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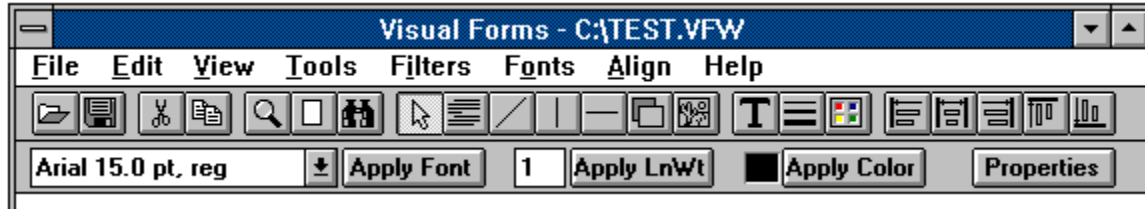
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# Overview

Visual Forms for Windows is an interactive Form designer for the Windows programming environment. A Form, in this context, refers to the portion of a viewed or printed document that is static, or does not change at runtime. Both Visual Basic and a number of other Windows development environments use the term Form in other contexts, including the screen display, dialog boxes, etc. A Visual Forms for Windows Form is created at design time (as its appearance being static, is known), with no programming. It is a fast, efficient way to develop the static portion of your output; and, since the forms are stored as Windows MetaFiles, makes your code small, efficient, and easier to maintain.

Visual Forms for Windows can also help you design the runtime (or data) portion of your output. If you are using PrintWorks to display or print your document, you can use Visual Forms for Windows to create a Data Template that will be automatically filled in with formatted text at runtime. Design your Form once in Visual Forms for Windows, and you can display it on any monitor and print it on any printer with no programming. In addition, it uses Windows API commands, store in a MetaFile to produce the image. This is many times faster than using controls, and helps conserve resources.

The Visual Forms for Windows interface works similarly to Visual Basic's form designer and Visual C++'s App Studio. However, instead of adding controls to create text, line, graphics and data fields, you add graphical Objects. These Objects are converted to API commands when you generate a MetaFile. Otherwise, creating Forms is very much like Visual Basic and Visual C++'s App Studio.

Creating a Visual Forms for Windows Form involves the following steps:

1. Create a new Form
2. Add various graphics and text Objects
3. Create a MetaFile

Creating a Form is as simple as selecting New from the File Menu, picking a file name, and specifying the page size and units. All Visual Forms for Windows dimensions are in inches or centimeters, based on the full size printed page. To add Objects to your Form, click on the toolbar or use the Tools Menu to select a tool for the Object Type you want. A Properties Window is available for you to customize each Object. When the Form is complete, use the File Menu to create a MetaFile, and the Form is ready for inclusion in your application - with no programming.

Creating a Data Template is equally simple. Create Text Objects setting the Replace Property to indicate the Object is a data field. From the File Menu create a Data Template file, and you're done. To make development of Data Templates easy, a number of options are available for displaying and/or printing the data fields while working on the Form.

# Moving Objects

Objects can be moved, or re-positioned in several ways:

1. Dragging selected objects with the mouse
2. Changing the values of X Pos and Y Pos in the Properties Window
3. Using the cursor keys to move one pixel at a time
4. Using the Alignment Tools

The Focus Object may be moved by dragging the cursor when it is inside the bounding rectangle (indicated as a green cross hatch). The cursor takes the shape of a four-pointed arrow, indicating you can drag the object. When you drag the Focus Object, other Selected Objects are moved in relation to it. Visual Forms for Windows will not allow an object to be placed partially (or, completely) off the page.

You may move the Selected Objects using the cursor keys (up, down, left and right). Each time you press a cursor key, the Object(s) move 1 pixel (1 / 300th of an inch). At some zoom levels, there may be no apparent movement on the screen because 1 screen pixel may represent several pixels. Keep an eye on the Properties Window, which will be updated with every move.

# Re-Sizing Objects

Objects can be re-sized, or stretched in several ways:

1. Dragging selected objects with the mouse
2. Changing the values of Width and Height in the Properties Window
3. Using the shift+cursor keys to stretch on pixel at a time

Objects can be stretched horizontally (Width Property) and/or vertically (Height Property), with the exception of a Bitmap Object that does not have the Allow Re-Size Property checked. A Horizontal Line Object cannot be stretched vertically because it has no Height Property; and, a Vertical Line Object cannot be stretched horizontally because it has no Width Property.

To stretch Selected Objects using the mouse, the cursor has to be placed in a stretch zone, which are the right side of the focus rectangle for horizontal stretching; and, the bottom of the focus rectangle for vertical stretching. Hold the left mouse button down, and drag the focus rectangle to stretch the Object(s).

You may also stretch Selected Objects using the shift key and cursor keys. These keys cause the following actions:

Shift + Left	Increases Width Property 1 pixel
Shift + Right	Decreases Width Property 1 pixel
Shift + Up	Decreases Height Property 1 pixel
Shift + Down	Increases Height Property 1 pixel

Keep in mind that the height of the focus rectangle for Text Objects represents the line spacing for successive lines of text, not the height of the characters.

# Keyboard Keys

In addition to the standard keyboard combinations for menus and other controls, Visual Forms for Windows implements the following shortcut keys:

Enter	toggles between <u>Properties Window</u> and main window (displays <u>Properties</u>
<u>Window</u> if it is hidden)	
Ctrl+Enter	hides the <u>Properties Window</u>
Left	Moves <u>Selected Object(s)</u> 1 pixel to the left
Right	Moves <u>Selected Object(s)</u> 1 pixel to the right
Up	Moves <u>Selected Object(s)</u> 1 pixel up
Down	Moves <u>Selected Object(s)</u> 1 pixel down
Shift + Left	Increases <u>Width Property</u> of <u>Selected Object(s)</u> 1 pixel
Shift + Right	Decreases <u>Width Property</u> <u>Selected Object(s)</u> 1 pixel
Shift + Up	Decreases <u>Height Property</u> <u>Selected Object(s)</u> 1 pixel
Shift + Down	Increases <u>Height Property</u> <u>Selected Object(s)</u> 1 pixel

# Files

Visual Forms for Windows deals with five types of files:

1. Project Files
2. Data Template Files
3. Font Lists
4. Bitmap Files
5. MetaFiles

A Project File (usually with VFW extension), is a proprietary file format used only by Visual Forms for Windows. It contains all the information about a particular Form. This file is never distributed with your application.

A Data Template File is a special version of a Project File, that contains only information about the Text Objects that have been defined as data fields. This file must be distributed with your application to instruct PrintWorks how to fill in runtime data.

A Font List is a proprietary file format containing specifications about all the fonts in your Form. It is loaded into Visual Forms for Windows when the Form is loaded. It is distributed with your application only if you have defined a Data Template for use with PrintWorks. Otherwise, it is not needed.

Bitmap Files are standard Windows device independent bitmaps (usually having the DIB or BMP extension). To display a Bitmap Object in Visual Forms for Windows, the source bitmap file must be in the Windows device independent format. Bitmap Files do not have to be distributed with your application because they are included in the MetaFile representing the Form.

Visual Forms for Windows generates a Windows MetaFile and/or Aldus Placeable MetaFile for your Form. This is a device independent format that can be used in any Windows application supporting MetaFiles. The MetaFile contains the actual image of your Form and must be distributed with your application. (Note: It is possible to create a "blank" Form, for the purpose of creating only a Data Template. In this case, you would not need to distribute a MetaFile).

