

Where is in the World?

MetaCTF 2021

The Problem:

I must say, every time I see one of these directional signs, I think I've got to make this into a CTF problem. It's the idea of Open Source Intelligence (OSINT) or Geospatial Intelligence (GEOINT). The idea of being able to take an image and use all of the clues within it to infer details such as where it's at or what's happening in the photo.

Here is one such picture of those signs. Your goal? Use those little details to find the name of the marina it's at which you'll submit for the flag (so MetaCTF{name of marina})

The Solve:

Hint picture was that:



The file name doesn't help us: *sign_of_cities.png*
There are no meta-datas in the file (like GEO position).

We can read only datas from the arrows and watch another objects.

About the City names we can know, the pole stands somewhere in USA (or North-America).

Watch the picture right bottom corner, two masts.

So the question of the task can be sure, it is a port.



Let's look at the numbers. The unit of distance is important, M is miles.

I was looking for an online map to draw circles showing distances.

<https://www.calcmaps.com/map-radius/>

Data selection method:

- short distances
- opposite arrow directions

Data I used:



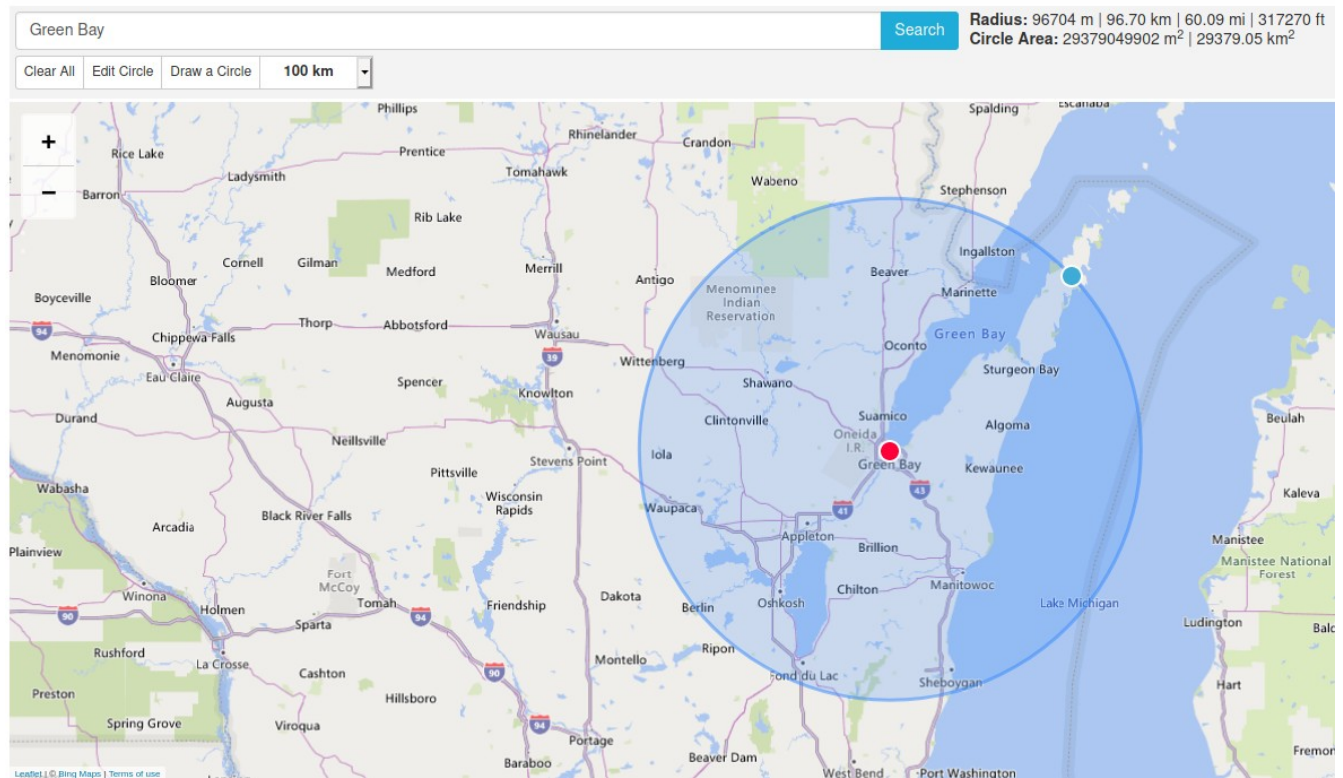
Green Bay - 60M ~ 100km
Sturgeon Bay - 20M ~ 30km
Gills Rock - 19M ~ 30km



The measurement:

