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Menu Commands

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Menu Commands:
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File New

This command opens an empty edit window with the name "untitled.txt".

File Open open

This command opens a window which shows a file listing of the logged directory.

General Information

The window contains a ribbon of disk icons, a list of the available directories, a list of files in the current directory, the total size of the current disk, the amount of free space on the current disk, a count of the files in the file list, the sum of the sizes of the files in the file list, an edit box to enter a file name, a statistics line for the highlighted file(s) and option buttons.

The list of directories and the list of files may include or exclude hidden and system files, depending upon the 'Hidden' and 'System' file options. Hidden files are capitalized in the list, if displayed.

Changing Drives

The disk icons at the top of the window are used to create directory windows for the specified disks.

The current disk is indicated by a highlight box drawn around the icon.

A "pressed" icon indicates that a directory window for that disk exits. Clicking on a pressed icon brings the selected disk's window into view.

Single-clicking on an "un-pressed" icon changes the current window into a window for the selected disk.

Double-clicking on an "un-pressed" icon creates a new directory window for the selected disk.

Changing Directories

The current directory may be changed by selecting a directory in the directory list.

View File

A file may be opened for viewing by selecting a file name from the file list box or entering a name in the File Name: edit box. The modification date, size, and attributes of a file are shown in the status box when a file is highlighted in the list box.

A newly opened view file inherits the colors, font, bit 7 strip status and tab stop from the current or most recent view window settings unless the file extension is in the <u>special file list</u>.

Multiple File Selection

Multiple files may be highlighted in the file list using the standard keys/mouse actions. When multiple files are selected, the status box displays the sum of the sizes of the selected files. The selected files may be processed by the Open, <u>Erase</u>, <u>Edit</u>, and <u>Launch</u> icon buttons or menu selections. If the <ENTER> key is pressed while multiple files are selected, the first file is opened in a view window and subsequent files in the selection may be opened via the <u>File Next</u> command.

Commands

The file list can be modified by typing a file specification into the File Name: edit box. Wild cards and regular expressions are allowed. Multiple file specifications may be separated by a semicolon, e.g. "*.txt;*.doc" would list files that matched either the "*.txt" or the "*.doc" specification.

Many of the button bar icons and menu choices are active when the directory window is open, as described below.

Open File Open or open

Views the file(s). If multiple files are highlighted, they will all be opened. A simple file search (that finds the first matching file name and does not open the search dialog) may also be initiated if the name in the File Name: box is not in the file list (i.e. it was entered by hand) and the <ENTER> key is pressed.

The first file found is presented for disposition and the <u>File Next</u> menu choice is enabled to continue the search.

Delete File Delete

The selected directory or file(s) is(are) deleted. The user will be prompted for confirmation before the delete takes place if the 'Confirm Delete' <u>option</u> is enabled. If a directory that is not empty is being deleted, the user is prompted regardless of the 'Confirm Delete' option.

Edit Edit edit or

The highlighted file(s) is(are) opened in an <u>edit</u> window. If multiple files are highlighted, all files are opened for edit Only small, <u>ordinary text files</u> may be edited.

Launch Edit Launch or

The highlighted file(s) is(are) run. If the file is executable (i.e. it's on the Programs= line in WIN.INI), the file itself is run. If the file is associated to an executable in the WIN.INI file (e.g. .DOC files associate to Word for Windows), the associated executable is run with the highlighted file as the run string parameter. Otherwise, the 'Default Editor' as set in <u>Options Options</u> is run with the highlighted file as the run string parameter. If multiple files are highlighted, all files are launched. If the 'Confirm Launch' <u>option</u> is enabled, a dialog box will open to allow changing the executable program and the run string.

Home Go Home or

The selected list is positioned so that the first entry is visible. i.e., if the File Name: edit box or the file list box is selected, the file list will be scrolled such that the first file in the list will be displayed; if the directory tree is selected, the tree will be scrolled such that the root directory will be displayed.

End Go End or

The selected list is positioned so that the last entry is visible. i.e., if the File Name: edit box or the file list box is selected, the file list will be scrolled such that the last file in the list will be displayed; if the directory tree is selected, the tree will be scrolled such that the last directory will be displayed.

File List Display Option Buttons

These buttons control what is presented in the file list box.

File Sort The files in the list box may be sorted 1) alphabetically starting with the first letter of the file name by selecting the Name button (the default), 2) alphabetically starting with the first letter after the '.' in the file name, then alphabetically by the characters before the '.' by selecting the Type button, 3) by the age of the file, oldest file first, by selecting the Date button, 4) by the size of the file, smallest first, by selecting the Size button, or 5) in the order they appear in the disk directory by leaving all sort options un-pressed.

File Masks Four file mask buttons are available. Selecting one of the mask buttons fills the file list box with files that match the mask. The masks are specified in the Options File Defaults dialog.

Statistics Lines

The bottom line of the directory window shows the number of files in the current directory, the sum of the sizes of those files, the number of bytes free on the associated disk, and the total size of the disk.

The line above the bottom line is used to show information about the selected items in the window.

The Sum button, when present, allows calculation of the size in bytes of the current directory and all of its sub directories. The results replace the Sum button, showing the number of files, directories, and bytes in the selected directory tree. The number of bytes is simply the sum of file sizes. Directory space and cluster round-up (e.g. a one byte file typically takes 2K of disk space) is not accounted for. Thus, if the Sum button is pressed when the root directory is selected, the sum of

sizes plus free space will not add up to the total disk size. Also, deleting the selected tree will yield more free disk space than the sum indicates.

If a single file is selected from the file list, the time stamp, size and attributes of the file are shown.

If multiple files are selected from the file list, the sum of the sizes of the selected files is shown.

The File Open command is also available from the <u>icon bar</u>.

File Save

This command is enabled if the $\underline{active\ window}$ is an \underline{edit} window. The command saves the current contents of the window onto disk under the current file name.

File Save As

This command is enabled if the <u>active window</u> is an <u>edit</u> window or if there is an active selection in a view or search list window.

Edit Window

The command saves the current contents of the window onto disk after prompting the user for a file name.

View and Search list Windows

The command saves the selected portion of the window onto disk after prompting the user for a file name.

This command uses the common Save As dialog if the COMMDLG.DLL file is available on the system.

File Close close

Closes the active window.

If the 'Auto Open' <u>option</u> is enabled and this command closes the last window, a <u>File Open</u> window is automatically created or a <u>File Next</u> command is automatically executed if the <u>File Next</u> menu command is enabled.

