
Subject: Re: HDF_SD_ADDDATA problem

Posted by brodzik@nsidc.org on Tue, 22 Apr 2008 14:23:38 GMT

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On Apr 21, 5:24 pm, adfra...@utas.edu.au wrote:

```
> Dear Everyone,
>
> I'm having trouble writing to an HDF file using HDF_SD_ADDDATA, but
> let me set the scene quickly first.
>
> I'm using a multispectral satellite imagery dataset in its native L1B
> (HDF-EOS, it's MODIS for those who care!) format. When ordering the
> data, one has the option to channel subset the data to reduce size.
>
> I've written IDL programs to cloud mask the data, which involves
> manipulating an SDS within the HDF. My programs all work fine using
> the full, un-subsetted data, but whenever I try them on the subsetted
> HDFs, they fall over with this error.
>
> -----
> % HDF_SD_ADDDATA: Unable to write the specified HDF-SD slice.
> % Execution halted at: HDFEDITSDS      28 /array/work/adfraser/
> MODIS
> images/18_4_08 processing of winter2 data/output/HDFeditSDS.pro
> %
> $MAIN$
> -----
>
> Here is the code which I've been using to write successfully to the
> unsubsetted data but unsuccessfully to the subsetted data:
>
> -----
> PRO HDFeditSDS, filename, sdsname, newdata
>
> sdfileid=hdf_sd_start(filename, /rdwr)
>
> ; Find the index of the "Gridded Data" SDS.
> index = HDF_SD_NAMETOINDEX(sdFileID, sdsname)
>
> ; Select the Gridded Data SDS.
> thisSdsID = HDF_SD_SELECT(sdFileID, index)
>
> HDF_SD_AddData, thisSdsID, newdata
>
> hdf_sd_end, sdfileid
>
> END
> -----
>
```

> I've checked all the obviously stupid things (file access permissions
> are identical, and the SDS name exists within the HDF). I'm at a loss,
> please help!
>
> Cheers,
> Alex.
>
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Alex,

I have also been working with MODIS HDF data lately, and sympathize with your troubles.

The workings of HDF routines are very murky to me. As a result, my behavior reduces to superstitious little rules like these. Makes me understand how ignorance during the Middle Ages led people to do all kinds of crazy things.

My wacky rules are:

- a) always check return codes--they often behave in strange ways when the object interface gets confused
- b) always bracket an hdf_sd_select call with an hdf_sd_endaccess, (I think you're missing an hdf_sd_endaccess in your sample, but that doesn't explain why it works for unsubsetted data but not subsetted)
- c) likewise with hdf_sd_start and hdf_sd_end

and, finally, after I recently added a new SD to a MODIS tile using the HDF_SD interface, I learned that I really needed to use the EOS_GD interface, so the new SD was really part of the HDF-EOS grid object and other software (the MODIS reprojection tool) was only looking in the grid object, and was ignoring any other SDs in the file. Just an aside, but it might affect whatever you're doing downstream.

Ohmygosh, I never thought it would happen to me, but I'm speaking HDF-bot...need to go get some Listerine.

Good luck,
Mary Jo
