

FAST EDDIE™

Fast Eddie™ (shareware) copyright 1992-1996, LizardTech, Seattle, WA USA.

Have you ever wondered why the miracles of modern science can't create a better 8-bit image? Have you ever worked your artistic soul into a frenzy creating a beautifully rendered image, only to have it look awful when shown in 8-bit color? YOUR TROUBLES ARE OVER!

Fast Eddie is a revolutionary shareware application that converts and compresses 24-bit color images without a loss of image quality. Fast Eddie creates an eight-bit optimal color palette for PICT images for Macintosh and TIF for Wintel that is used to represent a specific image.

Fast Eddie is unlike any other method of converting images from 24 to 8-bit (such as deBabbleizer and Photoshop). While those applications use the most popular or high frequency colors in an image, Fast Eddie uses patented vector quantization technology that concentrates on the low frequency information in an image—producing excellent color detail and beautiful reproductions of your 24-bit images.

Registration of Fast Eddie (US\$25) includes support for multiple images, and file names, technical support and a generous upgrade offer to Fast Eddie's big brother, Planet Color as well as the Planet Color Xtras for Macromedia Director 5.

The unregistered version of Fast Eddie converts single images and does not allow the option to save files with a particular file name.

Contact:

LizardTech
911 East Pike, Suite 231
Seattle, WA 98122
206-320-9969/Fax: 206-320-0989
EMail: info@lizardtech.com
URL: www.lizardtech.com



Using Fast Eddie 3.0

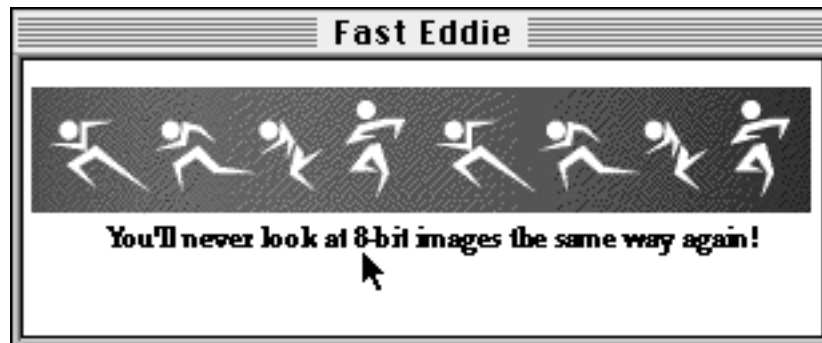
System Requirements

In order to use Fast Eddie you must have the following:

- Macintosh operating system 7.0 or better w/drag and drop (Mac OS 7.5.1 recommended)
- a modular Macintosh or PowerBook
- at least 1,200Kb free RAM and enough hard disk space to store both the original and the converted versions of the images you wish to convert.

Two Ways to Run Fast Eddie

The simplest way to convert an image using Fast Eddie is to simply drop a 24-bit PICT image file on the Fast Eddie icon. If you haven't registered, we'll provide a friendly little reminder. If you have paid and received your Registration Number, you can enter it now using the Register button. Otherwise click on Not Yet.



Fast Eddie will then convert your image (while showing our cool progress window, above) and write out an 8-bit PICT file to the same directory in which your original file resides. Fast Eddie DOES NOT over write your original file, it writes out a new file using the original file name (in the format “• originalfilename”).

That's it! Remember that, even on a Power PC, an unregistered copy of Fast Eddie uses the old (SLOW) 68K code and will only process one image at a time.





Menu Items

Apple

About Fast Eddie... gives you the goods on the fine folks that brought you Fast Eddie.

File

Select File allows you to open and process an image using the traditional Open dlog.

Unregister eliminates the Registration Number on properly registered copies so you can pass Fast Eddie along to a friend (see Chapter 3, Registering Fast Eddie 3.0, If You Want to Pass Along Fast Eddie to a Friend).

Quit

Closes Fast Eddie



Registering Fast Eddie 3.0

Fast Eddie is available for only US\$25 per copy (one copy per user). Quantity discounts are available. Contact LizardTech for more information.

Normally you receive your registration name and code within a week. Slow turnaround times occur if you mail your registration, during holidays, vacation time, and directly after we release a new version.

Two Ways to Register


You can enter the requested information in the Registration dialog in Fast Eddie (and Print of Fax directly from Fast Eddie) or you can print and fill out the Registration Form provided (see Chapter 9 or this document for both the Fast Eddie Registration Form and the Planet Color Generous Upgrade Offer Form).

