RSFslider

1.0

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Author

Yasmin Al-Zokari

Version

1.0

See also

https://gitlab.com/yaso2com/rsf-slider

https://www.youtube.com/playlist?list=PLZ9SRRNo8TbbJa8cjqxdKuYjwshlH_↩
IGI

Chapter 2

Namespace Index

2.1 Packages

Here are the packages with brief descriptions (if available):

slider 11
slider.lib 11
slider.RSFSlider 11

Chapter 3

Hierarchical Index

3.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

slider.RSFSlider.Example 21
JDialog
    slider.lib.EditSliderDialog 13
JFrame
    slider.RSFSlider.ExampleFrame 22
JPanel
    slider.lib.SliderPanel 68
JSlider
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Chapter 4

Class Index

4.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

slider.lib.EditSliderDialog 13
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slider.RSFSlider.ExampleFrame 22
slider.lib.MetalMThumbSliderUI 28
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slider.lib.SliderParameters 78
slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler 94

Chapter 5

File Index

5.1 File List

Here is a list of all files with brief descriptions:

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src/slider/lib/MetalMThumbSliderUI.java . . . 103
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Chapter 6

Namespace Documentation

6.1 Package slider

Packages

- package lib
- package RSFSlider

6.2 Package slider.lib

Classes

- class EditSliderDialog
- class MetalMThumbSliderUI
- class MThumbSlider
- interface MThumbSliderAdditional
- class MThumbSliderAdditionalUI
- class SliderPanel
- class SliderParameters

6.2.1 Detailed Description

Slider Parameters.

6.3 Package slider.RSFSlider

Classes

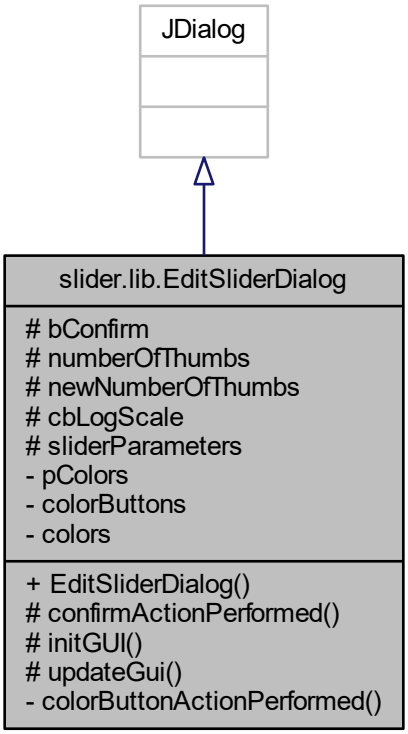
- class Example
- class ExampleFrame

Chapter 7

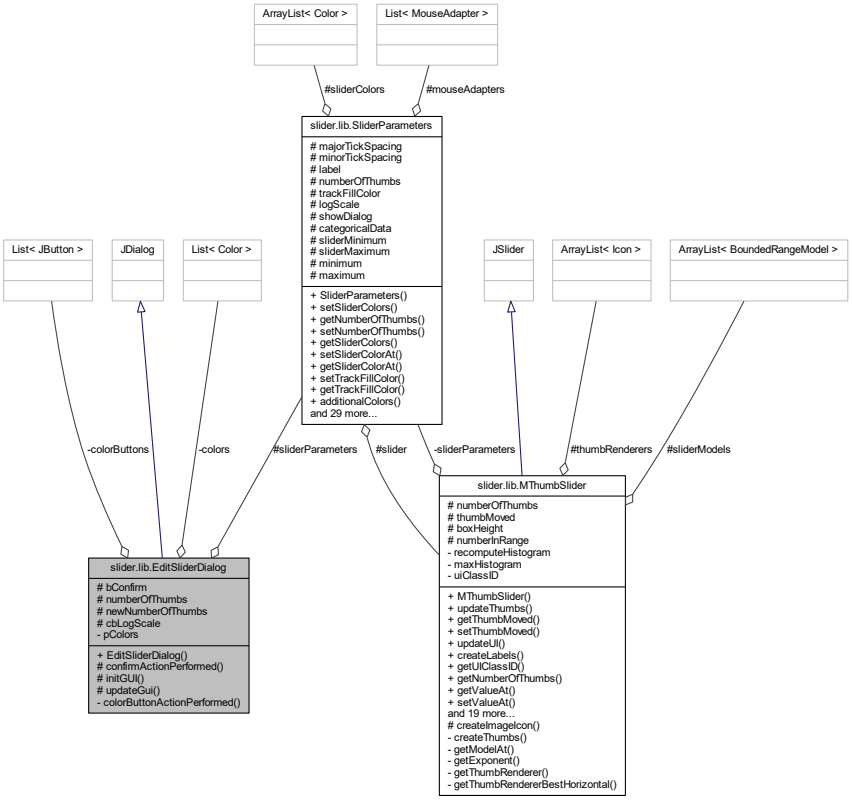
Class Documentation

7.1 slider.lib.EditSliderDialog Class Reference

Inheritance diagram for slider.lib.EditSliderDialog:



Collaboration diagram for slider.lib.EditSliderDialog:



Public Member Functions

- EditSliderDialog (SliderParameters sliderparam)

Protected Member Functions

- void confirmActionPerformed ()
- void initGUI ()
- void updateGui ()

Protected Attributes

- JButton bConfirm
- JLabel numberOfThumbs
- JSpinner newNumberOfThumbs
- JCheckBox cbLogScale
- SliderParameters sliderParameters

Private Member Functions

- void colorButtonActionPerformed (ActionEvent ev)

Private Attributes

- JPanel pColors
- List< JButton > colorButtons = new ArrayList()
- List< Color > colors

7.1.1 Detailed Description

Definition at line 13 of file EditSliderDialog.java.

7.1.2 Constructor & Destructor Documentation

7.1.2.1 EditSliderDialog()

```
slider.lib.EditSliderDialog.EditSliderDialog (
            SliderParameters sliderparam )
```

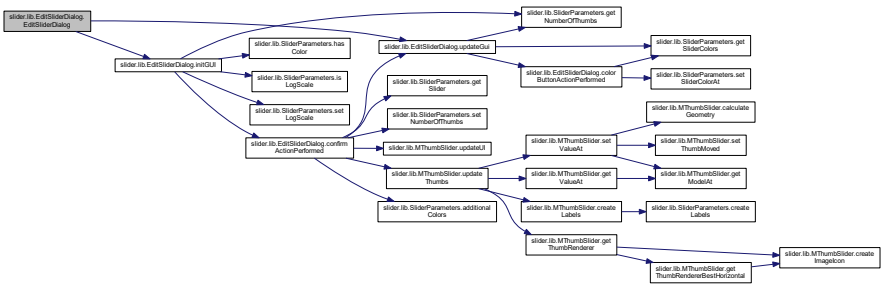
Constructor

Parameters

sliderparam	

Definition at line 37 of file EditSliderDialog.java.

Here is the call graph for this function:



7.1.3 Member Function Documentation

7.1.3.1 colorButtonActionPerformed()

```
void slider.lib.EditSliderDialog.colorButtonActionPerformed (
            ActionEvent ev )  [private]
```

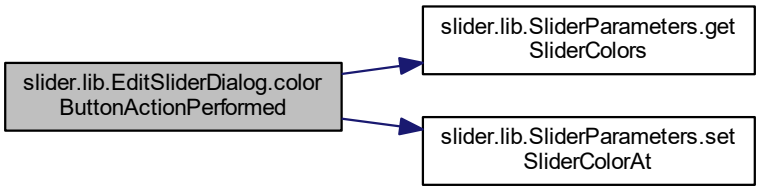
Color choosing action

Parameters

ev	is an action event that stores the action command when a button is pressed. is a string.

Definition at line 134 of file EditSliderDialog.java.

Here is the call graph for this function:



Here is the caller graph for this function:

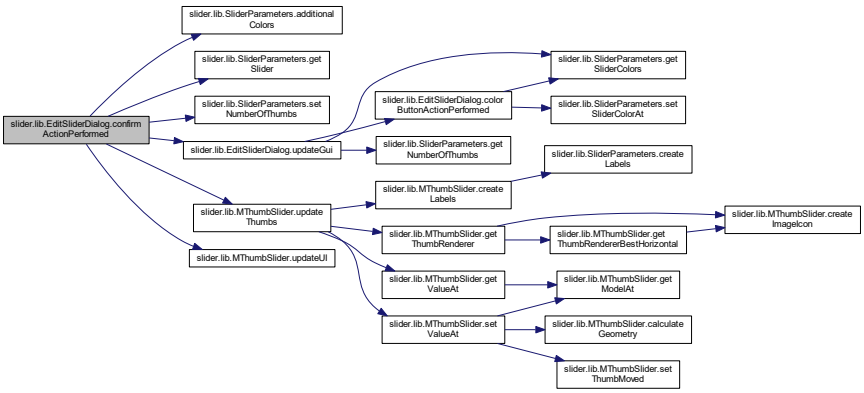
7.1.3.2 confirmActionPerformed()

```
void slider.lib.EditSliderDialog.confirmActionPerformed ( )  [protected]
```

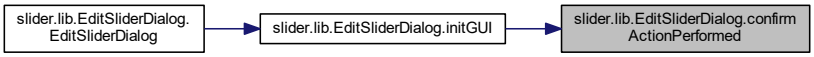
Confirm Button Action

Definition at line 55 of file EditSliderDialog.java.

Here is the call graph for this function:



Here is the caller graph for this function:



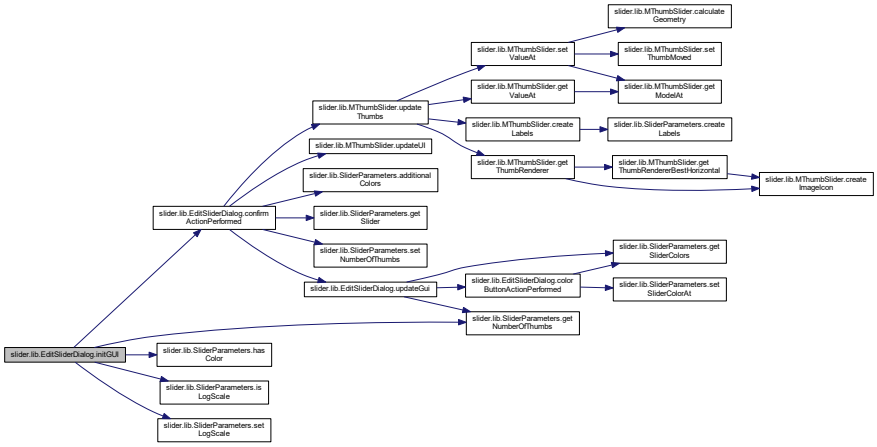
7.1.3.3 initGUI()

```
void slider.lib.EditSliderDialog.initGUI ( )  [protected]
```

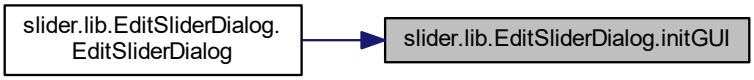
Create Content

Definition at line 75 of file EditSliderDialog.java.

Here is the call graph for this function:



Here is the caller graph for this function:



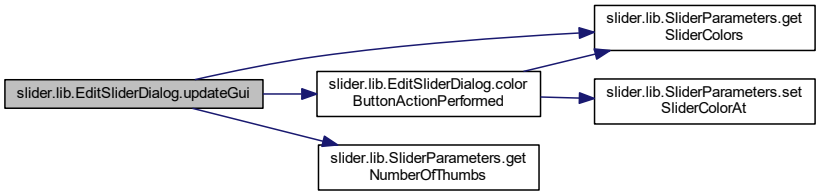
7.1.3.4 updateGui()

```
void slider.lib.EditSliderDialog.updateGui ( )  [protected]
```

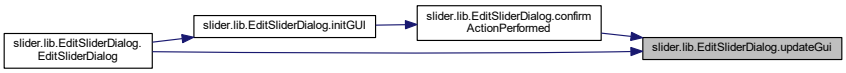
Update content

Definition at line 148 of file EditSliderDialog.java.

Here is the call graph for this function:



Here is the caller graph for this function:



7.1.4 Member Data Documentation

7.1.4.1 bConfirm

```
JButton slider.lib.EditSliderDialog.bConfirm  [protected]
```

Definition at line 18 of file EditSliderDialog.java.

7.1.4.2 cbLogScale

```
JCheckBox slider.lib.EditSliderDialog.cbLogScale  [protected]
```

Definition at line 23 of file EditSliderDialog.java.

7.1.4.3 colorButtons

```
List<JButton> slider.lib.EditSliderDialog.colorButtons = new ArrayList()  [private]
```

Definition at line 29 of file EditSliderDialog.java.

7.1.4.4 colors

```
List<Color> slider.lib.EditSliderDialog.colors  [private]
```

Definition at line 30 of file EditSliderDialog.java.

7.1.4.5 newNumberOfThumbs

```
JSpinner slider.lib.EditSliderDialog.newNumberOfThumbs  [protected]
```

Definition at line 21 of file EditSliderDialog.java.

7.1.4.6 numberOfThumbs

```
JLabel slider.lib.EditSliderDialog.numberOfThumbs  [protected]
```

Definition at line 20 of file EditSliderDialog.java.

7.1.4.7 pColors

```
JPanel slider.lib.EditSliderDialog.pColors  [private]
```

Definition at line 28 of file EditSliderDialog.java.

7.1.4.8 sliderParameters

```
SliderParameters slider.lib.EditSliderDialog.sliderParameters  [protected]
```

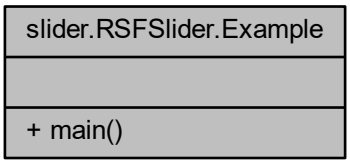
Definition at line 25 of file EditSliderDialog.java.

The documentation for this class was generated from the following file:

- src/slider/lib/EditSliderDialog.java

7.2 slider.RSFSlider.Example Class Reference

Collaboration diagram for slider.RSFSlider.Example:



Static Public Member Functions

- static void main (String args[ ])

7.2.1 Detailed Description

Definition at line 3 of file Example.java.

7.2.2 Member Function Documentation

7.2.2.1 main()

```
static void slider.RSFSlider.Example.main (
            String args[] )  [static]
```

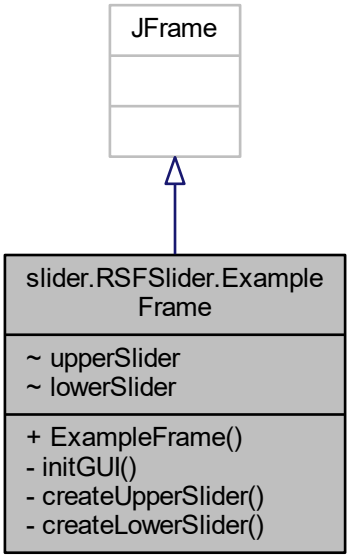
Definition at line 6 of file Example.java.

The documentation for this class was generated from the following file:

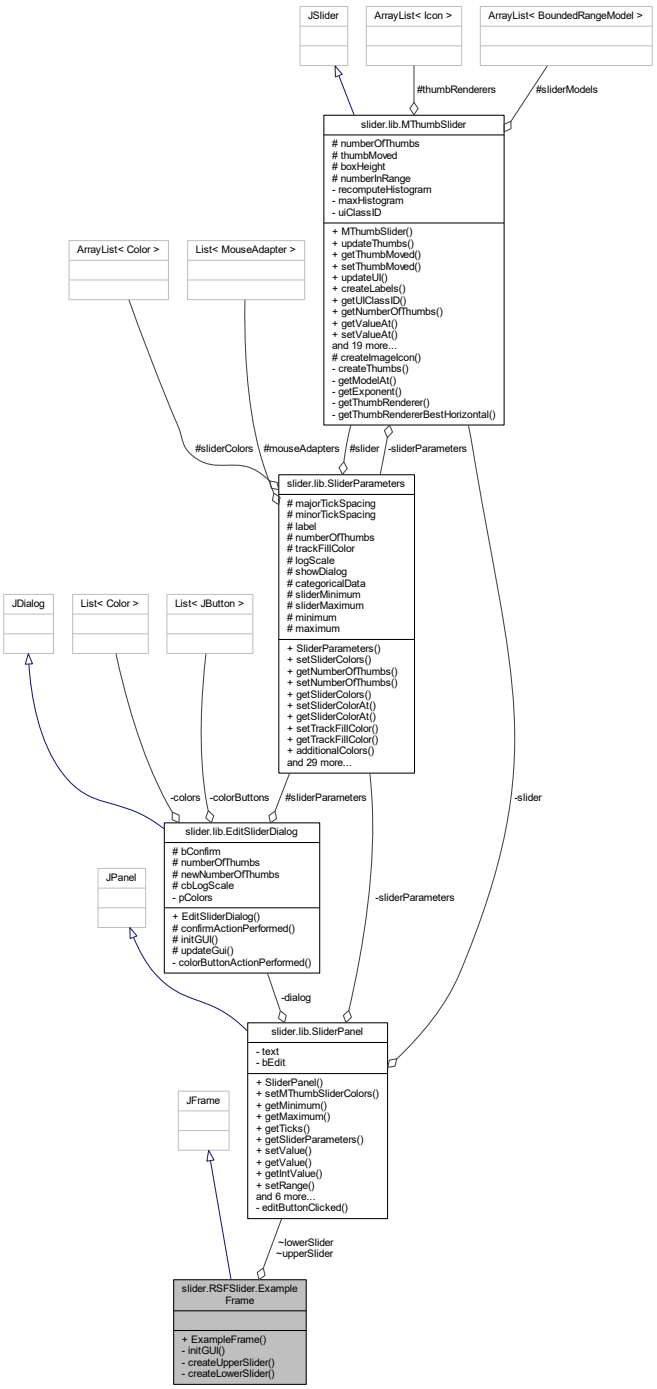
- src/slider/RSFSlider/Example.java

7.3 slider.RSFSlider.ExampleFrame Class Reference

Inheritance diagram for slider.RSFSlider.ExampleFrame:



Collaboration diagram for slider.RSFSlider.ExampleFrame:



Public Member Functions

- ExampleFrame ()

Package Attributes

- SliderPanel upperSlider
- SliderPanel lowerSlider

Private Member Functions

- void initGUI ()
- void createUpperSlider ()
- void createLowerSlider ()

7.3.1 Detailed Description

Definition at line 18 of file ExampleFrame.java.

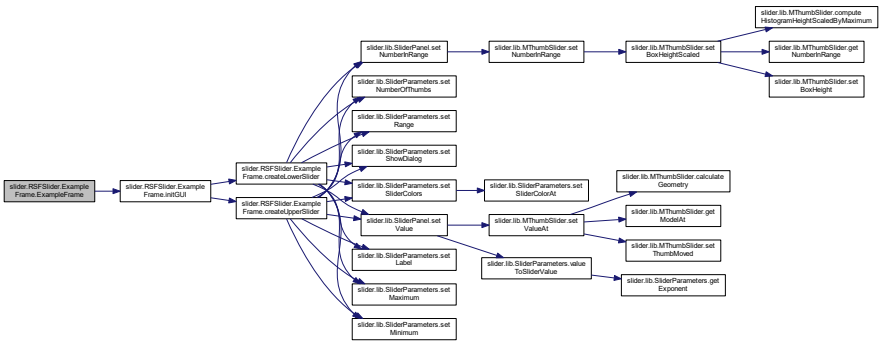
7.3.2 Constructor & Destructor Documentation

7.3.2.1 ExampleFrame()

```
slider.RSFSlider.ExampleFrame.ExampleFrame ( )
```

Definition at line 25 of file ExampleFrame.java.

