W1WAB

APRS – Automatic Packet Reporting System

What is APRS?

Soundcards become TNCs
Getting started

Pinpoint Demo
APRS Droid Demo
Messages / Radiograms / Emails / Texts

What's APRS?

-- **real time digital information** communications in the local area.

Global Positioning System (GPS) Lat/Long coordinates,
weather station data, text messages, announcements

-- transmitted as a "**packet**" on a **single shared frequency**
repeated locally by area relay stations (digipeaters)

-- track **emergency response** teams, sporting events (bike races), hikers,
weather balloons, or personal reasons

What's a packet?

-- Information string (Lat/Long, speed, power, temp) with a from/to address --translated to an audible sound.

```
Rx: fm K2YYD-1 to APU25N-0 via W2AEE-0,NE2E-15,WIDE2-1
=4047.33N/07330.36W-Email K2YYD@arrl.net {UIV32N}

Rx: fm AC2NJ-15 to BEACON-0 via N3XKU-15,KA2RLM-15,NE2E
!3939.06NS07448.21W# AC2NJ Atlantic County R.A.C.E.S.
```

Who invented this??

1982- Bob Bruninga WB4APR (SK) develops Naval Vessel tracking on HF (CETS) using an Apple II

Converted in 1980s to first APRS visual map
WB4APR set up the APRS 'rules' – symbols, data

Process?

