



***The Perfect
Solution
People***

***World
Leaders***

*in Digital Image Management
and Instant Messaging
Software*



ACDSee 3.1

For Windows[®]

White Paper
August 2000

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Market Segment Overview

We live in a world where visual media surrounds us, because images are an excellent way to communicate, whether in business, education, or among family and friends. Television, billboards, movies and Internet advertising all place images before us to capture our attention. Digital imaging represents the evolution of visual media and provides great potential to advertise, design and express ourselves better than ever before. Digital imaging also brings significant technical and economic advantages to the ways in which we design, pre-press, print and publish. As we progress toward an ever more technologically based society, the use of digital images will only broaden.

The advent of the Internet, the availability of digital imaging devices (scanners and digital cameras), and the development of easy-to-use software tools let you do more with images than ever before. You can take pictures with a digital camera, view them instantly, and download them onto your computer. You can enhance images, add captions, combine images and then easily share them with the world. You can also print your images in full-color, with photographic quality.

The kinds of people who work with digital images include: graphic artists, designers, photographers, doctors, educators, entertainers, law enforcement officials and web site designers. These people can be found in various types of agencies, such as: publishing houses, newspapers, advertising agencies, museums, libraries, universities, the film industry, medical institutions and game development companies. Recent developments in digital imaging technology have increased the ease-of-use, accessibility, and affordability of digital imaging, and it is now possible for anyone who owns a scanner or digital camera to get involved in this exciting medium.

The digital image market is composed of three main areas; image acquisition, image processing and image output.

Digital image acquisition is the fastest growing area of the market. It refers to how you acquire images, whether from a camera, scanner or video recorder. In digital imaging, the better the initial image, the better the finished product. In recognition of this fact, and in anticipation of an ever-increasing demand for high quality digital images, companies like Kodak, Hewlett Packard and Sony are developing and improving devices to capture images at higher resolutions, and with superior color quality.

Digital image processing, which provides consumers with many different ways to manipulate their captured images, is the most established market segment. Through the digital imaging process, the finished product can be vastly changed from the original captured image. Companies such as Adobe, Corel and Macromedia are predominant in this area of the market.

Digital image output focuses on the display of the finished image. The most common format to this point has been printed media. However, the increase in the types of display devices available on the market (such as handheld organizers and presentation projectors), and the merging of digital images

with other media means that how digital images are used will continue to become more diverse.

The focus of many companies has been on one of these three areas, with some minor inclusions from the other two areas to provide functionality. One issue that has been poorly addressed by many companies is what users do when they have all those images, in various stages of development, on their system. Management of image inventories is becoming a key issue for many professionals and home users as acquiring digital images becomes easier.

ACDSee® 3.1 (the software described in this white paper), has become the software standard for the management and viewing of digital image inventories. This paper provides you with an overview of the numerous technologies and functions of this valuable program and explains some of its many possible uses.

Executive Summary

ACDSee®

ACDSee named ZDNet 2000 Shareware Program of the Year award.

PC Magazine

“The best Graphic/Multimedia Viewer ever released!”

CNET reviews

“ACDSee beats...other graphics viewers hands down in terms of image viewing performance.”

Stroud's CWSApps™

ACD Systems is a world leader in the delivery of digital image management software to users in business, government, and educational or home settings. Our products offer many ways for users to manage, view and enhance images found on their system, that they have acquired from external devices such as scanners and digital cameras or that they have imported from other programs.

With ACDSee you get the fastest and most powerful image Viewer available for Windows®. Integrated with an easy-to-use interface, it has an intuitive quality about it that allows anyone to pick up their mouse and start viewing images. The program can easily handle thousands of images at a time and supports over 40 of the most popular image formats.

ACDSee however, is much more than just a simple image viewer. With it you can easily do *any* of the following:

- Prepare a slideshow for a presentation
- Manage images in a standard directory structure
- Create image databases for viewing or storage
- Play multimedia files with the click of a mouse
- Acquire images from a scanner or digital camera
- Create contact sheets of thumbnail images
- Send pictures by e-mail, and more...

ACDSee's Photo Enhancer allows you to touch up, or dramatically alter your photos with many easy-to-use features. A preview allows you to see what the finished copy will look like as you adjust the color balance, contrast or black/white point. Photo Enhancer also lets you change the appearance of the image with features like emboss, blur, sharpen or sepia, and there are many other elements to help you change the look and feel of your photos. In addition, with multiple levels of Undo/Redo, generating a final copy is quick and easy.

The ease of expandability is also addressed in ACDSee, as third party plug-ins can now be added to the program for increased functionality. The HTML Album Generator, SendPix and Create and Print a Contact Sheet, are three of the plug-ins included with this version. Due to ACDSee's popularity, many more plug-ins are anticipated.

Whether you are a novice or an advanced user, ACDSee provides features to make managing and manipulating your images quick and easy.

