



Engravers  
Network.com

**VISION-PRO**  
**Training Manual**

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# Chapter 1

## Vision Pro Workspace

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## Before We Start

### Terms & Conventions Used In This Manual



Vision Pro Tip – a special tip for the Vision Pro user.



Notes – a tip just to make sure that you are aware of it.



Wow Tip! – a different tip from the others, but deserved special notice.

### Short-Cuts Keys

Many short-cuts or ‘fast keys’ are available throughout Vision Pro. They are valuable time-savers, and should be utilized. *However, I do not teach them as you cannot see my keyboard.*

### Keystrokes

When you have a command that uses a combination of keys, always press and hold the first key and then press the other key(s). The command, **SHIFT+A**, tells you while you are holding down the **SHIFT KEY**, press the **A** key.

### The Mouse

- CLICK** Click is clicking/touching the left mouse button once and releasing.
- DOUBLE-CLICK** Double click is tapping the left mouse button twice
- CLICK-DRAG** Clicking is clicking and holding the left mouse button while you drag.
- RIGHT-CLICK** Right click is clicking the right mouse button once
- RIGHT-CLICK-DRAG** Right clicking is clicking and holding the right mouse button while you drag.

And, you will often be given instructions that include both keyboard and mouse commands together. Press the keyboard key and hold, and perform the mouse command. For example, **CTRL+CLICK-DRAG** tells you to first hold press and hold down the **CTRL** key and then **CLICK** and hold down the left mouse button while you drag.

### Menu Commands

The Menu Bar at the top of the VisionPro window has commands that you **CLICK**, showing other sub-menus and commands. The command **TOOLS | OPTIONS | WORKSPACE | DOCUMENT | RULERS** tells you to follow a sequence of commands, usually through menus, flyouts and dialogs.

## Image and File Types

VisionPro is a vector based drawing program. But it can import and trace bitmap files.

### **Bitmap**

Photo-editing applications like Corel PHOTO-PAINT work with bitmap images. Bitmaps are also the images that scanners and cameras create. When you work with bitmap images, you can refine small details, make drastic changes, and intensify effects.

Bitmap images, also called raster or paint images, are made of individual dots, called pixels (picture elements), that are arranged and colored differently to form a pattern. When you zoom in, you can see the individual squares that make up the total image. Increasing the size of a bitmap has the effect of increasing individual pixels, making lines and shapes appear jagged.

Reducing the size of a bitmap distorts the original image, because pixels are removed to reduce the overall image size. Also, because a bitmap image is created as a collection of arranged pixels, its parts cannot be manipulated (e.g., moved) individually.

Common bitmap file types extensions include (in the order of quality): TIFF, BMP (Windows Bitmap), CPT (Corel PhotoPaint), PCX (Paintbrush), JPEG and GIF (CompuServe Bitmap).

### **Vector**

Vector images, also called object-oriented or draw images, are defined mathematically as a series of points joined by lines. Graphical elements in a vector file are called objects. Each object is a self-contained entity, with properties such as color, shape, outline, size, and position on the screen included in its definition.

Since each object is a self-contained entity, you can move and change its properties over and over again while maintaining its original clarity and crispness without affecting other objects in the drawing. These characteristics make vector-based applications ideal for illustration, in which the design process often requires individual objects to be created and manipulated.

Vector-based drawings are resolution independent. This means that they appear at the maximum resolution of the output device, such as your printer or monitor.

Common vector files include: EPS (Encapsulate Postscript), PLT (Hewlett Packard Graphics Language), AI (Adobe Illustrator), WMF (Windows Metafile), DXF and DWG (AutoCAD) and DC2 (Design CAD).

## **VisionPro Terms**

### **OBJECT**

Most often referred to as a graphic, but any selection that has nodes around it

### **PARAGRAPH**

Text with dashed lines around it.

### **SIGNLAB**

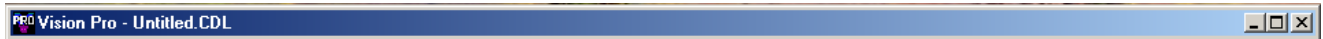
Product from which VisionPro was derived.

### **CADLINK**

Company that produces a variety of software products including VisionPro, SignLab, etc

# Exploring the Vision Pro Environment

## Title Bar

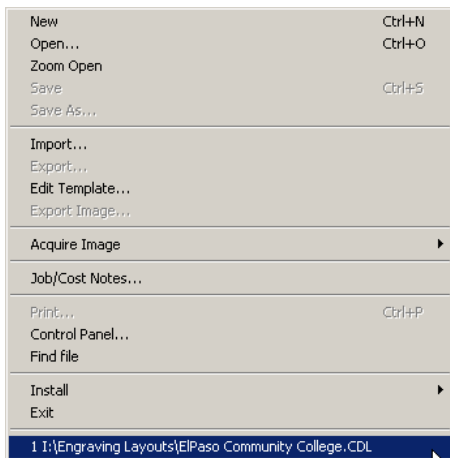


Tells the name of the current application running and the name of the open file. Move the position of the VisionPro window by dragging the Title Bar to a new location.

## Menu Bar



The Menu Bar allows access to a number of drop-down menus that contain tools for manipulating files. The menu bars in VisionPro include:



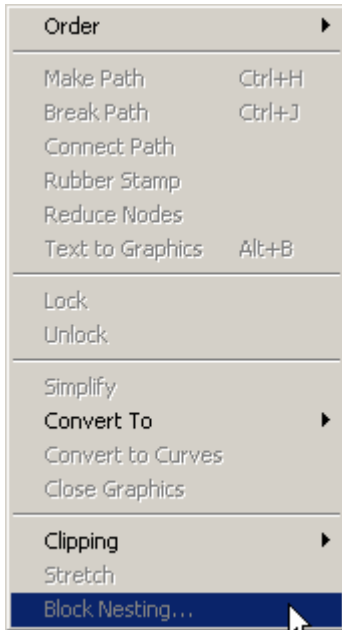
**File Menu**



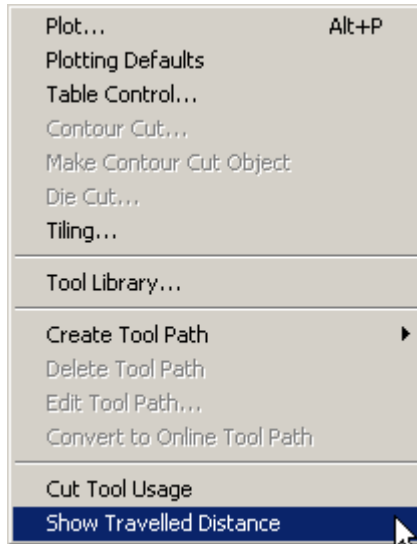
**Edit Menu**



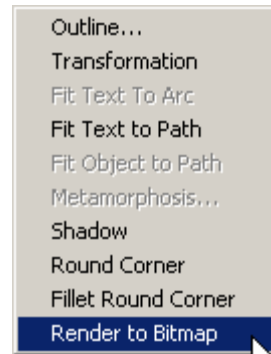
**Layout Menu**



Arrange Menu



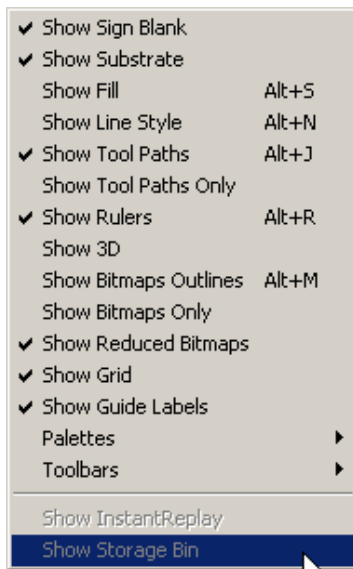
Engrave Menu



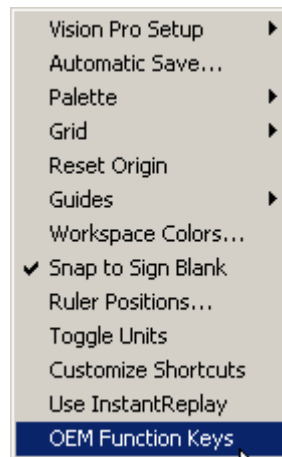
Transform Menu



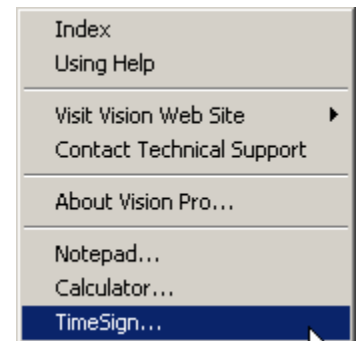
Image



View Menu



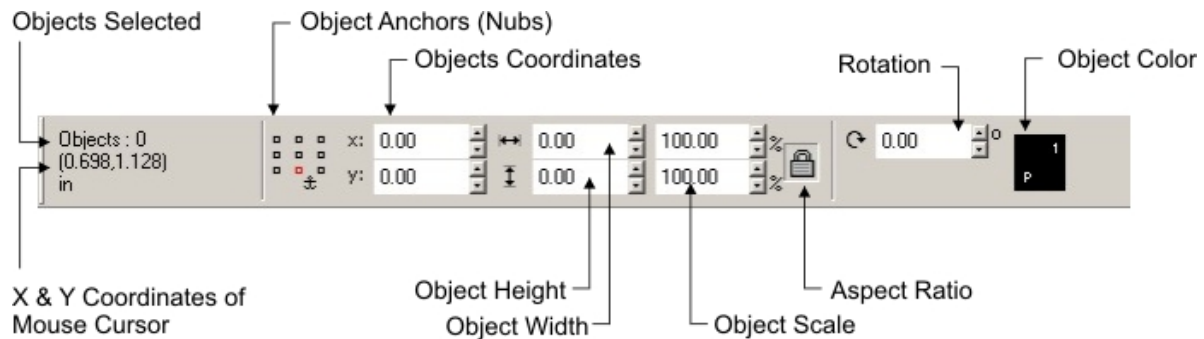
Options Menu



Help

## SmartBar Controls

The SmartBar is docked at the top of the workspace, where it displays information about the currently selected objects. Below is the SmartBar labeled with the functions:



### Objects Selected

The first information listed in the Status Bar is the Objects Selected information, if only one object is selected VisionPro will list the type of object as well as the layer upon which it exists.

### X & Y Coordinates of Mouse Cursor

The area immediately below the Objects Selected are displays the X and Y coordinates of the cursor on screen.

### Object Anchors/Current Nub

Selected objects have nine square nubs that are used for moving, scaling and resizing. These nubs are also represented in the SmartBar.

The highlighted nub in the SmartBar indicates the coordinates of that object on the workspace.



Click on individual nodes gives the position of that node. These options allow for setting the starting point for the baseline of any line of text at a specific position relative to the lower left corner of the Sign Blank. For example, an X Position of 1.00 and a Y Position of 1.00 will position the line of text so that its baseline begins 1 unit above and 1 unit to the right of the lower left corner of the Sign Blank. The position is set relative to the lower left of the sign blank in the current unit of measurement, pre-determined in the General Preferences dialog box.

### Object Width & Height

The Object Width and Height value boxes display the width and height of the selected object(s). These values can be edited, however once a value is entered the Return/Enter key on the keyboard must be pressed to activate the entry, or use the arrow cursor to increase or decrease the absolute width or height values. If more than one object is selected all objects will be sized when these values are edited.

### Object Scale

The Object Scale fields are used to resize the object as a percentage of its original dimensions. The Object Scale arrows will resize the object in 5% increments. Alternatively, the scale may be changed by entering a new value in one of the fields. If entering new data in a field, then the data will not be accepted until the Enter key is pressed.

### Aspect Ratio/Proportional Scaling

When an object is either resized or scaled, the Aspect Ratio button may be maintained by activating this button. When turned off, you can change the ratios. An example is shown below:



Aspect Ratio at 100:100



Aspect Ratio at 50:100  
The with was reduced by half  
and the height was not changed.

### Rotation

The Rotation option rotates the selected object(s) the defined angle of rotation. Use the arrow buttons to rotate the selected object(s) in increments of 5 degrees. These values can be edited, however once a value is entered the Return/Enter key on the keyboard must be pressed to activate the entry. Only vector object can be rotated with this tool.

### Object Color

The selected object(s) color fill and stroke color are displayed in this view box. If no object is selected the default fill and stroke colors are displayed.

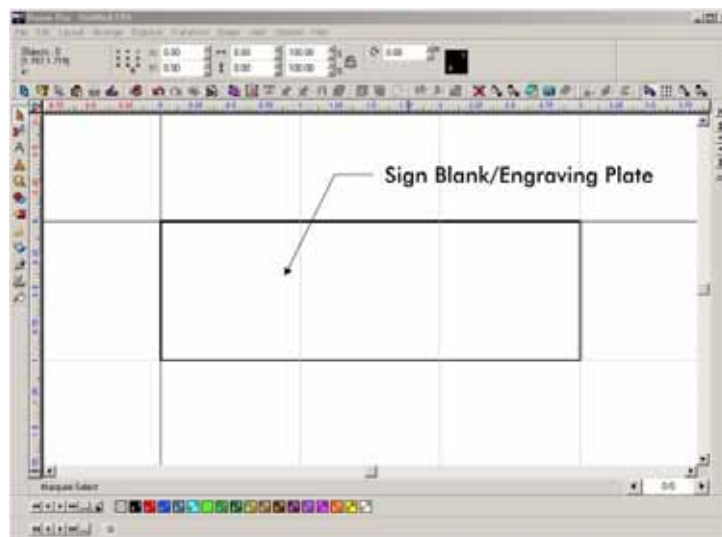
### Color Palette

The Color Palette at the bottom of the screen is used to assign a layer to selected objects. Each color depicts a different layer.

### Sign Blank

The area of the screen bounded by the border; sign blank.

Selecting the Sign Blank option will cause VisionPro to plot only those objects that appear on the sign blank. As with the Window option, an object that is partially on the sign blank will be partially cut.



