Subject: Re: Read values from a table with IDL - narrowed-down question
Posted by Vince Hradil on Thu, 17 May 2007 15:50:45 GMT
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On May 17, 4:13 am, DirtyHarry <kim20...@gmail.com> wrote:
> I posted a message few days ago and have been waiting any suggestions,
> but no one reply. (I am really sad and feel left out.. T.T) I think my
> question was too broad and vague. Therefore, I narrowed down the
> question.
>
> What I really would like to do now is just to read values of the table
> shown below.
>
> Skyl_lut.dat00.dat
>
> Aerosol_type: Continental
> MODIS_Band_1: (0.620,0.670)
> S&O 0.00 0.02 0.04
> ------------------
> 0   0.027 0.040 0.053
> 1   0.028 0.041 0.054
> 2   0.029 0.042 0.055
>
> There are 9 target values in this table. Others are just kind of input
> variables to get those values.
>
> For example, in order to read 0.055 in the table, required input
> variables are...
>
> aerosol_type = continental
> MODIS band = 1
> Optical depth = 0.04
> solar zenith angle = 2
>
> If it is possible, I want to do make a function with 4 input
> variables, and then the output of this function should be a value in
> this table.
>
> Sorry for bothering you, but please give me any suggestions. Thanks in
> advance.
>
> Harry

Depending on how flexible you want it to be, you should be able to
build something using something like:

```
line=''
while not eof(lun) do begin
```

```
readf, lun, line
linesep = strsplit(line,/extract)
;; compare various linesep[] values with the given arguments
endwhile
```

Subject: Re: Read values from a table with IDL - narrowed-down question
Posted by cmancone on Thu, 17 May 2007 18:14:40 GMT
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It's definitely do-able, but what it really depends on is how rigorously formatted the text files are. What you probably want to do is create a separate routine that will read each file into a well-defined structure, which can be read later. Actually, I'm not so sure about the structure part, I don't use those terribly often. The tricky part will really be reading in the data properly. You'll have to parse the input files properly, and how easily that happens will depend (as I said) on how rigorous the file's format is. For instance:

Is the first line of a "group" of always a description, followed by a single space, followed by the type?
Is the second line always the phrase: 'MODIS_Band_' followed by a number, followed by useless stuff?
Is the third line always a description, followed by the values separated by spaces?

If so, then you would try something like this (in psuedo-code, with no attempts at bug-finding):

```
gettype = 'Continental'
getband = '1'
getdepth = '0.04'
getangle = '2'

openr, unit, filename, /get_lun
readf, unit, line1
readf, unit, line2
readf, unit, line3
line1dat = strsplit( line1, ' ', /extract )
line2dat = strsplit( line2, '_', /extract )
line3dat = strsplit( line3, ' ', /extract )

type = line1dat[1]
band = line2dat[2]

while( not eof(unit) ) do begin
    readf, unit, line
```

```
    thisline = strsplit( line, ' ', /extract )
    thiszenith = thisline[0]
    if ( type eq gettype and band eq getband and thiszenith eq
getangle ) then return, thiszenith[ where( getdepth eq line3dat ) ]
endwhile
```

That's one way to go. Obviously, you'd have to change a fair amount still, since I'm assuming there is only one group in each file. Also, as I said, this will only work under the above conditions. If the exact layout of the group changes you'll have to extract your data differently

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