## Subject: Re: Digital Chart of World (WorldMap) Posted by Martin Schultz on Thu, 03 Dec 1998 08:00:00 GMT View Forum Message <> Reply to Message

## Nando lavarone wrote:

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> Hi all.
> I need to access to the IDL database of DCW.
> Particularly I need a function returning a vector
> of lat/lon coordinates of a feature (e.g. rivers or coasts)
> in a region of interest.
> starting from the coordinates of ROI (e.g. 4 corners in lat/lon).
>
 Does someone know how to resolve this problem?
>
 Greetings,
       Nando
>
> Nando lavarone
> Advanced Computer System
> via Lazzaro Belli, 23
> 00040 Frascati - RM
> Tel: +39-6-944091 (switchboard)
        9440943 (direct)
>
> E-mail:
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```

I can only suggest a quick "lowres" resolution to your question: Draw your map in a limited window

map\_set...,limit=[..] and overlay your "feature" in a specific color. Then you can perform a tvrd() and "query" the resulting byte array for values of that specific color (e.g. rivers = where(image eq 3)). You would still have to convert the pixel index to coordinates (so you better choose a simple projection), and you cannot resolve individual features (i.e. you will not get a vector of say the amazon river). So, probbaly, this isn't of too much help.

One more thing: I discovered that there may be some inconsistencies in the map database: when I tried something like the above to create maps with indivdually color coded countries, I discovered, there were a few places where country boundaries did not end at a coastline but left a little gap instead (this screwed up my fill algorithm). Same thing may be true for rivers, so if you get your vectors, and you want to re-construct a river you may end up forming a lake if two rivers don't meet exactly (this was with the low res data set).

Martin.

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Subject: Re: Digital Chart of World (WorldMap)
Posted by Mark Hadfield on Mon, 07 Dec 1998 08:00:00 GMT
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Nando lavarone wrote in message <36672204.665D0EDC@acsys.it>...

- > Hi all,
- > I need to access to the IDL database of DCW.

>

- > Particularly I need a function returning a vector
- > of lat/lon coordinates of a feature (e.g. rivers or coasts)
- > in a region of interest,

In map\_continents.pro, there is a function called MAP\_GETINDEX which reads the index data (position in file, number of points, lon/lat range for each segment) in a map index file. The index files have names like

- .../IDL52/resource/maps/high/\*.ndx
- .../IDL52/resource/maps/low/\*.ndx

Attached is code for a function, MAP\_GETDATA, which reads the lon/lat data for a specified segment. The data files have names like

- .../IDL52/resource/maps/high/\*.dat
- .../IDL52/resource/maps/low/\*.dat

MAP\_GETDATA calls FDECOMP from the IDL Astronomy Users Library (http://idlastro.gsfc.nasa.gov/homepage.html)

To find all the segments for a specified ROI, you need to read in the index data then search for lon/lat ranges that match the ROI. Unfortunately, segments don't correspond very well to "features", ie a coastline or river

may be split into several segments.

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## File Attachments

1) map\_getdata.pro, downloaded 89 times