Here is the call graph for this function:



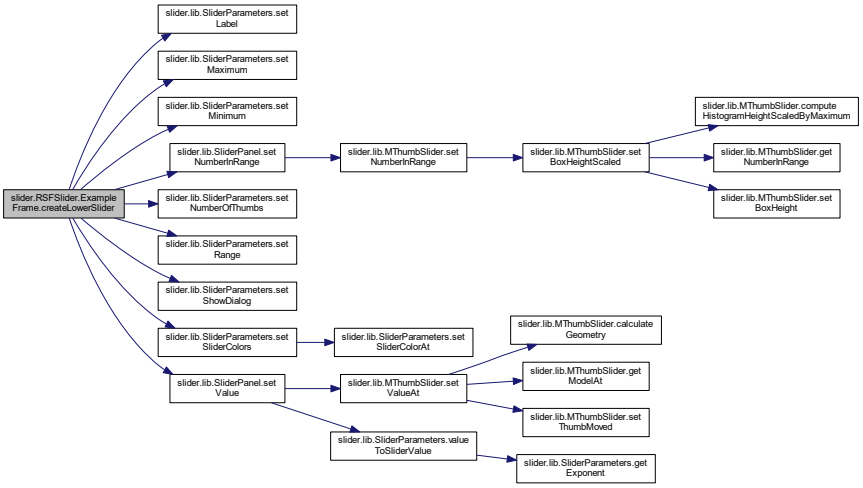
7.3.3 Member Function Documentation

7.3.3.1 createLowerSlider()

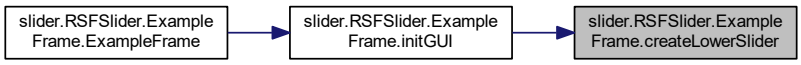
```
void slider.RSFSlider.ExampleFrame.createLowerSlider ( )  [private]
```

Definition at line 92 of file ExampleFrame.java.

Here is the call graph for this function:



Here is the caller graph for this function:

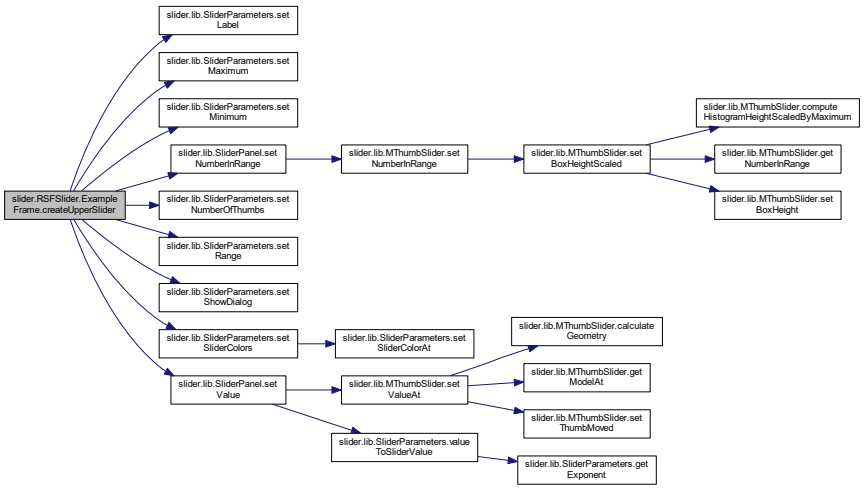


7.3.3.2 createUpperSlider()

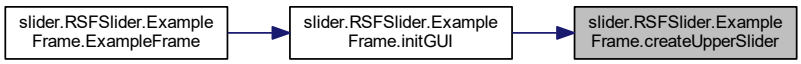
```
void slider.RSFSlider.ExampleFrame.createUpperSlider ( )  [private]
```

Definition at line 63 of file ExampleFrame.java.

Here is the call graph for this function:



Here is the caller graph for this function:

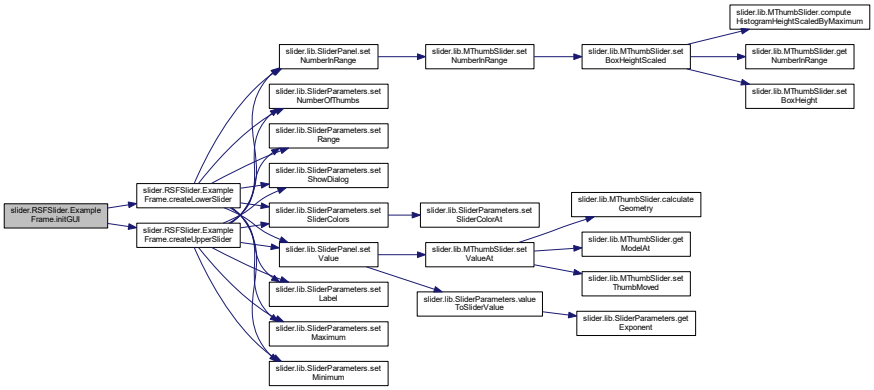


7.3.3.3 initGUI()

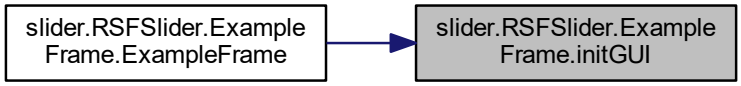
```
void slider.RSFSlider.ExampleFrame.initGUI ( )  [private]
```

Definition at line 39 of file ExampleFrame.java.

Here is the call graph for this function:



Here is the caller graph for this function:



7.3.4 Member Data Documentation

7.3.4.1 lowerSlider

```
SliderPanel slider.RSFSlider.ExampleFrame.lowerSlider  [package]
```

Definition at line 23 of file ExampleFrame.java.

7.3.4.2 upperSlider

```
SliderPanel slider.RSFSlider.ExampleFrame.upperSlider  [package]
```

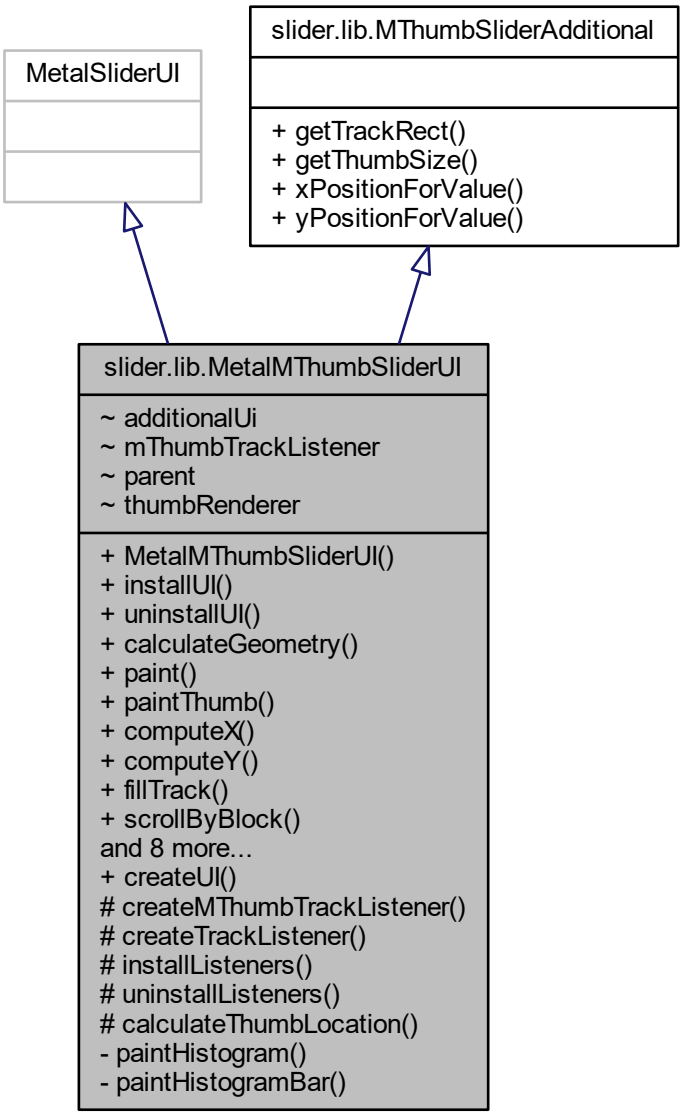
Definition at line 22 of file ExampleFrame.java.

The documentation for this class was generated from the following file:

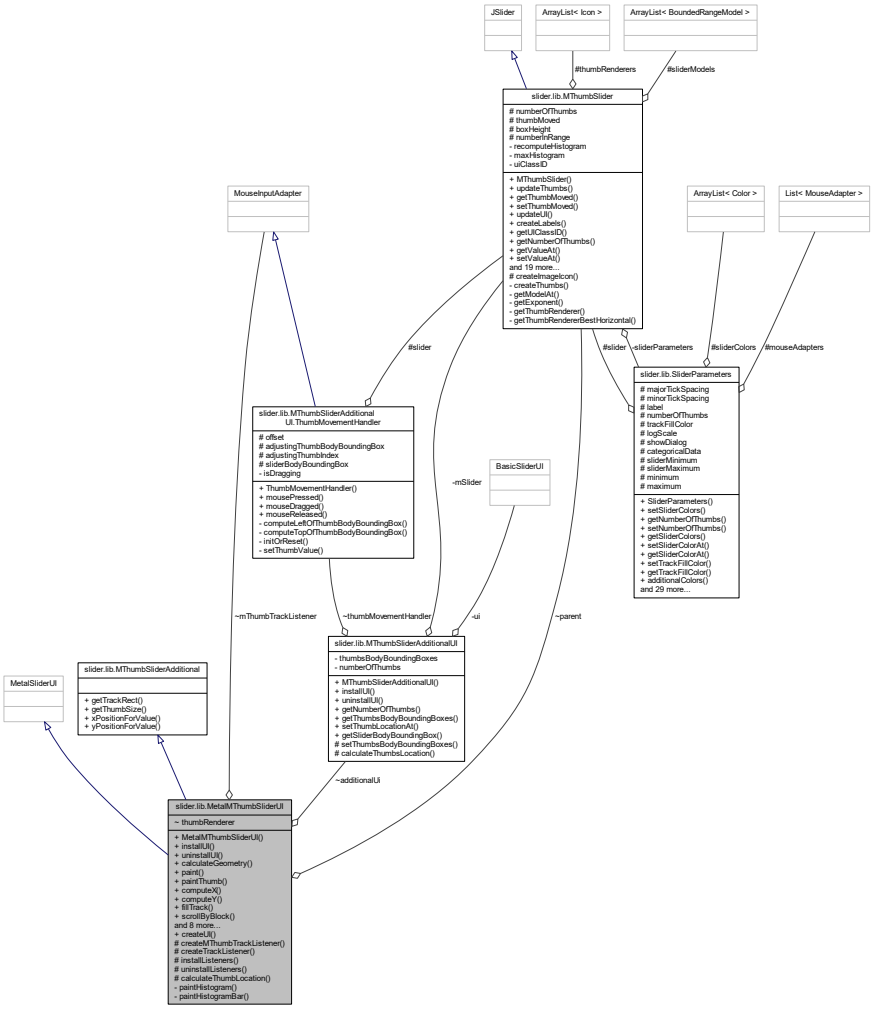
- src/slider/RSFSlider/ExampleFrame.java

7.4 slider.lib.MetalMThumbSliderUI Class Reference

Inheritance diagram for slider.lib.MetalMThumbSliderUI:



Collaboration diagram for slider.lib.MetalMThumbSliderUI:



Public Member Functions

- MetalMThumbSliderUI (MThumbSlider parent)
- void installUI (JComponent c)
- void uninstallUI (JComponent c)
- void calculateGeometry ()
- void paint (Graphics g, JComponent c)
- void paintThumb (Graphics g)
- Point computeX (Point pOrig, Rectangle thumbRect, Rectangle trackRect)
- Point computeY (Point pOrig, Rectangle thumbRect, Rectangle trackRect)
- void fillTrack (Graphics g, Point t1, Point t2, Color fillColor)
- void scrollByBlock (int direction)
- void scrollByUnit (int direction)
- Rectangle getTrackRect ()
- Dimension getThumbSize ()
- int xPositionForValue (int value)
- int yPositionForValue (int value)
- int getOrientation ()
- Icon getVertThumbIcon ()
- Icon getHorizThumbIcon ()

Static Public Member Functions

- static ComponentUI createUI (JComponent c)

Protected Member Functions

- MouseInputAdapter createMThumbTrackListener (JSlider slider)
- TrackListener createTrackListener (JSlider slider)
- void installListeners (JSlider slider)
- void uninstallListeners (JSlider slider)
- void calculateThumbLocation ()

Package Attributes

- MThumbSliderAdditionalUI additionalUi
- MouseInputAdapter mThumbTrackListener
- final MThumbSlider parent
- Icon thumbRenderer

Private Member Functions

- void paintHistogram (Graphics g)
- void paintHistogramBar (Graphics g, int y, int xFrom, int xTo, int height, int numberInRange)

7.4.1 Detailed Description

This class provides the user interface behavior that is dependent of the look and feel.

Definition at line 16 of file MetalMThumbSliderUI.java.

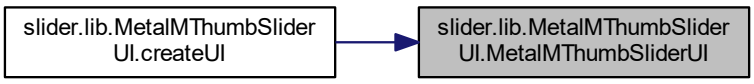
7.4.2 Constructor & Destructor Documentation

7.4.2.1 MetalMThumbSliderUI()

```
slider.lib.MetalMThumbSliderUI.MetalMThumbSliderUI (
            MThumbSlider parent )
```

Definition at line 30 of file MetalMThumbSliderUI.java.

Here is the caller graph for this function:



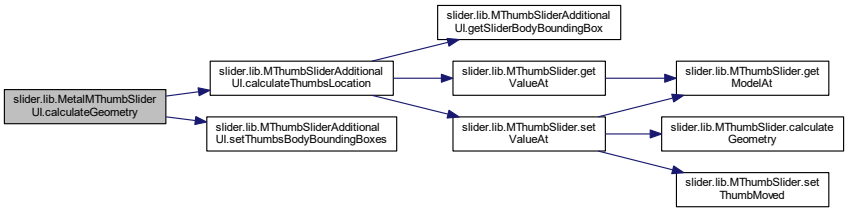
7.4.3 Member Function Documentation

7.4.3.1 calculateGeometry()

```
void slider.lib.MetalMThumbSliderUI.calculateGeometry ( )
```

Definition at line 87 of file MetalMThumbSliderUI.java.

Here is the call graph for this function:



7.4.3.2 calculateThumbLocation()

```
void slider.lib.MetalMThumbSliderUI.calculateThumbLocation ( )  [protected]
```

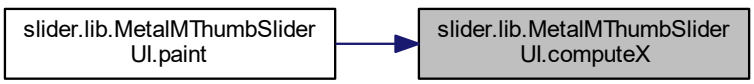
Definition at line 101 of file MetalMThumbSliderUI.java.

7.4.3.3 computeX()

```
Point slider.lib.MetalMThumbSliderUI.computeX (
            Point pOrig,
            Rectangle thumbRect,
            Rectangle trackRect )
```

Definition at line 229 of file MetalMThumbSliderUI.java.

Here is the caller graph for this function:



7.4.3.4 computeY()

```
Point slider.lib.MetalMThumbSliderUI.computeY (
            Point pOrig,
            Rectangle thumbRect,
            Rectangle trackRect )
```

Definition at line 244 of file MetalMThumbSliderUI.java.

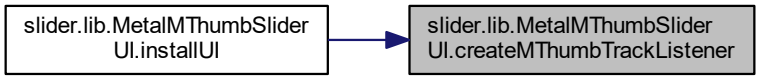
Here is the caller graph for this function:

7.4.3.5 createMThumbTrackListener()

```
MouseInputAdapter slider.lib.MetalMThumbSliderUI.createMThumbTrackListener (
            JSlider slider )  [protected]
```

Definition at line 53 of file MetalMThumbSliderUI.java.

Here is the caller graph for this function:



7.4.3.6 createTrackListener()

```
TrackListener slider.lib.MetalMThumbSliderUI.createTrackListener (
            JSlider slider )  [protected]
```

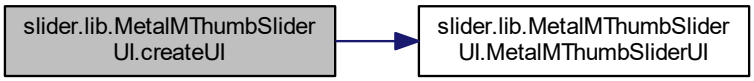
Definition at line 59 of file MetalMThumbSliderUI.java.

7.4.3.7 createUI()

```
static ComponentUI slider.lib.MetalMThumbSliderUI.createUI (
            JComponent c )  [static]
```

Definition at line 25 of file MetalMThumbSliderUI.java.

Here is the call graph for this function:

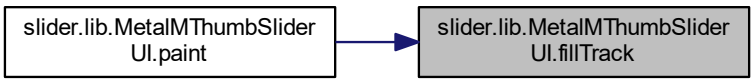


7.4.3.8 fillTrack()

```
void slider.lib.MetalMThumbSliderUI.fillTrack (
            Graphics g,
            Point t1,
            Point t2,
            Color fillColor )
```

Definition at line 259 of file MetalMThumbSliderUI.java.

Here is the caller graph for this function:



7.4.3.9 getHorizThumbIcon()

```
Icon slider.lib.MetalMThumbSliderUI.getHorizThumbIcon ( )
```

Definition at line 479 of file MetalMThumbSliderUI.java.

7.4.3.10 getOrientation()

```
int slider.lib.MetalMThumbSliderUI.getOrientation ( )
```

Definition at line 469 of file MetalMThumbSliderUI.java.

7.4.3.11 getThumbSize()

```
Dimension slider.lib.MetalMThumbSliderUI.getThumbSize ( )
```

Returns

Implements slider.lib.MThumbSliderAdditional.

Definition at line 442 of file MetalMThumbSliderUI.java.

7.4.3.12 getTrackRect()

```
Rectangle slider.lib.MetalMThumbSliderUI.getTrackRect ( )
```

Returns

Implements slider.lib.MThumbSliderAdditional.

Definition at line 432 of file MetalMThumbSliderUI.java.

7.4.3.13 getVertThumbIcon()

```
Icon slider.lib.MetalMThumbSliderUI.getVertThumbIcon ( )
```

Definition at line 474 of file MetalMThumbSliderUI.java.

7.4.3.14 installListeners()

```
void slider.lib.MetalMThumbSliderUI.installListeners (
            JSlider slider ) [protected]
```

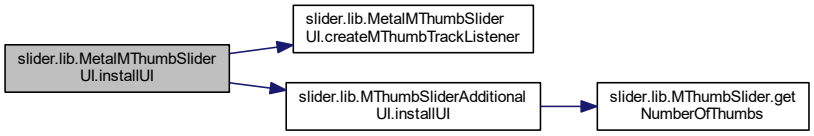
Definition at line 65 of file MetalMThumbSliderUI.java.

7.4.3.15 installUI()

```
void slider.lib.MetalMThumbSliderUI.installUI (
            JComponent c )
```

Definition at line 36 of file MetalMThumbSliderUI.java.

