ARDC Community Meeting

16 July 2022
Agenda

• Welcome & Housekeeping
• Staffing Update
• Grants Update
• Hamfests and Conferences
• 44Net
  • Updates
  • Overview of survey results
  • Discussion

“Operation Hamulanche” (RDRF) at a middle school, Feb 2021
Housekeeping

- This session is being recorded
- Questions in the chat window please!
- All materials will be posted after the call
Staffing Updates

● Tim Požár
  From TAC volunteer to Technology Management Consultant

● Now Hiring Director of Technology
  In the interviewing stage

KC6GNJ
Grants Update - New in 2022

● New Review Process
  ○ Allows ARDC to evaluate more proposals
  ○ Compares similar projects

● New Web Pages
  ○ Updated instructions on applying
  ○ More concise/refined categories
  ○ Rundown on what happens after you get a grant
  ○ You can now leave us feedback anonymously
Grants Update - Overview

- **New grants!**
  - A total of 61 new projects
  - $5,632,889 awarded so far in 2022

- **2022 Request trends**
  - 86 proposals were received
  - We funded 56% of requests
Grants Update - Project Trends

- Would like to see more R&D proposals
- Still striving for more international projects

- Amateur radio to new audiences
- Increased capacity for established ham clubs
Grants Update

Growing Participation in Amateur Radio Direction Finding
Sangamon Valley Radio Club
$1,824
Grants Update

Why Ham Radio Matters
National Radio Astronomy Observatory
$315,123
Grants Update

Central Michigan Emergency Network
Mi6WAN Project
$250,945
Grants Update - What’s Next?

Upcoming Deadline:
You can apply any time, but applications submitted after October 1 will be reviewed in 2023

Hypha
New, open source grant application system
grants.ardc.net
Hamfests and Conferences

Hamcation, Orlando
Adam, KC7GDY
Dan, KB6NU
John, K7VE

Ham Radio, Friedrichshafen
Merideth, KK7BKI
John, K7VE
Leandro G5LSI
Hamfests and Conferences

Hamvention, Xenia
John, K7VE speaks with some visitors
Hamfests and Conferences

In the second half of 2022, come see us at:

● DEFCON 30, Las Vegas, NV, August 11-14, 2022

● HamXposition 2022, Marlboro, MA, August 26-28, 2022

● TAPR Digital Communications Conference (DCC), Charlotte, North Carolina, September 16-18, 2022

● GNU Radio Conference (GRCon22), Washington, DC, September 26-30, 2022
Technical Advisory Committee has been working on a technical requirements document for a new version of the Portal.
44Net Assessment

• Purpose is to detail the **current state** of 44Net as a starting point for **future visioning**

• Contract with **Two** for objective, professional research

• **Next steps** for assessment:
  • Additional quantitative data collection
  • Focus groups
  • Executive write-up presented to Board of Directors
    • Expected October 2022
44Net Assessment

• Released May 26

• **1766** total responses

• **Translated professionally** from English into German, French, and Japanese
Common Themes

• **Inconsistent regional coordinators**, both policies & response time vary

• **AMPRgw approach with IPIP mesh is challenging in the modern internet**; where CG-NAT is increasingly common and a single California PoP is a latency penalty for many users
Common Themes

• Applications (ie: web browsing, Jitsi video conference) are rapidly going to a trusted security model with encryption required & on-by-default; this makes operating an “encryption free” network difficult

• Need for offering RIR services, or at bare minimum, RPKI & reverse DNS delegation; participation in the global routing communities
What applications or services are you running on your 44Net prefix(es)?

<table>
<thead>
<tr>
<th>Service</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web, email (i.e. Winlink), chat,</td>
<td>255</td>
</tr>
<tr>
<td>Repeater infrastructure</td>
<td>236</td>
</tr>
<tr>
<td>Remote operation of station(s)</td>
<td>220</td>
</tr>
<tr>
<td>VoIP / RoIP</td>
<td>190</td>
</tr>
<tr>
<td>Software Defined Radio (SDR)</td>
<td>163</td>
</tr>
<tr>
<td>Internet of Things (IOT)</td>
<td>107</td>
</tr>
<tr>
<td>Emergency communications</td>
<td>127</td>
</tr>
<tr>
<td>Video streaming / conferencing</td>
<td>91</td>
</tr>
<tr>
<td>Mesh Networking</td>
<td>91</td>
</tr>
<tr>
<td>Other</td>
<td>68</td>
</tr>
</tbody>
</table>

Number of Respondents
Why were you unsuccessful using 44Net?

- Got IPv4 addresses somewhere else: 19
- The process was too technical: 24
- I never heard from my regional coordinator or another administrator: 35
- Lack of, or incorrect, documentation: 41
- Other: 49
- Lost interest / took too long: 52
“Make use of that address pool easier - move beyond just administering allocation. Just handing out IPs is only useful in a very small number of very specific use cases and circumstances - these don't apply to most people…”
“As a sysop/experimenter you need a counterpart/other station. It would be nice to have some kind of IP address book with used applications.”
“ARDC should delegate large subnets ( /16-/18 ) to other non-profits that are within other jurisdictions.”
“In my opinion global visibility of 44Net has been decreasing for years. I think ARDC should invest in creation of educational and operational materials for the possible uses of 44Net, in English and then translations to other local languages around the world.

Also establish some sort of "Academy" for different age groups that local clubs can follow and get new people interested in.”
Connections with Grants

Comment from Survey

Frustrations with the Linux AX.25 kernel

“Essentiell für HAMNET” / “Essential for HAMNET!”

Related Grant

Hire developers to create a stable implementation of the stack

Granted December 2021 to DARC

Expand and solidify infrastructure of the network.

Granted April 2021 to DARC
Q & A
What actions or support are critical to making 44Net more accessible?

Examples:

- Improved documentation
- Easier to use software (or a pre-configured router)
- Consistency with allocation process
- Hardware recommendations, documented use cases
What are examples of cool use cases of 44Net?

Examples:

- Experimental Autonomous System (AS)
- Remote licensing exams running on servers using 44Net
What did we not ask, but should?
Thank you!

Reach out any time: contact@ardc.net