Themes, Visual Classes and More

PxPlus 2017 (v14) and PxPlus 2018 (v15)

DireXions 2018

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Agenda

- User Interface Overview
- Themes
- Visual Classes
- Custom Title Bars



- Toolkit user interface continues to evolve
- PxPlus 2014 November 2014
- PxPlus 2016 May 2016
- PxPlus 2017 May 2017
- PxPlus 2018 May 2018
- Online Updates in between

PxPlus UI Before and After

PxPlus v11.50 – Feb 2014

🚱 Buttons —		
Name: BUTTON 1		Bullon Properties
Data Class: 2		Name: BUTTON_1 Preview Class: Image: Class: Image: Class:
Display Font/Clr Attributes Logic User Aid		Display Text
_ Text	Qk	Eont/Clr Button 1
Fixed V Button 1	<u>C</u> ancel	Attributes Bitmaps Image Transparency Normal:
		Logic Pushed:
Bitmaps Image Transparency:		User Aid Alignment Left ~
Normal: Browse		Top and Bottom alignment options only work in 4D mode.
Pushed: Browse Victor Tax and Pattern alignment		Position Size General Attributes
Alignment: Left options only work in 4D mode.		Column: 1.00 🗘 Width: 9.00 🗘 🔽 Tab Stop
Position Size General Attributes	Popup Menu	Line: 1.00 C Height 2.00 C Initially Disabled
Column: 1.00 C Width: 11.00 L Initially Disabled	Groups	
Line: 0.50 C Height: 3.25 C Initially Hidden	Security	Security Groups Popup Menu QK Cancel

Which one would you or your users prefer?

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PxPlus 2017 (v14.00) – May 2017

- PxPlus 2014
 - '4D' Visual effect
 - Flat buttons
 - Button state color enhancements
 - Side Bar Folders
 - Embedded buttons in multi-lines
 - Ribbon Bars
 - Notation boxes
 - White background on all screens

- New visuals/features
 - Button state colors, Side bar folders, embedded buttons, create visual classes, etc.



• An opportunity to brand your product



• New visuals/features



• New bitmaps introduced



- Consistent screen design
 - Control spacing
 - Button sizes
 - Button images
 - Naming
 - etc.
- De-cluttered and reorganized screens

 Looked for other opportunities involving big payback with little coding

🔮 Data Dictionary Maintenance — 🗆 🗙	File Fdit Ontions Utilities Projects
<u>File Edit Options Utilities</u>	
Nomads Data Dictionary	TECHNOLOGIES LTD. Data Dictionary Maintenance
Create and Maintain definitions for file and tables	
Table name: Client Master File	Num Update Care Decare statute Data Name SQL Define 10 Data File
1. General File Information 2. Data Elements	File Cop Rename Belete Data Notes Keyder Keys Pocedure Print Splitting
Description: Client Master File Group:	Name: Client Master File Image: Client Master File Description: Client Master File
C Physical File	Info Physical File
Fixed data/client Browse	Fixed data/client
C Expression	Elements O Expression
Coptions	Options
Type: Variable Length V Extended Records	Group: Application ~ Extended Records
Block Size: Default Compression Type: None	⊥ype: Variable Length Compression Type: None ✓
	Block Size: Default ~ Convert to Text for Version Control System
Separator. SSAS Convert to text for Version Control System	Separator. 38A\$ (Std) ~ Force data Validation on WRITE/UPDATE
Define Keys Define Voc. Update Hie Qose	
	i
Big impact, no) CODINA

- PxPlus 2016
 - Info Tips
 - HTML style info tips with embedded hyperlinks

Query View:	
Hybrid 🗸 🦻	The Drop Query displays data in a Report View list box directly on the current panel adjacent to its associated multi-line, emulating an enhanced drop box. The Drop Query behaviour and features are similar to the Query+ display with some exceptions.