Here is the call graph for this function:

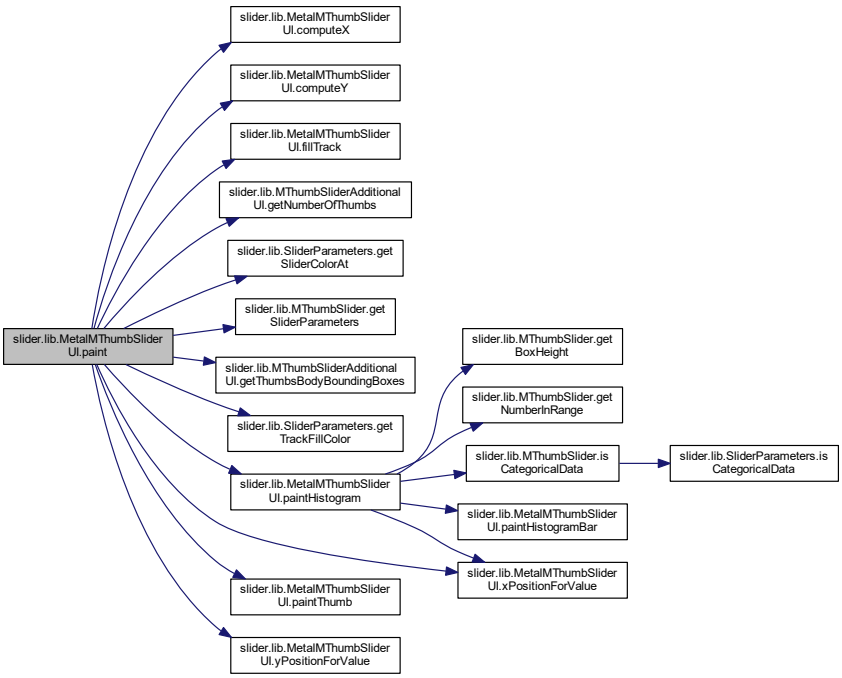


7.4.3.16 paint()

```
void slider.lib.MetalMThumbSliderUI.paint (
            Graphics g,
            JComponent c )
```

Definition at line 108 of file MetalMThumbSliderUI.java.

Here is the call graph for this function:



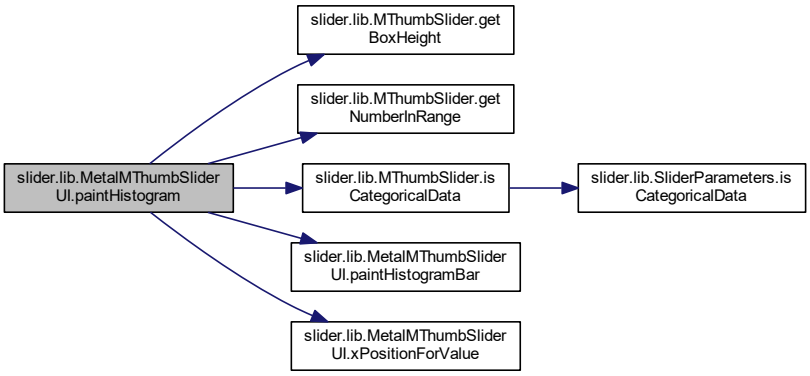
7.4.3.17 paintHistogram()

```
void slider.lib.MetalMThumbSliderUI.paintHistogram (
            Graphics g )  [private]
```

Histogram

Definition at line 318 of file MetalMThumbSliderUI.java.

Here is the call graph for this function:



Here is the caller graph for this function:

7.4.3.18 paintHistogramBar()

```
void slider.lib.MetalMThumbSliderUI.paintHistogramBar (
            Graphics g,
            int y,
            int xFrom,
            int xTo,
            int height,
            int numberInRange )  [private]
```

Definition at line 370 of file MetalMThumbSliderUI.java.

Here is the caller graph for this function:

7.4.3.19 paintThumb()

```
void slider.lib.MetalMThumbSliderUI.paintThumb (
            Graphics g )
```

Definition at line 224 of file MetalMThumbSliderUI.java.

Here is the caller graph for this function:

7.4.3.20 scrollByBlock()

```
void slider.lib.MetalMThumbSliderUI.scrollByBlock (
            int direction )
```

Parameters

direction	

Definition at line 410 of file MetalMThumbSliderUI.java.

7.4.3.21 scrollByUnit()

```
void slider.lib.MetalMThumbSliderUI.scrollByUnit (
            int direction )
```

Parameters

direction	

Definition at line 419 of file MetalMThumbSliderUI.java.

7.4.3.22 uninstallListeners()

```
void slider.lib.MetalMThumbSliderUI.uninstallListeners (
            JSlider slider )  [protected]
```

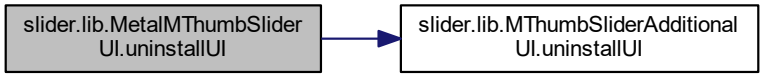
Definition at line 76 of file MetalMThumbSliderUI.java.

7.4.3.23 uninstallUI()

```
void slider.lib.MetalMThumbSliderUI.uninstallUI (
            JComponent c )
```

Definition at line 45 of file MetalMThumbSliderUI.java.

Here is the call graph for this function:



7.4.3.24 xPositionForValue()

```
int slider.lib.MetalMThumbSliderUI.xPositionForValue (
            int value )
```

Parameters

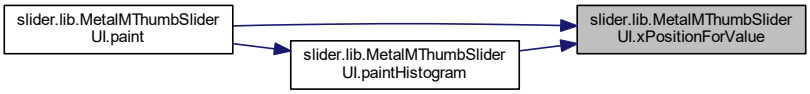
value	

Returns

Implements slider.lib.MThumbSliderAdditional.

Definition at line 453 of file MetalMThumbSliderUI.java.

Here is the caller graph for this function:



7.4.3.25 yPositionForValue()

```
int slider.lib.MetalMThumbSliderUI.yPositionForValue (
            int value )
```

Parameters

value	

Returns

Implements slider.lib.MThumbSliderAdditional.

Definition at line 464 of file MetalMThumbSliderUI.java.

Here is the caller graph for this function:

7.4.4 Member Data Documentation

7.4.4.1 additionalUi

```
MThumbSliderAdditionalUI slider.lib.MetalMThumbSliderUI.additionalUi  [package]
```

Definition at line 21 of file MetalMThumbSliderUI.java.

7.4.4.2 mThumbTrackListener

```
MouseInputAdapter slider.lib.MetalMThumbSliderUI.mThumbTrackListener  [package]
```

Definition at line 22 of file MetalMThumbSliderUI.java.

7.4.4.3 parent

```
final MThumbSlider slider.lib.MetalMThumbSliderUI.parent  [package]
```

Definition at line 23 of file MetalMThumbSliderUI.java.

7.4.4.4 thumbRenderer

```
Icon slider.lib.MetalMThumbSliderUI.thumbRenderer  [package]
```

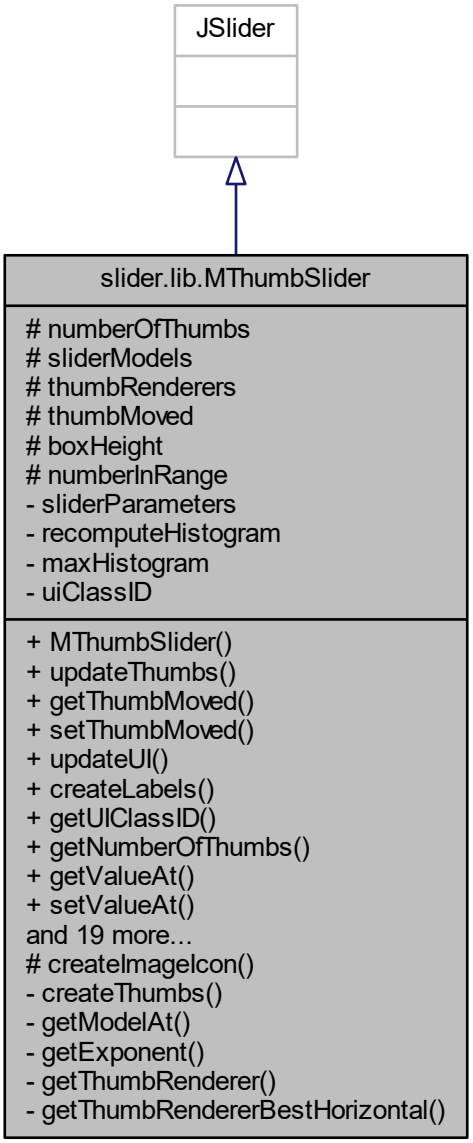
Definition at line 105 of file MetalMThumbSliderUI.java.

The documentation for this class was generated from the following file:

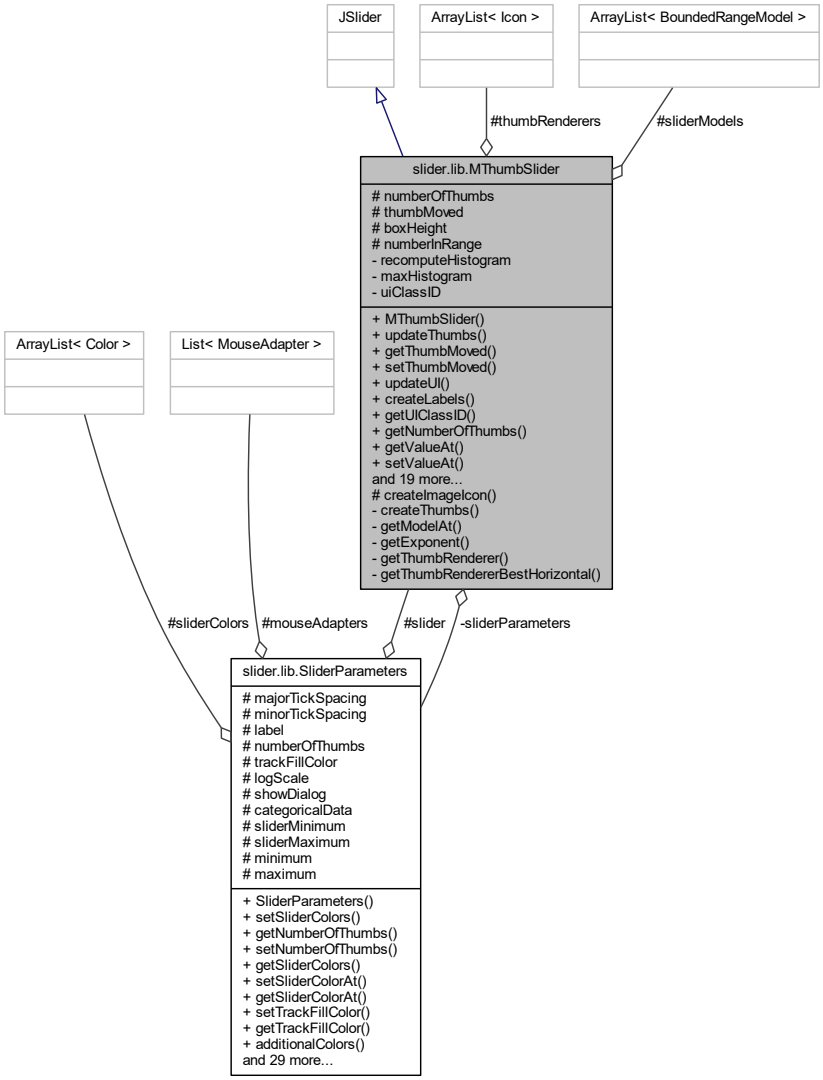
- src/slider/lib/MetalMThumbSliderUI.java

7.5 slider.lib.MThumbSlider Class Reference

Inheritance diagram for slider.lib.MThumbSlider:



Collaboration diagram for slider.lib.MThumbSlider:



Public Member Functions

- MThumbSlider (SliderParameters sliderParameters)
- void updateThumbs (int n)
- int getThumbMoved ()
- void setThumbMoved (int thumbMoved)
- void updateUI ()
- void createLabels ()
- String getUIClassID ()
- int getNumberOfThumbs ()
- int getValueAt (int index)
- void setValueAt (int value, int index, boolean recalculateGeometry)
- void calculateGeometry ()
- void setMinimum (double minimum)
- double getMinimumValue ()

- void setMaximum (double maximum)
- double getMaximumValue ()
- Icon getThumbRendererAt (int index)
- void setThumbRendererAt (Icon icon, int index)
- int getMaxHistogram ()
- void setMaxHistogram (int maxHistogram)
- boolean isCategoricalData ()
- int getBoxHeight (int n)
- void setBoxHeight (int box, int value)
- void setBoxHeightScaled (int box, int value)
- void setNumberInRange (List< Integer > box, List< Integer > numberInRange)
- Integer getNumberInRange (int box)
- int computeHistogramHeightScaledByMaximum (int numberInRange)
- SliderParameters getSliderParameters ()
- int getTicks ()
- List< Integer > getTickValues ()

Static Protected Member Functions

- static ImageIcon createImageIcon (String path)

Protected Attributes

- int numberOfThumbs
- ArrayList< BoundedRangeModel > sliderModels
- ArrayList< Icon > thumbRenderers
- int thumbMoved = -1
- HashMap< Integer, Integer > boxHeight = new HashMap<Integer, Integer>()
- HashMap< Integer, Integer > numberInRange = new HashMap<Integer, Integer>()

Private Member Functions

- void createThumbs ()
- BoundedRangeModel getModelAt (int index)
- int getExponent (double value) throws NumberFormatException
- Icon getThumbRenderer (int number, int numberOfThumbs)
- Icon getThumbRendererBestHorizontal (int thumbNumber, int numberOfThumbs)

Private Attributes

- SliderParameters sliderParameters = null
- boolean recomputeHistogram = false
- int maxHistogram = 1

Static Private Attributes

- static final String uiClassID = "MThumbSliderUI"

7.5.1 Detailed Description

Multi-Thumb Slider based on JSlider

Definition at line 16 of file MThumbSlider.java.

7.5.2 Constructor & Destructor Documentation

7.5.2.1 MThumbSlider()

```
slider.lib.MThumbSlider.MThumbSlider (
            SliderParameters sliderParameters )
```

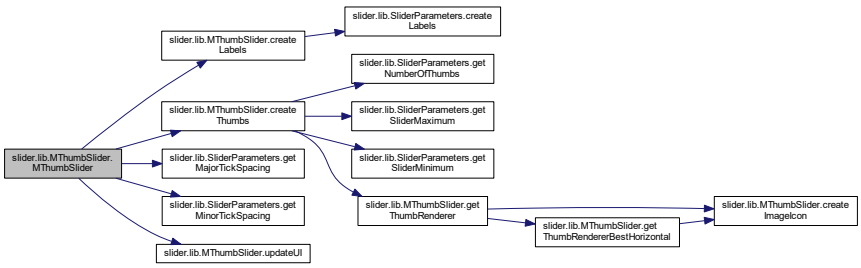
Constructor

Parameters

sliderParameters	slider parameters

Definition at line 40 of file MThumbSlider.java.

Here is the call graph for this function:



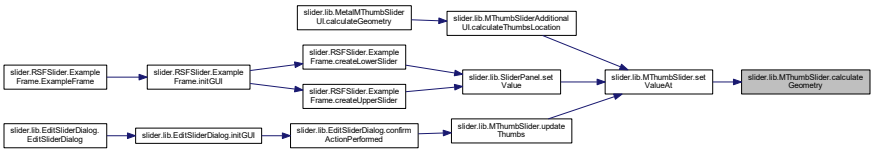
7.5.3 Member Function Documentation

7.5.3.1 calculateGeometry()

```
void slider.lib.MThumbSlider.calculateGeometry ( )
```

Definition at line 227 of file MThumbSlider.java.

Here is the caller graph for this function:



7.5.3.2 computeHistogramHeightScaledByMaximum()

```
int slider.lib.MThumbSlider.computeHistogramHeightScaledByMaximum (
            int numberInRange )
```

Definition at line 502 of file MThumbSlider.java.

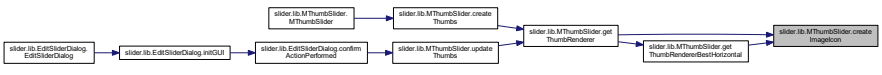
Here is the caller graph for this function:

7.5.3.3 createImageIcon()

```
static ImageIcon slider.lib.MThumbSlider.createImageIcon (
            String path )  [static], [protected]
```

Definition at line 343 of file MThumbSlider.java.

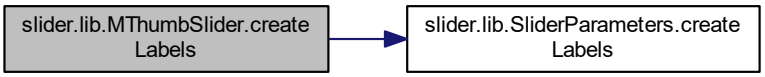
Here is the caller graph for this function:



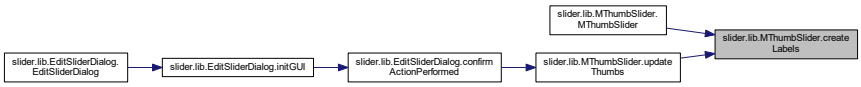
7.5.3.4 createLabels()

```
void slider.lib.MThumbSlider.createLabels ( )
```

Definition at line 151 of file MThumbSlider.java.
Here is the call graph for this function:



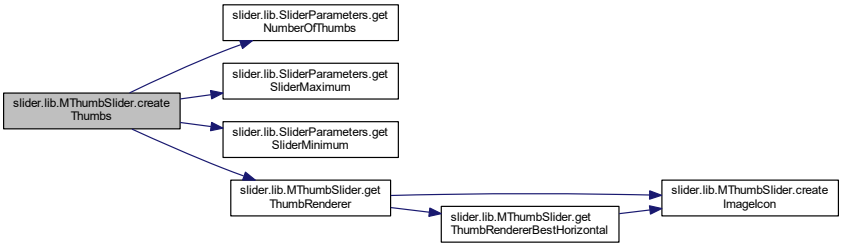
Here is the caller graph for this function:



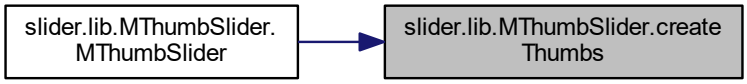
7.5.3.5 createThumbs()

```
void slider.lib.MThumbSlider.createThumbs ( )  [private]
```

Create thumbs.
Definition at line 66 of file MThumbSlider.java.
Here is the call graph for this function:



Here is the caller graph for this function:



7.5.3.6 getBoxHeight()

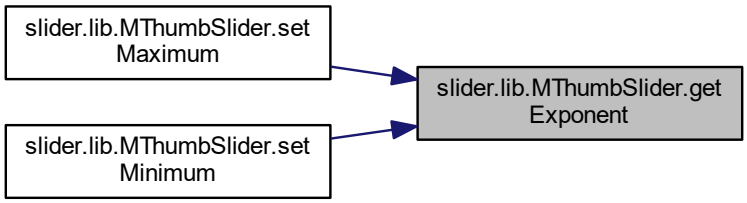
```
int slider.lib.MThumbSlider.getBoxHeight (
            int n )
```

Definition at line 444 of file MThumbSlider.java.
Here is the caller graph for this function:

7.5.3.7 getExponent()

```
int slider.lib.MThumbSlider.getExponent (
            double value ) throws NumberFormatException  [private]
```

Definition at line 323 of file MThumbSlider.java.
Here is the caller graph for this function:



7.5.3.8 getMaxHistogram()

```
int slider.lib.MThumbSlider.getMaxHistogram ( )
```

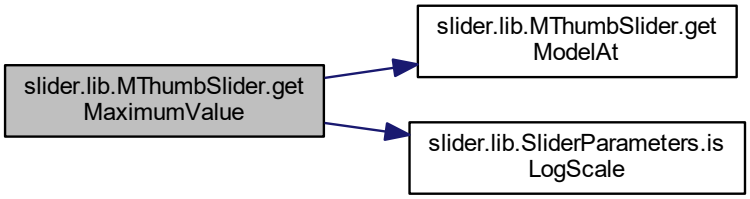
Definition at line 425 of file MThumbSlider.java.