### Scroll Bars - Scrolling & Panning

#### Vertical/Horizontal Scroll Bars

Scroll Bars are used to scroll the current viewing window to view another part of the image on-screen. This is very useful when using a zoomed-in view of the image.

### Scroll Bar Arrows

Clicking on a scroll arrow causes the viewing window to move in the direction indicated by the arrow. This will have the appearance of moving the graphic in the opposite direction a short distance. This distance is approximately 1/10 the width or height of the view screen, depending on whether you are moving the view screen vertically or horizontally.

### Scroll Bar Elevators

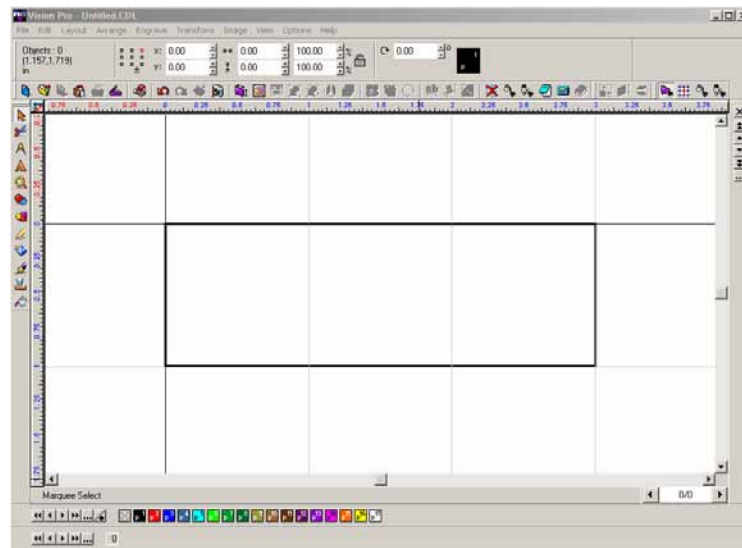
Clicking on a Scroll Elevator causes the viewing window to move in the appropriate direction a large distance. The distance moved is approximately equal to 1/3 the width or height of your view screen, depending on whether you are moving your view vertically or horizontally.

### Scroll Bar Thumb

Dragging a scroll bar thumb within the scroll bar causes the viewing window to move in the direction of the thumb in very large movements. How far the view screen actually moves depends on how far the thumb is moved within the scroll bars. When deciding how far to drag the scroll thumb, be aware that the ends of the scroll bar represent the outer edges of the file on screen.

### Editing Window

The large blank area of the screen is the Editing window. If Show Sign Blank is activated, a rectangle representing the sign blank appears on the Editing Window. The Sign Blank is the only object in the Editing Window that cannot be edited.



### Dialog Boxes

Secondary window that appears that controls the actions of many functions.(i.e Shape Tool | Right Click on Stars/Polygons and the Star Settings Dialog Box appear).

### Short Cuts

#### HOT KEYS

One or more keys pressed the same time to replace a series of mouse and menu movements. (i.e. **CTRL+S** is the hot key for Save File). Hot keys are located the right of the pull down menu functions. The **CTRL KEY** is abbreviated as '^'.

#### Function Keys

Provide access to often used functions of VisionPro

- [F1]** Help
- [F2]** Disable all but the target layer
- [F3]** Select All
- [F4]** Redraw Screen
- [F5]** Activate Zoom In Tool
- [F6]** Zoom Out
- [SHIFT]+[F6]** Zoom Out to Center
- [F7]** Zoom To Selected Object
- [F8]** Zoom To Sign Blank
- [F9]** Zoom In/Out Toggle
- [F10]** Select the Menu Bar
- [F11]** Pan To Mouse

### **ACCELERATORS**

Single keystrokes that will access a function from within an open menu. With the LAYOUT menu open, press **[D]** to get to the Decorative Border Dialog Box. To open a menu and access a menu without using the mouse simply press the **[ALT]** key combined with the underscored letter in the menu title followed by the underscored letter of the menu item.(i.e. **[ALT] + [L] + [D]**).



# Chapter 2

## Vision Pro Text

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## Working With Text in Vision Pro

There are two methods for entering text in Vision Pro, Text Compose and Text Autolayout. Both are accessed from the Text Tools on the tool box

### Text Compose

There are three methods for inputting text from the Text Compose option or 'A' from the tool box.

- **Free form text without fixed margins.** This is the most unconstrained method – just hold down the **SHIFT KEY** and click anywhere within the Editing Window, and start typing.



In the example above, you can see the text frame around the lettering. There are no side or top and bottom margins as in text created with Frames.

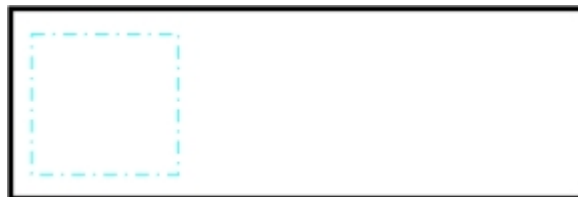
- **Text with Frame Properties.** Use text compose and clicking within the engraving plate/sign blank. A text frame is automatically created around the plate. The margins are defined by the Frame Properties.



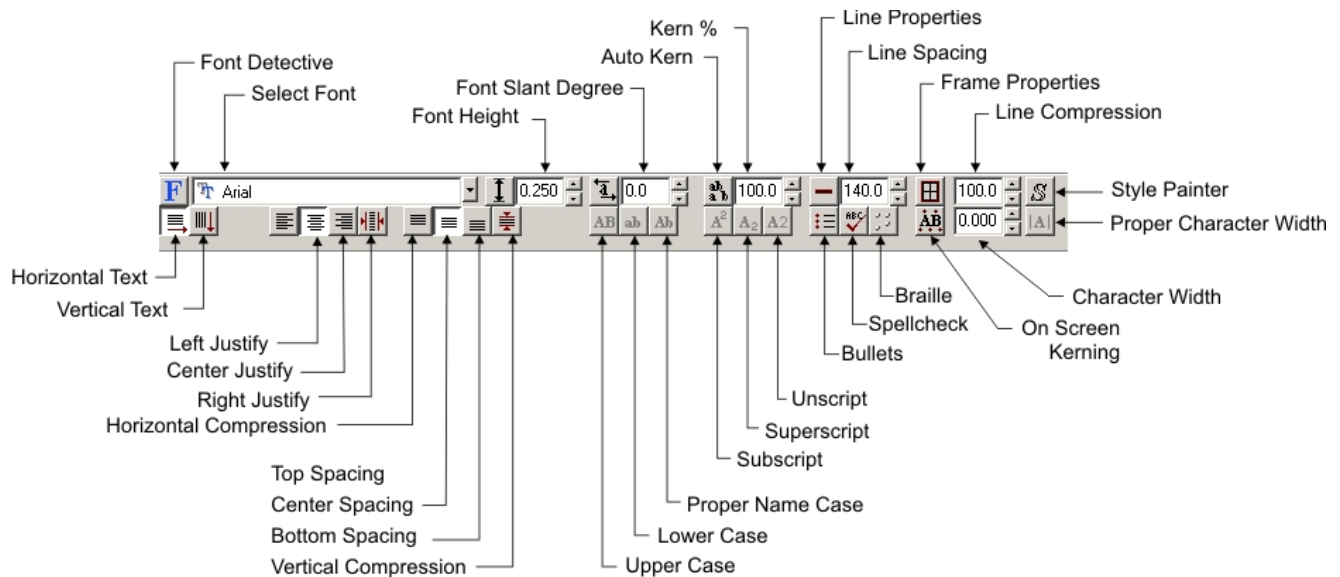
1 x 3 plate With Text Frame

Note the dotted lines around the engraving plate/sign blank. This is the automatic Text Frame.

- **Text with Frame Properties in a User Defined Frame.** Just draw a box **OR SHIFT + DRAW A BOX**



1 x3 plate with .75 x .75 User Defined Text Frame



Once you get text in your layout, you can control the various options shown below:

### Font Height

The Font Height defines the actual height of the font as it was created. When creating a new font, enter the actual height of a reference letter so that the font maker knows how to appropriately size the rest of the characters in the font. For example, choose to define the font's height based on an uppercase M (a fairly traditional choice), measure the M and enter that value in the Height entry box. Define the font height in the current unit of measurement (i.e., inches or millimeters). It is very important to assign an appropriate height to a font being created. The height of a font is often based on the height of an uppercase M or H. When creating a block-style font, use the absolute height of the letter, while a script font may require a more creative estimate of height.

### Font Slant Degree

The Font Slant Degree option, when edited from the keyboard, allows the text to be tilted to the left or right as desired. The Slant is measured in degrees. Entering a positive value applies a forward slant (top toward the right) while a negative value applies a backward slant (top toward the left).

### Kern Percent

The entry box directly below the Cell Spacing provides the ability to set the Text Kerning within the Cell.

### Auto Kern

The Auto Kern command balances the white space between characters, such that a more pleasing arrangement of text is created.

The Kern Percent field is used to specify that a percentage of the regular kerning is to be applied. Reducing the percentage will decrease the space between characters, while increasing the percentage will move characters further apart.

### Line Properties

### Line Spacing

This option allows for setting the vertical spacing between lines of text. Specifically, this option allows for specification of the distance between the baseline of the current line of text and the baseline of the line of text directly above it. The Line Spacing can be edited within the Line Properties dialog box or directly from the Text tool bar.

Changes spacing at the top of the line; does not affect top line in layout. This distance can be edited from the keyboard or by using the scroll arrows.

### Frame Properties

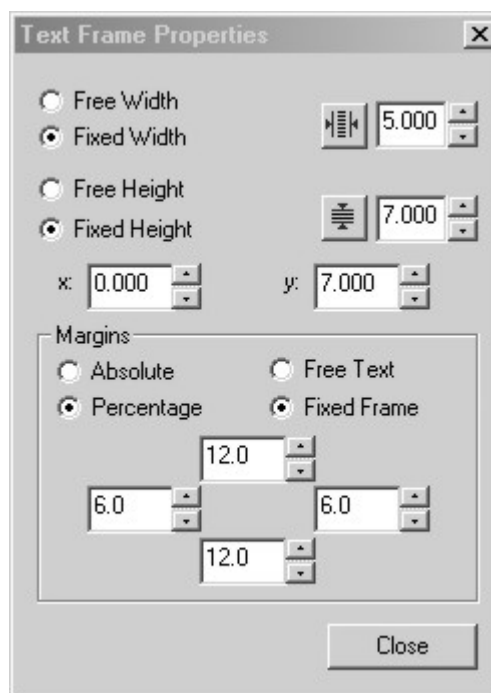
The purpose of the text frame is to constrain text to the given height and width.



With respect to either **Free Width** or **Free Height**, the text will be set according to the height, width and kerning settings for the given font. Alternatively, fixed width or height may be set.

The **X** and **Y** fields are to position the line of text at specific coordinate with respect to the signblank origin.

The text frame margins may be set in terms of absolute distances from the text frame edge, or by a percentage of the text frame size.



The purpose of framing text is to contain any text entered into the paragraph within a defined area of specified width and height. This is a great feature for controlling placement of text when there is a limited area for the text.

#### Free Width

Determined by character height

#### Free Height

Allows the paragraph to run to its natural height based on the height, width, and kerning of the fonts in the lines of text. Selecting the Free Height option adjusts the length and height of the lines based on the standard font settings.

#### Fixed Width/Length

Sets the line length as specified by an absolute value. Selecting the Fixed Length option activates the Horizontal Compression button and value box.

### Fixed Height

Sets the height of the paragraph as specified by an absolute value, in the unit of measurement pre-determined in the General Preferences dialog box. Because the method for line height alteration must be specified, this option must be used in conjunction with the Vertical Compression option.

### Margins - Absolute

Absolute distances from the text frame edge

### Margins - Percentage

Preferred method especially when constantly changing to a different plate size.

## Line Compression

Maintains height, reduces line spacing as lines wrap around



This field is used to compress a line width to a percentage of its original width. For example, enter 50 to compress the line to 50% of its original length.

## Line Spacing

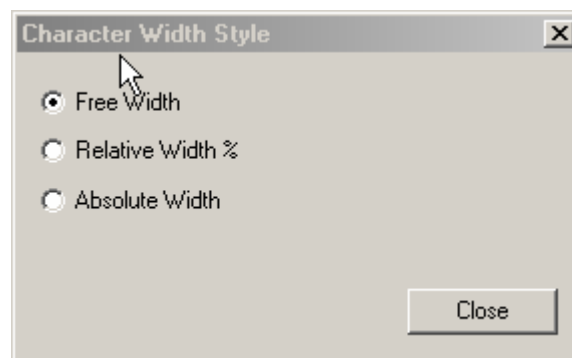
Constrains text by modifying the spacing between lines of the selected text.

## Style Painter

The Style Painter is used to copy text attributes from one text object to another. To copy attributes, select the text and click the Style Painter button. To paste these attributes, click the Style Painter button when there is no text selection.

## Proper Character Width

The Character Width tool can apply compression to individual characters of a word. Right-clicking the Proper Character Width button opens the Character Width Style dialog.



The dialog controls are summarized as follows:

**Free Width** - maintain the characters at their original widths. This setting does not allow the Character Width to be adjusted.

**Relative Width Percentage** - adjust the character width as a percentage of the original width.

**Absolute Width** - adjust the character width to be a specific width.

## Character Width

The Character Width tool can apply compression to individual characters of a word.

**On Screen Kerning**

The On-Screen Kerning feature is used to make manual adjustments to text using a special set of kerning nubs. The kerning nubs may be used to adjust inter-line spacing, line kerning, individual letter pair kerning, and the alignment skew of text.

On-Screen Kerning is accessible from the Text Tools flyout, as well as from the Text Compose toolbar. In addition, holding the Control key and double-clicking a text object will enter On-Screen Kerning mode.

**Braille**

The Braille button is used to operate the Braille module. If the Braille module has not been purchased from CADlink or one of its re-sellers, this option will not be available, and will be grayed out. Please consult the chapter in this manual entitled The Braille Module for details on the operation of this feature.

