A Great Ham Radio Tool!

By: W4JFS John Sherwood

About Me:

John Sherwood W4JFS.

aka “The Repeater Killer”.

General Class Amateur License Holder.

GMRS License Holder.

LWRA Member Since 2020.

About Me:

I enjoy 2m/70cm operation, APRS, POTA Activating and Hunting, Portable HF Operation.

Profession: Automotive Service Instructor.

Traviss Technical College in Lakeland.

Vice President of Polk Co Schools Radio Society

Callsign: W4PSR

What we will cover today:

What is APRS?

What are some uses of APRS?

How can I join the APRS community?

This is NOT a technical “how to” presentation.

What is APRS?

It’s a lot of things!

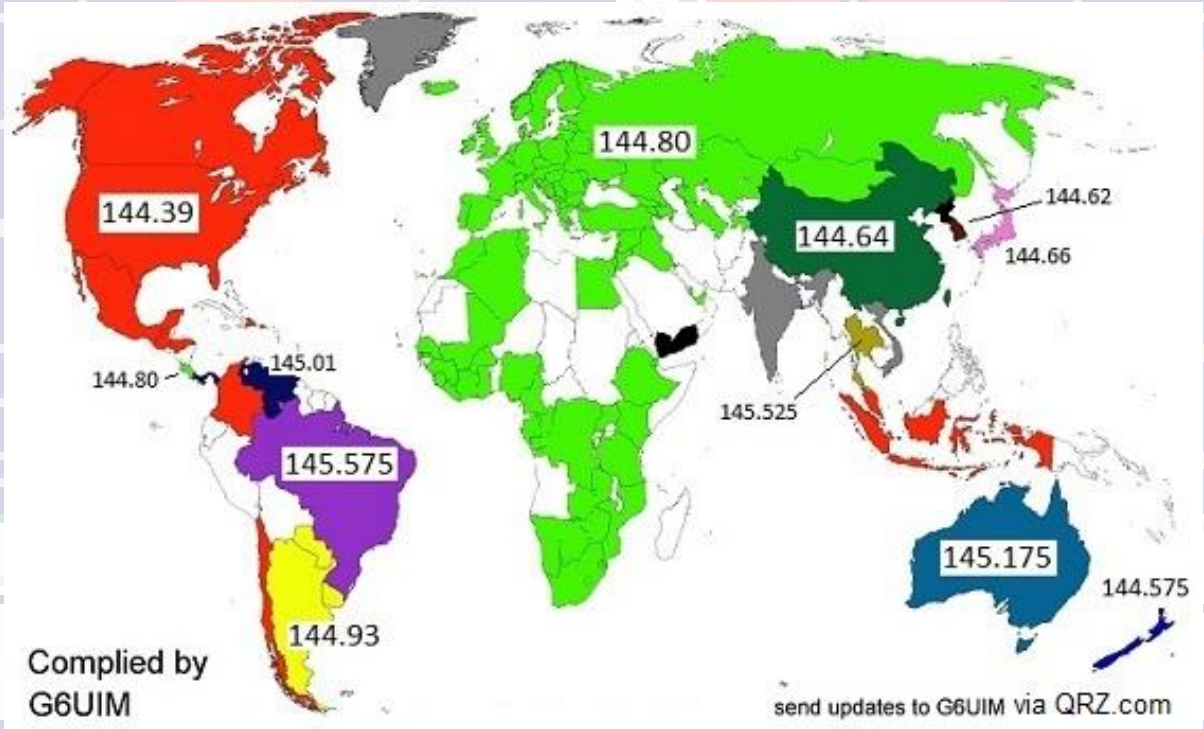
The basics:

The Automatic Packet Reporting System is an amateur radio-based system for real time tactical digital communications in the world.

Not Just For Tracking!