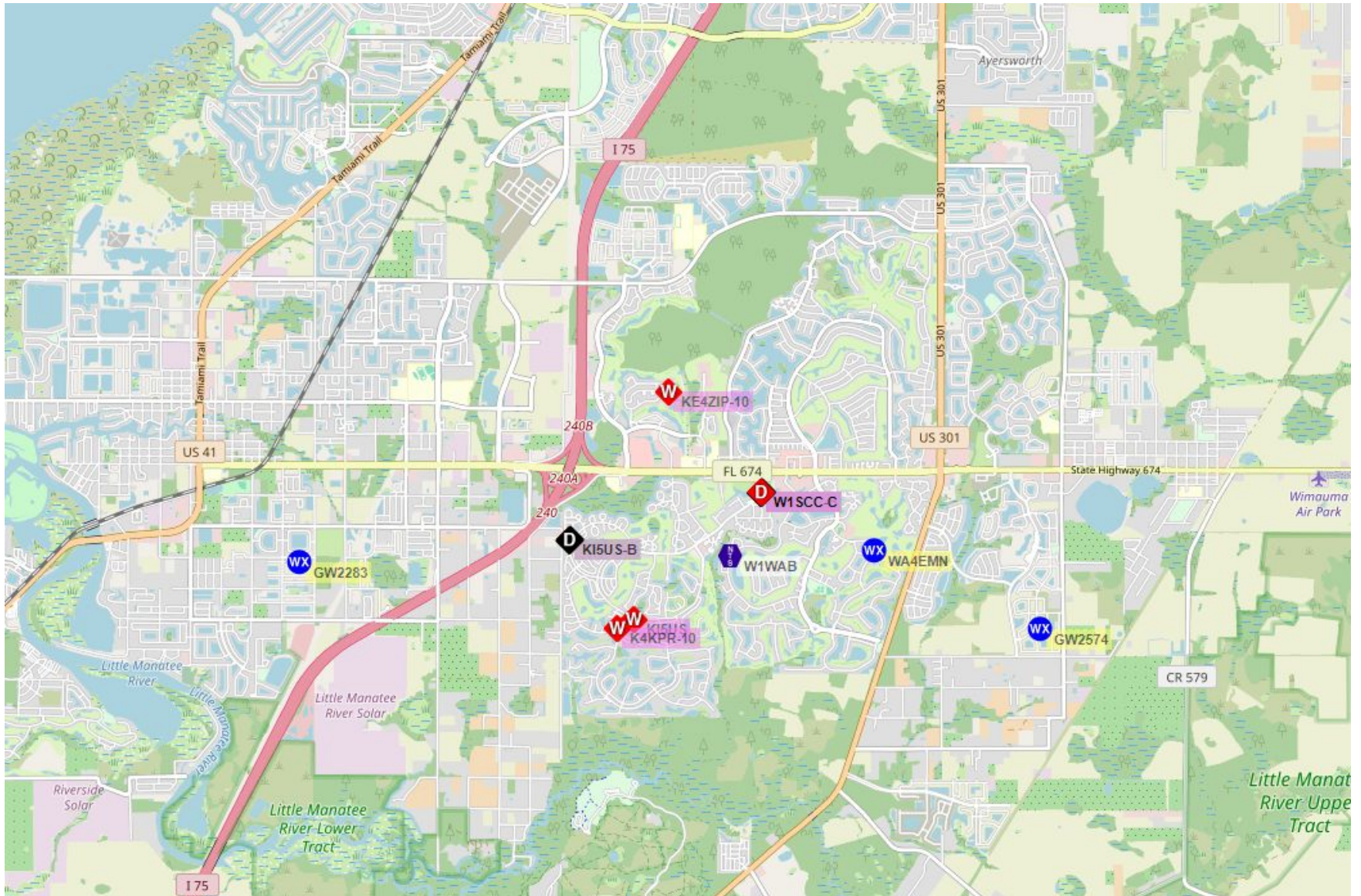**Radios connected to 'terminal node controllers' (TNC) … mini computers converting sounds to data packets**
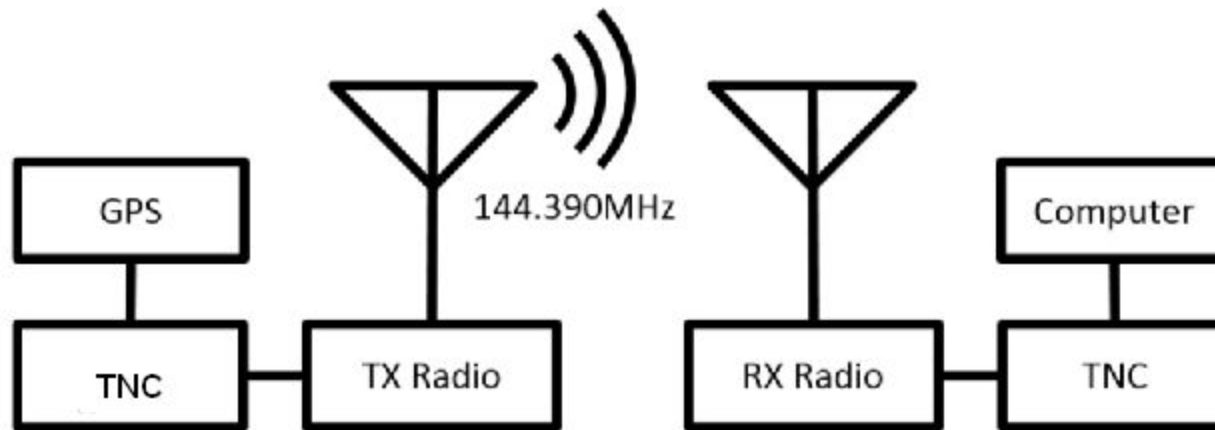
Fig. 2. Block diagram of example APRS System end to end [12]

Didn't take long for base stations to 'relay' received "packet" information to the internet (APRS-IS system)

On the Internet – aprs.fi

Equipment?

Equipment?

Equipment?

Equipment?

10 watt CERT tracker boxes

Soundcards as TNCs?

Obtain credentials?

Obtain your APRS Passcode

- https://apps.magicbug.co.uk/passcode/

APRS Passcode Generator

Important: Do not use fake callsigns to inject content into the APRS-IS network you will likely get banned.

Callsign [_____] [Get Passcode]