- Themes
 - Renamed Templates to Themes
 - Enhanced more properties
 - More robust

- PxPlus 2016
 - *i*Nomads enhancements
 - *i*Nomads Setup Enhanced UI usability
 - Template designer wizard
 - Template designer maintenance
 - New templates
 - Hamburger style menus



- PxPlus 2016
 - *i*Nomads enhancements
 - Calendar and Calculator controls
 - iFrame popup style windows for subdialogs



• Web version of the toolkit (Web IDE)

2017

- PxPlus 2017
 - Custom title bars

🔮 Buttons		_ [×
🔮 Buttons			□ ×
Buttons			1 Help
PVX Plus		⊛ – □ ×	
TECHNOLOGIESLID.	Button Properties		

- Custom check boxes and radio buttons
- Fonted text alignment



- PxPlus 2017
 - New Attributes
 - ClrHighlight, ClrHighlightText
 - Sets background color and text for selected item in list box and drop box
 - GrayDisableBmp
 - Controls image display on disabled button





Themes & Visual Classes

Themes & Visual Classes

- Define display attributes for a group or individual controls
- Themes
 - Applied to all controls
 - Global level
- Visual Classes
 - Specific type controls
 - For example, tool bar buttons or text buttons
- NOMADS and *i*Nomads are supported

Themes & Visual Classes

Each type has its own utility to define
 Theme Visual Class

	P US ES LTD.	Themes "DireXions Demo - Not for res	− □ × sale"
<u>T</u> heme:	CATS	88	
C <u>o</u> ntrol Type:	Button	~	
Dranart/		Netro	
		Value	
Bitmon Button			_
Border Style		Solid	
Border Width		1	
Drop-List Button			-
Flat Button			
Flat-No Border			
Hover Color			
Hover Cursor		Default	•
Transparent			_
Underscore			
0		Colors	
Background Color		White	
Background Color 2		RGB:248 248 248	
Border Color		RGB:100 47 4	
Border Color 2		Default	
Foreground		RGB:100 47 4	
•		Colors (States)	
Active Background C	Color	RGB:253 220 193	
Active Background C	Color 2	Default	
Active Border Color		RGB:100 47 4	
Active Border Color	2	Default	
Active Text Color		RGB:100 47 4	🗸
IA A >		/rite <u>D</u> elete C <u>l</u> ear	<u>E</u> xit

Class <u>N</u> ame:	BITMAPBUTTON	₿ 6
Class Theme:		\checkmark
C <u>o</u> ntrol Type:	Button ~	ר
D <u>e</u> scription:	Bitmap buttons	
Property	Value	
•	Attributes	
Bitmap Button		
Border Style	Solid	•
Border Width	1	•
Drop-List Button		
Flat Button		
Flat-No Border		
Hover Color		
Hover Cursor	Default	•
Transparent		
Underscore		
•	Colors	
Background Color	Default	
Background Color 2	Default	
Border Color	Default	
Border Color 2	Default	
Foreground	Default	
•	Colors (States)	
Active Background Color	Default	
Active Background Color:	2 Default	

Themes & Visual Classes

- Properties defined by control type that has its own set of unique properties
 - Color (States)
 - Font
 - Other attributes
- A theme can be a collection of control types or a single control type
- Multiple themes and visual classes

Themes Setup and Hierarchy Nomads

Set NOMADS Property %Nomads'Theme\$="ocean"

Defined in Font/Clr tab - Fixed value or Expression

Defined in Font/Clr Tab - Fixed Value or Expression

Set NOMADS Property



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2017

Themes Setup and Hierarchy

iNomads



Set in the Overrides Tab

Set NOMADS Property



- Visual classes are applied to individual controls on a panel
- Visual class will override any theme defined
- A theme can be assigned to a visual class
- Why?
 - May want a different look
 - For example: Web IDE buttons

Applying Visual Classes

• Applying a visual class

Utilities	Where	Description
Panel Designer	Panel	Apply to an individual control
Panel Bulk Edit	Panel Designer	Apply to more than one control in the current panel
Visual Class Assignment by Panel	Panel Designer	Apply to controls for current panel by Visual Class
Visual Class Assignment by Library	Library Object Selection	Apply to controls for a specific library and panel by Visual Class
Library Bulk Edit	IDE/Library Object Selection	Apply to controls in multiple panels either in a single library or in multiple libraries within a specified directory

- Started using visual classes in PxPlus 2014
- Created visual classes for different button types

Clear

le ⊂

Close

> Add

- Buttons with text
- Buttons with images
- Buttons with images and text
- '*Buttontext' visual class created
- Applied to all buttons with text in toolkit



• All PxPlus pre-defined classes start with "*"

Buttons

• Attributes section

	Plus es ltd.	Visual Cla	 		
Class <u>N</u> ame:	BUTTONTEXT		静		
Class Theme:			~		
Control Type:	Button	\sim			
D <u>e</u> scription:	Text Buttons				
Property	Value				
Bitman Button		lifes			
Border Style	Solid			-	
Border Width	1			•	
Drop-List Button				_	
Flat Button					Attributor
Flat-No Border					Allibules
Hover Color					
Hover Cursor	Default			-	
Transparent					
Underscore					
•	Colo	urs			

