Institute for advanced architecture of Catalonia

Geolocation

MAA TERM 2

GENERAL SEMINAR

Designing Associativity

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1 TOPIC and DATA

The bald eagle is a bird of prey found in North America. A sea eagle, it has two known sub-species and forms a species pair with the white-tailed eagle (Haliaeetus albicilla). Its range includes most of Canada and Alaska, all of the contiguous United States, and northern Mexico. It is found near large bodies of open water with an abundant food supply and old-growth trees for nesting. The bald eagle is the national bird of the United States of America. The data here shows a study that tracks 2 bald eagles.

The data comes from Movebank, a website where you can download tracking data of animals.

DATASOURCE: MOVEBANK
https://www.movebank.org/panel_embedded_movebank_webapp

Study Details

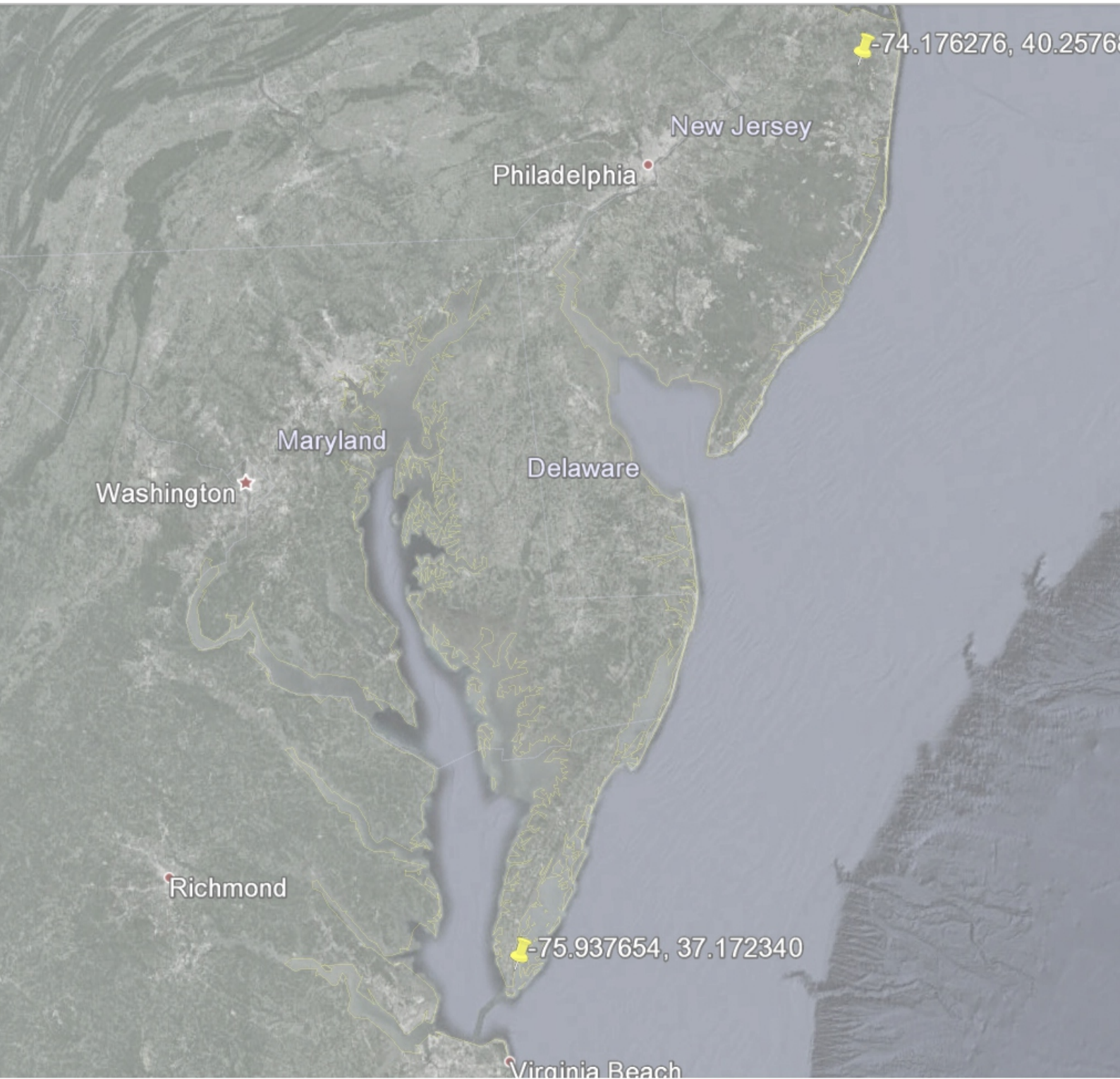
Study NameBald Eagle / Haliaeetus leucocephalus / Clark
Contact Person Clark_ENSP (Kathleen Clark)
Principal Investigator Clark_ENSP (Kathleen Clark)
Citation Clark, K.E. 2014. New Jersey Bald Eagle Tracking Project.
Acknowledgements New Jersey Division of Fish & Wildlife, and Conserve Wildlife Foundation of New Jersey.
Grants used USFWS State Wildlife Grants; donation(s) from Six Flags/Great Adventure.
License Terms not set
Study Summary not set
Study Reference Location
Longitude -74.495
Latitude 40.028
Movebank ID 34754576
Study Statistics Last Update about 9 hours ago
Number of Animals 2
Number of Tags 2
Number of Deployments2
Time of First Deployed Location 2014-05-06 14:43:11.000
Time of Last Deployed Location 2015-02-16 21:19:44.000
Taxa Haliaeetus leucocephalus
Number of Deployed Locations 48383
Number of Records Deployed (outliers) / Total (outliers)
GPS 48383 (78) / 48762 (86)
Accessory Measurements 66767 (0) / 67163 (0)

