



## About the Client:

The Client is one of the largest manufacturers of Scanners based out of Japan.

## Client Requirements:

The Client wanted Robosoft to develop an *Interpreter* module to provide high-level interface for communicating with the low-level driver for an USB scanner device.

## Solution provided by Robosoft:

The Client wanted Robosoft to work on the development of the *Interpreter* module for a new scanner module to support all the versions of Mac OS 9.1.x, Mac OS 10.1.x; Mac OS 10.2.x and Mac OS 10.3. The Client provided the TWAIN and the USB class driver.

The *Interpreter* module is a Carbon-shared library and is responsible for implementing the Customer-specified ESC and FS commands that it receives from the Scan application and then communicating with the scanner device using SCSI commands.

The *Scanner* is a flatbed scanner that supports the following functions:

1. Flatbed reflective scanning
2. AFL (Auto Film Loader) for scanning negative film strip
3. AFL Mount for scanning positive film
4. MPF (Multi-Photo Feeder) for scanning positive photos
5. Push buttons for Scan, Copy and E-mail
6. Hi-resolution scanning at 2400 dpi

The *Scan* application puts up a User Interface enabling the user to make the necessary settings for preview and scan operations. The application has the following features:

1. Operates in Professional, Home and Full Auto mode
2. Selection of Document Type: Reflective or Film
3. Selection of Image Type: 24-bit Color, Color Smoothing, Grayscale and Black & White
4. Selection of scan resolution: 50 to 3200 dpi or custom setting
5. Target Size and orientation settings
6. Selection of multiple scan areas

The *Scan* application also provides image-processing settings as follows:

1. Auto exposure
2. Histogram adjustment
3. Tone correction
4. Image adjustments
5. Unsharp mask filter
6. Descreening filter

### Application Architecture Diagram:

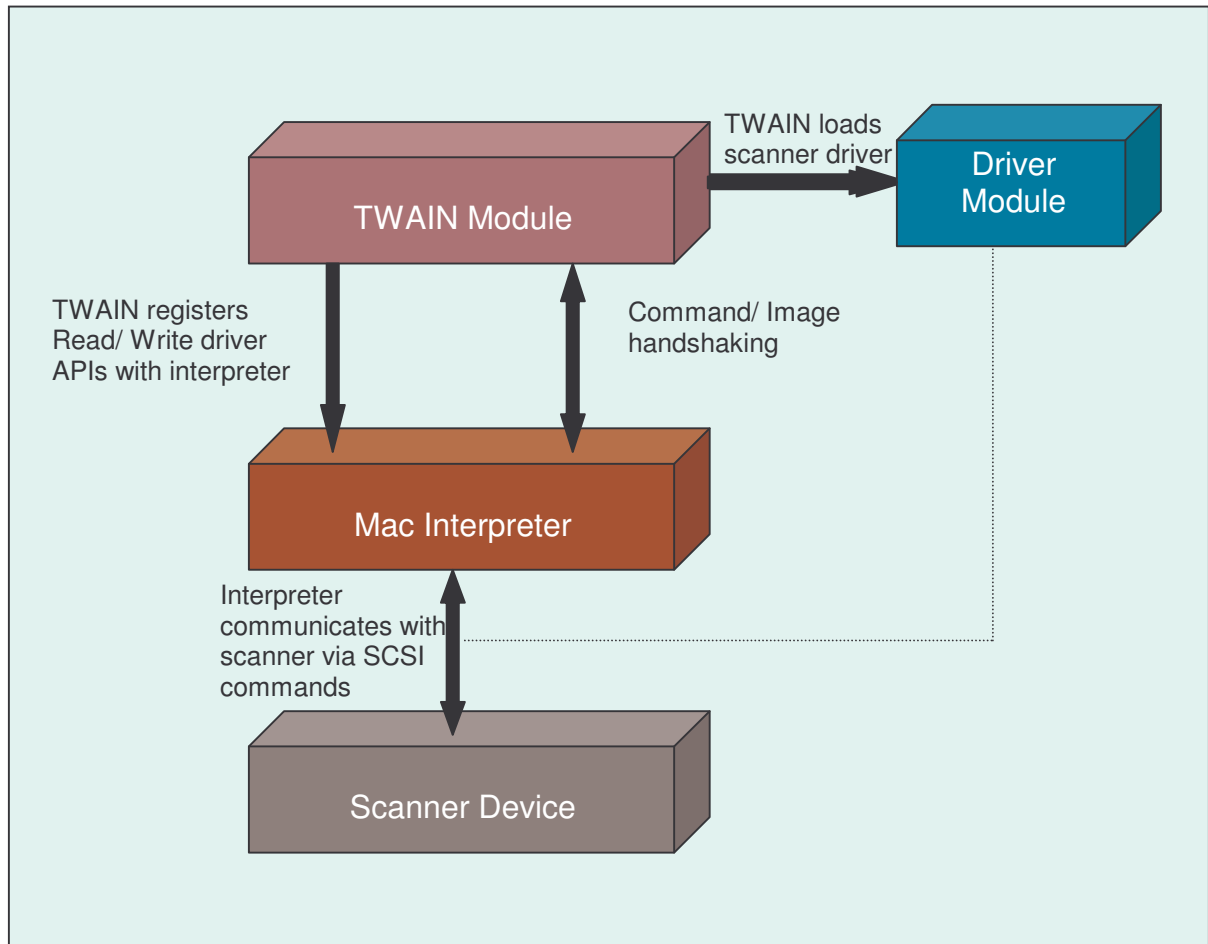


Figure 1: Application Architecture Diagram

### Environment Used:

- |                                   |   |
|-----------------------------------|---|
| 1. <b>Development Environment</b> | Metrowerks CodeWarrior Compiler v8.3                          |
| 2. <b>Tools and Technologies</b>  | Carbon  |
| 3. <b>Platform Supported</b>      | Mac OS 9.1.x and Mac OS 10.1.x; Mac OS 10.2.x and Mac OS 10.3 |
| 4. <b>Duration of the Project</b> | 3 Months  |