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Subject: Re: IDL "expert" needs help BAD!--Correction to earlier post.

Posted by [grunes](#) on Thu, 23 Jan 1997 08:00:00 GMT

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In article <davidf-ya023080002201971346190001@news.frii.com>

davidf@dfanning.com (David Fanning) writes:

> I have three vectors that represent randomly distributed  
> longitude and latitude temperature data. Thus, I have three  
> variables lat, lon, and temp that are all the same length  
> and data type. I want to store them as a VDATA table  
> in an HDF file.  
>  
> Then, I want to grid this data and make a regularly-spaced  
> 2D array. I want to store this data in the same HDF file  
> as a scientific dataset.  
...

I apologize for the earlier incorrect posting (which I have since deleted). I was playing with routines wrsdf and rdsdf, and they still had errors.

I am not sure if this is helpful, since I have not tried to change the shape mid-file, as you wish to, but it may help to see a simpler example. I agree that the IDL manuals are quite deceptive, in terms of not indicating that certain calls need to be made for every variable.

Corrected versions are as follows:

-----File: wrsdf.pro----Cut here-----  
; -----WrSDF-----  
pro WrSDF,filename,a,varname,frames=frames,palette=palette  
; Write array to HDF file in a  
; scientific data format.  
; (Can be read back with rdsdf.pro.)  
; -----INPUT-----  
; filename=Name of file to create.  
; a=array to write to file.  
; varname=name of variable (optional).  
; if /frames is set, and the array  
; is 3 dimensional (last dimension  
; = # of frames), each frame will  
; be written as a seperate HDF  
; entry.  
; (That is the usual way HDF movies  
; are written.)  
; if /palette is set, the current

```

; pallete will be added.
;Written by Mitchell R Grunes.
if n_elements(varname) eq 0 then varname='a'
if n_elements(frames) eq 0 then frames=0
if n_elements(palette) eq 0 then palette=0
if !prompt eq 'IDL>' then begin
  sd_id=HDF_SD_Start(filename,/create)

s=size(a)
vt=s(n_elements(s)-2)           ; variable type
if vt lt 1 or vt gt 5 then stop,'Bad Data type in WrHDF'
ndim=s(0)                      ; # of dimensions
dims=s(1:ndim)                 ; dimensions
nFrames=1                       ; # of frames
if ndim eq 3 and frames then begin
  nframes=s(ndim)
  dims=dims(0:1)
endif
print,'Adding variable ',a,' to HDF file ',filename
help,a

if ndim eq 3 and frames then begin
  print,'Writing array as ',nframes,' frames.'
  for i=0,nframes-1 do begin
    sds_id=HDF_SD_Create(sd_id,varname,dims,byte=vt eq 1,int=vt eq 2,$
      long=vt eq 3,float=vt eq 4,double=vt eq 5)
    HDF_SD_AddData,sds_id,reform(a(*,* ,i))
    HDF_SD_EndAccess,sds_id
  endfor
  endif else begin
    sds_id=HDF_SD_Create(sd_id,varname,dims,byte=vt eq 1,int=vt eq 2,$
      long=vt eq 3,float=vt eq 4,double=vt eq 5)
    HDF_SD_AddData,sds_id,a
    HDF_SD_EndAccess,sds_id
  endelse

HDF_SD_End,sd_id
if palette then begin
  tvlct,/get,R,G,B
  p=transpose([[R],[G],[B]])
  hdf_dfp_addpal,filename,p
endif
endif else begin
  stop,'My WrSDF stuff only works from IDL, not PV-WAVE.
endelse
end
-----Cut here-----

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-----File: rdsdf.pro----Cut here-----

; -----RdSDF-----

```
pro RdSDF,filename,a,name,number=number; Read array from HDF file in a
;   scientific data format.
; -----INPUT-----
; filename=Name of file to read.
; name (optional) specifies the array
; name to read.
; Number (optional)=0-origin sequence
; number of variable in file.
; -----OUTPUT-----
; a=array to read from file
; name=name of variable.
; number=sequence number of variable.
```

;Written by Mitchell R Grunes.

```
if n_elements(number) eq 0 then number=0
loop:
if !prompt eq 'IDL>' then begin
  sd_id=HDF_SD_Start(filename,/read)
  sds_id=hdf_sd_select(sd_id,number)

  HDF_SD_GetInfo,sds_id,name=name2
  print,'Sequence number=',number,' Variable Name=',name2
  if n_elements(name) gt 0 then begin
    if name ne name2 then begin
      number=number+1
      print,'Trying next sequence number.'
      HDF_SD_EndAccess,sds_id
      goto,loop
    endif
  endif
endif
HDF_SD_GetData,sds_id,a

HDF_SD_EndAccess,sds_id
HDF_SD_End,sd_id
endif else begin
  stop,'My RdSDF stuff only works from IDL, not PV-WAVE.
endelse
end
```

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Mitchell R Grunes, grunes@imsy1.nrl.navy.mil. Opinions are mine alone.

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