com.leapcv

Enum LeapCVCamera.CameraSide

java.lang.Object
    java.lang.Enum<LeapCVCamera.CameraSide>
        com.leapcv.LeapCVCamera.CameraSide

All Implemented Interfaces:

java.io.Serializable, java.lang.Comparable<LeapCVCamera.CameraSide>

Enclosing class:

LeapCVCamera

```
public static enum LeapCVCamera.CameraSide
extends java.lang.Enum<LeapCVCamera.CameraSide>
```

Enumeration of the camera sides 0 = left 1 = right

Enum Constant Summary

Enum Constants

Enum Constant and Description
LEFT
RIGHT

Field Summary

Fields

Modifier and Type	Field and Description
private int	**side**

Method Summary

All Methods	Static Methods	Instance Methods	Concrete Methods
Modifier and Type	**Method and Description**		
int	**getSideId**()		
static LeapCVCamera.CameraSide	**valueOf**(java.lang.String name)		

| | Returns the enum constant of this type with the specified name. |
| static **LeapCVCamera.CameraSide**[] **values**() | Returns an array containing the constants of this enum type, in the order they are declared. |

Methods inherited from class java.lang.Enum

clone, compareTo, equals, finalize, getDeclaringClass, hashCode, name, ordinal, toString, valueOf

Methods inherited from class java.lang.Object

getClass, notify, notifyAll, wait, wait, wait

Enum Constant Detail

LEFT

public static final LeapCVCamera.CameraSide LEFT

RIGHT

public static final LeapCVCamera.CameraSide RIGHT

Field Detail

side

private int side

Method Detail

getSideId

public int getSideId()

valueOf

public static LeapCVCamera.CameraSide valueOf(java.lang.String name)

Returns the enum constant of this type with the specified name. The string must match *exactly* an identifier used to declare an enum constant in this type. (Extraneous whitespace characters are not permitted.)

Parameters:

name - the name of the enum constant to be returned.

Returns:

the enum constant with the specified name

Throws:

java.lang.IllegalArgumentException - if this enum type has no constant with the specified name

java.lang.NullPointerException - if the argument is null

values

```
public static LeapCVCamera.CameraSide[] values()
```

Returns an array containing the constants of this enum type, in the order they are declared. This method may be used to iterate over the constants as follows:

```
for (LeapCVCamera.CameraSide c : LeapCVCamera.CameraSide.values())
    System.out.println(c);
```

Returns:

an array containing the constants of this enum type, in the order they are declared

com.leapcv

Class LeapCVCamera

java.lang.Object
    com.leapcv.LeapCVCamera

```
public class LeapCVCamera
extends java.lang.Object
```

Class that stores information about the leap motion cameras

Nested Class Summary

Nested Classes

Modifier and Type	Class and Description
static class	**LeapCVCamera.CameraSide** Enumeration of the camera sides 0 = left 1 = right

Field Summary

Fields

Modifier and Type	Field and Description
private **LeapCVImage**	**currentImage**
private org.opencv.core.Mat	**distortionX**
private org.opencv.core.Mat	**distortionY**
private **LeapCVCamera.CameraSide**	**side**

Constructor Summary

Constructors

Constructor and Description
LeapCVCamera(**LeapCVCamera.CameraSide** side)

Method Summary

Modifier and Type	Method and Description
LeapCVImage	**getCurrentImage**() Get the image within the current frame state
org.opencv.core.Mat	**getDistortionX**() Get the X distortion `Mat` for this camera for use with the OpenCV remap method
org.opencv.core.Mat	**getDistortionY**() Get the Y distortion `Mat` for this camera for use with the OpenCV remap method
org.opencv.core.Mat	**getImageUndistorted**() Get the undistorted image from this camera.
LeapCVCamera.CameraSide	**getSide**() Get the side of this camera
void	**setCurrentImage**(com.leapmotion.leap.Image image) Set the image in the current frame state
void	**setDistortionX**(org.opencv.core.Mat distortionX) Set the X distortion `Mat` for this camera
void	**setDistortionY**(org.opencv.core.Mat distortionY) Set the Y distortion `Mat` for this camera
void	**setSide**(**LeapCVCamera.CameraSide** side) Set the side of this camera.