ACDSee 3.1 New Feature Highlights

Imaging Browsing

- Save your favorite Browser pane/toolbar configurations using the Layout Schemes command
- Play embedded audio in Exif JPEG files
- Group archives with folders in file list using the Options

Image Viewing

- Play audio clips embedded in images

Photo Enhancement

- Enjoy the improved crop feature

Image Manipulation

- Make batch level adjustments to your images
- Create a contact sheet of thumbnail images using the convenient contact sheet plug-in
- Send pictures by e-mail

User Interface

- By right-clicking on the toolbar you can customize the shortcut buttons you want. By using of the Layout Schemes command you can also save Browser pane/toolbar configurations.

Where is ACDSee Used?

ACDSee is popular among consumers in a home setting because it is easy to use. However, through its speed, functionality and flexibility, it has also proven itself not only helpful, but in many cases indispensable to professional users in the course of their daily work. The following examples reveal some of the ways in which ACDSee is used in the professional world.

Medicine

In order to increase diagnostic efficiency, Radiologists are moving toward digital imaging systems that use ACDSee to manage thousands of X-Ray, CAT scan and MRI images recorded in computer file format.

Medical equipment developers use ACDSee to develop visual inventories of their equipment and to create presentation slideshows to effectively market their products.

Ophthalmologists use ACDSee to manage retinal-scan archives, track patients' eye development and add case-specific descriptions for future reference.

Dentistry

Dentists have found ACDSee to be an excellent tool for tracking changes in dental structure during orthodontic treatment.

Law Enforcement

Digital cameras are used routinely by the police to record crime scene details, and ACDSee is often the platform of choice to acquire the digital-camera images, file them effectively, analyze them, and present them for review.

Police often find that individuals engaged in creating and distributing illegal forms of pornography attempt to hide images on their computers using non-image file-extensions. When investigating such activities, police use ACDSee to scan computer systems for these types of files, as it quickly recognizes them as images, even though they do not have image file-extensions.

In forensics, micrographs from different sources and with different file extensions are often created in the investigation of evidence. These images are easily viewed with ACDSee, as the program recognizes the various image formats quickly, thereby eliminating the need for several programs specific to viewing different image formats.

The Military

ACDSee is used by the military for both engineering and intelligence gathering purposes, as it is highly capable of managing image databases for such things as ship reconstructions and aerial photography.

Academia and Research

In Astronomy, ACDSee is used to catalogue interstellar images from telescopes.

In Biology, ACDSee is used in combination with digital cameras to take time-lapse photographs automatically for studying developmental cycles in organisms.

In Meteorology, satellite images are presented in slide shows to track weather patterns.

In Histology and Microscopy, electron micrographs and other micro-images are tracked in the program's powerful database.

Manufacturing

ACDSee is often used by manufacturers to compile visual records of equipment product lines and related items, and to manage invoices by scanning them and organizing them into easily searchable folders.

Manufacturers also use ACDSee to track product performance -- analyzing regular wear and tear, as well as subsequent damage patterns in the case of failures.

For many manufacturers, ACDSee is the platform of choice because of its fast, thumbnail browsing of images and its ability to create and print thumbnail contact sheets.

Photography

ACDSee's intuitive interface allows professional photographers to access and organize photos quickly and easily. In only a few moments pictures captured on a digital camera are acquired and saved in a designated directory, dramatically reducing the downtime associated with the use of conventional cameras. Photos are instantly viewed in either full view or thumbnail mode prior to the creation of a contact sheet. The acquisition of photos can be significantly improved with the use of a supported ACDSee camera plug-in. ACDSee is used to acquire old photos easily through a scanner.

Retail

Retailers use ACDSee to create and manage large, graphical archives of inventory and product lines, as images are stored easily and accessed quickly.

Advertising

Advertisers often use ACDSee's Photo Enhancer to alter images for advertisements, and they often rely on ACDSee's powerful filing system to manage promotional images and banner-ads for the World Wide Web.

Graphic Design

Graphic designers use ACDSee to manage the many images they create in different proprietary programs.

Entertainment Industry

Many game-development companies use ACDSee for its ability to access images developed by artists using other proprietary software.

ACDSee's Slide Show is also an excellent tool for displaying storyboards during the development of things like animated sequences, and images are made readily accessible to all team members from a single folder.

Training and Development

Many companies use ACDSee to develop training seminars using the Slide show feature, or to catalogue images used in safety manuals and other publications.

Engineering and Architecture

Engineers and architects often use digital cameras during project development for initial survey photos, project model renderings, project site construction and highlighting specific architectural features. ACDSee allows companies to place all their images in a single folder, sequence them, and present them in slide shows.

Multimedia Developers

Multimedia developers use ACDSee to increase file sampling efficiency, as visual and audio files (including movies), can all be quickly reviewed in the File List pane with the simple click of a button.

Web Developers

Web developers use ACDSee to manage and view thousands of banner ads for web sites with its powerful filing system.

Artists

Many artists use ACDSee to manage digital images of their work and post the images to their online galleries.

Publishing

Using ACDSee, many publishers organize and view complex files (such as Multi-page TIFFs), easily. The ability to view groups of zipped image files allows publishers to reduce the amount of disk space designated for image storage.