Buttons

• Colors & Colors (States) sections

	Colors	
Background Color	RGB:150 150 150	 Background Color
Background Color 2	RGB:90 90 90	 Background Color
Border Color	RGB:180 180 180	 and
Border Color 2	RGB:90 90 90	
Foreground	White	 Foreground Text
2	Colors (States)	
Active Background Color	RGB:183 14 14	
Active Background Color 2	Default	 <u>W</u> rite <u>D</u> elete <u>C</u> lear
Active Border Color	RGB:183 14 14	
Active Border Color 2	Default	
Active Text Color	RGB:219 219 219	
Disable Background Color	RGB:219 219 219	
Disable Background Color 2	Default	
Disable Border Color	RGB:219 219 219	
Disable Border Color 2	Default	
Disable Text Color	Dark Gray	
Focus Background Color	Dark Red	
Focus Background Color 2	Default	
Focus Border Color	Dark Red	
Focus Border Color 2	Default	
Focus Text Color	Default	
Hover Background Color	Dark Red	
Hover Background Color 2	Default	
Hover Border Color	Dark Red	
Hover Border Color 2	Default	
Hover Text Color	Default	
•	Font	

Buttons

• Colors & Colors (States) sections

•	Colors		
Background Color	RGB:150 150 150		
Background Color 2	RGB:90 90 90		
Border Color	RGB:180 180 180		
Border Color 2	RGB:90 90 90		
Foreground	White		
0	Colors (States)		
Active Background Color	RGB:183 14 14		
Active Background Color 2	Default		Active
Active Border Color	RGB:183 14 14		_
Active Border Color 2	Default	 B	utton Down
Active Text Color	RGB:219 219 219		
Disable Background Color	RGB:219 219 219		
Disable Background Color 2	Default	 Write	elete Clear
Disable Border Color	RGB:219 219 219		
Disable Border Color 2	Default		
Disable Text Color	Dark Gray		
Focus Background Color	Dark Red		
Focus Background Color 2	Default		
Focus Border Color	Dark Red		
Focus Border Color 2	Default		
Focus Text Color	Default		
Hover Background Color	Dark Red		
Hover Background Color 2	Default		
Hover Border Color	Dark Red		
Hover Border Color 2	Default		
Hover Text Color	Default		
•	Font		

Visual Classes Buttons

• Colors & Colors (States) sections

•	Colors			
Background Color	RGB:150 150 150			
Background Color 2	RGB:90 90 90			
Border Color	RGB:180 180 180			
Border Color 2	RGB:90 90 90			
Foreground	White			
0	Colors (States)			
Active Background Color	RGB:183 14 14			
Active Background Color 2	Default			
Active Border Color	RGB:183 14 14			
Active Border Color 2	Default			
Active Text Color	RGB:219 219 219			
Disable Background Color	RGB:219 219 219			
Disable Background Color 2	Default		[Disabl
Disable Border Color	RGB:219 219 219			
Disable Border Color 2	Default		Button L	Disable
Disable Text Color	Dark Gray			
Focus Background Color	Dark Red			
Focus Background Color 2	Default	 Write	Delete	Cle
Focus Border Color	Dark Red	 		
Focus Border Color 2	Default			
Focus Text Color	Default			
Hover Background Color	Dark Red			
Hover Background Color 2	Default			
Hover Border Color	Dark Red			
Hover Border Color 2	Default			
Hover Text Color	Default			
•	Font			

Visual Classes Buttons

• Colors (States) section

0	Colors		
Background Color	RGB:150 150 150		
Background Color 2	RGB:90 90 90		
Border Color	RGB:180 180 180		
Border Color 2	RGB:90 90 90		
Foreground	White		
0	Colors (States)		
Active Background Color	RGB:183 14 14		
Active Background Color 2	Default		
Active Border Color	RGB:183 14 14		
Active Border Color 2	Default		
Active Text Color	RGB:219 219 219		
Disable Background Color	RGB:219 219 219		
Disable Background Color 2	Default		
Disable Border Color	RGB:219 219 219		
Disable Border Color 2	Default	 <u>W</u> rite <u>D</u> elete	<u> </u>
Disable Text Color	Dark Gray		
Focus Background Color	Dark Red		
Focus Background Color 2	Default		Foc
Focus Border Color	Dark Red		_
Focus Border Color 2	Default	 Button Ha	as Foc
Focus Text Color	Default		
Hover Background Color	Dark Red		
Hover Background Color 2	Default		
Hover Border Color	Dark Red		
D 1 0 1 0			
Hover Border Color 2	Default		

