

initWithFrame:

Freeing a SoundView instance free

Modifying the object scaleToFit

setBackgroundGray:
setBezeled:
setContinuous:
setDelegate:
setDisplayMode:
setEnabled:
setForegroundGray:
setOptimizedForSpeed:
setSound:
sizeToFit

Querying the object backgroundGray

delegate
displayMode
foregroundGray
getSelection:size:
isAutoScale
isBezeled
isContinuous
isEnabled
isOptimizedForSpeed
reductionFactor
sound

Selecting and editing the sound data

copy:
cut:
delete:
mouseDown:
paste:
selectAll:
setSelection:size:
isEditable
setEditable:

Pasteboard and Services support pasteboard:provideData:

readSelectionFromPasteboard:
validRequestorForSendType:andReturnType:
writeSelectionToPasteboard:types:

Modifying the display coordinates

setAutoscale:
setReductionFactor:

Drawing the object drawSelf::

drawSamplesFrom:to:
hideCursor
showCursor
sizeTo::

Responding to events acceptsFirstResponder

becomeFirstResponder
resignFirstResponder

Performing the sound data pause:

didRecord:
hadError:
tellDelegate:
willPlay:
willRecord:

(BOOL)acceptsFirstResponder

If the SoundView is enabled, this returns YES, allowing the SoundView to become the first responder. If the SoundView is disabled, this method returns NO. This method is automatically invoked by objects defined by the Application Kit you subclass. You should not invoke it directly.

(float)backgroundGray

Returns the SoundView's background gray value (NX_WHITE by default).

becomeFirstResponder

Promotes the SoundView to first responder. You never invoke this method directly. Returns self.

copy:sender

Copies the current selection to the pasteboard. Returns self.

cut:sender

Deletes the current selection from the SoundView, copies it to the pasteboard, and sends a soundDidChange: message to the delegate. The insertion point is positioned to where the selection used to start. Returns self.

delegate

Returns the SoundView's delegate object.

delete:sender

Deletes the current selection from the SoundView's Sound and sends the soundDidChange: message to the delegate. The deletion isn't placed on the pasteboard. Returns self.

(int)displayMode

Returns the SoundView's display mode, one of NX_SOUNDVIEW_WAVE (oscilloscopic display) or NX_SOUNDVIEW_MINMAX (minimum/maximum display this is the default).

drawSamplesFrom:(int)first to:(int)last

Redisplays the given range of samples. Return self.

drawSelf:(const NXRect *)rects :(int)rectCount

Displays the SoundView's sound data. The selection is highlighted and the cursor is drawn (if it is visible). Returns self.

You never send the drawSelf:: message directly to a SoundView object. To cause a SoundView to draw, send one of the display messages defined by the View class.

(float)foregroundGray

Returns the SoundView's foreground gray value (NX_BLACK by default).

free

Frees the SoundView but not its Sound object nor its delegate. The willFree: message is sent to the delegate.

getSelection:(int *)firstSample size:(int *)sampleCount

Returns the selection by reference. The index of the selection's first sample (counting from 0) is returned in firstSample. The size of the selection in samples is returned in sampleCount. The method itself returns self.

hadError:sender

Used to redirect delegate messages from the SoundView's Sound object you never invoke this method.

hideCursor

Hides the SoundView's cursor. This is usually handled automatically. Returns self.

Returns YES if the SoundView is in autoscaling mode, otherwise returns NO.

(BOOL)isBezeled

Returns YES if the SoundView has a bezeled border, otherwise returns NO (the default).

(BOOL)isContinuous

Returns YES if the SoundView responds to mouse-dragged events (as set through setContinuous:)

(BOOL)isEditable

Returns YES if the SoundView's sound data can be edited.

(BOOL)isEnabled

Returns YES if the SoundView is enabled, otherwise returns NO. The mouse has no effect in a disabled SoundView. By default, a SoundView is enabled.