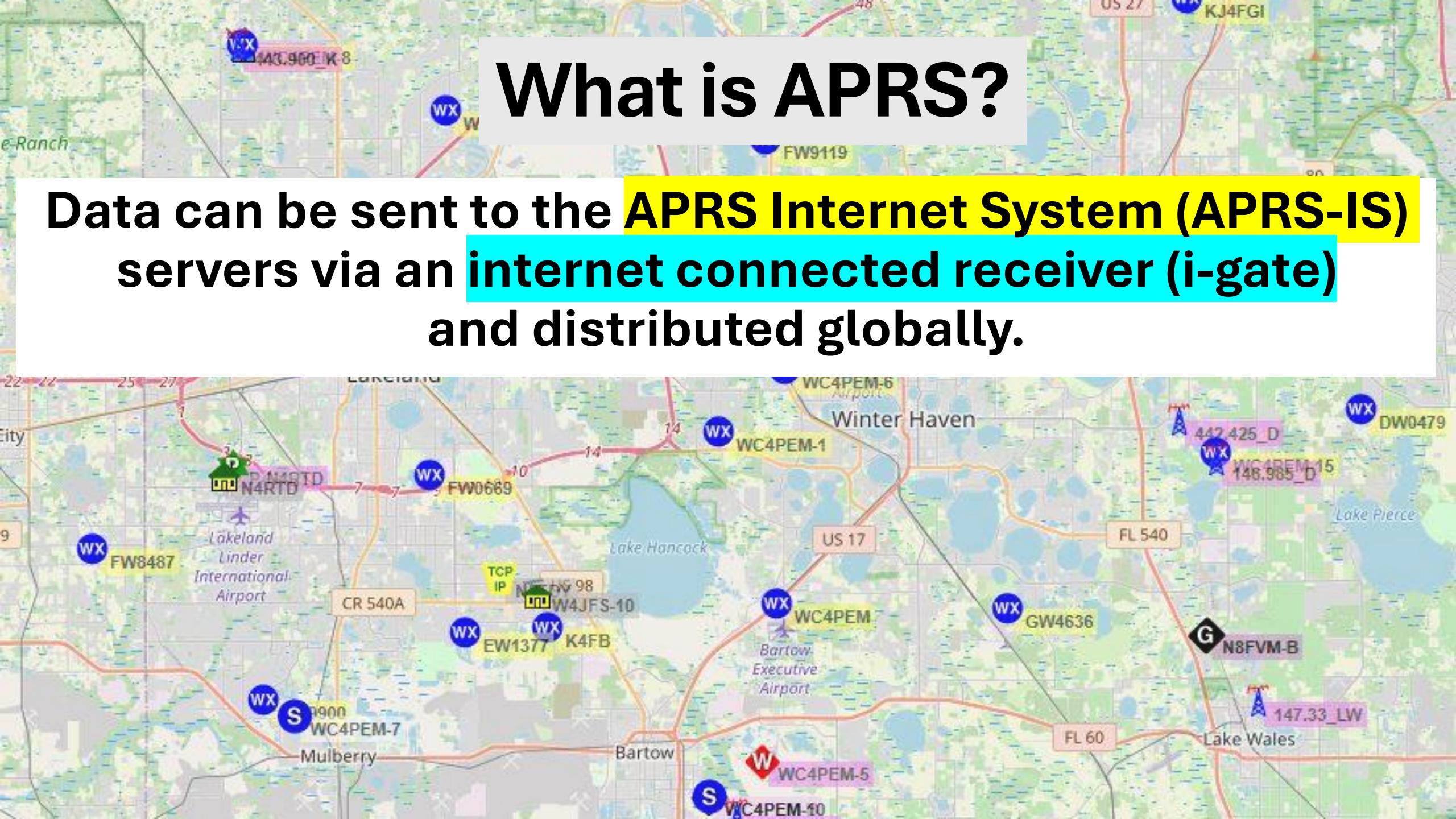
What is APRS?

APRS data is typically broadcast on a single shared frequency to be repeated locally by area relay stations and digipeaters.



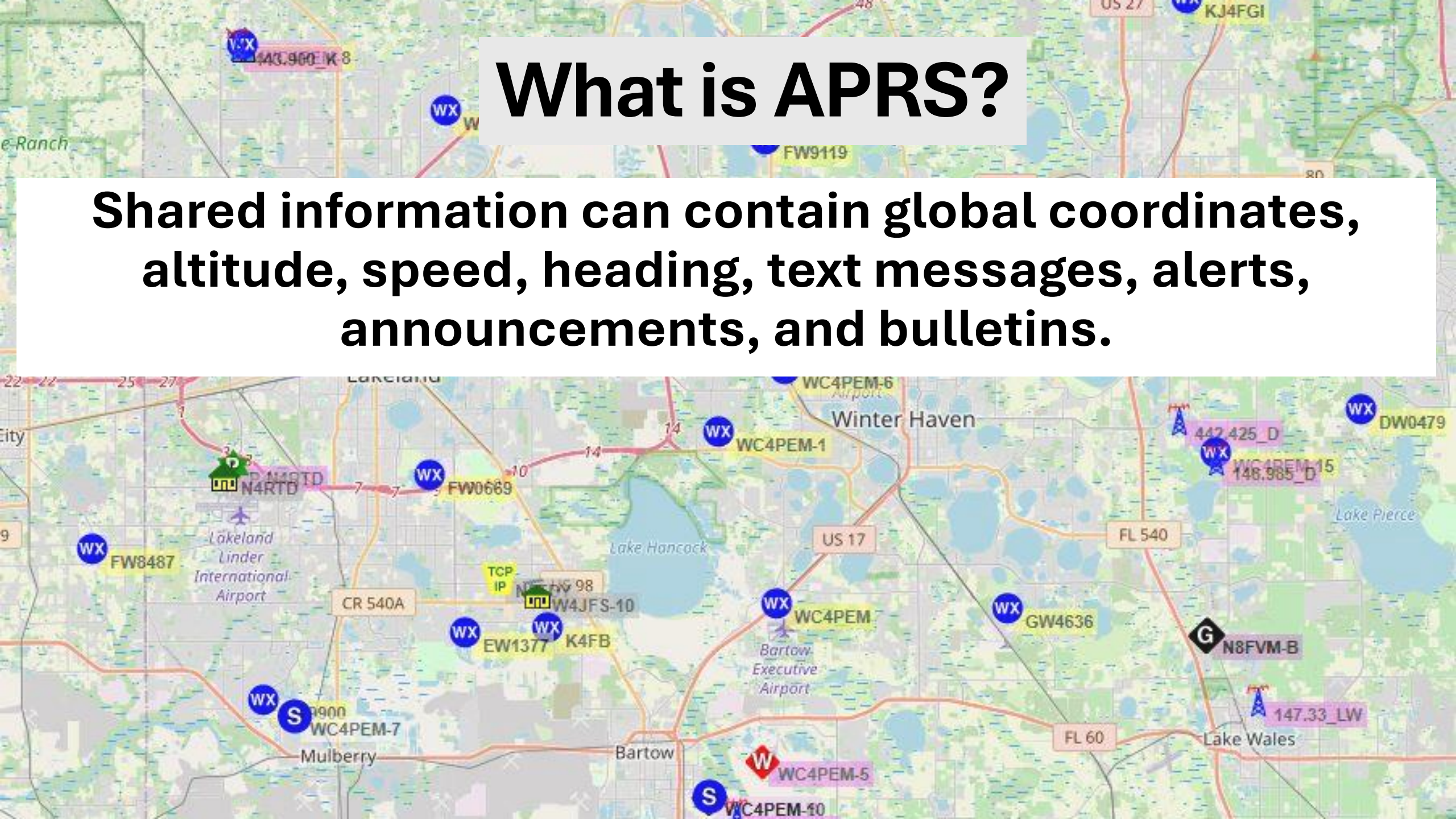
What is APRS?