**Spell Check**

VisionPro's Professional Text Compose module is equipped with a Spell Checker. To operate this feature, sweep-select the text to check and click on the Check Spelling button. This opens the Spell Checker dialog box:

**Bullets**

The Bullets button converts any selected text line to a bulleted format.

**Unscript**

This button causes all selected characters that appear as Superscript or Subscript to be converted back to standard character placement.

**Subscript**

Text below the baseline

**Superscript**

Text above the baseline. This button converts all selected text to Superscript characters.

**Proper Name Case**

First letter of each word is capitalized.

**Lower Case**

Converts selected text to lower case

**Upper Case**

Converts selected text to upper case

**Vertical Compression**

Character Height Compression constrains the lines of text to the specified maximum height by reducing the height of the font in the lines of text. This option will also reduce the character width and kerning proportionately. Because this is a simple compression type, it will only have an effect on the height of lines if they exceed the value designated in the Units edit box.

Otherwise, the lines of text will be allowed to run freely according to the other parameters set in Text Compose.

**Bottom Spacing**

Places the Y placement value at the bottom of the Text Paragraph.

**Center Spacing**

Places the Y placement value at the center of the Text Paragraph.

**Top Spacing**

(default) places the Y placement value at the top of the Text Paragraph.

**Horizontal Compression**

Where necessary, text is compressed to fit into the cells defined in the layout. Cells can have the compression mode set independently of other cells or as a group. The method used for linking the lines in a layout determines the final effect of the compression style applied. There are three compression modes to choose from: Lines individually; All Lines Equally; and Equal Height Lines.

**Lines Individually**

The Lines Individually option provides the ability to treat each line in a paragraph independently when applying a compression. The effect of this compression mode is that each line of text may have very different height, width, and kerning characteristics.

**All Lines Equally**

Applying compression to All Lines Equally causes VisionPro to find the cell that requires the most compression, and then compress all others to the same extent. The effect of the compression mode is that all cells in a layout display the same width and kerning characteristics, regardless of the height of the text in each line.

**Equal Height Line**

VisionPro treats all the cells with text of the same height as a group for the purposes of compressing text when the Equal Height Lines compression mode is selected. VisionPro finds all the cells of the same height and then selects the cell that requires the most compression. VisionPro then applies this compression value to all cells of the same height. The effect of this type of compression mode is that all lines of text with equal height display the same width and kerning values, but not the same width and kerning values as those lines of text with different height values.

**Left Justify**

Selecting the Left option causes the first characters of each line of text to be lined up vertically with the point selected by the Text tool on the view screen. This option causes each line of text to run from a point on the left to the right, such that the left side of the paragraph is straight and linear, while the right side of the text is ragged.

**Center Justify**

Selecting the Center option causes the center of each line of text to be lined up vertically with the point selected by the Text tool on the view screen. This option causes each line of text to run to the left and right from its center, such that both the left and right sides of the paragraph are ragged.

**Right Justify**

Selecting the Right option causes the last character of each line of text to be lined up vertically with the point selected by the Text tool on the view screen. This option causes each line of text to run to a point on the right from the left, such that the right side of the paragraph is straight and linear, while the left side is ragged.

**Horizontal Text**

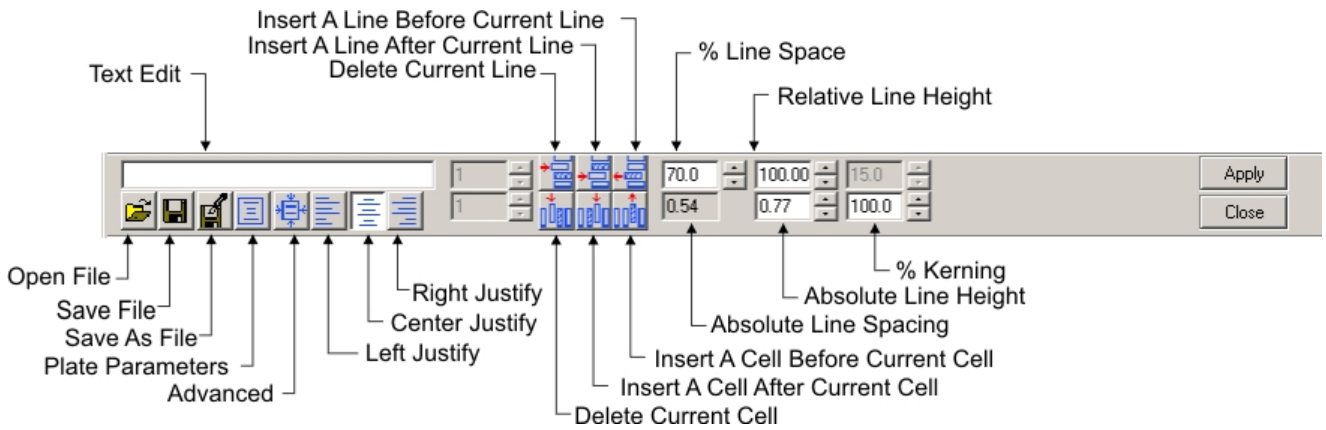
Horizontal Text displays the text paragraph in order from left to right along a horizontal, top line to bottom line.

**Vertical**

Vertical Text displays the text paragraph in order from top to bottom along a vertical line, left line to right line.

**Text Auto Layout**

The general controls for the Auto Layout controls are shown below on the properties bar:



**Plate Parameters**

Selecting the Plate Parameters button opens the Plate Dimensions dialog box, to set the size of the plate (width by height) and the number of lines to be included within the plate.

**Advanced**

**Plate Dimensions**

The Plate is the rectangle upon which the layout is created. It is typically sized to match the substrate (i.e., badge, plaque, or other finished product) for final output.

The default plate size is equal to the size of the selected object when Auto Layout is accessed. If no objects are selected (or more than one object is selected), the plate size is defaulted to the size of the Sign Blank.

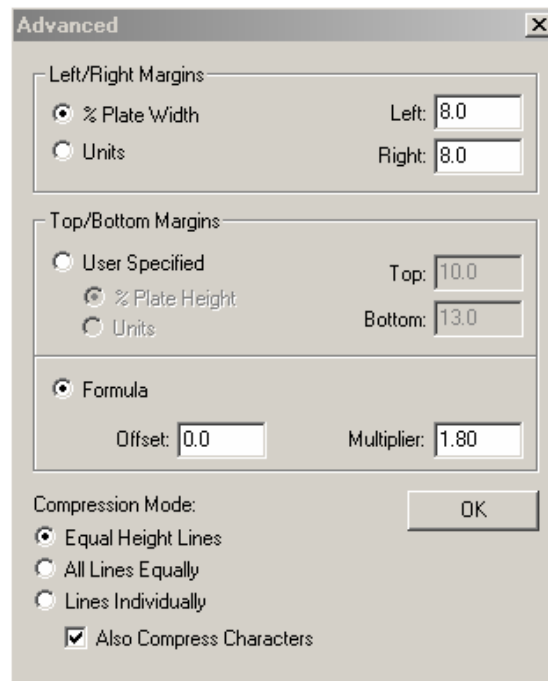
**Number of Lines**

A Line is a series of boxes (or Cells) that runs from left to right across the layout, and into which text or graphics are inserted. The cells are each

Set the size parameters first, then set the number of lines of text these values can be edited later if required.

## Advanced

The Advanced button opens the Advanced dialog box providing access to more advanced features in the setup of the Auto Layout tools, including the ability to develop layouts using specific relationships between objects within the layout.



There are four margins in any layout: top, bottom, left, and right. These margins represent the distance between the nearest edge of a cell (or cells) and the edge of the plate. The margins for each layout are indicated in each of the four corners by crop marks, these crop marks appear green on-screen.

### Left / Right Margins

The left and right margins can be specified as a percentage of the plate width or as an absolute value by selecting the appropriate radio button. The values for the margins can then be set in the entry boxes on the right.

### Top / Bottom Margins

The user can specify the top and bottom margins, or by a mathematical formula, simply select the appropriate radio button: User Specified, or Formula.

### User Specified

Specify the top and bottom margins manually as a percentage value of the height of the plate, or as an absolute unit value by selecting the appropriate radio button. The values for the margins can then be set in the entry boxes on the right.

### Formula

Selecting the Formula option, causes VisionPro to calculate the top and bottom margins automatically based on the Offset value and Multiplier value entered combined with the number, size, and spacing of the lines included in the plate.

Note: Inter-line spacing is the distance between the bottom of any given line and the top of the line directly below it

**Offset**

The Offset setting specifies the difference in height between the upper and lower margins as a percentage value of the entire plate height. A positive value causes the bottom margin to be larger than the top margin, while a negative value has the reverse effect.

**Multiplier**

The Multiplier setting governs the ratio of inter-line spacing with the top and bottom margins. Specifically, this number represents the top and bottom margin size as a multiple of the average inter-line space.

For example, if the inter-line spaces average 1 inch in size, and the multiplier is 2, then the average size of the top and bottom margins is 4 inches.

**Text Justification**

- Left Justify
- Center Justify
- Right Justify

**Line and Cell Controls**

- Insert A Line Before Current Line

The Insert Line Before button inserts a line of cells above the currently selected line. The new line will be identical to the currently selected line, except that the cells will not contain any text.

- Insert A Line After Current Line

The Insert Line After button inserts a line of cells below the currently selected line. The new line will be identical to the currently selected line, except that the cells will not contain any text.

- Delete Current Line

The Delete Selected Line button removes the currently selected line of cells. Deleting a line also deletes the contents of the cells within the line, including a text.

Note: The Undo feature is not available in Auto Layout, as such be careful when deleting lines, as critical layout information can be deleted along with the corresponding lines.

- Insert A Cell Before Current Cell

The Insert Cell Before button inserts a cells to the left of the currently selected cell. The new cell will be identical to the currently selected cell, except that it will not contain any text.

- Insert A Cell After Current Cell

The Insert Cell After button inserts a cells to the right of the currently selected cell. The new cell will be identical to the currently selected cell, except that it will not contain any text.

- Delete Current Cell

The Delete Selected Cell button removes the currently selected cell. Deleting a cell also deletes the contents of the cell, including a text.

Note: The Undo feature is not available in Auto Layout, as such be careful when deleting cells, as critical layout information can be deleted along with the corresponding cells.

**Cell Behavior**

- % Line Space

The percent and absolute spacing represent the distance from the top of the selected cell to the bottom of the cell immediately above. The distance can be specified as either a percentage or absolute value.

- **Absolute Line Spacing**

This box, located directly below the Relative Line Height box, provides the ability to set the height of the line as an absolute value. Editing the Absolute Height effects the Relative Height value.

- **Relative Line Height**

This box provides the ability to set the height of the selected line based on the size of the other lines in the layout. For example, setting the line to 100% causes another line with a Relative Height of 50% to be half the height of the 100% line, while another line set at 150% will be one and a half times the height of the selected 100% line. Editing the Relative Height effects the Absolute Height value.

- **Absolute Line Height**

- **% Kerning**

### Creating A Sample Job With Auto Plate Layout

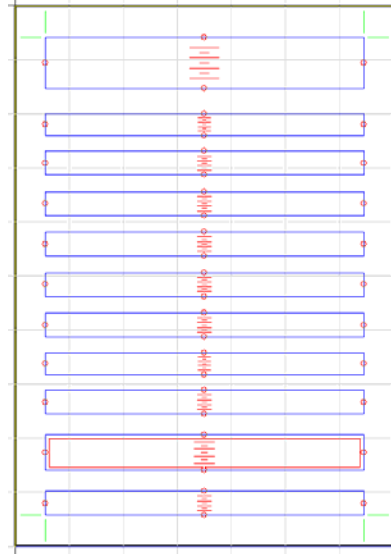
To start the Auto Plate Layout, go to Text Tools on the toolbox and select Text Auto Layout.

Enter the data as shown below:

Line #	Text	Absolute Line Height	Relative Line Height
1	Michelle Goodwin		200
2	A	.40	
3	In Appreciation of		100
4	Her Dedication, Love and		100
5	Many Long Hours Spent		100
6	Helping Our Special Children		100
7	Get Their Wishes		100
8	A	.40	
9	From The Staff of		100
10	Wish For Wings		150
11	January, 2004		100

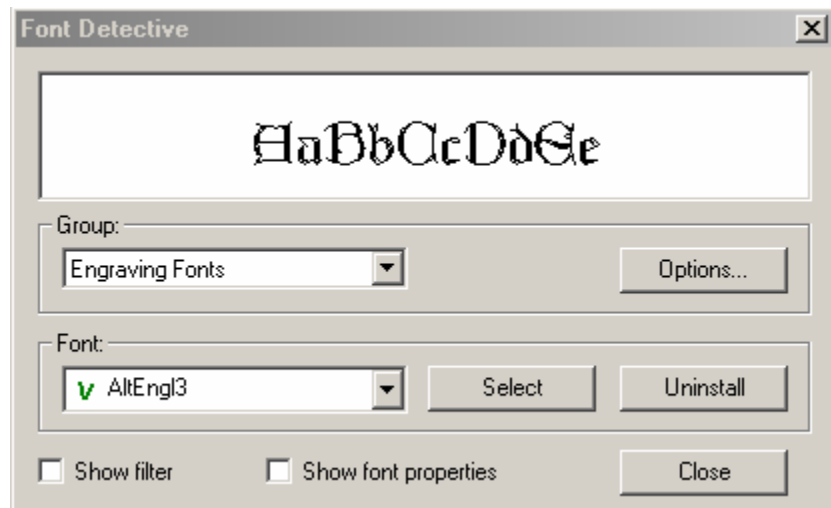
▪

To the right is the Auto Plate Layout screen.  
Each line of text is noted by a rectangle.