(BOOL)isOptimizedForSpeed

Returns YES if the SoundView is optimized for speedy display. SoundViews are optimized by default.

(BOOL)isPlayable

Returns YES if the SoundView's sound data can be played without first being converted.

mouseDown:(NXEvent *)theEvent

Allows a selection to be defined by clicking and dragging the mouse. This method takes control of the selection. While dragging, the selected region is highlighted. On mouse up, the delegate is sent the selectionChanged: message. If isContinuous is YES, selectionChanged: messages are also sent while the mouse is being dragged. This method is invoked automatically in response to the user's actions. Returns self.

paste:sender

Replaces the current selection with a copy of the sound data currently on the pasteboard. If there is no pasteboard data, no action is taken. The pasteboard data must be compatible with the SoundView's format.

pause:sender

Pauses the current playback or recording session by invoking Sound's pause: method. If no sound returns nil otherwise, returns self.

play:sender

Play the current selection by invoking Sound's play: method. If there is no selection, the SoundView played. The willPlay: message is sent to the delegate before the selection is played didPlay: is sent when done playing. Returns self.

read:(void *)stream

Unarchives the SoundView by reading it from stream. Returns self.

readSelectionFromPasteboard:thePasteboard

Replaces the SoundView's current selection with the sound data on the given pasteboard. The pasteboard data is converted to the format of the data in the SoundView (if possible). If the SoundView has no selection, the data is inserted at the cursor position. Sets the current error code for the SoundView's Sound object (by retrieve by sending processingError to the Sound) and returns self.

record:sender

Replaces the SoundView's current selection with newly recorded material. If there is no selection, the material is recorded at the cursor. The willRecord: message is sent to the delegate before the recording is started didRecord: is sent when recording has completed. Recorded data is always taken from the CODEC microphone input. Returns self.

(float)reductionFactor

Returns the SoundView's reduction factor, computed as

$$\text{reductionFactor} = \text{sampleCount} / \text{displayUnits}$$

resignFirstResponder

Resigns the position of first responder. Returns self.

automatically when the SoundView's data changes and the SoundView is in autoscale mode. If the SoundView is in autoscale mode, sizeToFit is invoked when the data changes. You never invoke this method directly. You can reimplement this method to provide specialized behavior. Returns self.

`selectAll:sender`

Creates a selection over the SoundView's entire Sound. Returns self.

`setAutoscale:(BOOL)aFlag`

Sets the SoundView's automatic scaling mode, used to determine how the SoundView is redisplayed when the data changes. With autoscaling enabled (aFlag is YES), the SoundView's reduction factor is recomputed within the view frame. If it's disabled (aFlag is NO), the frame is resized and the reduction factor is recomputed. If the SoundView is in a ScrollingView, autoScaling should be disabled (autoscaling is disabled by default).

`setBackgroundGray:(float)aGray`

Sets the SoundView's background gray value to aGray the default is NX_WHITE. Returns self.

`setBezeled:(BOOL)aFlag`

If aFlag is YES, the display is given a bezeled border. By default, the border of a SoundView display is not bezeled. If autodisplaying is enabled, the Sound is automatically redisplayed. Returns self.

`setContinuous:(BOOL)aFlag`

Sets the state of continuous action messages. If aFlag is YES, selectionChanged: messages are sent continuously while the mouse is being dragged. If NO, the message is sent only on mouse up. The default is NO. Returns self.

`setDelegate:anObject`

Sets the SoundView's delegate to anObject. The delegate is sent messages when the user changes the Sound. Returns self.

`setDisplayMode:(int)aMode`

Sets the SoundView's display mode, either NX_SOUNDVIEW_WAVE or NX_SOUNDVIEW_BITMAP. If autodisplaying is enabled, the Sound is automatically redisplayed. Returns self.

default, a SoundView is enabled. Returns self.