Data can be sent to the APRS Internet System (APRS-IS) servers via an internet connected receiver (i-gate) and distributed globally.



What is APRS?

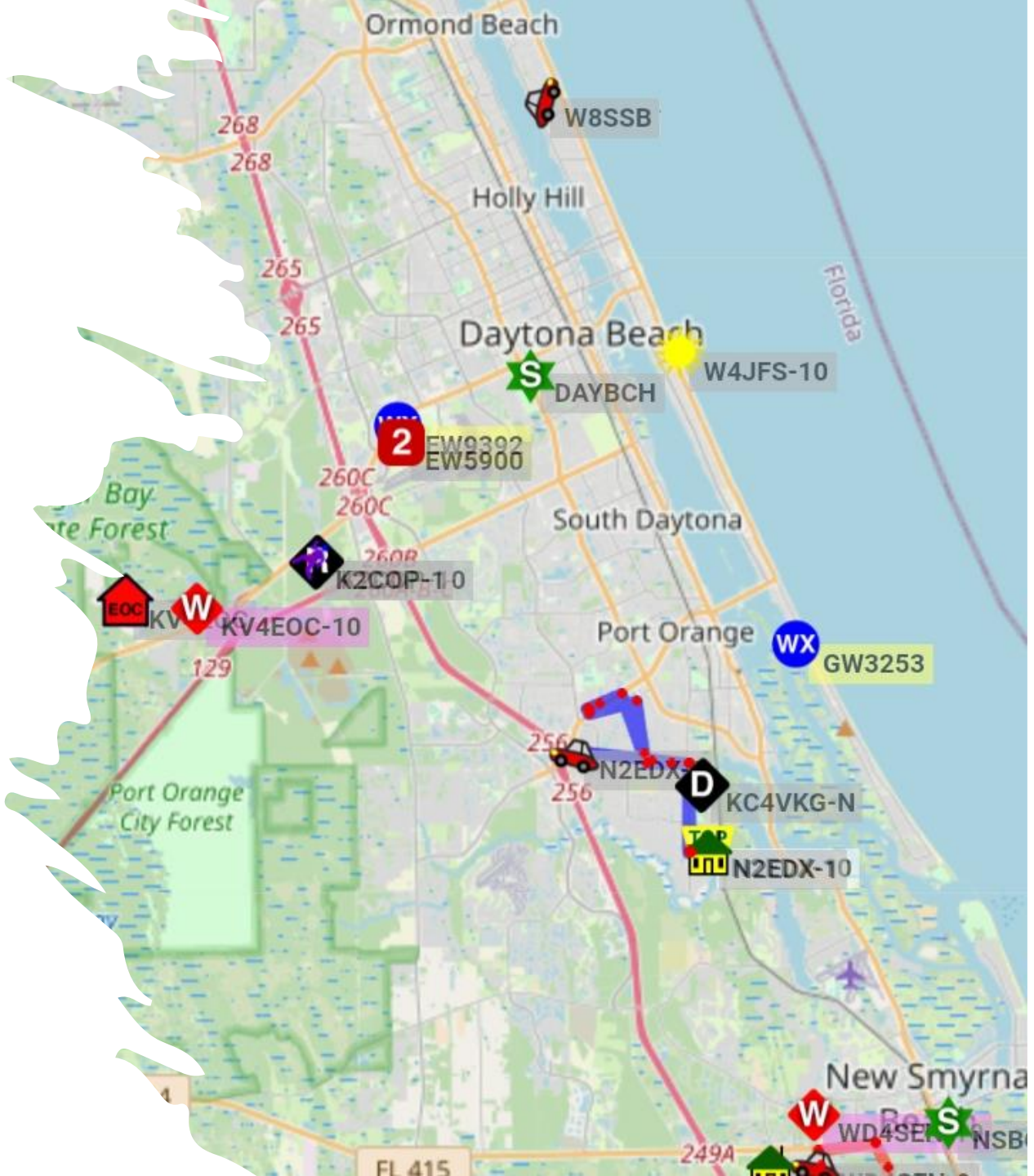
Shared information can contain global coordinates, altitude, speed, heading, text messages, alerts, announcements, and bulletins.



What are some uses of APRS?

Discovering what is in your area! (using www.aprs.fi)
Anyone can use this tool!

Let's Check it out!



What are some uses of APRS?

Messaging.

To other APRS Stations, Cell Phones, Email, satellites, and even the ISS!

