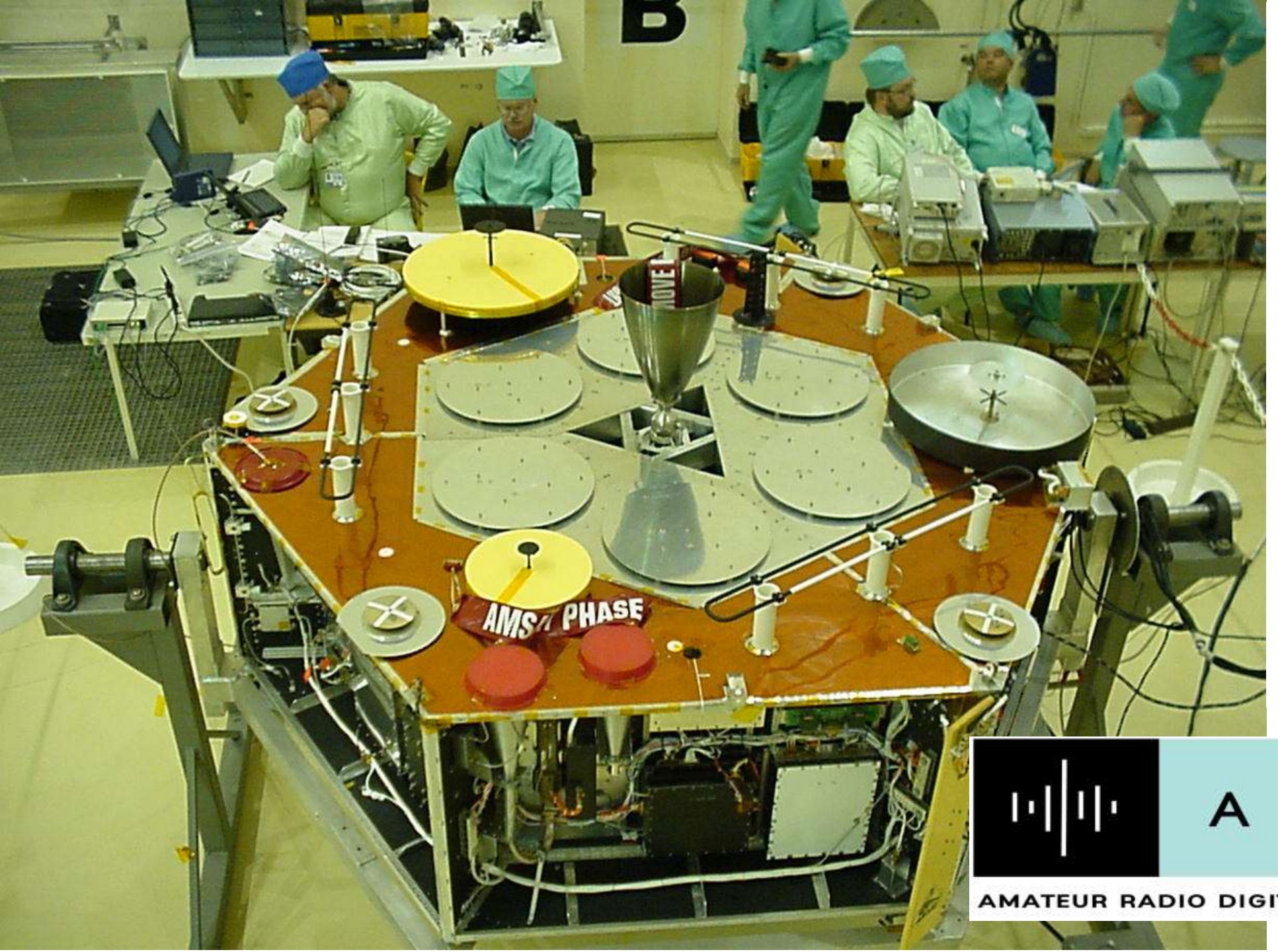

AR|DC and Satellites

AMSAT Symposium 2025

Jim White
WD0E

AR | DC
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Introduction

- What is the ARDC Foundation and what does it do
- Brief History
- Mission, Vision
- Strategies
- Priority Areas for Funding
- Space
- Funded Space Projects
- Summary and Questions

What is the AR|DC Foundation

- Private foundation that provides grants to Amateur Radio (AR) and|or Digital Communication (DC) projects that
  - Promote Learning
  - Promote Experimenting
  - Promote Doing
- Manages 44Net
  - A block of about 12 million IP addresses starting with 44 that are dedicated to amateur radio
- Grants about $3 to $5 million a year to AR | DC projects