Payment

We accept Mastercard, Visa and Discover cards as well as check or money order. Register electronically (via fax or E-Mail) using a credit card or mail your check or money order to the addresses provided (see Chapter 7, How to Contact LizardTech).

About the Provided Registration dialog

Although you can fill out all the required information directly in the dialog shown below, the only fields that we keep are User Name and Registration Number. The other fields are added to make faxing and printing easier.



To register your copy of Fast Eddie 3.0, please send US\$25 to:
Fast Eddie Registration, LizardTech/PCI, PO Box 2129, Santa Fe, New Mexico 87504.
Fax: +1 (505) 989-9292; Voice: +1 (505) 989-7117;
E-Mail: register@lizardtech.com; URL <http://www.lizardtech.com/lizardtech.html>
Registered users of Fast Eddie are entitled to technical support, the "Fat Binary" version of Fast Eddie (that runs 6 to 8 times faster on a Power PC™), multiple file support, free upgrades to future versions of Fast Eddie, a generous upgrade offer to Planet Color and our eternal gratitude. Make Ines happy and send in your registration fee!

User Name:

Registration Number:

Address

City, ST, ZIP

MC/Visa # **EHP**



Write down Your Registration Info!!

Write down the name under which you registered your copy of Fast Eddie 3.0 as well as the serial number provided to you. It is very important that you write down and enter your name EXACTLY as you submitted it to us (i.e., UPPERCASE or lowercase matters to the registration function).

Once You Receive the Registration Number

1. Start Fast Eddie by double-clicking from the Finder (instead of dropping an image on the Fast Eddie icon).
2. Click on the button labeled “Register.”
3. Fill in the User Name and Registration Number fields (the other fields are there in the event you want to complete the form and Print it directly from the application).
4. Click on “OK.”
5. You are registered! You can now access all the benefits of being registered: drag & drop multiple images, the wicked-fast Power PC code is enabled and you get technical support!

If You Want to Pass Along Fast Eddie to a Friend

Please use the Unregister menu item in the File menu and include this ReadMe file. You shouldn't have to pay your friends' registration fee, after all.

Upgrade to Planet Color

If you like the image quality produced by Fast Eddie, you'll love his big brother Planet Color. Use the Generous Upgrade Offer Order Form (in Chapter 9) to get Planet Color for only US\$75.00--- that's 50% off the retail price!

Planet Color is specifically designed for multimedia presentations, web pages and animation.

- Support for PICT, PICT Series TIFF, Interlaced GIF and QuickTime PICT image files.
- Integrated batch processing of images using a “watch folder.”
- Ability to seed custom palette colors (using imported CLUT files).
- Convert images to any number of optimal colors, from 2 to 256 (varies with output file format)
- Superior direct mapping of images to 16-bit.

Direct support for QuickTime™ movies coming soon to Planet Color!



MCICR Technology FAQs

What is MCICR?

MCICR is a revolutionary technology for digital images computers that compresses and converts 24/32-bit (photo realistic quality) images with no loss in visual quality. Fast Eddie and Planet Color are based on the MCICR process, which was developed at Los Alamos National Laboratory, in Los Alamos, New Mexico. MCICR is true compression. However, using MCICR, compressed images are written in a standard 8-bit file format (using only 256 custom colors). MCICR has three advantages over traditional image compression:

- images converted with MCICR have the quality of 24-bit images, but the size of 8-bit images
- the physical size of converted images is less than one-third that of the original (disk space)
- images compressed with MCICR are written in standard graphic file formats
- MCICR'd images do not required decompression nor the processing overhead required by decompression.

MCICR is a set of computational tools that reduce the storage size of digital images (or image-like data, such as sound, digital video and animation) without perceptual loss in quality.

MCICR consists of two major parts. The first is the construction of an optimal palette (a color look-up table, or CLUT) by which high resolution images can be represented in a format acceptable by the lower resolution device. These lower resolution devices include 8-bit CRTs, color printers, etc.

The second aspect of MCICR involves the assignment of elements in the high resolution image to the palette of lower resolution, thereby completing the conversion process. In addition, human sensory perception models are integrated into this second aspect of the process, the resulting images being excellent representations of the original data.

Is MCICR a lossy or lossless compression process?

MCICR is a lossy process in that the original image data is replaced with the converted image data. However, MCICR does such a good job of representing the image, by minimizing errors in low frequency data, that converted and compressed images are virtually indistinguishable from the original.

Who owns the rights to MCICR?

MCICR was developed at Los Alamos National Laboratory over a several year period and at an expense of several million dollars. LizardTech holds exclusive rights to the MCICR patents for the life of those patents (to the year 2008).

Is LizardTech part of the federal government or Los Alamos National Laboratory?

