Image Eye

v3.0

Program Manual
(covering both Windows 95 and DOS/DPMI interfaces)

ALPHA BUILD 8

coded by:

F. Markus Jönsson
Svedjevägen 7, 147 52 Tumba, SWEDEN

phone: +46-8-530 390 81
email: f93-maj@nada.kth.se
www: http://www.nada.kth.se/~f93-maj/

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The following files must always supplied:

FILE_ID.DIZ	BBS info file.
README.TXT	Installation instructions.
REGISTER.TXT	Registration form.
IEMANUAL.HLP	Program Manual in WinHelp hypertext format.
IEDECODE.DLL	Image Eye decoding and image processing engine.
WEYE.EXE	Windows User interface.
WIDIR.EXE	Windows Image folder app.
DEYE.EXE	DOS/DPMI User interface.
32RTM.EXE	DOS/DPMI extender file.
DPMI32VM.OVL	DOS/DPMI extender file.
WINDPMI.386	DOS/DPMI extender for Windows 3.1.

Introduction

Requirements:

The Windows User Inteface to Image Eye, WEYE.EXE and WIDIR.EXE, requires;
- PC compatible with i386 or better processor,
- Windows 95, or Windows NT 3.5 (not tested),
- Minimum 8MB memory; rec. min. 16MB including swap disk.

The DOS/DPMI User Interface requires;
- PC compatible with i386 or better processor,
- MS-DOS v3.3 or later,
- Minimum 4MB memory (rec. 8MB),
- VESA VBE (Video Bios Extension) driver or Bios (rec. VBE v2.0 or later).

Features:

The primary feature is raw speed, try comparing WEYE with oher Windows based image viewers and youll see for yourself.
Image Eye is designed to be a very good Quick Viewer and not an image editor or a format conversion program; after all viewing an image is the absolutely most common use of an image file...
Image Eye also sports high quality conversion from 24bit truecolor to 8bit LUT image conversion and Floyd-Steinberg dithering in 8 and 15/16bit modes.
- et c. -
Image Eye was coded using Borland C 4.02 (user interface and macro structure) and Turbo Assembler 4.0 (most really speed sensitive stuff).

Supported file formats:

Image Eye can read and display the following image file formats:

File Extension:	*Description:*
BMP, DIB, RLE, ICO, CUR	Microsoft Windows/IBM OS/2 (Device Independent) BitMap / Icon / Cursor 1, 4, 8 or 24 bits/pixel. Uncompressed or RLE.
CUT	Dr.Halo Cut file (+ .PAL - LUT file) 1..8 bits/pixel. RLE.
GIF	Compuserve Graphics Interchange Format v87a and v89a. 1..8 bits/pixel. LZW compression. Highly tuned code. No support for viewing multiple image files and overlay text.
IFF, LBM, BBM	Electronic Arts Interchange File Format. This is a more general data format; only 'ILMB' data are handled: 1..8 bits/pixel planar type 49h and 8 bits/pixel type 50h. Compression types supported: No Compression (0), Byte Run (1) (RLE).
JPG	JPEG: Joint Photographic Experts Group / JFIF. Baseline JPEG support: sequential DCT based huffman compression with

	8 bits/component data precision. Can also read extended precision quantization tables (word size) and an extended number of huffman tables (max 4DC & 4AC). YCbCr, RGB and Grayscale color spaces supported.
MAC	MacPaint image file 1 bit/pixel. 576x720 res. RLE.
NEO	Atari Neochrome image file 1..4 bits/pixel. Uncompressed.
PCX	ZSoft image (PC Paintbrush) 1,4,8, 24 bits/pixel. Uncompressed or RLE.
PIC	Pictor / PC Paint file 1, 4, 8 bits/pixel. RLE.
RAS SUN	Sun Raster format files. 1, 8 or 24 bits/pixel. Uncompressed. No support for text formatted data.
RID	FMJ-Software, Raw Image Data Descriptor Files. RGB, YCbCr, HSI and Grayscale color spaces, 8 bits/component only. An ASCII text file containing a description of how an uncompressed (raw) image is stored in another file or files. This provides for a way to view images and datadumps, like satellite imagery, which are very often stored uncompressed in simple, but nonstandard formats.
PPM PGM	PBMPLUS color (grayscale) images 1..48 bits/pixel. Uncompressed or Text format.
TGA	Truevision TARGA image files. 8, 15, 16, 24, 32 bits/pixel. Uncompressed or RLE. No support for interlaced files.
TIF	(Aldus / Microsoft) Tag Image File Format. 1, 2, 4, 8, 24 bit/pixel supported. Uncompressed, Packbits, LZW and Predicted (type 2) LZW compression. Color and grayscale response curves are ignored.

WEYE - Open File Dialog

Whenever loading WEYE without an image file as command line parameter, or when choosing *Spawn New* or *Load New Image* from the Image Menu, the Open File Dialog pops up.
This is a standard Windows file dialog where you select an image to load. The directory and image file is remembered and used as a starting point, next time you come to this dialog.
Doubleclicking a file or selecting one and clicking Ok loads the image and displays it in a window. See Image Menu further actions!

