

# **2020 Annual EC Meeting**

**August 29, 2020**

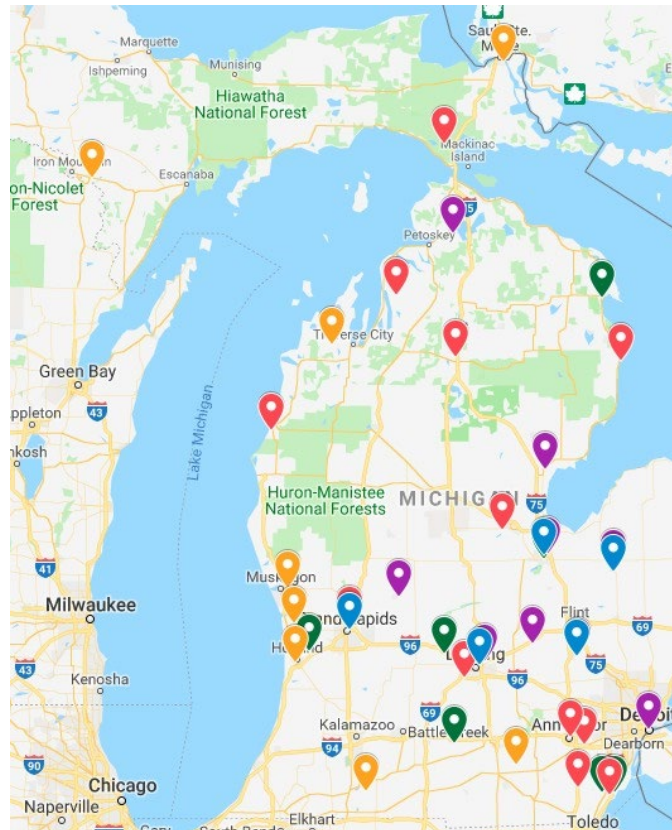
Jay Nugent WB8TKL  
Assistant Section Manager (ASM)  
for Digital Technologies

- 1982 – TAPR Beta Test Coordinator
- 1992 – Sysop for Hamgate.Washtenaw.AMPR.Org  
and Michigan AMPRnet IP Address Coordinator
- 2004 – Appointed by SM to organize DRG tasked to build  
Packet Network, coordinate D-Star, DMR, etc.
- 2007 - Appointed as an ASM for Digital Technologies



# Services on the Packet Networks:

- JNOS TCP/IP carrying SMTP Email, Telnet, FTP, HTTP, etc.
- NetROM or Telnet for Keyboard-to-Host communications
- CHAT & CONVerse conferencing systems
- RMS nodes (BPQ & JNOS) to reach Winlink CMS servers
- Nodes of all types are spread out all over the State



# Winlink:

- Winlink is predominantly RF for \*only\* the last mile
- RMS servers use the Internet to reach the CMS servers
- The CMS servers are all linked via the Internet & sync with one another to form duplicate mail queues
- Can do WL2K-to-WL2K direct connections and avoid all RMS/CMS servers (and the Internet)
- “VARA” modulation allows MUCH higher bitrate without \$costly\$ Pactor modems. Used on both HF and VHF.
- Mi7 network uses Mi6 microwave to reach their own POS (also linked to WL2K CMS servers). Traffic for addresses outside of Mi7 still use the Internet.
- BOTH the Mi7 and JNOS/AMPRnet nodes offer RMS

# CMEN Mi7 BPQ (NetROM) Network

- Supports NetROM and AX.25
- Many NetROM nodes in State can be reached, but not all
- Uses Mi6 microwave backbone to link nodes
- Mi6 network contains 5 “POS” Winlink mail servers
- JNOS uses IPNR to route IP over the NetROM networks