No. LizardTech is a privately-held commercial company. LizardTech's economic and social goals are to bring enabling technologies to market. These technologies, developed by LizardTech or by public entities, are designed to allow consumer access to large data sets (such as high-quality image and sound data), increase user productivity and in general increase the quality of human life—all while making a reasonable and justifiable profit.



Does LizardTech get special consideration from the US Federal government?

NO. LizardTech pays a royalty for every copy and every sub license of MCICR. Although we have access to the original MCICR scientists at Los Alamos, LizardTech must rely on its considerable engineering, theoretical and marketing resources for its MCICR-based consumer products.

Why not make MCICR public domain?

Two reasons. MCICR was developed using tax-payer dollars. MCICR royalties “pay back” the federal government and allow Los Alamos to continue the Technology Transfer Initiative (under which MCICR was licensed, see Chapter 6, Save the TTI!). The second reason is the profit motive. The MCICR technology will only expand and become refined if LizardTech and its industrial partners can expect to collect a reasonable profit from its work for their shareholders.

How is MCICR different than JPEG/MPEG or other lossy compression?

Although useful in many different situations, the JPEG/MPEG standard compression schemes lack the optimization for low frequency data and low-resolution devices afforded by MCICR. Also, whereas MCICR-compressed images do not require decompression, JPEG/MPEG requires considerable processing time and effort for this task.

Can MCICR speed up or increase the quality of existing lossy compression?

Yes. The vector quantization(VQ) algorithm within MCICR is optimized for both time (speed) and space (image detail). This low frequency image data is the most difficult to maintain in lossy compression, yet the most important (the majority of image detail is contained in the low frequency range).

How is MCICR different than existing methods of creating indexed images?

Companies such as Adobe Systems and Equilibrium have made great strides toward enhancing indexed image conversion. However, they appear to use some variation of the standard Median Cut and/or the Most Popular method for converting images. MCICR merely manifests itself on personal computers in the form of indexed images. Both the way colors are picked for the CLUT and the method of projection are unique to the computing industry (so unique, that a patent was issued to protect the integrity of the algorithm).

What platforms will MCICR work on?

MCICR is platform independent. The process can be implemented in both hardware and software. Aspects of MCICR (such as the VQ) can be integrated into existing technology to enhance other methods of compression and conversion. LizardTech’s MCICR-based products currently support Macintosh (PPC native) and every flavor of UNIX. C++ MCICR libraries are available for any computing device.

Is MCICR compatible with lossless compression?

Most of the compressible data within images is reduced to the point that lossless compression routines provide little or no additional reduction in image file size.

What products currently exist that use MCICR?

Fast Eddie for Macintosh, published by LizardTech was the first of many MCICR-based products. Planet Color, released by LizardTech in September of 1993, extended the functionality of MCICR and added many user features (such as palette seeding and manipulation, batch processing and



popular graphic file formats). Planet Color is designed to convert and compress moving images and animation as well as single, still images. A myriad of software and hardware applications, including those developed by other firms, will utilize MCICR in the future.

Are converted images just like the original 24-bit images?

MCICR compressed and converted images are visually indistinguishable from the original images. Since MCICR is lossy, the original data is replaced upon conversion (although MCICR-based products do not over-write the original files).

Can converted images be reconverted to their original color space?

Yes. Although Fast Eddie and Planet Color do not support this feature, applications from other publishers (such as PhotoShop by Adobe Systems) have the ability to switch from an indexed color space back to the RGB or CMYK modes.

Can images converted with MCICR be manipulated like the original 24-bit images?

Yes. However, applications that manipulate images by changing the structure of all three or four color channels require that images be converted back to either the red, green, blue (RGB) or yellow magenta, cyan, black (CMYK) color space.

Can images converted with MCICR be printed like the original 24-bit images?

Yes. Software applications (including device drivers) that fully conform to PostScript Level II convert the indexed to CMYK or RGB, depending on the printer. For example, Aldus PrePrint examines images and when it finds an indexed image it converts that data automatically to the CMYK color space for separations. Most all desktop color printers from companies such as Tektronics will print MCICR-converted images. In fact, since all color printers have to convert images to a lower resolution color space, printing MCICR-compressed and converted images is faster and usually higher in quality than using the original 24-bit image.

Can images converted with MCICR be displayed like the original 24-bit images?

Yes. However, a few applications (such as TeachText from Apple Computer) do not recognize index color information and/or must project 8-bit images using a generic (system) palette. Fortunately this the exception rather than the rule because the result is less than desirable.

What file formats and platforms does MCICR support?

