

What's New in NOMADS 2019

PxPlus 2019 (v16)

Agenda

What's New in NOMADS 2019

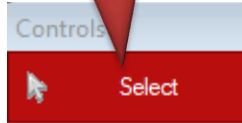
- NOMADS Designer & IDE
- Data Dictionary
- Shape Controls
- NOMADS Controls
- Themes & Visual Classes
- Report Writer

NOMADS DESIGNER & IDE

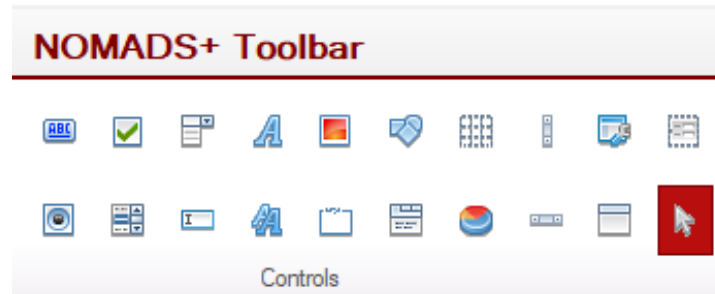
Pointer Tool on NOMADS+ Toolbar

NOMADS Designer & IDE

Pointer Tool
in Property
Sheets



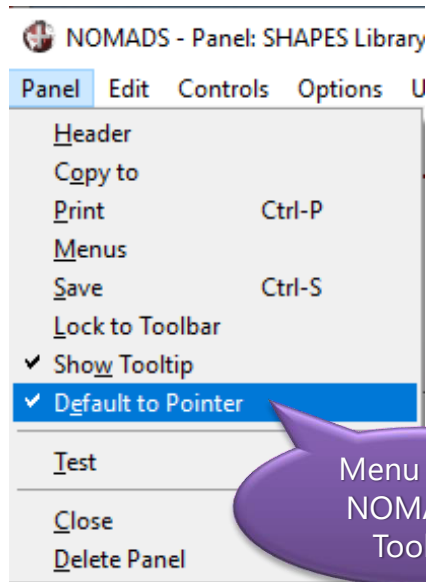
- Pointer Tool added to NOMADS+ Toolbar
- Previously existed in Property Sheets but not Folder Style or NOMADS+
- Used to select a single control or draw a selection box around multiple controls



New Pointer
Tool for
NOMADS+

Pointer Tool as Default Control

NOMADS Designer & IDE

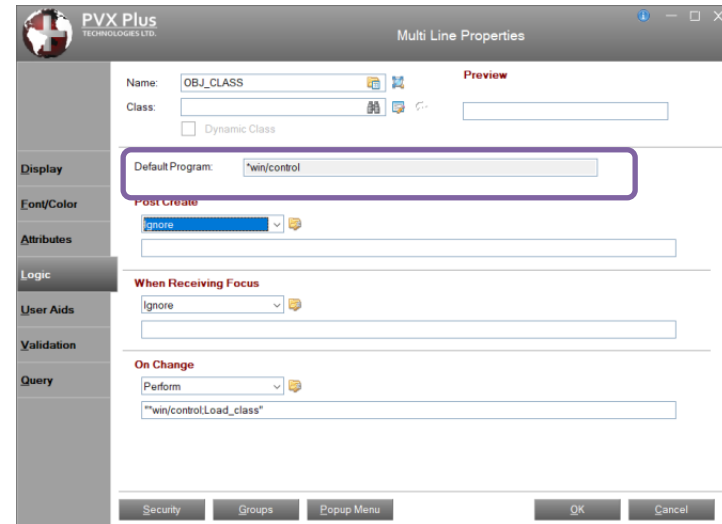
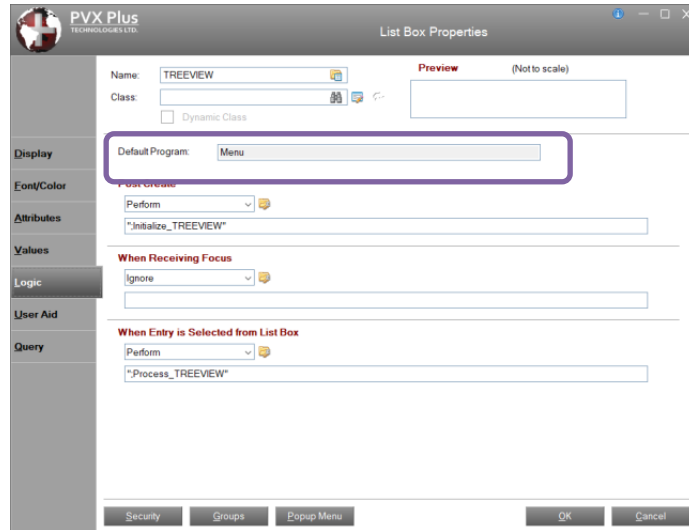


- Setting Default NOMADS+ Control
 - Pointer Tool is the default control type when using Property Sheets
 - Ability to set the new Pointer Tool as the default control when entering NOMADS+ (rather than Button)
 - Persists for future NOMADS+ design sessions

Default Program on Logic Tab

NOMADS Designer & IDE

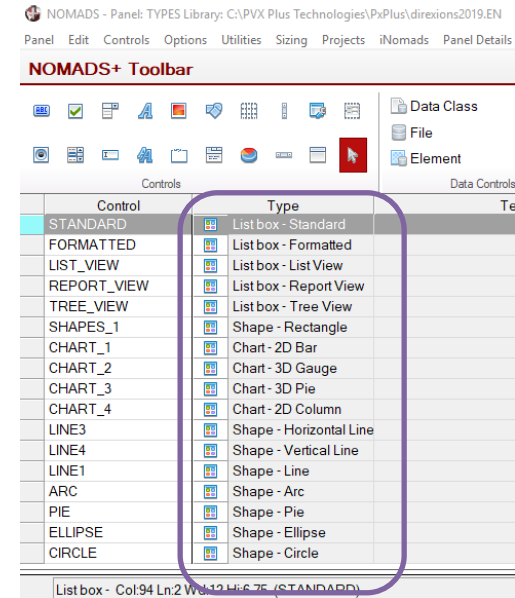
- Added **Default Program** on Logic Tab (NOMADS+ and Folder Style)
 - The default program defined on the header of the panel now displays (disabled) on the **Logic Tab** for all other control types



More Information in NOMADS+ Toolbar

NOMADS Designer & IDE

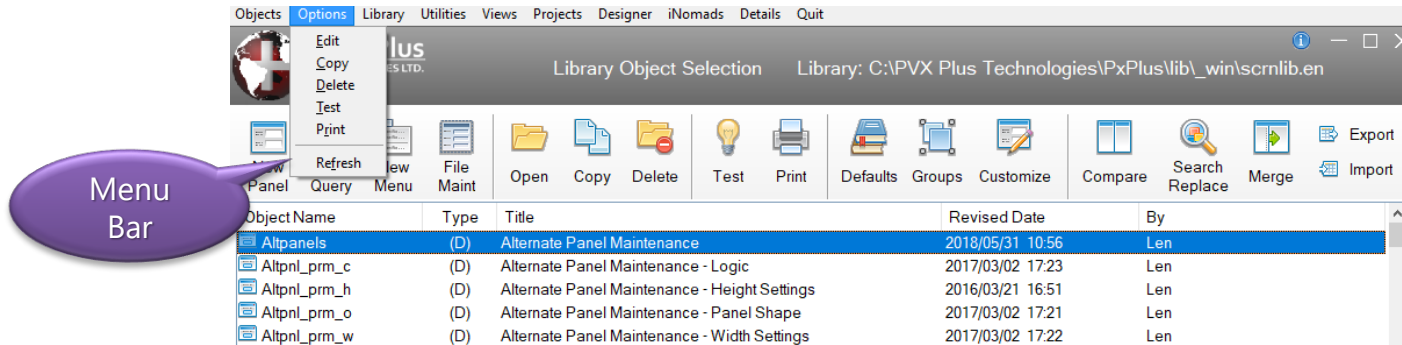
- More information displayed for certain control types:
 - Listboxes
 - Standard, Formatted, List View, Report View, Tree View
 - Charts
 - 2D, 3D
 - Bar, Pie, Gauge, Column, *etc.*
 - Shapes
 - Rectangle, Arc, Circle, Ellipse, Pie, Line, Vertical Line, Horizontal Line, Radius Arc, Radius Circle, Radius Pie, Poly Line, Polygon