# Fonts

Visual Forms for Windows uses TrueType fonts to render all Text Objects (including data fields). In order to simplify the management of many potential typefaces and font characteristics, Font Lists are used. Each Form is associated with one Font List, that contains the specifications for all the fonts used in the Form. Every font used in the Form must be included in the Font List; however, not every font in the Font List need be used. In addition, a Font List may be used for one or many different Forms.

Use Font Manager to create and edit Font Lists. You may change the characteristics of a font at any time. When you do, all Text Objects that use that font will be updated immediately. Be careful about editing fonts in Font Lists that are used for more than one Form, so that you don't inadvertently change the appearance of another Form. It is recommended that if you wish to use one Font List for more than one Form, you do it for related Forms.

When your Form is distributed, in MetaFile format, the Font List is not required because all the font specifications are included in the MetaFile. If you are using the Data Template feature of Visual Forms for Windows with PrintWorks, the Font List is required.

When building Font Lists, consider the availability of the fonts you choose with likelihood the same fonts will be present on the machines of those using your application. If a specified font is not present, Windows makes a substitution, based on the closest match of existing fonts. This can produce undesirable results. It is best to use commonly available fonts; or, obtain a license to distribute the fonts you use. As an alternative, you could specify specific third party fonts that are required to use your application. It is recommended you print your Form from a machine having limited fonts installed to observe the results.

# Data Templates

Data Templates are an extremely powerful feature of Visual Forms for Windows. It allows you to visually decide where runtime data will be placed on your Form (to fill it in), and what the font characteristics will be (this is why the Font List must be distributed). In order to use the Data Template capability, you must have PrintWorks, a custom control distributed by Bytech Business Systems, Inc. PrintWorks contains properties for easily filling in the data portion of your form with properly formatted text, without any programming.

Creating a Data Template is very easy and involves the following steps:

1. Add a Text Object to your Form
2. Click the Styles button on the Properties Window
3. Check the "Replace text at runtime (data field)" check box
4. Save the Data Template by selecting the "Create Data Template File" item from the File

Menu

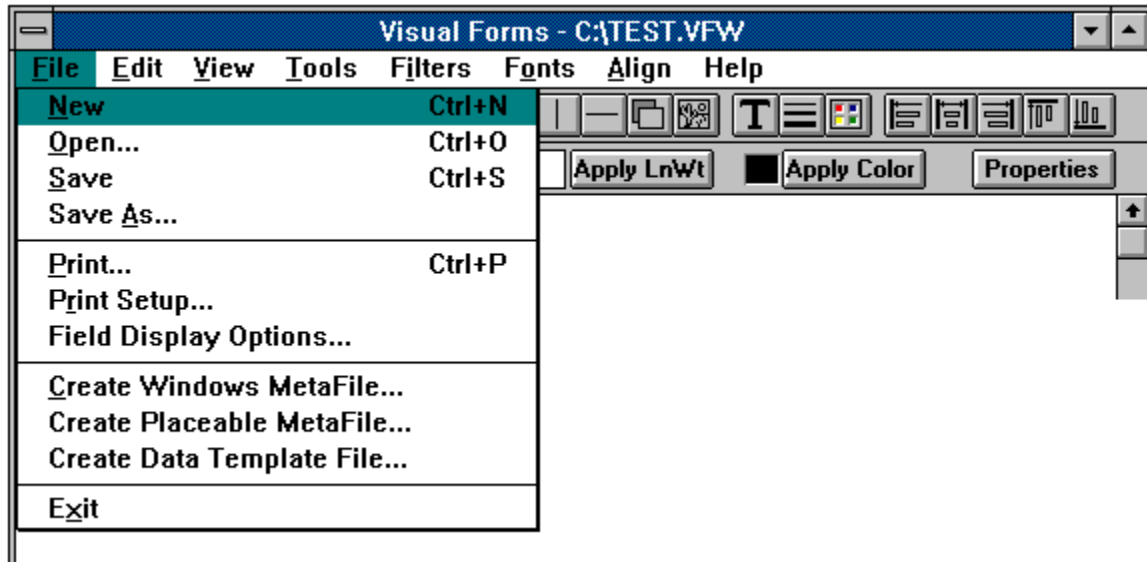
A Data Field is simply a Text Object with the Data Field style set. The Data Template file is a list of these Data Fields. Specifying a Text Object as a Data Field means that it won't appear as part of the Form (and is not a part of the MetaFile). Therefore, you must distribute both the Data Template file and the Font List so PrintWorks can properly add the data to the Form at runtime.



# File Menu

The File Menu contains items for managing Visual Forms files (except for Font Lists), printing and exiting. Font List files are managed from the Fonts Menu.

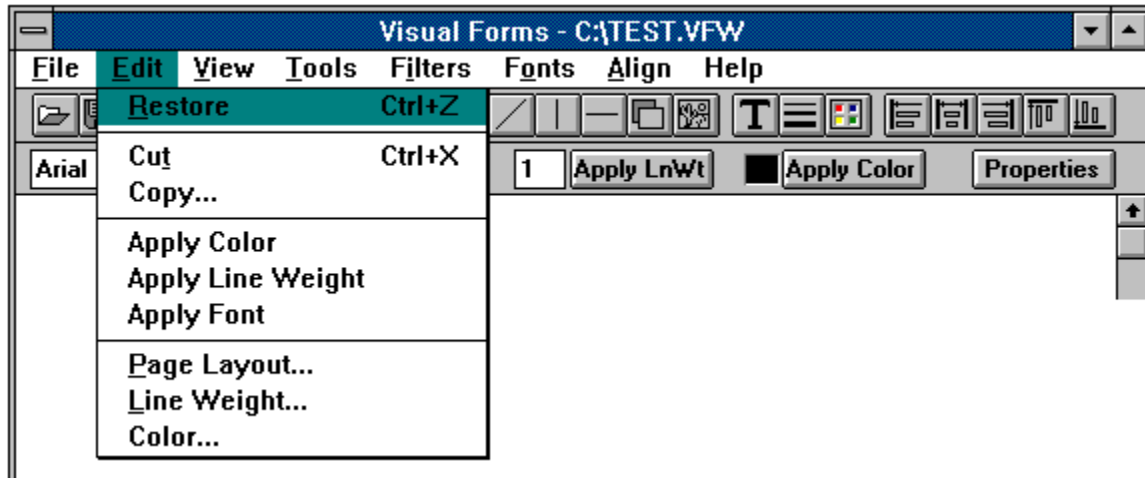
Select a File Menu item for Help.



# Edit Menu

The Edit Menu contains tools for manipulating specific properties of one or more Objects, copying and deleting Objects, and editing the page layout.

