Subject: landscan data
Posted by matthias.demuzere on Sun, 15 Jan 2006 15:45:22 GMT
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Dear all,

Is there anyone that has experience in reading the Landscan data in IDL? The LandScanTM Dataset comprises a worldwide population database compiled on a 30" X 30" latitude/longitude grid. The LandScan Dataset files are available in an ESRI raster binary format.

Now I have all the data, but I really don´t succeed in reading in this dataset. The data includes also a header file with the following information:

ncols 43200
nrows 20880
xllcorner -180
yllcorner -90
cellsize 0.00833333333333
NODATA_value -9999
byteorder LSBFIRST

and a .prj file with following contents:

Projection GEOGRAPHIC

Datum WGS84

Zunits NO

Units DD

Spheroid WGS84

Xshift 0.0000000000

Yshift 0.0000000000

Parameters

Is their anybody who could help me with this problem?

Thanks,
Matthias

Subject: Re: landscan data
Posted by Ben Panter on Tue, 17 Jan 2006 11:18:48 GMT
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matthias.demuzere@geo.kuleuven.be wrote:
> Thanks for the reply David.
>
> I tried again to read in the whole dataset with 43200x20880 fields on
> another PC, but that didn't work either. So I probably have to look to
> see if I can expand my memory capacity....

Wow!

That's one big array. I have a 2Gb Linux machine here, and can't get a
43200x20880 float array to fit in memory. I can do it with an integer
array, however it's not possible to do much with it afterwards.

You might want to go down the problem-splitting route after all.

cheers, and best of luck,

Ben

--
Ben Panter, Garching, Germany.
Email false, http://www.benpanter.co.uk
or you could try ben at ^^^^^^^^^^^^^^^

Subject: Re: landscan data
Posted by Paolo Grigis on Tue, 17 Jan 2006 13:09:27 GMT
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matthias.demuzere@geo.kuleuven.be wrote:
> Thanks for the reply David.
>
> I tried again to read in the whole dataset with 43200x20880 fields on
> another PC, but that didn't work either. So I probably have to look to
> see if I can expand my memory capacity....

The problem with the 32-bit versions of IDL is that no matter how much
memory you have in the system, you cannot allocate more than 2GB for *one*
array (the reason is likely due to the fact that internal array indexing
is done with a long signed integer, ranging up to 2^31-1).

So the maximal numbers of *elements* in one array is approximately
2^31/size, where size is the byte-size of your data type (1 for byte,
2 for int, 4 for longs etc.).

Possible solutions: break up the array in smaller chunks or switch
to 64-bit IDL versions.

Ciao,
Paolo

>
> Cheers,
> Matthias
>