ACD Systems Ltd. Profile

Since 1993, ACD Systems has enjoyed rapid growth and prosperity in the software industry and continues to be a strong, dynamic and competitive company on the cutting edge of technology.

ACD Systems is a world leader in the shareware industry. Over the last five years our software products have become well known as "Try before you buy" opportunities. All of our products are designed to be fast, intuitive and value priced. The ACD Systems product line includes: ACDSee, ImageFox, PicaView, PhotoSee, Express Messaging Server and Express Communicator.

Our success in electronic sales over the Internet has allowed ACD Systems to establish significant market penetration with an estimated 15 million users worldwide. Consumer interest in our products has grown exponentially to the point where ACD Systems has downloaded over 1 million copies of its products to consumers in the last four months.

Digital Imaging and Network Messaging are two of the fastest growing niches in the marketplace today. Our customers have come to trust and depend on our products. Over the last five years we have charted a course for new development and software design. ACD Systems' move to the public market allows us to capitalize on emerging opportunities that have been presented to us because of our success.

ACD Systems Ltd. is a wholly owned subsidiary of ACD Systems International Inc., a public company listed on the Toronto Stock Exchange under the symbol "ASA".

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* Those who have purchased ACDSee will receive ongoing, preferred treatment by our technical support team, should the need arise!

ACDSee Profile and System Requirements

ACDSee is offered in sponsored mode, trial, and full version formats. It is comprised of the following main features:

- ACDSee Image Browser
- ACDSee Image Viewer
- Photo Enhancer

The following plug-ins are shipped with the stated version of ACDSee;

Adjust Levels	v3.1
Create a Contact Sheet	v3.1
Print a Contact Sheet	v3.1
Send images by e-mail	v3.1
HTML Album Generator	v3.0, v3.1
SendPix	v3.0, v3.1
JPEG Transform*	v3.0

* became a standard tool with v3.1

Minimum System Requirements

- Microsoft Windows[®] 95 / 98 / NT 4.0 / 2000.
- Minimum Intel 486DX
- Minimum 32 MB RAM.
- 10 MB free disk space.

Note:

Users working with large images or large numbers of images will benefit from system requirements that exceed those listed above -- this will ensure a faster display of images.

A modem and internet connection are required for various features to function correctly.

ACDSee User Interface: Browser

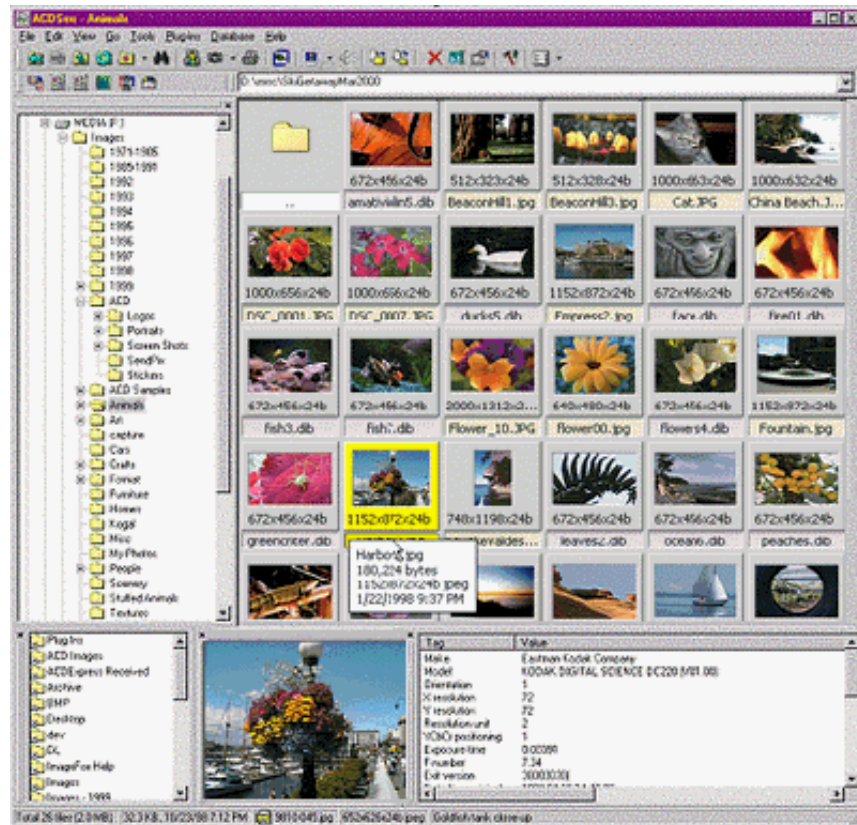


Fig. 1 ACDSee Browse Window

With ACDSee you can quickly browse through folders and view thumbnail images of files on your system. ACDSee supports most popular image formats such as: .BMP, .GIF, GIF-animation, .JPG, .PIC, .PCD, .TGA, TIF-multi-page and .WMF. You can also see the contents of archive file types such as ZIP and LZH (Japanese archive format) and browse for video clips and sound clips. A complete list of all supported file types is available in Appendix A.