2 DATA VISUALIZATION

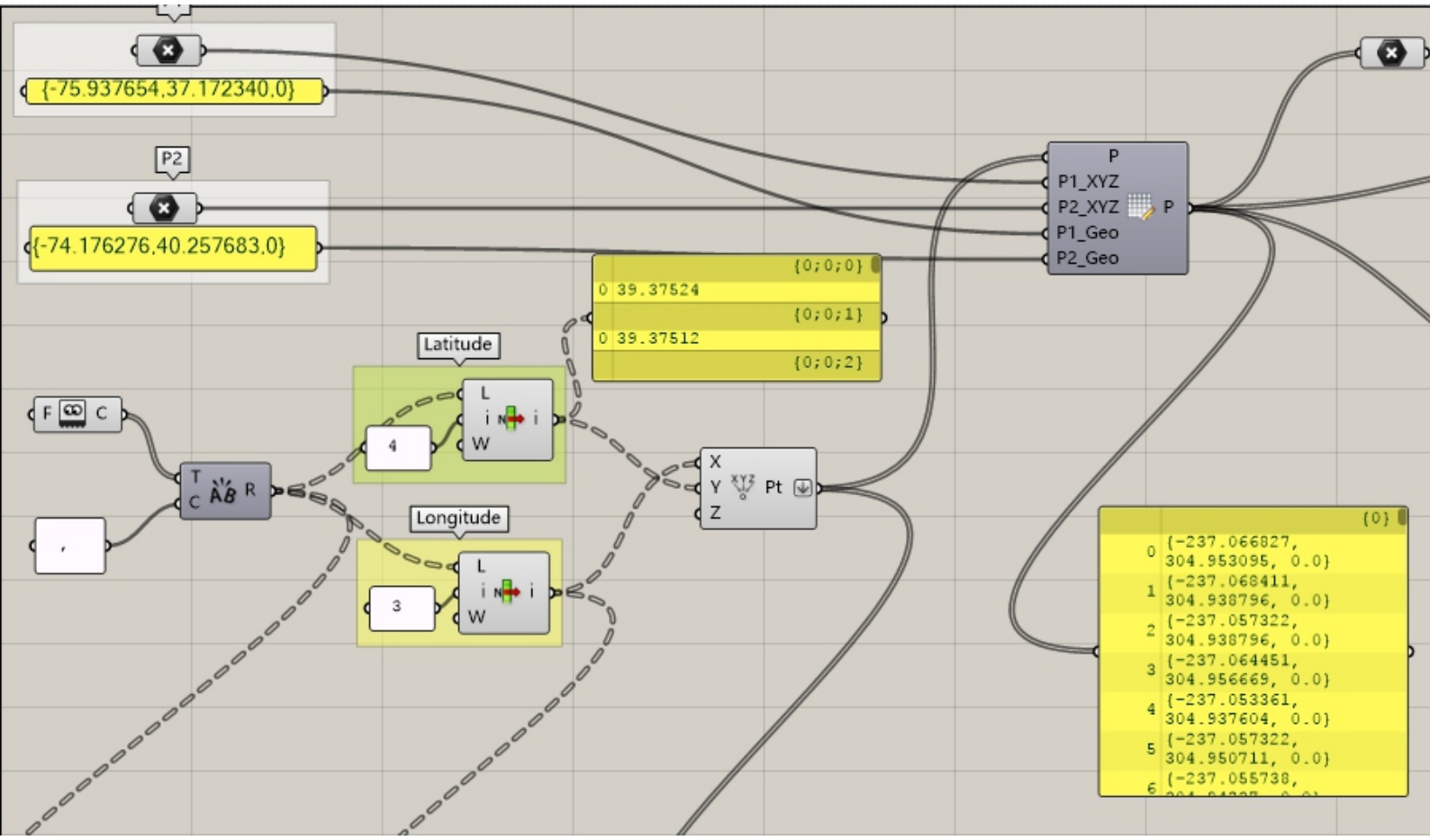
The first thing to prepare for visualize the data is a map of the related area. 2 points are picked to locate this area in program.

