McIDAS-X Software Development and Demonstration

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Overview

- McIDAS-X 2006, 2007
- McIDAS-XRD 2006, 2007
- Software Development in 2007
- Software Plans for 2008
- McIDAS-X ADDE Port Changes
- McIDAS-Lite, OpenADDE, PAW Status
- McIDAS-V
McIDAS-X 2006 and 2007

- ADT (Advanced Dvorak Technique)
- IMGCOPY CONTINUE=YES
- IMGDISP REPEAT= 0
- IMGREMAP
  - Fixed gaps in mosaics
  - PRO=DEST with lat/lon navigation
IMGCOPY

• **IMGCOPY CONTINUE=YES**
  – Continues to copy images even if one or more of the source images is skipped because it does not contain the specified geographical region

• **IMGDISP REPEAT= 0**
  – Frame increment can be set to zero to load all images on a single frame
IMGREMAP
(fixed gaps)
IMGREMAP
(to lat/lon nav)
McIDAS-X 2006 and 2007

- IMGRGB
- MODIS Level 1b servers read compressed DAAC files
- Foreign Satellite Data servers for MSG LRIT data
- Updates to AVHRR Level 1b server
- Meteosat-8 HRV moving sector
MODIS Level 1b Server

- Modification to read compressed DAAC files
- HDF internally compressed SDSs
MSG LRIT Data
AVHRR Level 1b Server

- Update for NOAA-18
- Correct 1x1 pixel shift with IMGCOPY
- Handle bands 3a and 3b when both are present
Meteosat-8 Moving Sector
McIDAS-X 2006 and 2007

• GRDDISP
  – Wind vectors sized as in PTDISP and proportional to speed

• GRD* commands
  – ENSEMBLE=
  – Can use GRID in Gn= keywords
  – Keywords passed correctly to Gn= keywords
GRDDISP ENSEMBLE=
GRD* Commands

- Can use GRID in $Gn=$ keywords
- ‘Global’ keywords passed correctly to $Gn=$ keywords
McIDAS-X 2006 and 2007

• GRIB servers
  – Local or remote data
  – With –XCD, database access is used for performance considerations
  – GRIB1 and GRIB2 formats

• Maximum number of grid points in a grid increased from 300,000 to 2,000,000.
McIDAS-X 2006 and 2007

• UACROSS bug fixes
  – Corrected wind direction
  – Southern hemisphere orientation corrected for winds flags

• UA* commands with UPPR schema

• WWDISP/LIST areal flood statements
UACROSS
UAPLOT with UPPR schema
McIDAS-X 2006 and 2007

• Windows XP
  – ADDE remote servers no longer work on XP
  – Physical Address Extension (PAE) must be disabled

• Cutting and pasting improved in text window
McIDAS-X 2007 GUI

- Access to online satellite archive
- GRIB file access
- GRD* selection
McIDAS-XRD 2006

- ABBA
- CRASIMG
- IFR
- LIMBFIT
- LLBOX
- MAKE_MULTIB (NASA/Langley)
- MERGE_GEO (NASA/Langley)
ABBA

- ABBA: Automated Biomass Burning Algorithm
- Retrieve wildfire text file from ftp site
- Plot locations on graphics
LIMBFIT
LLBOX
MAKE_MULTIB

- Intended for use with GOES, MET-8, FY-2C, MTSAT-1R
- Single-banded files to combine must have the same size, res, projection, and center Lat/Lon
- Has not been tested with MTSAT HRIT format
MERGE_GEO
McIDAS-XRD 2006

- ROADMAP
- WUUS
ROADMAP

ROADMAP WI HWY 151 SEG = PLATTEVILLE WAUPUN COL = 2
ROADMAP WI HWY 70 COL = 3
WUUS
McIDAS-XRD 2006

- Kalpana navigation and calibration
- MODIS MOD03 server
- Hurricane plot utilities
Kalpana
MODIS MOD03 Server

- MOD03 contains geolocation information:
  - Latitude and longitude for every 1km pixel
  - Sensor zenith and azimuth angles
  - Solar zenith and azimuth angles
  - Land/sea mask
  - Used with IMGBOWTIE command
Hurricane Plots

MAP DEF LAT=20 40 LON=75 95 ; HURR KATHINA S
McIDAS-XRD 2007

• Angles
• Servers
  – AIRS
  – MODIS NDVI
• US railroads and highways; others
**Angles**

<table>
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<th>Frame</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Tline</th>
<th>Tvelem</th>
<th>Line</th>
<th>Elem</th>
<th>SatAngle</th>
<th>SolarAngle</th>
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</table>

*IMA GRN Bounds Switches*

25 25 random

*Date* 15 Oct 2007 22:19:24
Servers

- AIRS: 2378 channel IR sounder on Aqua
- Normalized Difference Vegetation Index (NDVI) product from MODIS
Railroads
Tectonic Plates
Rivers
Interstates and Highways
India Political Boundaries
Software Plans for 2008

- MTSAT HRIT (Fastrack)
- MetOp Level 1b AVHRR FRAC
- IMGBOWTIE
- BUFR server
- AWIPS server
- GeoTIFF updates
- GOES-R (ABI navigation and calibration)
MTSAT HRIT
MetOp FRAC
(with satellite winds)
IMGBOWTIE
(correction for MODIS scanning)

IMGREemap
Bow tie corrected
BUFR Server
AWIPS Server

- ADDE server writes out AWIPS-compatible netCDF files
- Products used throughout the NWS regions
- Capability first developed at MSFC
GeoTIFF update
(Web Map Service)
GOES-R

- Advanced Baseline Imager (ABI) navigation and calibration modules
- Being used with simulated data
McIDAS-Lite and OpenADDE Status

- Added support for Mac OS X Intel
- A version of McIDAS-Lite is included with the International MODIS/AIRS Processing Package (IMAPP) for visualizing MODIS products at Direct Broadcast reception sites.
PDA Animated Weather (PAW) Status

- 5,000,000 hits per month
- Google gadget available
McIDAS-V Update

- McWeb (via mclisten)
- ADDE Port Number (via mcservl)
McWeb
ADDE Port Number

- mcserv1
  - Remove requirement for inetd/xinetd
  - Remove requirement for root access (to modify configuration files)
  - Allow serving on any port, not just 112
  - Currently limit of 5 concurrent connections