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

---

Field Detail

currentImage

private LeapCVImage currentImage

---

distortionX

private org.opencv.core.Mat distortionX

---

distortionY

```
private org.opencv.core.Mat distortionY
```

side

```
private LeapCVCamera.CameraSide side
```

Constructor Detail

LeapCVCamera

```
public LeapCVCamera(LeapCVCamera.CameraSide side)
```

Method Detail

getCurrentImage

```
public LeapCVImage getCurrentImage()
```

Get the image within the current frame state

Returns:
LeapCVImage

getDistortionX

```
public org.opencv.core.Mat getDistortionX()
```

Get the X distortion `Mat` for this camera for use with the OpenCV remap method

Returns:
Mat

getDistortionY

```
public org.opencv.core.Mat getDistortionY()
```

Get the Y distortion `Mat` for this camera for use with the OpenCV remap method

Returns:

getImageUndistorted

```
public org.opencv.core.Mat getImageUndistorted()
```

Get the undistorted image from this camera. distortionX and distortionY need to be set first.
Makes use of the OpenCV `Imgproc` `remap()` method.

Returns:

`Mat`

getSide

`public LeapCVCamera.CameraSide getSide()`

Get the side of this camera

Returns:

`LeapCVCamera.CameraSide`

setCurrentImage

`public void setCurrentImage(com.leapmotion.leap.Image image)`

Set the image in the current frame state

Parameters:

`image - Image to be set`

setDistortionX

`public void setDistortionX(org.opencv.core.Mat distortionX)`

Set the X distortion `Mat` for this camera

Parameters:

`distortionX - Distortion Mat for X`

setDistortionY

`public void setDistortionY(org.opencv.core.Mat distortionY)`

Set the Y distortion `Mat` for this camera

Parameters:

`distortionY - Distortion Mat for Y`

setSide

`public void setSide(LeapCVCamera.CameraSide side)`

Set the side of this camera. Each camera already has a side set from the LeapSDK so make sure this
gets set within LeapCV.

com.leapcv

Class LeapCVController

java.lang.Object
    com.leapcv.LeapCVController

```
public class LeapCVController
extends java.lang.Object
```

Class to be initialised to interface with the leap motion.

Field Summary

Fields

Modifier and Type	Field and Description
private com.leapmotion.leap.ImageList	**currentImages**
private com.leapmotion.leap.Controller	**leapController**
private **LeapCVCamera**	**leftCam**
private **LeapCVCamera**	**rightCam**

Constructor Summary

Constructors

Constructor and Description
LeapCVController() Constructor for **LeapCVController**

Method Summary

All Methods	Instance Methods	Concrete Methods

Modifier and Type	Method and Description
java.util.List<**LeapCVCamera**>	**getCameras**() Get the **LeapCVCamera** objects from the **LeapCVController**
org.opencv.core.Mat	**getLeftImage**()

	Get raw image from the left side camera
org.opencv.core.Mat	**getLeftImageUndistorted**() Get undistorted image from the left side camera
org.opencv.core.Mat	**getRightImage**() Get raw image from the right side camera
org.opencv.core.Mat	**getRightImageUndistorted**() Get undistorted image from the right side camera
private void	**initDistortionMats**() Initialize the leap motion controller distortion matrices for the left and right camera
private void	**initLeap**() Initialize leap controller and wait for the next valid frame to be received
void	**nextValidFrame**() Move the leap motion controller on to the next valid frame

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

---

Field Detail

currentImages

private com.leapmotion.leap.ImageList currentImages

leapController

private com.leapmotion.leap.Controller leapController

leftCam

private LeapCVCamera leftCam

rightCam

private LeapCVCamera rightCam

Constructor Detail

LeapCVController

```
public LeapCVController()
```

Constructor for LeapCVController

Method Detail

getCameras

```
public java.util.List<LeapCVCamera> getCameras()
```

Get the LeapCVCamera objects from the LeapCVController

Returns:
List – containing LeapCVCamera

getLeftImage

```
public org.opencv.core.Mat getLeftImage()
```

Get raw image from the left side camera

Returns:
Mat

getLeftImageUndistorted

```
public org.opencv.core.Mat getLeftImageUndistorted()
```

Get undistorted image from the left side camera

Returns:
Mat

getRightImage

```
public org.opencv.core.Mat getRightImage()
```

Get raw image from the right side camera

Returns:
Mat

getRightImageUndistorted

```
public org.opencv.core.Mat getRightImageUndistorted()
```