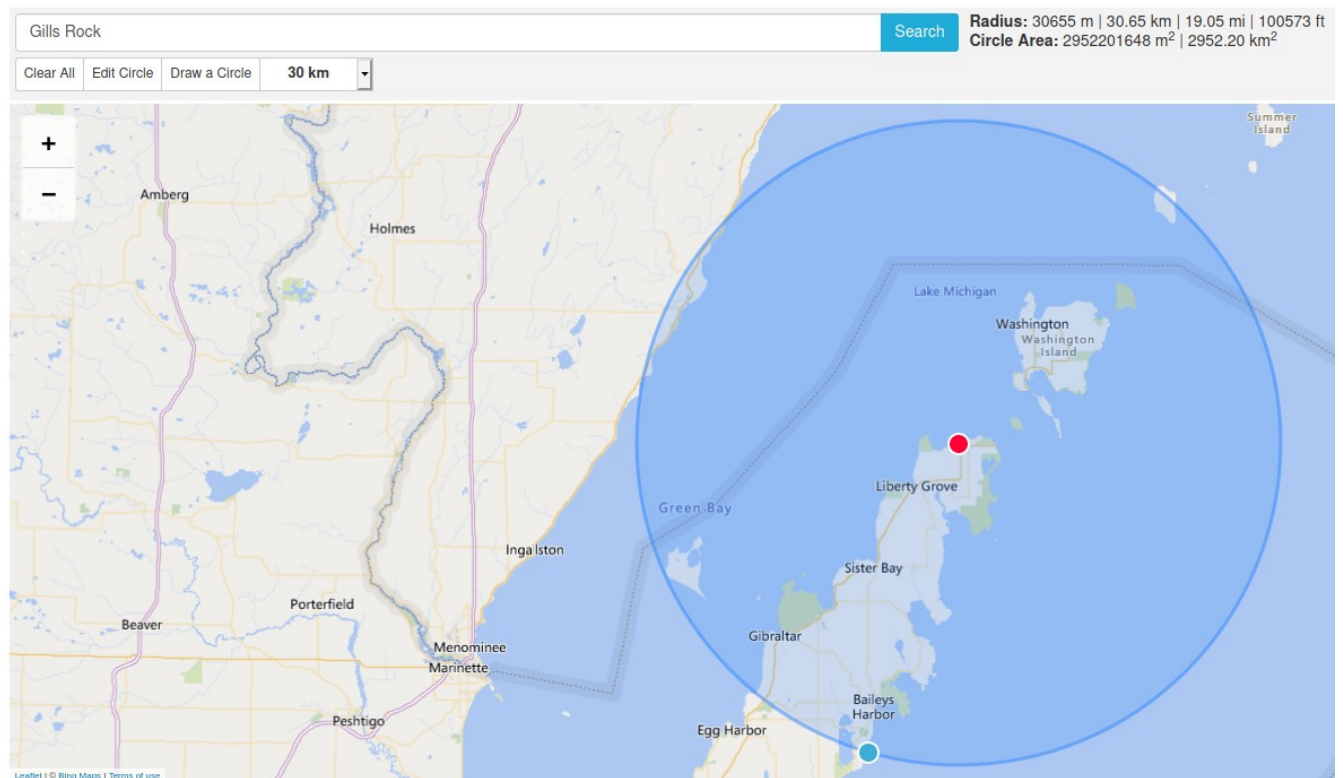
First time large scale. Possible points on North and East (2x) near water.

