



## About the Client:

The Client is a leading manufacturer of innovative products based on Digital video, Wireless communication and Opto-electronic technologies based out of Taiwan.

## Client Requirements:

The Client wanted an application with features to display, edit and enhance images, record and play movie files. The application has a fully customized and user-friendly interface. The application had to be developed for both Mac OS 9 and Mac OS X. The downloading of files from a mass storage digital camera and recording of movies from a VDIG-supported Web camera need to be handled. TWAIN Data Source for *Digital Image* should be provided. The application should be integrated with *PhotoImpression 3.0*

## Solutions Provided by Robosoft:

Digital Imaging application developed by Robosoft is the world's premier, user-friendly, digital dark room software. It was developed using complex mathematical algorithms and included a number of patented technologies.

This state-of the-art application software for digital cameras and photo printers enables the amateur photographer to create masterpieces in an instant. It automatically analyses a photograph's content and corrects problems using an advanced, built-in, "intelligent Kernel" and an extensive database.

The main features of the *application* are as follows:

### 1. Image Enhancements

*Digital Image* supports a very strong image enhancement library. The two types of enhancements supported are the 'Photo Quality Enhancement' and the 'Whiteboard Enhancement'. The 'Whiteboard Enhancement' is a special feature of *Digital Image* using which the contents of a whiteboard image can be easily made clear. 'Photo Quality Enhancement' is used to enhance either the landscape or portrait images. This supports nine different functions to enhance the given image:

### 2. Tone Enhancement

This function is used to enhance the tone of a variety of images like too dark images, too bright images, back lit images, snow scene images and night scene images.

### 3. Smart Contrast

This function is used to enhance the contrast of the image automatically.

### 4. Color Cast Removal

This is used to correct any color shift and white balance occurring due to absence of sunlight or too bright sunlight.

### 5. Color Enrichment

This function is used to automatically enhance the saturation of the image.

### 6. Skin Lighting



This function is used for lighting compensation on the skin region of portrait images.

#### **7. Skin Tone Adjustment**

This function is used to adjust the skin color of portrait images so as to give it a more whitish complexion, more yellowish complexion or more reddish complexion.

#### **8. Skin Clearing**

This function is used for cleaning up of small and undesirable defects on the skin regions of portrait images.

#### **9. Salon**

This function is used for soft-focus processing of portrait images.

#### **10. Crispness**

This function is used to increase the sharpness of the photos.

#### **11. Image Editing**

The images in the Digital Image database can be edited. The user can rotate selected images by 90 degrees either in the clockwise or anticlockwise direction, or save them in desired format.

#### **12. Image Importing**

The images can be imported to the database by downloading from a mass storage digital camera. The image formats supported by Digital Image are: JPEG, BMP, PNG and TIFF.

#### **13. Plug and Play**

Digital Image supports a plug and play feature whereby the application gets launched as soon as any of the specified set of cameras is connected to the USB of the machine. The user can then download the images from the camera.

#### **14. Playing Movies**

Digital Image supports the playing of movie files. It has its own customized movie player. The movie types supported are: AVI and MOV.

#### **15. Recording Movies and Downloading Images**

Digital Image possesses its own customized live video window using which either movie can be recorded and stored or snapshots can be taken through Web cameras that contain the VDIG component. Also, Digital Image can download images from digital cameras that support mass storage protocol. The recorded movies and the downloaded images are stored in the database of Digital Image.

#### **16. Exporting Files**

The images and movie clips can be exported to other formats and stored in any location on the user's system.



### 17. Mail and Print

The user can mail any of the files in the database as attachments. Digital Image launches the default E-mail client and attaches the selected files to the mail, which the user can send to the required destination. Also, the images can be sent to any of the selected printers.

### 18. Digital Image Data Source

The user can transfer images from Digital Image into TWAIN-compatible applications such as Adobe Photoshop.

### 19. Connect to PhotoImpression 3.0

The selected images can be transferred to *PhotoImpression 3.0* application using the *Arcsoft PhotoImpression* icon in the main window.

### Environment Used:

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|-----------------------------------|---|
| 1. <b>Development Environment</b> | Metrowerks CodeWarrior 8.3, PowerPlant framework, Project Builder, Mac OS 9, Mac OS X |
| 2. <b>Tools and technologies</b>  | QuickTime   |
| 3. <b>Duration of the Project</b> | 6 Months  |