AREDN
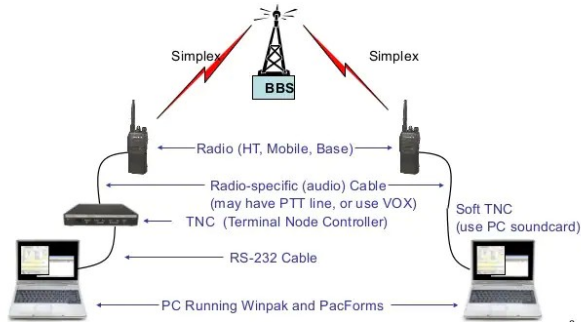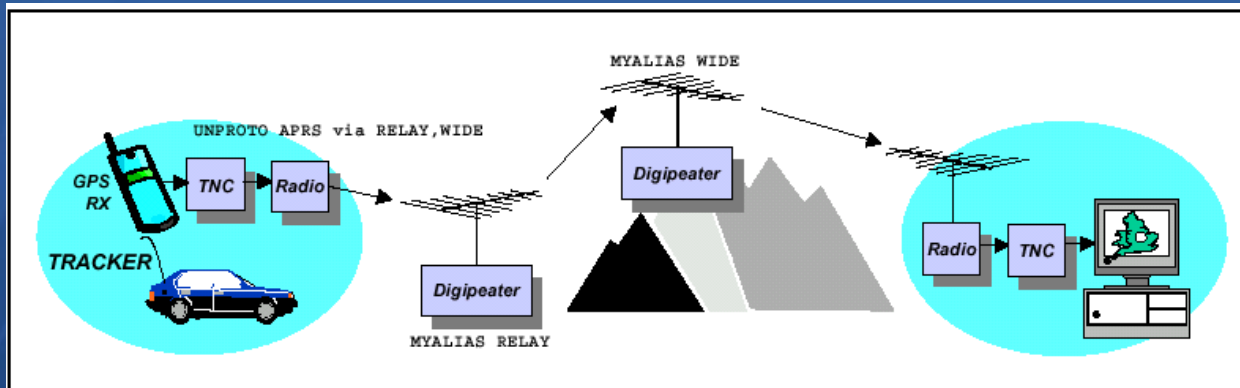
Amateur Radio Emergency Data Network
arednmesh.org

YES
OR
NO?