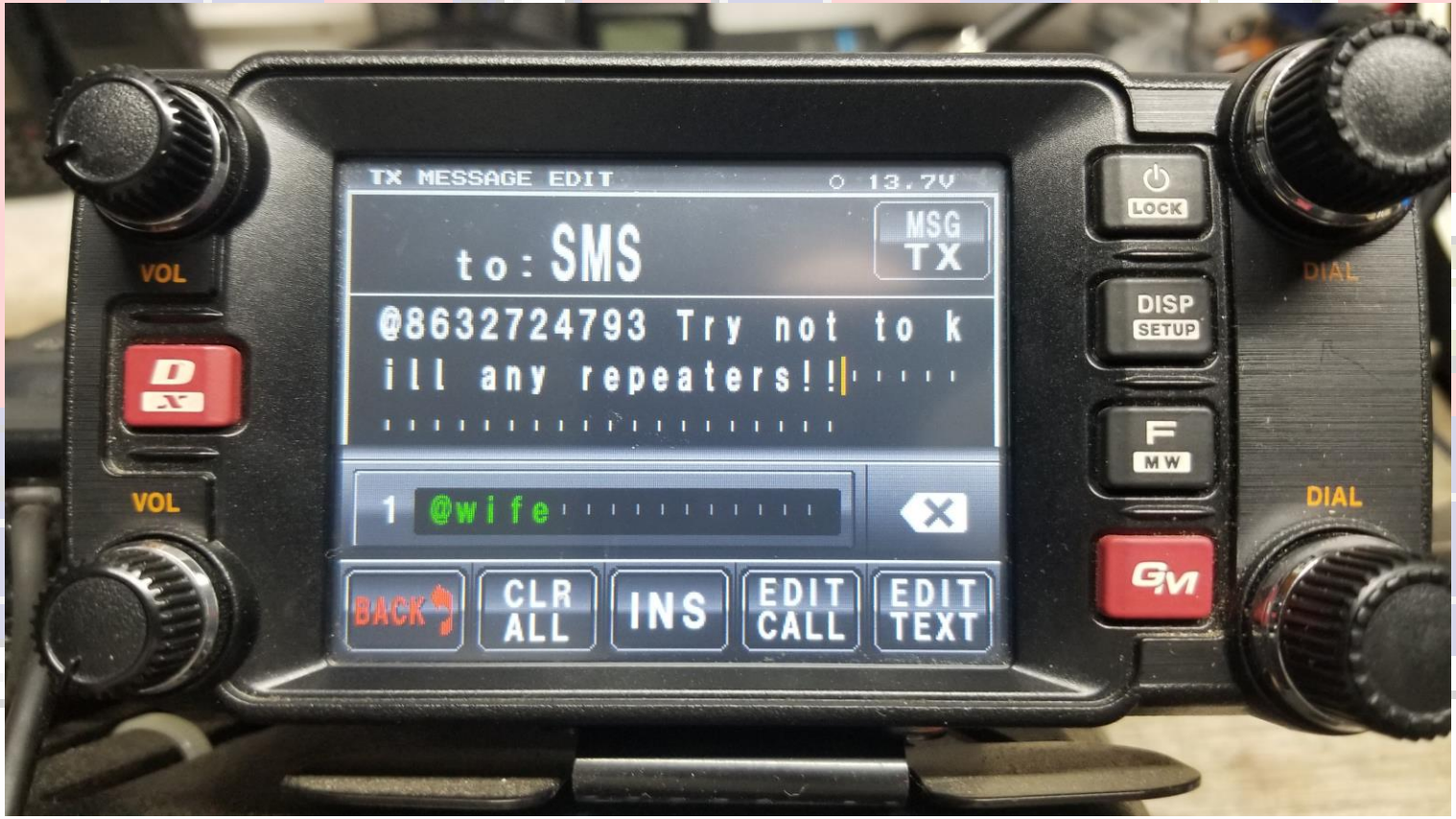
APRS messages are stored for 14 days. It is possible to search using wildcards (*?) after a prefix.

2023-12-16 17:22:25 EST: **KO4FRZ-10>N4RTD**: Hi Russ
2023-12-16 17:23:38 EST: **N4RTD>KO4FRZ-10**: Message feom FTM-400
2023-12-16 17:23:56 EST: **KO4FRZ-10>N4RTD**: Hi Russ
2023-12-16 17:24:37 EST: **N4RTD>KO4FRZ-10**: Message feom FTM-400
2023-12-16 17:25:56 EST: **KO4FRZ-10>N4RTD**: Hi Russ
2023-12-16 17:29:57 EST: **KO4FRZ-10>N4RTD**: Hi Russ
2023-12-16 17:37:57 EST: **KO4FRZ-10>N4RTD**: Hi Russ
2023-12-16 17:53:59 EST: **KO4FRZ-10>N4RTD**: Hi Russ
2023-12-21 16:26:38 EST: **N4RTD>W4JFS-10**: Hello John
2023-12-21 17:51:30 EST: **W4JFS-10>N4RTD**: Hello my friend.
2023-12-21 17:52:02 EST: **W4JFS-10>N4RTD**: Hello my friend.
2023-12-21 17:52:34 EST: **W4JFS-10>N4RTD**: Hello my friend.
2023-12-21 17:53:39 EST: **W4JFS-10>N4RTD**: Hello my friend.
2023-12-21 17:55:15 EST: **W4JFS-10>N4RTD**: Hello my friend.
2023-12-21 18:43:12 EST: **W4JFS-10>N4RTD**: Hello my friend.

