Subject: [Q]: How to calculate distance from GPS measurements
Posted by uuvince on Fri, 22 Mar 1996 08:00:00 GMT
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I am working on a project where I will be receiving measurements from the Global Positioning System, presumably latitude and longitude measurements, and I will need to calculate the distances between the measurement points. The measurements will all be taken over a region of only a few miles so I guess I could assume the earth is flat over this region and just calculate the straight line distance. But I was wondering if anyone could help me with a more mathematically rigorous method for calculating distance from pairs of latitude/longitude measurements?

Vince Scullin	Never attribute to malice that
Software Engineering Branch	which can be adequately explained
NASA Lewis Research Center	by ignorance.
Cleveland, Ohio 44135	uuvince@ariel.lerc.nasa.gov

Subject: Re: [Q]: How to calculate distance from GPS measurements
Posted by Kile_Baker on Fri, 22 Mar 1996 08:00:00 GMT
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In article <22MAR199612092665@ariel.lerc.nasa.gov>,
uuvince@ariel.lerc.nasa.gov (Vince Scullin) wrote:

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> Positioning System, presumably latitude and longitude measurements, and I will
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> rigorous method for calculating distance from pairs of latitude/longitude
> measurements?
>
>

Although I am sure that any textbook on surveying would have this information, you can look into working with spherical triangles. This will work as long as you assume that you are on a spherical earth at a constant height (such as sea level).

The equations for working with spherical triangles can be found in the CRC standard math tables books.

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Kile Baker (kile_baker@jhuapl.edu) | All opinions are my own and
Johns Hopkins Applied Phys. Lab | not those of the JHU/APL