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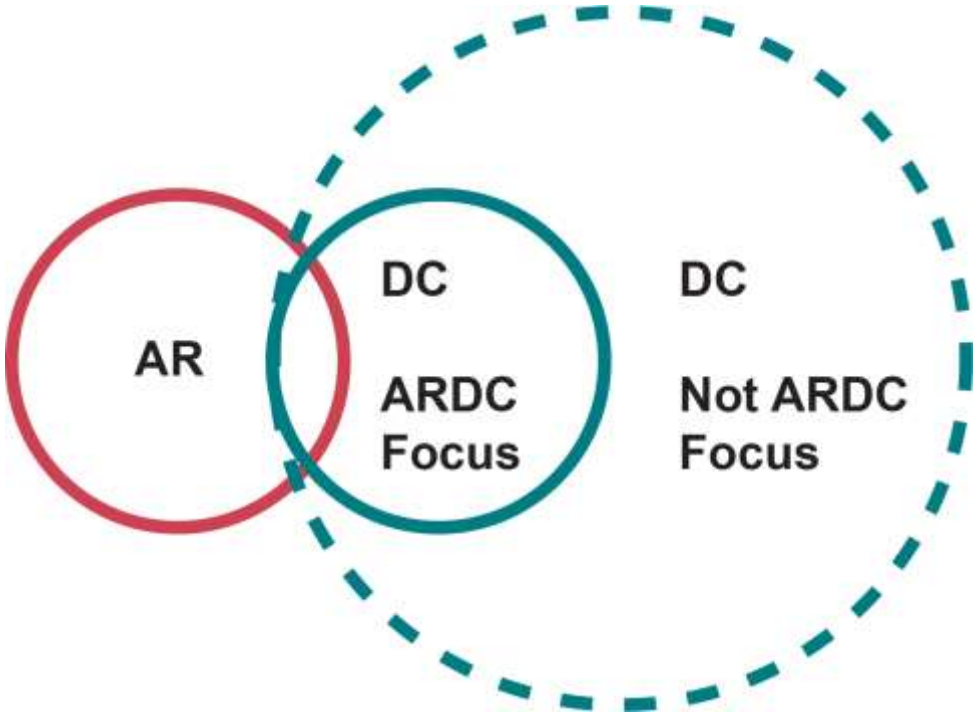

Amateur Radio

OR

Digital Communications

Either or both

A Brief History of ARDC Foundation

- 1981 Hank Manguski K6AM and 44Net / AMPRNet
- 2011: Formation of ARDC to be trustee of the 44Net address space by Brian Kantor WB6CYT
- 2019: Sale of IPv4 addresses and creation of endowment to fund ARDC operations and grants
- 2019: Sudden passing of WB6CYT
- 2020: Building a staff to manage operations including grants that technology
- 2019 – 2024: 315 grants, ~$30M distributed. >94k people directly impacted
- 2024: 198 proposals submitted, 59 were funded, ~$3.0M distributed

Mission

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.

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High-Level Strategies

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We also care about…

- ✓ No gatekeeper technologies
- ✓ Broad impact (open, shareable, leverageable) vs. serving a single group
- ✓ Not likely to be funded by other sources
- ✓ Not just wireless

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Priority Areas for Funding

- **R&D:** Low-cost, open solutions – e.g. codecs, SDR transmitters, modulation techniques.
- **Open Source Education:** Filling gaps in AR & DC resources – e.g. curricula, videos, hands-on projects.
- **Space-Based Comms:** New or enhanced sat comms tech – e.g. GEO or HEO programs, repurposed commercial sats, space-based tools for learning.

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Areas of Interest in Space

- **Geostationary and highly elliptical orbit (HEO) satellites:** The foundation supports projects that develop and deploy these types of satellites. HEO and geostationary satellites offer higher bandwidth, greater availability, and a wider geographic footprint than the more common Low Earth Orbit (LEO) satellites

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Areas of Interest in Space

- **Repurposing existing commercial satellites:** ARDC is interested in projects that use underutilized capacity on commercial satellites for amateur radio or digital communications. This includes encouraging the addition of amateur radio payloads on future commercial launches.
- **Educational initiatives:** ARDC funds projects that use space-based communications to engage new communities in experimenting with wireless technology, supporting the development of relevant technical skills. For example, a grant to Amateur Radio on the International Space Station (ARISS) funded an educational project that creates wireless electronics kits for students

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Funded Space Projects

- Open Source VHF/UHF CubeSat Communication System
  - VHF/UHF radio from librecube.org in Germany
- Pathways to Space
  - Training/educating teachers with a STEM program including building a cubesat. Teachers in Space, Inc
- Modular CubeSat Radio
  - Develop an SRD based UHF/VHF cubesat radio. University of Victoria and consortium
- Slippers2Sat
  - Develop and build a 1U cubesat by students in rural Nepal. Space Foundation Nepal

