



Digital Radio & The Future

SAN BENITO AMATEUR RADIO ASSOCIATION FORUM

TIMOTHY S. TAKEUCHI - PRESENTING

Have you heard the questions?

- ▶ I have a cellular phone, why do I need amateur radio?
- ▶ My government recently got a new global emergency communication system (i.e. AT&T FirstNet, Verizon Frontline, Starlink) – Does Amateur Radio still have a role in emergency communications?

Think of analog comparisons

- ▶ We have wonderful commercial aircraft, but people hand glide
- ▶ We have speed boats, but people still go surfing
- ▶ We have plenty of houses, but people still enjoy building cabins
- ▶ We have variety of clothes, but people still sew their own
- ▶ Etc...

Emergency happen when things break

- ▶ No point in denying there are new high tech options. Companies and divisions of companies are build for that purpose
- ▶ But, if something goes wrong, who can we turn to for emergency options
- ▶ Probably true that voice communications is fading as the MAIN reason why amateur radio is needed during emergencies
- ▶ With more reliance on digital today, amateur radio operators can fill in for digital communications

New technology has two edges

- ▶ Good to do more and be more
- ▶ More opportunity to set up redundant and back up systems
- ▶ More likely to have more points of failure

Early in AT&T's FirstNet...

THE TENNESSEAN

Nationwide debate emerges on how to secure communication networks in wake of Nashville bombing

Meghan Mangrum and Donovan Slack USA TODAY NETWORK

Published 6:00 p.m. CT Dec. 31, 2020

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117 Photos

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Four days after the bombing on Christmas Day in downtown Nashville crippled cell service, internet and even key tools for law enforcement across a multi-state region, White County, Tennessee residents still struggled to get through to the county's emergency communications center.

Though the center's landlines worked and officials pushed out a non-emergency number via social media, the rural Tennessee county's 911 Emergency Director Suzi Haston said she remained shocked their wireless services were still out after the bombing damaged an AT&T building more than 90 miles away. Even farther away, in Alabama, the bombing forced first responders to use two-way radio and text messaging systems after the state's primary communications network for public safety workers, FirstNet, was disrupted.

Back at home...

POLICE / FIRE



Early morning fire damages homeless camps, communication lines

Published 04/02/2021 BenitoLink Reporter, Noe Magaña

Email this Article

Cause is under investigation; damage assessment needed for San Juan Road bridge.



HFD Battalion Chief Charlie Bedolla speaking with Hollister Mayor Ignacio Velazquez at the site of an early morning fire on April 2. Photo by Noe Magaña.

Rene Rodriguez Photography

BenitoLink

San Benito County's News



Knowledge and Skill are our greatest assets

- ▶ How do things work? Amateur radio operators know!
- ▶ If we have to work outside the box, we have the skills
- ▶ Does amateur radio become a test bed to gain knowledge and do we help outside of amateur radio?

Why didn't we get called?

- ▶ Two things to keep in mind
 - ▶ We aren't first responders – we are second and third wave responders and if communications are operating properly, no need for us to be activated
 - ▶ We are volunteers – if the risk factor of the event is too high to involve volunteers, we won't be called

How many areas for digital in Amateur Radio are there?

- ▶ AMPRNet
- ▶ AMTOR
- ▶ APRS
- ▶ ATV
- ▶ C4FM
- ▶ Contestia
- ▶ D-Star
- ▶ DMR
- ▶ Echolink
- ▶ FT-4
- ▶ FT-8
- ▶ Fusion (Yaesu)
- ▶ IRLP
- ▶ JT-4
- ▶ JT-65
- ▶ JT-9
- ▶ Olivia
- ▶ P25
- ▶ PACTOR
- ▶ PSK125
- ▶ PSK31
- ▶ PSK63
- ▶ RTTY
- ▶ SSTV
- ▶ Winlink
- ▶ Winmor

...and many
more!

Best reasons to go Digital

- ▶ Emergency Communications:
 - ▶ Volunteer for ARES/RACES to help your community
 - ▶ Send word that you're OK
- ▶ Make contacts
 - ▶ Great equalizer – you don't have a large yard or high power gear. You can do more with digital than voice
 - ▶ Contesting
 - ▶ California QSO Party, Field Day, Winter Field Day, etc...
 - ▶ Worked all States, DXCC (DX Century Club)

Winlink great place to start

- ▶ Use your computer to connect via the internet
- ▶ Connect and send email with a VHF/UHF radio
 - ▶ May need a digital connection / modem/terminal node controller
- ▶ Move up to HF eventually and connect to Winlink nodes out of state or out of the country

Echolink / IRLP

- ▶ Echolink: Connect to other repeaters or ham radio operators with your computer or smart phone
- ▶ IRLP: Use a repeater to link to other repeaters

Suggestion

- ▶ Two of the most rewarding aspects of amateur radio in my opinion:
 1. Opportunity to help
 2. Learn new things

- ▶ Look out for opportunities to help
- ▶ Try to learn something new every break (summer/holidays), every year, whatever works. Set it a goal for yourself.



Thank You!

[HTTPS://SBCARA.ORG](https://SBCARA.ORG)