

Annotate / Redlining

During the design review process in working with engineering or architectural drawings, it is often useful to have the ability to look at a drawing and mark it up with comments or changes. With Slick!'s redlining feature, you may:

- retrieve a drawing to be redlined;
- select any of Slick!'s pre-defined redline layers to enter redline information;
- draw true geometric entities such as lines, arcs, circles, boxes to denote drawings changes;
- place textual information on the drawing for comments;
- save the redline information into a redline file (.RDL extension)
- send the redline file to the AutoCAD draftsman to be used as reference for necessary drawing modifications.

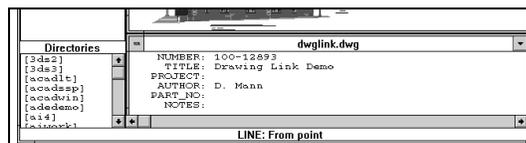
? **Redlining works only on plan view. It does not work in 3D!**

The draftsman can then retrieve the redline file into the AutoCAD drawing via a special LISP routine *REDLINE.LSP* provided by Slick!. By using the redline information as a reference, the draftsman can then make the actual drawing changes as required. Slick! will **never** modify an AutoCAD drawing directly. It however provides a powerful redlining tool for helping automate the design review process.

Redlining Commands

After retrieving a drawing to be redlined, select Redline from the Slick! menu bar or pick from one of the icons in the tool bar.

Some redline commands requiring user input will display prompts at the **bottom** of the Slick! screen at the space normally containing the current directory. The following example shows Slick! prompting for a point while in the LINE command.



The user can continue to zoom and pan to move around the drawing while redlining. See chapter on Viewing.

Some redline commands perform editing on previously entered redline information. These include Change Text, Copy, Erase, Move, and Undo. These editing commands affect redline information only.

They **do not** make any changes directly to the AutoCAD drawing (.dwg) file.

Redlining Steps

Redlining in general involves the following steps:

- retrieve the file to be redlined so that it shows on the graphics screen
- zoom in to the area to be redlined
- select the current redline layer to use via the RDL Layers command
- set the desired text height using the Text Height command
- set the desired arrow size using the Arrow Size command
- proceed to markup the file using redline entities such as lines, arcs, circles, and text
- save the redline information by using the Save Redline command

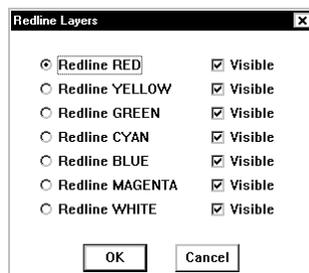
If you wish to continue redlining at a later time, you can simply retrieve the same file and load the saved redline information by using the Load Redline command.

Object Selection

The redlining commands Copy, Erase, and Move require you to select existing redline information by picking them with the left mouse button. To end the selection process, click on the right mouse button.

RDL Layers

The redline layer table is displayed showing the different layers that you may use to contain redline information. Slick! provides seven pre-defined layers with a color associated with each. Activate the desired current layer.



You can control the visibility of any of the layers by selecting or deselecting the Visible button. A check mark besides the button indicates that the contents of this redline layer will be displayed.

Text Height

The default text height is 0.2 drawing units. To change, click on two points on the graphics screen to enter a text height base point and a second point.

Line  Slick! prompts for the starting point and subsequent to points. Pick the desired points by dragging the mouse. A rubber-banded line is displayed as each to point is selected. When finished, press ? or click on the right-mouse button.

Arc  Three points are required to draw an arc. Slick! prompts for the start point, second point and end point. A rubber-banded arc will be displayed after the second point is picked.

Box  Slick! prompts for two points defining the corners of the box. Pick the first corner and drag the mouse to pick the other corner.

Circle  Pick the center point and drag the mouse to pick the desired radius.

Text  Before issuing this text command, it is recommended that you set the text height first. See the **Text Height** command above. Slick! will prompt you for the text starting point. After picking the point, a dialog box for entering text appears. You can enter multiple lines of text by terminating each line with the ENTER key.

Leader  A leader entity is composed of an arrow pointer and one or more lines of text. You must pick the two points to define the arrow pointer. After selecting the second point, a dialog box for entering text will come up. As with the text command, you can type multiple lines.

? It is recommended that you first set the text height prior to using this command to correspond to the scale of the drawing being redlined. Slick! automatically determines the arrow size based on the current redline text height.

? A leader going right to left will have its text right justified.

Change Text

This command allows you to change previously entered text. You **cannot** use this command to change text in the actual AutoCAD drawing. Pick the text to be changed and enter the new text as in the Text command above. If Slick! cannot find the text to be changed, it simply goes back to Command: level.

Erase



Pick the objects to be erased. Selected objects will be dotted. Press the right-mouse button when finished.