7.5.3.9 getMaximumValue()

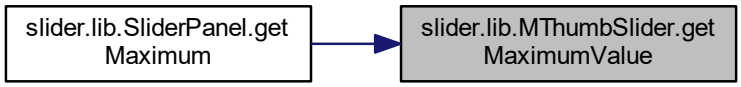
```
double slider.lib.MThumbSlider.getMaximumValue ( )
```

Definition at line 290 of file MThumbSlider.java.

Here is the call graph for this function:



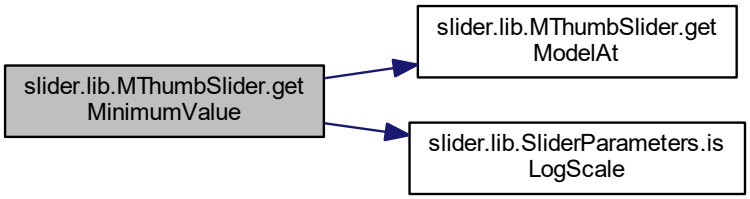
Here is the caller graph for this function:



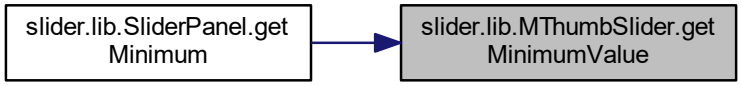
7.5.3.10 getMinimumValue()

```
double slider.lib.MThumbSlider.getMinimumValue ( )
```

Definition at line 255 of file MThumbSlider.java.
Here is the call graph for this function:



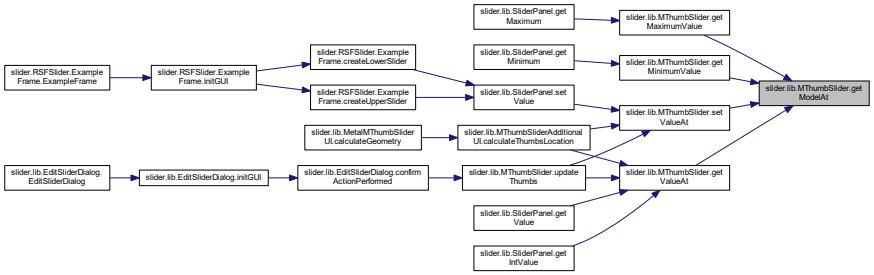
Here is the caller graph for this function:



7.5.3.11 getModelAt()

```
BoundedRangeModel slider.lib.MThumbSlider.getModelAt (
            int index )  [private]
```

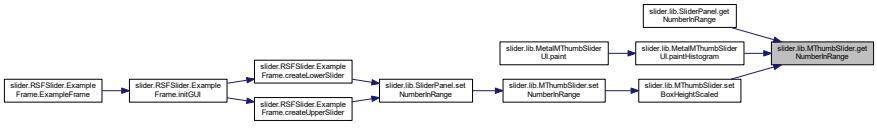
Definition at line 302 of file MThumbSlider.java.
Here is the caller graph for this function:



7.5.3.12 getNumberInRange()

```
Integer slider.lib.MThumbSlider.getNumberInRange (
            int box )
```

Definition at line 497 of file MThumbSlider.java.
Here is the caller graph for this function:



7.5.3.13 getNumberOfThumbs()

```
int slider.lib.MThumbSlider.getNumberOfThumbs ( )
```

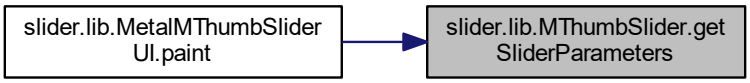
Definition at line 176 of file MThumbSlider.java.

Here is the caller graph for this function:

7.5.3.14 getSliderParameters()

```
SliderParameters slider.lib.MThumbSlider.getSliderParameters ( )
```

Definition at line 536 of file MThumbSlider.java.
Here is the caller graph for this function:



7.5.3.15 getThumbMoved()

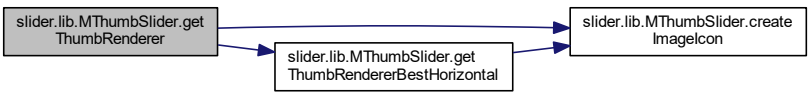
```
int slider.lib.MThumbSlider.getThumbMoved ( )
```

Definition at line 125 of file MThumbSlider.java.

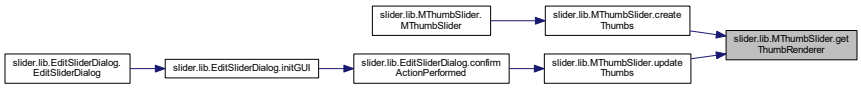
7.5.3.16 getThumbRenderer()

```
Icon slider.lib.MThumbSlider.getThumbRenderer (
            int number,
            int numberOfThumbs )  [private]
```

Definition at line 357 of file MThumbSlider.java.
Here is the call graph for this function:



Here is the caller graph for this function:



7.5.3.17 getThumbRendererAt()

```
Icon slider.lib.MThumbSlider.getThumbRendererAt (
            int index )
```

Parameters

index	

Returns

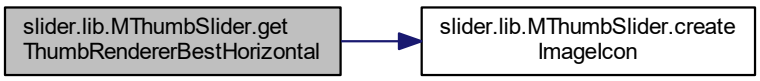
thumb renderer

Definition at line 312 of file MThumbSlider.java.

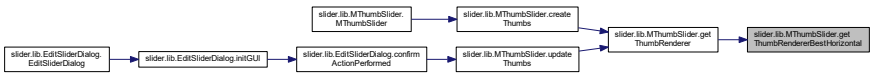
7.5.3.18 getThumbRendererBestHorizontal()

```
Icon slider.lib.MThumbSlider.getThumbRendererBestHorizontal (
            int thumbNumber,
            int numberOfThumbs )  [private]
```

Definition at line 379 of file MThumbSlider.java.
Here is the call graph for this function:



Here is the caller graph for this function:

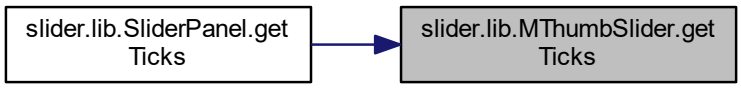


7.5.3.19 getTicks()

```
int slider.lib.MThumbSlider.getTicks ( )
```

Definition at line 541 of file MThumbSlider.java.

Here is the caller graph for this function:



7.5.3.20 getTickValues()

```
List<Integer> slider.lib.MThumbSlider.getTickValues ( )
```

Definition at line 553 of file MThumbSlider.java.

7.5.3.21 getUIClassID()

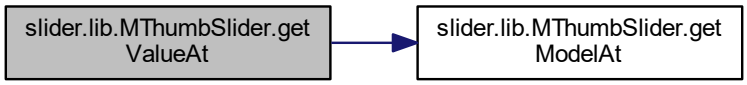
```
String slider.lib.MThumbSlider.getUIClassID ( )
```

Definition at line 164 of file MThumbSlider.java.

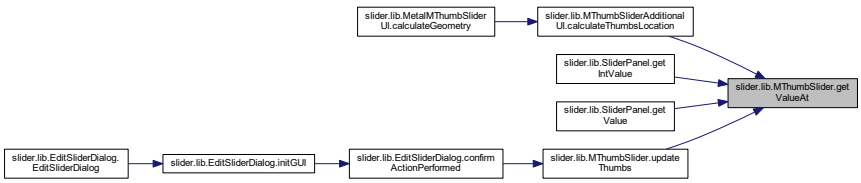
7.5.3.22 getValueAt()

```
int slider.lib.MThumbSlider.getValueAt (
            int index )
```

Definition at line 181 of file MThumbSlider.java.
Here is the call graph for this function:



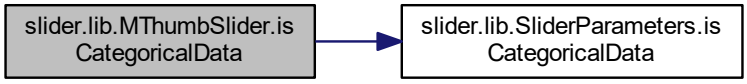
Here is the caller graph for this function:



7.5.3.23 isCategoricalData()

```
boolean slider.lib.MThumbSlider.isCategoricalData ( )
```

Definition at line 439 of file MThumbSlider.java.
Here is the call graph for this function:



Here is the caller graph for this function:

7.5.3.24 setBoxHeight()

```
void slider.lib.MThumbSlider.setBoxHeight (
            int box,
            int value )
```

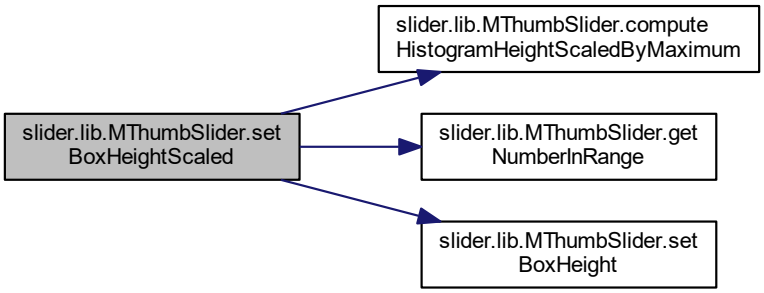
Definition at line 454 of file MThumbSlider.java.
Here is the caller graph for this function:

7.5.3.25 setBoxHeightScaled()

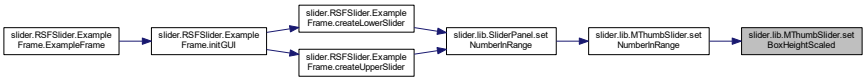
```
void slider.lib.MThumbSlider.setBoxHeightScaled (
            int box,
            int value )
```

Definition at line 461 of file MThumbSlider.java.

Here is the call graph for this function:



Here is the caller graph for this function:



7.5.3.26 setMaxHistogram()

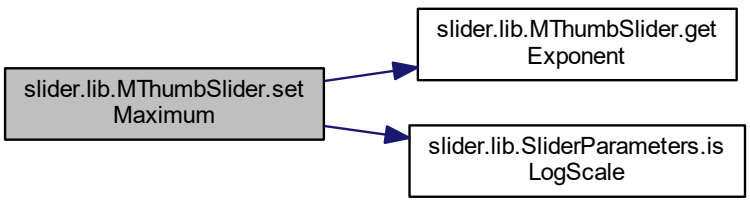
```
void slider.lib.MThumbSlider.setMaxHistogram (
            int maxHistogram )
```

Definition at line 430 of file MThumbSlider.java.

7.5.3.27 setMaximum()

```
void slider.lib.MThumbSlider.setMaximum (
            double maximum )
```

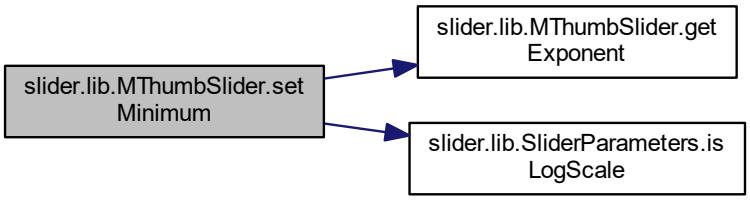
Definition at line 267 of file MThumbSlider.java.
Here is the call graph for this function:



7.5.3.28 setMinimum()

```
void slider.lib.MThumbSlider.setMinimum (
            double minimum )
```

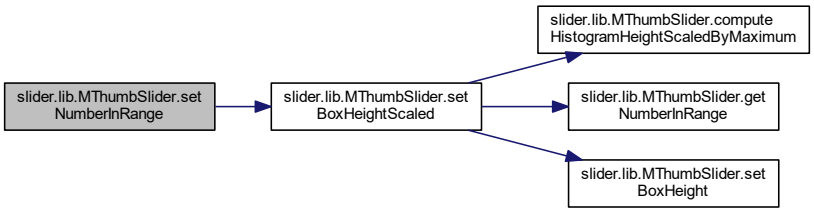
Definition at line 232 of file MThumbSlider.java.
Here is the call graph for this function:



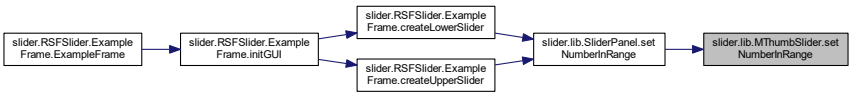
7.5.3.29 setNumberInRange()

```
void slider.lib.MThumbSlider.setNumberInRange (
            List< Integer > box,
            List< Integer > numberInRange )
```

Definition at line 469 of file MThumbSlider.java.
Here is the call graph for this function:



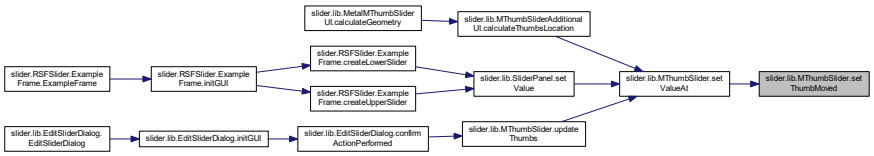
Here is the caller graph for this function:



7.5.3.30 setThumbMoved()

```
void slider.lib.MThumbSlider.setThumbMoved (
            int thumbMoved )
```

Definition at line 132 of file MThumbSlider.java.
Here is the caller graph for this function:



7.5.3.31 setThumbRendererAt()

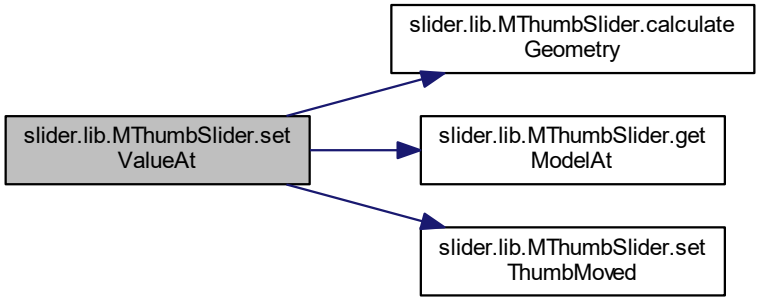
```
void slider.lib.MThumbSlider.setThumbRendererAt (
            Icon icon,
            int index )
```

Definition at line 317 of file MThumbSlider.java.

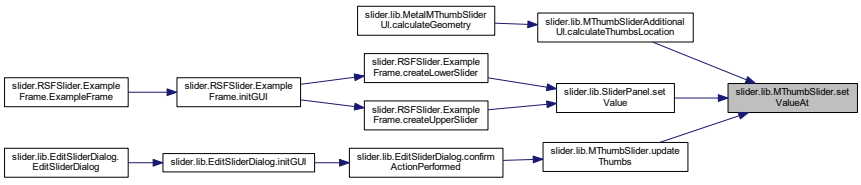
7.5.3.32 setValueAt()

```
void slider.lib.MThumbSlider.setValueAt (
            int value,
            int index,
            boolean recalculateGeometry )
```

Definition at line 186 of file MThumbSlider.java.
Here is the call graph for this function:



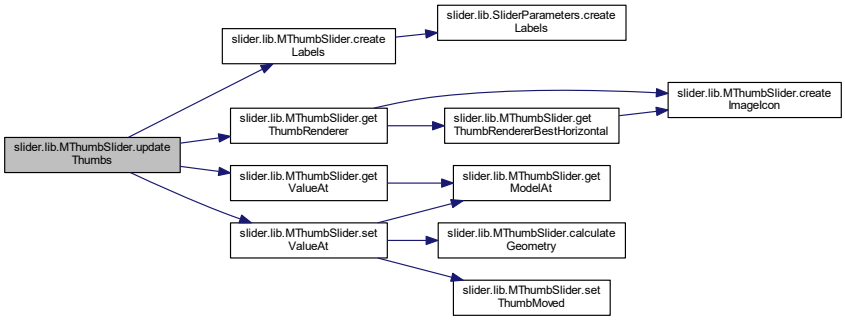
Here is the caller graph for this function:



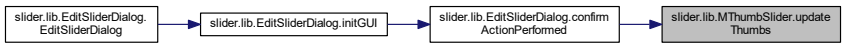
7.5.3.33 updateThumbs()

```
void slider.lib.MThumbSlider.updateThumbs (
            int n )
```

Definition at line 89 of file MThumbSlider.java.
Here is the call graph for this function:



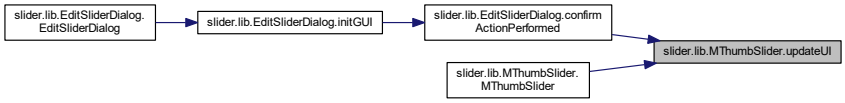
Here is the caller graph for this function:



7.5.3.34 updateUI()

```
void slider.lib.MThumbSlider.updateUI ( )
```

Definition at line 137 of file MThumbSlider.java.
Here is the caller graph for this function:



7.5.4 Member Data Documentation

7.5.4.1 boxHeight

```
HashMap<Integer, Integer> slider.lib.MThumbSlider.boxHeight = new HashMap<Integer, Integer>()
[protected]
```

Definition at line 30 of file MThumbSlider.java.

7.5.4.2 maxHistogram

```
int slider.lib.MThumbSlider.maxHistogram = 1  [private]
```
Definition at line 33 of file MThumbSlider.java.

7.5.4.3 numberInRange

```
HashMap<Integer, Integer> slider.lib.MThumbSlider.numberInRange = new HashMap<Integer, Integer>()
[protected]
```
Definition at line 31 of file MThumbSlider.java.

7.5.4.4 numberOfThumbs

```
int slider.lib.MThumbSlider.numberOfThumbs  [protected]
```
Definition at line 24 of file MThumbSlider.java.

7.5.4.5 recomputeHistogram

```
boolean slider.lib.MThumbSlider.recomputeHistogram = false  [private]
```
Definition at line 32 of file MThumbSlider.java.

7.5.4.6 sliderModels

```
ArrayList<BoundedRangeModel> slider.lib.MThumbSlider.sliderModels  [protected]
```
Definition at line 25 of file MThumbSlider.java.

7.5.4.7 sliderParameters

```
SliderParameters slider.lib.MThumbSlider.sliderParameters = null  [private]
```
Definition at line 22 of file MThumbSlider.java.

7.5.4.8 thumbMoved

```
int slider.lib.MThumbSlider.thumbMoved = -1  [protected]
```
Definition at line 28 of file MThumbSlider.java.

7.5.4.9 thumbRenderers

```
ArrayList<Icon> slider.lib.MThumbSlider.thumbRenderers  [protected]
```
Definition at line 26 of file MThumbSlider.java.