Tamiami Amateur Radio Club
September 8, 2021
KN4BAR, Paul

Packet Radio @1990s

- VHF usually

- 1200 baud

- Digipeaters to extend coverage

- Has morphed into Winlink, Pactor, & VARA & HF
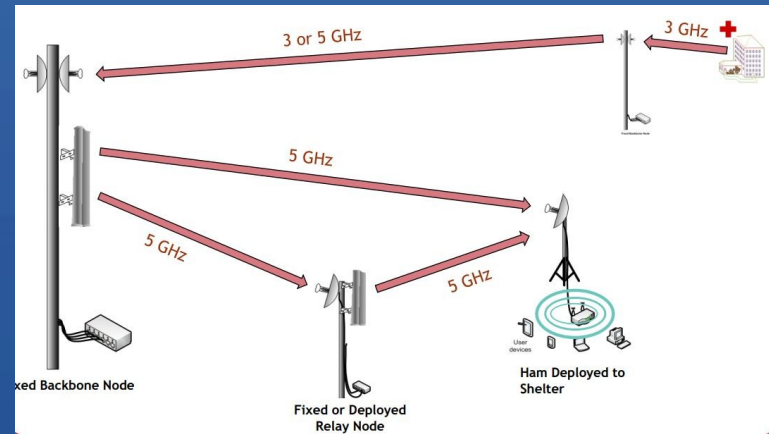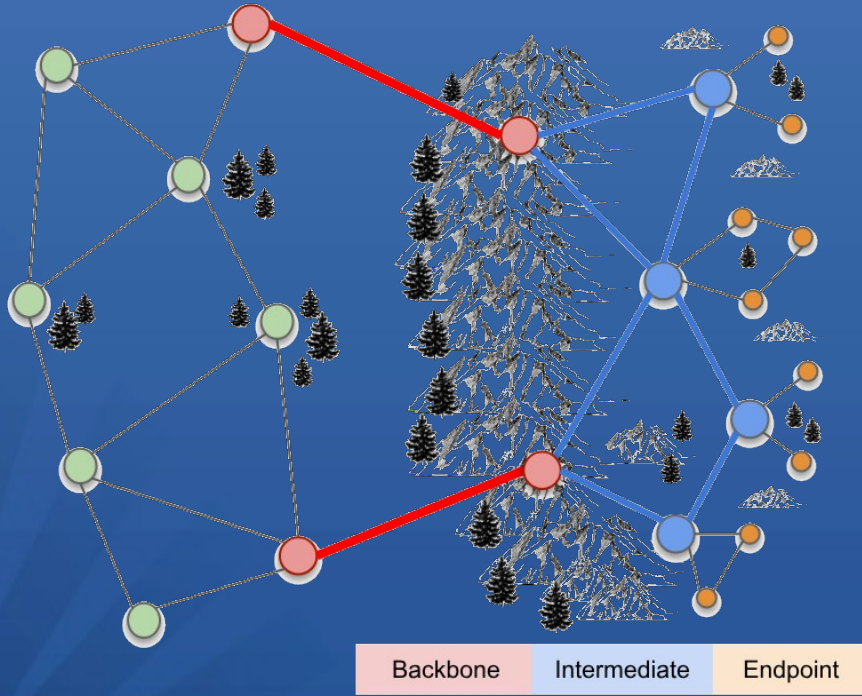
- Still Used @2020s

What is AREDN

high-speed ad hoc digital data network

for emergency and service oriented communications

- Data, VoiP, streaming video

- An RF Internet !

- 2.4 GHz – 2 ham channels

- 3.5 GHz – 24 ham channels. FCC ordered sunset on 10-8-20

- 5.8-5.9 GHz – FCC has proposed reduction in number of ham channels

- TCP/IP packet network at Mbps speeds!

- Uses off-the-shelf commercial wifi equipment with AREDN flashed firmware
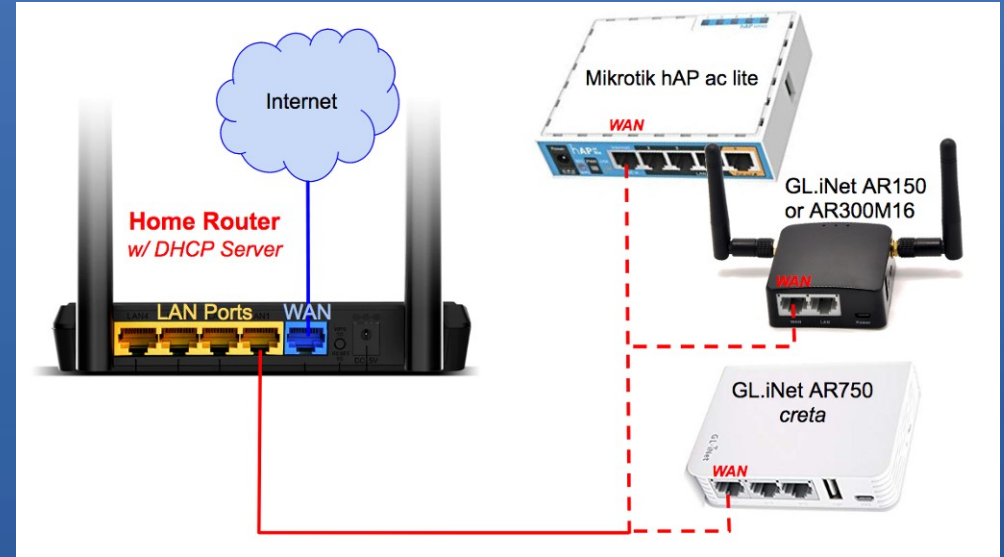
Mesh Topology

