Landsat Ecosystem Disturbance Adaptive Processing System (LEDAPS)
U.S. Geological Survey (USGS)
Earth Resources Observation and Science Center (EROS)
Sioux Falls, South Dakota, U.S.A.

LEDAPS Release Notes

LEDAPS 1.1.2 (January 16, 2013 – USGS EROS)
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lndpm

- Added META_FILE field to the lndsr parameter file which provides the filename of the L1G/L1T metadata file, containing valuable information for some of the data users.

lndsr

- Modified the data fields in the output metadata to be one-based so they align with the metadata fields appended in lndapp.
- Modified the fill_QA band to flag pixels as fill if the pixel is fill in any of the reflective bands and not just band 1 as was the previous implementation.
- Added META_FILE field to the lndsr parameter file. This field is read and used for the output lndsr metadata.
- Added a global metadata tag called LPGSMetadataFile to keep track of the input LPGS metadata file used for processing the L1G/L1T product. This file contains information that will be of value to the downstream user.
- Modified the 6s processing to utilize descriptive filenames for the 6s command and 6s output files. These files are no longer deleted but instead are left for the user to review/utilize, if desired. These files are written to the local directory instead of /tmp.

lndapp

- Added band6_fill_QA as an additional quality band to be output in the surface reflectance product.

bin

- Modified do_ledaps.py to allow the user to call this script from any directory vs. the directory where the MTL file resides. The script will parse the directory from the MTL file and then change to that directory to process the data.

ledapsAncSrc

- Modified the update scripts to limit the number of retries to 5 in the case the ftp site is not available or due to a connection problem.

LEDAPS 1.1.1 (December 6, 2012 – USGS EROS)
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lndpm:

- Corrected spelling of SATTELITE to SATELLITE in the output metadata.txt file

lndcal:

- Corrected spelling of SATTELITE to SATELLITE in the output metadata.txt file

lndsr:

- Fixed a bug in cld_diags.std_b7_clear to be based on the sqrt of band 7 and not the band 6 temperature.

bin:

- Modified do_ledaps.py to be a class and to allow an -l or --logfile option to write the output to a log file.

- Added a findAncillary method to the Ledaps class to determine if the required EP/TOMS and NCEP REANALYSIS ancillary files exist for the specified year (all days) or year/DOY.

ledapsAncSrc:
- Added source code and scripts to download and process the NCEP and EP/TOMS ozone ancillary products.

LEDAPS 1.1.0 (November 27, 2012 - USGS EROS)

- Developed do_ledaps Python script which provides error checking on each of the LEDAPS applications.
- Modified the LEDAPS applications to flag additional errors, like missing ancillary data, so that the Python script will catch these errors and exit with an error.
- Cleared fill/gap QA pixels such that QA pixels are never set 'on' for fill/gap pixels.
- Changed the name of the *.carbon_met.txt file to *.metadata.txt. The word "carbon" was residual from original development for North American Carbon Project (NACP).
- Added the units of 'meters' to the GCMDEM.hdf file, given that the units were missing from the file metadata.
- Placed the GCMDEM.hdf, GOLD.txt, GOLD_2003.txt, and GNEW.txt files on the LEDAPS Google Projects page for easy download. These files are required for processing in LEDAPS.

LEDAPS 1.0.0 (October 24, 2012 - USGS EROS)
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lndpm:
- lndcsm is no longer called as part of the surface reflectance processing; the internal surface reflectance cloud mask is used instead. Therefore the cloud snow/mask is no longer sent as a parameter for lndsr.
- Updated lndpm based on mods provided by Feng Gao from 1/18/2012.
    - restores the solar zenith angle bug fix from the past for NLAP_W0 format (Greg Ederer)
    - fixes a bug when writing the UTM zone (south) into the ENVI hdr file (Greg Ederer)
    - added processing for Landsat-4 TM (Feng Gao)
- Updated the metadata tags to work with the newly released LPGS metadata as well as continuing to support the old metadata tags.
- Cleaned up warning messages from compilation.
- Reset the version to 1.0.0 as this is our first official version of LEDAPS for the ESPA system.
- Changed the DataProvider to USGS/EROS.

lndcal:
- Modified calibration of band 6 to flag the saturated thermal pixels in the output brightness temperature product. This is consistent with flagging the saturated pixels in the reflective bands.
- Modified lndcal to write the QA bits for the lndth product (brightness temperature product), including appropriate metadata for the QA band. The QA bits include flags for both fill pixels and for saturated band 6 pixels, consistent with the QA bits for the reflective bands in the lndcal output.

- Cleaned up some compiler warnings and minor bugs when freeing some of the data arrays.
- Reset the version to 1.0.0 as this is our first official version of LEDAPS for the ESPA system.

lndcsm:
- Removed the source code from the repository since it is no longer used by the ESPA LEDAPS processing flow.

lndsr:
- Cleaned up some compiler warnings and minor bugs when freeing some of the data arrays.
- Updated the metadata output to include the surface reflectance based QA bits.
- Reset the version to 1.0.0 as this is our first official version of LEDAPS for the ESPA system.
- Removed lndcsm input for cloud mask. Will use only the internal cloud mask. QA bits are no longer output as a packed set of bits, but instead a separate band is written for the cloud, shadow, fill, etc. QA information and each pixel is either on or off.

lndsrbm:
- cmrbv1.0.f used a hard coded pixel size of 28.5. This has been modified to use the pixel size read from the scene metadata.
- updated to handle the new single QA bands vs. the previous packed bit QA band

bin:
- Modified do_ledaps.csh to no longer call lndcsm as part of the LEDAPS processing flow.

LEDAPS 0.0.0 (November 24 2011 – NASA GSFC/UMD)