Preview Window

ACDSee Browser is designed for fast display of images and archive file contents. High-speed access lets you click on a filename and get an immediate display inside the Preview window. With a single click you can annotate a file with a descriptive phrase in a way that does not alter the filename or contents. You can even browse images in your Internet Explorer cache folder.

Folder Tree

The Folder Tree provides a view of all the folders on your system for easy access to your images. Clicking on any folder opens it instantly, displaying all files inside and the notes that are associated with each file.

Favorites List

The Favorites List provides immediate access to your favorite photos and folders. It also allows you to create shortcuts to programs you frequently use. Coupled with the ability to drag and drop files, you will find that it is easy to launch a file in different applications quickly.

Toolbar

The customizable Toolbar allows you to place feature icons on the toolbar for quick access with the mouse.

Image Information

The Image Info Pane provides metadata information about the image displayed in the preview window.

Audio and Video

Audio and video clips are easily played from the browser. A list of files can be played one at a time as you scroll through a folder of clips.

Acquiring Images

Along with acquiring images from clip-art, CDs or the Internet, you can acquire digital images for your computer with the aid of a scanner or a digital camera (a scanner is a device that enables a computer to read hard-copy pictures, as well as printed or hand-written pages. A digital camera takes a picture with a CCD (Charged Coupled Device) and transmits it directly to a computer or records it on a disk.).

The standard retrieving protocol for digital image devices is called TWAIN. The TWAIN protocol delivers graphical images from a scanning or imaging device to the application software, such as ACDSee. TWAIN reduces the number of device drivers needed by providing a standard communication format. ACDSee supports the widest range of hardware equipment by being TWAIN compliant.

ACDSee also provides the following capabilities with a supported digital camera:

- **browse** contents of the camera like a file folder
- **transfer all** pictures on the camera to your computer in the image format of your choice
- **take pictures** at specified intervals

ACDSee also works with scanner software to let you scan, crop or resize an image without using a separate application.

Find Images

ACDSee has a Find Images command that searches for images on the hard drive according to user inputted data and image metadata. The inputted data can include a description, file name, author, date, notes and keywords. The search results display a list of images that match the search criteria. This feature lets you use the hard drive structure rather than a separate database for storing images.

The search algorithm recursively searches the directory structure, including shortcuts to other folders. Shortcuts let you create a virtual database using your file system; you can use a shortcut to frequently used folders rather than producing a database. This creates a type of index or link to image collections and is particularly useful when you need quick access to commonly used folders and files.

File Description Database

You can attach descriptions, notes and keywords to files and folders. These are used by a few other application programs (such as JPSoft's 4DOS/4NT), but are not supported directly by Windows[®]. The file descriptions are stored in a hidden file called "descript.ion". There is one such file for each folder. If you copy, move or rename files using ACDSee, the file descriptions remain attached to the files.

- Each file description can be up to 3800 characters long.
- The file description for the currently selected file appears in the rightmost pane of the status bar.
- In the Browser, file descriptions also appear in the rightmost column in detail view and can be used to sort the files.
- Using ACDSee's Find Images command, you can search through your file descriptions for matching words and phrases in order to locate images.

Format Conversion

Format conversion in ACDSee is designed to require fewer steps and produce the desired conversion quickly and in the highest quality of the desired format.

ACDSee supports conversion to: BMP, GIF, JPEG, PCX, PNG, RSB, TIF, and TGA.

ACDSee User Interface: Viewer

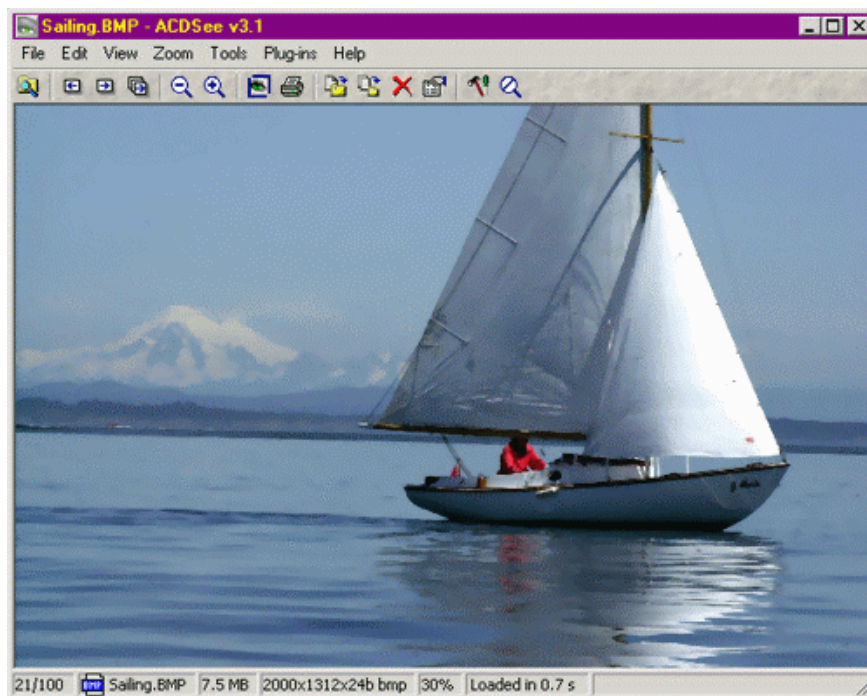


Fig. 2 ACDSee View Window

The basic features of any viewer should include save, print, zoom and edit functions, and allow access to photo enhancement and image display options. ACDSee will quickly display high-quality images without exhausting the entire system. It lets you view a full image rapidly because the Viewer does not load image-enhancing features; if you need to enhance an image a separate window is launched.