Funded Space Projects

- Develop a 3U Open Source CubeSat Space Frame With Deployable Solar Panels
  - AMSAT-NA
- Democratization of Space via Opensource CubeSats
  - Build BIRDS-X cubesat with APRS, and ground terminal. Kyushu Institute of Technology
- Cubesat
  - 1 U cubesat for suborbital flights for STEM education and subsystem testing. Paradox Sonic Space Research Agency, India

How to Apply for a Grant

- Eligibility
  - Nonprofit, government agency, school or university, charities
  - Includes radio clubs that are a 501c3
  - Individuals if they partner with one of the above
  - International groups of the same type
  - Businesses or for-profit organizations are not eligible

- grants.ardc.net Then click Apply

- Grant application/award schedule is quarterly
  - Applications are filtered by staff
  - Go to the Grants Advisory Committee
  - The ARDC board reviews and does final approval

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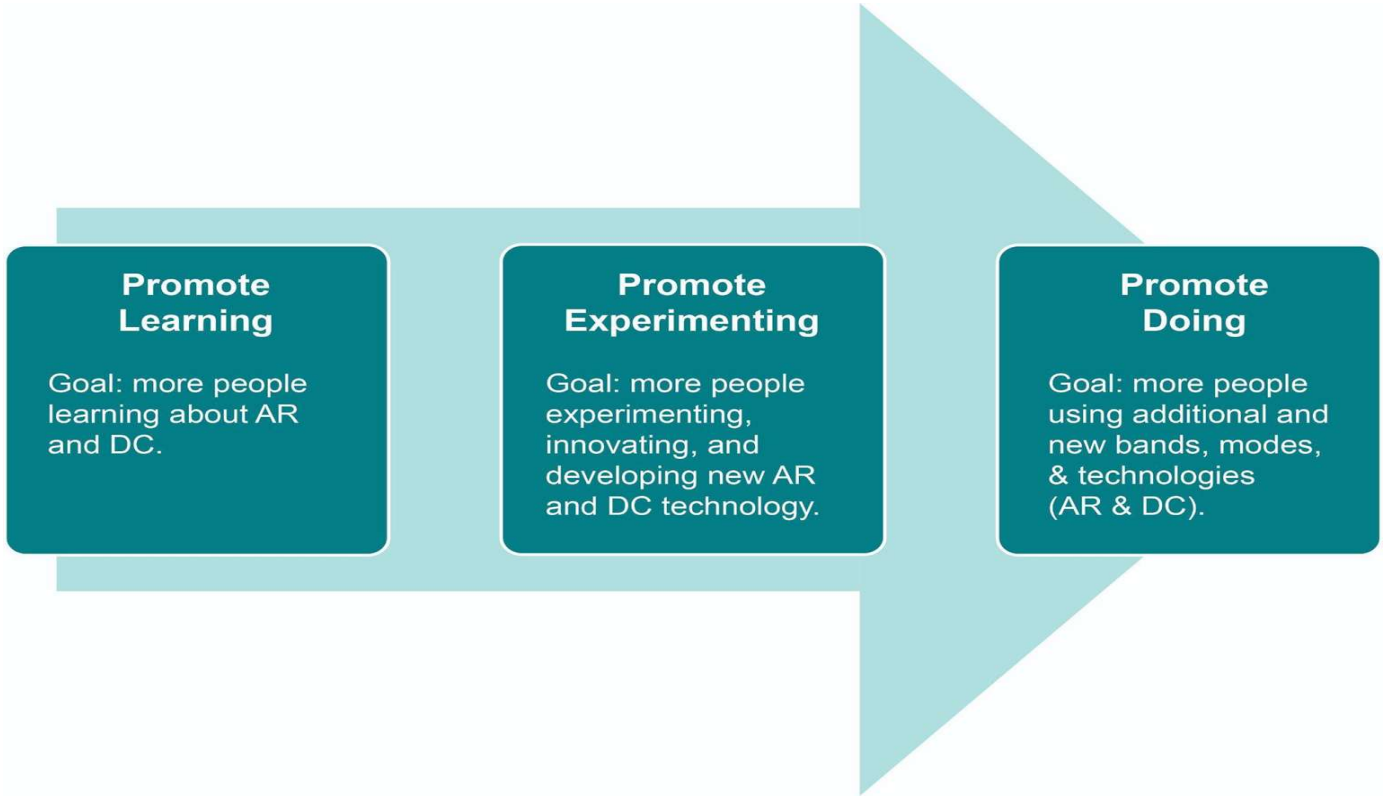
Contacts

- www.ardc.net
- General inquires: contact@ardc.net
- Grants email: giving@ardc.net
- 44Net inquiries: adam@ardc.net
- Reports: www.ardc.net/about/legal/ardc-finances/

ARDC is about providing funding for AR | DC projects



44 years of 44Net

Questions?

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