Visual Classes Buttons

• Colors & Colors (States) sections

•	Colors	
Background Color	RGB:150 150 150	
Background Color 2	RGB:90 90 90	
Border Color	RGB:180 180 180	
Border Color 2	RGB:90 90 90	
Foreground	White	
0	Colors (States)	
Active Background Color	RGB:183 14 14	
Active Background Color 2	Default	
Active Border Color	RGB:183 14 14	
Active Border Color 2	Default	
Active Text Color	RGB:219 219 219	
Disable Background Color	RGB:219 219 219	
Disable Background Color 2	Default	
Disable Border Color	RGB:219 219 219	
Disable Border Color 2	Default	
Disable Text Color	Dark Gray	
Focus Background Color	Dark Red	
Focus Background Color 2	Default	
Focus Border Color	Dark Red	
Focus Border Color 2	Default	
Focus Text Color	Default	
Hover Background Color	Dark Red	
Hover Background Color 2	Default	
Hover Border Color	Dark Red	
Hover Border Color 2	Default	
Hover Text Color	Default	
0	Font	

With Themes

- Change button look for Web IDE
 - Desktop <u>QK</u> <u>Cancel</u> Browser <u>QK</u> <u>Cancel</u>
- Created new "*Buttontext" visual class with a theme

Desktop

Class <u>N</u> ame:	BUTTONTEXT	ê B
Class Theme:		~
Control Type:	Button ~	
Description:	Text Buttons	

Property	Value		^		
•	Attributes				
•	Colors		1		
Background Color	RGB:150 150 150		L		
Background Color 2	RGB:90 90 90		L		
Border Color	RGB:180 180 180		L		
Border Color 2	RGB:90 90 90		L		
Foreground	White		Е		
•	Colors (States)				
Active Background Color	RGB:183 14 14				

Browser

	-				
Class <u>N</u> ame:	BUTTO	ee.			
Class Theme:	WEB	WEB			
Control Type:	Button	~			
Description:	Text Bu	ttons			
Property		Value			
•		Attributes			
•		Colors			
Background Color		White			
Background Color 2		RGB:245 245 245			
Border Color		Dark Red			
Border Color 2		Default			
Foreground		Dark Red			
•		Colors (States)			
Active Background Color		RGB:183 14 14			

Visual Classes Web IDE

PVX Plus Technologies ltd.	Template Configuration M	 X aintenance
These are the temp	plate configuration settings which lisplay and formatting for the temp	are used to control the plate.
General Sizing Overrides ChkBox	Lists Folders Frames Text L	ayout Tweaks HTML Misc
Colors and Font settings		
Use application defined font information	vhen displaying text.	
Use application defined background col	ors when displaying controls/text.	
Use application defined text colors when application defined color.	displaying controls. Simple text always uses	
Style overrides		
Include all static application defined imag Dynamic images will be included.	ges. Style sheets will provide images.	
Force all Image-only buttons to be 'Flat' (no visible button image only).	
How to handle list view alternate highlight	ing.	Ignore ~
Use Enhanced tooltips for all TIPs.		
Assign a Theme		web
		<u>OK</u> ancel

- Template Configuration
 Maintenance
- Assign a theme

Themes/Visual Classes Recap

Themes

- Applied to all controls
- Defined at a higher level
- Applied system wide, by library, by panel, *i*Nomads template

Visual Classes

- Specific control
- Applied in panel designer or via utilities
- Override Themes

Themes/Visual Class Hierarchy

• Library with three panels

🔮 Panel A "DireXions Demo - N 🗙			🔮 Panel B "DireXions Demo - N 🗙			🔮 Panel C "DireXions Demo - N 🗙		
Field			Field			Field		
Button 1	Button 2		Button 1	Button 2		Button 1	Button 2	

- Create a theme for buttons and apply theme to the library
- Create visual class for buttons and apply visual class to Button 2 on panel B