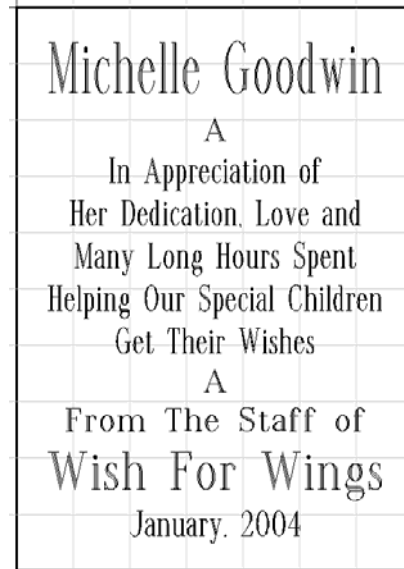


Before Applying within Auto Plate Layout, save your layout file (.lyt extension). After you leave, you can go back and load your saved file.

After the Auto Plate Layout screen, you will choose your font. Pick the font that is used on most of the lines. You can change the individual lines in the regular text edit screen. I used Roman 3L and then clicked on Select

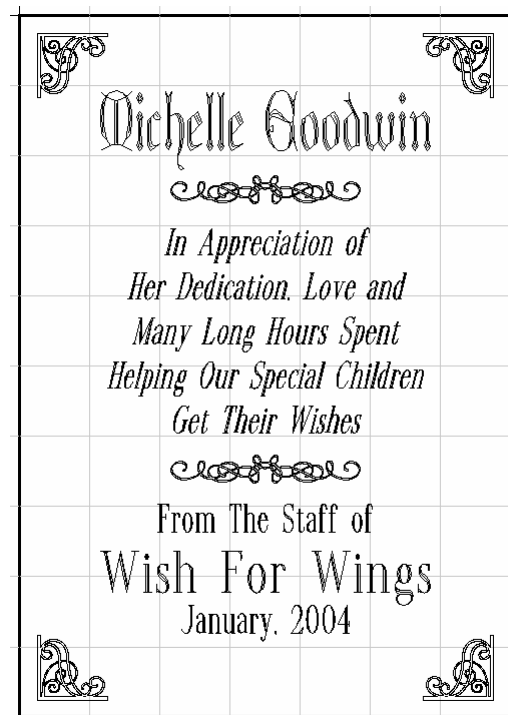


Here are the results after I selected the font.



The finished plaque is shown to the right. Here are some of the options I did to get this look

- Resized to allow for corners
- AltEngl3 for Name
- Italicized Saying to 15 degrees
- Layout | Ungroup
- Layout | Arrange and Distribute







# Chapter 3

## Selecting and Grouping

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## Selecting Vs. Grouping

An object is a single entity. While it is usually thought of as a single item, items that are selected or grouped are also considered an object

### Selecting

#### The Select Tool

The select tool is used to select objects that will be operated on by the commands contained in the menus. The select tool is also use to move and resize objects.

With the Select tool active, position the Select tool on the object's outline (you will see the cursor change to a cross hairs (+)), and click. A group of 9 nubs will appear around the selected object and the Status Bar will indicate the dimensions of the selected object and the layer designation of that object.

#### Selection Multiple Objects

With the select tool active, click on several objects while holding down the [SHIFT]key. This group of objects can be operated on as one object with the menu commands. If you click on an already selected object while holding down the [SHIFT] key, that object will be deselected.

After you select multiple objects, you can group them so they will stay together; ungroup them when you need to manipulate them individually.

### Grouping

The Group command allows you to combine two or more selected objects into a single entity, so that they will be treated as a single entity.

To form a group:

Select the objects with the you wish to include in the group.

Choose the Group option from the Layout menu.

The objects are now the components of a group which will be treated by Vision Pro as a single object.

You can also Group two or more groups together into a larger group where required. An example of this is text created with the Text Compose Tool. The Text Compose tool generates text in groups naturally, as follows:

Each line of text is actually a group of letters

Each paragraph of text is actually a group of lines of text

In effect, a paragraph of text is, therefore, a group of groups.

### Selecting a Node

Any node can be selected by simply clicking on it. Clicking on a group of nodes while keeping the [SHIFT] key depressed will select the group of nodes.

You can also marquee select a group of nodes, or select all of the nodes in a given contour by clicking on one node in the contour while pressing the **CTRL** key. Selected nodes will change color.

### Selecting All

This command allows you to select all objects in active color layers on the screen without having to draw a marquee or click on individual objects. (A menu option)

KEYBOARD SHORTCUT:

**CTRL +**



# Chapter 4

## Creating Fills

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## Creating Fills with Vision Pro's Create Tool Path

The Tool Path tool is used to access all the Tool Path Creation tools, selecting this tool opens the following fly-out menu: Used specifically for routing and engraving requirements, these tools are also accessed via the Create Tool Path option in the Cut menu.

The Routing Fill Control dialog boxes are used to apply a rout or tool path to selected objects. Selecting a Tool Path option from the Create Tool Path fly-out menu available in the Cut menu can access them. The Routing Fill options are Online, Male, Female, Fill, 3D Centerline, and 3D Multi-Pass. These options apply to the Tool Offset from the contour; this specification defines the type of cut to produce.

### On-line Tool

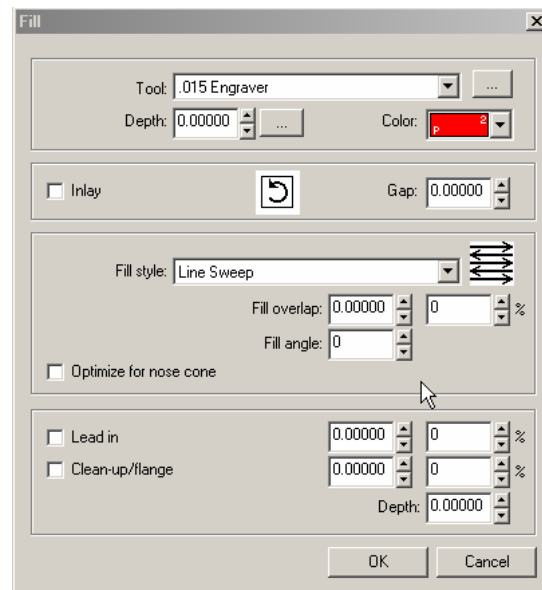
### Male Tool

### Female Tool

### Fill Tool

This feature allows the engraver to fill objects and text.

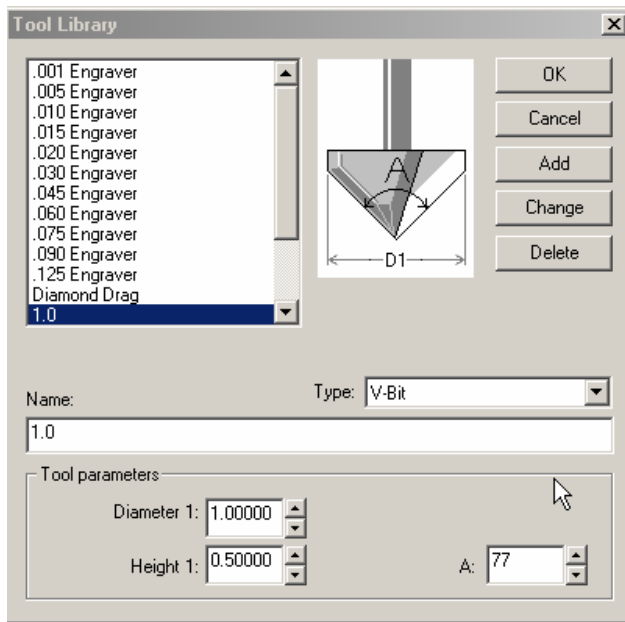
For those in a hurry, just select the cutter size you are using, and the fill style, and you have a rout pattern for the selected text or object. If you want more, the FILL OPTION lets you choose. Your choices include:



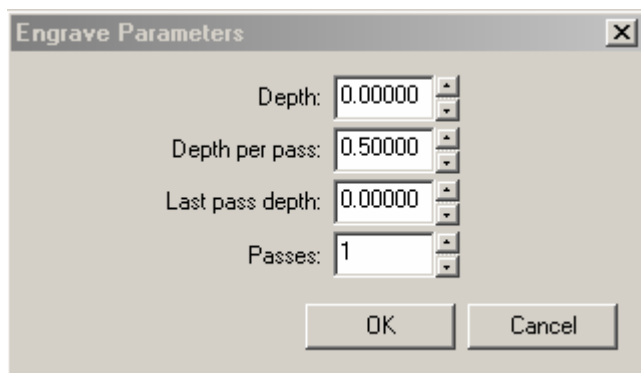
### Tool

Select the actual tool effect you want.

Use this option to set the default size of your cutter, felt-tipped marker you use in your plotter, or the size line you want sent out to your printer. This option is very helpful in determining the correct cutter - select a cutter and the results appear on the screen.



### Depth



### Color/Layer

This selection box allows you to send the current Rout Path to a specific layer. Rout Paths rely on the Palette for depth information, so you must assign each path you generate to a layer for Routing. The layers are color-coded for viewing and manipulation.

### Clockwise or Counter Clockwise

Selecting this option will cause the outside edge of all objects to be traced clockwise without regard for the direction in which they were originally produced. Contours inside other contours will be traced in an anti-clockwise fashion.

### Fill Style

The Fill Box, located at the top of the dialog box, this box provides a graphic representation of the chosen fill pattern.



### Fill Overlap

Fill Overlap is the amount by which you would like each successive tool path to overlap each previous path. The Fill Overlap is applied only when you are actually filling an object (i.e., not when you are tracing an object). You can specify fill overlap as either a percentage of the tool diameter, or as an absolute measurement.

### Fill Angle

You may elect to specify a Fill Angle if you are cutting artwork which leans in a specific direction. Proper setting of the Fill Angle can result in substantially reduced production time.

### Optimize for Nose Cone

#### Lead In

Selecting this option will cause VisionPro to generate a Lead In for the tool path. A Lead In is an additional portion added to the start of the tool path which begins away from the edge of the object being cut. This additional path prevents any distortions to the edge of the object caused by the movement of the router bit while it is plunging into the material.

#### Cleanup /Flange

When you are cutting an object to a deep final depth, you may want to use multiple passes (i.e., several cut passes at varying depth settings) to avoid burning the material or bit, to make sure that the corners of the cut objects are sharp, and to speed the cutting process.



# Chapter 5

## Raster to Vector

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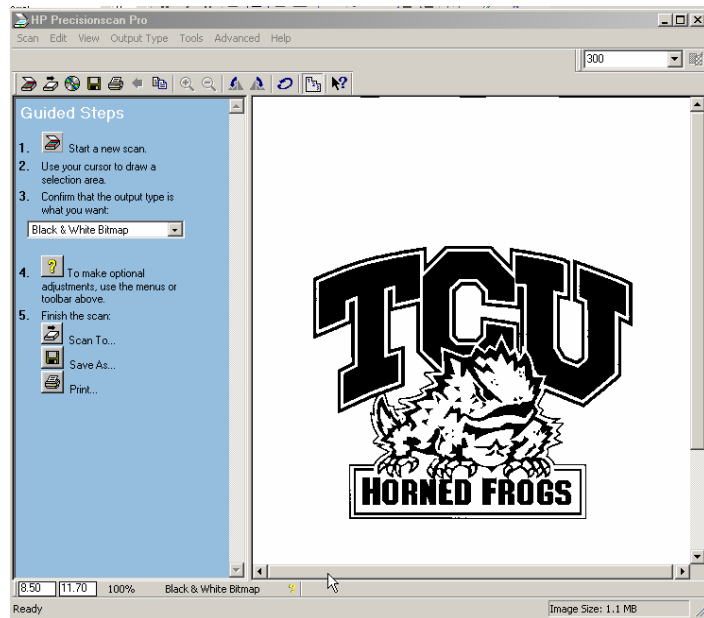
## Scanning Artwork into Vision Pro & Vectoring

Scanning artwork into Vision Pro involves two basic steps; acquire a bit-mapped image from your scanning software, and converting it to a vectored object.

From the File pull down menu, select **FILE | ACQUIRE | SOURCE**.

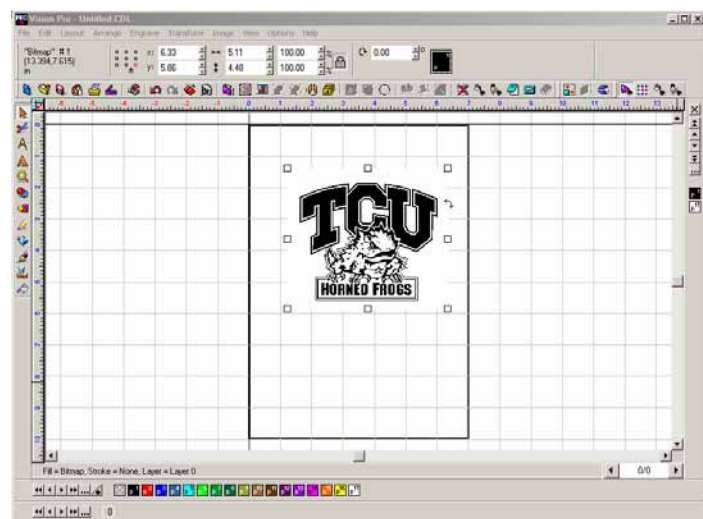
Vision Pro will open your system's scanning program.

I am using the HP Scan Jet 4400c. Your particular scanning screen may be different. Before or after you scan, depending on your particular scanning software, make sure the file image is a 'black and white drawing'. Scanning and vectoring of a color object is not standard in Vision Pro. (Note: I have the upgrade option for color and I still use 'black and white drawing' images for best results.)



After you have scanned the image in your scanning software, Vision Pro will now acquire it in the engraving program. It is brought in as a bit-mapped drawing. I am using an example I have scanned.