It is also important that a viewer is capable of displaying many different image formats. Formats have been developed to serve a variety of needs such as on-screen display versus printing, or document imaging. Image formats are also developed to allow manipulation with specific software. ACDSee displays most image formats instantly without having to go through importing menus.

Slide Show

ACDSee includes an excellent slide show feature that lets you easily produce and organize slide show presentations. This feature gives you the ability to select a number of images and view them one at a time or automatically in a sequence. It is possible to increase or decrease the display interval between images. Other configurations include read-ahead decoding, subfolder searching, forward/reverse/random and single/loop sequencing features.

You can synchronize to a particular folder to automatically adjust the slide show list to reflect added/removed files. The command is available from the View mode and synchronizes the image sequence with the contents of a folder. Initially, all images in the folder will be entered in the image sequence. Then, as image files are added or removed from the folder they are automatically added or removed from the image sequence. Using the Slide Show Recursive feature you can produce a slide show of all files in a folder, including subfolders.

JPEG Compression

ACDSee provides the option of saving JPEG images at varying degrees of compression when using the Save As... menu item from the viewer. Images can be significantly reduced in file size (as much as 90%), but with a subsequent loss in image quality. Images can also have their quality improved with an increase in file size.

ACDSee User Interface: Photo Enhancer

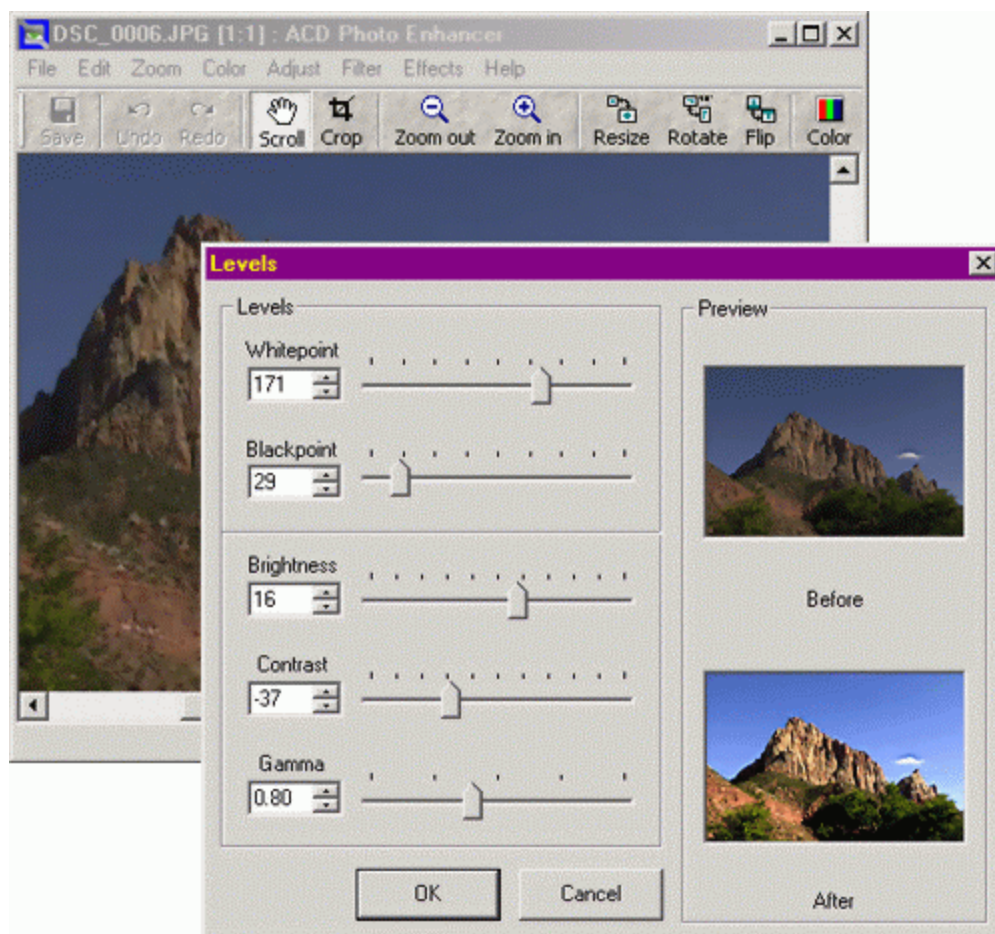


Fig. 3 ACDSee Photo Enhancer Window

Digital image enhancement can involve cropping, scaling or rotating and correcting for flaws such as scratches, dust or poor lighting conditions. ACDSee provides a thumbnail view of the image, both before and after any of the following features are adjusted.