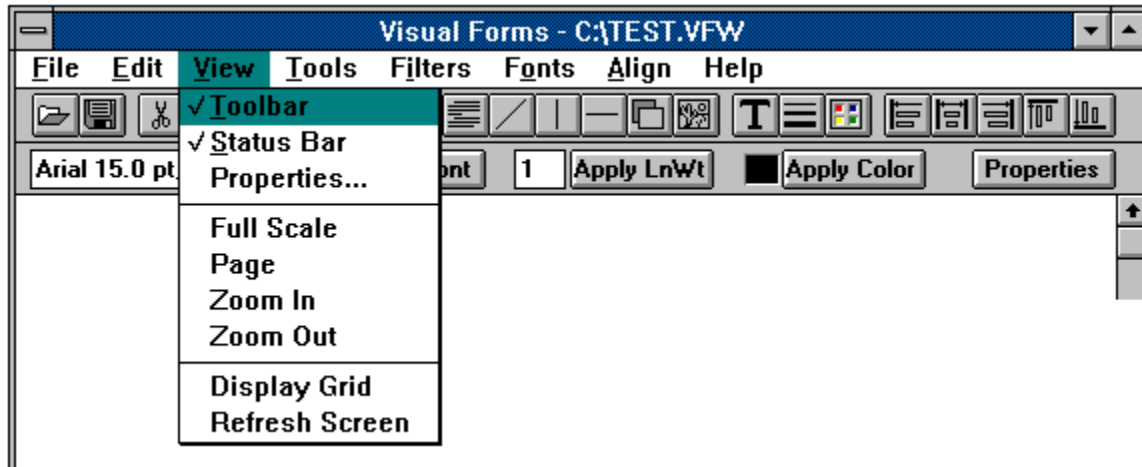
Select an Edit Menu item for Help.



# View Menu

The View Menu is used for configuring Visual Forms main window and for controlling the Zoom Level of the current form.

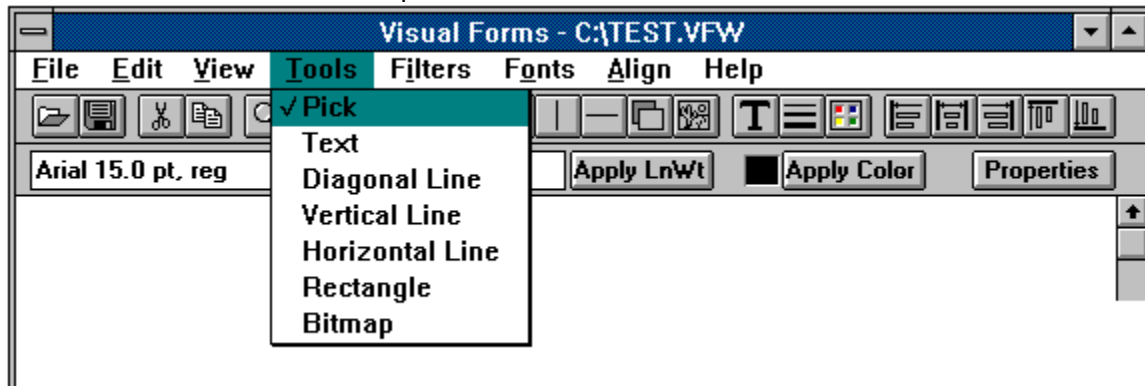
Select a View Menu item for Help.



# Tools Menu

The Tools Menu and corresponding toolbar buttons allow you to select an Object Type to add to your Form. Also, the Pick Tool can be chosen to Select Objects.

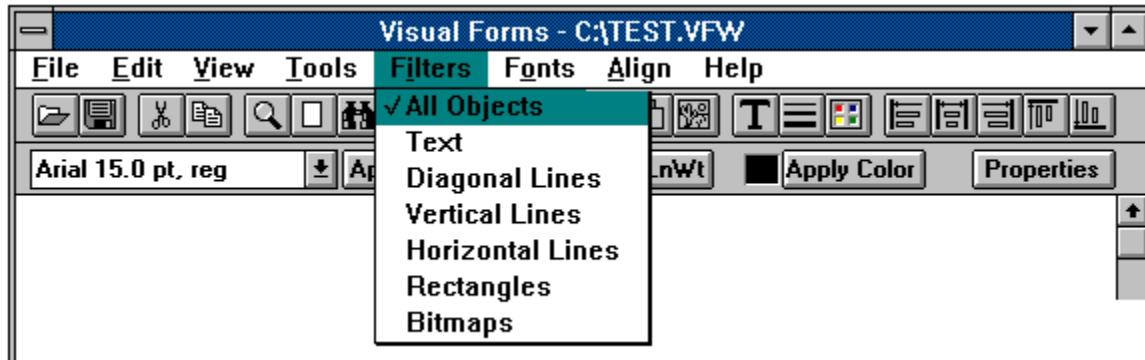
Select a Tools Menu item for Help.



# Filters Menu

The Filters Menu allows you to designate an Object Type for selection. When a particular filter is chosen, only Objects of that type may be Selected.

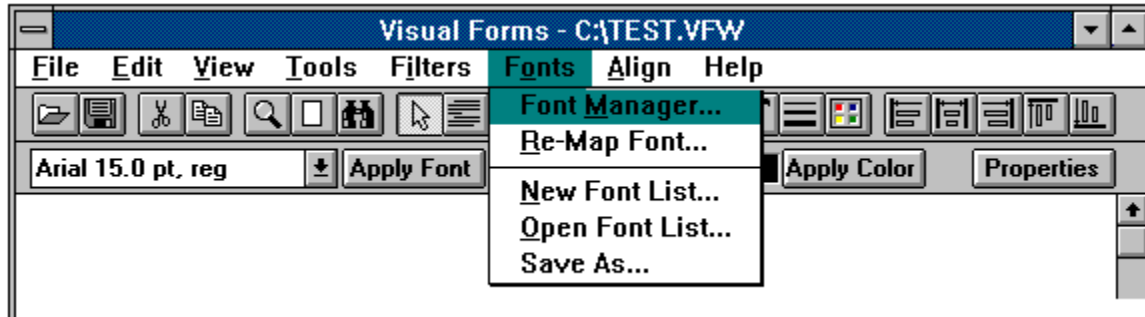
Select a Filters Menu item for Help.



# Fonts Menu

The Fonts Menu contains items for creating and managing Font Lists.

Select a Fonts Menu item for Help.



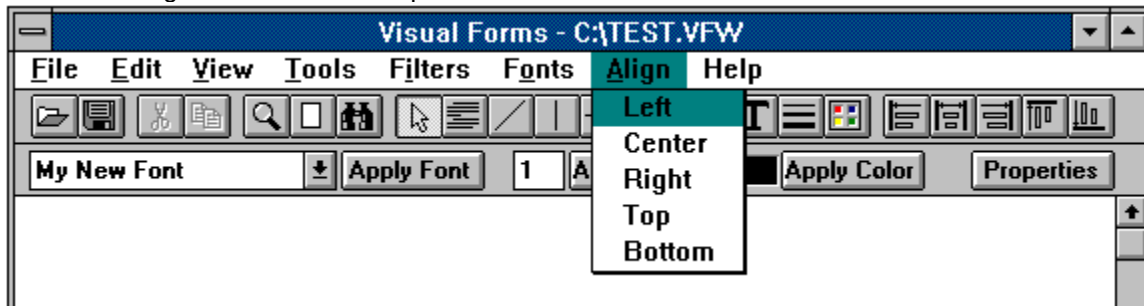
# Alignment Tools

The Alignment Tools are used to re-position one or more Objects. If only one Object is selected (i.e. the Focus Object), then only the Align Center tool is available. If more than one Object is selected, they may be centered with the Align Center tool, or aligned with the Focus Object.