Technical Example of Passcode Generation using PHP

Source code available on Github

This tool was developed by Peter Goodhall 2M0SQL who also runs magicbug

Download Pinpoint

- https://www.pinpointaprs.com/
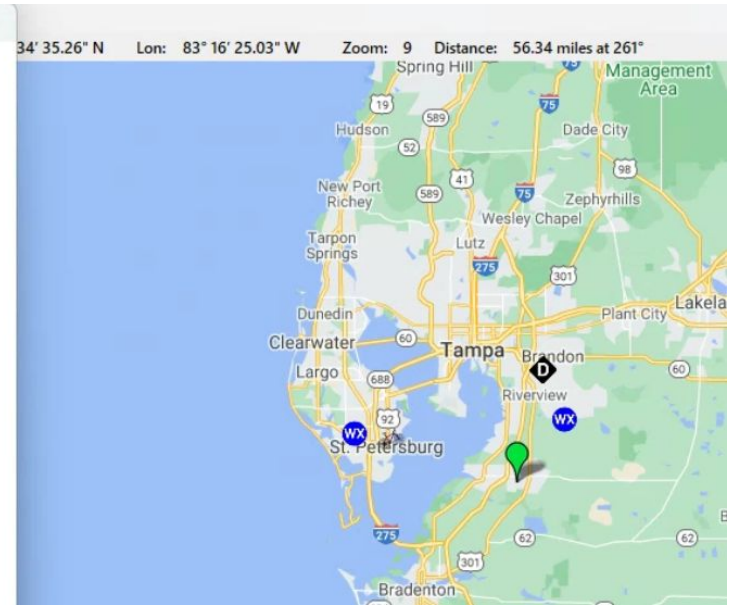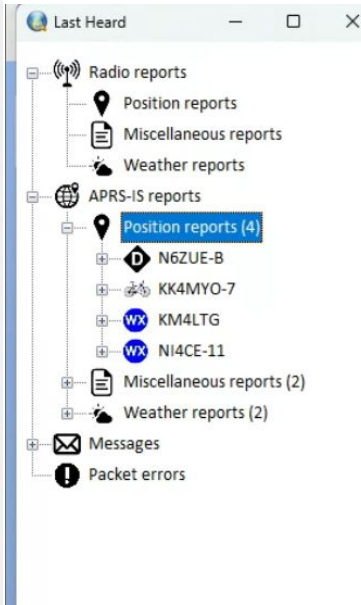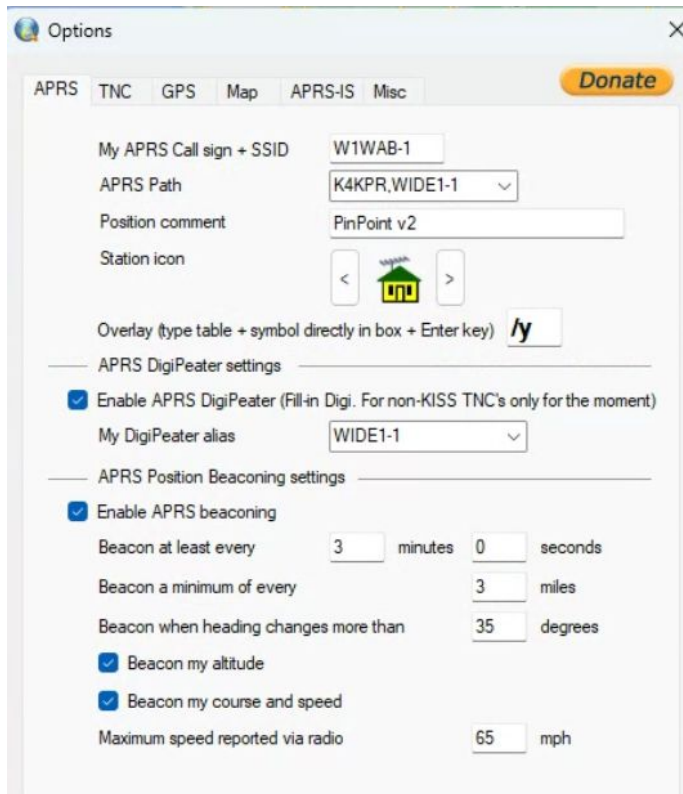
Cell phone? Try APRS Check-in or APRS Droid