Refresh of Library Object Selection Dialog

NOMADS Designer & IDE

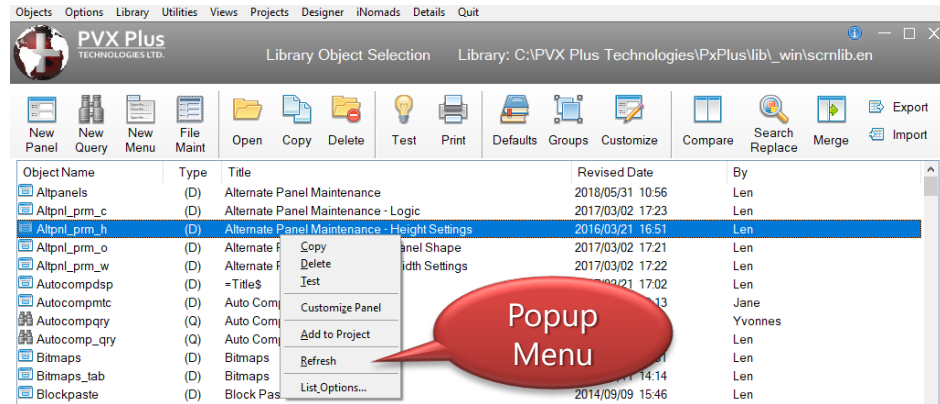
- Added ability to Refresh the main list box on the Library Object Selection Dialog
- Available from the **Menu Bar**



Refresh of Library Object Selection Dialog

NOMADS Designer & IDE

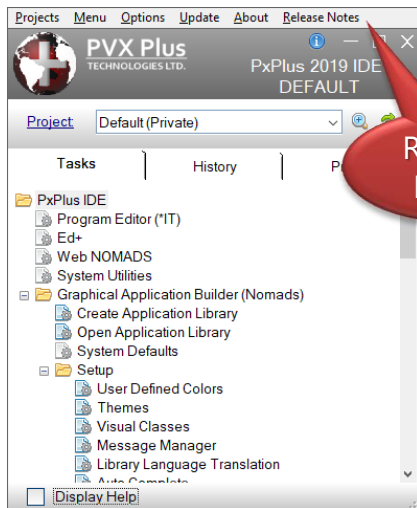
- Available also from the **Popup Menu** of the Listbox
- Added to all three possible views
 - Toolbar View (default)
 - Button View
 - Menubar View
- Listbox is repopulated in original sort sequence by **Object Name**



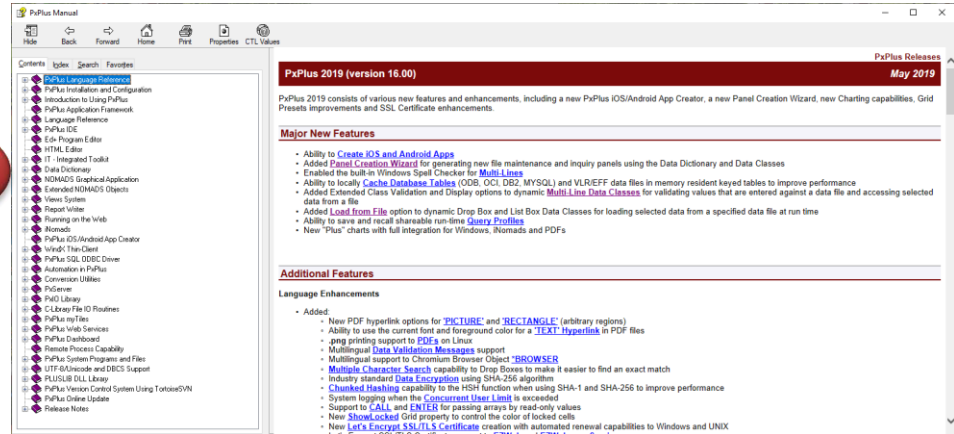
Release Notes on IDE Menu Bar

NOMADS Designer & IDE

- Added Release Notes on IDE menu bar
 - Quick access to the Release Notes (*from the PxPlus Help file*) that correspond with the current PxPlus installed version



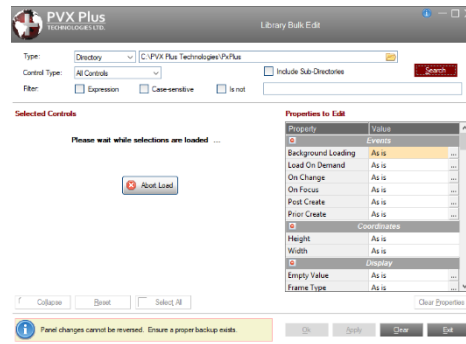
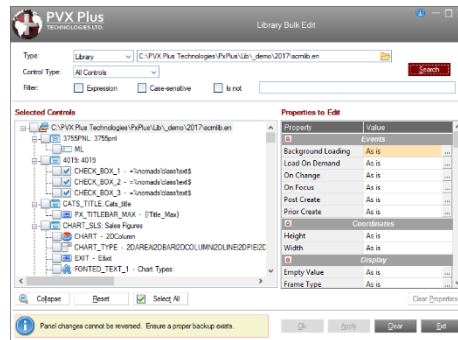
Release
Notes



Library Bulk Edit

NOMADS Designer & IDE

- Library Bulk Edit Utility
 - Introduced in PxPlus 2017 to allow bulk panel changes to be made over entire screen libraries or directories
 - Abort Load button added in PxPlus 2018.1
- PxPlus 2019
 - Dirty record checking
 - Data Classes

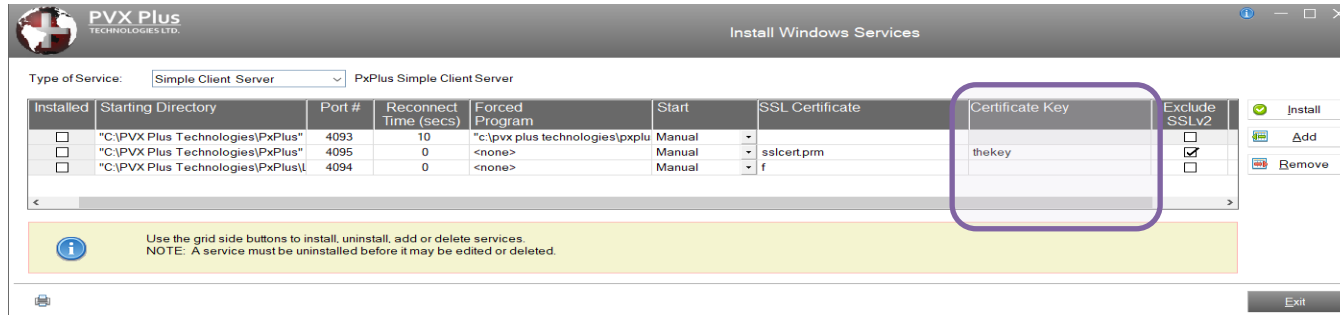


More details at
[Simplify Coding using Enhanced Data Classes PDF](#)

Install Windows Services Utility

NOMADS Designer & IDE

- Install Windows Services
 - Accessible from the IDE/Installation and Setup menu option
 - Added new columns when installing [EZWeb Server](#) or [Simple Client Server](#) to correspond with new security options



More details at the
[Data Protection & Lets
Encrypt SSL/TLS
Certificates and Using a
Relational Database PDF](#)

DATA DICTIONARY

Data Dictionary Maintenance Updates

Data Dictionary

- A new **Database Convert** button added to toolbar
 - Database Conversion Utility to assist in creating and populating SQL database tables from your Data Dictionary data files

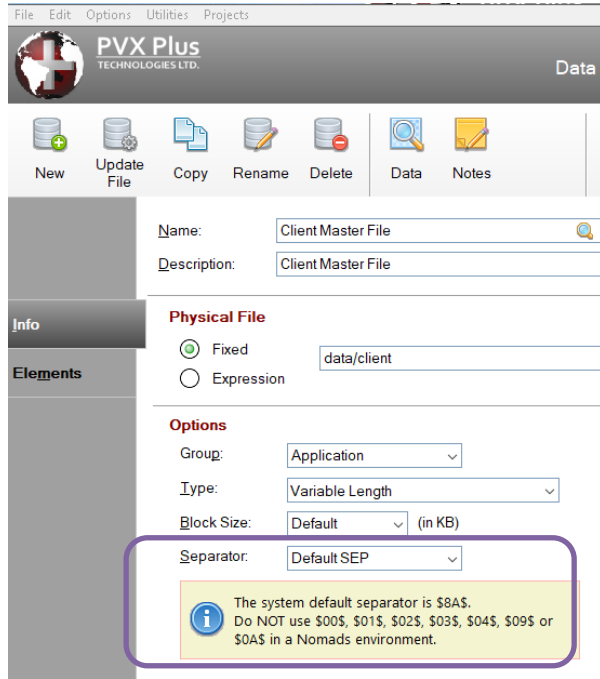


More details at the
**Data Protection & Using
a Relational Database PDF**

- Element Description Maintenance
 - Dirty record checking
 - Added First Element and Last Element browse buttons