The File Close command is also available from the icon bar.

File Close All

Closes all windows.

If the 'Auto Open' $\underline{\text{option}}$ is enabled, a $\underline{\text{File Open}}$ window is automatically created/actiavted or a $\underline{\text{File Next}}$ command is automatically executed if the $\underline{\text{File Next}}$ menu command is enabled.

File Next

This command is enabled when it is possible to process another file without going through the <u>File Open</u> window. This occurs in the following situations:

When a File Search that does not create a <u>search list window</u> is in progress, and the search is not complete (i.e. a matching file was found but all directories of all <u>search disks</u> have not yet been searched). The search is continued when the File Next command is executed.

If multiple files are selected in a search list window, the first File Next command views the first file and subsequent File Next commands view subsequent files.

If multiple files are selected in the directory window and the <ENTER> key is pressed, the first file is viewed and subsequent File Next commands view subsequent files.

File Search

This command creates a windowed listing or a one-by-one presentation of files that match the entered search specification(s). A <u>dialog box</u> is opened that accepts the qualifiers that must be matched.

The dialog box and the list window are further described under <u>search list windows</u>.

The File Search dialog is also available from the icon bar.

File Delete

If the <u>active window</u> is an edit or view window, this command deletes the associated file and closes the window.

If the active window is a <u>search list window</u>, the command deletes all <u>highlighted</u> files in the list.

If the active window is a directory window, the command deletes the selected files(s) or directory.

The menu choice will be "Delete File", "Delete Files", or "Delete Dir" to indicate what is to be deleted.

If the 'Confirm Delete' <u>option</u> is enabled, a dialog box is opened for user confirmation before any file is deleted. (If the 'Confirm Delete' option is enabled, the menu command is followed by an ellipses, i.e. the menu will be <u>Delete File...</u>)

File Page Setup

Allows specification of the top, bottom and left margins on a printout. Margins are specified in inches.

Allows specification of a header and/or a footer on a printout. The header is always placed on the top line of the page, regardless of the top margin. The footer is always placed on the bottom line of the page, regardless of the bottom margin.

Arbitrary text may be placed in the header/footer by simply typing it into the appropriate box. Codes are available to specify the file statistics and position the data as follows:

<u>Code</u>	<u>Interpretation</u>
&c	Center the following text
&d	Replaced with the date stamp on the file
&f	Replaced with the file's name
&I	Left justify the following text
&р	Replaced with the page number
&r	Right justify the following text
&t	Replaced with the time stamp on the file

Justification codes must occur in left to right order, i.e. if &I is used, it must be the first code on the line, if &c is used, it must come after any &I and before any &r, and if &r is used, it must follow any &I and &c. If no justification code is given, the text will be centered.

Check boxes are available to enter/remove the codes into/from the header/footer string. When a check box is used to enter a code, the code is inserted at the caret or appended to the end of any existing specification if the caret is not in the edit box.

An example string that puts the file date on the left margin, centers the file name and author, and puts the page number on the right margin would be:

&I&d&c&f by J J Lundblad&r&p

File Print

This command is enabled when the <u>active window</u> is not a directory window. The command opens a dialog box that begins the process of printing the window. The destination printer is displayed in the dialog box.

The dialog box allows selection of the portion of the file to print, either the entire file/list or the selected area. If the window is a view window, an option to print the current screen is also provided.

The font used for the printout may be the default font for the printer, or a printer font (via the Fonts button, if the common dialog COMMDLG.DLL is available on the system), or the program will attempt to match the screen font with a printer font. The results of this matching process is highly variable, depending upon the capabilities of the destination printer.

If the Process Form Feeds check box is checked, a form feed in the file (hex 0c) will generate a form feed at the printer. If the box is not checked, the form feed character is sent to the printer and will probably be printed in the current font.

The dialog box provides access to the other printer setup dialogs through the <u>Setup</u> button. This button opens the <u>File Printer Setup</u> dialog to allow changing printers or driver parameters. From there, the <u>File Page Setup</u> dialog box is also available.

The data sent to the printer is what is displayed on the screen. If <u>hex mode</u> is enabled, the printout will be the hex dump. If the file is not an <u>ordinary text file</u> and is not displayed in hex, the results depend upon the font used and the printer driver.

File Printer Setup

Activates the dialog box that allows selection of a printer and configuration of the printer.

When LI is first run, the selected printer is the default printer as defined in the WIN.INI file. Selecting a different printer from LI's dialog box does not change the default printer in the WIN.INI file.

The Prn Setup button allows setting the printer font, landscape/portrait mode, and/or whatever parameters the printer driver supports. Printer driver parameter changes are "local" (i.e. they only affect LI) when the printer driver supports this.

The Ctrl Pnl button will run the Control Panel to allow re-configuration of the printer environment.

The Pg Setup button will open the File Page Setup dialog box.

File Exit

Closes all files and windows and exits LI. If any edit windows contain modified text, the user is prompted as to whether to save the modifications.

The File Exit command is also available from the <u>icon bar</u>.

Edit Undo

If the last edit command in an edit window can be reversed, this command will be available to undo the change.

Edit Cut

This command removes the <u>selected text</u> in an edit window from the edit window and places the text in the clipboard. The text may then be inserted at another point in a window by an <u>Edit Copy</u> to accomplish a block move.

Edit Copy

Copies the <u>selected text</u> to the Clipboard. The copied text may then be processed by Clipboard in any desired manner (e.g. pasted into another program or window).

The Edit Copy command is also available from the icon bar.

Edit Paste

In an edit window, inserts the text in the clipboard at the caret location. If there is $\underline{\text{selected text}}$ in the edit window, the selected text is replaced by the pasted text from the clipboard.

Edit Deselect

 $\underline{\text{Selected text}} \text{ is de-selected.} \quad \text{Text highlights are removed.}$

Edit Edit

This command attempts to open an edit window and load the currently viewed file. The edited file must meet the general constraints of a Notepad file for the edit window to open successfully. The most important of these constraints is the file type and size. The file must be an <u>ordinary text file</u>. The file and associated memory must be less than 64K bytes. The actual file size limit depends upon the number of lines in the file and how long the lines are. In practice, a file larger than about 30K bytes that has many short lines will probably be difficult to add text to. Files up into about 56K may load into the window successfully but give an out of memory error if text is inserted.

The Edit Edit command is also available from the icon bar.