# Align Menu

The Align Menu contains tools for aligning one or more objects. Only the Align Center menu item (or toolbar button) is useful for a single Selected Object (i.e. the Focus Object). The other alignment tools require more than one object, and the Selected Objects are aligned relative the Focus Object.

Select an Align Menu item for Help.

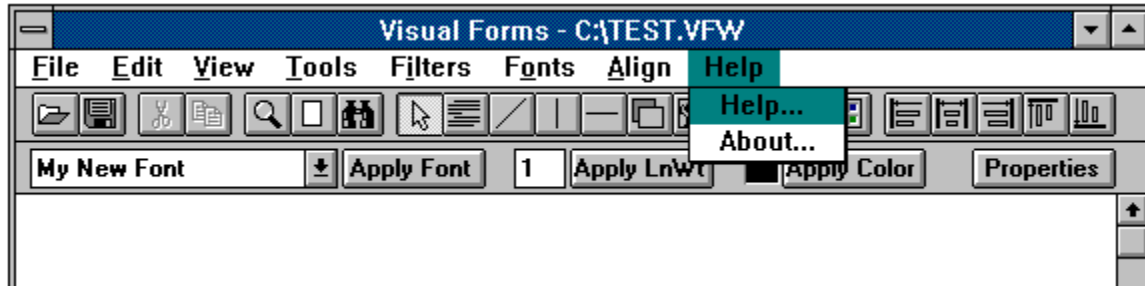




# Help Menu

The Help Menu launches Visual Forms Help, or displays the Visual Forms About Box.

Select a Help Menu item for Help.



## New File

The New item in the File Menu creates a new Visual Forms Form. Enter a name for the file (usually with a VFW extension). A VFW File containing a blank form will be created. Next, the Page Layout dialog box will appear. Enter the dimensions of the page and the units (inches or centimeters).

# Open File

The Open item in the File Menu loads a VFW File for an existing form, allowing you to edit, view or print.

## Save File

The Save item in the File Menu saves the current Form as a VFW File. It works in conjunction with the Edit Restore to allow restoring your Form to the last saved version. While you are designing a Form, save it often. You may even wish to use Save As at certain points, particular when major portions are complete.

## Save File As

The Save As item in the File Menu makes a copy of the current Form (typically a VFW File) with a new file name.

# Print

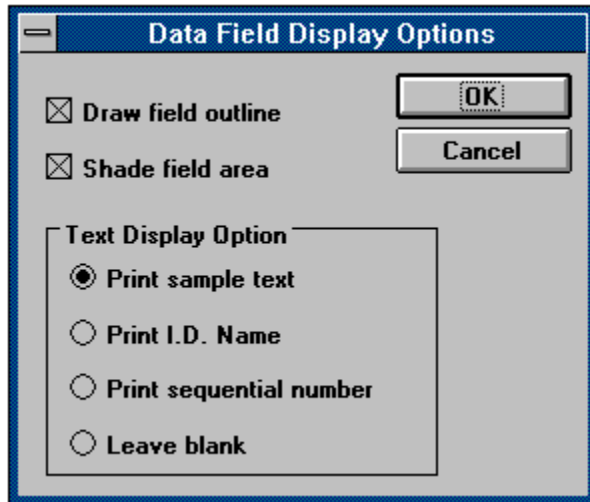
The Print item in the File Menu invokes the Windows print dialog box for printing. The Form will be printed along with the Data Fields, depending on the Field Display Options selected. The Print menu item prints directly from Visual Forms for Windows. To display or print the form from other applications, create a MetaFile from the File Menu.

# Print Setup

The Print Setup item in the File Menu invokes the Windows print setup dialog box so you can change printers or printing options.

# Field Display Options

The Field Display Options dialog box contains options for displaying or printing Data Fields while working in Visual Forms for Windows. The options include what text, if any, is displayed; and, whether the field is grayed and/or has a border. Click on the options in the graphic for more detail on each option.





## Sequence Number Data Field Option

When Sequence Number Data Field Option is selected, the numerical number representing Data Field is displayed or printed. This is useful if you are filling the data in the fields by referencing the sequential number. Data Fields are numbered in the order they are created, beginning with 1. If a Data Field is deleted, the remaining fields are re-numbered accordingly.

## Blank Data Field Option

The Blank Data Field Option causes no text to be displayed or printed in the Data Field.

## Shade Data Field Option

The Shade Data Field Option fills the Data Field with a gray shading. Only the first line of the Data Field is shaded; and, the height of the field represents the spacing between successive lines.

## Outline Data Field Option

If the Outline Data Field Option is selected, a red border is drawn around the Data Field. Only the first line of the field has a border; and, the height of the Data Field represents the spacing between successive lines.

## **I.D. Name Data Field Option**

If the Name Data Field Option is selected, the I.D. name of the Data Field is displayed or printed. This is useful if you are filling the data in the fields by referencing the I.D.

## Sample Text Data Field Option

If the Sample Text Data Field Option is selected, the text entered in the Properties Window is displayed or printed. This option is useful to simulate an actual filled in Form.

## Create Windows MetaFile

Create Windows MetaFile generates an image of your Form in standard Windows metafile format. Use this metafile to display or print your Form in your application, or any other application that supports Windows metafiles. If your application requires an Aldus Placeable MetaFile format, use the Create Placeable MetaFile menu item instead.

## Create Placeable MetaFile

Create Placeable MetaFile generates an image of your Form in Aldus Placeable Metafile format. Use this metafile to display or print your Form in your application, or any other application that supports Aldus placeable metafiles. If your application requires a standard Windows MetaFile format, use the Create Windows MetaFile menu item instead.



# Create Data Template File

Create Data Template File generates a special file that is used by PrintWorks to fill in the Data Fields in your Form. This file must be distributed with your application if you are using PrintWorks to automatically fill in Data Fields.

# Exit

The Exit menu item terminates the program.

# Restore

Restore changes the Form back to the last saved version.

# Cut

Cut is used to delete Objects from your Form. It applies to all Selected Objects. It is recommended that you save your Form prior to using this function.

# Copy

The Copy function makes a copy of the Selected Objects at a new location on the Form. A dialog box will appear for you to enter the horizontal and vertical offsets for the copied Objects.

# Apply Color

Apply Color applies the Current Color to all Selected Objects. To change the Current Color, select the Color item from the Edit Menu.

## Apply Line Weight

Apply Line Weight applies the Current Line Weight to all Diagonal, Vertical, and Horizontal Line Objects and Rectangle Objects. To change the Current Line Weight, enter the new value directly in the toolbar edit box, or select the Line Weight item from the Edit Menu.

# Apply Font

Apply Font applies the Current Font to any selected Text Objects. To change the Current Font, select from the toolbar list box, or select the Font Manager item from the Fonts Menu and make your selection in the Font Manager dialog box.



## Page Layout

The Page Layout dialog box allows you to define the size and units of your Form. For many Forms, the size will be 8.5 inches by 11.0 inches, representing a standard page in portrait orientation. If your Form is designed for landscape orientation, the width and height should be reversed (i.e. 11.0 inches by 8.5 inches). This way, your Form will always be readable on the screen. If you are using PrintWorks to print your Form, the page will automatically be rotated. If you are using other software to print, make sure your printer is set to print in landscape orientation. If you wish to display and/or print a landscape Form in portrait orientation (long side vertical), you must set it up as a portrait Form and rotate all your Objects accordingly.