MAP RADIUS CALCULATOR

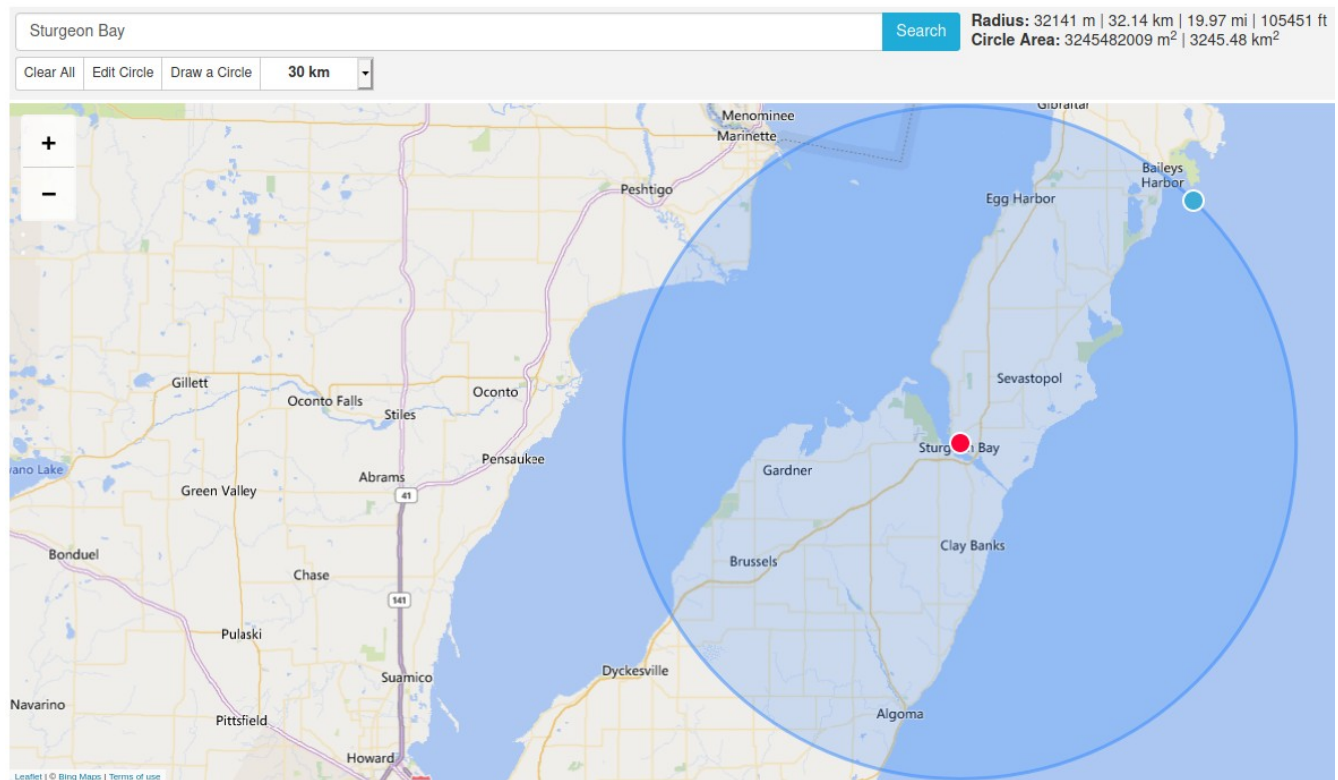


Approximation with the 2 closer data.

MAP RADIUS CALCULATOR

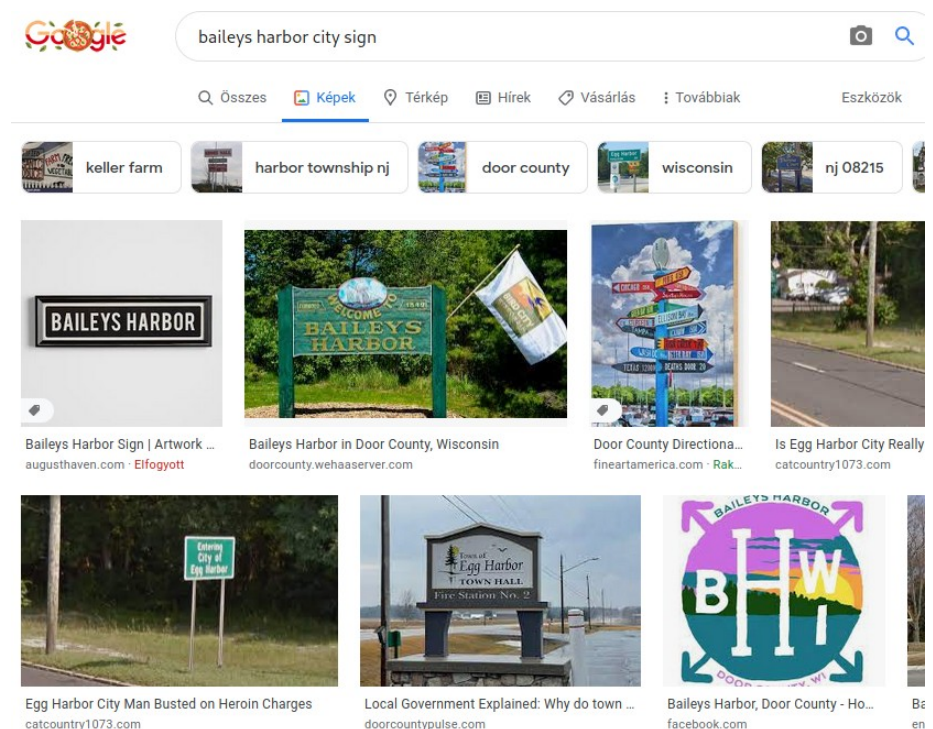


MAP RADIUS CALCULATOR



Due to the opposite direction, the intersection points mark the target area, candidate: **Baileys Harbor**

Do a picture search:
'baileys harbor city sign'



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Door County Directional Sign in Egg Harbor Wood Print



by Christopher Arndt

\$66.00[Show Price Details](#)[ADD TO CART](#)[Add to Favorites](#)

Pay in 4 interest-free payments of \$16.50 with **PayPal**. Select PayPal at checkout and then choose "Pay Later". [Learn more.](#)



Wood Print

PRINT SIZE

8.5" x 12"



SHAPE

Natural



PRODUCT DETAILS

Door County Directional Sign in Egg Harbor wood print by Christopher Arndt. Bring your artwork to life with the texture and added depth of a wood print. Your image gets printed directly onto a sheet of 3/4" thick maple wood. There are D-clips on the back of

Ooops, new city name in the description, candidate: **Egg Harbor**

Let's go to Egg Harbor port for proof... virtually...

Google Maps Street View search finally:



The accepted flag is:
MetaCTF{Egg Harbor}