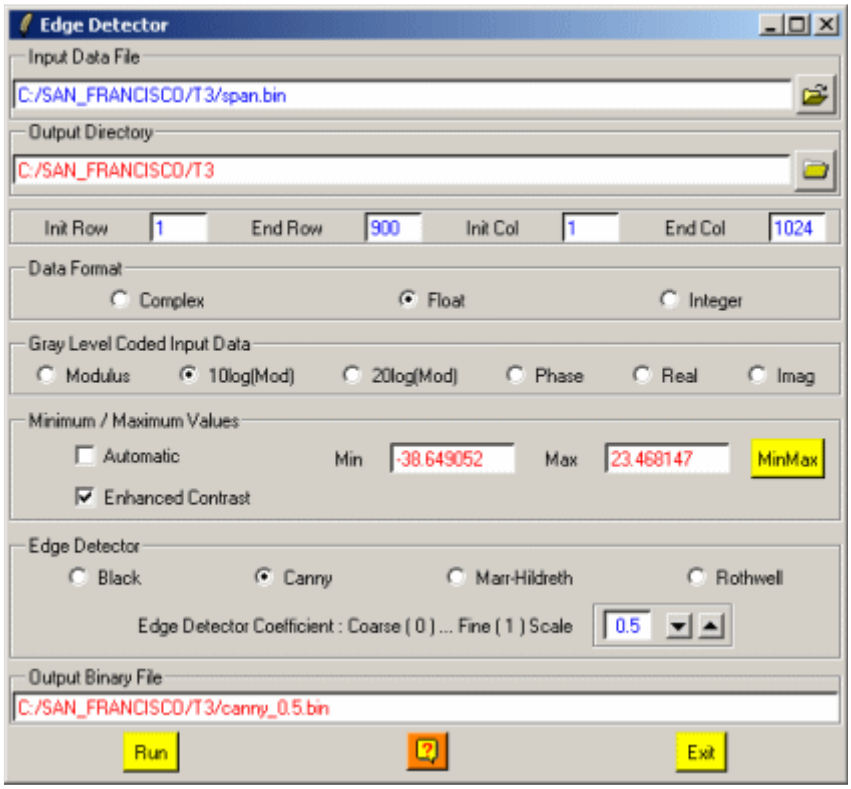
Edge Detector



Description:

This function is used to apply an Edge Detector procedure on a polarimetric raw binary data file.

Comments:

Parameters written in Red can be modified directly by the user from the keyboard.

Input/Output Arguments:

Input Data File Indicates the complete location of the binary data file to be processed.

Output Directory Indicates the location of the processed data output directory. The default value is set automatically to the **Input Directory** extracted from the Input Data File name.

Output File Indicates the name of the output file. The default value is set to the concatenation of the Edge Detector procedure name (Black, Canny, Marr or Rothwell) with the value of the Edge Detector Coefficient selected by the user.

Output Image Number of Rows/Columns:

The output image numbers of rows and columns are initialised to the input data set dimensions.
Users wishing to process a sub-part of the initial image can modify the **Init** and **End** values of the converted images rows and columns.
Note: init and end values have to remain within the range defined by the input image dimensions.

Processing Parameters:

Data Format

Indicates the type of input data.

- Complex : 4 bytes interlaced real and imaginary parts.
- Float : 4 bytes real data.
- Integer : 2 bytes real data.

Grey Level Coded Input Data

Indicates the mode of representation on which will be applied the Edge Detector procedure. The default value is set to **real**.

- Modulus : Modulus of real / complex input data (linear scale).
- 10*log10(Modulus) : Modulus of real / complex input data (db scale).
- 20*log10(Modulus) : Modulus of real / complex input data (db scale).
- Phase : Argument of complex input data (linear scale).
- Real : Real part of complex input data (linear scale).
- Imag : Imag part of complex input data (linear scale).

Min / Max Values

Scales the data range of variation

- Automatic : The first grey level index is assigned to values inferior or equal to min, while the last grey level index is assigned to values superior or equal to max.
If selected, the program automatically search the min and max values of the data, otherwise min and max values are fixed by the user.
- Enhanced Contrast : The program automatically adapts the grey level scale to data distribution. Min and max are set so that 5% of the total number of pixels are superior to max and 5% are inferior to min.

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The user can select between four proposed Edge Detector procedures and has to fix the Edge Detector Coefficient that corresponds from a coarse (0) to a fine (1) scale edge detection