If you are using metric units, select centimeters from the Measuring Units group. The height and width will automatically be converted to centimeters. You may then edit the height and width, if necessary.

# Line Weight

The Line Weight item sets the Current Line Weight, which is used to set the Line Weight Property of line and rectangle objects. The Line Weight is the thickness of lines and rectangle borders, in pixels. A pixel is based on 300 dots per inch (standard laser printer resolution), so each pixel represents 1 / 300th of an inch.

# Color

The Color item in the Edit Menu sets the Current Color. All Objects that are created have their Color Property set to the Current Color when they are created.

## Toolbar On/Off

The Toolbar On/Off item in the View Menu toggles the toolbar on (visible) or off (hidden).

## Status Bar On/Off

The Status Bar On/Off item in the View Menu toggles the status bar on (visible) or off (hidden).

## Properties Window On/Off

The Properties Window On/Off item in the View Menu, and the toolbar button, displays (on) or hides (off) the Properties Window.

## View Full Scale

The View Full Scale item (and toolbar button) displays the Form on the screen at full resolution; that is, one pixel on the screen represents one pixel at 300 dots per inch (standard laser printer resolution).

## View Page

The View Page item (and toolbar button) displays the Form in full page mode, where the entire Form is displayed.



## Zoom In

The Zoom In item (and toolbar button) enlarges the view of the Form for detailed work. The maximum Zoom Level is twice the Full Scale resolution, or 600 dots per inch.

## Zoom Out

The Zoom Out item (and toolbar button) reduces the size of the Form for more general work. The minimum Zoom Level is the same scale as View Page (i.e. where the entire page is visible).

## Display Grid

The Display Grid item toggles the background grid on or off. If you are doing a lot of scrolling, you may want to turn the grid off to allow faster scrolling.

# Refresh Screen

The Refresh Screen item is used to force a re-draw of the Form and the bounding rectangles of Selected Objects. Use this function if the screen should become corrupted for any reason.

# Pick Tool

The Pick Tool allows you to "pick" or Select an Object. You may select one or more Objects by enclosing them within a rectangle created by dragging the pick tool (holding down the left mouse button and moving the mouse). Only objects that are fully enclosed by the dragged rectangle will be selected. You may select an individual object by clicking the left mouse button. The nearest object to the cursor will be selected. You may also choose a filter from the Filters Menu, so that only one Object Type is available for selection.

Objects that have been selected have a bounding rectangle; a green, cross-hatched rectangle for the Focus Object, and a gray, solid rectangle for others. Selected objects may be moved, re-sized, copied, deleted, or have their Font, Line Weight, or Color properties changed. The Focus Object may also be edited in the Properties Window.

# Text Tool

The Text Tool is used to add a new Text Object to the Form.

# Diagonal Line Tool

The Diagonal Line Tool is used to add a new Diagonal Line Object to the Form.

# Vertical Line Tool

The Vertical Line Tool is used to add a new Vertical Line Object to the Form.



# Horizontal Line Tool

The Horizontal Line Tool is used to add a new Horizontal Line Object to the Form.

# Rectangle Tool

The Rectangle Tool is used to add a new Rectangle Object to the Form.

# Bitmap Tool

The Bitmap Tool is used to add a new Bitmap Object to the Form.

## All Objects Filter

The All Objects Filter allows selection of all Object Types when using the Pick Tool.

## Text Filter

The Text Filter allows selection of only Text Objects when using the Pick Tool.

## Diagonal Line Filter

The Diagonal Line Filter allows selection of only Diagonal Line Objects when using the Pick Tool.

## Vertical Line Filter

The Vertical Line Filter allows selection of only Vertical Line Objects when using the Pick Tool.

# Horizontal Line Filter

The Horizontal Line Filter allows selection of only Horizontal Line Objects when using the Pick Tool.



# Rectangle Filter

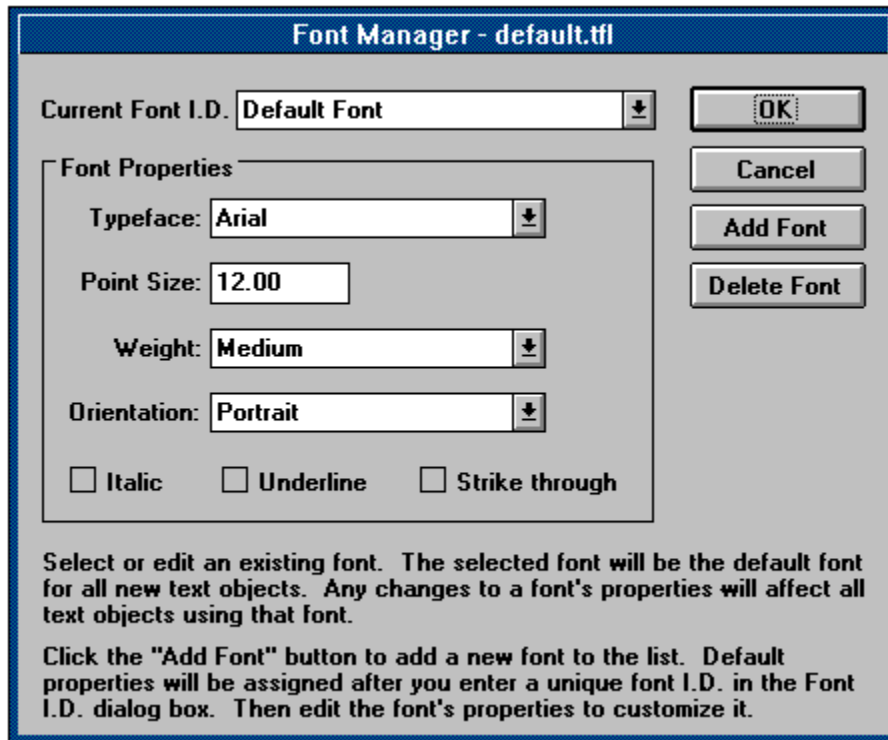
The Rectangle Filter allows selection of only Rectangle Objects when using the Pick Tool.

# Bitmap Filter

The Bitmap Filter allows selection of only Bitmap Objects when using the Pick Tool.

# Font Manager

The Font Manager dialog box is used to add, delete, and edit fonts in the Font List, and is shown below:



The file name for the Font List is displayed in the dialog caption bar. The Current Font is displayed in the drop-down list box following the caption "Current Font I.D.". This is the font that is affected by any changes you make in the Font Properties group; or, if you click the Delete Font button.

You can select any of the fonts in the list by clicking the arrow on the list box to display the Font List. The name or I.D. of a font in the list cannot be changed. If you must change the name of a font, do the following: (1) add a new font to the list with the same characteristics but with the new name; (2) ReMap all Text Objects using the original font to the new one; and (3) delete the original font if you don't need it.

