARRL Foun awards \$3 to ORI.	Jun 2020 dation 000 grant	Aug 2020 Open Sour Satellite w free of ITA State Depa First of thr successfu this work.	Sep 2020 ce ork ruled R by US artment. ee I stages of	ORI work by AMSA Symposit Excluded directory being a M Society o	Mar 2021 censored T from their um. I from I, despite Member of AMSAT.

Timeline	+	+ ORI at DEFCON, presented all work for feedback.	First independent technical conference, co- hosted by IEEE Computer/Info Theory Societies.	+ Site visit to Huntsville Space and	+ Four hours of forum presentations at	
open source work at Good Support M17 of meetings Applied for a with OLF	e ASIC ogle. Major financial and fundraising review. 7 – lots 5. Space@VT IAB a SBIR Lots of work!	ORI at HamExpo, presented all work for feedback. Submitted ARDC grant application for Engineers General	FCC Meeting with OET, WTB, IB about Open Source and how it can help ARSS thrive under Debris Mitigation rules is great success. STTR/Funding pivot	Science Center, to get their big dish working again for amateur radio and citizen science use.	HamCation, three booths, and multiple on air demos and events. Major public outreach.	
Mar Apr 2021 2021	May Jun Jul 2021 2021 2021	Aug Sept 2021 2020	Oct Nov 2021 2021 Remote La equipment	Dec Jan 2021 2021	2 Feb 2022 tely Technical	
technical S conference with T IEEE. Singleton presentation as dry M run. S HamExpo! Big! a	Summit with Open GSE code Source Satellite Feam in the UK. Began col with RATP. M17 in Space! Lots of wo Summit with CalTech about our ITAR/EAR regulatory work.	Advisory C Request of laborations the way w AC. Work subr AMSAT Jo Symposiu censored	mitted to again. and install new dedic space. Orbit Work Graveyard again. Modified H Elliptical O produce m plans for F	ed in a Advis ated meet lab c Lots and ligh irbits hission	sory Committee ting, end-to-end all, and more. of lab work	

➢ Individuals and interactions over processes and tools. ➤ Working software over Comprehensive documentation. > Customer collaboration *over* contract negotiation. Responding to change over following a plan.

# 4. Where?

A

## International Collaboration

14. Major contributors and participants.

### **Physical Sites**

**Remote Lab East** was in Orlando, Florida. It is in the process of being moved to Little Rock, AR and will be relaunched as Remote Lab South. Now includes interferometry site! Remote Lab West is in San Diego, California. Complete and active. M17 Lab

We bought Open Lunar Foundation's laboratory and will use this equipment to set up M17 Project with a fully stocked open source and remotely accessible lab in the spring of 2022.



We believe that an open source approach to things like amateur digital communications, bacteriophage research, and sticking up for the non-commercial use of space will result in the best possible outcomes for the good of humanity.

# Lightweight Approach

Low overhead, radically participant-focused, internationally accessible work is what ORI does.