

Greetings,

SCF Toolkit 5.2.20, and related software are officially released. The release contains SCF Toolkit 5.2.20, HDF-EOS 2.20, HDF-EOS 5.1.16. The HDF4 support is at HDF4.2.13 and HDF5 Support is at hdf5-1.8.19.

The following tar files have been placed on the EDHS ftp site (ftp to edhsl.gsfc.nasa.gov and change directory to edhs) in the directories as identified:

```
/sdptk/latest_release: SDPTK5.2.20v1.00.tar.Z  
SDPTK5.2.20v1.00_TestDrivers.tar.Z UG_intro220.pdf UG_geo_location220.pdf  
UG_proc_cntl220.pdf UG_appendices220.pdf VDD_prod_descrp220.pdf
```

```
/hdfeos/latest_release: HDF-EOS2.20v1.00.tar.Z HDF-  
EOS2.20v1.00_TestDrivers.tar.Z hdf-4.2.13.tar.gz zlib-1.2.11.tar.gz  
jpegsrvc.v9b.tar.gz HDF-EOS_REF220.pdf HDF-EOS_UG220.pdf
```

```
/hdfeos5/latest_release:  
HDF-EOS5.1.16.tar.Z  
HDF-EOS5.1.16_TESTDRIVERS.tar.Z  
hdf5-1.8.19.tar.gz  
gzip-2.1.1.tar.gz  
HDF-EOS5_REF116.pdf  
HDF-EOS5_UG116.pdf
```

These files are accessible through anonymous ftp site edhsl.gsfc.nasa.gov and can be downloaded directly from ftp://edhsl.gsfc.nasa.gov/edhs
The User's Guides will also be at our web site
<http://newsroom.gsfc.nasa.gov/sdptoolkit/toolkit.html>.

We tested the code with our provided test drivers, and with several user-provided codes for TOOLKIT, HDF-EOS, and HDF-EOS5.

In this release major changes are as follows:

- Extended GCTP to support ellipsoidal earth model for Sinusoidal projection in addition to the spherical earth model.
- Added new APIs to HDF-EOS5 to return buffer size of attribute element when seeking info on a local, group, or global attribute.

- - Changes to HDF-EOS for compiling with C++11
- - Eliminating some inconsistencies in declarations such as use of int for hid_t

- - Added dimscales to Geofields
-
- - Added Metadata reader API HE5_EHreadmeta() to HDF-EOS5 to complement the Metadata Writer HE5_EHwritemeta().

Some notes concerning this and previous releases:

1. Our TOOLKIT install scripts try to install zlib, jpeg, and szip before attempting to install HDF4 or HDF5. With the previous release of HDF-EOS and HDF-EOS5 this feature was added to HDF-EOS and HDF-EOS5 installation scripts. So if the users try new INSTALL script in HDF-EOS or HDF-EOS5, they will have a chance to install or re-install zlib, jpeg, szip, HDF4, and HDF5 before installing HDF-EOS or HDF-EOS5 in supported platforms.

2. HDF4 supports szip with HDF4.2.5 release. Our installation scripts can now configure HDF4 with szip. This may require TOOLKIT/HDF-EOS users to include szip related header/library files in their makefiles that used to work with the HDF4 versions prior to the HDF4.2.5 release.

3. If users install zlib, jpeg, HDF4 and HDF-EOS independent from the TOOLKIT installation and they do not intend to install TOOLKIT, They may require either to modify their existing makefiles to include relevant path/files for zlib (szip and jpeg) header and library files, or to copy those files to relevant directories in HDF4.

4. With this release we officially support CYGWIN, Mac Intel (64-bit), linux (32 and 64-bit), and Windows (hdfeos2, hdfeos5, and MTD Toolkit only). Please note that 32bit installation cannot be made in IA64 platforms since the compiler does not support -m32 flag.

Also like the previous release HDF-EOS2 and HDF-EOS5 can be auto-configured, so that if users do not require TOOLKIT, or want to try new platforms, they could install HDF-EOS2/HDF-EOS5 separate from TOOLKIT. Starting with the previous versions the SDP and MTD Toolkit also can be auto-configured and installed like HDF and HDF-EOS. Please see the README files in doc directories of SDP and MTD Toolkits.

5. Like the previous releases the szip decoder will be installed as default. Users will have the choice also to have szip encoder installed during decoder installation.