Separator DropBox on Info Tab

Data Dictionary



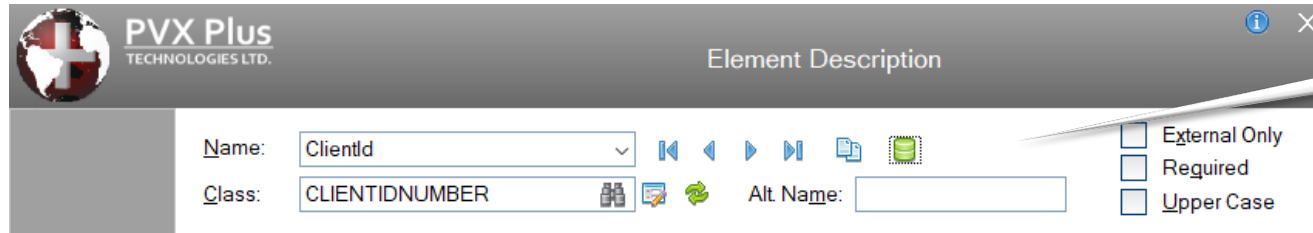
The screenshot shows the PVX Plus Data Dictionary interface. The 'Info' tab is selected, displaying details for a file named 'Client Master File'. The 'Separator' dropdown menu is set to 'Default SEP' and is highlighted with a red box. Below this, an information box provides a warning: 'The system default separator is \$8A\$. Do NOT use \$00\$, \$01\$, \$02\$, \$03\$, \$04\$, \$09\$ or \$0A\$ in a Nomads environment.'

- Changed Separator DropBox in PxPlus 2019 Update 1
- Added a new item **Default SEP**
 - If selected, file will be created with the system field separator based on 'FS' parameter (previously defaulted to **\$8A\$**)
- Also added an info box to suggest not using certain values in a NOMADS environment

Update of Global Dictionary Elements

Data Dictionary

- New dialog allows edits made to Global Dictionary elements to also be applied to data file elements that share the same element **Name** and **Type**
 - **Update Global Dictionary Elements in other Files** button available when editing a Global Dictionary element
 - Message box appears when saving changes to a Global Dictionary element and other elements with the same **Name** and **Type** exist in the Data Dictionary



PVX Plus
TECHNOLOGIES LTD.

Element Description

Name: ClientId

Class: CLIENTIDNUMBER

Alt Name:

☐ External Only
☐ Required
☐ Upper Case



Update Global Dictionary Elements Dialog

Data Dictionary

- Update All or Selective occurrences
- Updates the entire element record to match the Global element record (not just the latest changes)
- Does **NOT** update the physical file

Global Element:

Data Dictionary Name	Description	Length	Format Mask	Default Value	Validation	Print Format
Global Dictionary	Client ID	6	Delimited			000000

Elements in the Dictionary with the same Name and Type:

Data Dictionary Name	Description	Length	Format Mask	Default Value	Validation	Print Format
<input type="checkbox"/> Client Master File	Client ID	6	Delimited			000000
<input type="checkbox"/> Invoice Header	Client ID	6	Delimited			000000

☐ Select/Deselect all

Applying changes to the selected Elements will update the entire Element record to match the Global Dictionary Element record.

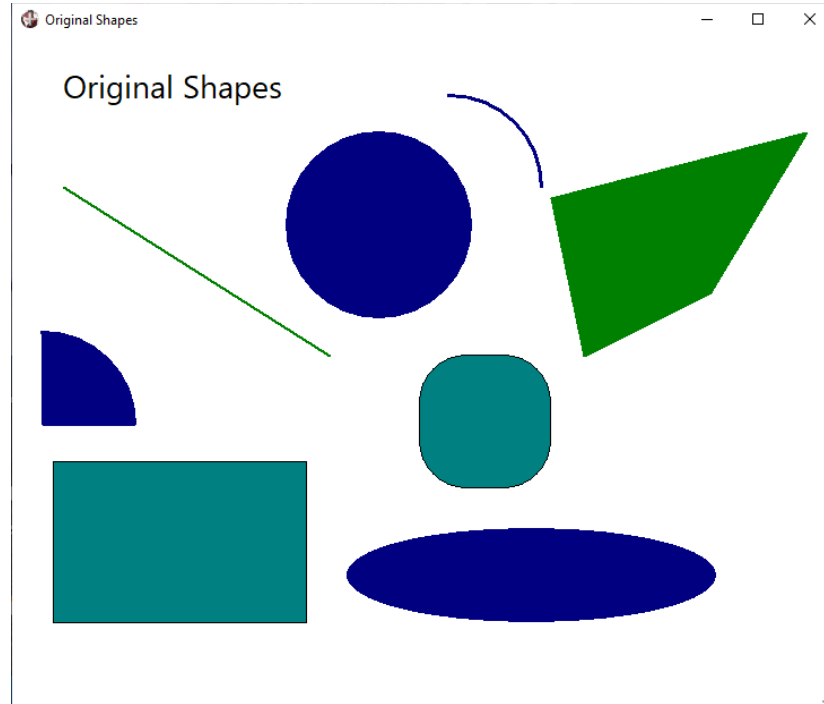
Apply Cancel

SHAPE CONTROLS

PxPlus 2018 Shape Controls

Shape Controls

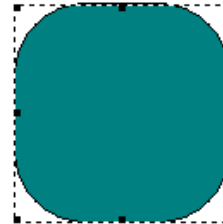
- Arc
- Circle (Ellipse)
- Line
- Pie
- Polygon
- Rectangle (Default)



Rectangle

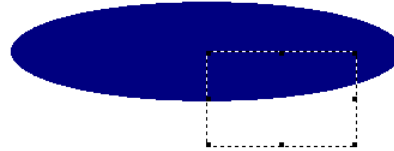
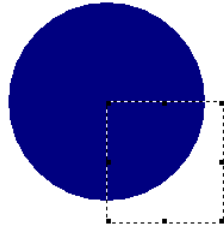
Shape Controls

- Rectangle Definition: (default shape)
 - Size defined by column, line, width and height of shape drawn in the designer
 - Enter **Pen Style**, **Width** and **Color** (border)
 - Enter **Fill Pattern** and **Fill Color(s)** (two colors if using a gradient)
 - Enter optional **Radius** (rounded corners)



Original Arc, Circle, Ellipse & Pie

Shape Controls

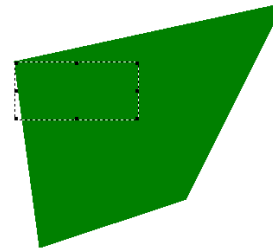
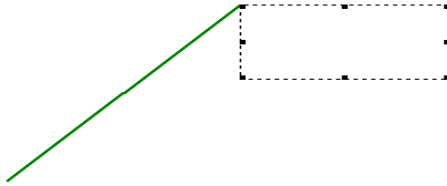


- Original Arc, Circle, Ellipse & Pie definitions:
 - Center defined by column and line of shape drawn in designer (top, left corner)
 - Enter **Pen Style**, **Width** and **Color** (border)
 - Enter **Fill Pattern** and **Fill Color(s)** if not Arc
 - Enter **Radius** and **Ratio** (ratio =1 for Circle)
 - Enter **Angles** if Arc or Pie

Original Line and Polygon

Shape Controls

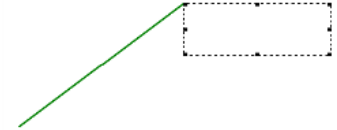
- Original Line and Polygon definitions:
 - Start position defined by column and line of shape drawn in designer (top, left corner)
 - Enter **Pen Style**, **Width** and **Color** (border)
 - Enter **Fill Pattern** and **Fill Colors** if Polygon
 - Enter **X/Y Values** in graphical units (multiple for polygon)



