VHF contests as a propagation study tool

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Abstract

There are 5 major vhf contests and two seasonal VHF and above sprints a year that could be used to provide data across a wide spectrum of frequencies and time frame (the whole year).

In each of these events, there are operators that go out and operate in different grids squares, known as "rovers", which would give more data points to either prove or disprove weather, time of year, and other factors of propagation.

Proposal is to gather this data and study to see if operating actually does benefit depending on the time of the year, weather, location, and amount of power used.

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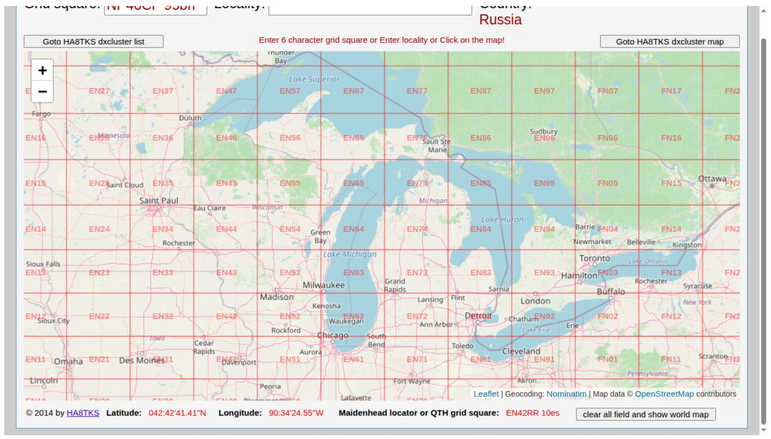
Rovers can cover large geographic areas during most of these contests which means they can give more data points to pinpoint openings and patterns over time.



As you can see in the image, Michigan is covered by 25 Maidenhead grid squares which can be roved during a contest period but is not really suggested to attempt by one person.

Method/Experiment

5 major VHF and above contests across the year
- ARRL sponsered:
  - January VHF
  - June VHF
  - September VHF
  - 222 MHz and Up Distance Contest (August)
- CQ WW:
  - CQWW VHF in July

2 VHF and above sprints
- Spring and Fall

Each month there are Activity nights
(these are the ones I know of that are somewhat active)
- First Monday – 2m
- Second Tuesday – 1 1/4m
- Third Thursday - 70cm
- Microwave Activity Day (MAD) – 33cm and above
  - First Saturday morning monthly

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Each contest has a different category that one submits a log as
- Single Operator
  - Low power
  - High power
- Multi-op
  - Low power
  - High power
- Portable
  - Usually below 25w output
  - Basically QRP status
- Rover
  - Classic
    - All available bands 6m and up
    - Any mode
    - One operator doing everything
    - Limited to a hundred contacts with any one rover
  - Unlimited
    - Same as Classic except can have an additional operator
  - Limited
    - Only the four lowest bands
    - Power output limited

Conclusion

- There are possible uses for VHF contests to provide data during different times of the year for study to see if there is a possible way to correlate when a band is open or not and possibly predict if conditions are good or not.

- The following image is of my rover up at the Sleeping Bear Dunes National Lakeshore (EN74av)

- This is an example image of possible data points that could be used to gather information about propagation.
- This image is from a POTA activation at Erie State Game Lands in Michigan Satruday morning (UTC) November 8th, 2025