- **Cropping** reduces the visible area of an image. When you crop an image you frame the area that you want and crop it. The resulting image consists only of the area within the cropping frame.
- **Scaling** changes the size of a graphical object without changing its shape.
- **Rotating** lets you turn an object around its center without losing its quality.
- **Flip** turns the image on its horizontal or vertical axis without losing its quality.

Image Filters

Image filters alter the noise levels of an image to produce an image that is either more defined or smoother in quality.

- **Blur** softens an image by averaging the pixels next to the hard edges of defined lines and shaded areas, thereby smoothing the transitions. You can alter the degree of blurriness applied to the image and a before and after preview is available.
- **Sharpen** focuses blurry images by increasing the contrast of adjacent pixels. The amount of sharpness applied is variable and a preview is available.
- **De-speckle** reduces noise in the image. Visually, image noise correlates with graininess, scratches, and dust. The process uses a convex-hull-based algorithm to blend the noise centers with the surrounding pixels.

Image Effects

Image enhancement can also involve special effects such as sepia, negative, emboss and colorize.

- **Sepia** is a reddish brown pigment made from fluid secreted by the cuttle fish, the term is used to describe dated photos that consist of shades of reddish brown
- **Negative** refers to reversing the colors in an image. This process modifies each pixel of the image by replacing each color component with its additive inverse. That is, each pixel component, say v , becomes $1-v$ when the negative effect is applied. For example, if a pixel is $RGB=(1.0, 0.5, 1.0)$ which is light magenta, then it is replaced with $RGB=(0.0, 0.5, 0.0)$ which is dark green
- **Emboss** refers to molding, stamping or carving in relief. This effect makes the image appear as though the objects are carved in stone
- **Colorize** is used to create a monochrome image. Hue and saturation levels are available for adjustment and a before and after preview is available.

Adjusting Color Levels

- **Levels** lets you gradually adjust the brightness, contrast, and midtones in an image. By adjusting the midtones, you can change the brightness values of the middle range of gray tones without dramatically altering the shadows and highlights.
- **Auto Levels** adjusts the brightness, contrast and color balance of an image automatically. There is no before and after preview with this feature.
- **Color Balance** is used to adjust the colors of a full color image. Hue, saturation and lightness are all available for modification.

Gamma Correction

If your computer screen does not display your image properly you may not get the desired results when you print your image. Ideally, every monitor should display an image the same way, but this is not the case. Each make of monitor applies its own characteristic nonlinear transfer function to the pixels of an image when displaying it. For this reason, ACDSee allows you to specify a gamma correction value. A gamma value of 1.0 is normal, with no correction. Lower gamma values will appear to darken the image, while higher gamma values will appear to lighten the image.

ACDSee Features and Benefits: General

Printing

ACDSee lets you print images along with names and descriptions either alone or in a batch. You can preview images before printing, change the resolution and gamma correction before the final output to ensure high quality printing, and print out thumbnail images in the form of contact sheets. Gamma correction, in printing, picks up details in low contrast drawings without significantly affecting the shadows or highlights.

Thumbnail Cache Maintenance

ACDSee generates and displays a thumbnail for each of the images in the current folder. Because thumbnail generation can be a time-consuming process, ACDSee provides a thumbnail caching feature. Whenever a thumbnail is generated from a source image, it is saved in a central database file. The next time ACDSee requires the thumbnail for that image, it reads the thumbnail directly from the database file, rather than decoding the source image again. This greatly enhances the speed at which ACDSee gathers thumbnails.

A recommended option is to compress the thumbnails stored in the cache. This saves disk space, but often requires more time to read the thumbnails back. By default, ACDSee stores thumbnails with no compression.

ACDSee also caches thumbnails for image files on read-only and removable disks. ACDSee uses the volume label of a removable disk to identify it. Therefore, you can have several disks of images, possibly with the same names, and ACDSee is able to correctly cache the images on each disk without conflict.

When you delete image files with ACDSee, the corresponding thumbnails are removed from the database to reclaim the space used. However, if you delete, move or rename image files with Explorer, the thumbnails are not removed and space is wasted. To alleviate this problem and keep your database working efficiently, you can use the Optimization command to clean and de-fragment the database file.

Optimization

The optimization command in ACDSee is a de-fragmentation tool for the thumbnail cache or database. Often, information in the database becomes fragmented and wasted space is accumulated. The database becomes fragmented when thumbnails are scanned and subsequently deleted. Empty spots develop. This can slow the access time and cause delays when thumbnails are being read or written. The ACDSee optimization tool lets you de-fragment any portion of the database in relation to a disk or folder on the system

Dithering

Dithering is the representation of an intermediate color by mixing dots of two other colors. Hardware limitations make it impossible to print or display all possible colors, so dithering is used to represent shades of gray or colors on a printer or screen that cannot be produced directly.