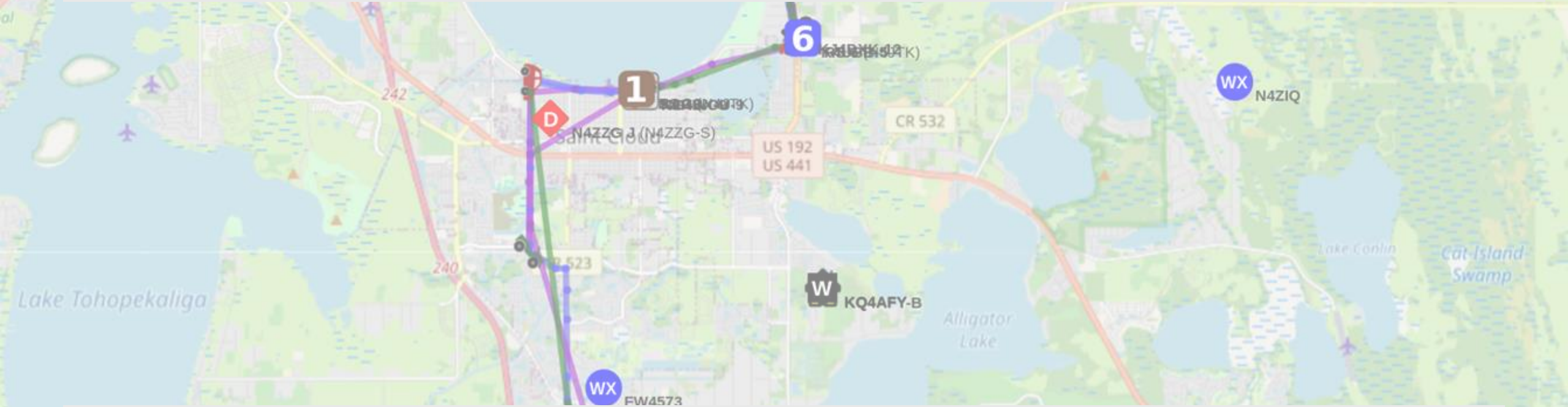
Messaging Example:

Send Text Messages to Cell Phones using SMS.

More info at: https://aprs.wiki/sms



What are some more uses of APRS?



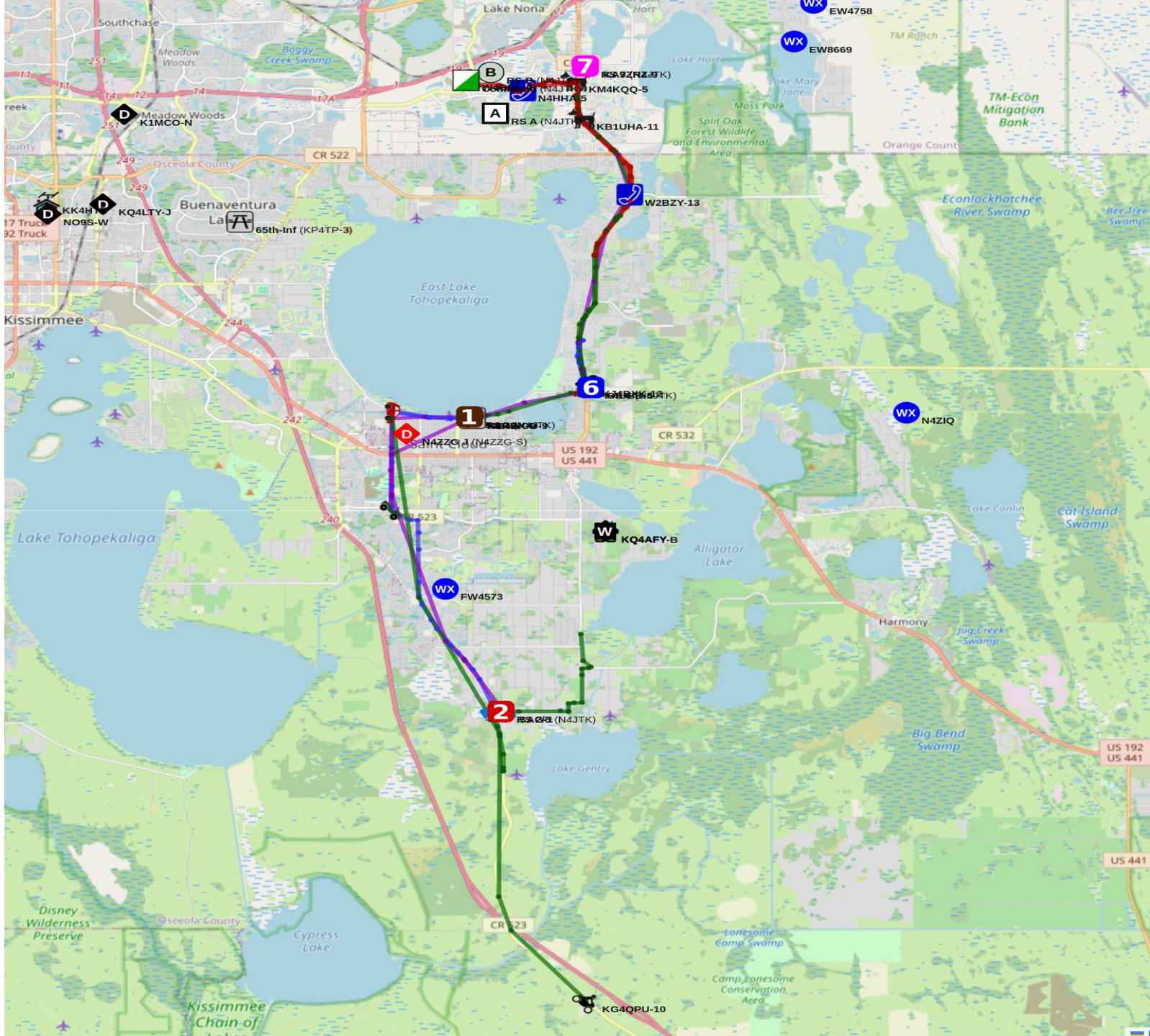
Coordinating Community or Emergency Events

ARES, CERT, Tour de Cure Bike Tour, Community Events, etc.

