
Subject: Map_Image and interpolation

Posted by [Ben Tupper](#) on Wed, 08 Dec 1999 08:00:00 GMT

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```
<!doctype html public "-//w3c//dtd html 4.0 transitional//en">
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<html>
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Hello,

<p>I have a set of ship positions (Lon/Lat in WGS 84 map datum). I also have a bathymetric grid which I have warped into a tranverse mercator projection (Datum = WGS 84). The ship locations plot correctly on the warped image. Now I would like to interpolate values off of the warped image between consecutive ship locations.

<p>I need to interpolate between two locations using $Z = \text{INTERPOLATE}(\text{WarpedGrid}, X, Y)$ where X and Y are vectors of arbitrary length in WarpedGrid coordinates.

<p>I tried the some thing terribly clever, like this:

```
<p>Sz = Size(WarpedGrid, /Dimensions)
```

```
<p>NormalXYZ = Convert_Coord(ShipLon, ShipLat,/Data,/To_Normal)
```

```
<br>X = NormalXYZ[0,]*(SZ[0]-1)
```

```
<br>Y = NormalXYZ[1,]*(SZ[1]-1)
```

<p>Good try, but the X, Y values are not located correctly on the WarpedGrid and the ship seems to be aground. Oopsie!

<p>So how do I go from Ship Lon/Lat to WarpedGrid[X,Y]?

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<pre>Thanks,</pre>
```

```
<pre>Ben</pre>
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<pre>--&nbsp;
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Ben Tupper
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Bigelow Laboratory for Ocean Science

tupper@seadas.bigelow.org

Pemaquid River Company

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pemaquidriver@tidewater.net</pre>
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