Get undistorted image from the right side camera

Returns:

Mat

initDistortionMats

```
private void initDistortionMats()
```

Initialize the leap motion controller distortion matrices for the left and right camera

initLeap

```
private void initLeap()
```

Initialize leap controller and wait for the next valid frame to be received

nextValidFrame

```
public void nextValidFrame()
```

Move the leap motion controller on to the next valid frame

OVERVIEW   PACKAGE   CLASS   TREE   INDEX   HELP

PREV CLASS   NEXT CLASS   FRAMES   NO FRAMES   ALL CLASSES
SUMMARY: NESTED | FIELD | CONSTR | METHOD   DETAIL: FIELD | CONSTR | METHOD

com.leapcv

Class LeapCVImage

java.lang.Object
    com.leapmotion.leap.Interface
        com.leapmotion.leap.Image
            com.leapcv.LeapCVImage

```
public class LeapCVImage
extends com.leapmotion.leap.Image
```

Image class for leap motion and OpenCV types

Nested Class Summary

Nested classes/interfaces inherited from class com.leapmotion.leap.Image

com.leapmotion.leap.Image.FormatType

Field Summary

Fields

Modifier and Type	Field and Description
private com.leapmotion.leap.Image	**imageAsLeap**
private org.opencv.core.Mat	**imageAsMat**

Fields inherited from class com.leapmotion.leap.Interface

swigCMemOwn

Constructor Summary

Constructors

Constructor and Description
LeapCVImage(com.leapmotion.leap.Image image)

Method Summary

Modifier and Type	Method and Description
com.leapmotion.leap.Image	**getImageAsLeap**() Get the image as a `Image`
org.opencv.core.Mat	**getImageAsMat**() Get the image as a `Mat`
void	**setImage**(com.leapmotion.leap.Image image) Set the image
private void	**setImageAsLeap**(com.leapmotion.leap.Image imageAsLeap)
private void	**setImageAsMat**(org.opencv.core.Mat imageAsMat)

Methods inherited from class com.leapmotion.leap.Image

bytesPerPixel, data, data, delete, distortion, distortion, distortionHeight, distortionWidth, equals, finalize, format, getCPtr, height, id, invalid, isValid, rayOffsetX, rayOffsetY, rayScaleX, rayScaleY, rectify, sequenceId, toString, warp, width

Methods inherited from class com.leapmotion.leap.Interface

getCPtr

Methods inherited from class java.lang.Object

clone, equals, getClass, hashCode, notify, notifyAll, wait, wait, wait

Field Detail

imageAsLeap

private com.leapmotion.leap.Image imageAsLeap

imageAsMat

private org.opencv.core.Mat imageAsMat

Constructor Detail

LeapCVImage

public LeapCVImage(com.leapmotion.leap.Image image)

Method Detail

getImageAsLeap

```
public com.leapmotion.leap.Image getImageAsLeap()
```

Get the image as a `Image`

Returns:
`Image`

getImageAsMat

```
public org.opencv.core.Mat getImageAsMat()
```

Get the image as a `Mat`

Returns:
`Mat`

setImage

```
public void setImage(com.leapmotion.leap.Image image)
```

Set the image

Parameters:
`image` – Image

setImageAsLeap

```
private void setImageAsLeap(com.leapmotion.leap.Image imageAsLeap)
```

setImageAsMat

```
private void setImageAsMat(org.opencv.core.Mat imageAsMat)
```

PACKAGE CLASS TREE DEPRECATED INDEX HELP

PREV CLASS NEXT CLASS FRAMES NO FRAMES ALL CLASSES
SUMMARY: NESTED | FIELD | CONSTR | METHOD DETAIL: FIELD | CONSTR | METHOD

com.leapcv

Class LeapCVImageUtils

java.lang.Object
    com.leapcv.utils.LeapCVImageUtils

```
public class LeapCVImageUtils
extends java.lang.Object
```

Field Summary

Fields

Modifier and Type	Field and Description
static int	**IMAGE_HEIGHT**
static int	**IMAGE_WIDTH**
static java.lang.String	**LEFT_IMAGE_KEY**
static java.lang.String	**RIGHT_IMAGE_KEY**
static java.lang.String	**X_MAT_KEY**
static java.lang.String	**Y_MAT_KEY**