Edit Launch

The file in the <u>active window</u> is run. If the file is executable (i.e. it's on the Programs= line in WIN.INI), the file itself is run. If the file is associated to an executable in the WIN.INI file (e.g. .DOC files associate to Word for Windows), the associated executable is run with the file as the run string parameter. Otherwise, the 'Default Editor' as set in <u>Options Options</u> is run with the file as the run string parameter. If the 'Confirm Launch' <u>option</u> is enabled, the menu item will have an ellipses, (i.e. <u>Launch...</u>) and a dialog box will open to allow changing the executable program and the run string. LI can be set to minimize itself either through the launch dialog box or through the <u>Options Options</u> menu command.

The Edit Launch command is also available from the icon bar.

View Hex

Displays a viewed file as a hexadecimal dump. Each display line consists of **1**) the byte offset (or file address) of the first byte of the line, in hex **2**) 16 bytes of file data, in hex, and **3**) the interpreted characters represented by the data.

The character interpretation depends upon the <u>selected font</u> and whether all 256 codes are being interpreted. The interpretation of the codes is changed in the <u>Special character dialog box</u>.

The View Hex format may be automatically selected based upon the file extension via the <u>file types</u> setup.

View Text

Displays a viewed file in ANSI or <u>OEM characters</u> depending upon the selected <u>font</u>.

If the file is not an <u>ordinary text file</u> the program will ask whether the file should be displayed in hex. In this case, if the hex display is refused, the extended character display option of the <u>SpcI character dialog</u> <u>box</u> is automatically enabled.

The View Text format may be automatically selected based upon the file extension via the $\underline{\text{file types}}$ setup.

View SpcI chars

Opens a dialog box containing three options.

CR = new line

With this option enabled, a Carriage Return (CR) in the file will start a new line on the display. This often enhances the readability of word processor files. This option has no effect on <u>ordinary text files</u>.

Dump Raw Characters

In <u>text mode</u>, this option is mandatory if the file is not an ordinary text file. For ordinary text files, enabling this option will display the normally hidden tab characters (the tab will be displayed, not expanded) and also the carriage return/line feed characters, depending upon the next option setting.

In <u>hex mode</u>, with this option disabled, the character interpretation on the right of the display only interprets the alpha-numeric characters, all other characters are shown as "." (periods). With this option enabled, all 256 character codes are interpreted according to the current <u>font</u>.

Display CR/LF

If the Dump Raw Characters option is enabled, selecting this option will show the carriage return and line feed characters on the screen in the current font. (In an ANSI font, this will be two boxes. In the 'Terminal' font, this will be the IBM characters for CR and LF.)

The View Spcl Chars format may be automatically selected based upon the file extension via the <u>file</u> <u>types</u> setup.

View Strip

Toggles the clearing of the top bit (bit 7) of each character code. Clearing this bit can improve the readability of some word processor files. The current state is displayed at the bottom of the file window on the <u>status line</u>.



means that the character is being displayed as it exists in the file, the top bit is left alone.



means that the top bit of each character is being set to 0.

The state may also be toggled by clicking the bitmap on the status line.

The View Strip format may be automatically selected based upon the file extension via the <u>file types</u> setup.

View Tabs

Opens a dialog box that allows the entry of the tab stop spacing. Tabs are only processed if the 'Dump Raw Characters' option in the <u>Spcl chars dialog box</u> is not enabled.

The View Tabs setting may be automatically selected based upon the file extension via the $\underline{\text{file types}}$ setup.

View Title Lock

This command sets a non-scrolling section at the top of a view window.

The text to be included in the Title must be selected in the view window before the command will be enabled.

Titles always consist of entire lines.

Automatic title locking based on the file extension is available in the <u>file types</u> setup.

The Title is removed with the <u>View Title Unlock</u> command.

View Title Unlock

This command removes a <u>Title Lock</u> window.

View Colors

Opens a dialog box that allows setting the colors for the text foreground and background for the current window type, either view, edit, directory, or search list. The default colors for all types are black text and white background. The number of available colors depends upon the hardware configuration. The colors are changed with the dialog box scroll bars, varying the amount of red, green and blue in the color.

The Options Save Settings command must be executed to maintain the colors between sessions.

View Font

Opens a dialog box that allows selecting the font for the window. Fonts are maintained separately for the view, edit, search list, and directory windows.

Windows[™] 3.1 or COMMDLG.DLL

The standard common font dialog is used.

No COMMDLG.DLL

A short sample of the font's appearance is shown in the dialog box. The sample includes some capital letters, some letters with decenders, some numbers, some special characters, and some extended characters (beyond the ASCII range).

The Sizes box only contains the stock sizes that Windows is keeping. A non-standard size may be created by entering the desired point size in the Size edit control, optionally checking Bold and/or Italic and pressing Generate. LI will then attempt to create the specified font. The results can vary, for example, Windows may not be able to create the specified size, in which case the closest available match will be generated. (Note: generated sizes will not show up in the Sizes list box except immediately after being 'generated'.)

General

In hex mode, the best results are obtained by using a fixed font, found under the face name "Terminal" or "Courier". A fixed spacing OEM font is the default when LI is started.

LI includes a small fixed font that allows viewing 127+ characters on a standard VGA screen. Select VGA128col from the Typeface or Font box. (The VGA128.FON file must be in the PATH or the directory that LI.EXE resides in before it will show up in the list.)

The Options Save Settings command must be executed to maintain the fonts between sessions.

Go Find [®]

Opens a dialog box that accepts a character string to be located in the active window.

In a view window, the search begins from 1) the top of the file if the Top-Of-File check box is checked, 2) the top of the current display if a find string is not currently highlighted, or 3) the end of the current find string if it is highlighted.

In an edit window, the search begins from 1) the top of the file if the Top-Of-File check box is checked, 2) the caret if a find string is not currently highlighted, or 3) the end of the current find string if it is highlighted.

An option allows selection of a case sensitive or insensitive search.

A option allows specifying the search string in hexadecimal. For example, to search for line feed characters, enable this option and enter "0a" as the search string.

The display will be re-positioned to display the found string. The string will be highlighted.

If the Regular expression check box is checked, the find string is treated as a regular expression.

Boolean finds may be enabled by entering the appropriate data and checking the Enable Boolean check box.

If the <u>active window</u> is an edit window, a find/replace function is available. The replace function is activated by checking the Replace With checkbox. The text in the edit box under the Replace With checkbox will then be the replace string. The user is prompted before the replace is accomplished.

Go Find may also be started and continued from the icon bar.

