

# New Graphical Features

PxPlus 2017 (v14) & PxPlus 2018 (v15)

# Graphical Features

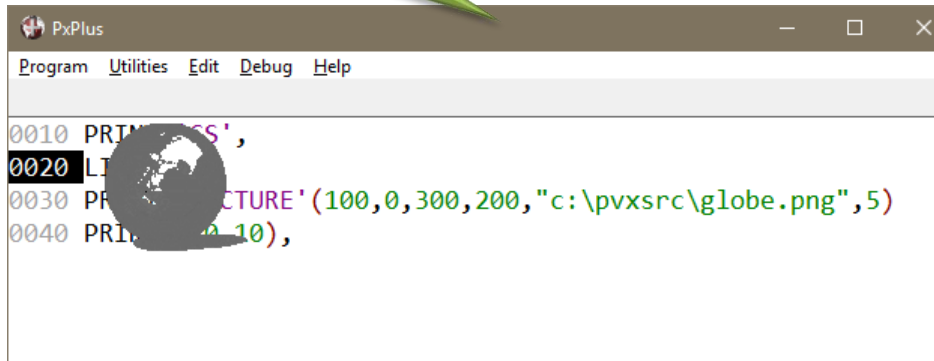
## Topics for review

- Transparency and PNG image handling
- Percentage bar in List View and Grid
- Image Scaling in List View
- Grid enhancements
  - Auto-Fit columns to match largest element
  - Control over Multi-line alignment
- Customization options
- Enhanced window interface
  - Resizable frameless windows
  - Drag from menu bar

# Transparency and PNG Files

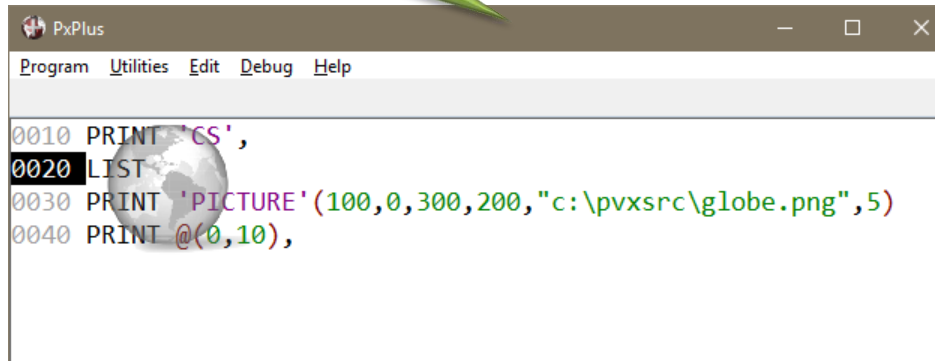
- Proper Alpha channel blending supported
  - Alpha channel is 4<sup>th</sup> byte defining transparency
    - 0 to 255 transparent (0=Visible, 255=Transparent)
  - Prior logic only used Alpha channel to build mask
    - Greater than 90% transparent was masked off
  - New logic blends colors
    - Renders cleaner edges and shadow effects

PxPlus 2016  
and prior  
releases



```
PxPlus
Program Utilities Edit Debug Help
0010 PRINT 'CS',
0020 LIST
0030 PRINT 'PICTURE'(100,0,300,200,"c:\pvxsrc\globe.png",5)
0040 PRINT @(0,10),
```