The other is prepare the file that contains GPS data. File got from the website is a csv file. To avoid trouble, remove the first line.

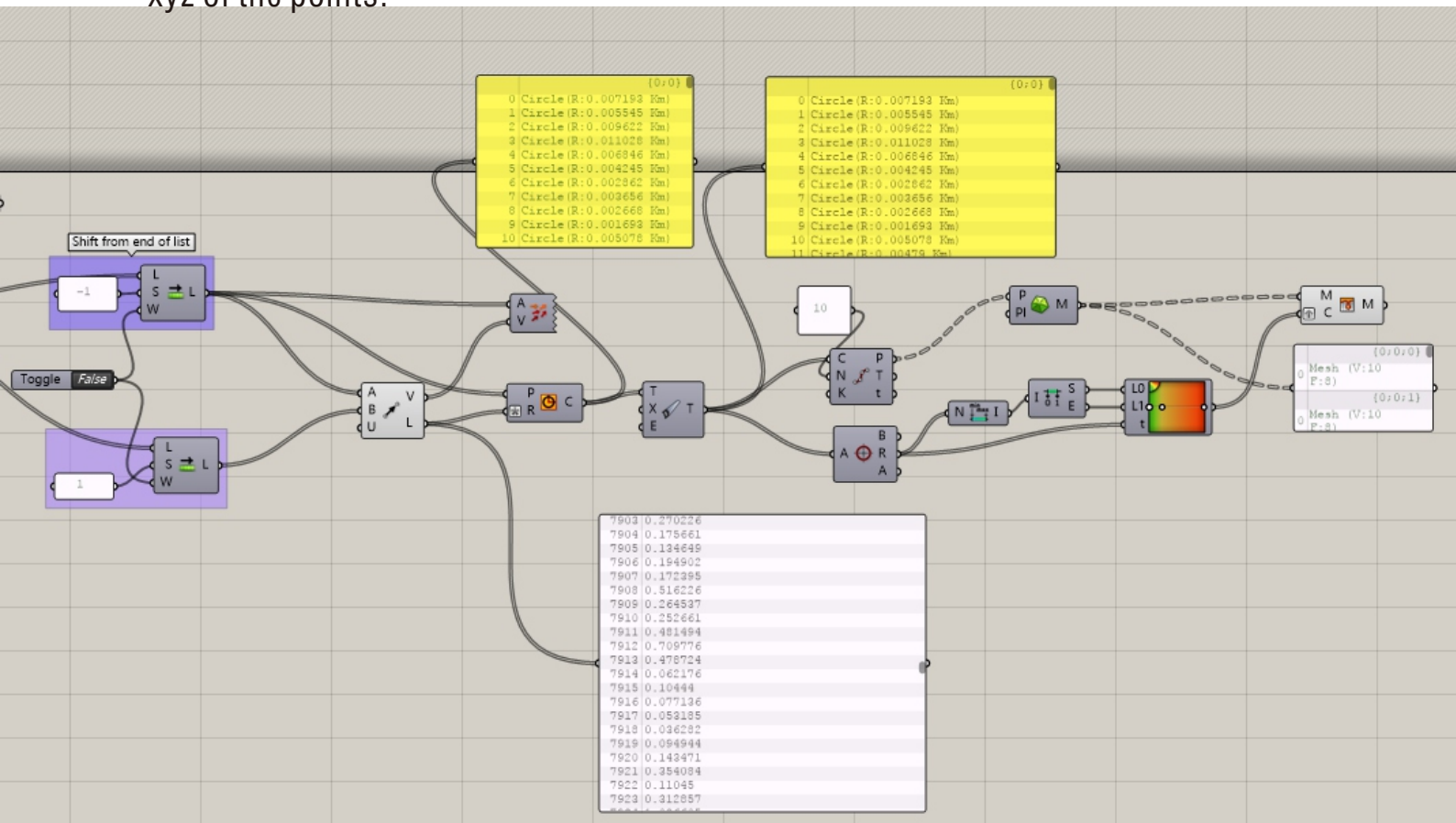
```
event-id,visible,timestamp,location-long,location-lat,algorithm-marked-outlier,gps:hdop,gps:satellite-count,gps:vdop,ground-speed,heading,height-raw,manu
390997243,true,2014-05-19 15:19:48.000,-75.03979,39.37524,false,1.8,5,3.0,0.0,0.0,"35",,"gps","Haliaeetus leucocephalus","366","Millville","Bald Eagle /
390997244,true,2014-05-19 15:42:35.000,-75.03981,39.37512,false,2.0,4,3.8,0.0,0.0,"35",,"gps","Haliaeetus leucocephalus","366","Millville","Bald Eagle /
390997245,true,2014-05-19 16:07:51.000,-75.03967,39.37512,false,1.7,5,2.7,0.0,0.0,"35",,"gps","Haliaeetus leucocephalus","366","Millville","Bald Eagle /
```