Color Quantization and Dithering

If you have a 256 or 32k/64k (high color) display, then ACDSee processes 24 and 32-bit images with 16 million colors before being displayed. This reduces the number of colors used. ACDSee performs a two-stage process called quantization and dithering. By selecting different quantization and dithering methods, you can trade off image quality against decoding speed. That is, higher quality output will cost you some extra decoding time.

True Color Displays (16 million colors)

For true color displays, ACDSee always gives you the highest quality output possible. No quantization or dithering is required.

High Color Displays (32768 or 65536 colors)

For high color displays, the available quantization and dithering methods are No Dithering and Ordered. No Dithering displays the fastest, with high quality output. Ordered is a little slower but with very high quality output. Ordered is the default in ACDSee. For many images, there is little visible difference between No Dithering and Ordered. However, the superior output of the Ordered is noticeable with computer-generated images.

8-bit Color Displays (256 colors)

For 256 color displays, the available quantization and dithering methods are:

- One-pass Ordered
- One-pass Floyd-Steinberg
- Two-pass Floyd-Steinberg

The One-pass Ordered display is fast and has reasonable quality output. One-pass Ordered is the default in ACDSee. One-pass Floyd-Steinberg is somewhat slower with reasonable quality output.

Two-pass Floyd-Steinberg is slower and has good quality output. With two-pass Floyd-Steinberg the image is decoded in two passes. In the first pass, ACDSee decodes the image and determines the optimal color palette. While this is being performed, the image is displayed using the One-pass Ordered method. In the second pass, ACDSee uses dithering to obtain the optimal palette. After the second pass completes, the image is redrawn using the optimal palette. This method normally produces high quality output, but takes longer than the single pass methods.

Lossless JPEG rotation

When an image is taken in portrait form most cameras will output the image on its side in landscape form. ACDSee provides lossless JPEG rotation that lets you correct the orientation of the image without using a third party editor and without losing detail in the image.

When a JPEG image is edited and the changes are saved, some image degradation takes place. Every time a load and save iteration takes place some amount of noise is introduced into the image. Also, when an image is saved as a JPEG it is compressed and some loss of image information

occurs — this is referred to as "lossy." By avoiding the traditional load/save step, ACDSee preserves JPEG images in all situations of potential degradation.

Plug-Ins

Plug-in modules extend the capabilities of ACDSee, expanding it to work with additional computer products and file formats, and adding special effects. Most plug-in modules come with an installer or installation instructions that guide you through the installation process. When an installer prompts you to select the plug-ins folder, you locate the folder where you installed ACDSee, and then select the Plug-ins folder.

A plug-in can be created and distributed by ACD Systems or it can belong to a third party company. Present plug-ins that are supported by ACDSee include:

- Image decoding
- Image encoding
- Archive handling - allows reading of content or archive files like a normal folder
- Digital camera - allows access to digital cameras
- Command extension - adds commands to the ACDSee menu

Among the plug-ins included with ACDSee, there are many effects and enhancement features created by ACD Systems and other companies that are compatible with ACDSee.

SendPix Plug-in

SendPix is a plug-in that comes with ACDSee and lets you resample images into a web-friendly resolution. The images are stored on ACD System servers. You type in the recipient's e-mail address and include a message. The recipient is provided a URL (Uniform/Universal Resource Locator) where they can view the album using a web browser so that there is no need for specific software. A thumbnail contact sheet of the images can be viewed quickly without downloading all the images and then some or all of the images can be saved on the recipient's computer.

HTML Album Generator

HTML Album Generator is ideal for web site developers who want to quickly and easily create HTML photo albums. These albums can be used as web pages to be viewed with Internet Explorer or Netscape.

E-mail plug-in

The E-mail plug-in allows you to send images by e-mail directly from ACDSee version 3.1 without using any external application.

Contact Sheet and Print Contact Sheet

The Contact Sheet and Print Contact Sheet plug-ins pertain to contact sheet developing and printing plug-ins for ACDSee (version 3.1 specifically). These contact sheets are excellent for cataloguing large image banks. The Contact Sheet plug-in allows highly customizable image contact sheets, and HTML image maps to be created, while the Print Contact Sheet Plug-in was designed for printing contact sheets.

Adjust Levels Plug-in

The Adjust Levels plug-in in ACDSee v3.1, allows you to adjust the brightness, contrast, whitepoint / blackpoint, and gamma settings of one or more images. Using this plug-in you will be able to select a group of images and adjust all of them as a batch.

Susie Plug-in

The ACDSee Susie plug-in allows ACDSee to use any plug-ins that have been developed for the Japanese Susie freeware product that supports many different image formats. If a plug-in for Susie is developed to decode an image format, you can use this plug-in with ACDSee.

Plug-in Manager

A plug-in manager is available to allow ACDSee to scan a directory for plug-ins, locate the plug-ins, determine the functionality (for example, what formats it handles), and then present that information to the application. The plug-in manager lets you add and remove plug-ins and change the priority of plug-ins. Other customization features include disabling a particular plug-in, displaying information about the plug-in, and displaying a dialog box for selecting options.