Line of Sight
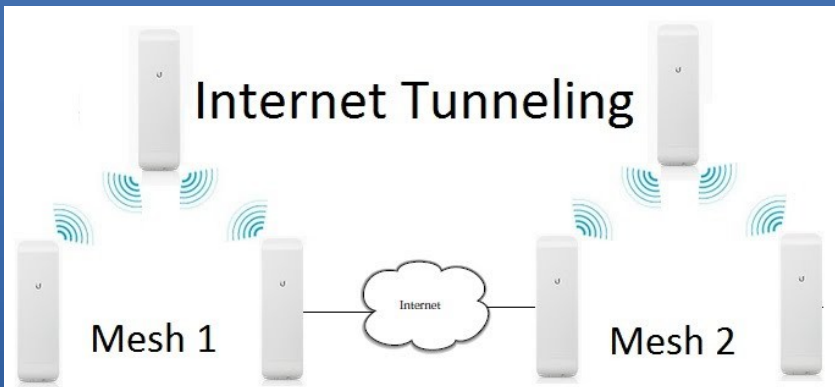

Two's Company

Trees a Crowd

Home QTH Station

Ubiquity NanoStation
2.4 GHz - <$100

Add AREDN Router/Smart Switch and expand to digital phone, streaming video, etc. etc.

Internet Tunneling
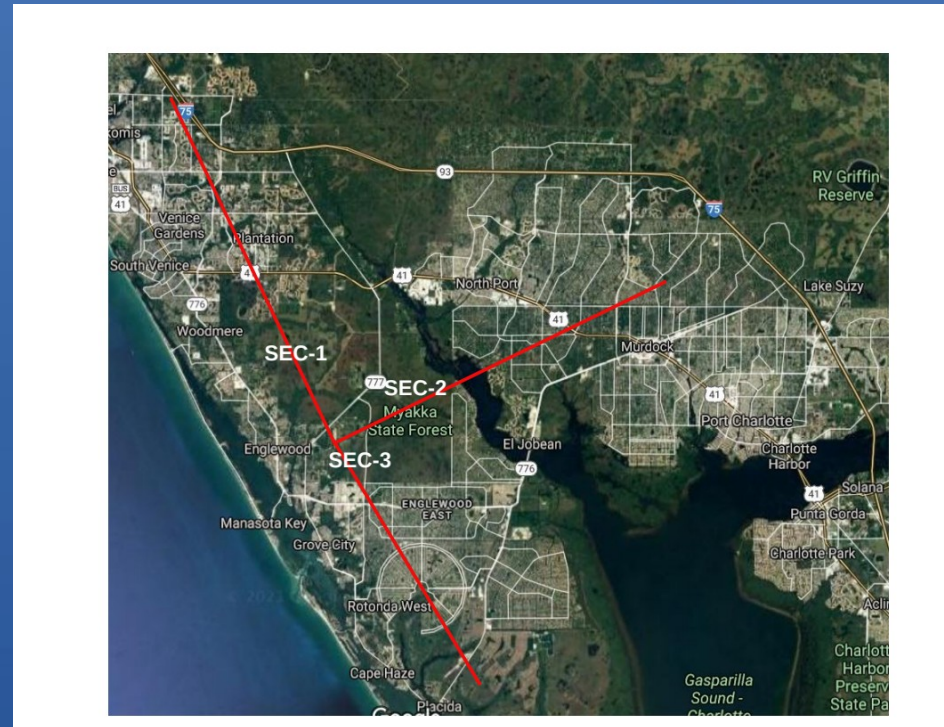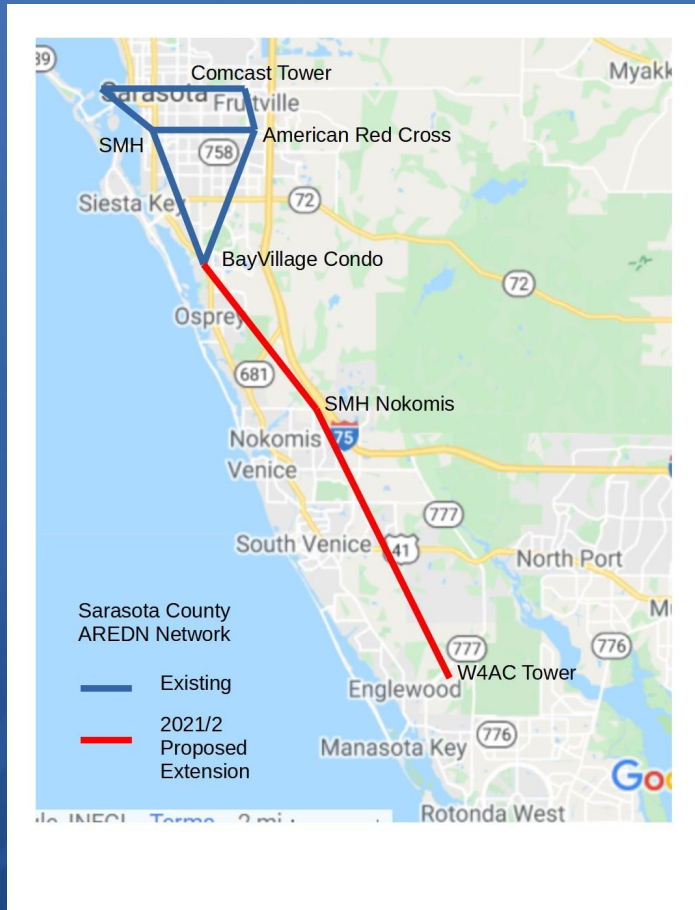