Problems with Original Shape Controls

Shape Controls

- Difficult to locate the shape control to edit for all shapes except Rectangles
- Difficult to determine X/Y Values for a Line or Polygon
 - Many use a frame 0 high or 0 wide instead of a horizontal/vertical line
- Hard to estimate the radius needed for the proper size
- Resizing
 - Impossible to resize Lines in *iNomads* because of graphical units in a browser environment
- Font settings with different aspect ratios will result in different locations for the X/Y graphical units used in Lines and Polygons



New Shape Controls for PxPlus 2019

Shape Controls

- Re-designed all shapes controls except Rectangles and Polygons
 - Consider using an image or bitmap rather than a polygon
- Kept old definitions for compatibility but renamed them
- Going forward - controls can use the new shape definitions
- Convert functionality
- Resizing logic makes more sense

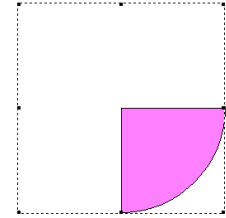
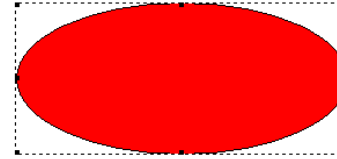
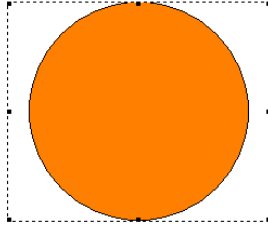
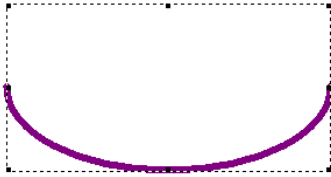
Shape Names

Shape Controls

PxPlus 2018 Shape	PxPlus 2019 Shape
Rectangle	Rectangle (<i>unchanged</i>)
Polygon	Polygon (<i>unchanged</i>)
Radius Arc	Arc
Radius Circle	Circle
Poly Line	Line
Radius Pie	Pie

New Arc, Circle, Ellipse & Pie

Shape Controls

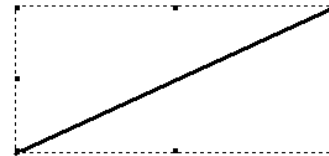
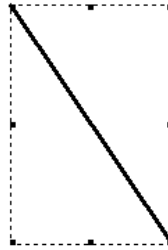
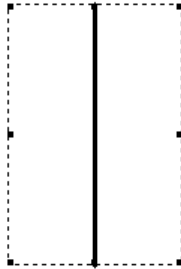
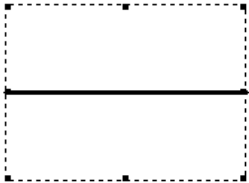


- New Arc, Circle, Ellipse & Pie definitions:
 - Size is defined by rectangle drawn (circle centered in smallest dimension)
 - Enter **Pen Style**, **Width** and **Color** (border)
 - Enter **Fill Pattern** and **Fill Color(s)** if not Arc
 - Enter **Angles** if Arc or Pie
 - Selection of **Circle** or **Ellipse**

New Lines

Shape Controls

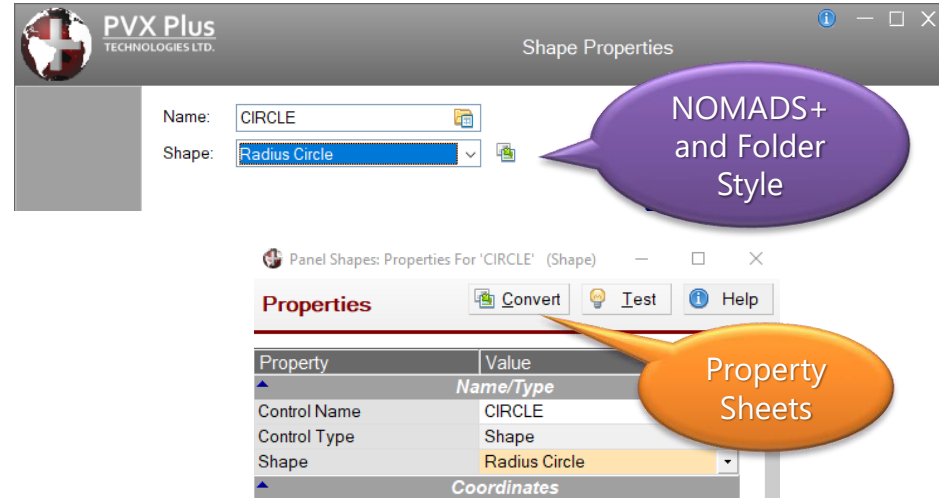
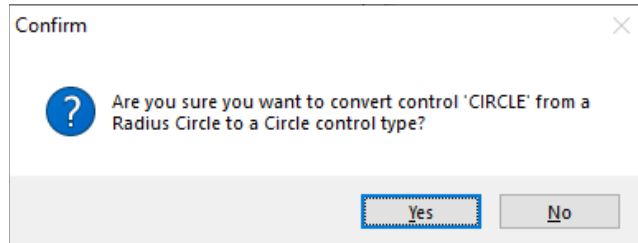
- New Line definition:
 - Size is defined by rectangle drawn
 - Enter **Pen Style**, **Width** and **Color**
 - Selection of **Line Type**
 - Horizontal / Vertical / Down / Up
 - Horizontal and Vertical lines are centered in shape drawn



Conversion of Shapes

Shape Controls

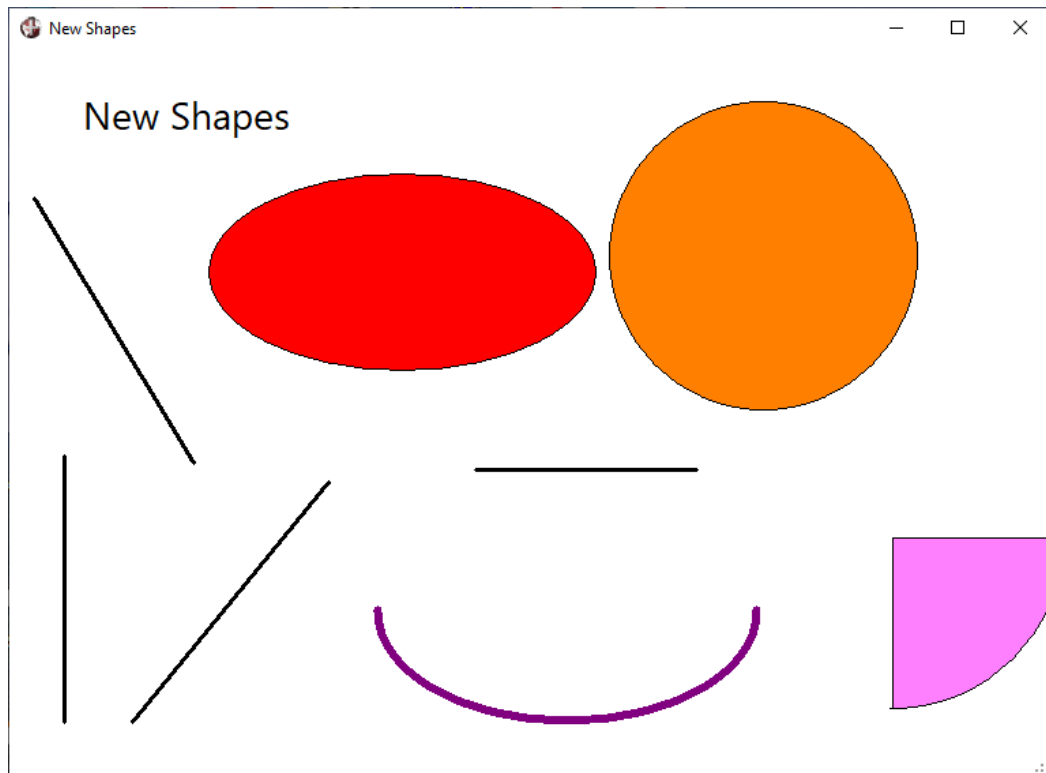
- Conversion button added when shape is Poly Line, Radius Arc, Radius Circle or Radius Pie



- Co-ordinates etc. adjusted so shape appears the same

New Shape Controls

Shape Controls



Advantages of New Shape Controls

Shape Controls

- Clicking on the shape will always select the control in the designer
- Definition and positioning of shape controls is simplified and more intuitive
- Shapes resize correctly in relation to other controls on the panel
- Lines can now also be resized in *iNomads*
- Fonts with differing aspect ratios will not affect the overall shape of the control rendered (no more graphical units)
- Can still use old controls if desired (Arc, Pie at edge of panel)