Archive files (ZIP and LZH)

ACDSee presents the compressed archive file (either ZIP or the Japanese LZH format) as a virtual folder so that you can view image files. A ZIP file is compressed with PKZIP or with compatible software from other sources. PKZIP runs on a PC and takes one or more files, compresses them, and stores them in a single file with the extension .ZIP. This saves space and makes it easy to keep a group of related files together.

Appendix A

Image File Formats

The plug-in modules included with ACDSee support the formats shown below. More plug-ins will be distributed in the future for expanded support. A Susie plug-in module allows ACDSee to utilize Susie plug-ins.

Read Support

Image Formats

ANI	Windows animated cursor	Shows cursor animation.
ART *	AOL ART	Still images
BMP	Windows Bitmap	Windows and OS/2. 2/8/16/24/32 bpp. RLE and uncompressed.
CUR	Windows cursor	
DCX	Multiple-page PCX	All sub-types and multiple pages supported.
DJV *	DjVu	
EMF	Enhanced Metafile Format	Win32 enhanced placeable metafiles.
EPS	Encapsulated PostScript	Displays embedded thumbnail only.
FPX	FlashPix	Multiple resolution support.
GIF	Graphics Interchange Format	Single page and animated. 87a and 89a.
ICN *	AT&T ICN	
ICO	Windows icon	Shows multiple resolutions as separate pages.
IFF	EA/Amiga Interchange File Format	1-24 bpp, including HAM and HAM8. Multiple pages and animations not supported.
JPG	JPEG JFIF	JFIF and Adobe CMYK.
KDC	Kodak KDC.	Reads both the full image and the embedded thumbnail.
LDF**	LuraDocument	Supports files with embedded thumbnails and multiple pages. Saves LDF files with embedded thumbnails, but not multiple pages.
LWF**	LuraWave	Supports files that are password protected. Saves files with optional password protection.
MAG	MAG	All sub-types supported.
PBM	Portable BitMap	
PCD	Kodak PhotoCD	Up to 3072x2048 resolution (16BASE).
PCX	ZSoft Publisher's Paintbrush	All sub-types supported.

* Included with ACDSee v3.1.

** LuraDocument and LuraWave are purchasable plug-ins that have both Image and Write Support.

PGM	Portable GrayMap	
PIC	SoftImage PIC	All sub-types supported.
PCT	Macintosh PICT	
PIX	Alias PIX	24 bpp.
PNG	Portable Network Graphics	All sub-types supported.
PPM	Portable PixMap	
PSD	Adobe PhotoShop Document	RGB, grayscale, duotone, paletted and bi-level. Lab color interpreted as grayscale only.
PSP*	Paint Shop Pro	Version 5 and Version 6
RAS	Sun Raster	Uncompressed and RLE compressed.
RSB*	Red Storm image format.	All sub-types are supported
SGI	SGI Image Format	8-32 bpp; no colormaps. RLE or uncompressed.
TGA	Targa TGA	All sub-types supported.
TIFF	Tag Image File Format	1/2/4/8/12/16 bits per sample, 1-4 samples per pixel. Bilevel/RGB/Paletted/CMYK/YCrCb/LOGL/LOGLUV. Uncompressed/PackBits/LZW//ThunderScan/SGILog/CCITT/ZIP /NEXT/New-JPEG. (no v6.0 JPEG support). Support for multi-page documents.
WMF	Windows Metafile Format	Win 3.x placeable metafiles.
XBM	X bitmap	
XPM	X pixmap	

Video, Sound and Music Formats

AVI	Windows AVI video	Extracts thumbnail and plays in preview area with MCI.
MID	MIDI sequence	Plays in preview area with MCI.
MOV	QuickTime Movie	Plays in preview area with MCI.
MP3	MP3 audio	Plays in preview area with MCI.
MPG	MPEG video	Extracts thumbnail (MPEG-1) and plays in preview area with MCI.
WAV	WAV audio	Plays in preview area with MCI.

Archive Formats

LHA	LHA archive.	Lhd, lz4, lh0, lh1, lh4, lh5, lh6, lh7.
ZIP	ZIP archive	Store, Deflate.

* Included with ACDSee v3.1.

Write Support

BMP	Windows Bitmap	Windows 1/8/24 bpp.
GIF	Graphics Interchange Format	Non-interlaced GIF 89a only.
JPEG	JPEG JFIF	8 and 24 bpp. Progressive and baseline. Adjustable compression factor, subsampling, smoothing and Huffman code optimization.
PCX	ZSoft Publisher's Paintbrush	8 and 24 bpp. RLE compressed.
PNG	Portable Network Graphics	1/4/8 bpp colormapped. 24 bpp RGB.
RSB*	Red Storm image format	All sub-types are supported.
TGA	Targa TGA	8 and 24 bpp. RLE and uncompressed. Top-down and bottom-up.
TIFF	Tag Image File Format	1/8/24 bits per pixel, single-page. Uncompressed, CCITT3, CCITT4, LZW, Deflate (ZIP), and JPEG compression. Adjustable DPI tags.

* Included with ACDSee v3.1.