MCICR is format and platform independent. The functionality of MCICR-based applications is being broadened to include support across several file formats and all personal computer platforms. Images converted with the designated platform and format can be further optimized within the software (for example converting a 24-bit Macintosh image to a 8 or 16-bit IBM-compatible PC color space).

Is it possible for other developers to license MCICR code and/or the patent itself?

Yes. LizardTech has several licensees and continues to work with other developers to license both code libraries (C class) and the patents proper. Although all license agreements must be royalty based, the actual figure is extremely reasonable and negotiable (depending upon intended use, projected unit sales and the terms of the license).



LizardTech is charged by our technology transfer license agreement to develop and enable other publishers in securing the use of the MCICR technology, for a small, reasonable fee. In addition, third party developers of CD ROMs, animation and multimedia presentations can display a small sticker (Fast Eddie Was Here) that assures consumers that their products were developed using the finest image conversion and compression software available today.

Who uses MCICR?

Since the release of Fast Eddie in August of 1992, thousands of users world-wide have purchased the product. Although a complete list is impossible here, it includes Apple Computer, IBM, Microsoft, Paramount Pictures, MacroMedia, Wayzata Technology, Activision Studios as well as every major multimedia production studio and every major research university in the United States.

If MCICR is so revolutionary, why doesn't the entire industry use it?

Most users don't expect to get quality images using only 8-bits of color data. In addition, virtually all new technologies suffer from the Not Invented Here (NIH) and/or the Too Good to be True syndromes. Industry and market acceptance is rapidly increasing for MCICR as new products and processes are developed.

Where can I get more information?

LizardTech is responsible for development and marketing of MCICR-based consumer products and for licensing MCICR to other publishers. They can be reached at the following address:

LizardTech
911 East Pike, Suite 231
Seattle, WA 98122 USA
Voice: 206-320-9969 • Fax: 206-320-0989
E-Mail: licensing@lizardtech.com



Save the TTI...

A portion of every dollar received from the sale of MCICR-based products (including Fast Eddie™ and Planet Color™) goes to help continue the Technology Transfer Initiative (TTI) at Los Alamos National Laboratory. This initiative, mandated by the US Congress in 1989, is in danger of ending up on the floor of the federal budget editing suite.

Why should you care? The best reason to continue the Technology Transfer Initiative is that scientific advances made for defense purposes can be made available to the public and can be used to help strengthen US industrial competitiveness in the global marketplace.

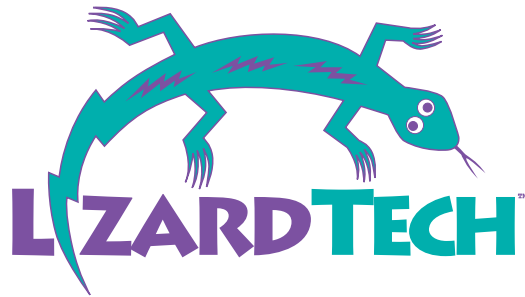
This isn't a case of the feds using taxpayer dollars to muck-up the free market nor to benefit a few large companies that already own half the planet. The TTI works primarily to benefit small businesses (the same small businesses that generate over 85% of all new jobs).

Contact your US Senator or Congressperson to show support for the Technology Transfer Initiative and/or contact the two New Mexico Senators that co-sponsored the 1989 Stevenson-Wylder Act that created the TTI:

Senator Jeff Bingaman (D, NM)
703 Hart Senate Office Bldg.
Washington, DC 20510-3102
Voice: (202) 224-5521

Senator Pete Dominici (R, NM)
324 Hart Senate Office Bldg.
Washington, DC 20510-3102
Voice: (202) 224-6621





How to Contact LizardTech

Orders

We accept orders by fax, E-mail or snail mail:

Fax: +1 206-320-0989

E-Mail: order@lizardtech.com

Technical Support

E-Mail: techsupport@lizardtech.com

Fax: +1 206-320-0989

Voice: +1 206-320-9969

USSMS (United States Snail Mail Service) Address

LizardTech

911 East Pike, Suite 231 Seattle, WA 98122

Check out our Web Site

URL <http://www.lizardtech.com>



The Fine Print

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Acknowledgments

Fast Eddie 3.0 for Macintosh: John Hall, Jim George and John R. Grizz Deal. Copyright 1992-1995, LizardTech, Santa Fe, NM. Fast Eddie is based on the MCICR image compression process created and patented at Los Alamos National Laboratory by Vance Faber, Jim White and Jeff Saltzman. MCICR optimization by John Hall and Olaf Lubeck. This software is based on DropShell by Leonard Rosenthal and friends. DropShell C++, by John Hall, available free, soon.