Constructor Summary

Constructors

Constructor and Description
LeapCVImageUtils()

Method Summary

All Methods   Static Methods   Concrete Methods

Modifier and Type	Method and Description
static org.opencv.core.Mat	**convertToMat**(com.leapmotion.leap.Image image) Convert a leap type Image to an OpenCV Mat
static org.opencv.core.Mat	**crop**(org.opencv.core.Mat image, double percentageCrop) Crops even percentage from each side of an image
static org.opencv.core.Mat	**denoise**(org.opencv.core.Mat image, double denoisingFactor)
static org.opencv.core.Mat	**gaussianBlur**(org.opencv.core.Mat image)
static java.util.Map<java.lang.String,org.opencv.core.Mat>	**initDistortionMat**(com.leapmotion.leap.Image image) Initialise the distortion matrices for use with OpenCV Imgproc method.
static javafx.scene.image.Image	**matToWritableImage**(org.opencv.core.Mat image) Turn a Mat into a WritableImage, useful for displaying in JavaFX
static org.opencv.core.Mat	**medianBlur**(org.opencv.core.Mat image)
static java.awt.image.BufferedImage	**toBufferedImage**(com.leapmotion.leap.Image image) Turn a leap motion Image type into a BufferedImage
static javafx.scene.image.WritableImage	**toWritableImage**(java.awt.image.BufferedImage image) Turn a BufferedImage into a WritableImage, useful for displaying in JavaFX

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

IMAGE_WIDTH

```
public static final int IMAGE_WIDTH
```

See Also:
Constant Field Values

IMAGE_HEIGHT

```
public static final int IMAGE_HEIGHT
```

See Also:
Constant Field Values

LEFT_IMAGE_KEY

```
public static final java.lang.String LEFT_IMAGE_KEY
```

See Also:
Constant Field Values

RIGHT_IMAGE_KEY

```
public static final java.lang.String RIGHT_IMAGE_KEY
```

See Also:
Constant Field Values

X_MAT_KEY

```
public static final java.lang.String X_MAT_KEY
```

See Also:
Constant Field Values

Y_MAT_KEY

```
public static final java.lang.String Y_MAT_KEY
```

See Also:
Constant Field Values

Constructor Detail

LeapCVImageUtils

```
public LeapCVImageUtils()
```

Method Detail

convertToMat

```
public static org.opencv.core.Mat convertToMat(com.leapmotion.leap.Image image)
```

Convert a leap type `Image` to an OpenCV `Mat`

Parameters:
image – of type Image

Returns:
Mat of original image,

initDistortionMat

```
public static java.util.Map<java.lang.String,org.opencv.core.Mat> initDistortionMat(com.leapmotion.leap.Image image)
```

Initialise the distortion matrices for use with OpenCV `Imgproc` method.

Parameters:

`image` – The Image which contains the distortion data

Returns:

`Map<String,Mat>` of X and Y matrix.

toBufferedImage

```
public static java.awt.image.BufferedImage toBufferedImage(com.leapmotion.leap.Image image)
```

Turn a leap motion `Image` type into a `BufferedImage`

Parameters:

`image` – – Image

Returns:

`BufferedImage`

toWritableImage

```
public static javafx.scene.image.WritableImage toWritableImage(java.awt.image.BufferedImage image)
```

Turn a `BufferedImage` into a `WritableImage`, useful for displaying in JavaFX

Parameters:

`image` – – BufferedImage

Returns:

`WritableImage`

matToWritableImage

```
public static javafx.scene.image.Image matToWritableImage(org.opencv.core.Mat image)
```

Turn a `Mat` into a `WritableImage`, useful for displaying in JavaFX

Parameters:

`image` – – Mat

Returns:

`WritableImage`

gaussianBlur

```
public static org.opencv.core.Mat gaussianBlur(org.opencv.core.Mat image)
```

medianBlur

```
public static org.opencv.core.Mat medianBlur(org.opencv.core.Mat image)
```

crop

```
public static org.opencv.core.Mat crop(org.opencv.core.Mat image,
                                        double percentageCrop)
```

Crops even percentage from each side of an image

Parameters:

`image` – The Image to be cropped.

`percentageCrop` – The percentage to which the image passed in should be cropped. Between 0 and 1.