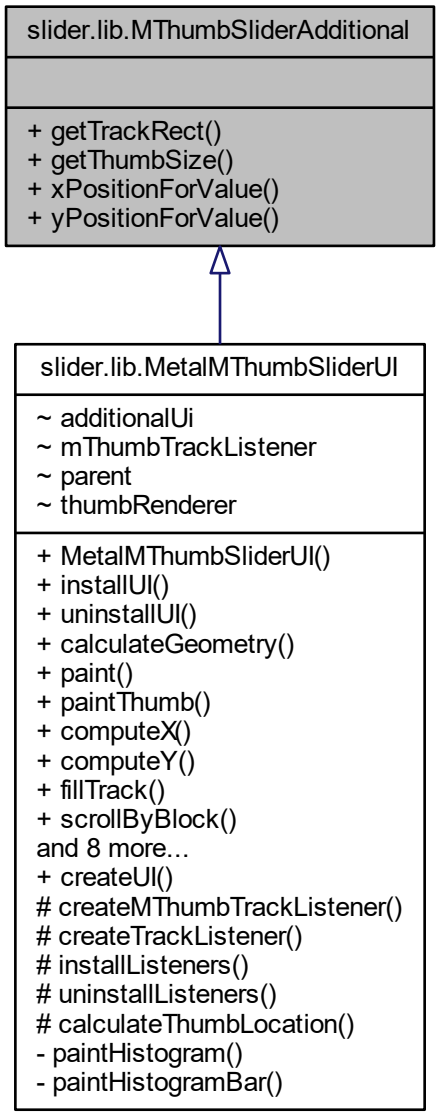
7.5.4.10 uiClassID

```
final String slider.lib.MThumbSlider.uiClassID = "MThumbSliderUI"  [static], [private]
```
Definition at line 20 of file MThumbSlider.java.
The documentation for this class was generated from the following file:

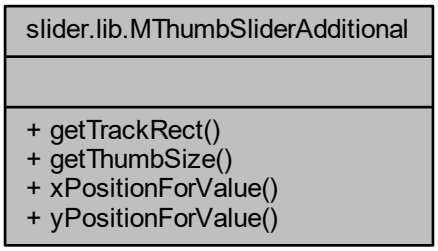
- src/slider/lib/MThumbSlider.java

7.6 slider.lib.MThumbSliderAdditional Interface Reference

Inheritance diagram for slider.lib.MThumbSliderAdditional:



Collaboration diagram for slider.lib.MThumbSliderAdditional:



Public Member Functions

- Rectangle getTrackRect ()
- Dimension getThumbSize ()
- int xPositionForValue (int value)

  Gets the x position of thumb tip for that value on the slider body.
- int yPositionForValue (int value)

  Gets the y position of thumb tip for that value on the slider body.

7.6.1 Detailed Description

This interface should be implemented by the following look and feel classes: BasicMThumbSliderUI, MetalMThumbSliderUI, and MotifMThumbSliderUI. Nevertheless, currently only the MetalMThumbSliderUI is implemented.
Definition at line 9 of file MThumbSliderAdditional.java.

7.6.2 Member Function Documentation

7.6.2.1 getThumbSize()

```
Dimension slider.lib.MThumbSliderAdditional.getThumbSize ( )
```

Sets the bounding boxs of all thumbs
Implemented in slider.lib.MetalMThumbSliderUI.

7.6.2.2 getTrackRect()

```
Rectangle slider.lib.MThumbSliderAdditional.getTrackRect ( )
```

Gets the bounding box of the slider

Returns

the bounding box of the slider

Implemented in slider.lib.MetalMThumbSliderUI.

7.6.2.3 xPositionForValue()

```
int slider.lib.MThumbSliderAdditional.xPositionForValue (
            int value )
```

Gets the x position of thumb tip for that value on the slider body.
Implemented in slider.lib.MetalMThumbSliderUI.

7.6.2.4 yPositionForValue()

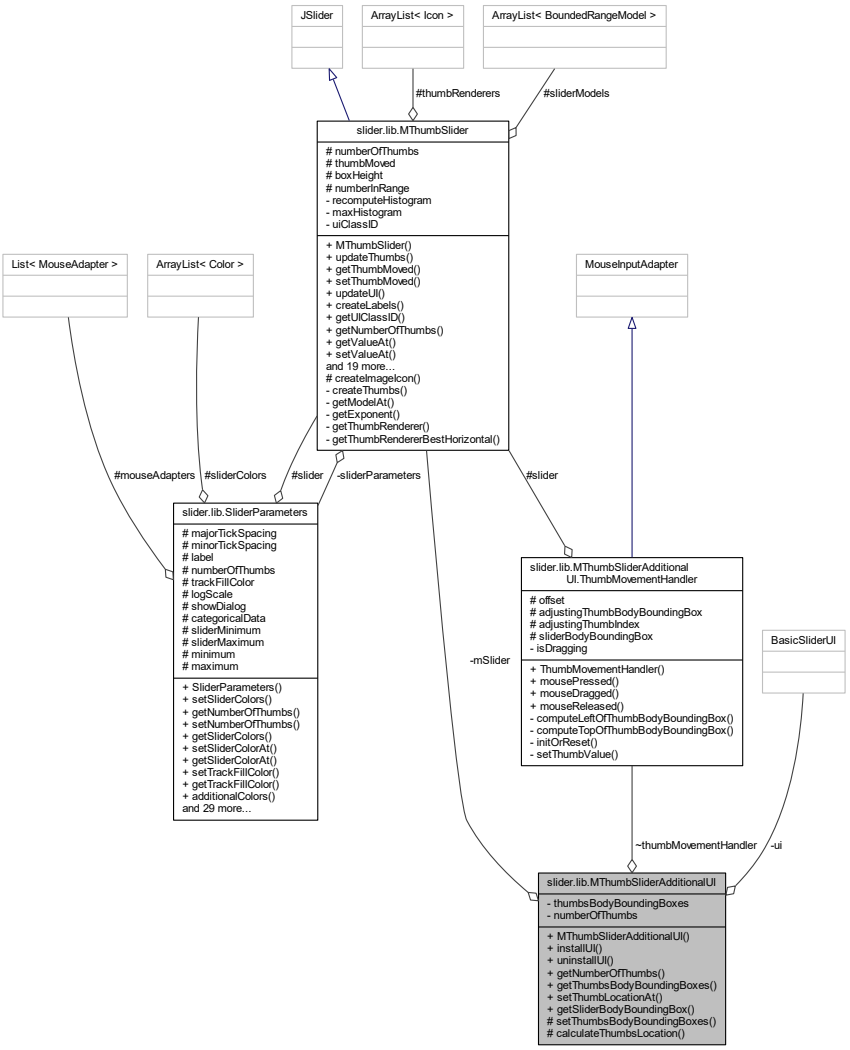
```
int slider.lib.MThumbSliderAdditional.yPositionForValue (
            int value )
```

Gets the y position of thumb tip for that value on the slider body.
Implemented in slider.lib.MetalMThumbSliderUI.
The documentation for this interface was generated from the following file:

- src/slider/lib/MThumbSliderAdditional.java

7.7 slider.lib.MThumbSliderAdditionalUI Class Reference

Collaboration diagram for slider.lib.MThumbSliderAdditionalUI:



Classes

- class ThumbMovementHandler

Public Member Functions

- MThumbSliderAdditionalUI (BasicSliderUI ui)
- void installUI (JComponent c)
- void uninstallUI (JComponent c)
- int getNumberOfThumbs ()
- Rectangle[ ] getThumbsBodyBoundingBoxes ()
- void setThumbLocationAt (int leftThumbBodyBoundingBox, int upperThumbBodyBoundingBox, int indexOf↩ CurrentThumb, MThumbSlider slider)
- Rectangle getSliderBodyBoundingBox ()

Protected Member Functions

- void setThumbsBodyBoundingBoxes ()
- void calculateThumbsLocation ()

Package Attributes

- ThumbMovementHandler thumbMovementHandler

Private Attributes

- MThumbSlider mSlider
- BasicSliderUI ui
- Rectangle[ ] thumbsBodyBoundingBoxes
- int numberOfThumbs

7.7.1 Detailed Description

This class provides the user interface behavior that is independent of the look and feel.
Definition at line 27 of file MThumbSliderAdditionalUI.java.

7.7.2 Constructor & Destructor Documentation

7.7.2.1 MThumbSliderAdditionalUI()

```
slider.lib.MThumbSliderAdditionalUI.MThumbSliderAdditionalUI (
            BasicSliderUI ui )
```

Constructor: stores the user interface

Parameters

ui	is the user interface

Definition at line 47 of file MThumbSliderAdditionalUI.java.

7.7.3 Member Function Documentation

7.7.3.1 calculateThumbsLocation()

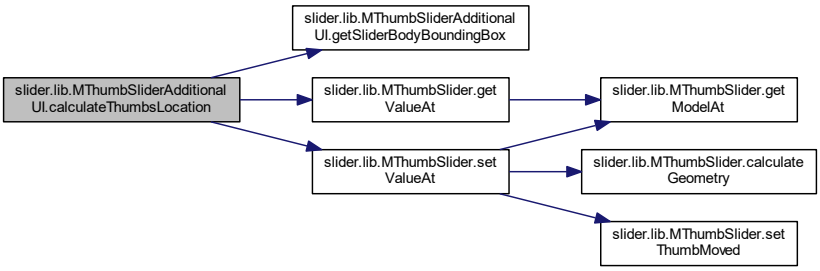
`void slider.lib.MThumbSliderAdditionalUI.calculateThumbsLocation ( ) [protected]`
Assures that the thumbtips are on the ticks of the slider and not some where in between.
Description
Gets the orientation of the slider, either vertical or horizontal

- Vertical case is not implemented yet

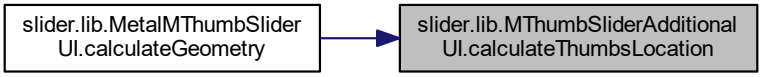
Assures that the thumbtips are on the ticks of the slider and not some where in between.
Gets the orientation of the slider, either vertical or horizontal (Vertical case **Not implemented yet**)
Gets the current thumb value
Gets the x position of thumb tip for that value on the slider body
Sets the position of the left side of the current thumb to the position of the tip - half the width of the thumb
Distinguishs if we have an odd number of thumbs or an even number of thumbs

- case of even: the left half of the thumbs position will be below the slider and the right half of the thumbs position will be over the slider
  - Example: 8-> 16 -> 8 (for four thumbs)
- case of odd: the left half of the thumbs position will be below the slider, the middle thumb is in the middle of the slider body, and the right half of the thumbs position will be over the slider
  - Example: 8-> 8-> 8 -> 8 (for five thumbs)

Definition at line 101 of file MThumbSliderAdditionalUI.java.
Here is the call graph for this function:



Here is the caller graph for this function:



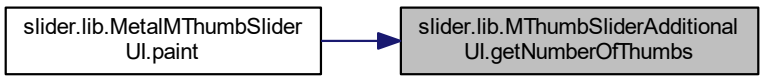
7.7.3.2 getNumberOfThumbs()

`int slider.lib.MThumbSliderAdditionalUI.getNumberOfThumbs ( )`
Gets the number of thumbs

Returns

the number of thumbs

Definition at line 194 of file MThumbSliderAdditionalUI.java.
Here is the caller graph for this function:



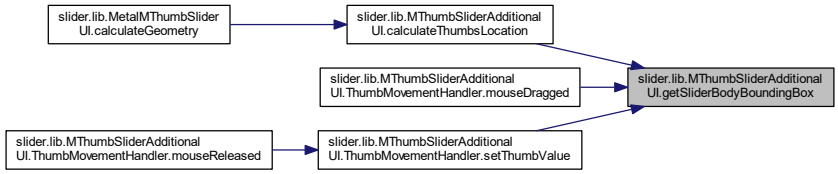
7.7.3.3 getSliderBodyBoundingBox()

`Rectangle slider.lib.MThumbSliderAdditionalUI.getSliderBodyBoundingBox ( )`
Gets the bounding box of the slider

Returns

the bounding box of the slider

Definition at line 271 of file MThumbSliderAdditionalUI.java.
Here is the caller graph for this function:



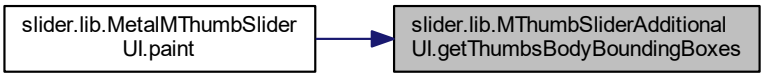
7.7.3.4 getThumbsBodyBoundingBoxes()

`Rectangle [] slider.lib.MThumbSliderAdditionalUI.getThumbsBodyBoundingBoxes ( )`
Gets the bounding boxes of all thumbs

Returns

the bounding box of all thumbs

Definition at line 204 of file MThumbSliderAdditionalUI.java.
Here is the caller graph for this function:



7.7.3.5 installUI()

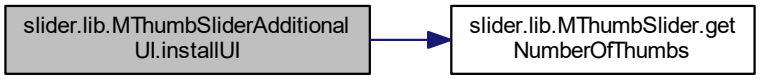
```
void slider.lib.MThumbSliderAdditionalUI.installUI (
            JComponent c )
```

Sets the number of thumbs, thumbs body bounding boxes, thumb movement handler

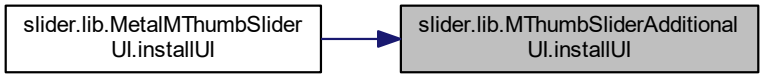
Parameters

c	is the parent component

Definition at line 57 of file MThumbSliderAdditionalUI.java.
Here is the call graph for this function:



Here is the caller graph for this function:



7.7.3.6 setThumbLocationAt()

```
void slider.lib.MThumbSliderAdditionalUI.setThumbLocationAt (
            int leftThumbBodyBoundingBox,
            int upperThumbBodyBoundingBox,
            int indexOfCurrentThumb,
            MThumbSlider slider )
```

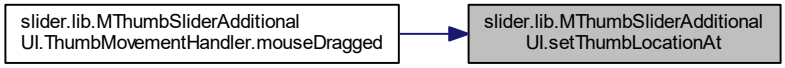
This is the method for the cascading effect, there are two types of sliders, one vertical and another horizontal.

Parameters

leftThumbBodyBoundingBox	is the leftThumbBodyBoundingBox location of the thumb number indexOfCurrentThumb
upperThumbBodyBoundingBox	is the upperThumbBodyBoundingBox location of the thumb number indexOfCurrentThumb
indexOfCurrentThumb	is the indexOfCurrentThumb of the thumb whose location should be changed
slider	is the slider to change

Description Calculates the union of the old and the new bounding boxes of the thumbs to repaint the old one with

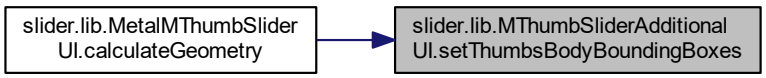
the background and the new one with the thumb
Definition at line 221 of file MThumbSliderAdditionalUI.java.
Here is the caller graph for this function:



7.7.3.7 setThumbsBodyBoundingBoxes()

```
void slider.lib.MThumbSliderAdditionalUI.setThumbsBodyBoundingBoxes ( )  [protected]
```

Sets the bounding boxs of all thumbs
Definition at line 83 of file MThumbSliderAdditionalUI.java.
Here is the caller graph for this function:



7.7.3.8 uninstallUI()

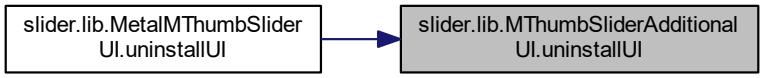
```
void slider.lib.MThumbSliderAdditionalUI.uninstallUI (
            JComponent c )
```

Unsets the thumbs body bounding boxes and the thumb movement handler (invalidating them).

Parameters

c	is the parent component

Definition at line 74 of file MThumbSliderAdditionalUI.java.
Here is the caller graph for this function:



7.7.4 Member Data Documentation

7.7.4.1 mSlider

`MThumbSlider slider.lib.MThumbSliderAdditionalUI.mSlider [private]`
Definition at line 37 of file MThumbSliderAdditionalUI.java.

7.7.4.2 numberOfThumbs

`int slider.lib.MThumbSliderAdditionalUI.numberOfThumbs [private]`
Definition at line 40 of file MThumbSliderAdditionalUI.java.

7.7.4.3 thumbMovementHandler

`ThumbMovementHandler slider.lib.MThumbSliderAdditionalUI.thumbMovementHandler [package]`
MThumbSlider mSlider is the multithumb slider from Java Swing BasicSliderUI ui is the user interface Rectangle[] thumbsBodyBoundingBoxes are the bounding boxes of all thumbs int thumbNum is the thumb number starts from 0 ThumbMovementHandler thumbMovementHandler is the handler of the mouse events
Definition at line 36 of file MThumbSliderAdditionalUI.java.

7.7.4.4 thumbsBodyBoundingBoxes

`Rectangle [] slider.lib.MThumbSliderAdditionalUI.thumbsBodyBoundingBoxes [private]`
Definition at line 39 of file MThumbSliderAdditionalUI.java.

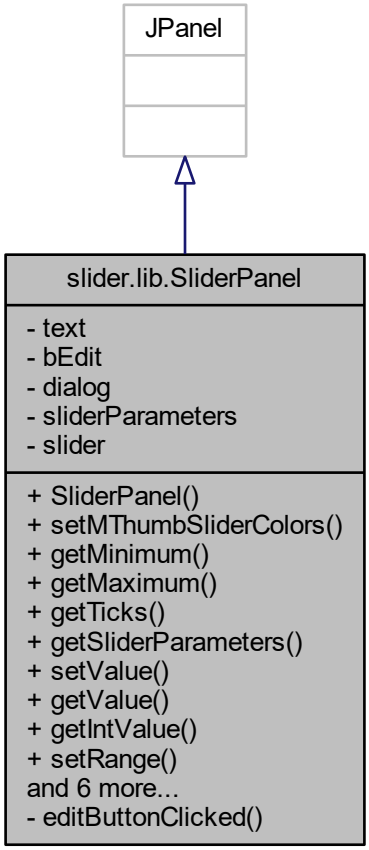
7.7.4.5 ui

`BasicSliderUI slider.lib.MThumbSliderAdditionalUI.ui [private]`
Definition at line 38 of file MThumbSliderAdditionalUI.java.
The documentation for this class was generated from the following file:

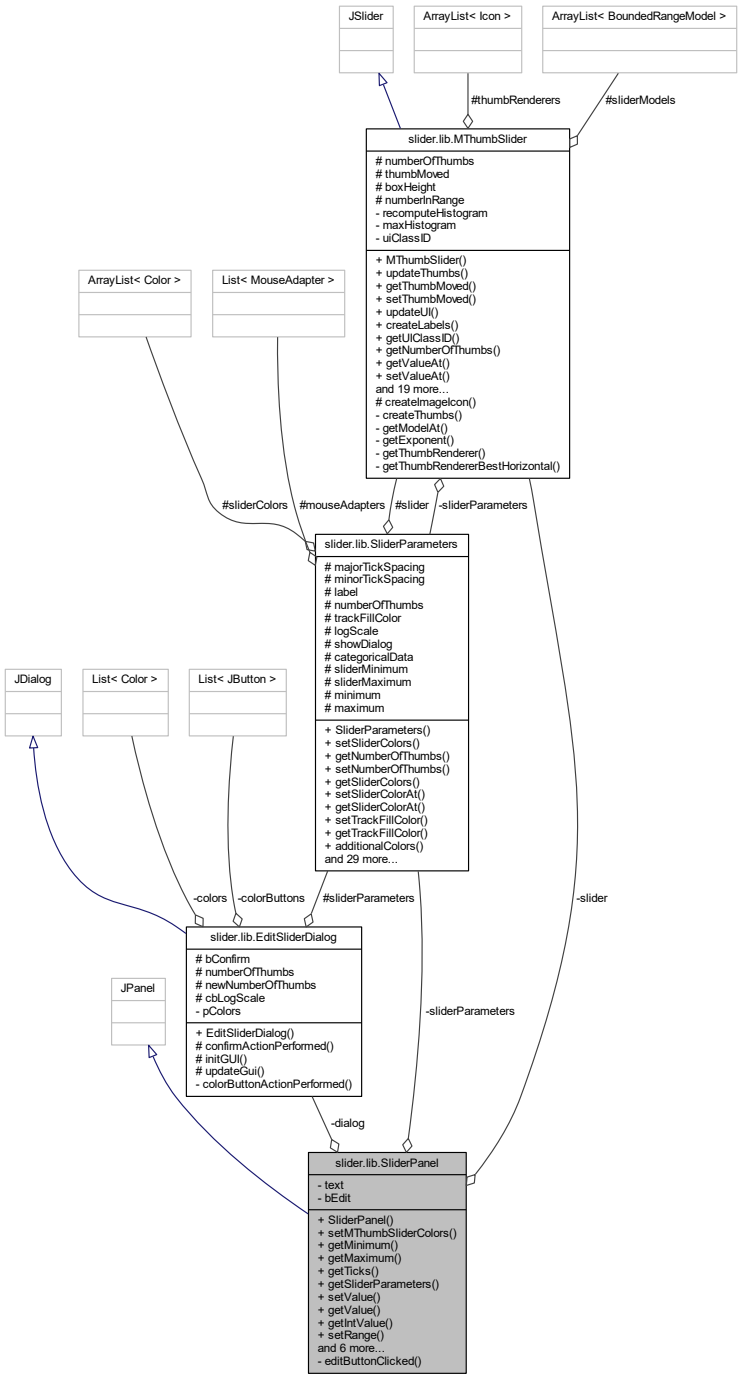
- src/slider/lib/MThumbSliderAdditionalUI.java

7.8 slider.lib.SliderPanel Class Reference

Inheritance diagram for slider.lib.SliderPanel:



Collaboration diagram for slider.lib.SliderPanel:



Public Member Functions

- SliderPanel (SliderParameters sliderParameters)
- void setMThumbSliderColors (int colorCode)
- double getMinimum ()
- double getMaximum ()
- int getTicks ()
- SliderParameters getSliderParameters ()

- void setValue (double value, int index)
- double getValue (int index)
- int getIntValue (int index)
- void setRange (double minimum, double maximum)
- void setMinimum (double minimum)
- void setMaximum (double maximum)
- void setNumberInRange (List< Integer > box, List< Integer > numberInRange)
- int getNumberInRange (int box)
- void paint (Graphics g)
- List< Integer > getTickValues ()

Private Member Functions

- void editButtonClicked (ActionEvent e)

Private Attributes

- JLabel text
- JButton bEdit
- EditSliderDialog dialog = null
- SliderParameters sliderParameters = null
- MThumbSlider slider = null

7.8.1 Detailed Description

Definition at line 12 of file SliderPanel.java.