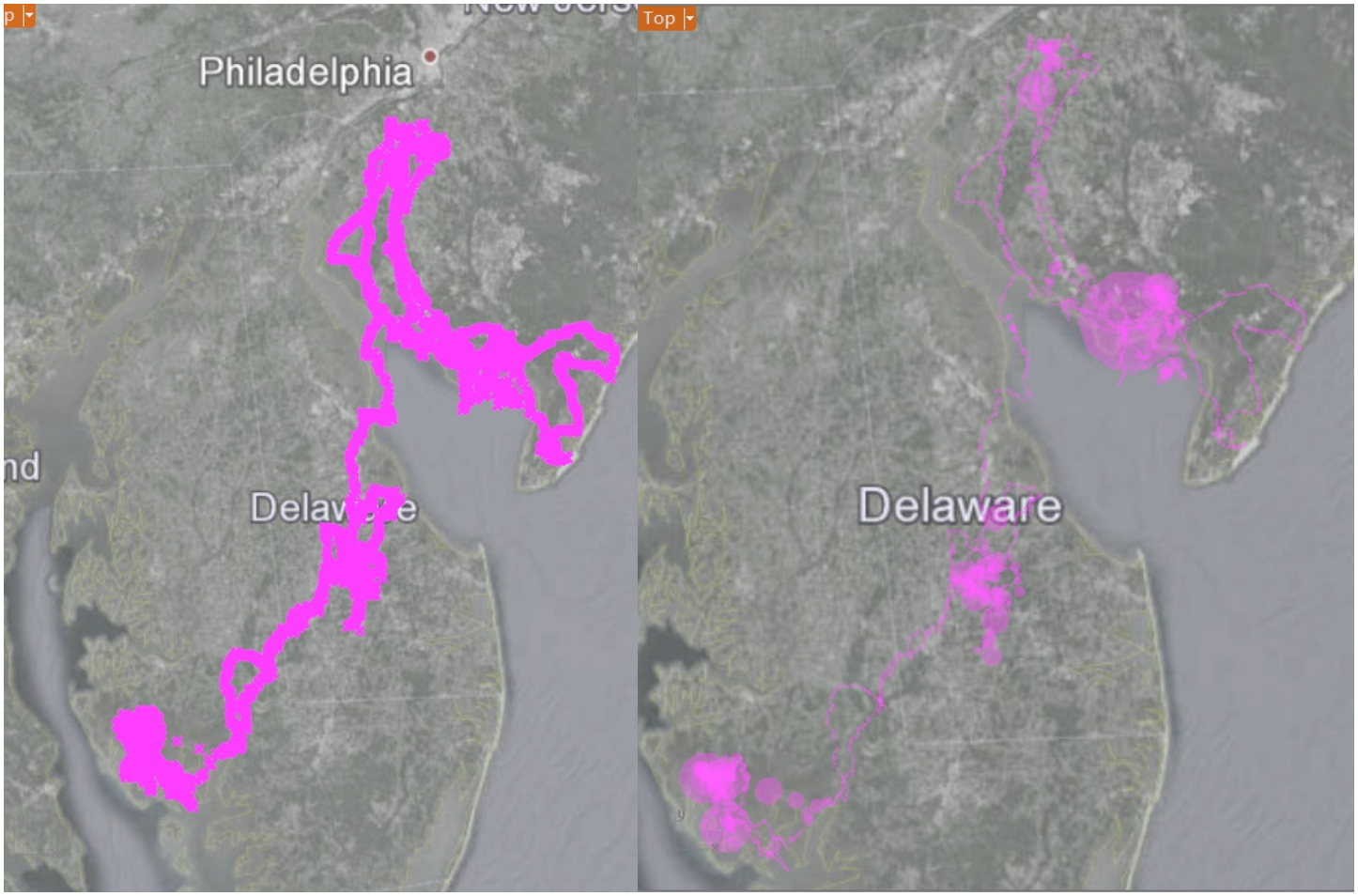


Set the anchor points, and get coordinates of points from csv file. From the first line, latitude and longitude of point can be located. And then convert geo information into xyz of the points.



Set the anchor points, and get coordinates of points from csv file. From the first line, latitude and longitude of point can be located. And then convert geo information into xyz of the points.





The points generated. They shows where the eagle passes by.

By counting the distance between two neighboring dots speed can be tell. The faster, the bigger circle to be drown.