`setForegroundGray:(float)aGray`

Sets the SoundView's foreground gray value to aGray. The default is NX_BLACK. Returns self.

`setOptimizedForSpeed:(BOOL)flag`

Sets the SoundView to optimize its display mechanism. Optimization greatly increases the speed of drawing, particularly for large sounds. It does so at the loss of some precision in representing the sound. Inaccuracies are corrected as you zoom in on the data. All SoundView's are optimized by default.

`setReductionFactor:(float)reductionFactor`

Recomputes the size of the SoundView's frame, if autoscaling is disabled. The frame's size (in display units) is computed according to the formula

$$\text{displayUnits} = \text{sampleCount} / \text{reductionFactor}$$

Increasing the reduction factor zooms out, decreasing zooms in on the data. If autodisplaying is enabled, the SoundView is automatically redisplayed.

If the SoundView is in autoscaling mode, or reductionFactor is less than 1.0, the method avoids computing the frame size and returns nil. (In autoscaling mode, the reduction factor is automatically recomputed when the sound changes—see `scaleToFit`.) Otherwise, the method returns self. If reductionFactor is the same as the current reduction factor, the method returns immediately without recomputing the frame size.

`setSelection:(int)firstSample size:(int)sampleCount`

Sets the selection to be sampleCount samples wide, starting with sample firstSample (samples are indexed from 0). Returns self.

`setSound:aSound`

Sets the SoundView's Sound object to aSound. If autoscaling is enabled, the drawing coordinates are scaled so that aSound's data fits within the current frame. Otherwise, the frame is resized to accommodate the length of aSound. If autodisplaying is enabled, the SoundView is automatically redisplayed. Returns self.

`showCursor`

Displays the SoundView's cursor. This is usually handled automatically. Returns self.

Resizes the SoundView's frame (horizontally) to maintain a constant reduction factor. This method is invoked automatically when the SoundView's data changes and the SoundView isn't in autoscale mode. If in autoscale mode, `scaleToFit` is invoked when the data changes. You never invoke this method directly. Reimplement this method to provide specialized behavior. Returns self.

`sound`

Returns a pointer to the SoundView's Sound object.

`soundBeingProcessed`

Returns the Sound object that's currently being played or recorded into. Note that the actual Sound object performed isn't necessarily the SoundView's sound (the object returned by the `sound` method) for `soundBeingProcessed` creates a private performance Sound object. While this is generally an implementation detail, this case the SoundView's delegate needs to know exactly which object will be (or was) performed.

`stop:sender`

Stops the SoundView's current recording or playback. Returns self.

`tellDelegate:(SEL)theMessage`

Sends theMessage to the SoundView's delegate with the SoundView as the argument. If the delegate doesn't respond to the message, then it isn't sent. You normally never invoke this method it's invoked automatically when playing or editing, is performed. However, you can invoke it in the design of a SoundView subclass.

`validRequestorForSendType:(NXAtom)sendType
andReturnType:(NXAtom)returnType`

You never invoke this method it's implemented to support services that act on sound data.

`willPlay:sender`

Used to redirect delegate messages from the SoundView's Sound object you never invoke this method.

`willRecord:sender`

Used to redirect delegate messages from the SoundView's Sound object you never invoke this method.

ignored. Returns self.

`didPlay:sender`

Sent to the delegate just after the SoundView's sound is played.

`didRecord:sender`

Sent to the delegate just after the SoundView's sound is recorded into.

`hadError:sender`

Sent to the delegate if an error is encountered during recording or playback of the SoundView's sound.

`selectionChanged:sender`

Sent to the delegate when the SoundView's selection changes.

`soundDidChange:sender`

Sent to the delegate when the SoundView's sound data is edited.

`willFree:sender`

Sent to the delegate when the SoundView is freed.

`willPlay:sender`

Sent to the delegate just before the SoundView's sound is played.

`willRecord:sender`

Sent to the delegate just before the SoundView's sound is recorded into.