

A New Generation of Ham Radio

Fun - Technology – Relationships

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Where are We Now?

- ◉ In transition...
- ◉ Previous versus emerging standards
- ◉ New “customer” requirements
- ◉ Online communities 24/7/365
- ◉ New activities, procedures, publications, goals

What is the Transition?

- ◉ SDR taking over the radio
- ◉ Digital modes are blossoming
- ◉ Massive amounts of processing
- ◉ Focus on systems and automation
- ◉ It's all about the community
- ◉ Antennas & propagation know-how will still rule
- ◉ What will the FCC allow?

Ham Radio 2.0

- ◉ Many different communities
- ◉ All levels of students
- ◉ Young adults and free-thinkers
- ◉ Public service, applications, systems
- ◉ Built on evolving technology
 - With the help of mentors
 - On top of basic radio know-how

Focus on Technology

- ◉ Arduino, R-Pi, PICaxe, FPGA – yikes!
- ◉ Hamnet – high-speed networking
- ◉ RBN, PSKReporter, WSPRnet – hybrids of Internet and radio
- ◉ SDR - from dongles to “real radios”
 - New UI = New mental model of radio
- ◉ Modes to deal with noise and low SNR
- ◉ Physical science and data

Out and About

- ◉ Mobile
- ◉ Portable
- ◉ Low power
- ◉ Remote control
- ◉ Stealth
- ◉ Clubs and “spaces”
- ◉ Shared systems



Out and About

- ◉ Mobile
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WGØAT – Goat Portable

Focus on Relationships

- ◉ Relationships hold us together
- ◉ Build a group
- ◉ Build a community
- ◉ Get together online and physically
 - Have fun together
- ◉ Sustain your community
- ◉ Interact with other communities

Don't Forget the Fun Part

- ◉ It can't all be about the code
- ◉ Celebrate innovation
- ◉ Drill holes in and break stuff
- ◉ Compete and compare
- ◉ Have parties, picnics, hikes, hamfests
- ◉ Use existing hamfests and conventions
- ◉ Pizza!

Fun Example - YOTA

- YOTA – Youngsters on the Air

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Fun Example - YOTA

- ◉ YOTA – Youngsters on the Air
- ◉ Ages 15-25, more or less
- ◉ Big presence in Europe, starting in Japan
- ◉ Special call signs
- ◉ In-person conventions (YOTA-2017)
- ◉ Operating events

Fun Example - CARI

- ◉ Collegiate Amateur Radio Initiative

Fun Example - CARI

Collegiate Amateur Radio Initiative



Fun Example - CARI

- ◉ Collegiate Amateur Radio Initiative
- ◉ Connecting the clubs on Facebook
- ◉ Sharing successes and suggestions
- ◉ Re-activating some long-dormant calls
- ◉ Clubs recruit and build on social media
- ◉ Possible competitions?

Fun Example - HamSCI

- ◉ Ham Science Citizen Investigation

Fun Example - HamSCI

◉ Ham Science Citizen Investigation



Fun Example - HamSCI

- ◉ Ham Science Citizen Investigation
- ◉ Organized around the solar eclipse
- ◉ Sponsored the Solar Eclipse QSO Party
- ◉ Undergrad, graduate, post-doc, faculty
- ◉ Now attracting Serious Scientists™
 - HAARP, Arecibo, Universities, ???
- ◉ Building an online community
- ◉ Sharing papers, posters, projects

Sustaining Critical Mass

- ◉ Sharing and cross-connections
 - Builds interest
 - Stimulates ideas and brainstorming
 - Attracts more people
- ◉ Evolve and grow
- ◉ Don't be isolated!
- ◉ Don't be afraid to change!

My Advice

- ◉ If it's legal – try it and publicize it
- ◉ Free from traditional FDMA planning
- ◉ Hybridize online immediately and widely
- ◉ Repurpose on-the-air events and activities
- ◉ Provide public service and information
- ◉ Soak up know-how from existing experts
- ◉ Ignore the trolls and grouches

“The future is here - it’s just not very evenly distributed.”

- William Gibson

“When I say the word ‘future’ the first syllable already belongs to the past.”

- Wislawa Szymborska

Go For It! – Q&A – Thank You