Go Find Next

Finds the next occurrence of the Find string. The search begins from the previous find string, if it is still highlighted, or the top of the current display in a view window, or the caret in an edit window.

Go Find Next may also be started with the F3 key and from the icon bar.

Go to Line

Opens a dialog box for the entry of a line number. The display will be positioned so that the entered line number is the first line on the display.

The Go To Line dialog may also be started by clicking on the "Line:" field at the bottom of a view window.

Go Home [™]

The display is positioned such that line 1 is at the top of the display.

View Window

In a view window, the <u>status line</u> always indicates when line 1 is being displayed, as follows:



is displayed when line 1 is being displayed and the last line of the file is not being displayed.



is displayed when both line 1 and the last line of the file are being displayed.

Directory Window

If the focus is in the directory tree list, the tree is positioned so that the first item in the tree is visible. If the focus is anywhere else, the file list is positioned so that the first file in the list is visible.

Go Home may also be activated from the <u>icon bar</u>.

Go End

Positions the window such that the last line is displayed.

View Window

In a view window, the <u>status line</u> always indicates when the last line is being displayed, as follows:



is displayed when the last line is being displayed and line 1 of the file is not being displayed.



is displayed when both line 1 and the last line of the file are being displayed.

Directory Window

If the focus is in the directory tree list, the tree is positioned so that the last item in the tree is visible. If the focus is anywhere else, the file list is positioned so that the last file in the list is visible.

Go End may also be executed from the <u>icon bar</u>.

Boolean Finds

The Boolean find dialog box is activated from the $\underline{\text{Go Find}}$ dialog box or through the ALT+F3 key sequence.

This dialog allows specification of two find strings that are related through AND, OR, and NOT functions.

The Boolean find will search for the specified strings to occur either 1) on the same line in a text file or 2) within 256 bytes of each other in a non-text file.

If either string is specified in hex, both strings must be specified in hex.

If the search string is a <u>regular expression</u>, the NOT option is disabled.

Regular Expressions

Regular expressions allow greater flexibility in pattern matching for file names and strings within files.

When searching for matching file names, regular expressions are always enabled. When finding a string in a file, regular expressions may be enabled or disabled.

The <u>Boolean</u> NOT option is not available when regular expressions are enabled.

Regular Expression Tokens

- * to match 0 or more occurrences of any character (like DOS)
- ? to match 1 occurrence of any character (like DOS)
- + to match 1 or more occurrence of the previous character or set
- [set] to match either 's' or 'e' or 't' [a-z] to match any of 'a' through 'z'
- [!set] to match any character other than 's' or 'e' or 't'
 - to match a special character, for example * to find a '*'

DOS File Name Peculiarity

Per "real" regular expression rules, the standard DOS file spec of *.* would have to find a '.' in the file name. For LI file searches, *.* is handled the way DOS does it (the file does not have to have an extension), but within a file, *.* would have to find a '.' to find a match.

Range Limits

In a text file, the pattern must fit on one line. An end of line will always terminate a match. Thus, if searching for "abcdef" in a file that has "abc" on one line and "def" on the next line, a match would not be found (there are intervening line termination characters, even though they may not be displayed).

In a hex or binary file, the entire pattern must be found within 256 characters, start to finish.

Find Speed

A regular expression find can be greatly sped up by starting the find specification with a non-regular expression character.

For example, finding "a[0-9]+b*c" will generally be faster than finding "[a][0-9]+b*c".

Examples

<u>Pattern</u>	<u>Match</u>	No Match
*.txt	help.txt	helptxt
?.txt	a.txt	ab.txt
ab+.txt	abbb.txt	abbc.txt
[abc].txt	a.txt	ab.txt
[a-z].txt	a.txt	1.txt
a[!bc]e.txt	ade.txt	ace.txt
a*	a*	abc
[a-z][0-9]+.tx	t a12.txt	ab1.txt
ab.txt	12ab34.txt	12a34.txt
[a-z0-9]+.txt	1a2b.txt	#.txt

Window Tile

Arranges all open file windows in a side by side fashion. If only one file window is open, it will occupy the entire LI window but keep its title bar.

Window Cascade

Arranges all open, non-mimimized, file windows in a cascade or waterfall fashion.

Window Arrange Icons

Arranges minimized file icons.

Options Button Bar

The button bar provides quick access to the common commands.

Find

The Find drop down box may be used to find strings in an open edit or view window.

The Find box is activated by clicking either in the box or on the drop down arrow.

If the box is clicked, a find string may be entered or the previous string may be edited.

If a string is typed into the Find box, the other find parameters (which are accessible from the <u>Go Find</u> dialog box, for example, 'ignore case') stay set to their last setting. Typing <ENTER> while editing the string will execute the equivalent of a <u>Go Find Next</u> command.

If the drop down arrow is clicked, the drop down list box lists previous find strings. Selecting a string from the list restores the string and all of its associated find parameters. The previous strings are abbreviated in the list box, and <u>Boolean</u> combinations are indicated by a '+' for an OR and a '*' for an AND.

Once a string has been entered or selected, the find operation may be started with a Go Find Next menu command or icon (see below). If the Go Find menu command or icon (see below) is activated, the associated find parameters may be modified.

Icons

Activates the File Open/Dir dialog

Closes the <u>active window</u>

Activates the File Search dialog

Activates the Edit Copy command.

Opens an edit window for the file in a directory, view, or search list window.

Launches the file in a directory, view, or search list window.

Focuses on the next window if several windows are open.

Activates the Go Home command.

Activates the Go End command.

Activates the Go Find dialog box.

Executes a Go Find Next command.

Exits LI.

Options Vert Scroll Bar

The vertical scroll bar in a view window may be moved out of the text area of the window to allow full use of the window for text. With the supplied 128 column <u>font</u>, 127+ columns of fixed font text may be displayed on a standard VGA screen when the vertical scroll bar is moved to the status line.

When the scroll bar is moved to the <u>status line</u>, the up and down arrows will still function. To execute a page up or down, the book icon on the status line may be used.

Options File Open

Opens a dialog box that defines what happens when a new window is opened. Options are available for how to handle the <u>active window</u> and how to handle the new window.

Active Window

The active window may be left open, closed, or minimized to an icon.

New Window

The new window may either be maximized, tiled with any other open windows, or cascaded with any other open windows. If the Auto Open/Next option is enabled, the program behaves as follows:

- **1)** When LI is first run, a <u>File Open/Dir</u> window is automatically opened if no parameters are passed on the run string.
- **2)** When the last file window is closed and the <u>File Next</u> menu choice is disabled, a File Open window is automatically opened.
- **3)** When the last file window is closed and the File Next menu choice is enabled, a File Next command is automatically executed.