# JNOS

- **“Swiss Army Knife of Packet”** (runs on Linux/Pi)
- Does AX.25, NetROM, TCP/IP over AX.25, Winlink RMS, and APRS/Igate
- Supports SMTP, FTP, Telnet, HTTP, POP3, ICMP, SNMP, and typical BBS services – all over the air
- Uses AXIP or AXUDP links over foreign networks (Inet)
- Now supports RMS (must be registered w/WL2K)
- Easily connected with WiFi and other OTS equipment
- Interconnects easily with NPR and AREDN via TCP/IP
- Can do IPNR routes over the top of NetROM
- Download and compile, or available as “NOOBS/JNOS” on MicroSD card (\$4 at cost)

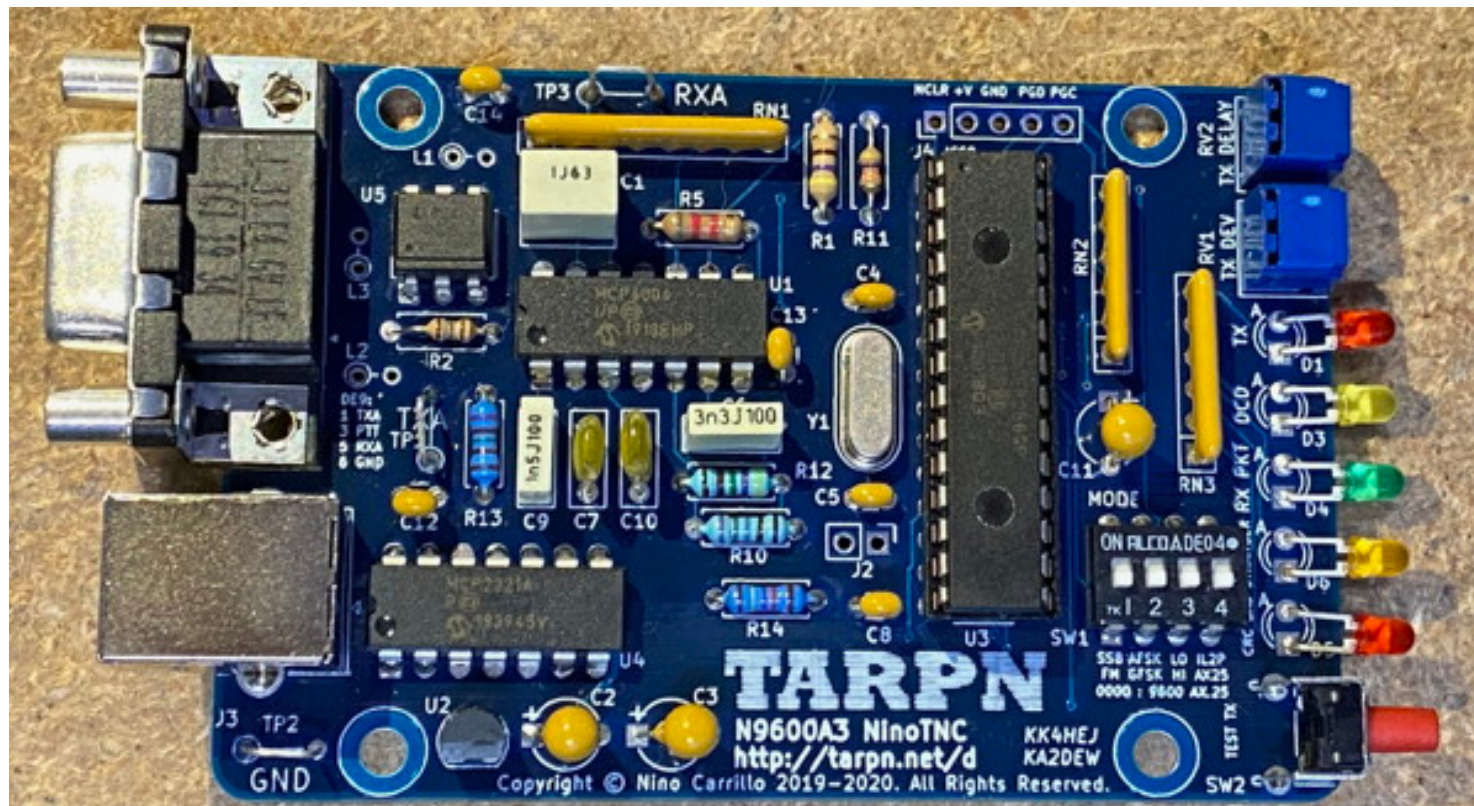


Coastal Chipworks **TNC-Pi** (\$40 kit)  
Works for either **LinBPQ** or **JNOS** Nodes  
....but sadly they have closed their doors....



