

Camera application software modification

The camera application *camera.exe* is a command line program. Not only is the application run from the command line, editing, compiling, and linking are done from the command line. The Chrotel Camera System computer has MKS Toolkit installed. This means most UNIX commands are available, including a C Shell. Follow these steps to modify the *camera* application.

1. Select the "C Shell" icon on the desktop. This will source *cshrc.csh* in the administrator home directory. This shell script sets up environment variables needed to compile C language programs and sets the working directory to the source directory to *D:/Chrotel/Software/Camera App*.
2. Edit the offending source file using *vi* or even better *viw*, a windows GUI version of *vi*.
3. Edit *header.h* and change the VERNUM header entry setting it the current yyyyymmdd. Add what has changed in the comment field of the FITS header entry.
4. So that the header is picked up by all source files, *touch *.c*.
5. Create a new executable with *make*.
6. Run the application with *camera*.

The application *camera* consists of a main thread, *camera.c*. This thread spawns the thread that supervises camera exposures, *accum.c*, spawns the thread that listens for TCP/IP commands, *statin.c*, and parses commands from the keyboard or received via TCP/IP. The *accum.c* thread further spawns the *lyot.c* thread that waits for messages from *accum.c* then steps the Helium filter LCVRs through the specified sequence of voltages changing voltages on the falling edge of the trigger signal received from the camera.