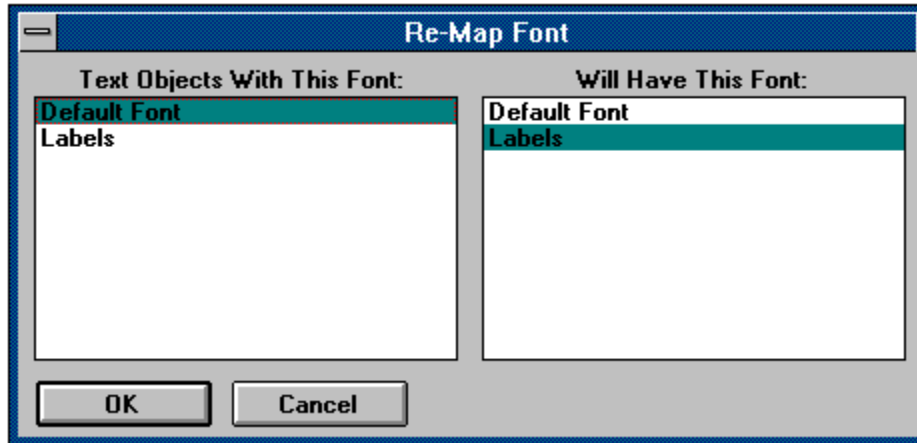
All of the characteristics of a font that may be edited are in the Font Properties group (see below). All of the properties except Point Size require only a selection; so, it is impossible to specify a non-valid value. Point Size requires you enter a value, which may contain a decimal portion. In Visual Forms for Windows, Point Size is the standard typography definition - one point = 1 / 72 of an inch; so there are 72 points in an inch. The Point Size refers to a character cell (a rectangular area that encloses all characters in the font), so the actual height of any character will be less than the Point Size converted to inches. This definition ensures that the font will be the correct height when it is printed. When viewed on the screen as part of a Form, the font will be scaled appropriately to compensate for the screen's resolution. This definition may be different than that used by other Windows software that base Point Size on how the font will appear on the screen.

A Font List can only include TrueType fonts. All the TrueType fonts that have been installed with your version of Windows are listed in the Typeface drop-down list box. If you intend to distribute your Form, or use it on another computer, make sure all the fonts you specify in your Font List are installed. Any fonts that are not installed will be replaced with a substitute by Windows, using a closest

match strategy. It is possible the substituted font may affect the formatting of text and the appearance of your Form. Try to use fonts you know exist on computers that will use the Form, or distribute the fonts (this may require a license), or require customers to acquire them.

# Re-Map Font

Fonts can be easily re-mapped using the Re-Map Font item from the Fonts Menu. Re-mapping a font takes all Text Objects that use a particular font in the Font List, and assigns a different font from the Font List to those Text Objects. Simply indicate which font you wish to have replaced in the left list box (see below), and which font you wish to replace it with in the right list box. Press Ok to apply the change. Pressing Cancel will cancel the operation.



## Create New Font List

Create New Font List creates an empty Font List. You then add the fonts you want to be in the new list using Font Manager. It is best to use Create New Font List when there are no Text Objects in the current Form (i.e. create a new blank Form first) to avoid getting a message that some fonts were not found. If you wish to create a new Font List for an existing Form that has Text Objects, use Save Font List As to make a clone, and then delete the fonts you don't need.

## Open Font List

Open Font Lists loads an existing Font List and associates it with the current Form. If the Font List is different than a previously used Font List, the appearance of the Form will be updated accordingly. Keep in mind that if you change the characteristics of a font in a Font List, all Forms that are associated with that Font List will appear differently.

## Save Font List As

Save Font List As makes a copy of the current Font List and saves it with a new name. This is useful for creating similar, but different Font Lists.



# Align Left

Align Left aligns the left side of all Selected Objects with the left side of the Focus Object. The position of the Focus Object is not changed.

# Align Center

Align Center centers all Selected Objects including the Focus Object, horizontally on the page.

# Align Right

Align Right aligns the right side of all Selected Objects with the right side of the Focus Object. The position of the Focus Object is not changed.

# Align Top

Align Top aligns the top of all Selected Objects with the top of the Focus Object. The position of the Focus Object is not changed.

# Align Bottom

Align Bottom aligns the bottom of all Selected Objects with the bottom of the Focus Object. The position of the Focus Object is not changed.

# Visual Forms Help

The Visual Forms Help item in the [Help Menu](#) launches Visual Forms for Windows help.

# About Visual Forms

The About Visual Forms item in the [Help Menu](#) displays a dialog box with copyright information.

## Current Font

The Current Font is displayed in the drop-down list box on the toolbar to the left of the Apply Font toolbar button. It indicates the font that will be used to create subsequent Text Objects; or that will be applied to Selected Objects by clicking the Apply Font toolbar button. The Current Font can be changed by making a new selection from the drop-down list box; or, by selecting the Font Manager item from the Fonts Menu.



## Current Line Weight

The Current Line Weight is displayed on the toolbar to the left of the Apply Line Weight toolbar button. It indicates the Line Weight, in pixels, that will be used to create subsequent Objects; or that will be applied to Selected Objects by clicking the Apply Line Weight toolbar button.

## Current Color

The Current Color is displayed on the toolbar to the left of the Apply Color toolbar button. It indicates the color that will be used to create subsequent Objects; or that will be applied to Selected Objects by clicking the Apply Color toolbar button.

## Select Font

The Select Font drop down list box on the toolbar allows you to select a font from the Font List. The selected font is applied to any new Text Objects that are created. Also, any selected Text Objects can be changed to the selected font by clicking the Apply Font toolbar button. A font can also be selected by clicking the Font Manager toolbar button, or by selecting the Font Manager item from the Fonts Menu.

# Selected Object

An Object is selected if it has a rectangular border around it. There are two types of borders: (1) a green, cross-hatched border for the Focus Object; and, (2) a gray border for all other objects. At least one Object (the Focus Object) is always selected. Selected Objects can be: re-positioned as a group; aligned to the Focus Object using the Alignment Tools; have their Color, Font, and Line Weight Properties changed as a group; deleted; and, copied.

# Focus Object

Whenever a Form contains at least one object, there is a Focus Object. The object that has the focus is surrounded by a green, cross-hatched rectangular border. The Focus Object is also Selected. A Form can have a number of objects that are Selected, but only one, the Focus Object, has the focus. Objects that are selected, but do not have the focus, have a gray rectangular border.

The Focus Object has two important attributes, in addition to its properties: (1) it is the Object that the Properties Window refers to; and, (2) it is the Object which other selected Objects are aligned to with the Alignment Tools.

The Focus Object can be changed using the tab and shift + tab keys. If the tab key is pressed, the next Object becomes the Focus Object. If the shift + tab key is pressed, the previous Object become the Focus Object. If only one Object (the Focus Object) is selected, the tab and shift + tab keys will allow you to change the focus to any Object on your form. If more than one Object are selected, you can only change the focus to another Selected Object. If a filter has been selected from the Filters Menu, only objects of that type may be selected.

# Font List

A Font List is a file containing a list of TrueType fonts that are used to draw Text Objects for one or more Forms. Each entry in the Font List contains all the attributes of a particular font, which provides an easy method for managing the appearance of Text Objects. A Font List may be used for any number of forms; and not every font in the list need be used.

## Zoom Level

The Zoom Level defines the amount of detail visible in the current form. As you Zoom In, more detail becomes visible over a smaller portion of the page. As you Zoom Out, more of the page is visible, but less detail.

# Object Type

A form is comprised of a collection of Objects, of which there are six types:

1. Text (including data fields)
2. Diagonal Line
3. Vertical Line
4. Horizontal Line
5. Rectangle (which includes fills and hatching patterns)
6. Bitmaps

These Objects may be thought of as building blocks, from which very complex forms can be created. Each of the Object types has a set of Properties (such as color or size) that control its appearance.