Tour de Cure

March 24th 2024

Net control or officials can track positions of assets.



Weather Forecasts via APRS.

You can get weather forecasts for your area or other locations using WXBOT.

This is useful in remote areas with APRS coverage but without cell or internet.

Some Commands Include:

today, tomorrow, or a day of the week,

zipcode or airport code.

WXBOT through messaging.

WXBOT through messaging.

Send a message to REPEAT
to find nearby repeaters when traveling.

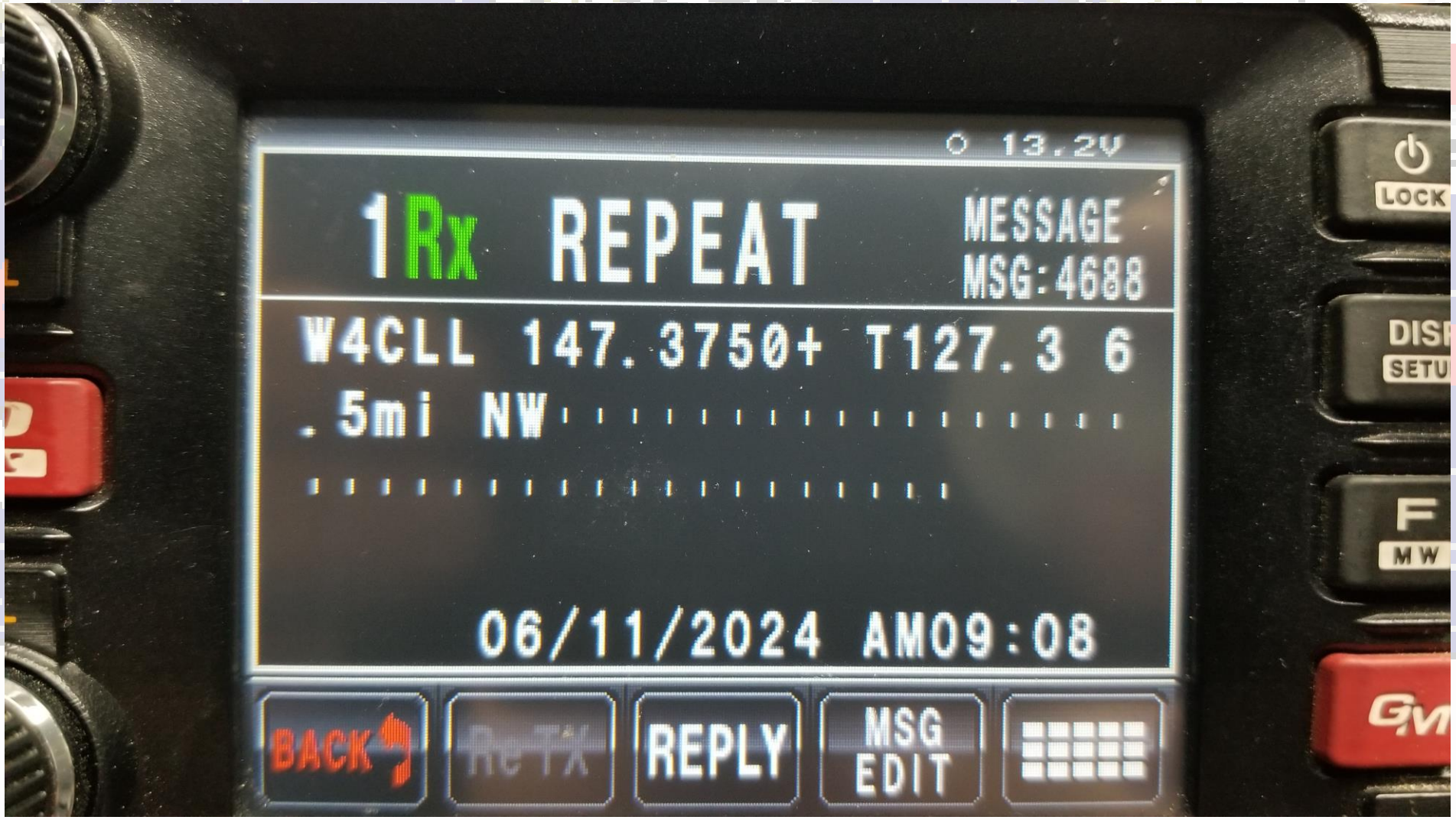
You can query for closest 2 meter, 70 cm, Echolink, D-Star, Wires-X, or DMR machines, and more!

A list of commands can be found at:

https://aprs-repeat.hemna.com

Using REPEAT Example.

REPEAT Example Return.



Another APRS Service called:

MPAD

Send a APRS message w/command to MPAD for info on:

Weather Reports in several ways.

Nearest Repeaters to you in different modes.

Send a one-way email to share your location with someone.

Your location & closest city, grid, & GPS coord in several formats.

Closest grocery store, police, hospital, bank, gas station, pharmacy, pub/bar, electronics store & lots more!

Search web for MPAD Github site for more commands!

Make APRS Contacts Worldwide!

Through APRS Thursday Net!

#APRSTHURSDAY Weekly Net

Join us every Thursday for the weekly #APRSTHURSDAY worldwide APRS net.