Options File Search

Opens a dialog box that specifies which disk drives are to be searched when a <u>file search</u> is executed.

Selecting a drive from the Disk List adds it to the Search list.

Selecting a drive from the Search list removes it from the list.

If the <u>Logged</u> button is pressed, only the <u>logged</u> disk will be searched and the <u>Search</u> list in the dialog box will be empty.

Options File Defaults

Activates a dialog box to specify the file masks that show on the four file buttons in the <u>File Open/Dir</u> and <u>File Search</u> dialog boxes. These masks may be any valid DOS file names, including wild cards, <u>regular expressions</u>, and/or directories, though the space to display the mask in the <u>File Open and File Search</u> windows is limited.

Options File Types

This dialog sets up automatic file viewing parameters for the specified file extension.

For a File Extension entered, the view display may be set to text, hexadecimal or binary character dump. Depending upon the display type, the treatment of carriage returns and non-text characters may be specified.

File extensions are entered as 1 to 3 characters. Do not include the '.'.

Existing settings for a file extension may be modified by selecting the file extension from the drop down list, changing the selections, and clicking 'OK'.

The Auto Lock box allows specification of a line range to be automatically <u>title locked</u> for the given <u>file</u> extension.

Unlike all other Options, these settings are immediately written to the $\underline{\text{LI.INI}}$ file when the OK button is pressed.

Options Options

Opens a dialog box that configures the operation of LI.

Confirm Launches

If enabled, a dialog box opens when a <u>Edit Launch</u> command is given. The dialog box allows changing what program will run, what is passed on the run string, and whether LI will minimize itself while the other program runs.

Minimize on Launch

Specifies whether LI will minimize itself after launching another program. This is the same check box provided in the Edit Launch confirmation dialog box, duplicated here in case the dialog box is disabled.

Confirm File Deletes

If enabled, a dialog box opens before any files are actually deleted, allowing the operator to cancel the operation.

List Hidden Files

If enabled, hidden files and directories are displayed in the $\underline{\text{File Open/Dir}}$ window. Hidden files are capitalized in the lists.

List System Files

If enabled, system files are displayed in the File Open/Dir window.

Default Editor

Specifies the program to be run when an Edit Launch is commanded against a file that is neither executable nor associates to an executable in WIN.INI.

Options Save Settings

Saves the current settings in the <u>LI.INI</u> file. A dialog box allows specification of which parameters will be saved. The parameters are grouped as follows:

Operational Settings

List Hidden files

List System files

Confirm File Deletes

Dir Tree begins at root

Minimize LI on Launch

Confirm on Launch

Default Editor

Button Bar Status

Window Position

The LI window size and position

File Names

The file masks

Disks Searched

The Options File Search options.

File Open Settings

The Options File Open options.

Print Page Setup

The printout header, footer and margins.

Whether LI executes form feeds in the file.

View Settings

The tab spacing.

The color settings.

The current Directory, View, Edit, and Search window fonts

Bit 7 Stripping

The saved configuration is automatically set the next time LI is run.

General Description of LI

LI is a file utility for Windows TM 3.x. Files may be viewed as text or hexadecimal. Multiple file windows may be open at once. The file or a portion thereof may be printed with customized header and footer options. Copying to the Clipboard or a file is supported. The display may be customized by changing the colors, font and tab stop. LI will search for files (across multiple disk drives) that match a file specification and optionally match a file size range, a file date range, contain specified text, including regular expressions, AND, OR, NOT functions on the find strings. LI can delete files and directories (including their contents), useful when cleaning old files off of the system. Multiple directory tree windows may be created for quick disk navigation using the mouse. LI can launch programs and files (through File Manager Associations). LI can edit small text files. LI can produce a list of files that match specified file names and contents (like the *IX grep program). LI can adjust its view parameters based upon the file extension (for example, set the tab stop to 4 for *.C files, to 8 for *.TXT files). Windows 3.1 File Manager file drag and drop is supported. Common commands are available on the icon bar.

More Info

Command Line
Screen Layout
Status Line
Menu Commands
Procedures
LI.INI file

Command Line

Command line processing is supported in the following manner:

- **1)** If a file type is associated with LI in the WIN.INI file, double clicking the appropriate file type from the File Manger will activate LI and open the file.
- **2)** If a file name is specified after the LI.EXE filename on the Command Line of the Program Manager New Program box, that file will be opened every time LI is run.
- **3)** If a directory name and/or wild card file specification is entered after the LI.EXE filename on the Command Line of the Program Manager New Program box, that directory will be displayed in LI's initial File Open dialog box.
- **4)** If the command line consists of two numbers, the numbers are ignored and LI is run/activated. This allows the use of LI in place of TASKMAN.EXE.

File Search

A search for a specified file may be initiated from the <u>File Search</u> menu command or the hunting dog on the icon bar.

Initiation of a search will open a dialog box containing the following features:

Start Dir:

The directory in which the search will begin. If the Only search limb and Only search start dir check boxes are not checked, the search begins in the specified directory, then continues in the root directory of the start disk and searches remaining directories on the start disk, then continues searching other disks in the search disk list.

Search for File

Allows specification of a file to search for. Wild cards and <u>regular expressions</u> are allowed. The four buttons below the <u>search for file</u> edit box contain the same file specifications as the <u>directory window</u>, as set by the <u>Options File Defaults</u>.

Create List Window

If checked, a <u>search list window</u> is opened and the directories being searched are displayed in the title. Matching files are added to the list window (as they are found in WIndows 3.0, slightly delayed in Windows 3.1). Selected files from the list may be viewed, <u>erased</u>, <u>launched</u>, <u>copied</u>, or <u>edited</u>.

An active search may be stopped by clicking in the list window or by pressing a key.

If the Create List Window check box in the search dialog is not checked, the directories being searched are displayed in a dialog box. When a file that matches the specification is found, the program prompts the user as to whether to view the file, skip the file and continue the search, erase the file, launch the file, edit the file, or cancel the search. If a matching file is opened, launched, or edited, the <u>File Next</u> menu choice may be used to continue searching for more files that match the specification. When no (more) matching files can be found, the user is informed and the File Next command is disabled.

An active search may be stopped by clicking CANCEL in the dialog box, or by pressing a key.

Only search limb

If checked, the only directories searched will be the Start Dir and its sub directories.