# Text Object

A Text Object consists of from one character to several paragraphs of text. It has two basic forms: (1) static; and, (2) data. The difference relates to when the text is actually drawn; otherwise, they are identical. Static text is part of the Form, and never changes. It is included in the MetaFile you create, and therefore, is always displayed or printed. Data is text that is added at runtime, because it is dependent on the application and may change. It requires PrintWorks VBX, which automatically fills in the data from within your application.

Text is formatted in fields - a rectangular area on the Form that contains the text. A field is defined by its reference point (X Pos Property and Y Pos Property), and its Width Property. The reference point is the left edge of the text field at the character baseline (a character "sits" on its baseline). The Y Pos field name changes to "Baseline" in the Properties Window to indicate that a Text Object has the Focus. The height of the field is the height of one line or, the line spacing. Although a Text Object may have more than one line, only the first line is considered as the field. The text may be formatted within the field by setting the Alignment Property.

Text is formatted in paragraphs, if there is more than one line. You can start a new paragraph, or force a linefeed, by pressing Ctrl+Enter in the text edit box in the Properties Window. You can also use Ctrl+Enter to format multiple lines of text as centered or right justified.

All text is displayed in a particular font from the Form's Font List. When a Text Object is created (by selecting the Text item from the Tools Menu or clicking the Text Tool toolbar button), a new Text Object is located in the upper left corner of the screen. You then position the object where you want it and set its Properties. The Text Object initially has the Current Font as its Font Property, and "Text" as its Text Property.

One Text Object can be used to print a single character (such as the check mark in the Available Properties grid in the Properties topic), or many paragraphs. You can always change the Font Property to another font, or use the Font Manager to change the characteristics of the font being used. Keep in mind that changing a font's characteristics affects all Text Objects that use the font.

# Diagonal Line Object

A Diagonal Line Object is a straight solid line between two points. It is created by selecting the Diagonal Line item from the Tools Menu, or clicking the Diagonal Line Tool from the toolbar. Use the drawing pencil that appears when the tool is selected to draw the line. Press and hold the left mouse button where you want the line to start, and drag the line with the mouse to where you want the line to end. If the line is not exactly where you want it, use the mouse to re-position or re-size it; or, use the cursor keys, or the Properties Window.

# Vertical Line Object

A Vertical Line Object is a straight solid vertical line between two points. It is created by selecting the Vertical Line item from the Tools Menu, or clicking the Vertical Line Tool from the toolbar. Use the drawing pencil that appears when the tool is selected to draw the line. Press and hold the left mouse button where you want the line to start, and drag the line with the mouse to where you want the line to end. You can move the drawing pencil out of the way (moving it left or right) and the line will remain vertical. This can help improve your vision, for precise positioning. If the line is not exactly where you want it, use the mouse to re-position or re-size it; or, use the cursor keys, or the Properties Window.

# Horizontal Line Object

A Horizontal Line Object is a straight solid horizontal line between two points. It is created by selecting the Horizontal Line item from the Tools Menu, or clicking the Horizontal Line Tool from the toolbar. Use the drawing pencil that appears when the tool is selected to draw the line. Press and hold the left mouse button where you want the line to start, and drag the line with the mouse to where you want the line to end. You can move the drawing pencil out of the way (moving it up or down) and the line will remain horizontal. This can help improve your vision, for precise positioning. If the line is not exactly where you want it, use the mouse to re-position or re-size it; or, use the cursor keys, or the Properties Window.

# Rectangle Object

A Rectangle Object may be used to create boxes, fills, and hatching patterns. It is created by selecting the Rectangle item from the Tools Menu, or clicking the Rectangle Tool from the toolbar. Use the drawing pencil to draw the Rectangle. Press and hold the left mouse button at one corner of the Rectangle, and drag the Rectangle with the mouse to the opposite corner. If the Rectangle is not exactly where you want it, use the mouse to re-position or re-size it; or, use the cursor keys, or the Properties Window.

Use the Style Properties to customize the appearance of your rectangle. Keep in mind the following points when designing Rectangles:

1. The Color Property for the Rectangle itself and its fill (if any) are the same
2. If a Solid Fill is used, it will cover any objects in the background
3. All filled Rectangles are drawn as opaque (background does not show through white space) because of known problems with some printer drivers correctly rendering fills in transparent background mode. Un-filled Rectangles are simply drawn as boxes. If you are using filled Rectangles, put them behind other objects you want to be visible by drawing them first.

# Bitmap Object

A Bitmap Object allows you to add graphics to your Form. It is created by selecting the Bitmap item from the Tools Menu, or clicking the Bitmap Tool toolbar button. A dialog box appears requesting the name of the bitmap file to add to your Form. The bitmap must be a Windows device independent bitmap (usually a DIB or BMP extension). Windows has another bitmap format which is device dependent and is intended to be used internally. It is possible for some software to save device dependent bitmaps to files; however, this format is not supported.

After selecting the bitmap file you want, position it on the Form. The Bitmap Object may be displayed as either transparent (background shows through white space) or opaque (white space remains white), depending on the Opaque Property. If the ReSize Property is set, the Bitmap Object may be scaled (or, stretched) to any size you like. Otherwise, it retains its native size. When it is first added to the Form, it is displayed at its native size.

Monochrome Bitmap Objects may have a Color Property. When the Bitmap Object is created, the Color Property is the Current Color. For color bitmaps, the Color Property does not apply, and is ignored.

## VFW File

A VFW File is a Visual Forms for Windows project file, and usually has the extension VFW. It contains all the information about the form you have designed, including Page Layout, Objects and their Properties, and the appropriate Font List. A VFW file is in a proprietary format, and is not compatible with other software. To create a file containing an image of your form for use in other software, or with PrintWorks, select Create Windows MetaFile, or Create Placeable MetaFile from the File Menu.

# Repeat Property

The Repeat Property, which is displayed in the Properties Window, specifies how many additional times an Object is drawn, or repeated. For most Objects, this value is zero and the Object is drawn only once. When an Object is to be repeated, the X Offset and Y Offset values are specified in the Properties Window, to indicate the position offset of successive repeated Objects. For example, if you wished to draw five horizontal lines, one inch apart, you would enter the following values:

Repeats = 4  
X Offset = 0  
Y Offset = 1.0

All other Properties of the repeated Object (except location) are the same. This feature is useful for building grids, a series of check boxes, etc.



# Properties

Properties are the attributes of a particular Object, such as its location, size, and color. Each type of Object has its own set of properties that are used to fully define it. In addition, all Objects have a Repeat Property, that determines how many times it is drawn.

The Properties for an Object can be edited in the Properties Window. The Properties Window always displays the properties of the Focus Object. The most common properties are displayed in the Properties Window: Other properties are called Style Properties, and require clicking the "Style" button in the Properties Window. This displays a custom style properties window for the particular Object Type.

There are a number of Properties available; however, not each Object Type has all of the available properties. The chart below (which was created in Visual Forms for Windows) lists the Object Types and the available properties. The check mark indicates that a particular Property is available for the Object Type. Click on the Property for a description of that Property. Click on the Object Type for a description of that Object.