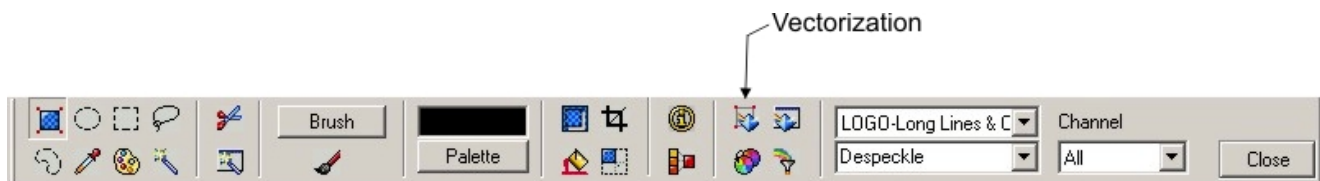
Remember, nine nodes will appear any time an object is selected. If you scanned image doesn't have the nodes, use the Select the tool and click on the image.





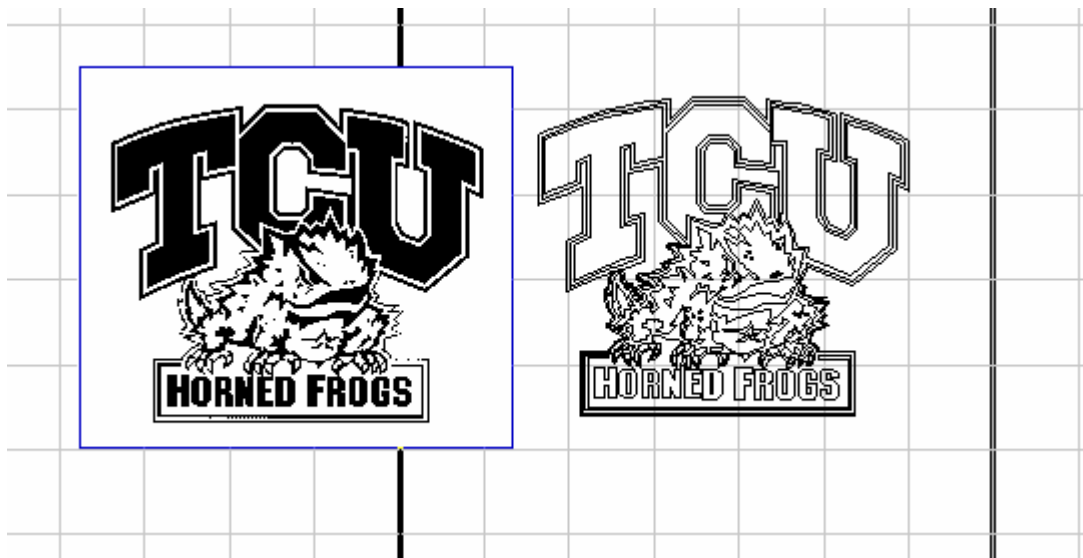
The next step is to vector the drawing. From the Scan Tools menu select the ACCUSCAN tool, or the pyramid, as shown below.

After you click on SCAN, you will get the Scanning Box. You can also double-click on the scanned image to get to the Scanning properties bar as shown below:



Choose the style of scanning that best fits your logo. For the donut logo, I have selected LOGO-Complex with details. Now click on the pyramid (arrow pointing to it) in the Scanning box. You will see your logo vectored, or outlined.

Then click on the Vectorization icon as noted on the SmartBar above. The results of the raster-to-vector conversion is shown below. Before you click on the object to move it, select the GROUP option under Layout pull down menu.



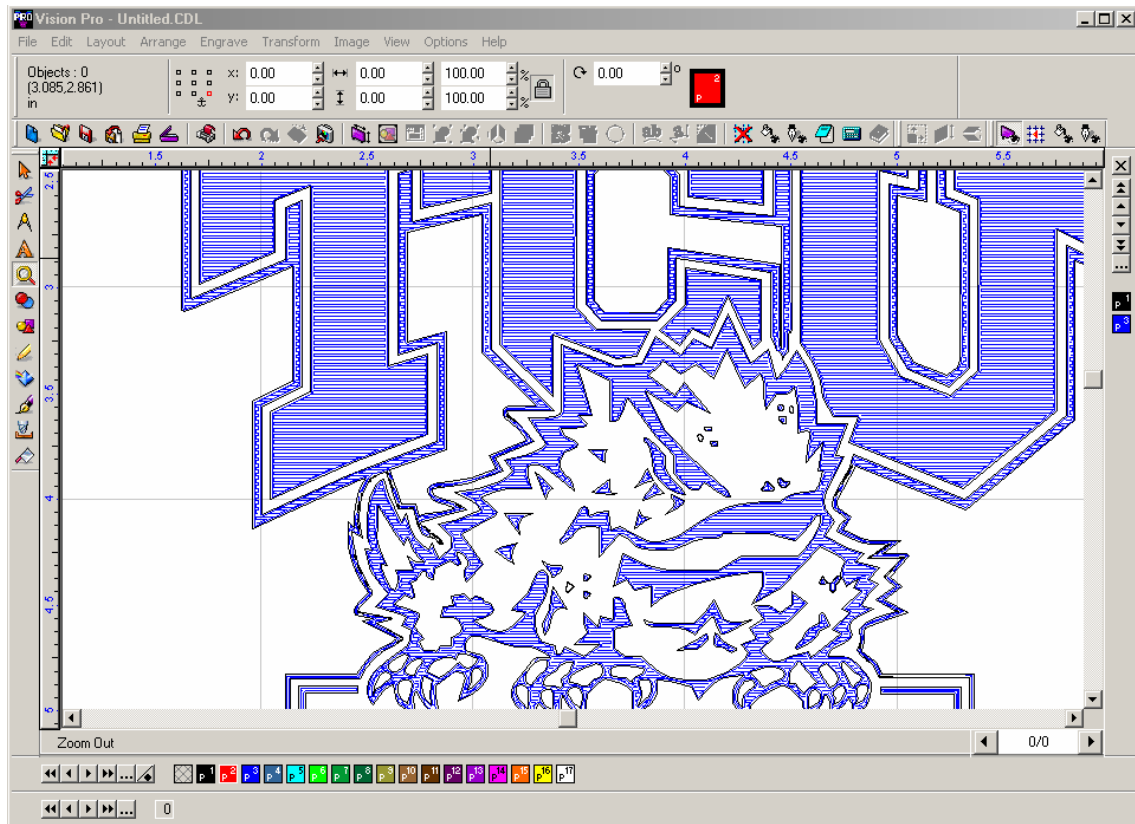
After an image is scanned, it is made up of individual objects. All of the objects are selected after you exit the Scanning box. If you click away from the object the vectored image will be de-selected. Then when you try to click on the object again, you will see that you only move a single part of the object. If you accidentally de-select the scanned image, it's usually quicker to hit the ALT + BACKSPACE

key do undo the scan. Then rescan, and make sure that you Group the vectored image before you try to move it.

As you get more experienced, you can move only the scanned image away from the vectorized image, and not have to use the group command.

Next, with the vector image selected, go to Arrange | Make Path. This will combine the logo into separate parts so that each will fill independently.

To fill the logo, go to Engrave | Create Tool Path | Fill. The logo was 4.37 x 3.74. I used a .015 cutter and an S-sweep fill pattern. I also selected Blue for the fill color. The results are shown below:





# Chapter 6

## Vision Pro Toolbars

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## Vision Pro Tool Bars

### SELECT Tool

Used to select tools that will be operated on by the commands contained in the menus. It also used to move and re-size objects

### CUT TOOL

Sends job to engraver bypassing the Menu Command, Plot.

## MEASURE TOOLS

### Measurement

The Measure Tool permits selection of two points on a graphic, determine the distance between these two points and then force this distance to any length. Select the Measure Tool and a '+' shaped cursor appears on the screen. When the dialog box also appears, select one point and press the mouse button; drag the mouse to the point that represents the end of the area to be measured and release the mouse button. The dimension between the two selected points is shown in the dialog box

### Dimension

The Dimension tool provides the ability to create arrows indicating dimensions on any given plane or angle. The format of the final dimension arrows is governed by the settings set in the Dimension Setup dialog box, located under the Options menu

### Object Dimension

The Object Dimension tool is designed to generate Vertical and horizontal measurements based on a specific object or group of objects. To use this tool, first select the object(s) required to draw dimensioning information.

### Arrow Draw

The Arrow Draw tool provides the ability to draw arrows and to apply notes to objects.

### Notes

The Notes tool provides the ability to add descriptive notes to files. To operate the Notes Tool: click on the Measure tool button; click on the Notes tool in the tool palette; click on screen at the point to place the notes. This produces the Edit Notes dialog box.

## ZOOM TOOLS

### Zoom In

The Zoom In tool provides the ability to zoom into a selected area of the graphic and magnify it.

### Zoom Out

A drawing can be viewed as smaller on the screen by successively clicking on the Zoom Out icon on the Zoom menu. The Zoom Out tool may also be invoked while using the Zoom In tool, by pressing the right mouse button instead of the left.

### Zoom To Selected Object

Selecting the Zoom to Selected tool causes the viewing window to fit the selected objects exactly into the boundary of the screen. If no objects are selected then all objects will be fit to the screen.

Keyboard Shortcut: Pressing [F7] activates the tool.

### **Zoom To Sign Blank**

Selecting the Zoom to Sign Blank tool causes the viewing window to fit the current Sign Blank in the Layout menu.

Keyboard Shortcut: Pressing [F8] activates the Zoom to Sign Blank tool.

### **Zoom To Previous View**

Selecting the Return to Previous View tool, when zoomed in or zoomed out on an object will automatically change the screen view to any previous zoomed view. This tool is extremely useful to toggle back and forth between views when working at extreme detail.

Keyboard Shortcut: Pressing [F9] activates the Return to Previous View tool.

## **WELD TOOLS**

### **Basic Weld**

The Basic Weld tool is used to delete overlapping sections between two different objects in the same color layer, or overlapping sections of the same object, and convert these into one fused or welded object. The Basic Weld tool can be found in the main tool box and is represented by the icon. This icon is only active if you have activated a module that contains the Weld feature as explained above.

This tool is useful when working, for example, with script fonts that have a "lead-in" and "lead-out" on each character that overlaps the adjacent letter. Without welding the overlaps, the letters will cut with overlapped cutting lines. The Basic Weld tool removes those overlaps to make script-lettering flow together as a single object.

### **AND Weld**

This And Weld tool is represented by the And Weld icon in the Welds fly-out tool box. The And Weld welds two overlapping objects leaving the area which was occupied by both (the area occupied by this AND this -- hence the name, the And Weld). It is a 'what you don't see is what you get' weld, because the resulting objects will be rendered in the color of the hidden object.

### **XOR Weld**

Welding with the Or Weld tool will cause all areas where the selected objects overlap to be deleted.

### **Overlay Weld**

### **Inlay Weld**

## **SHAPE TOOLS**

### **Circle/**

Select the Circle icon from the Shapes fly-out menu. This permits drawing circles and ellipses on the screen; drag the pointer on the screen and a circle/ellipse appears to grow behind the moving pointer.

**Ellipse Tool****Rectangle Tool**

Select the icon from the Shapes fly-out menu. This permits drawing rectangles on the screen; drag the pointer on the screen and a rectangle appears to grow behind the moving pointer.

**Polygon Tool**

VisionPro supports the automatic construction of polygons, starbursts, seals, and gear shapes.

**Star****Arrows Draw Tool**

From the Shape tool right mouse select the Arrow tool to open the Arrow Shape Settings dialog box; select a Shaft to head ratio, the Shaft thickness, and the Barb extent,

**Fan****Weed Border Tool****Power Weed****Decorative Border Tool**

From the Shape tool right mouse select the Arrow tool to open the Arrow Shape Settings dialog box; select a Shaft to head ratio, the Shaft thickness, and the Barb extent.

**Border Size**

**USE OFFSET** - applies the border with the Offset and Thickness values defined in the Border Extent box.

**USE FIXED SIZE** - applies the border with the Width, Height, and Thickness values defined in the Border Extent box. The border is centered on the objects selected on screen.

**FIT INSIDE SIGN BLANK** - applies the border with the Offset and Thickness values defined in the Border Extent box and forces the border to an outside dimension that fits along the edges of the Sign Blank.

**Border Extent**

The Border Extent section of the Decorative Border Setting is used to define the size of the Decorative Border.

The Height and Width - used to define the size of the border when Use Fixed Size is selected in the Border Size scroll box.

**THE OFFSET** - used to specify the size of the border by calculating an offset from the outer edges of the selected object(s). It is in effect only when Use Offset is selected in the Border Size scroll box.

**THE THICKNESS** - specifies the width of the lines that make up the Decorative Border. This setting must always be positive (i.e., greater than zero).

**Registration Mark Tool****Multi-Registration Tool****Stencil Tool****Ruler****Dial**

## WASP Barcode

### GRAPHIC EDIT TOOLS

#### Node Edit Tool

Any node can be selected by clicking on it. Clicking on a group of nodes while holding the **[SHIFT]** key selects the group of nodes. Sweep select a group of nodes, or select all of the nodes in a given contour by clicking on one node in the contour while pressing the **[CONTROL]** key. Selected nodes will change color.

When the Node Edit or Arc Edit tools, are activated the selected object is in editing mode and the following actions can be performed:

- select a node
- add a node
- change the type of node (not available with polyarc)
- break a contour at a node
- delete a node
- join two nodes

#### The Node Tool Palette

Provides the ability to change node types for drawing and editing, as well as perform other useful functions. To access this palette, place the cursor over a node and press the right mouse button.

The following tools appear (clockwise from top left):

The Corner Node tool (**+**) which changes the selected or next-drawn node(s) to a corner node;

The Join tool (**ARROWS POINTING TOGETHER**) which joins the two end points of a selected contour, or any two selected contour end points;

The Curve Node tool (**CIRCLE**, or **DOT**) which changes the selected or next-drawn node(s) to a curve node;

The Set Start Point tool (**ARROW**) which provides the ability to specify the start point of the selected contour;

The Tangent Node tool (**TRIANGLE**) which changes the selected or next-drawn node(s) to a tangent node;

The Break tool (**ARROWS POINTING AWAY**) which breaks a given contour at the selected node;

The Trash tool (**TRASH CAN**) which deletes the selected node or nodes;

The Clockwise/Counter-Clockwise button (**ARROWS IN CIRCLES**) which provides the ability to toggle the direction of the selected contour.

