Using WinECJ 2.0

File menu

Open/Preview Redraw Save Profile Save Cropped Exit

Display menu

Normal/Preview Settings
Colour Options
Size Control
Nice
Slide Show
Crop/Uncrop

Open

Select one or more *JPEG* files to view. Multiple files can be selected and viewed in conjunction with the <u>slide show</u> feature. Two alternatives to Open exist if you are running File Manager at the same time:

- 1. You can drag one or more files from within File Manager and drop them in a WinECJ window.
- 2. You can double click on a file within File Manager, the extension (e.g. ".jpg") of which has previously been associated with WinECJ.

Previewing

Selecting Open under the File menu activates an OpenFile dialog box. Apart from selecting one or more *JPEG* images for normal viewing, one can also click on the preview check box to activate the <u>Preview</u> mode.

Preview

To activate the preview mode, select <u>Open</u> under the File menu to bring up the OpenFile dialog box, and click on the <u>preview</u> check box. Within this mode, the OpenFile dialog box stays open, and images are displayed using a different set of settings (e.g. as small pictures one quarter of their original sizes) as chosen under the <u>Display/Preview</u> menu.

Redraw

Force the current picture to be repainted, usually after some display settings have been changed.

Save Profile

Save various settings in a file named "ecj.ini" under your Windows directory. The stored settings will be retrieved from this file the next time you start WinECJ.

Save Cropped

Save a portion of the currently loaded and displayed image. A <u>cropping rectangle</u> defining the portion to be retained/discarded must have already been defined. Upon completion of the SaveFile dialog, the rectangular region to be retained is then saved to the specified file. The filename specified can be the same as that of the original file, in which case the original file is overwritten.

The entire process is lossless, i.e. the cropped/saved file contains an image which is exactly the same as the retained portion of the original image. This is ahieved by performing the cropping operation in the coefficient domain.

Apart from saving the specified portion once a cropping rectangle is defined, one can also choose to visually crop the image using <u>crop</u> under the Display menu. Note that the two operations are independent: one can do a visual crop without saving, or a save without a visual crop. While a visually cropped image can be visually <u>uncropped</u>, a cropped image once saved <u>cannot</u> be physically uncropped.

Defining a cropping rectangle

The cropping rectangle is defined over a discrete grid, with valid grid points located at integer multiples of 8 or 16 pixels depending on the particular JPEG image. A cropping rectangle is specified by its top-left and bottom-right corners. To specify the top-left corner, position the cursor (the tip of the pointing finger), and press the left mouse button while holding down the shift key. Similary to define the bottom-right corner, use the right mouse button while holding down the shift key.

The two corners can be individually defined. If only one corner has been defined, it is marked by a cross. If both corners have been defined, the portion of the image to be retained is marked by a rectangle. Pressing any mouse button without holding down the shift key resets any previously defined corners.

Exit

Exit WinECJ.

Settings - Normal/Preview

Pictures can be displayed at different <u>sizes</u> and with different <u>colour</u> options. The settings can be independently specified for normal viewing and preview.

Normal

Selecting Normal under Display brings up the settings menu for normal viewing. In addition to size control and colour options, one can also specify whether to be "<u>Nice</u>" or not (i.e. to honour Windows non-preemptive multitasking).

Preview

Selecting Preview under Display brings up the settings menu for previewing.

Nice

In normal operation the decoding of a picture is interupted (in its own accord) at regular intervals, so that other programs can take over and gain a fair share of the resources. This is called non-preemptive multitasking. In preview mode one can choose to devote all resources to the decoding of the picture so that it will be finished as soon as possible. This can be achieved by de-selecting Nice under Display/Preview.

When operating in the non-preemptive multitasking mode (Nice), the decoding of a picture can be aborted midway by pressing the Esc Key.

Colour Options

Available colour options depend on the display hardware. True Colour mode is only applicable to Hi-colour and Tru-colour display cards (16 bits or higher graphics). Similarly, Windows must be running in the appropriate display mode (65,536 colours or more). All other modes are 8-bit modes, and are available to display hardware capable of, and with Windows setup to run at, 256 colours or more. Different 8-bit modes offer different speed/quality trade-off.

Ordered dithering

When none of the colour options are selected, pictures are processed and displayed in a single pass with ordered dithering. This is the speediest of all 8-bit colour modes (except for grayscale only). The resulting picture gives the feeling of a print over a fine-grained paper, which is more obvious when Windows is running at a low resolution.

Grey Only

Force subsequent pictures to be displayed in shades of grey only. Very fast.

True Colour

By default pictures are displayed in 8 bit colours with ordered dithering. If your display device supports 16 or 24 bit colours, dithering will not be necessary with this option selected. This results in excellent image quality without any penalty in decoding speed. Compared to 8 bit mode, however, 3 times as much memory is required.

2 Pass

For 8 bit display devices a 2 Pass colour quantisation process results in much better picture quality, especially if the image originates as a GIF. This mode is usually more than adequate when small pictures are displayed (e.g. in Preview mode).

2 Pass Dithered

2 Pass colour quantisation in conjunction with error diffusion (FS style dithering) results in good picture quality approaching that of 24 bits.

Size Control

Eighth Size

Picutres shall be displayed in one eighth of their original resolutions.

Quarter Size

Picutres shall be displayed in a quarter of their original resolutions.

Half Size

Picutres shall be displayed in half resolution.

Full Size

Display subsequent pictures in full resolution.

Auto

Automatically display pictures at lower resolutions if they are much larger than the size of the physical screen.

Crop/Uncrop

Visually crop and uncrop the currently loaded picture. Note that a <u>cropping rectangle</u> must have been previously defined. Note also that visually cropping without <u>saving</u> does not alter the original image file.

Slide Show

You can select multiple files to view using multiple file drag and drop in conjunction with File Manager, or from within the <u>Open</u> file common diaglog box. After displaying the first picture, WinECJ will pause for a number of seconds (the delay can be set from within the <u>Slide Show</u> diaglog box invoked under the <u>Display menu</u>) before proceeding to decode subsequent pictures.

During this specified period of inaction, pressing Home/End will cause the first/last picture on the list to be displayed. Most other keyboard input will cause the decoding to commence immediately. The order in which pictures are displayed (forward/backward along the list) can be changed at any time by back-space, left-arrow, up-arrow, page-up (backward); and right-arrow, down-arrow, page-down (forward).

A delay of -1 corresponds to an infinite delay. Pressing Esc at any time will set the delay to -1. Pressing Pause at any time will cause decoding to pause indefinitely *after* the current picture is finished.