Only Search start dir

If checked, the only directory searched will be the Start Dir.

Limit File Size

Available if a file size specification has been entered through the Size... dialog. If checked, only files that match the size specification will be matched.

Match Date Range

Available if a file date specification has been entered through the Date... dialog. If checked, only files that match the date specification will be matched.

Containing find string

Available if a find string specification has been entered through the String... dialog. If checked, only files that contain the find specification will be matched.

List Matching lines

Available if a find string specification has been entered through the String... dialog and the Containing find string and Create List Window check boxes are checked. If checked, all lines in matching files that contain

the find specification will be listed in the list box.

Qualifiers

String...

Activates the **Go Find** dialog box to allow specification of contents of matching files.

Size...

Activates the <u>size</u> dialog box to allow specification of a size range for matching files.

Date...

Activates the <u>date</u> dialog box to allow specification of a date range for matching files.

Disks...

Activates the <u>search disk list</u> dialog box to allow specification of the disks to search.

Search

Begins the file search.

Search Size

This dialog is opened from the <u>File Search</u> window. A size range that matching files must meet may be entered.

Sizes may be abbreviated with the modifiers 'K', 'M' and 'G', representing multiples of 1024, 1024x1204, and 1024x1024x1024, respectively (i.e. kilobytes, megabytes, and gigabytes). For example '1K' equals 1024 bytes.

The first edit box specifies the lower limit for the file size. If the Equal to check box is checked, matching files must be exactly the specified size. If the Equal to and (or) Larger than check boxes are both checked, matching files must be at least the specified size, or larger. If only the (or) Larger than check box is checked, the file must be larger than the specified size.

If the Equal to check box is not checked, or the (or) Larger than check box is checked, the (and) Smaller than check box and second edit window are enabled. If only the (and) Smaller than check box is checked, the file must be smaller than the specified size. If the (or) Larger than and (and) Smaller than check boxes are checked, the file size must be between the two specifications. If the Equal to check box is also checked, the file may also be exactly the "equal to" size.

Search Date

This dialog is opened from the <u>File Search</u> window. A date range that matching files must meet may be entered.

Dates must be entered in the edit boxes in the DDMMMYYYY HH:MM:SS [AM | PM] format where

DD is the day of the month, a leading 0 is not required. If DD is omitted, it defaults to 1 MMM is one of JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC. YYYY is the year. The default is the current year. It may be abbreviated YY, e.g. 93

HH is the hours, either 12 or 24 hour time. If 12 hour time, the trailing PM must be added to

indicate time after noon. The default is 0 (i.e. midnight).

MM is the minutes. Default is 0 (i.e. on the hour)

SS is the seconds. Default is 0.

Examples:

jan equals January 1st of the current year (per the system clock)

10jan93 3:15 equals 3:15 AM, the 10th day of January of 1993. 10jan93 15:15 equals 3:15 PM, the 10th day of January of 1993. equals 3:15 PM, the 10th day of January of 1993.

If the time is omitted, as in the first example above, any time of the specified day is considered a match.

The first edit box specifies the lower limit (earliest date) for the file date. If the Dated check box is checked, matching files must have exactly the specified date/time. If the Dated and (or) Newer than check boxes are both checked, matching files must be at least as new as the specified date, or newer. If only the (or) Newer than check box is checked, the file must be newer than the specified date.

If the Dated check box is not checked, or the (or) Newer than check box is checked, the (and) Older than check box and second edit window are enabled. If only the (and) Older than check box is checked, the file must be older than the specified date. If the (or) Newer than and (and) Older than check boxes are checked, the file date must be between the two specifications. If the Dated check box is also checked, the file may also be exactly the "dated" date.

Status Line

The status line displays the status of each view window. The information is presented from left to right as follows:



shows approximately what portion of the file is on the display. In this example, the top 25% of the file is on the screen.

The line number of the top line of the display is shown. For example "Line: 100" Clicking on the line number will open the <u>Go To Line</u> dialog box.





Ez

are present when line 1 is displayed, some middle portion of the file is displayed, the last line of the file is displayed, or both line 1 and the last line are displayed, respectively. When the file is larger than a single screen, clicking on the left half of the icon will perform a page up command and clicking on the right half of the icon will perform a page down.



is displayed if bit 7 stripping is turned off. Clicking the icon will turn bit 7 stripping off.



is displayed if bit 7 stripping is turned on. Clicking the icon will turn bit 7 stripping on

The size of the file, in bytes.

The date and time the file was last modified.

The attributes of the file.

R = read only

A = archive bit set

S = system file

H = hidden file

Should the window not be wide enough to display all of this information, it is truncated from right to left. That is, the first data item to be lost is the file attributes, followed by the time stamp, etc.

The status line may be temporarily replaced by information about a particular character in the file by pressing the <u>right mouse button</u>.

The <u>Options Vert Scroll Bar</u> menu command may be used in a view window to re-position the vertical scroll bar such that it is on the right edge of the status line.

Technical Information

Open Files

LI needs one file handle, regardless of how many file windows are open. The handle is used when updating memory from disk. All files are left closed unless new data from disk is needed to update the display, in which case the file is opened only long enough to retrieve the data.

This means that another program might modify those files. When LI reads a block of data off of disk, the time stamp of the file is compared against the time stamp when LI last read the file. If LI finds that a file has changed between accesses, LI will re-position itself to the top of the file. If the file disappears (or otherwise can't be re-opened by LI), the window that the file was in is closed.

Closed files will be re-opened and re-positioned every time the associated window is updated, for example, when the windows are rearranged. With large files positioned deep into the file, or files on floppy disk, the re-positioning can take awhile.

When launching a file that LI has in the <u>active window</u> (from the <u>Edit Launch</u> menu command or icon), if the file is not executable and associates to another program, and SHARE.EXE is loaded, upon returning to LI, the file may not be accessible and LI will close the window. This occurs with the Windows Write program, for example, when launching a .WRI file (apparently because Write closes its screen window before closing the file it is editing, so LI is re-activated and tries to re-open the file while Write still has it open).

File Format

LI determines the format of a file by searching for Line-Feeds (LF's). If an LF is not found within 256 characters, LI suggests switching to hex mode. If hex mode is refused, lines are processed as follows:

1) an LF terminates a line or 2) a binary 0 terminates a line or 3) lines are arbitrarily set to 77 characters long, or 4) optionally, a carriage return (CR) terminates a line (see <u>View Spcl chars</u>).

