

## **Light Lib Products for Windows**

### **Microsoft Visual C/C++**

February 1995

Dear User,

Please see README.WRI found in \LIGHTLIB for important information not found in this file. This MSVC.WRI file contains information on how to use all Light Lib products with Microsoft Visual C/C++.

We thank you for your support,  
The DFL Team

### **Compatibility**

Light Lib products for Windows are compatible with Microsoft Visual C/C++ 1.5

### **Installation**

## **Light Lib Objects (LLO)**

LLO is not a product, it is a system file. Every Light Lib product for Windows relies on LLO to manage memory allocation and the proper creation and deletion of all objects within the DLLs themselves.

We will be publishing the API to LLO in the near future and will be enhancing this system for possible general availability as a separate product.

## **Light Lib Images (LLI)**

### **Files**

The following is a list of files associated with Light Lib Images

LLID.MAK	Project file. It is compatible with the MSVC Workbench and with the NMAKE program provided with the Professional Edition of Visual C++.  To build a debug version of the program from the MS-DOS prompt, type...  nmake DEBUG=1 /f LLID.MAK  To build a release version of the program, type...  nmake DEBUG=0 /f LLID.MAK
LLID.H	Main include file for the application. It includes other project specific includes (including RESOURCE.H) and declares the CLLIDApp application class.
LLID.CPP	Main application source file that contains the application class CLLIDApp.
LLID.RC	Listing of all of the Microsoft Windows resources used by LLID. It includes the icons, bitmaps, and cursors that are stored in the RES subdirectory. This file can be directly edited with App Studio.
RES\LLID.ICO	Icon file used as the application's icon. This icon is included by the main resource file LLID.RC.
RES\LLID.RC2	Resources that are not edited by App Studio. Initially, this contains a VERSIONINFO resource that you can customize for your application. You should place other non-App Studio editable resources in this file.
LLID.DEF	Information about the application that must be provided to run with Microsoft Windows. It defines parameters such as the name and description of the application, and the size of the initial local heap. The values in this file are typical for applications developed with the Microsoft Foundation Class Library. The default stack size can be adjusted by editing the project file.
LLID.CLW	Information used by ClassWizard to edit existing classes or add new classes. ClassWizard also uses this file to store information needed to generate and edit message maps and dialog data maps and to generate prototype member functions.
MAINFRM.H,	

MAINFRM.CPP                      Contains the frame class CMainFrame, which is derived from CMDIFrameWnd, and controls all MDI frame features. These files make up the main frame window:

RES\TOOLBAR.BMP    This bitmap file is used to create tiled images for the toolbar. The initial toolbar and status bar are constructed in the CMainFrame class. Edit this toolbar bitmap along with the array in MAINFRM.CPP to add more toolbar buttons.

*Other Files...*

STDAFX.H,  
STDAFX.CPP                      These files are used to build a precompiled header (PCH) file named STDAFX.PCH and a precompiled types (PCT) file named STDAFX.OBJ.

RESOURCE.H                      This is the standard header file, which defines new resource Ids. App Studio reads and updates this file.

## Using

Light Lib Images allows you to easily add images to your applications.

## Demo

LLID was generated using AppWizard. This application demonstrates how to use the Microsoft Foundation classes with Light Lib Images and is an excellent reference for writing your own applications. AppWizard creates one document type and one view. AppWizard uses "TODO:" to indicate parts of the source code which should be added or modified.

LLIDDOC.H,  
LLIDDOC.CPP                      The document. These files contain your CLLIDDoc class. Edit these files to add your special document data and to implement file saving and loading using CLLIDDoc::Serialize.

LLIDVIEW.H,  
LLIDVIEW.CPP                      View of the document. These files contain your CLLIDView class. CLLIDView objects are used to view CLLIDDoc objects.

RES\LLIDDOC.ICO                Icon file used as the icon for MDI child windows for the CLLIDDoc class. This icon is included by the main resource file LLID.RC.

The following explains what each button on the toolbar does in left to right button order.

1. Scan in a new image into this window by using your installed TWAIN driver.
2. Save the image as a new file format such as BMP, PCX, GIF, TIF and JPG as well as using various compression techniques.
3. Print the image.
4. Fit the image to the width of the window. Use the vertical scroll bar to pan the image.
5. Fit the image to the height of the window. Use the horizontal scroll bar to pan the image.

6. Fit the image completely in the window. Notice the image may appear deformed. This is because the image is being scaled both vertically and horizontally and the scale factor may be different for both.

7. Releases any previous Fit mode and displays the original image.

*Notice that buttons 4,5,6 maintain the image settings even when the window is resized.*

8. Rotates the entire image 90 degrees right.

9. Rotates the entire image 90 degrees left.

10. Rotates the entire image 180 degrees

*Notice that buttons 8,9,10 maintain the image settings even when the window is resized and you are able to apply buttons 4,5,6 to the rotated image.*

11. Crops a region of the image selected by the mouse. First use your mouse to select a portion of the image, then select this button to perform the crop. Be aware that cropping an image destroys the original image and uses the cropped region as the new image.

12. Zoom out. Make the image larger

13. Zoom in. Make the image smaller.

14. Toggle the color palette between exclusive and shared. If your video setting is using a 256 color display, you may notice that the image is "fuzzy" or not in focus. By selecting this button, the color palette becomes optimized for the current image and therefore produces a sharper image.

15. Provides information about the current image.

Notice the Main Menu options have also changed.

Under *File*, select the *Grab* option. This allows capturing various parts of the screen such as the DeskTop, Window and the ClientArea. This technique is very useful when dynamically printing a form from the screen.

Under *Edit*, select *Color Operations*. This you to perform gray-scaling and dithering on an image. The various color settings (1 bit, 4 bit, 8 bit and 24 bit) affect the dithering. Be aware that these color settings are dependent on your video settings.

Close this LLI window. The same buttons can be applied to the next LLI window.  
You are also able to drag and drop image files onto this demo.

### **Light Lib Business (LLB)**

Native MSVC Class support is not available at this time.

### **Light Lib MultiMedia (LLM)**

Native MSVC Class support is not available at this time.

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