McIDAS-X Software Development and Demonstration

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PDA Animated Weather (PAW) Status
by
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Overview

- McIDAS-X 2008, 2009.1
- McIDAS-XRD 2008, 2009.1
- Software Development and Plans in 2009
- PAW Status
McIDAS-X 2008

- MTSAT updates
- MSG corrections
- Metop FRAC Level 1b server
- GeoTIFF write server improvements
- GOES-R ABI simulated data
- OpenMTP server
- MODIS CREF product server
MTSAT Updates

• Navigation module
  – Update to account for variable subpoint
  – Corrected transformation for points near limb
  – Satellite, sun, and relative angles available for ANGLES program

• List of bands can be input for IMGCOPY
MSG Updates

• Navigation module
  – Update to account for variable subpoint
  – Corrected transformation for points near limb
Metop FRAC
(Global full resolution)

3-color combination
GeoTIFF Server Update

- Added and corrected GeoTIFF tags used by GIS packages
- Updated to use WGS 84

Web Map Service
GeoTIFF update
(ArcGIS)
GeoTIFF update
(McIDAS-V)
GOES-R

- Advanced Baseline Imager (ABI) navigation and calibration modules
- Being used with simulated data (this example uses MODIS)
Simulated water vapor channel (6.95 µm) a from high resolution model
OpenMTP Server

- OpenMTP (Meteosat Transition Programme) is a EUMETSAT satellite image archive format
  - Server works with Meteosat-7 data that the SSEC Data Center receives from NOAA
  - Server needs some work for use with data ordered from EUMETSAT archive
MODIS CREF server
(Corrected reflectance)

• The corrected reflectance product is an atmospheric correction
• Does not remove aerosols
• Results in better true color composites
McIDAS-X 2008

- METAR cloud coverage definition
- BUF R server
- NOAAAPORT Grid additions
- Tangent cone projection fixed
METAR Cloud Cover

METAR value of FEW is defined as 5 in MD file
BUFR Server
NOAA PORT
Grid
Additions
Tangent Cone Projection Fixed

- Corrected for use in Southern Hemisphere
McIDAS-X 2009.1

- GOES-13 calibration coefficients updated
- NOAA-19 updates
- MOSRPT defaults to GFS
- POES server returns navigation compatible with McIDAS-V (LALO navigation)
McIDAS-XRD 2009.1

- IMGGRA
- MAP2TEXT
- MCAWIPS
- AMRR server
- MODL server
- BEEP
IMGGRA
(Display image as a graphic)

Radar graphic over visible image
MAP2TEXT

• Convert a McIDAS-X map file into a text file of a list of latitude/longitude segments
• This file can be edited and then converted back to a map file using MAKEMAP
MCAWIPS

- ADDE server writes out AWIPS-compatible netCDF files
- Products used throughout the NWS regions
- Capability first developed at MSFC
AMRR Server

AMSR-E Rainrate product
MODL Server

MODIS land surface temperature product
Software Plans for 2009

• **IMGCOPY**
  – Retain negative values when writing to netCDF file
  – Write McIDAS-V compatible netCDF files

• **SNDSKEWT** to work with GOES sounding retrieval files

• Ability to serve MSG HRIT files on AIX

• Replacement for IMGBOWTIE

• AVHRR Products from CLAVR-X (-XRD)
Bow tie correction
(correction for MODIS scanning)

IMGREMAP

Bow tie corrected
AVHRR Products

• Purpose: ADDE servers were developed to access products from Clouds from AVHRR Extended (CLAVR-x) for eventual transfer into AWIPS.
  – To provide forecasters with high (1km) resolution data from polar orbiters to supplement current MODIS data.
  – To have a tool for quick display of CLAVR-x products

• What is available
  – OBSX: Calibrated and navigated reflectances and brightness temperatures
  – SSTX: Masked SST and skin temperature
  – CLDX: Cloud type, height, temperature, optical depth and effective radius
  – ASHX: Volcanic ash detection, mass loading, etc. (in development)

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Visible and Cloud Type
Cloud Height and Optical Depth
Volcanic Ash

Redoubt, Alaska  24 March 2009
McIDAS-Lite and OpenADDE Status

• Neither has been updated in a couple years.
• A version of McIDAS-Lite continues to be included with the International MODIS/AIRS Processing Package (IMAPP) for visualizing MODIS products at Direct Broadcast reception sites.
• McIDAS-V replaces McIDAS-Lite
• OpenADDE will be phased out as new servers and data delivery methods are investigated as part of McIDAS-V.
PDA Animated Weather (PAW) Status

- 5,000,000 hits per month
- Google gadget available