Sample Work Flow Chart

Shape Controls



NOMADS CONTROLS

Panels

Nomads Controls

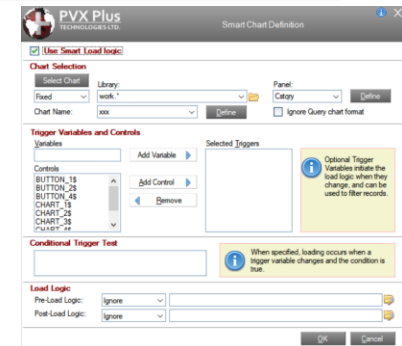
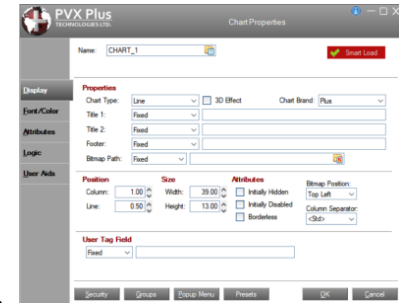
- Global setting to suppress persistence on panels with relative location settings:
 - Set %nomads'RelPnl_Suppress_Persistence
 - Settings:
 - 0 = Panel persistence is not suppressed (default)
 - 1 = Suppress panel persistence (location & size)
 - 2 = Suppress location persistence only (panel size persists)

Position

Relative

Column: 13

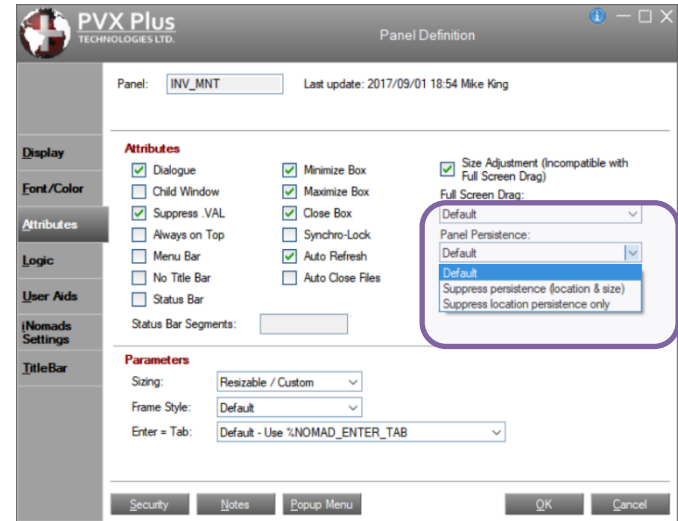
Line: 8



Panel Header

NOMADS Controls

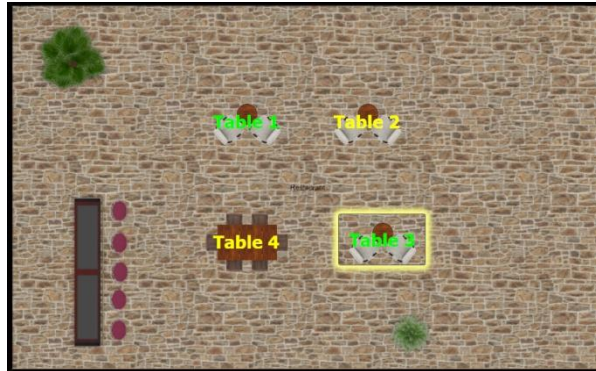
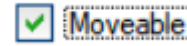
- Panel Header option to **suppress Panel Persistence** for panel
 - **Panel Persistence** option on Attributes tab
 - Settings:
 - Default (based on
 - `%nomads'Panel_Info_Prog$` and `%nomads'RelPnl_Suppress_Persistence`)
 - Suppress persistence (location & size)
 - Suppress location persistence only



Buttons

NOMADS Controls

- **Moveable** Attribute
 - Button can be moved by dragging it with the mouse
 - Relocation not persistent
 - i.e. Buttons will return to their original positions when the panel is next invoked or resized



More at *Spriten* up your Application PDF

Buttons, Checkboxes, Radio Buttons

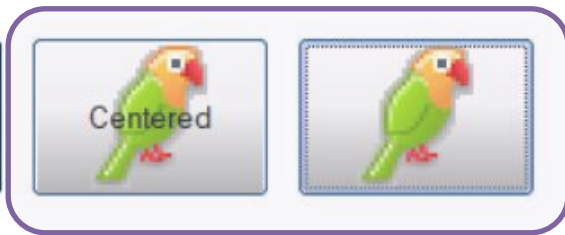
NOMADS Controls

- New **Center/Scale Bitmap Alignment** and **Scale Bitmap** options on the Display tab
 - Bitmap scaled and centered in button
 - Centered text overlays bitmap
 - '4D' mode only

Alignment: ☒ Scale bitmap



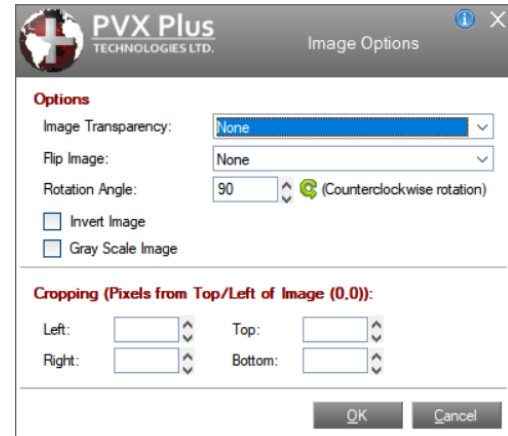
Top, Bottom and Center/Scale alignments and the Scale Bitmap option only work in 4D mode.



Buttons, Checkboxes, Radio Buttons

NOMADS Controls

- New **Bitmap Image** options:
 - Image Transparency
 - Flip Image - horizontally, vertically, both
 - Rotation Angle (0-360 degrees)
 - Invert Image
 - Gray Scale Image
 - Cropping

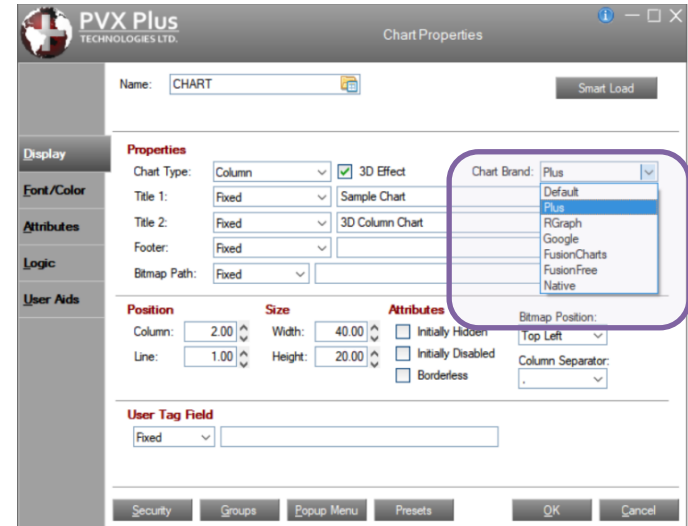


Note: Image Transparency and Cropping are not supported in *iNomads*

Charts

NOMADS Controls

- **Chart Brand** setting on Display tab
 - Override setting in %nomads'Chart\$
 - Settings:
 - Default (from %nomads'Chart\$)
 - Plus
 - RGraph
 - Google
 - FusionCharts
 - FusionFree
 - Native
- Added **iNomads Class** setting on Font/Color tab

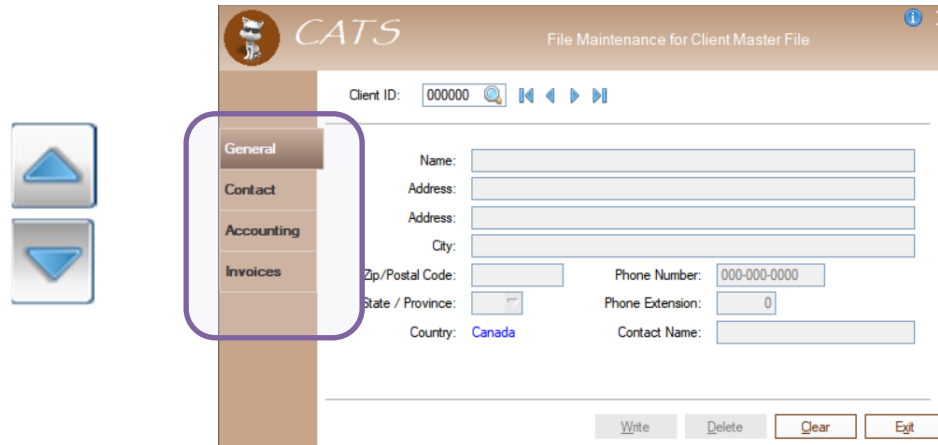


More information in the
Charting 101 and **Smart Charts** PDFs

Folders

NOMADS Controls

- Folder Navigation
 - Added support for PageUp / PageDown arrows to navigate through [SideBar](#) folders when focus is on the tab.