KN4BAR-HAP-ac-lite mesh status

Location: 27.04555 -82.34130
Microtik HAp ac lite RouterBoard Paul KN4BAR, 941-468-3843
paul9aber@gmail.com

[Refresh] [Auto] [Quit]

Local Hosts	Services		Current Neighbors	LQ	NLQ	TxMbps	Services
KN4BAR-HAP-ac-lite			KG4IYS-HAP-AC-LITE (tun)	100%	100%		
● Phone-x-2620-10-17-146-40			● Phone-X-2621-10-85-62-165				
			KN4BAR-NSM2 (dtd)	100%	100%		
Remote Nodes	ETX	Services	W8XG-XW-Home (tun)	100%	100%		
			● W8XG-Freepbx-NUC				
W8XG-GGP-NSM2-E60 (wan)	1.10						
● W8XG-Ebay64bitM64Sept18			**Previous Neighbors**				**When**
● W8XG-Phone-941-2655-10-163-137-135-Main-Home							
● W8XG-freepbx			none				
● W8XG-BP-Surface							
W8XG-ROCKET-TUNNEL (tun*7,wan)	2.00		**OLSR Entries**				
WB9AYD-NSM2-1 (tun*2)	2.00						
● RC710-Remoterig			Total	106			
● WB9AYD-Phone-2680-10-208-20-202			Nodes	21			
W8XG-PHOENIX-SMH-LINK	2.00						
W2DEN-NOKOMIS-M2-N (tun*2)	2.00						
● W2DEN-Phone-Home-2260-10-209-196-12							
● W2DEN-Pi-WX		WX-Nokomis, Fl					
● W2DEN-Computer		NOAA POES					
W8XG-Office-XW (tun*3)	2.00						

Tunnel when node to node RF is not possible. Requires working Internet.

Why W4AC Tower?

W4AC Tower has key location for Englewood and points South

Cost / Benefit

- Cost: $1,719
  - 3 120-degree sector antennas
  - 1 360-degree omni antenna
  - 300 ft cat 6 cable
  - Netgear smart switch
  - Mounting hardware, etc.
- Benefit
  - Experiment with and use GHz data network
  - Contribute to build out of AREDN mesh network in Sarasota County