7.8.2 Constructor & Destructor Documentation

7.8.2.1 SliderPanel()

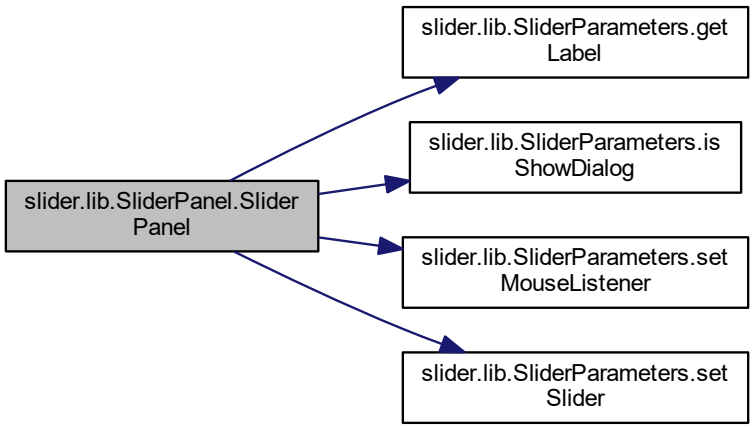
```
slider.lib.SliderPanel.SliderPanel (
            SliderParameters sliderParameters )
```

Parameters

sliderParameters	

Definition at line 27 of file SliderPanel.java.

Here is the call graph for this function:

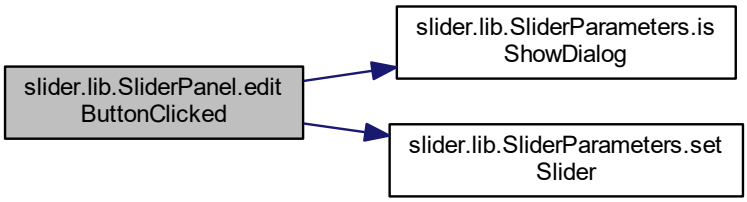


7.8.3 Member Function Documentation

7.8.3.1 editButtonClicked()

```
void slider.lib.SliderPanel.editButtonClicked (
            ActionEvent e )  [private]
```

Definition at line 231 of file SliderPanel.java.
Here is the call graph for this function:

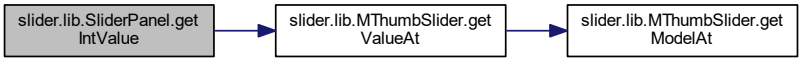


7.8.3.2 getIntValue()

```
int slider.lib.SliderPanel.getIntValue (
            int index )
```

Definition at line 114 of file SliderPanel.java.

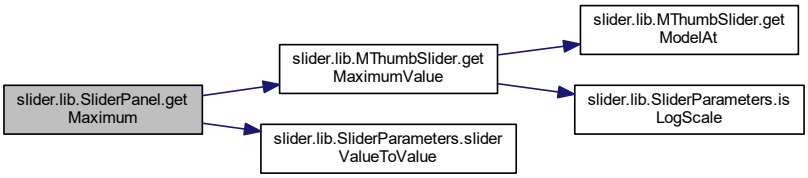
Here is the call graph for this function:



7.8.3.3 getMaximum()

```
double slider.lib.SliderPanel.getMaximum ( )
```

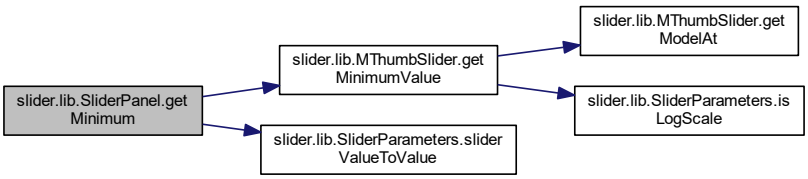
Definition at line 88 of file SliderPanel.java.
Here is the call graph for this function:



7.8.3.4 getMinimum()

```
double slider.lib.SliderPanel.getMinimum ( )
```

Definition at line 83 of file SliderPanel.java.
Here is the call graph for this function:

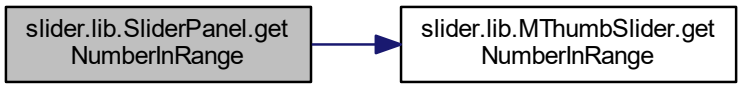


7.8.3.5 getNumberInRange()

```
int slider.lib.SliderPanel.getNumberInRange (
            int box )
```

Definition at line 221 of file SliderPanel.java.

Here is the call graph for this function:



7.8.3.6 getSliderParameters()

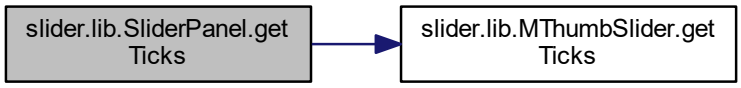
```
SliderParameters slider.lib.SliderPanel.getSliderParameters ( )
```

Definition at line 98 of file SliderPanel.java.

7.8.3.7 getTicks()

```
int slider.lib.SliderPanel.getTicks ( )
```

Definition at line 93 of file SliderPanel.java.
Here is the call graph for this function:



7.8.3.8 getTickValues()

```
List<Integer> slider.lib.SliderPanel.getTickValues ( )
```

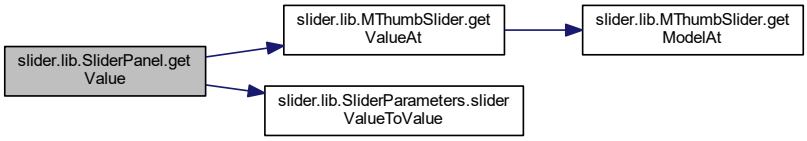
Definition at line 241 of file SliderPanel.java.

7.8.3.9 getValue()

```
double slider.lib.SliderPanel.getValue (
            int index )
```

Definition at line 109 of file SliderPanel.java.

Here is the call graph for this function:



7.8.3.10 paint()

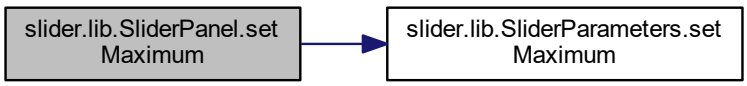
```
void slider.lib.SliderPanel.paint (
            Graphics g )
```

Definition at line 226 of file SliderPanel.java.

7.8.3.11 setMaximum()

```
void slider.lib.SliderPanel.setMaximum (
            double maximum )
```

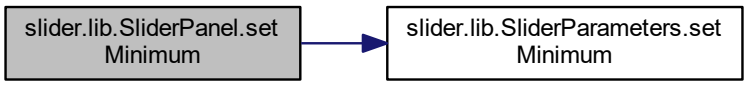
Definition at line 181 of file SliderPanel.java.
Here is the call graph for this function:



7.8.3.12 setMinimum()

```
void slider.lib.SliderPanel.setMinimum (
            double minimum )
```

Definition at line 151 of file SliderPanel.java.
Here is the call graph for this function:



7.8.3.13 setMThumbSliderColors()

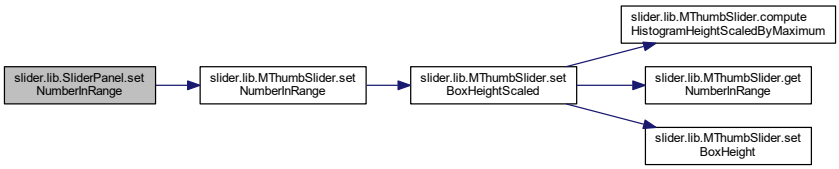
```
void slider.lib.SliderPanel.setMThumbSliderColors (
            int colorCode )
```

Definition at line 78 of file SliderPanel.java.
Here is the call graph for this function:

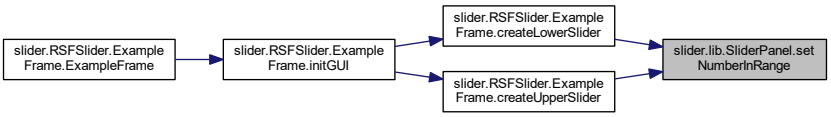
7.8.3.14 setNumberInRange()

```
void slider.lib.SliderPanel.setNumberInRange (
            List< Integer > box,
            List< Integer > numberInRange )
```

Definition at line 211 of file SliderPanel.java.
Here is the call graph for this function:



Here is the caller graph for this function:

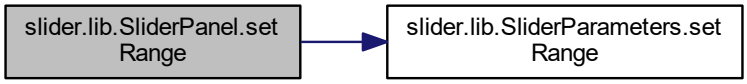


7.8.3.15 setRange()

```
void slider.lib.SliderPanel.setRange (
            double minimum,
            double maximum )
```

Definition at line 119 of file SliderPanel.java.

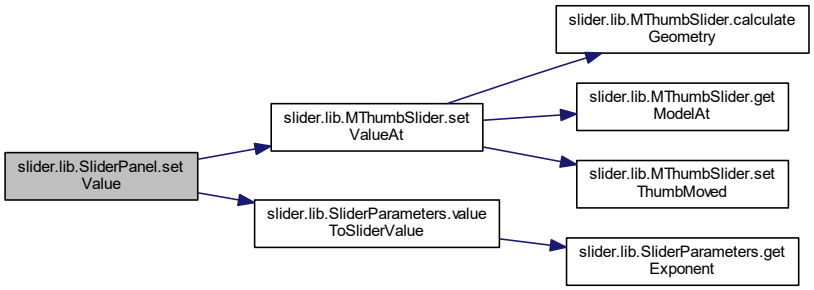
Here is the call graph for this function:



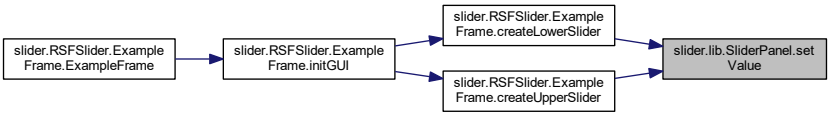
7.8.3.16 setValue()

```
void slider.lib.SliderPanel.setValue (
            double value,
            int index )
```

Definition at line 103 of file SliderPanel.java.
Here is the call graph for this function:



Here is the caller graph for this function:



7.8.4 Member Data Documentation

7.8.4.1 bEdit

```
JButton slider.lib.SliderPanel.bEdit  [private]
```

Definition at line 18 of file SliderPanel.java.

7.8.4.2 dialog

`EditSliderDialog slider.lib.SliderPanel.dialog = null [private]`
Definition at line 19 of file SliderPanel.java.

7.8.4.3 slider

`MThumbSlider slider.lib.SliderPanel.slider = null [private]`
Definition at line 22 of file SliderPanel.java.

7.8.4.4 sliderParameters

`SliderParameters slider.lib.SliderPanel.sliderParameters = null [private]`
Definition at line 21 of file SliderPanel.java.

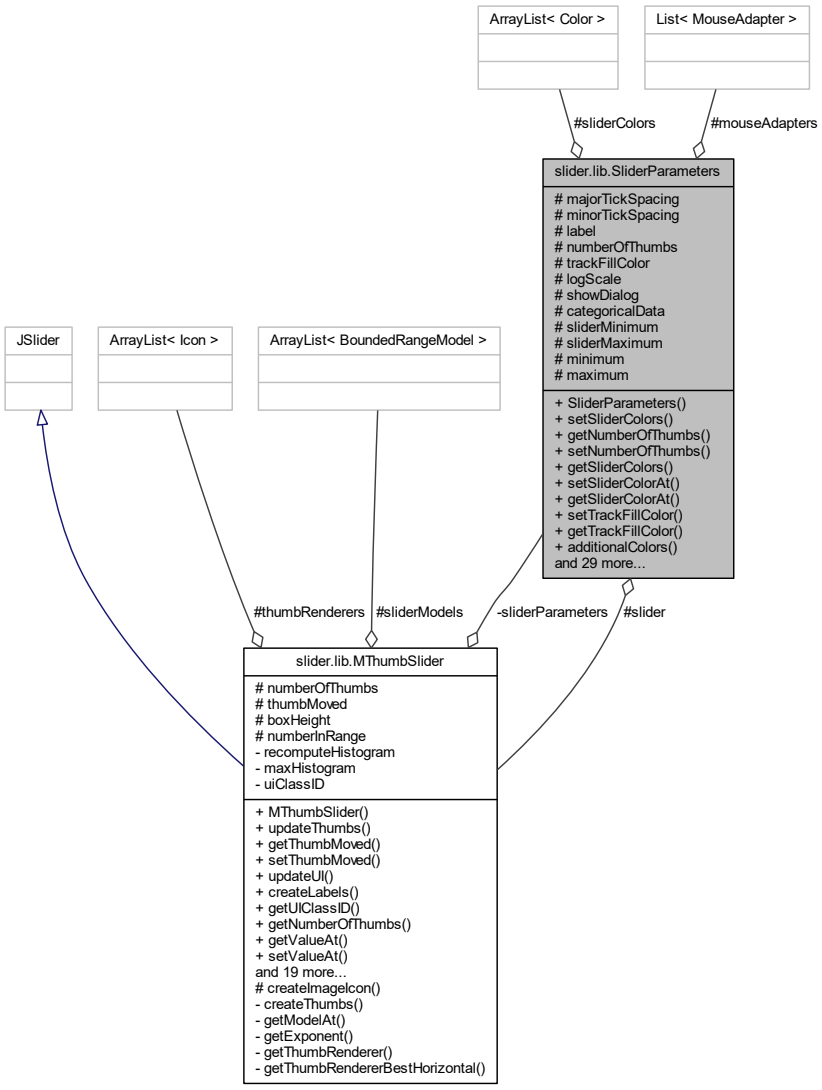
7.8.4.5 text

`JLabel slider.lib.SliderPanel.text [private]`
Definition at line 17 of file SliderPanel.java.
The documentation for this class was generated from the following file:

- src/slider/lib/SliderPanel.java

7.9 slider.lib.SliderParameters Class Reference

Collaboration diagram for slider.lib.SliderParameters:



Public Member Functions

- SliderParameters ()
- void setSliderColors (int colorCode)
- int getNumberOfThumbs ()
- void setNumberOfThumbs (int numberOfThumbs)
- ArrayList getSliderColors ()
- void setSliderColorAt (int index, Color color)
- Color getSliderColorAt (int index)
- void setTrackFillColor (Color color)
- Color getTrackFillColor ()
- void additionalColors (int n)
- void setSlider (MThumbSlider slider)
- MThumbSlider getSlider ()

- boolean isLogScale ()
- void setLogScale (boolean logScale)
- boolean hasColor ()
- int getMajorTickSpacing ()
- void setMajorTickSpacing (int majorTickSpacing)
- int getMinorTickSpacing ()
- void setMinorTickSpacing (int minorTickSpacing)
- String getLabel ()
- void setLabel (String label)
- void addMouseAdapter (MouseAdapter mouseAdapter)
- void setMouseListener (JSlider slider)
- boolean isShowDialog ()
- void setShowDialog (boolean showDialog)
- void setRange (double minimum, double maximum)
- void setMinimum (double minimum)
- void setMaximum (double maximum)
- double getMinimum ()
- double getMaximum ()
- int getSliderMinimum ()
- int getSliderMaximum ()
- Hashtable< Integer, JLabel > createLabels (int minimumValue, int maximumValue)
- double sliderValueToValue (double value)
- double valueToSliderValue (double value)
- int getExponent (double value) throws NumberFormatException
- boolean isCategoricalData ()
- void setCategoricalData (boolean categoricalData)
- void updateSlider ()

Protected Attributes

- MThumbSlider slider = null
- int majorTickSpacing = 10
- int minorTickSpacing = 1
- String label = ""
- int numberOfThumbs = 2
- ArrayList< Color > sliderColors = null
- Color trackFillColor = MetalLookAndFeel.getControlShadow()
- boolean logScale
- boolean showDialog = false
- boolean categoricalData = false
- List< MouseAdapter > mouseAdapters = new ArrayList<>()
- double sliderMinimum = 0.0
- double sliderMaximum = 10.0
- double minimum = 0.0
- double maximum = 10.0

7.9.1 Detailed Description

Parameters for sliders
Definition at line 17 of file SliderParameters.java.

7.9.2 Constructor & Destructor Documentation

7.9.2.1 SliderParameters()

```
slider.lib.SliderParameters.SliderParameters ( )
```

Constructor
Definition at line 40 of file SliderParameters.java.

7.9.3 Member Function Documentation

7.9.3.1 additionalColors()

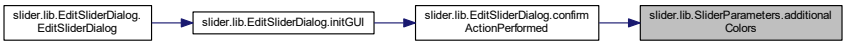
```
void slider.lib.SliderParameters.additionalColors (
            int n )
```

Set additional colors or delete unused colors.

