fastrack2009.1_prognotes.pdf

This file lists some of the software and structural changes included in McIDAS-X version 2009.1 that are most likely to affect your locally-developed McIDAS code. (See *http://www.ssec.wisc.edu/mcidas/software/x/fastrack2009.1_changes.txt* for the complete list of code changes included in McIDAS-X 2009.1.)

SSEC recommends that you always compile and link all local code after installing each new version of McIDAS-X. Use the information below to determine if you should make additional changes or accommodations to your local code.

- The default compiler for Red Hat Linux 5 is gfortran. Any FORTRAN module with characters beyond column 72 may not compile. An example line of code that no-longer compiles is as follows:

  ```
  TT=FK2(K)/ALOG(EXPN)                                    00000050
  ```

  Additionally, modules that begin a line with a TAB may cause compile and/or run-time errors. Sites with local code may find compiler and/or runtime errors for modules that previously worked correctly. The following modules and installation script were updated to work with gfortran:

bright.for	**grddisp.pgm**	**grdinfo.pgm**
iftok.for	**ptdisp.pgm**	**tipti.fp**
tu.pgm	**mccomp.sh**	

- The latest version of the gcc compilers created a conflict with the function name **eaccess**. The name of the function is now called **mceaccess**. Sites having local code calling the function eaccess, must be changed to call mceaccess. The following modules were updated for this name change:

eaccess.c	**m0mcpath.c**	**makefile**
mcidas.h	**pvsearch.c**	

- Two new flags were added to **mcservl.c** process. When specified, the –r option allows data transactions from remote clients. The –v flag enables mcservl to periodically check if McIDAS-V is running. If McIDAS-V is no longer running, the mcservl process will exit.
- McIDAS-X and McIDAS-XRD are now packaged into the same tar file and have a single installation script. The installation script **mcinst.sh** now has an additional flag to determine which package(s) are installed. Additionally, the disk space information has been moved from the space files (i.e., **mcidas2009.1.sp**) into the installation script. The new syntax is as follows:

  sh ./mcidas2009.1.sh *flags option package(s)*

  Where:

flags	-gcc, -noopt, -noX11, -mysql
option	make, unmake, install, uninstall
package	x (default), xrd, all (both x and xrd)

- A new flag has been added to the installation script allowing McIDAS to compile without linking to -X11 libraries. Using the new flag, -noX11, users will not have an image window, text window, a GUI interface or the ability to use F-Key menus. The build for Tck/Tk is also skipped preventing sites from using customized GUIs. This option has not been extensively tested and not to be considered fully supported.

- The performance of the AVHRR Level 1b server has been improved. This was done by reducing the number of file opens/closes, memory mallocs/frees and debug. Directory server was also updated to check return codes so it can exit gracefully. Modules updated include the two servers, **`lv1baget.cp`** and **`lv1badir.cp`** and the utility function **`lv1butil.c`**.

- The variable MAX_AUXBLOCK_SIZE was increased from 2000000 to 5000000 to accommodate large LALO navigation blocks from Metop FRAC passes. Modules changed included:

  `areaparm.inc` **`latlon.h`** **`laloutil.c`**
  `mcidas.h` **`nvxlalo.dlm`**

- GOES-13 calibration coefficients were updated in **`kbxgvar.dlm`**. Non-ADDE applications using GVAR data need to be rebuilt.

- NOAA-19 calibration coefficients were updated in **`kbxavhr.dlm`**. Non-ADDE applications using AVHRR need to be rebuilt.

- The Meteosat navigation modules were updated to accommodate satellite subpoint changes. Applications that perform navigation transforms on Meteosat-8 or Meteosat-9 need to be rebuilt. The following modules were changed:

  `nvxmsg.dlm` **`nvxmsgt.dlm`**