The search for LF's is continuous, that is, the switch to hex mode might be suggested in the middle of a file if the file begins with LF terminated lines and then contains non-LF terminated data. (This usually only happens on corrupted files, but may occur in text files that have short lines at the top and lines longer than 256 chars somewhere down in the file.)

Fonts

The best fonts for viewing in hex mode are the fixed fonts.

When shifting a view window horizontally, the text is always shifted by characters, regardless of how wide the character is. That is, a display shifted by one click will show all lines starting with the second character of the line on the left margin.

Edit windows shift horizontally by approximately the width of one character when a proportional font is used.

LI provides a small fixed font that allows viewing of a little over 127 characters on a standard VGA screen if the <u>vertical scroll bar is moved to the status line</u>. Select the VGA128col font from the font list box. (LI must be able to find the VGA128.FON file to load this font.)

When the 'match screen font' option is selected on a <u>printout</u>, the program attempts to match a printer font to the screen font. This can sometimes be spectacularly unsuccessful.

Memory Usage

Each new file window must be managed by Windows, which uses approximately 1% of the System Resources as reported by Program Manager in Windows 3.0, less in Windows 3.1. In most cases, this will be the limiting factor as to how may files may (or should) be opened at one time.

LI.INI fileThe <u>LI.INI</u> file is used to save program settings.

Cursors

LI defines some of its own cursors.



is displayed when LI is searching through a file as a result of a Go Find , Go Find Next or a file search with text find.



is displayed when LI is accessing a hard disk or network drive.



is displayed when LI is accessing a floppy disk drive.

Screen Layout

The screen consists of a menu line, an optional <u>icon bar</u>, and the file window area. Menu commands operate on the <u>active window</u>.

Each file window contains file data and associated scroll bars, view windows also have a <u>status line</u>. Movement through the file is accomplished using the arrow, page up/down, home and end keys, the scroll bars, the book icon on the status bar, or the icon bar up and down arrows.

Clicking the appropriate arrow on a scroll bar moves the display in the corresponding direction in the file. Dragging the "thumb" on the vertical scroll bar moves the display in the appropriate direction. Clicking on the vertical scroll bar anywhere else causes a page up or page down, depending upon the relative position of the thumb. A view window file may also be positioned at 0%, 10%, 20%, etc of the file by pressing the <0>, <1>, <2>, etc. keys, through <9>=90%

Dragging the thumb on the horizontal scroll bar scrolls the display horizontally. Clicking anywhere else on the horizontal scroll bar moves the display by one tab stop in the appropriate direction, depending on the relative position of the thumb.

Directory Tree Window

Creation

A directory window is created in response to the <u>File Open/Dir</u> dialog box, or "pressing" a disk icon in a directory window. The tree will be for the <u>logged directory</u> or the "pressed" icon.

Display Format

The directory window may be moved and sized as desired, including minimization to an icon.

The title of the window consists of the drive letter and path. When the window is minimized, the title is shortened to the drive letter and the last directory name in the path to the directory, possibly including an ellipses as a place holder for intermediate directories. As examples, if the tree begins at "C:\", the window title is also "C:\". If the path is "C:\SUBDIR1\SUBDIR2", the window title is "C:\...\SUBDIR2". The titles are kept short so as to be readable when the window is an icon.

The first line of the directory tree list is the root directory for the drive. Sub directories are indented below their parents and connected by lines to their parents, siblings and children. Sub directories are shown as only the last directory name in the path to the directory.

To the left of each directory name is a graphic that indicates whether the directory has any contents (files or sub directories), as follows:

- indicates that the directory contains files and/or sub directories (i.e. a DOS 'rmdir' command would fail because the directory is not empty)
- indicates that the directory is empty
- indicates that the directory contains only sub-directories

Data Validity

The directory windows are not automatically updated after creation. Thus, if directories or files are removed from the system by programs other than LI, the directory windows will still show that those directories/files exist. Clicking a non-existent directory will result in the removal of the directory from the list.

Mouse Commands

Single-clicking of a directory name will refresh the file list for the directory and add any sub-directories of the clicked directory to the directory tree. Double-clicking a directory name will collapse the directory to just its immediate sub-directories. Double-clicking the same directory name again will expand all of the sub-directories under the double-clicked directory.

Further usage of the directory window is described under the <u>File Open</u> command.

Right Mouse Button

In a view window, holding down the right mouse button generates a status of the mouse pointer position. The normal <u>status line</u> is replaced by data about the character pointed to by the mouse. The data provided is: 1) the line number in the file (begins with line 1), 2) the character number on the line (begins with 1), and 3) the byte offset in the file, in hex (begins with 0).

LI.INI file

The default parameters are saved in the LI.INI file in the Windows system directory (normally \Windows) in response to the <u>Options Save Settings</u> command or upon exiting LI, if the user authorizes it. (A LI.INI file is not created until the Save Settings command is executed or the exit question is answered affirmatively.) The meaning of the lines in the LI.INI file is as follows:

Parameter Comment Possible Value

[LI for Windows] section

AutoOpen= 1 to enable, 0 to disable

BackgndColor= View window background color,RGB, e.g. 255 255 255 for white

BitStrip= *default bit 7 strip status* **1** to enable, **0** to disable

BottomMargin= print margin in inches, e.g. **0**

ButtonBar= 1 to display button bar, 0 to hide button bar
ConfirmDelete= 1 to confirm, 0 to proceed without confirmation
ConfirmLaunch= 1 to confirm, 0 to proceed without confirmation
DirFont= facename(points[,attributes]), e.g.System(10,bold)

Editor= default launch program, e.g. Notepad.exe

EditBackgndColor= RGB, e.g. 255 255 255 for white

EditFont= facename(points[,attributes]), e.g. Terminal(9,bold)

EditTextColor= RGB, e.g. 0 0 0 for black

Font= LI version 1.0,1.1x: facename,index, e.g. Terminal,0

Font= LI version 1.2 & newer: facename(points[,attributes]), e.g. Terminal(9,bold)

Footer= coded <u>footer string</u>, e.g. &r&p
Header= coded <u>header string</u> ,e.g. &c&f

HiddenFiles 1 to list,0 to ignore

LeftMargin= print margin in inches, e.g. 0
MinOnLaunch= 1 to enable, 0 to disable

NextFile= new file action: Max; Tile; Cascade
PreviousFile= prev file action: NoChg; Close; Min
ProcessFF= 1 to process file form feeds, 0 to ignore

SearchDisks= drive list .e.q.cde

SrchBackgndColor= Search list window background color, RGB, e.g., 255 255 255 for white

SearchtFont= facename(points[,attributes]), e.g. Terminal(9,bold)

SrchTextColor= RGB, e.g. **0 0 0** for black
SystemFiles= 1 to list,**0** to ignore
tab stop ,e.g. **8**

TextColor= View window text color,RGB ,e.g. 0 0 0 for black

TopMargin= print margin in inches, e.g. 0

Window= window top,left,bottom,right, e.g. 2 1 413 640

[Memory] section (optional)

BlockPointers= determines what the largest viewable file is. Default is 512 for a 15Mbyte file size.