Parameters

n	

Definition at line 173 of file SliderParameters.java.
Here is the caller graph for this function:



7.9.3.2 addMouseAdapter()

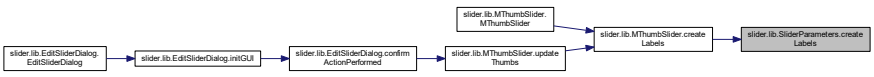
```
void slider.lib.SliderParameters.addMouseAdapter (
            MouseAdapter mouseAdapter )
```

Definition at line 269 of file SliderParameters.java.

7.9.3.3 createLabels()

```
Hashtable<Integer, JLabel> slider.lib.SliderParameters.createLabels (
            int minimumValue,
            int maximumValue )
```

Definition at line 335 of file SliderParameters.java.
Here is the caller graph for this function:

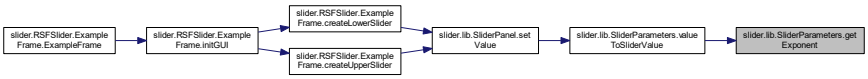


7.9.3.4 getExponent()

```
int slider.lib.SliderParameters.getExponent (
            double value ) throws NumberFormatException
```

Definition at line 366 of file SliderParameters.java.

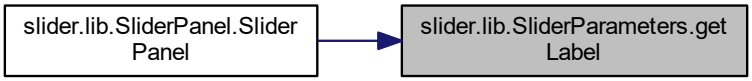
Here is the caller graph for this function:



7.9.3.5 getLabel()

```
String slider.lib.SliderParameters.getLabel ( )
```

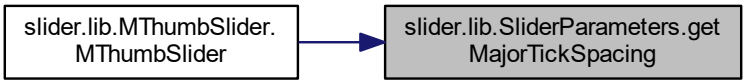
Definition at line 259 of file SliderParameters.java.
Here is the caller graph for this function:



7.9.3.6 getMajorTickSpacing()

```
int slider.lib.SliderParameters.getMajorTickSpacing ( )
```

Definition at line 239 of file SliderParameters.java.
Here is the caller graph for this function:



7.9.3.7 getMaximum()

```
double slider.lib.SliderParameters.getMaximum ( )
```

Definition at line 320 of file SliderParameters.java.

7.9.3.8 getMinimum()

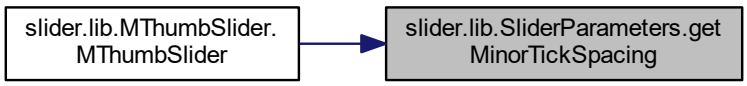
```
double slider.lib.SliderParameters.getMinimum ( )
```

Definition at line 315 of file SliderParameters.java.

7.9.3.9 getMinorTickSpacing()

```
int slider.lib.SliderParameters.getMinorTickSpacing ( )
```

Definition at line 249 of file SliderParameters.java.
Here is the caller graph for this function:



7.9.3.10 getNumberOfThumbs()

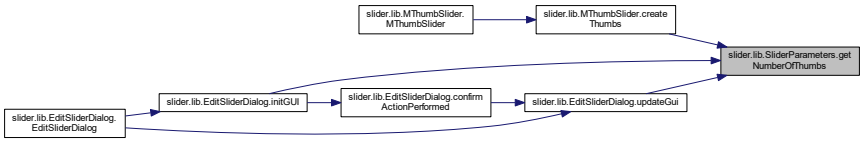
```
int slider.lib.SliderParameters.getNumberOfThumbs ( )
```

Returns number of thumbs of Slider

Returns

numberOfThumbs

Definition at line 95 of file SliderParameters.java.
Here is the caller graph for this function:



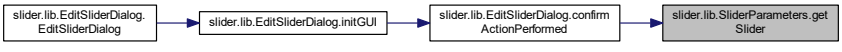
7.9.3.11 getSlider()

```
MThumbSlider slider.lib.SliderParameters.getSlider ( )
```

get parent slider

Returns

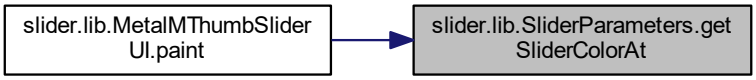
Definition at line 210 of file SliderParameters.java.
Here is the caller graph for this function:



7.9.3.12 getSliderColorAt()

```
Color slider.lib.SliderParameters.getSliderColorAt (
            int index )
```

Definition at line 137 of file SliderParameters.java.
Here is the caller graph for this function:



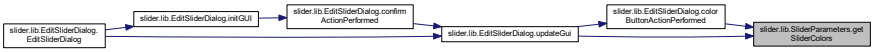
7.9.3.13 getSliderColors()

```
ArrayList slider.lib.SliderParameters.getSliderColors ( )
```

Returns

Colors Array

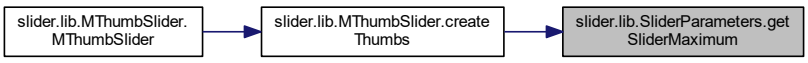
Definition at line 113 of file SliderParameters.java.
Here is the caller graph for this function:



7.9.3.14 getSliderMaximum()

```
int slider.lib.SliderParameters.getSliderMaximum ( )
```

Definition at line 330 of file SliderParameters.java.
Here is the caller graph for this function:

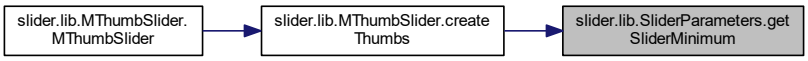


7.9.3.15 getSliderMinimum()

```
int slider.lib.SliderParameters.getSliderMinimum ( )
```

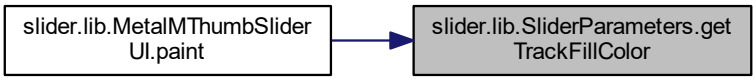
Definition at line 325 of file SliderParameters.java.

Here is the caller graph for this function:



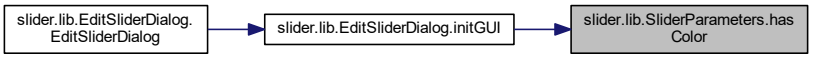
7.9.3.16 getTrackFillColor()

`Color slider.lib.SliderParameters.getTrackFillColor ( )`
Definition at line 156 of file SliderParameters.java.
Here is the caller graph for this function:



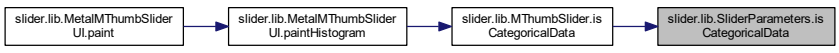
7.9.3.17 hasColor()

`boolean slider.lib.SliderParameters.hasColor ( )`
Definition at line 234 of file SliderParameters.java.
Here is the caller graph for this function:



7.9.3.18 isCategoricalData()

`boolean slider.lib.SliderParameters.isCategoricalData ( )`
Definition at line 390 of file SliderParameters.java.
Here is the caller graph for this function:

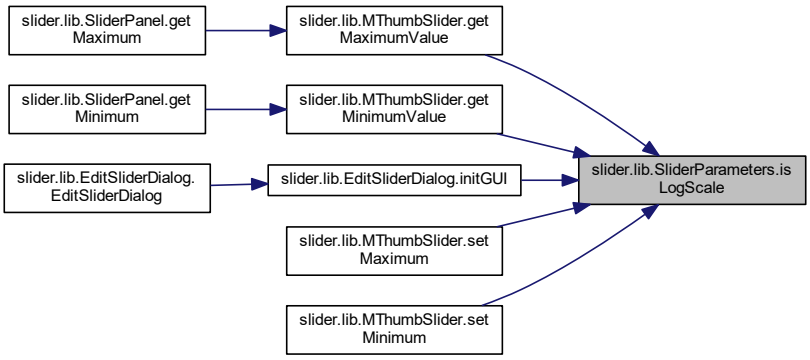


7.9.3.19 isLogScale()

```
boolean slider.lib.SliderParameters.isLogScale ( )
```

Returns

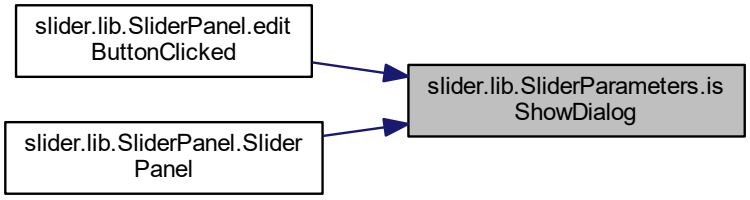
Definition at line 218 of file SliderParameters.java.
Here is the caller graph for this function:



7.9.3.20 isShowDialog()

```
boolean slider.lib.SliderParameters.isShowDialog ( )
```

Definition at line 282 of file SliderParameters.java.
Here is the caller graph for this function:



7.9.3.21 setCategoricalData()

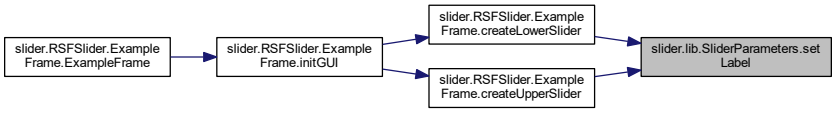
```
void slider.lib.SliderParameters.setCategoricalData (
            boolean categoricalData )
```

Definition at line 395 of file SliderParameters.java.

7.9.3.22 setLabel()

```
void slider.lib.SliderParameters.setLabel (
            String label )
```

Definition at line 264 of file SliderParameters.java.
Here is the caller graph for this function:



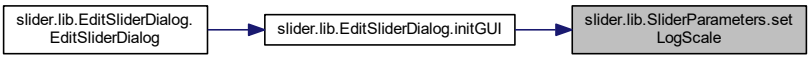
7.9.3.23 setLogScale()

```
void slider.lib.SliderParameters.setLogScale (
            boolean logScale )
```

Parameters

logScale	

Definition at line 226 of file SliderParameters.java.
Here is the caller graph for this function:



7.9.3.24 setMajorTickSpacing()

```
void slider.lib.SliderParameters.setMajorTickSpacing (
            int majorTickSpacing )
```

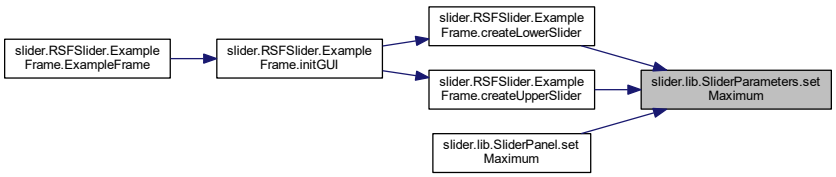
Definition at line 244 of file SliderParameters.java.

7.9.3.25 setMaximum()

```
void slider.lib.SliderParameters.setMaximum (
            double maximum )
```

Definition at line 309 of file SliderParameters.java.

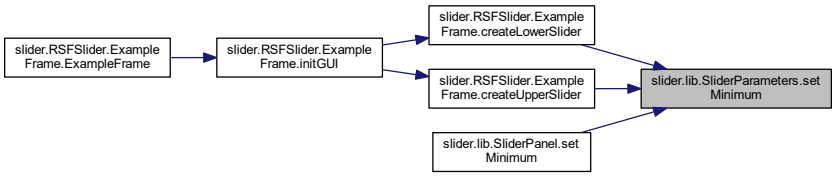
Here is the caller graph for this function:



7.9.3.26 setMinimum()

```
void slider.lib.SliderParameters.setMinimum (
            double minimum )
```

Definition at line 303 of file SliderParameters.java.
Here is the caller graph for this function:



7.9.3.27 setMinorTickSpacing()

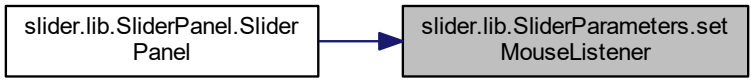
```
void slider.lib.SliderParameters.setMinorTickSpacing (
            int minorTickSpacing )
```

Definition at line 254 of file SliderParameters.java.

7.9.3.28 setMouseListener()

```
void slider.lib.SliderParameters.setMouseListener (
            JSlider slider )
```

Definition at line 274 of file SliderParameters.java.
Here is the caller graph for this function:



7.9.3.29 setNumberOfThumbs()

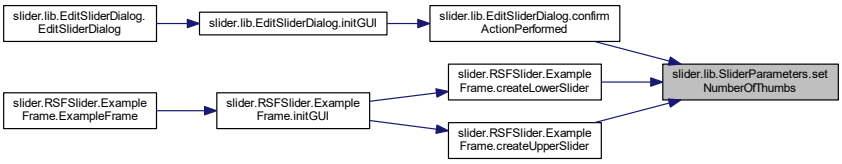
```
void slider.lib.SliderParameters.setNumberOfThumbs (
            int numberOfThumbs )
```

Sets the number of Thumbs of Slider

Parameters

numberOfThumbs	

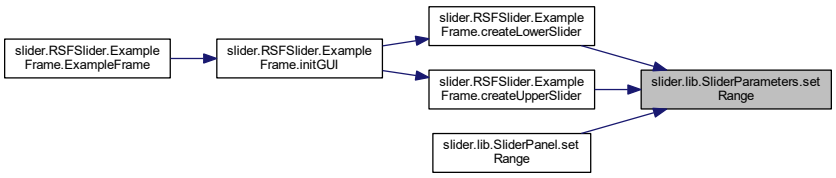
Definition at line 105 of file SliderParameters.java.
Here is the caller graph for this function:



7.9.3.30 setRange()

```
void slider.lib.SliderParameters.setRange (
            double minimum,
            double maximum )
```

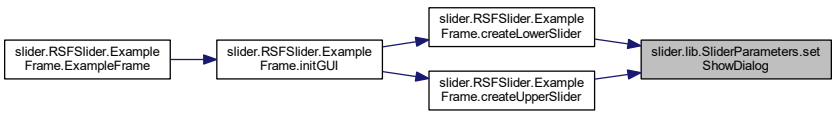
Definition at line 292 of file SliderParameters.java.
Here is the caller graph for this function:



7.9.3.31 setShowDialog()

```
void slider.lib.SliderParameters.setShowDialog (
            boolean showDialog )
```

Definition at line 287 of file SliderParameters.java.
Here is the caller graph for this function:



7.9.3.32 setSlider()

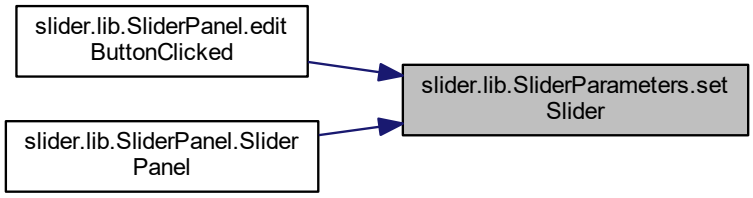
```
void slider.lib.SliderParameters.setSlider (
            MThumbSlider slider )
```

set parent slider

Parameters

slider	

Definition at line 200 of file SliderParameters.java.
Here is the caller graph for this function:



7.9.3.33 setSliderColorAt()

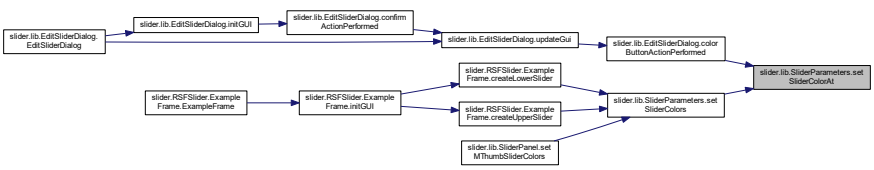
```
void slider.lib.SliderParameters.setSliderColorAt (
            int index,
            Color color )
```

Set Color of desired position

Parameters

index	
color	

Definition at line 124 of file SliderParameters.java.
Here is the caller graph for this function:

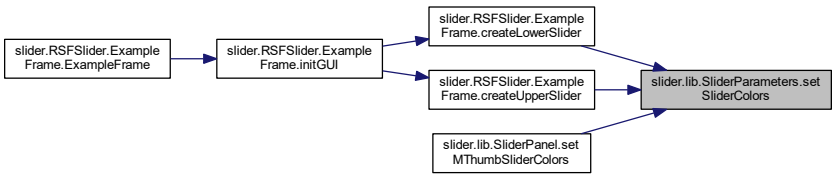


7.9.3.34 setSliderColors()

```
void slider.lib.SliderParameters.setSliderColors (
            int colorCode )
```

Definition at line 44 of file SliderParameters.java.
Here is the call graph for this function:

Here is the caller graph for this function:



7.9.3.35 setTrackFillColor()

```
void slider.lib.SliderParameters.setTrackFillColor (
            Color color )
```

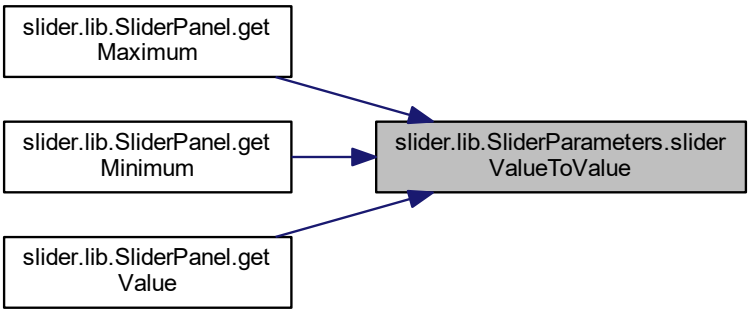
Definition at line 151 of file SliderParameters.java.

7.9.3.36 sliderValueToValue()

```
double slider.lib.SliderParameters.sliderValueToValue (
            double value )
```

Definition at line 342 of file SliderParameters.java.

Here is the caller graph for this function:



7.9.3.37 updateSlider()

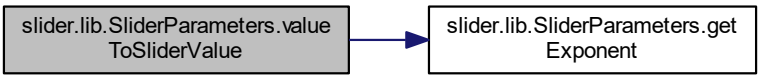
```
void slider.lib.SliderParameters.updateSlider ( )
```

Definition at line 400 of file SliderParameters.java.

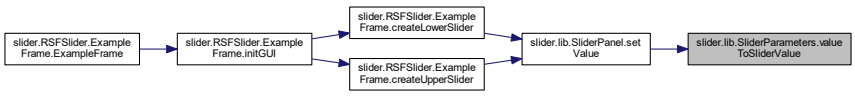
7.9.3.38 valueToSliderValue()

```
double slider.lib.SliderParameters.valueToSliderValue (
            double value )
```

Definition at line 354 of file SliderParameters.java.
Here is the call graph for this function:



Here is the caller graph for this function:



7.9.4 Member Data Documentation

7.9.4.1 categoricalData

```
boolean slider.lib.SliderParameters.categoricalData = false  [protected]
```
Definition at line 29 of file SliderParameters.java.

7.9.4.2 label

```
String slider.lib.SliderParameters.label = ""  [protected]
```
Definition at line 23 of file SliderParameters.java.

7.9.4.3 logScale

```
boolean slider.lib.SliderParameters.logScale  [protected]
```
Definition at line 27 of file SliderParameters.java.

7.9.4.4 majorTickSpacing

```
int slider.lib.SliderParameters.majorTickSpacing = 10  [protected]
```
Definition at line 21 of file SliderParameters.java.