#### To select one of the Node Palette options:

Press the right mouse button to display the Node Tool Palette.

Keeping the right mouse button depressed, move the cursor in the direction of the node type to select.

Upon releasing the right mouse button, the new node type is selected, and will be placed at the location where the left mouse button is pressed next.

### **Free Edit Tool**

It is possible to sketch a drawing on the screen freehand in the same way as drawing on a piece of paper. To implement the freehand sketching tool:

Select the Free Edit icon from the Edit tools fly-out menu;

Move the pointer on the screen to the beginning position of the sketch and press and hold the left mouse button;

With the button pressed, move the on-screen pointer to trace the object to draw.

As the pointer moves on screen, a line will be drawn behind it representing the trace being created.

The freehand sketching mode is automatically implemented when using the Free Edit tool. Clicking and dragging the pointer across the screen will leave a trace behind on the screen following the path taken by the pointer.

### **Arc Edit Tool**

Click on the Arc Edit icon from fly-out menu to activate the Arc Edit (Polyarc) tool. When activated, the tool is ready to begin the digitizing process. When the Arc Edit tool is selected, the Arc Edit Toolbox appears on the view screen as follows:

This toolbox contains:

the Arc Drawing Tool ,

the Arc Editing Tool, and

the Segment Editing Tool.

It is possible to create arcs and curves quickly and easily without having to incorporate the three node types. To implement the Arc Edit tool:

Select the Arc Edit icon from the Edit tools fly-out menu;

Move the pointer on the screen to the beginning position of the sketch and press the left mouse button;

Move the on-screen pointer to the next position and press the left mouse button again, repeat this procedure until the object is drawn.

## **SCAN Tools**

### **Scanning & Vectorizing With AccuScan**

The AccuScan module contains the tools that are required to convert a black and white or gray scale bitmaps into a line-traced drawing format that can be cut by VisionPro.

Once AccuScan is set up and the area to be scanned defined, return to the Scanning Control dialog box, and press the Scan button. AccuScan traces the selected area of the bitmap, or the entire bitmap if no specific areas are selected, according to the parameters set in the Trace Setup dialog box.

There are several tools available within AccuScan to manipulate a bitmap, to prepare it for either cutting or printing.

### **Photo Machine**

### **Centerline Tracing**

The CenterLine Trace module contains the tools that are required to convert a bitmap into a centerline-traced drawing format that can be cut, routed, or engraved by VisionPro. The CenterLine Trace module will be activated if you have purchased the appropriate password from CADlink or a VisionPro re-seller.

## Stroke and Fill Tools

### **Line Style Tool**

The Line Style tool is used to apply a "thick line" effect around any selected object in the Editing Window. It is not commonly used in the engraving environment

### **Gradient Fill Tool**

The Gradient Fills tool opens the Attribute Manager application, a 32-bit plug-in for VisionPro. With Attribute Manager use gradient or bitmap fill patterns for vector object(s). Edit the fills to create new fill patterns, or edit existing default patterns to apply to object(s) in VisionPro.

## Tool Path Tools

**Online**

**Male**

**Female**

**Hog**

**Drill**

## Ginsu Knife Tools

**Open Path**

**Close Path**





# Chapter 8

## Jobs & Lessons

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## Jobs & Lessons

# LESSON 1

Using free form text without fixed margins - quick show, will use in logo later

Use text compose without shift - quick show

Using text compose with margins defined to plate boundary 5 x 8, 4 line plate. Go straight to Frame Attributes and use percentage.

Changing text attributes - highlighting text to modify

- Fonts and difference between engraving fonts and outline fonts

- Italics

- Exiting and reentering text mode

- Line spacing and letter spacing

- Ungrouping

- Grouping Text After Ungrouped

# LESSON 2

Autolayout

Saving A Layout in Autolayout

Re-enter Autolayout to modify a layout

Adding clipart and graphics from other sources

Moving and positioning text and graphics elements on screen

Grouping and Ungrouping text and graphics

# LESSON 3

Using the Array, Rotate, and Mirror Functions

Using Guideline

Resizing Commands and techniques (??LIST??)

Using the Alignment Command

# LESSON 3

LESSON

## Autolayout

In VPro5 and VPro6, you can uninstall all of the fonts by going to File, Install, Fonts. Then click on the Reset icon. This will remove all of the fonts from VPro except the .vef fonts.

Then, make sure that Look In area of the Install Fonts screen says c:\ and you have include subfolders selected. Then select all of the different types of font formats you want to install in the left and click Search Now. This will look on the entire hard drive for all of the fonts types that you have selected. After that, if you click on Install All, it will install all of them in VPro.

If you add fonts into Windows, you will need to go through and find the fonts in the Install Fonts screen and install them there.

## Selecting Vs. Grouping

An object is a single entity. While it is usually thought of as a single item, items that are selected or grouped are also considered an object

### Selecting



The Select Tool

The select tool is used to select objects that will be operated on by the commands contained in the menus. The select tool is also use to move and resize objects.

With the Select tool active, position the Select tool on the object's outline (you will see the cursor change to a cross hairs (+)), and click. A group of 9 nubs will appear around the selected object and the Status Bar will indicate the dimensions of the selected object and the layer designation of that object.

### Selecting Multiple Objects

With the select tool active, click on several objects while holding down the [SHIFT] key. This group of objects can be operated on as one object with the menu commands. If you click on an already selected object while holding down the [SHIFT] key, that object will be deselected. After you select multiple objects, you can group them so they will stay together; ungroup them when you need to manipulate them individually.

## Grouping

The Group command allows you to combine two or more selected objects into a single entity, so that they will be treated as a single entity.

To form a group:



Select the objects with the  you wish to include in the group.

Choose the Group option from the Layout menu.



Procedure for Using the Badges (Multiple) Option In Vision Pro

Create your layout as usual. If you will need to change an individual line (for name, etc.), make sure this line is still in the TEXT mode. If you convert TEXT->GRAPHICS, you cannot change the names individually in the Badges option.

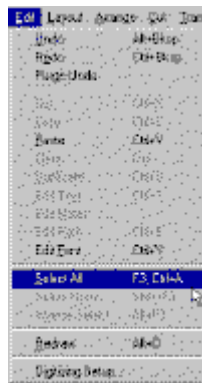
*Note: I recommend that you save your job at this point. In case you make a mistake in the Badges/Multiple screen, you can quickly start over.*

Here is our sample layout. The "Name To Be Changed" line is for the names I will be changing.



For a full sized view click on the picture, then on your "back" button to return here

\*The most important step before proceeding is to select all of the objects (logos, text, etc.). You can either use the shortcut [CTRL] + [A], or use the pull down menu as shown



For a full sized view click on the picture, then on your "back" button to return here

Select the Layout->Badges option



For a full sized view click on the picture, then on your "back" button to return here

This is the Badges Layout Screen



For a full sized view click on the picture, then on your "back" button to return here

In this layout, I want to use a 6" x 6" piece of material. Enter the plate dimensions as shown. The maximum plates with one pass is 12 plates. If all of your plates are the same and there are no name changes, click on OK.

Since I want individual liked names on each of the 12 plates, I clicked (highlighted) the 'Name To Be Changed' in the replaceable items/text. After OK, the Text Substitution Screen, appears for you change the individual names



For a full sized view click on the picture, then on your "back" button to return here

The finished layout looks like this



For a full sized view click on the picture, then on your "back" button to return here

## Importing A Logo Into Vision Pro

Follow this procedure to bring in a logo to your Vision Pro layout.

Under file, choose import. FILE>IMPORT



For a full sized view click on the picture, then on your "back" button to return here

In the IMPORT FILE box click on the box to merge logo



For a full sized view click on the picture, then on your "back" button to return here

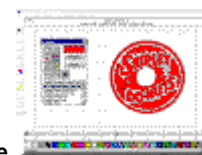
The PATH is the location of files that appear in the FILES window of the IMPORT FILE box. If you are searching for logos on your CD-ROM, you will need to get the PATH to display the D drive, or the actual drive of your CD-ROM. In the example IMPORT FILE box above, you would double-click on the [-d] under directories to move to the D-drive. The PATH should reflect your D drive directory.

The symbol [..] is for moving up in the PATH. For example, if you double clicked on the [..] in the sample box above, your path would change from 'C:\Artwork\Misclogos' to 'C:\Artwork', and your DIRECTORIES would display the current directories/files under the 'C:\Artwork' directory.

After you locate the file to import, select the logo name and double click to import. Your logo will appear on your engraving screen. On some file formats, you can click on the logo name one time and a sample will appear in the far right display box of the IMPORT FILE window.

NOTE: When importing logos, you cannot control the actual size until you are in the engraving program. The logo may import larger than you want it for your layout and may be off the plate area you have created.

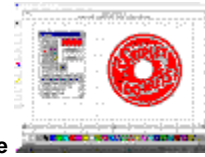
Before you move the logo, under layout choose group. LAYOUT>GROUP.



For a full sized view click on the picture, then on your "back" button to return here

This will group the logo as one item. If the group option is not highlighted, then the logo is already grouped.

Using the magnifying glass in the tools section



For a full sized view click on the picture, then on your "back" button to return here

Click on the glass (small glass - 2nd from left) to make the screen smaller until you see the entire logo and plate on a small scale.

Move the logo into the plate area. Click on the magnifying glass (4th from left) to show the entire plate area with the logo that was moved.

You can now resize the logo in one of two ways; by grabbing the corner node (or nub as referred to in the manual) and bringing in to the proper size, or by clicking the node with the right mouse button. A menu will appear with an option to size.



For a full sized view click on the picture, then on your "back" button to return here

You can input exact specifications for the size of your logo. To change the height, change only the Y-axis; the X-axis is the width (left to right)

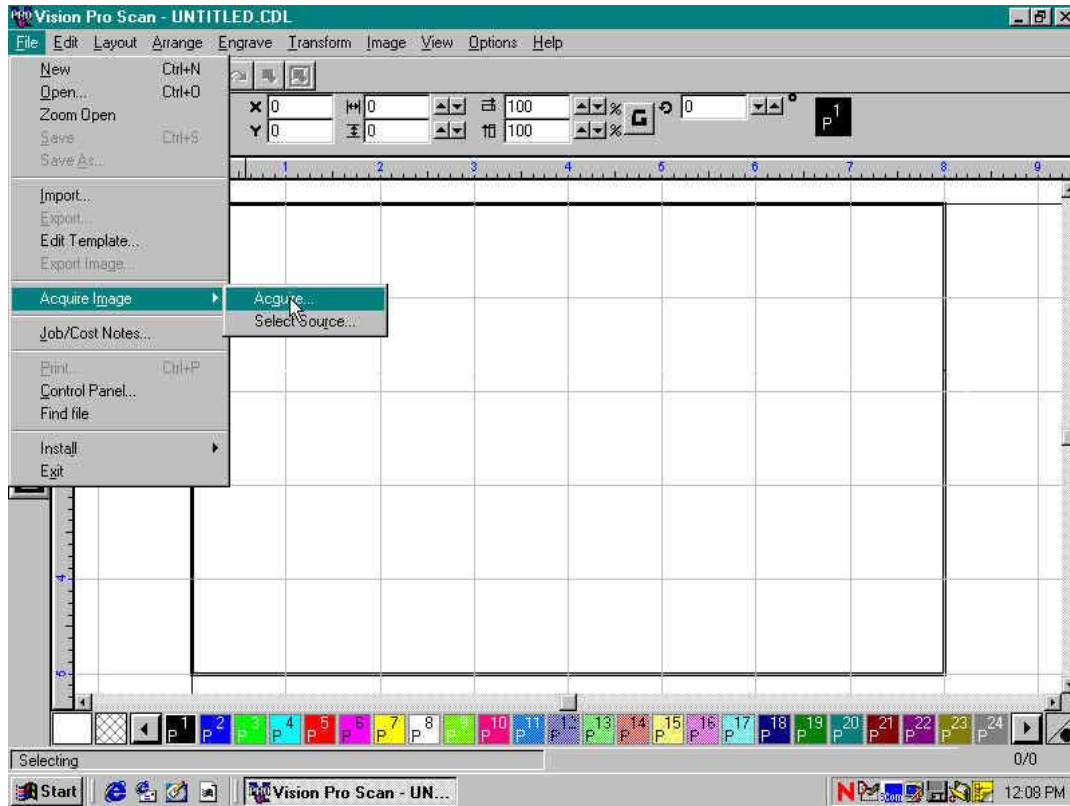
Again using the magnifying glass, click on the glass (plate inside glass - 4th from left) to make the layout normal size.

Finish your layout by moving the logo to the place on the plate where you want to engrave and add your text.

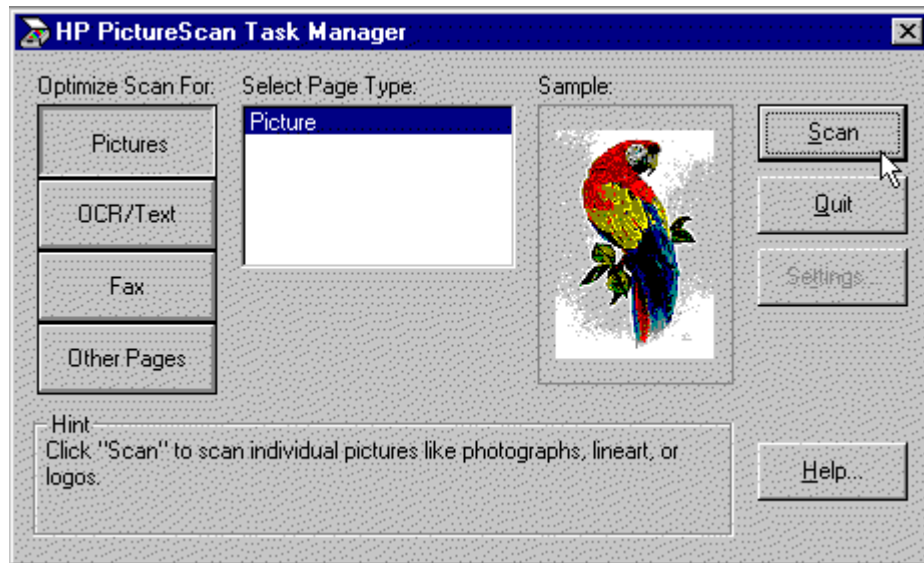
## Scanning Artwork into Vision Pro Scan & Vectoring

Scanning artwork into Vision Pro Scan involves two basic steps; acquire a bit-mapped image from your scanning software, and converting it to a vectored object.