Every Thursday, an APRS net is conducted to encourage use of APRS, allow an opportunity to learn more about its characteristics, and make a few new contacts. The net is open to any and every properly licensed amateur operator anywhere in the world.

The net is conducted using the Announcement Server service provided by KJ4ERJ. Below is an example of the simple ONE STEP process to check in using a Yaesu FT5D (the format would be the same on any other APRS capable radio too). Once checked in, you will receive all APRS net traffic from stations checking in for the following 24 hour period.

When:
- Every Thursday from 00:00 to 23:35 UTC.

Where:
- The HOTG Group on the Announcement Server (ANSRVR).

How:
- One step Process shown in example on to the right and outlined below.
- Send to Station: ANSRVR
- Message: cq hotg [space] your message text

Who:
- All properly licensed amateur operators anywhere in the world.

Why:
- Learn a new, or enhance an old skill
- Better understand the characteristics of APR
- Make new contacts from around the world
- Learn from like-minded individuals
- Why not - it's fun

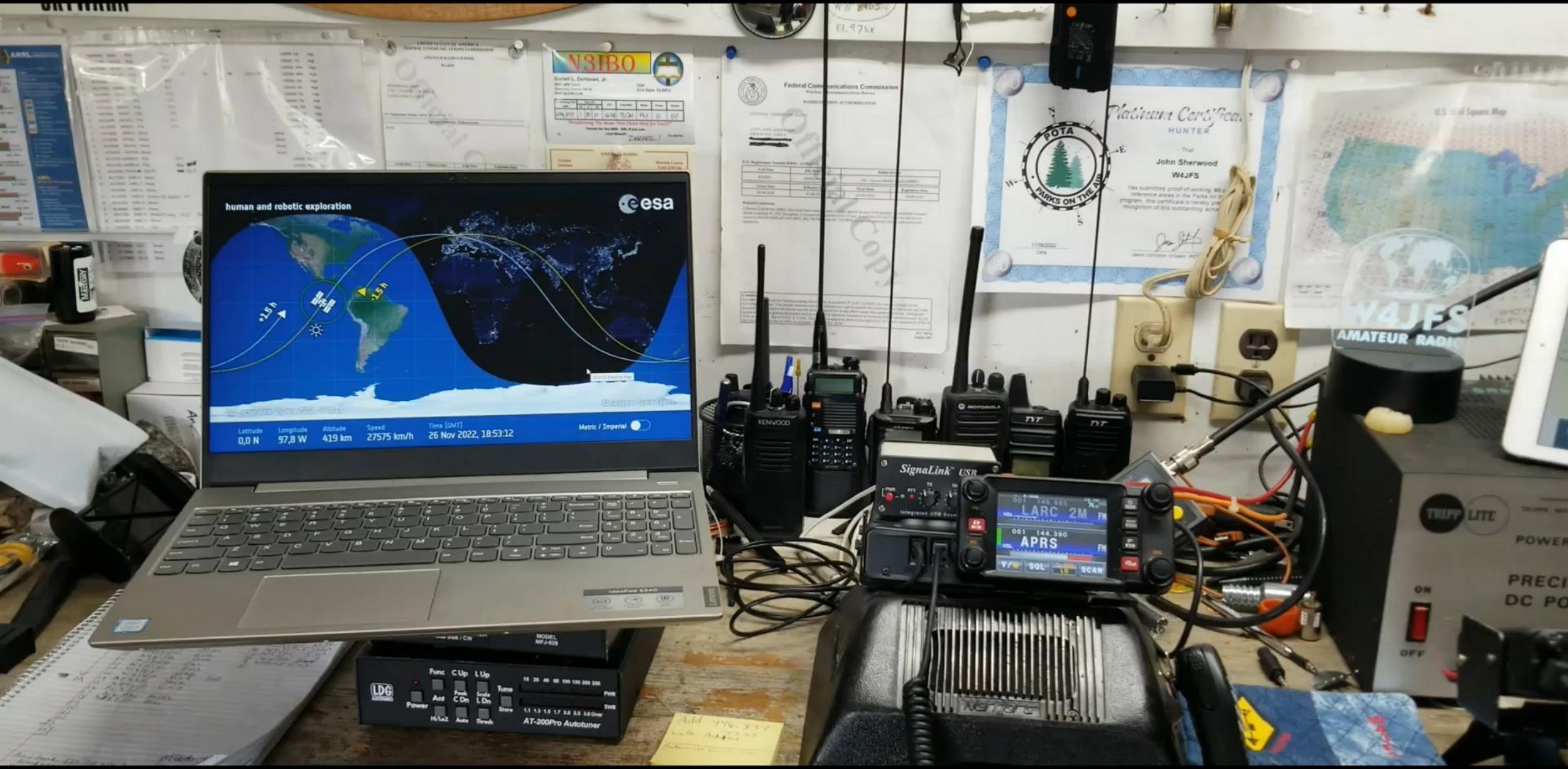
Checkins will be tabulated and shared the following day (Friday).

Looking For A Challenge?

Make Contacts Through the ISS Digipeater.

There Are APRS Satellites Too.

PSAT/PSAT2


human and robotic exploration
esa
+1.5 h
-1.5 h
Latitude
0,0 N
Longitude
97,8 W
Altitude
419 km
Speed
27575 km/h
Time [GMT]
26 Nov 2022, 18:53:12
Metric / Imperial
N3IBO
Federal Communications Commission
Platinum Certificate
HUNTER
John Sherwood
W4JFS
POTA
PARKS ON THE AIR
W4JFS
AMATEUR RADIO
KENWOOD
SignaLink USB
LARC 2M
APRS
SQL
SCAN
LDG
Power
Ant
Func
C Up
L Up
Tune
Store
AT-200Pro Autotuner
TRIPP LITE
ON
OFF

How Can You Join The APRS Community?

