Subject: Re: How to use ROI on a DEM ?
Posted by David Fanning on Sun, 12 Feb 2006 16:21:36 GMT
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L. Testut writes:

> I never used ROI, I saw on this newsgroup and on the IDL documentation
> many information on ROI ... but maybe to much for a first time user.
> Can someone help me to find which is the good ROI routine for my
> problem ?

A good routine for your program is one that helps you
solve your problem. Beyond that, all ROI selection tools are
simply devices, usually interactive, but not always
(e.g. Search2D), that allow you to discriminate data
values based on your (arbitrary) criteria. :-)

Some ROI devices are as simple as "is this pixel inside or
outside the box [ellipse, circle, random pattern] I just
drew I my image". These kinds of ROI selection tools are
easy to create:

http://www.dfanning.com/widget_tips/rubberband_widget.html

Sometimes you need to change device coordinates (which you use
to draw your box, ellipse, circle, etc.) to the data coordinates
of your data, but this is why God invented COORD_CONVERT.

> I have a matrix H(nx,ny) which is a Digital Elevation Model of the
> Antartcica. I want to select on this map the different regions of
> drainage (i.e I want to select the ice divide). Is it possible to
> display the map (with CONTOUR for example) and to select with the mouse
> one our more closed regions on this map. The idea is to used these
> regions to compute mean, stddev, ... of certain glaciological
> parameters inside each region. Well I hope it was clear. Can someone
> indicate me which routine I need, and how to use it in this case ?

So, I would probably build a polygon selection ROI (a *very* simple
modification of the rubberband box algorithm described above), that
allows you to outline the region you are interested in. If you are
drawing the polygon on the DEM, then you can find the pixels in the
DEM inside your polygon directly with POLYFILLV. It is all really
quite easy to do.

Cheers,

David

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