Subject: Re: matching 2 grids
Posted by Mark Hadfield on Thu, 09 Mar 2006 01:50:10 GMT
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Jenny wrote:
> Hi Mark,
>
> Sorry I'm not very clear about my problem. But it seems more complex
> than the one posted yesterday. They are 2-D arrays. I have 2 files for
> grid1: 600*600 array for lat1, and 600*600 array for lon1, one
> lat1/lon1 pair (smae coordinate in the array) represents the true
> location on earth. So generally lat1 increase along a column, and also
> slightly different along a row. Same for lon1, increase along a row,
> slightly different along a column. I think grid1 was produced from
> polar stereographic projection, so that they are not equally spaced
> lat/lon pairs. grid2 is a polygon shaped subset of grid1, they are also
> one 2-d array for lat2 and one for lon2 (say 100*120 with 0 filled in
> some places), but not exactly the same values as those in grid1, grid2
> was defined in a different projection. What I want is to find the
> closest lat1/lon1 for each of the lat2/lon2 based on the geographic
> location the lat/lon represents.

Yes, it's what I called a 2-D location problem in my previous post and
it can be handled by MGH_LOCATE2 or MGH_LOCATE2A (the former is faster
when the number of points in grid2 is large, the latter when it is
small). Examples of how to use these are in MGH_EXAMPLE_LOCATE.

What MGH_LOCATE2 will give you, for each point in grid2, is a 2-element
floating-point vector describing its position in the 2D "index space" of
grid1. If you round this vector to the nearest integer, that will be the
location of the nearest point of grid1.

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Mark Hadfield "Kei puwaha te tai nei, Hoea tahi tatou"
m.hadfield@niwa.co.nz
National Institute for Water and Atmospheric Research (NIWA)