

nxyView

INHERITS FROM	View: Responder : Object
DECLARED IN	NXYView.h

CLASS DESCRIPTION

nxyView is the primary class of the nxyPalette, a plotting palette which may be used from Interface Builder. nxyPalette is based on the 2D plotting package *nxpplot* written by Tom Pulliam and Dennis Jespersen. By loading nxyPalette into Interface Builder, an instance of nxyView may be dragged from the palette into the user's application. Parameters for the view may set from its Inspector from within IB. The view should be connected to an instance of the user's application using the id **nxyView**. Data may be passed to the view for plotting using a (NXStream) stream. The user's application may be compiled by adding either all the appropriate source modules (NXYView.m/h, Plot.m/h, auxil.m, defs.h, title.psw) to the Project, or by adding the library of compiled source, libnxyPalette.a (which should be installed in some suitable directory such as /usr/local/lib), and the include files NXYView.h and Plot.h to the Project. Most of the actual work in generating the plot is done by Plot.m. See the example MyPlotter and the source code for more details.

INSTANCE VARIABLES

<i>Inherited from Object</i>	Class	isa;
<i>Declared in NXYView</i>	id	plotParam

	id	plotInspectorPanel
	id	delegate
plotParam	id of the instance of Plot class that does most of the calculations	
plotInspectorPanel	id of the IB Inspector panel for this palette	

## METHOD TYPES

Methods for setting parameter from the Inspector

```

-setGrid:(int)grid_state
- setBorder:(int)border_state
-(int)gridState
-(int)borderState
-setAutoMaxMinState:(int)state
-(int)autoMaxMinState
-setAutoPaperState:(int)state
-(int)autoPaperState
-setXLinLogState:(int)state
-(int)xLinLogState
-setYLinLogState:(int)state
-(int)yLinLogState
-setMainTitle:(const char *)mainTITLE
-setXaxisLabel:(const char *)xAxisLabel
-setYaxisLabel:(const char *)yAxisLabel
-(const char *)mainTitle
-(const char *)xaxisLabel
-(const char *)yaxisLabel
-setXincValue:
-setXminValue:
-setXmaxValue:
-setYincValue:
-setYminValue:

```

- setYmaxValue:
- (float)xIncValue
- (float)xMinValue
- (float)xMaxValue
- (float)yIncValue
- (float)yMinValue
- (float)yMaxValue
- setLogoFlag:(int)state;
- (int)logoFlag;
- copyToPasteboard:sender;

## Drawing methods

- drawSelf:

- initWithFrame:

- clear:

- initPlot:

## Printing

- doPrinting:

## Saving to PS

- saveEPS:

## Copying to pasteboard

- copyToPasteboard:

## Setting the delegate

- setDelegate:

## Archiving

- read:

Reading data and drawing

- write:
- clearNXYView:
- plotDataFromStream:

## METHOD USED BY DELEGATE

Reading in data from a stream      - nxyView:sender    provideDataStream:

## INSTANCE METHODS AVAILABLE TO THE USER

### **clear**

- **clear:sender**

Used to clear the entire plot area. Should not be called by the user, instead use -clearNXYView.  
See also: - **clearNXYView:sender**

### **clearNXYView**

- **clearNXYView:sender**

Clear the plot in the view by resetting the min/max values to zero. Does not remove the axis labels or title.  
See also: - **plotDataFromStream:sender**

### **copyToPasteboard**

- **copyToPasteboard:sender**

Copies the contents of NXYView (with a bounding box) into the NeXT pasteboard, which may then be pasted into other NeXT applications.

### **doPrinting**

- **doPrinting:sender**

Sends the view to the printer via the standard NeXT print object. Prints only the plot and (if invoked) its border.

### **nxyView:sender provideDataStream**

- **nxyView:sender provideDataStream:(NXStream)dataStream**

Plots two or more columns of data in the view from a stream. The user should write the data to a (NXStream)stream then make an object ("Controller") which is the delegate of the view and which is responsible for providing the data using this method.

### **plotDataFromStream**

- **plotDataFromStream:sender**

Method which is messaged to start plotting action on the user's data. Actual data should be supplied via delegate using the method "nxyView:sender provideDataStream". If this method (or the delegate) is unavailable, NXYView will alert the user (with an Alert panel) with the option of accessing data via an Open panel.

### **saveEPS**

- **saveEPS:sender**

Saves the view to an EPS file with bounding box the size of the instance of nxyView.

### **setDelegate**

- **setDelegate:anObject**

Sets the views delegate to anObject. This is normally done in IB with connections.

**whyTheBeep** (*in Plot.m*)  
- **whyTheBeep:sender**

This method is NOT implemented, but is in place to be implemented by the user for error detection. See the source code for Plot.m.

## CONSTANTS AND DEFINED TYPES

```
#ifndef MIN
#define MIN(x,y) ((x)<(y)? (x) : (y))
#endif

#ifndef MAX
#define MAX(x,y) ((x)>(y)? (x) : (y))
#endif

#ifndef ABS
#define ABS(x) ( (x)<0? -(x) : (x) )
#endif

#ifndef SGN
#define SGN(x) ( (x)<0? -1.0 : 1.0 )
#endif

#define XOFFSET 100.0      /* offsets (in pixels) of axis origin from */
#define YOFFSET  50.0      /* lower left hand corner of window      */

#define NO 0
#define YES 1
```