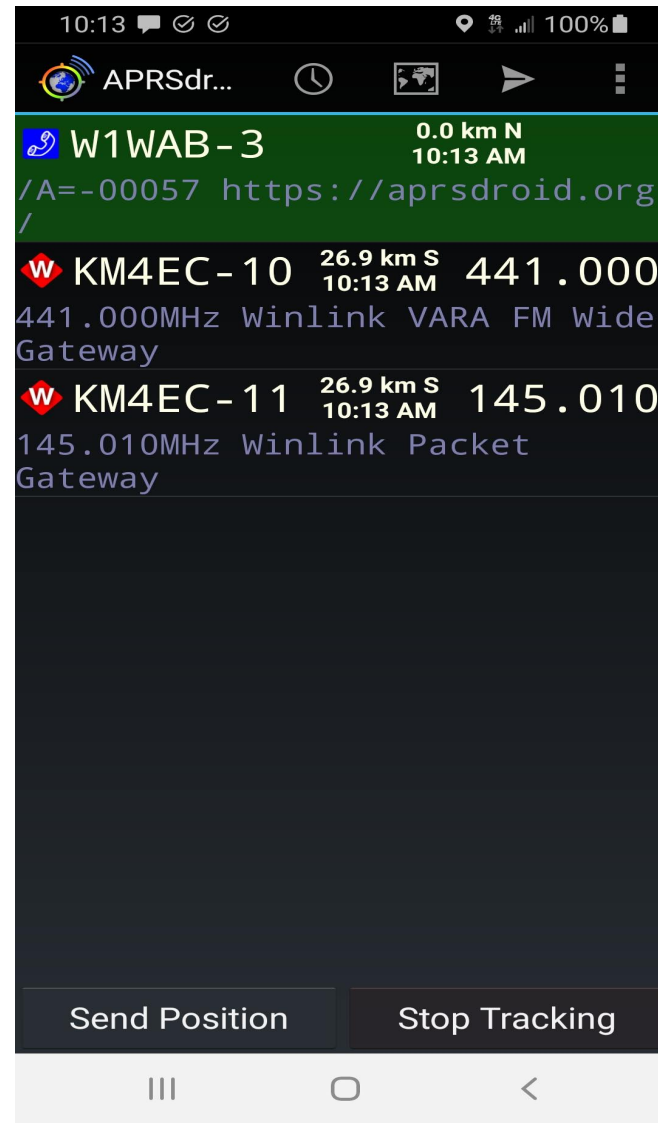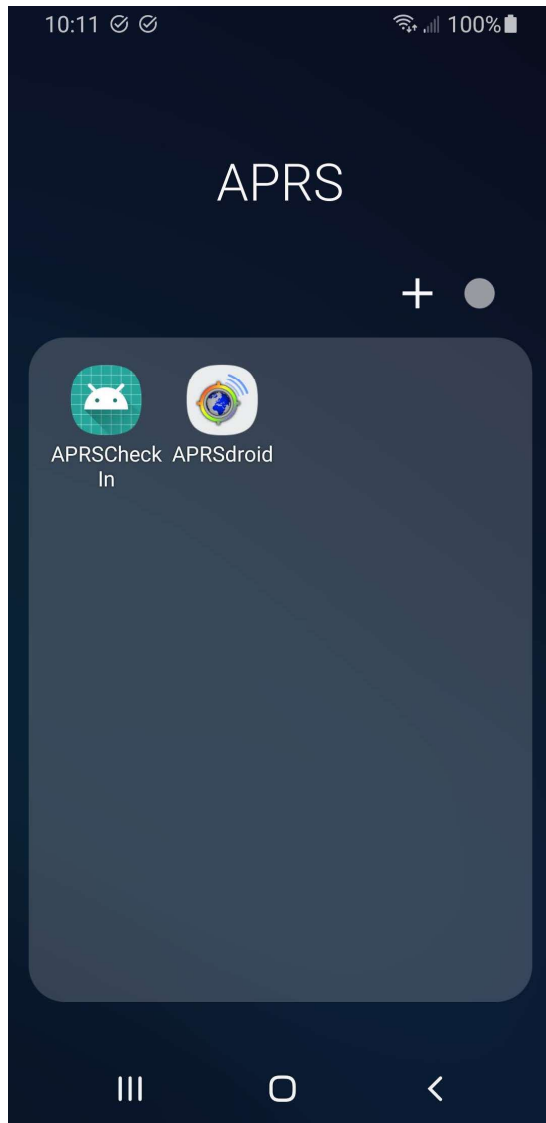
Different SSIDs used for each radio

APRS Droid Map / Messages

APRS Droid Map / Messages

Reply via findu.com

Other things to do with APRS

Messages

Texts to cell #

https://smsgte.org/ug-sending-messages/

Email   https://www.aprs-is.net/Email.aspx

NTS messages   https://nts2.arrl.org/ntsgte-an-aprs-nts-gateway/

(W1WAB-5 mailbox)

APRS

Questions?