Grid

NOMADS Controls

- New Presets Properties:
 - **LockTop** – Number of rows at the top of the grid to be excluded from sorting
 - **ShowLocked** – Grid-level property
 - 0 = Color of locked cells does not change BackHilight colors
 - 1 = Locked cells have grayed background (default)
 - **Lock** – Option “2” – Locks the cell but allows input-style selection

Client ID	Name	Balance	Credit Limit	CR	Credit Used
032475	Brewster Lighting	2,126.60	1,000	Y	212.66%
033994	Jackson Formal Rentals	1,768.73	1,000	Y	176.87%
034538	Grayson Nursery	2,264.93	2,000	Y	113.25%
038024	Burleson Construction	3,334.91	1,000	Y	333.49%
039816	Williamson Roofing	1,663.93	1,000	Y	166.39%
041264	Lipscomb Securities	3,955.29	1,000	Y	395.53%
047847	Kimble Wedding Services	66.11	1,000	N	6.61%
065853	Wheeler Laundromat	2,143.33	1,000	Y	214.33%
067320	Kimble Snackbar	2,606.07	2,000	Y	130.3%
069944	Moore Seafood and Steaks				164.42%

'Lock=1
'ShowLocked=1

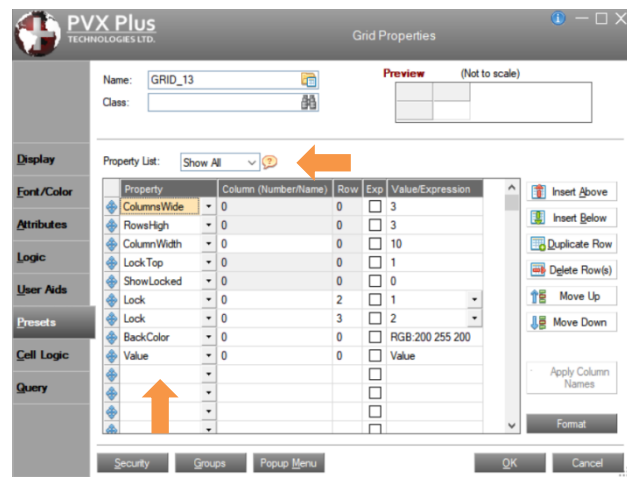
Client ID	Name	Balance	Credit Limit	CR	Credit Used
032475	Brewster Lighting	2,126.60	1,000	Y	212.66%
033994	Jackson Formal Rentals	1,768.73	1,000	Y	176.87%
034538	Grayson Nursery	2,264.93	2,000	Y	113.25%
038024	Burleson Construction	3,334.91	1,000	Y	333.49%
039816	Williamson Roofing	1,663.93	1,000	Y	166.39%
041264	Lipscomb Securities	3,955.29	1,000	Y	395.53%
047847	Kimble Wedding Services	66.11	1,000	N	6.61%
065853	Wheeler Laundromat	2,143.33	1,000	Y	214.33%
067320	Kimble Snackbar	2,606.07	2,000	Y	130.3%
069944	Moore Seafood and Steaks				164.42%

'Lock=2
'ShowLocked=0

Grid

NOMADS Controls

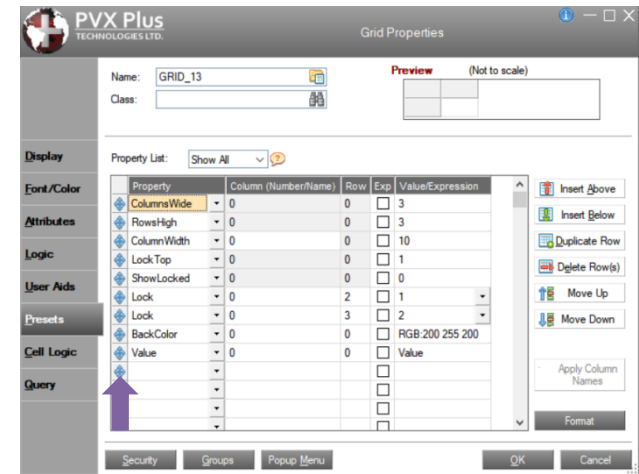
- New Grid Presets features:
 - Filter the **Property List** by property type:
 - Show All
 - General
 - Cell
 - Row
 - Column
 - Right-click **Property** selection by property category:
 - Contents
 - Display/Color
 - Formatting
 - Grid
 - Interface
 - Layout
 - Misc.



Grid

NOMADS Controls

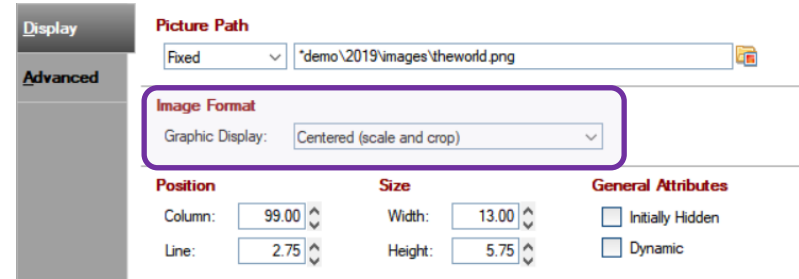
- New Grid Presets features:
 - Insert a new row above or below the current row
 - Create a duplicate of the current row and insert below
 - Rearrange rows using drag and drop
 - Replace column number settings with column names
 - New **Format** button to launch Grid Format Definition dialog



Images

NOMADS Controls

- New Graphic Display option
 - Centered (scale and crop)



Display

Advanced

Picture Path

Fixed *demo\2019\images\theworld.png

Image Format

Graphic Display: Centered (scale and crop)

Position

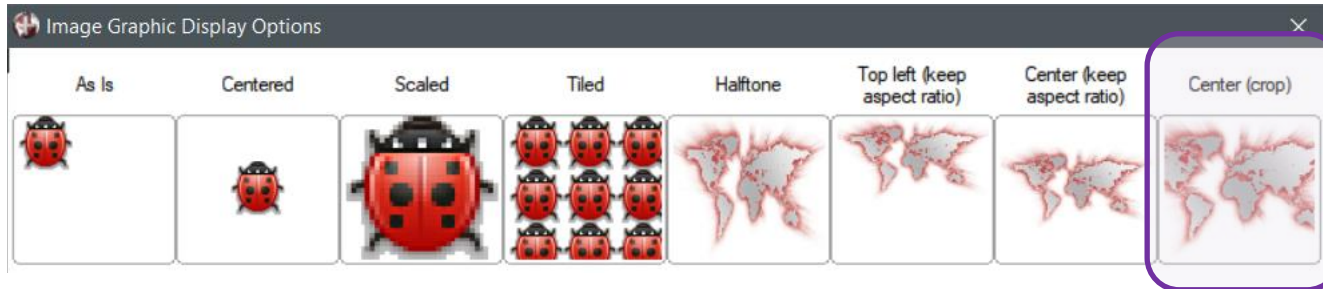
Column: 99.00
Line: 2.75

Size

Width: 13.00
Height: 5.75

General Attributes

☐ Initially Hidden
☐ Dynamic



Listboxes

NOMADS Controls

- New Attributes:
 - **Lock Top Rows**
 - Number of rows at the top of the Listbox to be excluded from sorting
 - **Center Text Vertically**
 - Select to center text vertically in the Listbox row when **Lines Per Row** is > 1
 - Text that exceeds the column width is truncated and an ellipsis (...) is displayed
 - When not selected (Default), text is aligned to the top of the Listbox row, and text that exceeds the column width is word wrapped

Centered			
Client ID	Name	City	Prov
032475	Brewster Lighting	Methlakahtla	BC
033994	Jackson Formal Re...	Langruth	MB
034538	Grayson Nursery	Reading	NS
038024	Burleson Constructi...	Elsanor	MB

Not Centered			
Client ID	Name	City	Prov
032475	Brewster Lighting	Methlakahtla	BC
033994	Jackson Formal Rentals	Langruth	MB
034538	Grayson Nursery	Reading	NS
038024	Burleson Construction	Elsanor	MB

Menu

NOMADS Controls

- **Delete** key enabled to delete items from menu contents
- Added **Merge-Jumpto** function to Item/Group definition
 - Process a concurrent panel
- Menu Item/Group/Link **Bitmaps** attribute assignment
 - Bitmap to appear to left of text
 - Can now assign Normal and Checked bitmaps as **expressions**

The screenshot shows the 'Item/Group' configuration panel in the NOMADS Controls interface. On the left, there are two tabs: 'Details' (selected) and 'Attributes'. The main area contains the following fields:

- Item:** A text input field containing '&5. Maintenance'.
- Function:** A dropdown menu with 'Merge-Jumpto' selected.
- Item State:** A dropdown menu with 'Show Item' selected.
- Expression:** A text input field containing '"cstmaint", "work"'. To its right is a checkbox labeled 'Include Line Separator (line appears below menu item)' which is currently unchecked.