PxPlus 2017

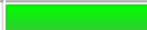




```
PxPlus
Program Utilities Edit Debug Help
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```




DireXions 2018

# Bar graph in List View & Grid

- Rendering of numeric percentage
  - Horizontal bar covers nn% of column width
  - Multiple bars of different colors supported
  - Optional trailing text for actual value
  - Grid

	ID	Name	Performance	Sales
1	0001	First Client	 80%	\$80,000
2	0002	Secondary Client	 110%	\$55,000
3	0003	Third Client	 50%	\$45,000

- List View

ID	Name	Performance	Sales
0001	First Client	 80%	\$80,000
0002	Secondary Client	 110%	\$55,000
0003	Third Client	 50%	\$45,000

*Bar width based on column width*

# Bar graph in List View & Grid

- Defining the GRID bar display
  - Bar defined by cell type **"BarChart"**
  - Bar segments defined in 'Text\$ property
    - Each segment separated by semi-colon
    - Segments consist of up to three comma separated values
      - Bar width as percentage (between 0 and 100)
      - Color at top of bar
      - Color at bottom of bar
        - If omitted, same color as top used with 10% lite to dark shading
  - Contents of 'Value displayed following last segment

# Bar graph in List View & Grid

- Defining the List View bar display
  - Bar defined using 'FILL' mnemonic in column value
    - Each segment defined by individual 'FILL' mnemonics
    - Mnemonic consists of

'FILL' ( *percentage*, "*TopColor*", "*BottomColor*")

- Bar width as percentage (between 0 and 100)
- Color at top of bar
- Color at bottom of bar
  - If omitted, same color as top used with 10% lite to dark shading
- Trailing text follows last mnemonic

# Scaled images in List View

- List View **ONLY** supports one image size
  - All images must be same size
  - Image size taken from first image loaded
    - Prior PxPlus 2017, images of wrong size rejected
  - PxPlus 2017 scales images to proper size
    - If too small, image is centered within size defined
    - If too large, image is scaled down and centered
  - Line Height defined by image size or font
    - Which ever is greater
    - New Property 'LinePixels' defines the height of a line
      - Can be read only
- Added Tree view support

# New Grid Properties

2017

- 'AutoFit to adjust column width to contents
  - Applied to columns set in 'Column property
  - When set to **any** value, forces column width largest element
    - If set to 0, then all elements scanned to find largest
    - Any other value indicates number rows to check
      - Always starts from first row
  - Similar to double clicking on column separator

2018

- 'HdrFont, 'HdrTextColor and 'HdrBackColor
  - Consistent property as List View
  - Same as setting row -1 cell properties



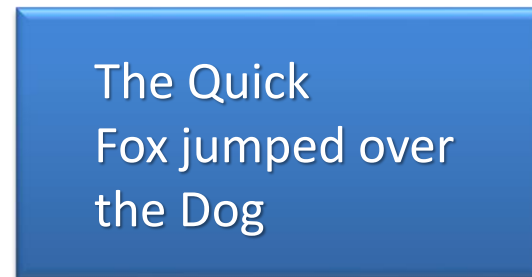
# New Grid Option

- Grid Multi-line alignment
  - New option "GridAlignLines" to change how text is aligned in Grid Button style cells
    - Impacts text with multiple lines (\$0A\$ separated)
    - When enabled (1) each line of text individually aligned as per the 'Align\$ property. **(new default)**
    - When disabled (0) the lines are treated as a block of text and as per the 'Align\$ property. **(old default)**

Enabled – Lines centered



Disabled – Block of lines centered



# Customization Options

- Addressing the needs for custom/standard displays
