

Re: Calculating great circle distances using WGS84

Source: <http://sci.tech-archive.net/Archive/sci.math/2005-11/msg01652.html>

- *From:* "Sylvain Croussette" <sylvaincroussette2@xxxxxxxxx>
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Makhno wrote:

- > Hello,
- > Given two points in Long/Lat/Alt, how can I calculate the "great circle"
- > (distance on the surface of the Earth) distance between them?
- > I can already convert between Long/Lat/Alt coordinates and a 'flat'
- > Geocentric system, unfortunately this doesn't seem to help much.

The title is confusing, on the one hand you say "great circle distance" which implies you consider the earth to be a perfect sphere, on the other hand you mention WGS84 which models the earth as an oblate ellipsoid. For the first case you already have answers, for the second search the web for "Vincenty forward inverse formula", it's an iterative method (I don't think there is a closed form to compute distances on an ellipsoid, but maybe I'm wrong).

See

http://www.ngs.noaa.gov/PC_PROD/Inv_Fwd/

http://www.ga.gov.au/geodesy/datums/vincenty_direct.jsp

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