Each block pointer takes 8 bytes of memory. The maximum file size is

(BlockPointers x 30720). Minimum is 2, maximum is 32767. This parameter must

be changed by editing the LI.INI file.

[Special Types] section (optional)

1= for each file extension configured with the Options File Types dialog, an entry is

made in this section. A corresponding [ext] section is also added that contains the

options for the specified file extension.

2=

etc.

[Masks] section (optional) Mask1= Up t Up to 4 file masks may be entered via the <u>Options File Defaults</u> command. The file masks are displayed in the <u>File Open</u> and <u>File Search</u> dialog boxes and attached to a button for quick file specification entry using the mouse.

Mask2=

Mask3=

Mask4=

Search List Window

A search list window is created from the <u>File Search</u> menu command or the 'Create List Window' check box in the Search Criteria dialog box.

A search list window contains a list of file names that match the search criteria.

The <u>Search Criteria</u> dialog box specifies the parameters that a matching file must meet to be included in the list and the format of the list itself.

Search List Window Operations

Once a list of files is created in the search list window, the files may be processed in much the same way as from the <u>File Open</u> directory window.

View files

A file from the list may be viewed by

- 1) double clicking on the name
- 2) highlighting multiple files and
 - a) clicking the Open icon from the icon bar.
 - b) executing the File Open menu command
 - c) executing the File Next menu command

Methods (2a) and (2b) will immediately open a view window for each selected file. Method (2c) will view the first file in the list and subsequent File Next commands will view the next selected file.

If the selected line contains the line number and matching text, the file is positioned to the matching line.

Edit Files

A file from the list may be edited by highlighting the file and selecting the <u>Edit Edit</u> menu command or the <u>edit</u> icon from the <u>icon bar</u>. If multiple files are highlighted, an edit window for each file is immediately opened.

If the selected file line contains the line number and matching text, the file is positioned to the matching line.

Launch Files

A file from the list may be launched by highlighting the file and selecting the <u>Edit Launch</u> menu command or the <u>launch</u> icon from the <u>icon bar</u>. If multiple files are highlighted, all files are immediately launched.

Delete Files

A file from the list may be erased by highlighting the file and selecting the <u>File Delete</u> menu command. If multiple files are highlighted, all files are immediately deleted. View windows of deleted files are automatically closed. Edit windows of deleted files are not closed (thus, the file could be restored using a File Save command).

"Logged" (or Current) Disk/Directory

The directory set by the most recent occurrence of one of the following:

- **1**. The program startup directory
- 2. The last directory selected from the File Open/Dir window

The logged directory is not changed by a file search, even if a matching file is found in a directory other than the starting directory. The current disk can be changed by stopping a mult-disk search before it completes. In this case, the logged directory will be the current directory on the disk that was being searched when the search was aborted by the user.

Select

A selection is made by either:

- double clicking the desired item in the list
 highlighting the item in the list (using <Tab> and <arrow> keys) and pressing <Enter>
 (if available) typing the desired information into the edit box and pressing <Enter>

Dialog Item Highlight

An item in a dialog I	list box may b	e highlighted by	clicking or using	the <tab> and</tab>	<arrow> kevs.</arrow>

List of Disks to Search

The itemized list of which disk drives to search when search options are exercised. The list is edited through the Options File Search command.

Active Window

The file window with the focus, i.e. the file window that has the maximize and minimize buttons on its title bar.

Selected Text

The text in a f	file window that has	s been hiahliahted	I by dragging the mous	se.

OEM Character Set

The computer-specific character set. On the IBM PC, this is the extended ASCII character set that includes the line drawing characters (in the IBM character set, the codes 00, 20, and FF hex all display as a blank).

Ordinary Text File

A file created by an editor (as opposed to a word processor file or an executable file). Typified by lines of less than 255 readable characters terminated with a Line-Feed character.

Registration

This program is distributed under the Shareware concept. This allows you to try the program before paying for it. If you find the program useful, please support the shareware system by registering your copy. The suggested trial period is 30 days. Registration is accomplished by sending \$20 and the registration form (click on the words registration form to access the form or edit the LIREG.TXT file) to the address below:

Third Millennium Technologies P.O. Box 852382 Mesquite, TX 75185

You may also order from Public (software) Library with your MC, VISA, AmEx, or Discover card by calling 800-242-4PsL or 713-524-6394, or by FAX to 713-524-6398, or by CompuServe mail to 71355,470. THESE NUMBERS ARE FOR ORDERING \$20 (+ service charge) COPIES ONLY. THE AUTHOR CAN NOT BE REACHED AT THESE NUMBERS.

This copy of the program is the full featured version. The only annoyance in the shareware version is the opening splash screen and a registration reminder when a Help command is executed. Hindrances and reminders were deliberately kept to a minimum by the author.

Registering users will be sent the current or next version of the program without the shareware notice intervening in accessing help and a documentaion file.

Problem reports and suggestions will be accepted from all users, although registered users will tend to get priority attention.

Problems and suggestions may be submitted on the registration form or through Compuserve mail to Jeff Lundblad, 73537,1203.

Site licenses and customizations may be negotiated.

Registration Form

Select File Print	Topic to	print this	form
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LI Version 1.30 Order Form

Please Remit per the following table to:

Third Millennium Technologies P O Box 852382 Mesquite, TX 75185

1-2 3-10 11-20 21-50 51-100 101 and above	\$20 \$19 \$18 \$17 \$16 \$15		
Your Name			
Company			
Address			
Address			
City/State/Zip			
Order Qty Price per copy Sub Total Tax Total	(TX residents add 7.75%)		
Disk Format: Please send	5.25" 3.5" Ver X.X (next release)		
Your Windows version? 3.0 3.1			
How did you obtain this copy of LI?			

Comments (likes/dislikes/problems/suggestions):

Thank you for your support, Jeff Lundblad.