# TARPN “NinoTNC” N9600A3(r3)

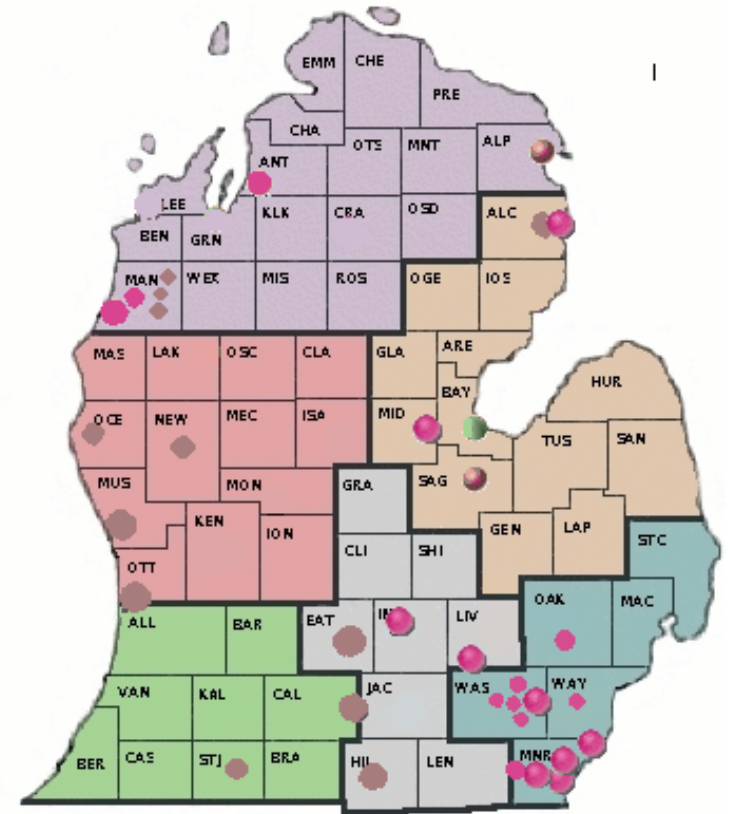
- 1200 baud (Bell 202) -or- 9600 baud (G3RUH)
- Conventional AX.25 -or- IL2P (Improved Layer 2 Protocol)
- USB interface to computer (KISS) // DE9 interface to radio
- \$7.57 for PCB+CPU from Etsy + ~\$25 parts through Digi-Key
- \$60 Built & Tested through Etsy
- More info available at <http://tarpn.net/d>





# With a Network you can do **ANYTHING** (Email, Winlink, files)

- RF footprint once covered 70% of LP
- Can reach ANYONE directly
- Routinely pass NTS Radiograms and Net Reports
- Hold weekly Nets on the CONVerse bridge
- Telnet <callsign|hostname>
- send WB8TKL@Hamgate.Washtenaw
- Soon we hope to add Max  
KE8DON.AMPR.ORG (44.102.200.??)



# What can *YOU* do ???

- Put up **BPQ** or **JNOS** nodes at your Home, Club Station, EOC, Hospital, Red Cross, repeater site
- At least do **NetROM** and link with neighboring communities (BPQ & JNOS do AXIP links via Inet)
- My preference is JNOS as it does **EVERYTHING!**
- See [www.DRG.org](http://www.DRG.org) website for more information
- Contact your DRG District Representative
- **!!!! DO SOMETHING !!!!**