From the File pull down menu, select File ->Acquire -> Acquire .



Vision Pro will open your system's scanning program.



I am using the HP ScanJet 5 Software. Your particular scanning screen may be different. Before or after you scan, depending on your particular scanning software, make sure the file image is a 'black and white drawing'. Scanning and vectoring of a color object is not standard in Vision Pro Scan. (Note: I have the upgrade option for color and I still use 'black and white drawing' images for best results.)

After you have scanned the image in your scanning software, Vision Pro Scan will now acquire the image. It is brought in as a bit-mapped drawing. I am using an example I have scanned.



Nine nodes will appear any time an object is selected. If you scanned image doesn't have the nodes, use the Select the tool and click on the image.

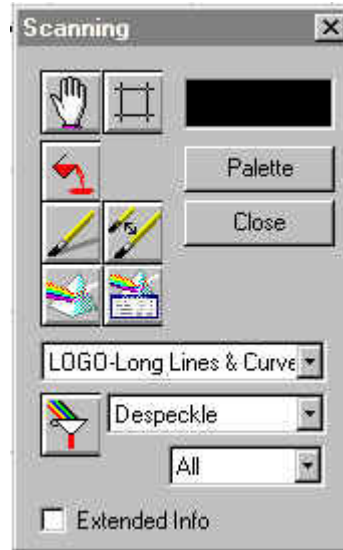
The next step is to vector the drawing. From the tools menu select the SCAN tool, or the pyramid, as shown below.



Select the type of vector you would like; Outline or Centerline. Usually the first pyramid gives the best result.



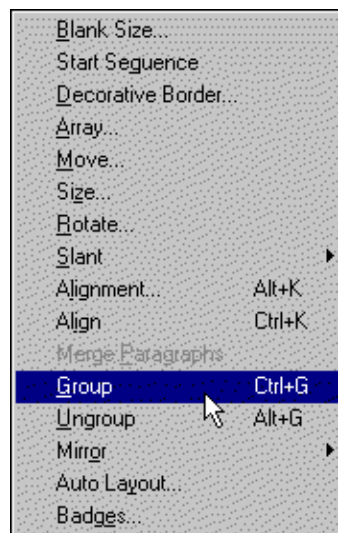
After you click on SCAN, you will get the Scanning Box.



Choose the style of scanning that best fits your logo. For the Bank of America logo, I have selected LOGO-long lines and curves. Now click on the pyramid in the Scanning box. You will see your logo vectored, or outlined.

Now, click on the Close of the Scanning box.

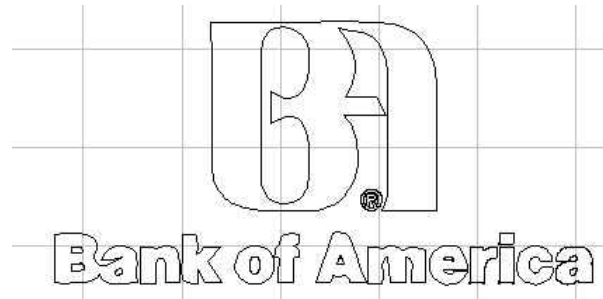
Before you click on the object to move it, select the GROUP option under Layout pull down menu..



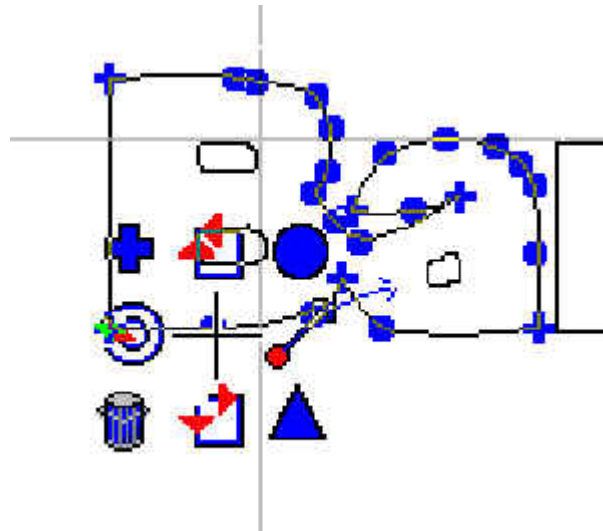
After an image is scanned, it is made up of individual objects. All of the objects are selected after you exit the Scanning box. If you click away from the object the vectored image will be de-selected. Then when you try to click on the object again, you will see that you only move a single part of the object.

If you accidentally de-select the scanned image, it's usually quicker to hit the ALT + BACKSPACE key do undo the scan. Then rescan, and make sure that you Group the vectored image before you try to move it.

Below, I've removed the scanned image. You can now click on the original scanned image and delete it.



You may also edit the nodes of the drawing by double clicking on an object. You will then see the nodes appear. By right clicking on a node you can change it from line to curve, make it a cusp, delete or add another.



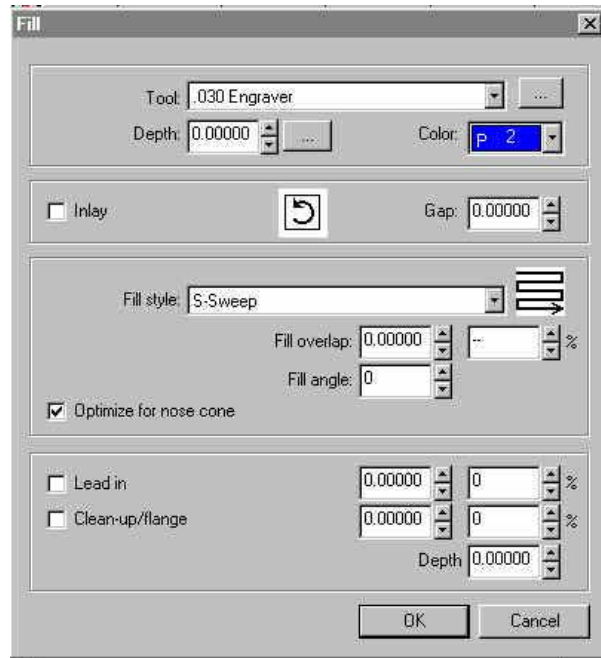
Once you have cleaned up your artwork you can fill the image if you like. First to fill this logo without filling in the centers of the B's and O's you must first select the entire image and then go to arrange > make path.



You can now create the fill by going to engrave >create tool path >fill.



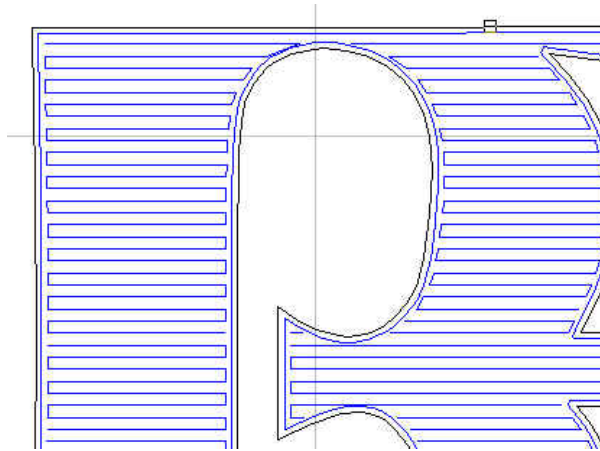
A dialogue box will appear and ask you some questions about the cutter size you will be using, the type of fill (s sweep, spiral or island) the overlap you would like, etc. These settings are something you will need to experiment with to get the desired effect you want on your logo.



If you chose the settings above, you should have an image similar to the following image.



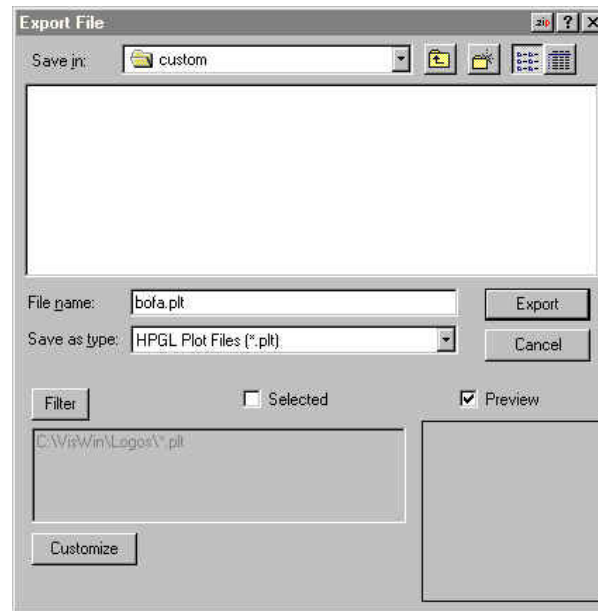
If you zoom in on the image you will see that the blue fill lines are one continuous line. This reduces the engraving time by not raising the cutter up at the end of each line.



You are now ready to export your image to a plt format that can be used by your Vision Engraving System. Go to file >export



In the dialog box select HPGL as your file type and use any name you desire. If you are using Vision Windows you typically want to save the file under c:\viswin\logos\custom\. Then click on the export tab.



The image is now ready to be used just like any other plt's you have in your Vision software.

There are other options available in the VisionPro Scan package but as time permits you can play around and read your manual to utilize these options. This tutorial should help you get a quick start at creating your own logos.

# VISION-PRO

## Appendix

## **Other/Third Party Support**

### **Engravers Network Virtual Support**

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The Engravers Network offers Virtual Support through the Internet. We can connect to your computer via the internet and help you with training, applications questions and other issues. Requirements: Internet connection to the computer running your laser, and a minimum of a DSL or Cable connection. Dial-up connections are not acceptable for Virtual Support. There is a charge of 39.95 per occurrence.

## Copy Tool

The Copy tool may be used to accomplish one of two tasks, use it to move a selected area to another position within the bitmap, or use it to copy a selected area to another position.

## Crop Tool

This tool is used to remove all of the bitmap except the selected area or areas. To use this tool, simply select the desired area with the select tool and click on the crop tool.

## Flood Tool

This tool is used to flood fill (change the color of all pixels) a selected area with the target color. To use this tool:

Select a target color from the palette of the bitmap (press the Palette button to toggle between black and white).

Select the area to be flooded using the selection tools

Press the Flood button

The entire selected area will take on the Target Color.

## Paintbrush Tool

This tool is used to add paint lines to the bitmap. To draw on the bitmap, select the Paintbrush tool, and then click and drag lines onto the bitmap using the mouse. There are several brush shapes available, any of which may be selected by clicking on the Brush Shape button. The color selected as the Target color is used for the Paintbrush tool.

## Brush Shape Button

Clicking this button produces the Brush Shape palette.

Use this palette to choose the shape for drawing with the Paintbrush tool. Draw with a round brush using one of five thickness', or a square brush, again with one of five widths. The available thickness' for the round brush shapes are 1, 3, 5, 9, and 11 pixels wide. For the square brush shape, chose from widths of 3, 5, 7, 9, and 11 pixels wide. The selected shape and size will be highlighted with a red outline.

## Trace Setup Dialog Box

Clicking on the button in the Scanning Control Box produces the Trace Setup Dialog Box.

This dialog box offers several types of control that determine the final output of the scan. These control types are: Setup, Line Fit, and Tracing Options

### Setup

**This section of the dialog box is used to manage configuration files for AccuScan. From within this area, select a saved setup, save a new or modified setup, or delete a saved setup.**

### Name List Box

**This box displays the name of the current setup. To select a new setup, click on the scroll arrow, and then select the desired setup from the list. Give a new setup a name in this box by sweep-selecting the name area and entering a new name.**

### Save Button

Use the Trace Setup dialog box to create setups to save for later use. The Save button is used to store these setups on the hard drive. To save a setup, sweep-select the name in the list box, enter a new name, and press the Save button. The newly selected setup now appears in the saved selection setup box.

**Note: Descriptive names for the setups allow for easy identification of a setup being appropriate for a given type of bitmap.**

### Delete Button

In addition to saving setups for AccuScan, delete those setups that no longer have value, by using the delete button. To delete a setup from the list, select the desired setup from the Name list box, and press the Delete button.

**Note: Once a setting is deleted, it is irretrievably gone, and cannot be recovered. Caution should be exercised when deleting any previously-saved scanning setups.**

### Line Fit Section

The Line Fit Section controls how AccuScan follows the edges of scanned artwork. This is particularly important, since appropriate settings in this section can produce a high-quality trace from poor quality bitmaps.

**Specifically, the Line Fit settings govern how closely AccuScan will follow the edge of the objects in a bitmap by varying the line Tolerance and Corner recognition capabilities of the tracing function.**

### Tolerance

The Tolerance setting specifies how closely AccuScan follows the edges of an object in a bitmap. A loose setting will approximate an object's shape rather loosely, while a tight setting will follow the edge very precisely.

Tolerance should be set tight (7 or greater) if a bitmap is very detailed and accurate. This allows for all of the fine detail to be traced. In general, the higher the detail, the higher the Tolerance setting.

**The Tolerance should be set loose (three or less) if a bitmap contains long smooth edges, or if it is of poor quality. This results in AccuScan ignoring small errors in the edges of the objects, but can also result in a loss of the finer details.**

### Corners

The Corner setting controls AccuScan's corner recognition ability. AccuScan uses this setting to determine which parts of a trace represent a corner, and which parts represent a tight curve.

