EXCERPT OF THE USAGE INSTRUCTIONS FOR THE JPEG2000 ENCODER

(j2000_encoder.exe)

The full instruction can be found by typing "j2000_encoder –u". This is recommended, as the functionalities and techniques in JPEG2000 are reflected in these command line switches.

The following arguments are recognized:

-i <image file> [<image file> [...]]

> Mandatory argument, identifying one or more image files; with one file for each component. The simple image reader supports binary PGM and PGX files only.

-o <name of file for compressed bit-stream>

-rate <max rate in bpp>

> Bpp = Bits Per Pixel (default = 100)

-low_rate_tol <lower tolerance to max_rate in bpp>

> (default = 0.005)

-hi_rate_tol <higher tolerance to max_rate in bpp>

> (default = 0)

-step <normalized base step>

> (default = 0.0078125)

-quiet

> (default = verbose)

-Ftiles <hi-res tile height> <hi-res tile width> (default = no tiling)

> This argument allows the image to be broken into tiles during compression. All operations within a tile are entirely independent of the other tiles, including the operations of entropy coding, Wavelet decomposition and any colour transform and/or component subsamplingoperations. The argument's two parameters identify the nominal dimensions on the high resolution grid. The actual tile dimensions in any image component are obtained by dividing by the relevant sub-sampling factors.

-Flev[+<tnum>] <levels> [<levels> [...]]

> (default = 5 level decomposition)

Set the number of levels of Wavelet decomposition used in each image component. By default, five levels of decomposition are used in each component. If only a single parameter is supplied, it is applied to all components. When multiple parameters are supplied, they identify the number of decomposition levels for each successive image component, with the last supplied parameter applied to any remaining image components. A value of 0 is legal and indicates that no Wavelet transform will be applied at all.

-Fweights[+<tnum>] <root weights file> (default = no weighting)

This argument provides a mechanism for specifying the relative importance of different subbands to overall visual quality. Specifically, the EBCOT coding algorithm tries to minimize the overall Weighted MSE, where the default is to simply use MSE. The weights supplied via the `root weights' file for each subband are squared and then multiplied by the MSE contribution to determine the WMSE contribution from any given subband's samples. When this quantity is minimized, subbands with larger weights will be assigned greater significance in the final bit-stream.

-Cblk[+<tnum>] <ht>[x<wd>] [<ht>[x<wd>] [...]]

(default = 64x64)
Specify the nominal code-block dimensions to use in coding. In its simplest form, the argument takes only one parameter assigning an identical code-block size in both dimensions and all image components.

-Cframes[+<tnum>] [Y|N [Y|N [...]]] (default = ignore frames)

Dictates whether or not the code-block size should be reduced as necessary to conform to frame boundaries. By default, frame boundaries are ignored.

-Clazy[+<tnum>] [Y|N [Y|N [...]]] (default = full effort coding)

Determines whether the lazy coding mode will be adopted, where trailing bit-planes bypass the arithmetic coder in all but the normalization coding passe. If no parameters are supplied, the lazy mode will be adopted in all image components.

-Cvis <exponent> (default = do not exploit visual masking)

This option causes the encoder to base its rate-distortion optimization decisions upon a visually sensitive distortion metric, which accounts for the phenomenon of visual masking

-u

Print this usage statement and exit. Overrides other arguments.