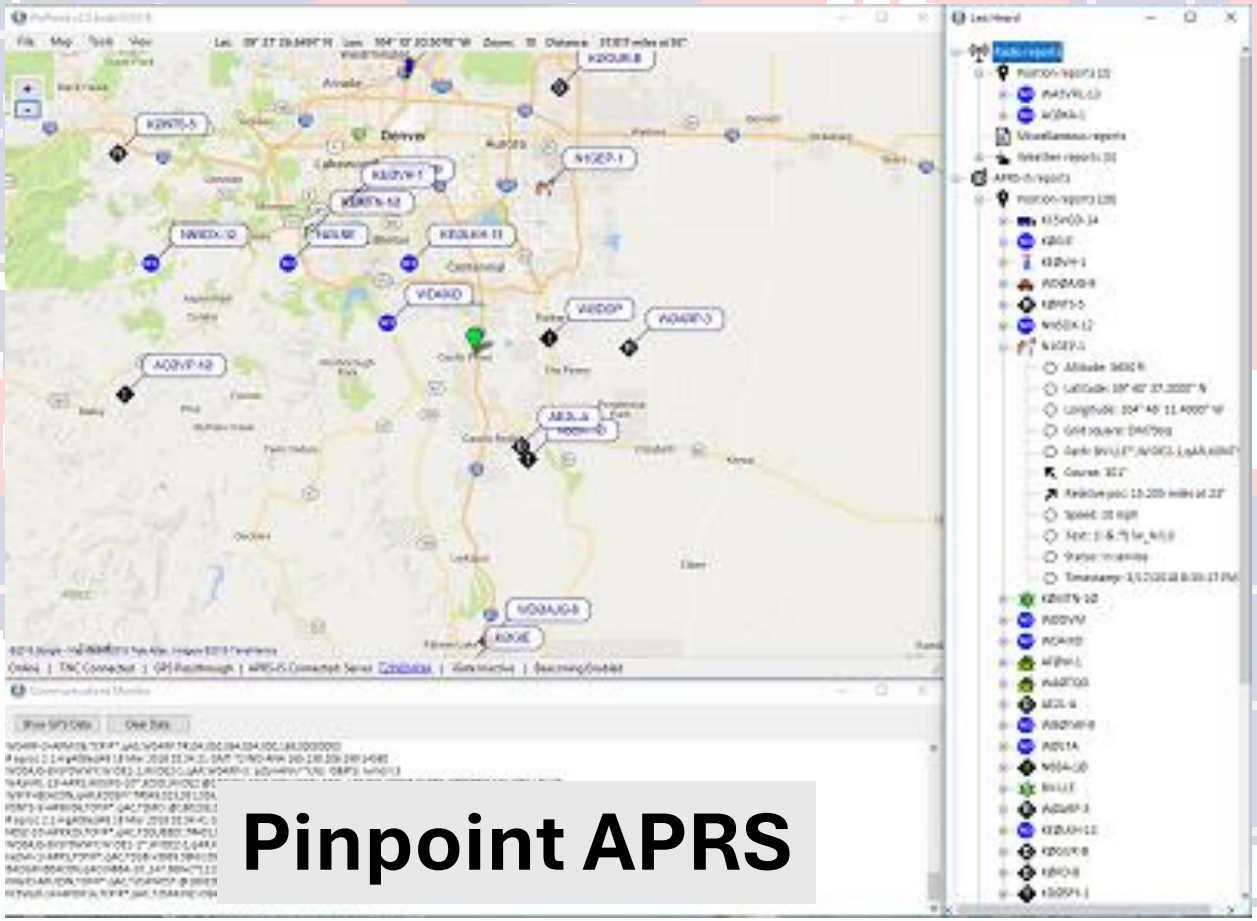
With a full function APRS radio.

Ex: Yaesu and Kenwood mobile and HT radios.

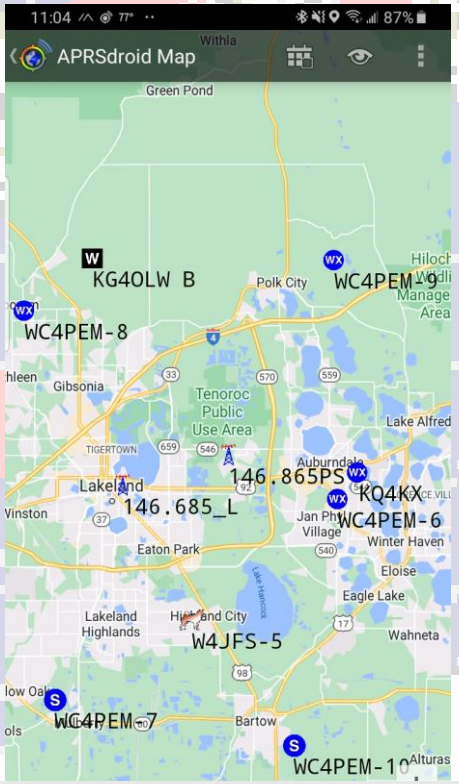
Not all radios with APRS are message capable.

How Can You Join The APRS Community?

With a computer or a cell phone app.



Pinpoint APRS



APRSdroid App

How Can You Join The APRS Community?

With almost any 2 meter radio, a TNC & an app

Questions? Comments?