7.9.4.5 maximum

```
double slider.lib.SliderParameters.maximum = 10.0  [protected]
```
Definition at line 35 of file SliderParameters.java.

7.9.4.6 minimum

```
double slider.lib.SliderParameters.minimum = 0.0  [protected]
```
Definition at line 34 of file SliderParameters.java.

7.9.4.7 minorTickSpacing

```
int slider.lib.SliderParameters.minorTickSpacing = 1  [protected]
```
Definition at line 22 of file SliderParameters.java.

7.9.4.8 mouseAdapters

```
List<MouseAdapter> slider.lib.SliderParameters.mouseAdapters = new ArrayList<>()  [protected]
```
Definition at line 30 of file SliderParameters.java.

7.9.4.9 numberOfThumbs

```
int slider.lib.SliderParameters.numberOfThumbs = 2  [protected]
```
Definition at line 24 of file SliderParameters.java.

7.9.4.10 showDialog

```
boolean slider.lib.SliderParameters.showDialog = false  [protected]
```
Definition at line 28 of file SliderParameters.java.

7.9.4.11 slider

```
MThumbSlider slider.lib.SliderParameters.slider = null  [protected]
```
Definition at line 20 of file SliderParameters.java.

7.9.4.12 sliderColors

```
ArrayList<Color> slider.lib.SliderParameters.sliderColors = null  [protected]
```
Definition at line 25 of file SliderParameters.java.

7.9.4.13 sliderMaximum

```
double slider.lib.SliderParameters.sliderMaximum = 10.0  [protected]
```
Definition at line 32 of file SliderParameters.java.

7.9.4.14 sliderMinimum

```
double slider.lib.SliderParameters.sliderMinimum = 0.0  [protected]
```
Definition at line 31 of file SliderParameters.java.

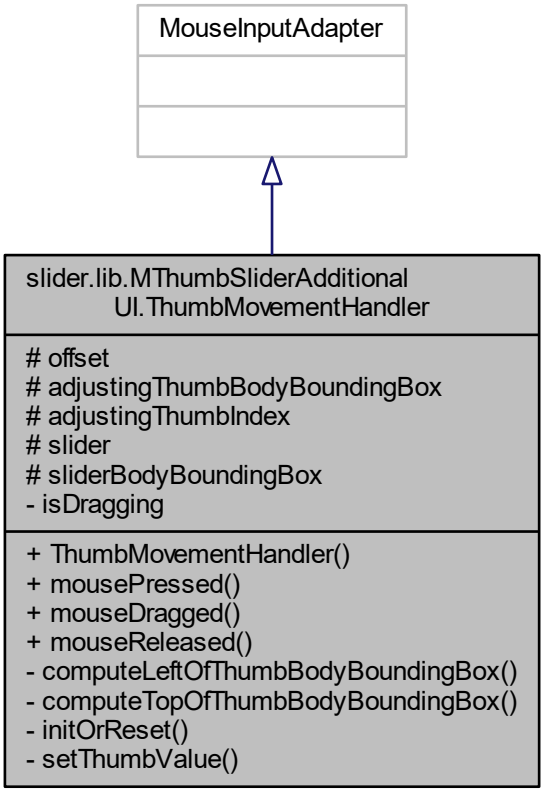
7.9.4.15 trackFillColor

```
Color slider.lib.SliderParameters.trackFillColor = MetalLookAndFeel.getControlShadow()  [protected]
```
Definition at line 26 of file SliderParameters.java.
The documentation for this class was generated from the following file:

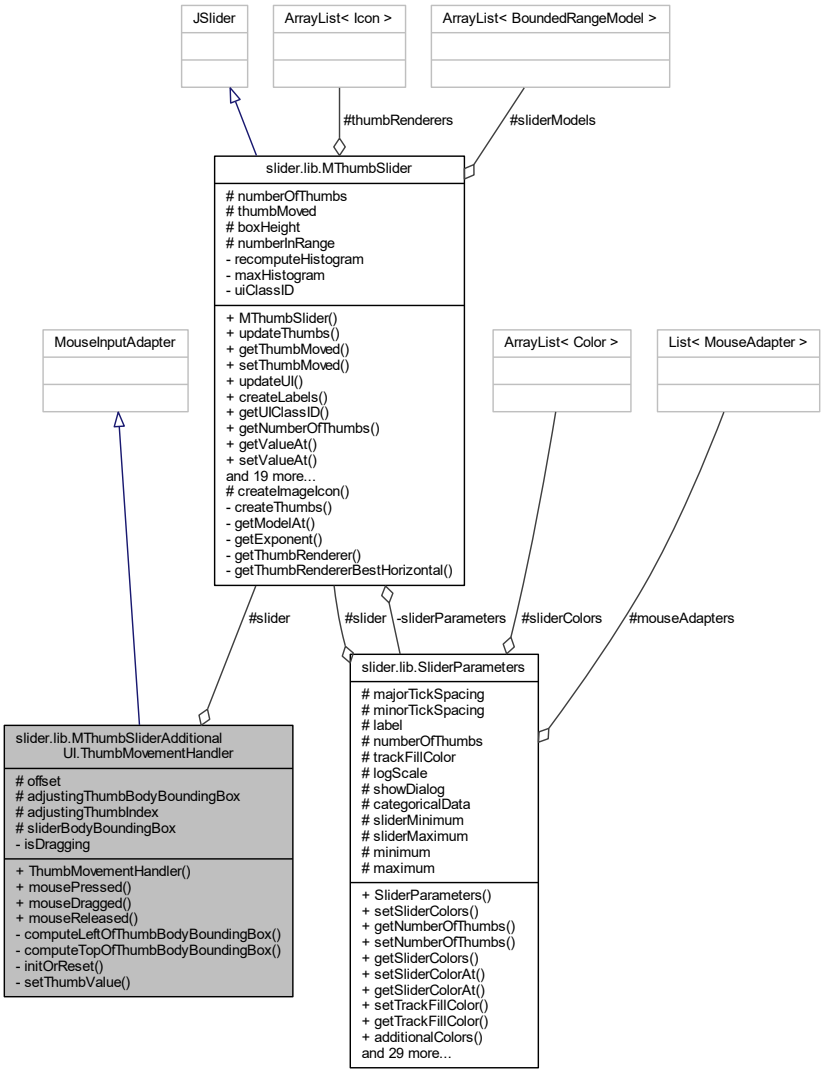
- src/slider/lib/SliderParameters.java

7.10 slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler Class Reference

Inheritance diagram for slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler:



Collaboration diagram for slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler:



Public Member Functions

- ThumbMovementHandler (MThumbSlider slider)
- void mousePressed (MouseEvent e)
- void mouseDragged (MouseEvent e)
- void mouseReleased (MouseEvent e)

Protected Attributes

- transient int offset

  The difference between the upper left corner of the bounding rectangle and the mouse position.
- Rectangle adjustingThumbBodyBoundingBox = null

  The bounding box of the thumb being adjusted.
- int adjustingThumbIndex

  The index of the thumb being adjusted.
- MThumbSlider slider

The associated slider.

- Rectangle sliderBodyBoundingBox

Private Member Functions

- int computeLeftOfThumbBodyBoundingBox (Rectangle thumbBodyBoundingBox, int initLeftOfThumbBody↩ BoundingBox)
- int computeTopOfThumbBodyBoundingBox (Rectangle thumbBodyBoundingBox, int initTopOfThumbBody↩ BoundingBox)
- void initOrReset ()
- void setThumbValue (int thumbIndex)

Private Attributes

- transient boolean isDragging

  Transient boolean isDragging: if the thumb of the slider is being dragged.

7.10.1 Detailed Description

Internal class for handling mouse events
Definition at line 279 of file MThumbSliderAdditionalUI.java.

7.10.2 Constructor & Destructor Documentation

7.10.2.1 ThumbMovementHandler()

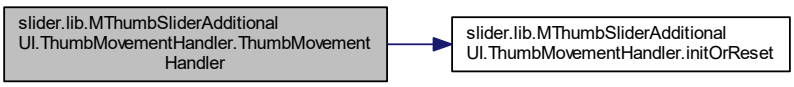
```
slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler.ThumbMovementHandler (
            MThumbSlider slider )
```

Constructor. Here the slider is stored.

Parameters

slider	slider

Definition at line 305 of file MThumbSliderAdditionalUI.java.
Here is the call graph for this function:



7.10.3 Member Function Documentation

7.10.3.1 computeLeftOfThumbBodyBoundingBox()

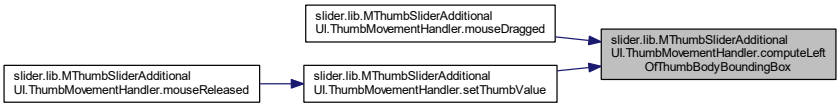
```
int slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler.computeLeftOfThumbBodyBoundingBox
(
            Rectangle thumbBodyBoundingBox,
            int initLeftOfThumbBodyBoundingBox )  [private]
```

Computes and sets new position of the current thumb for the horizontally oriented slider

Parameters

thumbBodyBoundingBox	The thumb body bounding box
initLeftOfThumbBodyBoundingBox	The initial left of the thumbs bounding box

Definition at line 448 of file MThumbSliderAdditionalUI.java.
Here is the caller graph for this function:



7.10.3.2 computeTopOfThumbBodyBoundingBox()

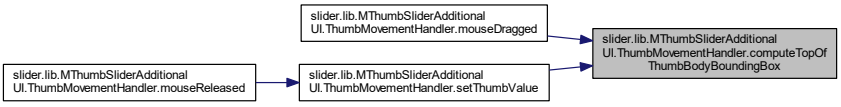
```
int slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler.computeTopOfThumbBodyBoundingBox
(
            Rectangle thumbBodyBoundingBox,
            int initTopOfThumbBodyBoundingBox )  [private]
```

Computes and sets new position of the current thumb for the vertically oriented slider

Parameters

thumbBodyBoundingBox	The thumb body bounding box
initTopOfThumbBodyBoundingBox	The initial top of the thumbs bounding box

Definition at line 473 of file MThumbSliderAdditionalUI.java.
Here is the caller graph for this function:

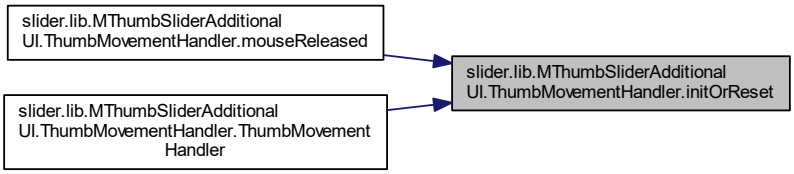


7.10.3.3 initOrReset()

```
void slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler.initOrReset ( )  [private]
```

Reset offset, dragging, value_adjusting
Definition at line 537 of file MThumbSliderAdditionalUI.java.

Here is the caller graph for this function:



7.10.3.4 mouseDragged()

```
void slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler.mouseDragged (
            MouseEvent e )
```

Mouse was dragged.

Parameters

e	mouse event

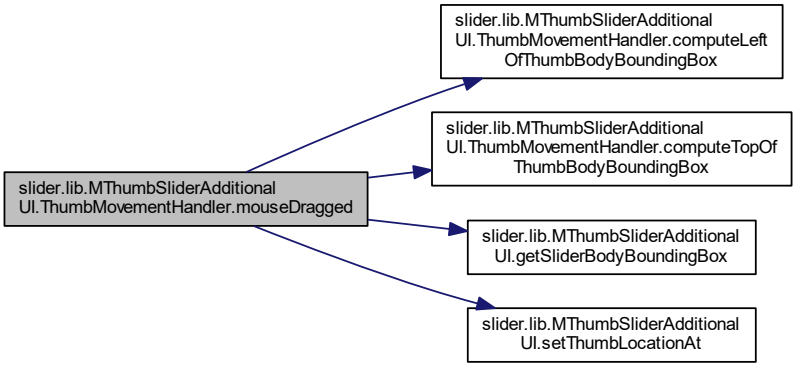
Description Checks

- if slider is enabled, i.e., can interact with the slider thumbs.
- if a thumb is dragged.
- if the bounding box of the thumb is set
  - Gets the bounding box of the dragged thumb
  - Gets the bounding box of the body (i.e., called Track) of the slider
  - Gets the orientation of the slider: either vertical or horizontal
  - Calculates the new position of the currently dragged thumb
    - Condition: The tip should not be positioned out of the slider body
      - if the tip position is smaller than the left of the slider body, position it to be on the left slider body position
      - if the tip position is larger than the right of the slider body, position it to be on the right slider body position

```
*  Example: HORIZONTAL Slider orientation:
*
*        upper left
*             *-----*         |
*              \   /          |--> Thumb
*               !             |
*            thumb tip
*              --------------------
*              |    slider body   |
*              --------------------
*             left                right
*
```

Definition at line 386 of file MThumbSliderAdditionalUI.java.

Here is the call graph for this function:



7.10.3.5 mousePressed()

```
void slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler.mousePressed (
            MouseEvent e )
```

Mouse was pressed.

Parameters

e	mouse event

Description Checks

- if slider is enabled, i.e., can interact with the slider thumbs.
  - Gets the x position of the mouse when pressed from the mouse event
  - Gets the y position of the mouse when pressed from the mouse event
  - Put focus on the slider
  - For all thumbs
    - gets the bounding box of the thumb
    - if the current mouse position is inside the bounding box of the thumb
      - Compute the offset (i.e., the difference in the x and the y positions) of the mouse with respect to the upper left corner of the bounding box of the thumb. Depending whether the slider is vertical or horizontal.
      - set the dragging flag to true
      - store the bounding box of the thumb and the index of the thumb being adjusted
      - if the thumb is already found do not go through all thumbs

Definition at line 318 of file MThumbSliderAdditionalUI.java.

7.10.3.6 mouseReleased()

```
void slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler.mouseReleased (
            MouseEvent e )
```

Mouse was released.

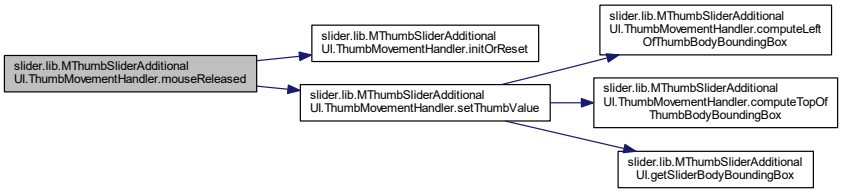
Parameters

e	mouse event

Description Checks

- if slider is enabled, i.e., can interact with the slider thumbs.
- Set the value of all thumbs
  - for all thumbs before the released (dragged) thumb, set the new thumbs values (e.g., $10^{-}13$ in MCSs analysis or any label being shown), excluding the current released thumb
  - for all thumbs after the released (dragged) thumb, set the new thumbs values, including the current released thumb
- Calculate the thumbs sizes and their positions
- Reset offset, dragging, value adjusting to the initial values. to have a clean start for the next mouse action.
- Repaint the slider

Definition at line 497 of file MThumbSliderAdditionalUI.java.
Here is the call graph for this function:



7.10.3.7 setThumbValue()

```
void slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler.setThumbValue (
            int thumbIndex )  [private]
```

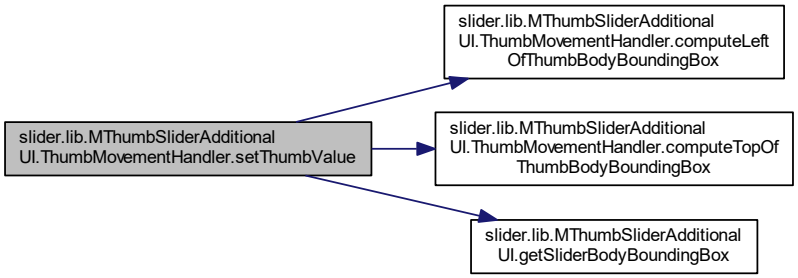
Set current thumb value.

Parameters

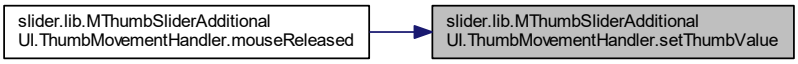
thumbIndex	thumb index <B> Description </B> <p> Gets the thumb body bounding box and the track slider body bounding box Gets the orientation of the slider Vertical of horizontal Calculates the new position of the current thumb Sets the value of the current thumb to the value of its tip (if they are not the s

Definition at line 556 of file MThumbSliderAdditionalUI.java.

Here is the call graph for this function:



Here is the caller graph for this function:



7.10.4 Member Data Documentation

7.10.4.1 adjustingThumbBodyBoundingBox

```
Rectangle slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler.adjustingThumbBodyBounding↩
Box = null  [protected]
```

The bounding box of the thumb being adjusted.
Definition at line 289 of file MThumbSliderAdditionalUI.java.

7.10.4.2 adjustingThumbIndex

```
int slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler.adjustingThumbIndex  [protected]
```

The index of the thumb being adjusted.
Definition at line 292 of file MThumbSliderAdditionalUI.java.

7.10.4.3 isDragging

```
transient boolean slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler.isDragging  [private]
```

Transient boolean isDragging: if the thumb of the slider is being dragged.
Definition at line 283 of file MThumbSliderAdditionalUI.java.

7.10.4.4 offset

```
transient int slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler.offset  [protected]
```

The difference between the upper left corner of the bounding rectangle and the mouse position.
Definition at line 286 of file MThumbSliderAdditionalUI.java.

7.10.4.5 slider

`MThumbSlider slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler.slider [protected]`
The associated slider.
Definition at line 295 of file MThumbSliderAdditionalUI.java.

7.10.4.6 sliderBodyBoundingBox

`Rectangle slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler.sliderBodyBoundingBox [protected]`
Definition at line 297 of file MThumbSliderAdditionalUI.java.
The documentation for this class was generated from the following file:

- src/slider/lib/MThumbSliderAdditionalUI.java

Chapter 8

File Documentation

8.1 src/slider/lib/EditSliderDialog.java File Reference

Classes

- class slider.lib.EditSliderDialog

Packages

- package slider.lib

8.2 src/slider/lib/MetalMThumbSliderUI.java File Reference

Classes

- class slider.lib.MetalMThumbSliderUI

Packages

- package slider.lib

8.3 src/slider/lib/MThumbSlider.java File Reference

Classes

- class slider.lib.MThumbSlider

Packages

- package slider.lib

8.4 src/slider/lib/MThumbSliderAdditional.java File Reference

Classes

- interface slider.lib.MThumbSliderAdditional

Packages

- package slider.lib

8.5 src/slider/lib/MThumbSliderAdditionalUI.java File Reference

Classes

- class slider.lib.MThumbSliderAdditionalUI
- class slider.lib.MThumbSliderAdditionalUI.ThumbMovementHandler

Packages

- package slider.lib

8.6 src/slider/lib/SliderPanel.java File Reference

Classes

- class slider.lib.SliderPanel

Packages

- package slider.lib

8.7 src/slider/lib/SliderParameters.java File Reference

Classes

- class slider.lib.SliderParameters

Packages

- package slider.lib

8.8 src/slider/RSFSlider/Example.java File Reference

Classes

- class slider.RSFSlider.Example

Packages

- package slider.RSFSlider

8.9 src/slider/RSFSlider/ExampleFrame.java File Reference

Classes

- class slider.RSFSlider.ExampleFrame

Packages

- package slider.RSFSlider

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