Move



With this powerful command, you can move redline entities to a different location in the redline layer. It is particularly useful in redlining dense drawings where you have to clearly specify the drawing entities that are affected by the changes.

Pick Move command from redline menu;

MOVE: Select objects displays at the bottom of the screen

Select objects with the mouse. Selected objects will be dotted

Click on right mouse button when finished with selection

Respond to **the DRAG: From Point** and **DRAG: To Point** prompts at the bottom of the screen.

Copy



The copy command is identical to the move command except that objects selected are not erased. Objects may be copied as many times as necessary by choosing multiple “To points”. To terminate, click on the right mouse button.

Undo



The undo command lets you cancel the previous command.

ID Point

Pick any point on the drawing and the x,y,z coordinates of the point are displayed. For example, if you want to know the x,y,z coordinate of the endpoint of an existing line, pick a point at the end of the desired line.

Distance

This command prompts for two points and displays the distance between the two points. It also displays the delta values for x and y.

Note: $Dx = x_2 - x_1$; $Dy = y_2 - y_1$



Reset

This command clears the screen of all redline information that has been entered. Use this command to start fresh. Slick! prompts: *Remove all redline information?* Respond with *Y* or *N*.

Save Redline

This command saves all the redline information to a redline file. Slick! displays the default file name which contains the path, the drawing name and the .RDL extension. For example:
C:\ACAD\COLUMBIA.RDL.

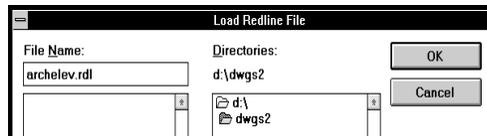


? You may modify the default file name by using the keyboard keys to type a new filename.

? It is highly recommended that you always save your work to a redline file. If you are working in a single graphics window and retrieved another drawing for viewing, all the redline information entered for the previous drawing will no longer be available!

Load Redline

This command loads a previously saved .RDL file while working inside Slick!. Use this command to continue working on the redline file for the drawing being reviewed.



This command is automatically executed if you have configured Slick! to do so. See Configuration section.

? **Do not confuse this command with the special LISP routine *REDLINE.LSP* which is used to retrieve information contained in the .RDL while working inside AutoCAD.**

Using the .RDL redline file with AutoCAD

You may retrieve the redline file (previously saved by the person doing the redlining) by using the lisp routine *REDLINE.LSP* provided by Slick!. To facilitate loading the routine, copy the file

REDLINE.LSP from the Slick! directory into your AutoCAD support directory.

- ?? Enter AutoCAD normally;
 - ?? Edit the drawing which has the associated redline file, for example *COLUMBIA.RDL*;
 - ?? At AutoCAD command level, type
 - ?? Command: (load "REDLINE") to load Slick!'s LISP routine;
 - Command: REDLINE to read the redline file;
 - ?? AutoCAD will show a default redline file name which is the drawing name with the .RDL extension. For example, *COLUMBIA.RDL*.
 - ?? If you wish to use the default, simply hit return. Otherwise, enter on the keyboard the complete file name you wish to use including drive and path *without the .RDL extension*.
- After these steps, AutoCAD should have created additional layers corresponding to the redline layer names with all the redline information. You may now:
- ?? use this information as reference material to effect actual drawing changes.
 - ?? remove the redline layers if they are no longer needed;
 - ?? save the drawing with the new redline layers using either the original drawing name or another name; please refer to your AutoCAD manual regarding the *SAVE* command.

? Saving the drawing with the redline layers from Slick! will effectively include these layers as part of the drawing creating a larger drawing file. If you no longer require the redline layers, you should delete the objects they contain and **Purge** them from the drawing to conserve on disk space. Please refer to your AutoCAD manual regarding the Purge Command.

? *The effect of running REDLINE is cumulative. If a drawing already contains redline information from a previous AutoCAD session and you execute the REDLINE command again, redline data from the .RDL file will be added to the existing redline layers.*

AutoCAD Text Height and Redline Text

When you read redline information containing text, AutoCAD will use its current text style and height to place the redline text into the drawing. The redline text height specified by the person doing the redline (see *Text Height* command) will be used by AutoCAD **only** if the text height of the current AutoCAD style is *variable*.

If the current AutoCAD style has a *fixed* height, redline text will be drawn by AutoCAD using the fixed height. This fixed height may not be the same height as the height originally set by Slick! A warning message will be displayed:

Warning! The current text style has a fixed height. All redline text will therefore have a fixed height! Press ctrl-c to cancel or any key to continue."

- ? If this message appears, you should:
- ?? cancel the *redline* command;
- ?? set AutoCAD to a text style using variable height;
- ?? type the *redline* command again;