**If a bitmap contains sharp corners, and is mostly angular, set Corners to sharp (7 or greater). If it is mostly curves, set Corners to loose (3 or less). Moderate settings (4 to 6) work best with a mix of corners and curves.**

### Tracing Options

This section of the AccuScan dialog box sets some general rules about how a bitmap is to be scanned.

## Speckle Filter

Many bitmaps contain undesirable bits of dirt. These random spots of color usually appear due to a scratched or dirty scanner bed. The Speckle Filter allows for removal of these specks and creation of a cleaner finished product.

The speckle filter sets the threshold at which AccuScan recognizes a group of pixels as an object. Once the filter is set, an object must be larger than the set value in order to be traced during a scan. For example, if the Speckle Filter setting is four pixels, then objects must be five pixels or larger in order to be recognized as a true object, and therefore scanned.

Specifying the minimum number of pixels can set the filter, or it may be specified as a percentage of the overall bitmap size. The percentage specification tends to be a much coarser unit of measurement than the pixel specification, and is most useful when dealing with particularly large or dirty artwork.

**Note: While higher Speckle Filter settings result in fewer extraneous objects being traced, it may also result in the loss of smaller objects. Exercise caution when choosing an appropriate filter setting.**

## Snap Long Lines to Vertical/Horizontal

When a photo is placed on a scanner bed, it is difficult to place the image perfectly straight on the scanner bed. The Snap Long Lines to Vertical/Horizontal setting provides a method to account for picture placement.

The Snap Long Lines to Vertical/Horizontal option allows for a threshold angle to be set, below which all lines will be made vertical or horizontal. For example, setting the snap angle to 5 results in any straight line 5 degrees or less off vertical/horizontal being made vertical/horizontal.

A setting of less than 10 is usually best when using the Snap Long Lines to Vertical/Horizontal option. Higher settings result in noticeable distortion in the final output.

**Note: If a higher snap angle is required, there are two other options: re-scan the original picture; or use no snap angle and rotate the artwork after tracing.**

## Small Shape Accuracy

Small Shape Accuracy allows for application of Line Fit settings to each object in a bitmap relative to its size, by scaling those specifications to match the size of the object. For example, for a given Tolerance setting, a single pixel on the side of an otherwise smooth edge of a large object might be seen as dirt, and ignored, while the same pixel in a smaller object will be recognized as detail, and included in the trace. This provides the ability to vary Line Fit parameters to automatically account for differences in object size in a bitmap.

**In order for Small Shape Accuracy to function most effectively, assess the relative size differences between the largest objects in a bitmap and the very small ones. Where the difference is large, the Small Shape Accuracy should be set high (7-10). Where the objects are fairly similar in size, the Small Shape Accuracy should be set low (Off-3).**

## Overlay

The Overlay button allows either the default Traditional Scanning style or the Overlay Scanning style to be selected.

### TRADITIONAL SCANNING STYLE

The Traditional scanning style has two characteristics that set it apart from the Overlay style: it treats each object individually when tracing; and it recognizes objects inside other objects as being made up of both a smaller object and a hole within the larger object. For example:

Given this bitmap; The Traditional Style scan would yield these parts;

#### **OVERLAY SCANNING STYLE**

The Overlay scanning style creates a complete mask for each of the colors in a bitmap as it calculates the size and shape of the bitmap objects. The order that the color masks are placed on top of one another is dictated by the order of the colors in the Palette dialog box. This is to ensure that the first color in the palette (upper left plate) is traced first and placed on the bottom, the second-row left plate is traced second, and so on.

The result of an Overlay scan has two characteristic features:

- where two or more objects of the same color are connected by other objects of different colors, the two objects are recognized by the software as a single object; and

- objects within other objects are seen as being on top of the objects rather than inside them, this means that there are no holes in the bottom object. For example:

An Overlay-style scan of these objects renders these results;

Note: This result differs from the Traditional scan in that the gray layer is one complete object that encompasses all of the gray areas and the bridge between them that was originally black. Note also that it is generated for placement underneath the black layer.

The advantages of an Overlay scan are:

- It typically results in simpler shapes, and

- The resulting objects will have no overlap areas when the sign is cut and laid out.

The disadvantage is that much larger objects are typically created (e.g., vs.).

Note: Since the order of the objects is governed by the order of colors in the Palette dialog box, be aware of the fact that (and, in the case of an Overlay-style trace, should) the colors can be sorted according to their usage in the bitmap. In other words, the most often-used colors are on the bottom, and the least-used are on top. This sorting function is available through the Re-Order button in the Palette dialog box.

## **Setup Selection Scroll Box**

The setup selection scroll box is located directly below the buttons. This box provides quick access to setups defined previously through the Trace Setup dialog box. The current setup name is shown in this list box. To select a different previously-saved setup, click on the scroll arrow, and select the desired setup. The name of the selected setup now appears in the Setup Selection scroll box.

## **Relative Spacing**

Select the Relative Spacing radio button for specifying the line spacing as a percentage of the font height in the current line, this will adjust the Line Spacing value box in the Text tool bar to read as a percentage value as well. A setting of 150% is usually a reasonable default. Enter the required value in the Line Spacing value box.

## Absolute Spacing

Select the Absolute Spacing radio button for specifying the line spacing as an absolute value for font height in the current line, this will adjust the Line Spacing value box in the Text tool bar to read as an absolute value as well. Unit Spacing allows for specifying the line spacing in the current unit of measurement, pre-determined in the General Preferences dialog box.

## Customizable Tool Palette

The List of Toolbar buttons displays all icons currently included in the Custom Toolbar, for quick access to various features in VisionPro. The toolbar can be activated through *View->Show Custom Tool Bar*, or right-clicking on the toolbar and Hide. Most of the options available through menu selection are available as icons for use in the Custom Toolbar. To select a different Toolbar or to edit or create new Toolbars, right mouse click anywhere within the Toolbar itself. The standard Toolbar options include:

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### Horizontal Text

#### WIDTH, HEIGHT, KERNING & WORD COMPRESSION

##### Width Compression

Constrains a line of text to the specified maximum length by reducing the width of the characters in the line of text. This option will also reduce the character kerning proportionately, but will have no effect on character height. Because this is a simple compression type, it will only have an effect on the length of a line if it exceeds the value designated in the Units edit box. Otherwise, the line of text will be allowed to run freely according to the other parameters set in the Text Compose dialog box.

##### Height Compression

constrains a line of text to the specified maximum length by reducing the height of the font in the line of text. This option will also reduce the character width and kerning proportionately. Because this is a simple compression type, it will only have an effect on the length of a line if it exceeds the value designated in the Units edit box. Otherwise, the line of text will be allowed to run freely according to the other parameters set in the Text Compose dialog box.

##### Kerning Compression

Constrains a line of text to the specified maximum length by reducing the kerning between characters in the line of text. This option will have no effect on either character height or width. Because this is a simple compression type, it will only have an effect on the length of a line if it exceeds the value designated in the Units edit box. Otherwise, the line of text will be allowed to run freely according to the other parameters set in the Text Compose dialog box.

##### Word Wrap

Clicking in the check box can activate the Word Wrap feature. When activated a Wrap After a set percentage of Compression can be edited to suit the requirements of the text layout. Therefore if a line of text exceeds a set line Length or Compression/Expansion value and cannot reasonably be compressed further VisionPro will Wrap the text to the preceding line.(Default 30%)

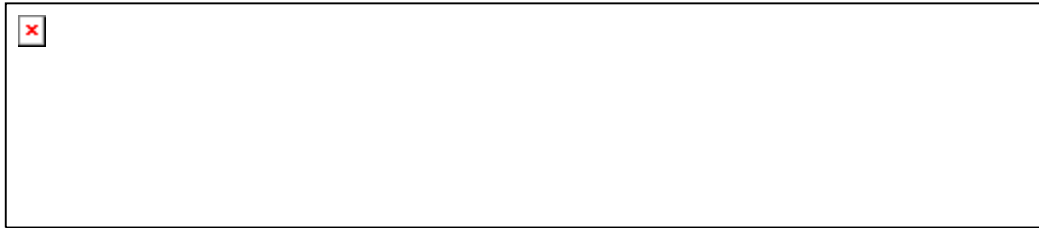
##### Compression Vs. Compression/Expansion

Compression allows for specification of a maximum length for a line of text. If the line of text does not reach that length, it will not be altered. If the line of text reaches that threshold length,

VisionPro will act upon it to restrict it from becoming longer. Conversely, Compression/Expansion allows for specification of the absolute length to which a given line of text is to be drawn. If the line of text is naturally shorter than the specified length, it will be expanded, while being naturally longer than the specified length will cause the text to be compressed. Put in simpler terms, specifying a Compression sets a Maximum length for a line of text, while a Compression/Expansion sets an Absolute length.

### Tool Offset From Contour

This specification defines the type of cut you are going to produce. Cut styles include:



### Fillet Corners



The proper use of this setting will ensure that outside edges are cut with both the tool bit and the tool path facing the cut. This will produce a clean, smooth-edged cut.

### Assigning Tool Paths

Because you generate Rout Paths for only the selected objects, you can generate different paths, and therefore different tool widths, overlaps, cut depths and so on for each of the objects in your artwork.

### Editing A Tool Path

When you select an object or group of objects, and then apply Rout Paths, VisionPro generates a Rout Path or series of paths on screen. Each of these paths are treated by VisionPro in essentially the same manner as regular on-screen objects. Thus, you are free to edit, shape, or delete them.

### Tool Offset From Contour

*Inside* -(picture in this section)-This option will cause the outside edge of your tool bit to trace the edge of your artwork from the inside, without cutting outside of the objects. The Tool Path will fall inside of the artwork with an offset equal to one half the width of the tool bit. This offset is typically used when filling or cutting out an object.

*Online* -(picture)This option will cause the outside edge of your tool bit to trace the edge of your artwork from the inside, without cutting outside of the objects. The Tool Path will fall inside of the artwork with an offset equal to one half the width of the tool bit. This offset is typically used when filling or cutting out an object.

*Outside*(picture)-Selection of this option will generate a tool path which cuts around the outside of a given object without ever crossing the original object's edge.

The tool path will fall to the outside of the artwork with an offset equal to one half the width of the tool bit. This type of offset is typically used to cut objects out of a piece of material.

Custom-Under some circumstances, you might wish to specify a Custom tool offset. The offset will be applied to the path generated by the Online setting (i.e., "0" will result in a cut equal to the Online setting) with negative values placing the path inside a given contour, and positive values placing the path outside. You may specify the required offset as either a percentage of the tool bit width or an absolute value in the current unit of measurement.

In fill section -increasing GAP number increases distance between outside edge of object and start of fill

In fill section - optimize spiral fill; turn off and it's a lot cleaner.

This features allows the engraver to fill objects and text. For those in a hurry, just select the cutter size you are using, and the fill style, and you have a rout pattern for the selected text or object. If you want more, the FILL OPTION lets you choose. Your choices include:

### **Target Layer**

This selection box allows you to send the current Rout Path to a specific layer. Rout Paths rely on the Palette for depth information, so you must assign each path you generate to a layer for Routing. The layers are color-coded for viewing and manipulation.

### **Tool Offset From Contour**

This specification defines the type of cut you are going to produce. Cut styles include:

### **Fillet Corners**

#### **Clockwise or Counter Clockwise**

Selecting this option will cause the outside edge of all objects to be traced clockwise without regard for the direction in which they were originally produced. Contours inside other contours will be traced in an anti-clockwise fashion.

The proper use of this setting will ensure that outside edges are cut with both the tool bit and the tool path facing the cut. This will produce a clean, smooth-edged cut.

### **Fill Overlap**

Fill Overlap is the amount by which you would like each successive tool path to overlap each previous path. The Fill Overlap is applied only when you are actually filling an object (i.e., not when you are tracing an object). You can specify fill overlap as either a percentage of the tool diameter, or as an absolute measurement.

### **Fill Angle**

You may elect to specify a Fill Angle if you are cutting artwork which leans in a specific direction. Proper setting of the Fill Angle can result in substantially reduced production time.

### **Lead In**

Selecting this option will cause VisionPro to generate a Lead In for the tool path. A Lead In is an additional portion added to the start of the tool path which begins away from the edge of the object being cut. This additional path prevents any distortions to the edge of the object caused by the movement of the router bit while it is plunging into the material.

### **Cleanup /Flange**

When you are cutting an object to a deep final depth, you may want to use multiple passes (i.e., several cut passes at varying depth settings) to avoid burning the material or bit, to make sure that the corners of the cut objects are sharp, and to speed the cutting process.

### **Assigning Tool Paths**

Because you generate Rout Paths for only the selected objects, you can generate different paths, and therefore different tool widths, overlaps, cut depths and so on for each of the objects in your artwork.

### **Editing A Tool Path**

When you select an object or group of objects, and then apply Rout Paths, VisionPro generates a Rout Path or series of paths on screen. Each of these paths are treated by VisionPro in essentially the same manner as regular on-screen objects. Thus, you are free to edit, shape, or delete them.

### **Tool Offset From Contour**

Inside-(picture in this section)-This option will cause the outside edge of your tool bit to trace the edge of your artwork from the inside, without cutting outside of the objects. The Tool Path will fall inside of the artwork with an offset equal to one half the width of the tool bit. This offset is typically used when filling or cutting out an object.

Online -(picture)This option will cause the outside edge of your tool bit to trace the edge of your artwork from the inside, without cutting outside of the objects. The Tool Path will fall inside of the artwork with an offset equal to one half the width of the tool bit. This offset is typically used when filling or cutting out an object.

Outside(picture)-Selection of this option will generate a tool path which cuts around the outside of a given object without ever crossing the original object's edge.

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Custom-Under some circumstances, you might wish to specify a Custom tool offset. The offset will be applied to the path generated by the Online setting (i.e., "0" will result in a cut equal to the Online setting) with negative values placing the path inside a given contour, and positive values placing the path outside. You may specify the required offset as either a percentage of the tool bit width or an absolute value in the current unit of measurement.

In fill section -increasing GAP number increases distance between outside edge of object and start of fill

In fill section - optimize spiral fill; turn off and it's a lot cleaner.