Themes / Visual Classes List Boxes

• New For PxPlus 2018

	Control Type: List_Box	~		2018
	Property	Value	^	
	0	Attributes		
	Borderless			
-	Disable Sorting		_	
	Att	tributes (ReportView)		
	Auto Column Size			
	Column Size Lock			
	Grid lines	No lines	-	Report View
	Header Lock			
	Lines Per Row	1.0		
	Sort Options	Default	-	
L	•	Coloro	_	
	Background	Default		
	Foreground	Default		
	Header Background Color	Default		
	Header Text Color	Default		
	Hilight Color 1	Default		
_	Hilight Color 2	Default		
	Hotlink Color	Default		Additional Color
	•	Colors (States)		Additional Color
	Hover Background Color	Default		Attributes
L		Font		
	Font	<default font="" graphic=""></default>	🗸	

Themes / Visual Classes Grids

• New For PxPlus 2018

Control Type: Grid	~			
Property	Value		^	
	Attributes			
Auto Track	Default	-		
Borderless				
Enter Mode	Default	-		Now Attributos
Grid Auto Column Size	As is	-		New Altributes
Grid lines	Default	-		
Tab Mode	Default	-		
	Colors			
Background	Default			
Current Cell Color	Default			
Fill Color				
Foreground	Default			Additional Color
Grid Hilight Color 1	Default			
Grid Hilight Color 2	Default			Attributes
Header Background Color	Default			
Header Text Color	Default			
Track Color	Default			
	Fort			
Font	<default font="" graphic=""></default>		~	

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Custom Title Bars

Custom Title Bars



- Introduced in PxPlus 2017 NOMADS only
- Design and create your own title bar
- Brand your application
- Can replace standard Windows title bar
- Custom Title bar is like an embedded panel
- Add virtually any type of control
- Automatically added to all dialog panels at run time
 - No additional programming required
 - No panel changes required
 - Does not change the functionality of the panel
- Turns on Full Screen Dragging

Creating a Custom Title Bar

• Before (with Windows title bar)



• After (without Windows title bar)



Creating a Custom Title Bar

- Create a dialog panel
- Set resizing to resizable/custom
- Set the Frame Style
 - Default/Caption displays Windows title bar
 - No Caption no Windows title bar
 - Menu bar will be on top
- Add the min, max, close buttons, if needed
- Add a fonted text control for caption
 - Panel title will be used
- Add other controls as needed
 - Be sure to use unique names
- Apply system wide, by library, by panel

Custom Title Bars Setup and Hierarchy



Set NOMADS Property %NOMADS'TitleBar\$="mypanel,mylib"

Defined in Titlebar tab

- Default, None, <u>Titlebar</u>,
- <u>Library and Pane</u>l

Defined in Titlebar Tab

- Default, None, <u>Titlebar</u>
- <u>Library and Panel</u>



Custom Title Bars Setup

- Custom title bars will **not** be displayed when:
 - Defined as widget
 - Auto-scroll resizing set
 - Concurrent windows
 - Not wide enough to display the custom title bar
 - Windows OS dialogs (Get file, Printer select, ...)
 - Non-NOMADS windows
- Windows title bar will be be displayed instead

Creating a Custom Title Bar

Create the title bar as you would a dialog or embedded panel



• Stretches to match panel width

Creating a Custom Title Bar Required Control Names

Control Name	Control Type	On Change Logic Perform *plus/winutl/control.lgc	Description
Px_TitleBar_Caption	Fonted Text	N/A	Automatically sets and updates the panel caption using the panel title
Px_TitleBar_Close	Button	Close_Panel	Panel Close button
Px_TitleBar_Max	Button	Maximize_Restore_Panel	Maximize/Restore button. Unlike the standard Windows button that changes images based on the window state, this button supports only one image
Px_TitleBar_Min	Button	Minimize_Panel	Panel Minimize button
Px_TitleBar_SysMenu	Button	System_Menu	System Menu button. The system menu consists of the <i>Restore/Move/Size/Minimize/Maximize/Close</i> options that are usually associated with the Application icon in the upper left corner of the standard Windows title bar

Recap

- Numerous options to improve application's User Interface
- Simple changes can make a huge impact
- Start off small, no need to go all in
- Goal:

Keep end-users happy

- Shared how we used PxPlus to update its UI
 - Examples & how to tips



...some ideas for your application

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.

- <u>Creating a theme</u>
- <u>Applying a theme</u>
- Adding a theme to iNomads
- <u>Creating a visual class</u>
- Applying a visual class
- <u>Creating a custom title bar</u>
- Using library defaults
- <u>Using panel headers</u>
- Using library bulk edit