WEYE - Image Menu

If the mouse cursor changes to a double or a quadruple arrow when moving it over the image, it indicates that the image is larger than the present windows size. Pressing down the left mouse button and dragging the mouse will then scroll the visible portion of the image.

Pressing the right mouse button over the image brings up a menu with the following commands

Spawn New...		Pops up the Open File Dialog and launches a new instance of WEYE with the new image, retaining the current image on screen.
File:	*Load New Image...*	Pops up the Open File Dialog and launches a new instance of WEYE with the nre image, closing the current image.
	Save Image...	Not yet implemented.
	Delete Image File	Prompt you to delete the currently loaded file from the disk.
	Print Image...	Pops up a Print Image dialog box wich wil allow you to, guess, what, print the image to a, guess again, printer of your choice!
	Uninstall Program	Cleans up the registry from all Image Eyes entries.
	Create Link to DLL	Not yet implemented.
	Exit Program	Same as doubleclicking the [-] thingy.
Edit:	*Copy to Clipboard*	Copies the image to the clipboard. Uses the bitmap format used to display the image on the screen (i.e.. 8bits/pixel in a 256clr video mode, even if the original image were 1 or 24 bits/pixel). Note that since WEYE uses WinG bitmaps not all programs will display it correctly).
	Size Win to Image	Resizes the image windows to the image size (if screen is large enough).
	Resize...	Not yet implemented.
	Adjust Colors...	Not yet implemented.
	System Info...	Bring up a dialog box with some system and image info.
Preferences...		Brings up the Preferences dialog box.
Help...		Brings up the index page of this WinHelp file.

WEYE - Properties Sheet

Heres where you configure the operation of WEYE:

[X] Use Maximum colors (palette modes)

Normally, in 256clr video modes, Windows has 20 static colors and 236 modifiable, when checking this options therell be only 2 static colors (black and white) and 254 modifiables. This makes images look better but makes all dialogs, title bars et c, become black and white for as long as you have an Image Eye window open.

[X] Use fixed halftone palette (palette modes)

Uses Windows standard fixed colormap, optimized for showing 24bit images in 16 and 256 color modes. This will enable you to have multiple images on screen in palette modes without garbled colors in inactive windows. Looks relatively good when combined with Dithering On.

[X] Use Floyd-Steinberg Dithering

When displaying an image on a display with lower bitdepth than that of the image, Floyd Steinberg dithering will be used to greatly increse the subjective quality of the image, takes some extra time to do but highly recommended anyway, even for 32K and 64K color modes...

[X] JPEG fast DCT (lower quality)

Use a faster but less accurate DCT algorithm when decompressing JPEG images. The image quality degradation might not be noticable, but then the time saving will probably be even less so...

[X] JPEG fast unsubsample (lower quality)

Use a block filter when usubsampling subsampled JPEG color components instead of a more accurate, but slower, triangular filter. The subjective difference is very slight (unnoticable in most cases) and almost all JPEG decoders stick with a block filter, so you may want to use this option...

[X] Run maximized

Initially display an image in a maximized window state.

[X] Display image comment (if any)

If the image contains some sort of text data field, it will be displayed in a pop up box when this option is checked.

[X] Display performance measurements

Pops up a dialog box detailing the time its took to:

Read & Decode	Read the image file from disk and decode it to memory, (Note! depends upon if the data is in the disk cache).
Convert & Display	Convert color space, if necessary. Convert bith depth and dither, if necessary. Convert it to a form acceptable by windows (WinG bitmap), and finally pass it to windows for display (Note! windows may take considerable time after that, before the image is actually displayed, but that isnt WEYEs concern).

WIDIR - Windows Image Folder

DEYE - DOS/DPMI Viewer

Revision History

future versions,

More input formats; just send me a description of any format(s) you want me to include (or send me some files and I might reverse-engineer'em).

A Windows 95 image folder DLL.

Save image and all teh other stuff mentioned as Not yet implemented.

version 3.0, <95-0?-??>

First release of the Windows User Interface.

Adds

Other titles from FMJ-Software include:

(theese titles are available from http://www.nada.kth.se/~f93-maj/fmjsoft.html)

2PAT: Wavetable Instrument Converter *(v1.5)*

Converts:
AIF, AU, EFE, FSM, GKH, IFF, INS, KRZ, MOD, MTM, PAT, RAW, SBK, SDK, SDS, SDX, SMP, SND, STM, S3M, SYW, TXW, 669, ULT, UWF, VOC, WAV, WFB, WFD, WFP.
Into:
PAT, WFP, WAV, SDS, AIF, RAW, SND.
Supports auditioning instruments on the Advanced Gravis Ultrasound and the Turtle Beach Maui cards.
[2PAT15.ZIP]

Midi Patch Browser *(v0.82)*

A generic midi integrator that'll give you a friendly interface for easily selecting and playing patches on your midi system.
Fully supports multiple patch bank caching as well as GS banks.
With special Ultrasound support for playing any .PAT file on disk.
[MPB082.ZIP]

Ultrasound Patch Librarian: *(v0.2)*

Load and manage arbitrary patches from disk to GUS-memory; let's you load and save lists of patches.
Designed to be used as a companion to the sequencer of your choice.
[UPL02.ZIP]