Logos and artwork: Jeff Segler, Atomic DoG, Inc., Santa Fe, New Mexico.

StuffIt is THE industry standard for loss-less compression. Thanks to Aladdin Systems, Inc. & Raymond Lau for allowing us to cut distribution costs by compressing our software using the greatest loss-less compression available anywhere.

Special Thanks: Our families and friends, Layne Harris at Lizardtech (Herr Web Meister), the United States Department of Energy and US Senators Jeff Bingaman (D-NM) and Pete Domenici (R-NM), Phil Bates and the ARTBEATS gang, Mike Backes and Amblin Entertainment, the University of California/Los Alamos National Laboratory, the American Film Institute and a myriad of others who have influenced our market and design decisions.

Planet Color, the Planet Color logo, MCICR, LizardTech and the LizardTech logo, Fast Eddie, the Fast Eddie logo, and the stylized running guy are trademarks of LizardTech. All other trademarks are the property of their respective holders.

Send Lawyers, Guns & Money...

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1. don't steal or give away our software
2. you don't own Fast Eddie, you have a limited license to use it on one machine
3. if you use Fast Eddie for more than 15 days, you MUST register and pay the US\$25 registration fee.
4. if this software doesn't do what you thought it would, sorry—call and let's talk.



We can't keep the lights on if we don't make some money. Fast Eddie is the result of a lot of hard work. Like you, we deserve to get paid for working hard.

The current method of protecting intellectual property such as a book, music or software, is through the copyright laws. MCICR, the compression process upon which Fast Eddie and Planet Color are built, are protected by US and international patents. The actual software, the written words, are protected by copyright. This copyright law stipulates we must provide adequate notice as to the terms and conditions of our license with you, the consumer. Which we have now done—in several forms within this Fast Eddie package.

The Actual "Break the Seal" Software License
LizardTech End User License Agreement For Fast Eddie™ Software, Macintosh version 3.0.

BY DOWNLOADING AND INSTALLING THE APPLICATION YOU ACCEPT ALL THE TERMS AND CONDITIONS OF THIS AGREEMENT. If you do not agree with the terms and conditions of this Agreement, you must erase from all devices both the Fast Eddie software and the installer you downloaded.

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Government users other than under a DoD contract or GSA schedule are hereby notified that use of this software is subject to restrictions that are the same as or similar to those set forth above.



The Fast Eddie 3.0 Shareware Registration Form

(1) Fill out and fax this order form to +1 206-320-0989 (fastest)
or (2) Send order information via E-Mail to: register@lizardtech.com
or (3) Fill out and mail this order form to:
LizardTech, 911 East Pike, Suite 231 Seattle, WA 98122 USA

User Name _____

Organization _____

US MailAddress _____

City _____ State _____ ZIP _____

Country _____ Phone (_____) _____ - _____

Fax/E-Mail(for fast processing) _____

Product	Price	Quantity	Amount
-----	-----	-----	-----
Fast Eddie 3.0	US\$25.00		
-----	-----	-----	-----

Shipping & Handling (FREE in US & Canada) Shipping _____
(International: add US\$5 for shipping)

Tax _____
(NM only: 6.25%)

TOTAL _____

Payment _____

___ Check/Money order enclosed (US funds only)

___ Visa ___ Mastercard ___ Discover

Exp. Date _____ Signature _____ Date _____

(Please allow 2-3 weeks for delivery via US Mail.)

OFFICE USE ONLY _____

User Name _____

Registration Number _____



The Planet Color Generous Upgrade Offer Form

(1) Fill out and fax this order form to +1 206-320-0989 (fastest)
or (2) Send order information via E-Mail to: register@lizardtech.com
or (3) Fill out and mail this order form to:
LizardTech, 911 East Pike, Suite 231 Seattle, WA 98122 USA

User Name _____

Organization _____

US MailAddress _____

City _____ State _____ ZIP _____

Country _____ Phone (_____) _____ - _____

Fax/E-Mail(for fast processing) _____

Product	Price	Quantity	Amount
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Planet Color (Retail is \$149.00)	US\$75.00		
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Shipping & Handling (FREE in US & Canada)	Shipping	_____	
(International: add US\$5 for shipping)			

Tax _____			
(NM only: 6.25%)			

TOTAL _____

Payment _____

___ Check/Money order enclosed (US funds only)

___ Visa ___ Mastercard ___ Discover

Exp. Date _____ Signature _____ Date _____

(Please allow 2-3 weeks for delivery via US Mail.)

OFFICE USE ONLY _____

User Name _____

Registration Number _____