6. Starting with the release 5.2.16 of SDP TOOLKIT users can get core metadata in XML format in addition to the ODL format. To get both *.met and *.xml files user need to modify their PCF file adding 3 lines

```
10260|XMLstylesheet.temp|||||1 10303|science.xsl|~/database/common/MET|||||1
10256|XML METADATA GENERATION FLAG; 0=no, 1=yes|0
```

(as shown in the template PCF file in the runtime setting XML METADATA GENERATION FLAG to 1. If PCF

```
10256|XML METADATA GENERATION FLAG; 0=no, 1=yes|0
```

or flag is set to zero (as above), toolkit should versions, creating only ODL metadata. If XML flag file, then TOOLKIT will produce .xml besides the .met file for INVENTORY metadata and also will write XML metadata into the HDF file in the

directory of TOOLKIT) and does not include the line

work as in the previous
is set to 1 in the PCF

"xmlmetadata" global attribute as for the coremetadata.

In the last release we created a new style sheet
(`TOOLKIT/database/common/MET/TKGran2HTM.xsl`) that when used with some client
tools, can transform granule level SDP TOOLKIT produced XML metadata files
for display.

The XML format metadata writing capability was extended to the MTD Toolkit
starting with this release of MTD Toolkit

7. In February 2012 release we added dimension scale setting and retrieving
to `hdfeos` and `hdfeos5`. Functions added were:

`hdfeos` :

```
SWsetdimscale(), SWgetdimscale(), SWsetdimstrs(), SWgetdimstrs()  
GDsetdimscale(), GDgetdimscale(), GDsetdimstrs(), GDgetdimstrs()
```

`hdfeos5`:

```
HE5_SWsetdimscale(), HE5_SWgetdimscale(), HE5_SWwritedscaleattr(),  
HE5_SWreaddscaleattr(), HE5_SWinqdscaleattr(), HE5_SWdscaleattrinfo()  
HE5_GDsetdimscale(), HE5_GDgetdimscale(), HE5_GDwritedscaleattr(),  
HE5_GDreaddscaleattr(), HE5_GDinqdscaleattr(), HE5_GDdscaleattrinfo()  
HE5_ZAsetdimscale(), HE5_ZAgetdimscale(), HE5_ZAwritedscaleattr(),  
HE5_ZAreaddscaleattr(), HE5_ZAinqdscaleattr(), HE5_ZAdscalesattrinfo()
```

With the previous release we added a few more new APIs such as
`SWdefdimscale()`, `SWdefdimstrs()`, `GDdefdimscale()`, `GDdefdimstrs()`,
`HE5_SWdefdimscale()`, `HE5_GDdefdimscale()`, `HE5_ZAdefdimscale()`

to set dimension scale for a given dimension just once after defining all
fields. For details please see the HDF-EOS and HDF-EOS5 Users Guides (volume
2), and sample C and Fortran codes in `hdfeos/sample` or `hdfeos5/sample`
directories of the distributions.

Please also note that in HDF-EOS5 the `hdf5` dimension scale related routines
are in `libhdf5_hl.a` library. Therefore, starting with HDF-EOS5.1.13 you may
require adding this library (in addition to `libhdf5.a`) into your HDF-EOS5
application makefiles.

8. Our latest release of HDF-EOS to HDF-EOS5 converter supports conversion of
dimension scales and hybrid `hdfeos` files (containing objects written by HDF
in addition to the HDF-EOS). The latest version of that tool was released
in April 2014.

9. Since the previous release of TOOLKIT we support access to new 500 m (15-
arc second) DEM elevation, land/water, and standard deviation of elevation
data. The elevation data released by USGS in late 2011 and we converted them
to `hdfeos` format for TOOLKIT use. The data files can be downloaded from our
ftp site <https://wiki.earthdata.nasa.gov/display/DAS/Toolkit+Downloads>

Please note that the 15-arc second elevation and std. dev. elevation data were not available for Antarctica and Greenland, therefore, the hdfs DEM data files for this resolution have data with fill value for these regions. We may add new 30-arc second data for these regions to TOOLKIT data in the next release if we see demand for it.

For Toolkit, HDF-EOS and other related software please visit our web site <https://wiki.earthdata.nasa.gov/display/DAS/SDP+Toolkit+and+HDF-EOS+EOSDIS++Core+System+Project>

Please report any problems or suggestions to sdps-support@earthdata.nasa.gov