Available Properties						
	Text	Lines			Rectangle	Bitmap
		Diagonal	Vertical	Horizontal		
X Pos	✓	✓	✓	✓	✓	✓
Y Pos	✓	✓	✓	✓	✓	✓
Width	✓	✓		✓	✓	✓
Height	✓	✓	✓		✓	✓
Color	✓	✓	✓	✓	✓	✓
Text	✓					
Font	✓					
Alignment	✓					
Indent	✓					
Replace	✓					
Line Weight		✓	✓	✓	✓	
Fill Style					✓	
Allow Re-size						✓
Opaque						✓

# X Pos Property

The X Pos Property is the horizontal coordinate (in inches or centimeters) of the reference point of the Object, which fixes its position on the Form. X Pos is measured from the physical left edge of the page. The position of the reference point relative to each Object Type is as follows:

Text: The left edge of the text field at the character baseline (a character "sits" on its baseline)

Diagonal Line: The upper left corner of a rectangle that bounds the line

Vertical Line: The top end of the line

Horizontal Line: The left end of the line

Rectangle: The upper left corner of the rectangle

Bitmap: The upper left corner of the bitmap

# Y Pos Property

The Y Pos Property is the vertical coordinate (in inches or centimeters) of the reference point of the Object, which fixes its position on the Form. Y Pos is measured from the physical top edge of the page. The position of the reference point relative to each Object Type is as follows:

Text: The left edge of the text field at the character baseline (a character "sits" on its baseline)

Diagonal Line: The upper left corner of a rectangle that bounds the line

Vertical Line: The top end of the line

Horizontal Line: The left end of the line

Rectangle: The upper left corner of the rectangle

Bitmap: The upper left corner of the bitmap

# Width Property

The Width Property describes the width of an Object. Only the Vertical Line Object has no Width Property. Its thickness is described by the Line Weight Property.

# Height Property

The Height Property describes the height of an Object. Only the Horizontal Line Object has no Height Property. Its thickness is described by the Line Weight Property.

## Color Property

The Color Property is the color of the Object. For a Rectangle Object, both the fill color and outline color are the same. The Color Property applies to the foreground (black) pixels of a monochrome Bitmap Object; but, has no effect on a color Bitmap Object.

## Text Property

The Text Property is the actual text in a Text Object field. If the Text Object has the Replace Property set, it becomes a Data Field no text will be placed in the created MetaFile, since this text will be added at runtime.

# Font Property

The Font Property determines which font in a Font List is used to draw a Text Object.



# Alignment Property

The Alignment Property determines how the text in a Text Object field is formatted. The following formatting options are available:

Left Justified: Text is drawn flush left to the left side of the field (i.e. at X Pos)

Right Justified: Text is drawn flush right to the right side of the field (i.e. at X Pos + Width)

Centered: Text is centered in the field

Fully Justified: Text is drawn both flush left and flush right (see above)

Decimal Aligned: Text is aligned with the first decimal point encountered at the left edge of the field. All text prior to the decimal point (typically numbers) will be drawn to the left of the field.

# Indent Property

The Indent Property describes how far to indent the first line of text in each paragraph of a Text Object.

# Replace Property

The Replace Property specifies that the Text Object is a Data Field and its text will be drawn at runtime. In order to use this property, you must print or preview your form at runtime using PrintWorks VBX. This Text Object will be left blank when a MetaFile is created, even though you may display sample text within Visual Forms for Windows.

## Line Weight Property

The Line Weight Property describes the thickness of a line in pixels. A pixel is 1 / 300th of an inch (standard laser printer resolution). If a Line Weight of zero is set, a one pixel width line will be drawn.

# Fill Style Property

The Fill Style Property describes the type of fill for a Rectangle Object. The following styles are available:

No Fill: The rectangle appears as a box.

Solid Fill: The rectangle is filled solid with the Color.

Horizontal Hatch: The rectangle is filled with a horizontal hatching pattern.

Vertical Hatch: The rectangle is filled with a vertical hatching pattern.

Diagonal Hatch 1: The rectangle is filled with a diagonal hatching pattern.

Diagonal Hatch 2: The rectangle is filled with a diagonal hatching pattern, rotated 90 degrees.

Cross Hatch: The rectangle is filled with a hatching pattern that is a combination of vertical and horizontal.

Diagonal Cross Hatch: The rectangle is filled with a hatching pattern that is a combination of the two diagonal hatching patterns.

## Allow Re-Size Property

The Allow Re-Size Property permits scaling or "stretching" a Bitmap Object. If this property is not set, the Bitmap Object will be displayed in its native resolution.

## Opaque Property

The Opaque Property, when set, causes a Bitmap Object to block out the background. When this property is not set, the background will show through and white space in the Bitmap Object.

# Objects

A form is comprised of a collection of Objects, of which there are six types:

1. Text (including data fields)
2. Diagonal Line
3. Vertical Line
4. Horizontal Line
5. Rectangle (which includes fills and hatching patterns)
6. Bitmaps

These Objects may be thought of as building blocks, from which very complex forms can be created. Each of the object types has a set of Properties (such as color or size) that control its appearance. Through manipulation of the Object's Properties, you can create a wide range of Form designs.



# PrintWorks

PrintWorks is a Windows Custom Control (VBX) distributed by Bytech Business Systems, Inc. It makes displaying and printing Forms and runtime data very easy. It allows merging of runtime data with data fields specified in Visual Forms for Windows; and, contains a comprehensive library for dynamically adding text and graphics.

Although Visual Forms for Windows and PrintWorks can both function as independent products, maximum efficiency is achieved when they are used together. If you are using the data field capabilities of Visual Forms for Windows, PrintWorks is required.

# MetaFile

A MetaFile is a standard Windows file format containing graphics commands, so it represents a graphic image of a page, or portion of a page. The MetaFile may be displayed and/or printed from any Windows program that supports metafiles. When a Visual Forms for Windows Form is complete, you create a MetaFile so it can be used in your application. The PrintWorks VBX can be used to easily manage displaying and printing of your forms.

A non-standard Windows MetaFile, usually called an "Aldus Placeable Metafile" or "Placeable Metafile", is used by some software. Visual Forms for Windows allows you to create a "Placeable Metafile" from the File Menu.

# Template File

A Template File contains the information for adding runtime data to your Form. The information it contains includes: the size and position of the data fields; the characteristics of the font to use for displaying the data; the font color; and formatting instructions. The Template File depends on the Font List associated with the Form. If you are using data templates, you must include the appropriate Font List with your application.

# Form

A Form is the finished product of Visual Forms for Windows. It has a broader meaning than some uses of the word in that it can be any kind of document: a business form; a graphic such as a logo; a letterhead; a base sheet for graphs and plots; a form letter; and almost anything else. Be aware that some Windows development platforms, such as Visual Basic, use the word form in a different context - to mean a screen display or dialog box.

A Visual Forms for Windows Form is a Windows MetaFile, and as such can be easily displayed and printed. Typically, the portion of your output that is static (does not change at runtime) is included with the Form, so you do not have to do any programming to create it. Dynamic output (created at runtime) is then merged with the form (filling it in) to create the final product.

Since a Form is used as a MetaFile, it cannot contain data fields, or their definitions. This information is saved in a special file called a data Template File (or TF File), which is created from the File Menu.

# Data Field

A Data Field is a Text Object that has the Replace Property set. When this is true, the Text Object is not considered part of the Form, but a field that will be filled in at runtime. In order to fill the field at runtime, the PrintWorks custom control is required. A collection of Data Fields is called a Data Template.

**ZZZZZ - Last Topic Marker**

