Subject: Interpol. irregular grid to irregular grid
Posted by deja_jlin on Tue, 06 Feb 2001 02:23:21 GMT
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howdy!

i'm trying to interpolate data from one irregular
2-D grid to another (different) irregular 2-D
grid:

- does IDL have any other built-in functions
besides MIN_CURVE_SURF that can do this?
- does anyone have any warnings regarding the
behavior of MIN_CURVE_SURF?
- has anyone implemented irregular-to-irregular
interpolations using other algorithms?

thanks!

best,
-Johnny Lin

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Subject: Re: Interpol. irregular grid to irregular grid
Posted by Mark Hadfield on Thu, 08 Feb 2001 20:32:40 GMT
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<deja_jlin@my-deja.com> wrote in message news:95nn6i$25g$1@nnrp1.deja.com...
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>
> i'm trying to interpolate data from one irregular
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> - does IDL have any other built-in functions
> besides MIN_CURVE_SURF that can do this?

Not that I'm aware of. It's a pity because there's no fundamental reason why TRIGRID (for example) couldn't be modified to handled irregular output grids.

> - does anyone have any warnings regarding the
> behavior of MIN_CURVE_SURF?

Yes! It's terribly slow when the input grid is of a significant size. For an NxN input grid, the execution time of MIN_CURVE_SURF increases as approx. N^3. This is because the alogorithm is non-local, i.e. every point in the input grid affects every point in the output grid.

> - has anyone implemented irregular-to-irregular
> interpolations using other algorithms?

No but you could try calling TRIGRID repeatedly, once for every output point...

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Subject: Re: Interpol. irregular grid to irregular grid
Posted by deja_jlin on Fri, 09 Feb 2001 00:51:59 GMT
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Craig and Mark,

thanks for your help! the grid turns out to be too large for MIN_CURVE_SURF to be efficient, and the presence of missing values in the dataset made MIN_CURVE_SURF troublesome, so i ended up coding a near-neighbor scheme.

thanks again!

best,
-Johnny

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