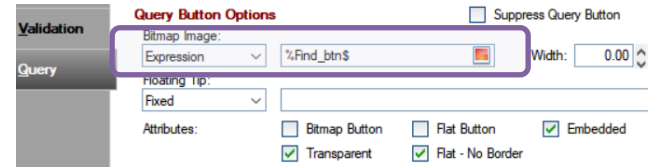
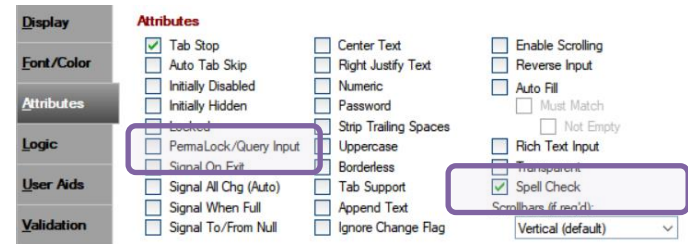
The screenshot shows the 'Bitmaps' configuration panel in the NOMADS Controls interface. On the left, there are two tabs: 'Details' (selected) and 'Attributes'. The main area is titled 'Bitmaps (Preview may not be to scale)' and contains the following fields:

- Normal:** A dropdown menu with 'Expression' selected, followed by a text input field containing 'mnu_unchecked\$' and a file icon button.
- Checked:** A dropdown menu with 'Expression' selected, followed by a text input field containing 'mnu_checked\$' and a file icon button.

Multi-Lines

- **Spell Check** attribute added
 - Enable spell checker for the Multi-Line
 - If *off*, the system-wide setting in ‘OPTION’(“AutoSpellCheck”) is used
- **Permalink** Multi-Line with query
 - Transfer Multi-Line hotkey to query button
- Query Bitmap assignment
 - Can now assign **Bitmap Image** as an **expression**
 - Also added to grid cell Query Preset definition

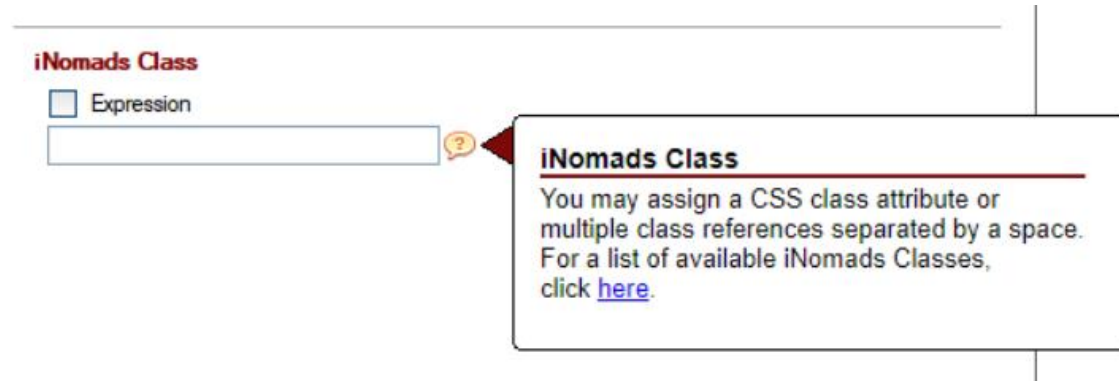
NOMADS Controls



Fixed Text and Scrollbars

NOMADS Controls

- Added *iNomads Class* setting for less common control types
 - Fixed Text – In Font/Color tab
 - Vertical & Horizontal Scrollbars – In Display tab



Extended Controls

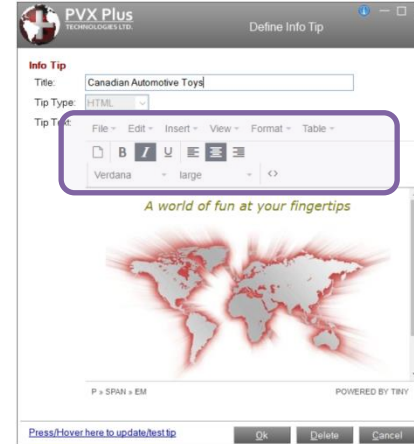
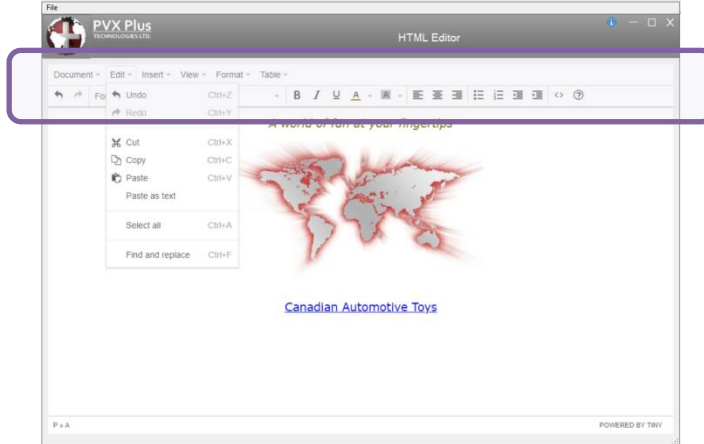
NOMADS Controls

- **TinyMCE HTML Editor**

- Updated to version 4.9.2
- Two new layouts using menu, buttons, and drop boxes

Modern (returns HTML code for full page)

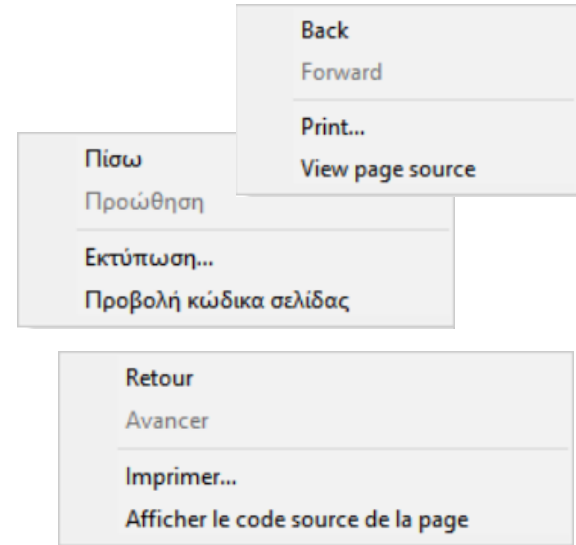
Narrow (returns HTML code snippet)



Extended Controls

- ***Browser**
 - **Multi-lingual support** added
 - Display websites, menus, etc. in a specified language
 - Based on the Windows user language
 - Override using:
 - PxPlus INI file [Config] section
 - BrowserLang=LanguageCode
 - **'OPTION'('BrowserLang',LanguageCode\$)**
 - Overrides INI settings
 - Set when browser first instantiated, cannot be reset

NOMADS Controls



Custom Title Bar Controls

NOMADS Controls

- Automatically set up logic for special title bar controls:

PX_TitleBar_SysMenu	(System menu button)
PX_TitleBar_Caption	(Panel caption)
PX_TitleBar_Min	(Panel minimize button)
PX_TitleBar_Max	(Panel maximize button)
PX_TitleBar_Close	(Panel close button)



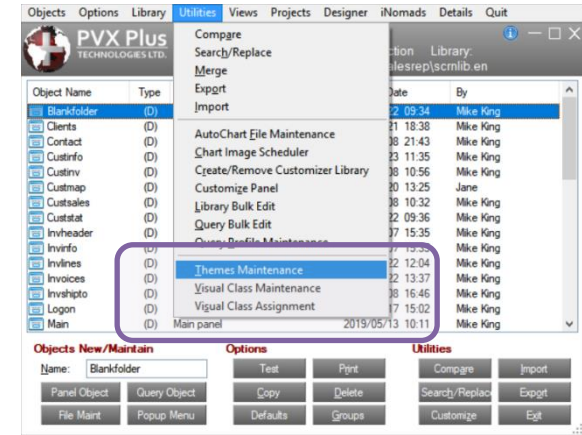
- Leave **Logic** settings blank, and NOMADS will handle the logic automatically

THEMES & VISUAL CLASSES

Theme & Visual Class Maintenance

Themes & Visual Classes

- **Easier Access to Maintenance Programs**
 - Access Themes and Visual Class Maintenance from the Utilities menu in Library Object Selection
 - Access Themes Maintenance from Font/Color tab of Library Defaults and the Panel Header
 - Access Visual Class Maintenance from panel control definitions (Buttons, Multi-Lines, etc.)