  - Ensure consistent corporate identity
  - Provide cohesive look for application suite
- Two areas added for customization
  - Custom Radio Button and Check Boxes
  - Ability to control colors for current 'Active' items
- Other options such as panel headers and custom window frames provided by Nomads



For more details  
see the  
What's New in  
Nomads PDF

# New Window Handling Interface

## Customization options

- Frameless windows can now be resized
  - Window will **NOT** have wide resizable border
  - User can resize by dragging from right or bottom
    - Drag region is 3 pixels band inside edge
    - Bottom right corner can also be dragged
  - Left edge and Top resizing not supported
- Windows can be dragged from Menu Bar
  - Drag only possible to right of menu bar
    - Cannot drag from any area occupied by menu option
- Reduced Flicker on loading lists

2017

2018

# Radio Buttons & Check Boxes

## Customization options

- New options to define images for

- Radio Button
- Check Box

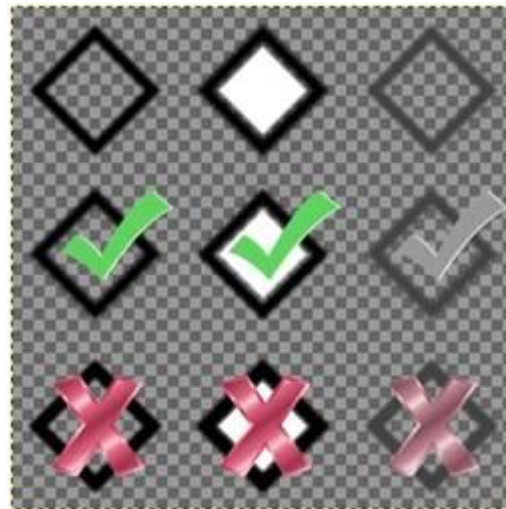
Radio Button	Check Box	Description
RbtImage	CbxImage	Defines image to use
RbtMarkSize	CbxMarkSize	Defines width of image in front of text

**Must be using '4D' option**

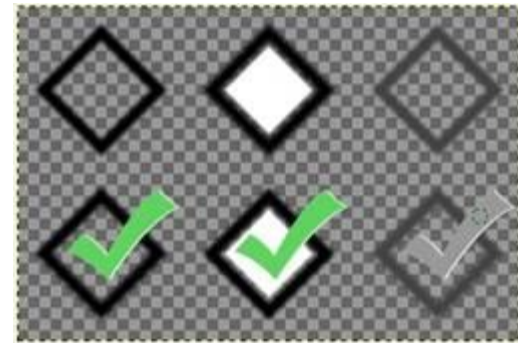
# Radio Buttons & Check Boxes

## Customization options

- Image file contains 9 images for Check box and 6 images for Radio Button
  - Image columns: Normal, Mouse over, Disabled
  - Image rows: Off, On, and Alt state for TriState Box



Check Box 3x3



Radio Button 2x3

# Active/Highlighted Color

## Customization options

- Two new 'OPTION' settings provided to control highlight for active items

'OPTION' setting	List/Drop Box & Grid	Multi_line inputs
ClrHighlight -or- StdFocusBackClr <b>(2018)</b>	Background color for current selected item(s) when control has focus	Background color when control has focus
ClrHighlightText -or- StdFocusTextClr <b>(2018)</b>	Text color for current selected item(s) when control has focus	Text color when control has focus

- Set using ***(uses system default if value is null)***
  - PRINT 'OPTION'("StdFocus...", value\$)
  - SETDEV (0) SET "StdFocus..." TO value\$
- Get setting using FIN(0, "StdFocus..")

# Image Hover/Hotlinks options

Set by 'Option' or Property

- List View hover color control
  - Defines color of row mouse is hovering over
- List View Hotlink columns
  - Allows column to be identified as Hotlinks
  - Text is underscored
  - Application responsible for processing click

'OPTION' setting	Property	Description
StdLvueHoverBackClr	HoverBackColor	Background color for line mouse currently over
StdLvueHoverTextClr	HoverTextColor	Text color for line mouse currently over
StdLvueHotlinkClr	HotLinkColor	Text color for HOTLINK column (Default Blue)

# Additional Resources

The help link(s) below refer to the current on-line help pages. The functionality may have been further updated since the PxPlus 2018 (version 15) release.

- ['Picture' Mnemonic](#)
- [GRID Directive](#)
- [LIST\\_BOX Directive](#)
- [Line Pixels Property](#)
- [GRID Properties](#)
- [Properties](#)
- ['OPTION' Mnemonic](#)  
(GridAlignLines,  
RbtImage,RbtMarkSize,  
CbxImage,CbxMarkSize,  
ClrHighlight,ClrFocusBackClr,  
ClrHighlightText,  
StdFocusTextClr,  
StdLvueHoverBackClr,  
StdLvueHoverTextClr,  
StdLvueHotlinkClr)