Focus Background & Text Color

Themes & Visual Classes

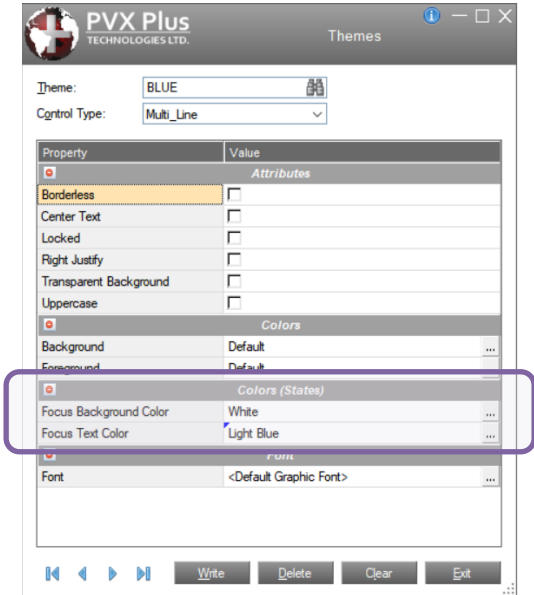
- Focus Background Color & Focus Text Color
 - Added to:
 - Listbox
 - Dropbox
 - Variable Listbox
 - Variable Dropbox
 - Multi-Line



Client Code 4566

Client Name Howard's Grocery

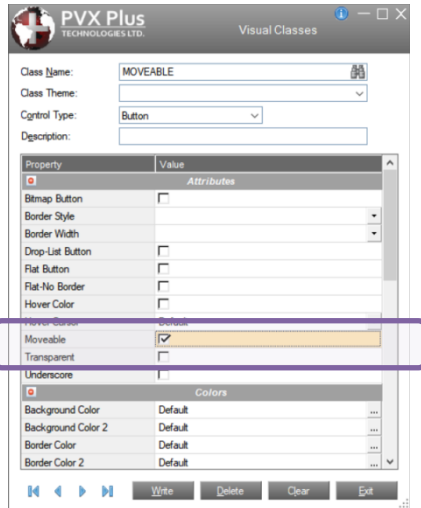
Region



Button and Listbox Properties

Themes & Visual Classes

- Button
 - Added **Moveable** attribute



- Listbox
 - Added **Column Size Lock** and **Center Text Vertically**

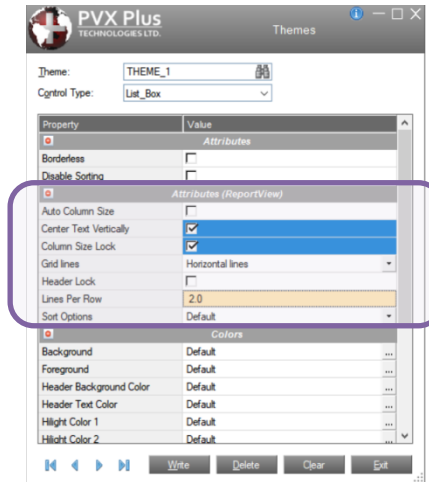
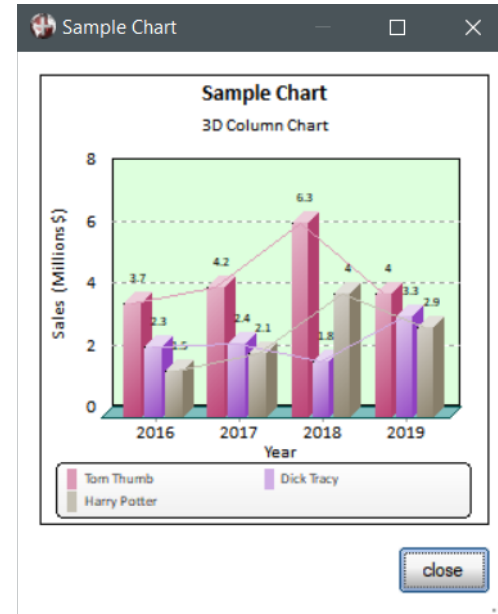


Chart Properties

Themes & Visual Classes

- New Chart Properties
 - Added for new **Plus** charts:
 - Bitmap
 - Connector Line
 - Legend Location
 - Pastel Palette (works for all charts)
 - Show Values
 - Default Color
 - Face Color (Back)
 - Face Color (Bottom)

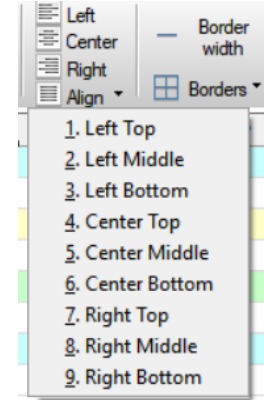


REPORT WRITER

Report Writer Font Alignment

Report Writer

- Added **Vertical Font Alignment**
 - Left Top, Left Middle, Left Bottom
 - Center Top, Center Middle, Center Bottom
 - Right Top, Right Middle, Right Bottom
- On Toolbar, Format & Popup menus, Bulk Edit Cell Format
- Defaults remain Left Top for text and Right Top for numeric values



Before:

<i>Product Code</i>	<i>Description</i>	<i>Price</i>	<i>Std Cost</i>

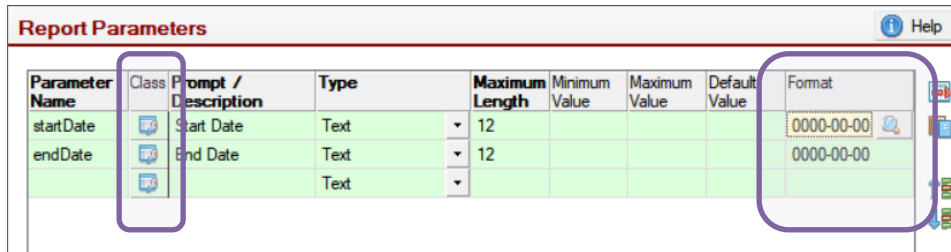
Now:

<i>Product Code</i>	<i>Description</i>	<i>Price</i>	<i>Std Cost</i>

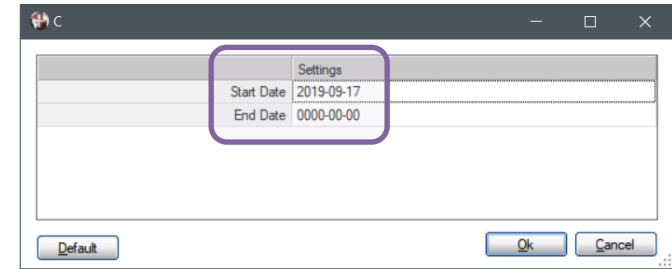
Report Writer Parameters

Report Writer

- Report Writer **Parameter Definition**
 - Added new parameter specifications used by the default parameter interface
 - Added **Format** column to specify an input format string for the parameter



Parameter Name	Class	Prompt / Description	Type	Maximum Length	Minimum Value	Maximum Value	Default Value	Format
startDate		Start Date	Text	12				0000-00-00
endDate		End Date	Text	12				0000-00-00
			Text					



Settings	
Start Date	2019-09-17
End Date	0000-00-00

Default Ok Cancel

- Added ability to specify a **Data Class** to be applied in the parameter interface

Details about using Data Classes in Report Parameters will be shown in the **Simplify Coding using Enhanced Data Classes** PDF

Additional Resources

- [PxPlus 2019 Release Notes](#)