Returns:

`Mat`

denoise

```
public static org.opencv.core.Mat denoise(org.opencv.core.Mat image,
                                           double denoisingFactor)
```

com.leapcv

Class LeapCVObjectDetector

java.lang.Object
    com.leapcv.LeapCVObjectDetector

---

public class **LeapCVObjectDetector**
extends java.lang.Object

Class for carrying out object detection

Field Summary

Fields

Modifier and Type	Field and Description
private org.opencv.features2d.DescriptorExtractor	**extractor**
private org.opencv.features2d.FeatureDetector	**featureDetector**
private org.opencv.core.Mat	**matchedImage**
private org.opencv.features2d.DescriptorMatcher	**matcher**

Constructor Summary

Constructors

Constructor and Description
LeapCVObjectDetector()

Method Summary

All Methods	Instance Methods	Concrete Methods

Modifier and Type	Method and Description
org.opencv.core.Mat	**getFeatureDescriptors**(org.opencv.core.Mat image) Get image feature descriptors
org.opencv.core.MatOfKeyPoint	**getFeatures**(org.opencv.core.Mat image) Get image key points
org.opencv.core.Mat	**match**(org.opencv.core.Mat left, org.opencv.core.Mat right) Match image features
private org.opencv.core.MatOfDMatch	**removeOutliers**(org.opencv.core.MatOfDMatch matches) Remove outliers from matched features

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

extractor

private org.opencv.features2d.DescriptorExtractor extractor

featureDetector

private org.opencv.features2d.FeatureDetector featureDetector

matchedImage

private org.opencv.core.Mat matchedImage

matcher

private org.opencv.features2d.DescriptorMatcher matcher

Constructor Detail

LeapCVObjectDetector

public LeapCVObjectDetector()

Method Detail

getFeatureDescriptors

public org.opencv.core.Mat getFeatureDescriptors(org.opencv.core.Mat image)

Get image feature descriptors

Parameters:

image –

Returns:

getFeatures

public org.opencv.core.MatOfKeyPoint getFeatures(org.opencv.core.Mat image)

Get image key points

Parameters:

`image –`

Returns:

`MatOfKeyPoint`

match

```
public org.opencv.core.Mat match(org.opencv.core.Mat left,
                                  org.opencv.core.Mat right)
```

Match image features

Parameters:

`left –`

`right –`

Returns:

removeOutliers

```
private org.opencv.core.MatOfDMatch removeOutliers(org.opencv.core.MatOfDMatch matches)
```

Remove outliers from matched features

Parameters:

`matches –`

Returns:

PACKAGE CLASS TREE DEPRECATED INDEX HELP

PREV CLASS NEXT CLASS FRAMES NO FRAMES ALL CLASSES
SUMMARY: NESTED | FIELD | CONSTR | METHOD DETAIL: FIELD | CONSTR | METHOD

com.leapcv

Class LeapCVStereoCalib

java.lang.Object
    com.leapcv.LeapCVStereoCalibrator

---

public class **LeapCVStereoCalib**
extends java.lang.Object

Constructor Summary

Constructors

Constructor and Description
LeapCVStereoCalib(**LeapCVCamera** left, **LeapCVCamera** right)

Method Summary

All Methods	Instance Methods	Concrete Methods

Modifier and Type	Method and Description
void	**calibrateLeapCameras**()
org.opencv.core.Mat	**create3dChessboardCorners**(org.opencv.core.Size boardSize, float squareSize)
void	**findChessboardCorners**()

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

LeapCVStereoCalib

public LeapCVStereoCalib(LeapCVCamera left,
                            LeapCVCamera right)

Method Detail

findChessboardCorners

```
public void findChessboardCorners()
```

create3dChessboardCorners

```
public org.opencv.core.Mat create3dChessboardCorners(org.opencv.core.Size boardSize,
                                                      float squareSize)
```

calibrateLeapCameras

```
public void calibrateLeapCameras()
```

OVERVIEW   PACKAGE   CLASS   TREE   INDEX   HELP

PREV CLASS   NEXT CLASS   FRAMES   NO FRAMES   ALL CLASSES
SUMMARY: NESTED | FIELD | CONSTR | METHOD   DETAIL: FIELD | CONSTR | METHOD

com.leapcv

Class LeapCVStereoCalibrator

java.lang.Object
    com.leapcv.LeapCVCalibrationUtils

---

public class **LeapCVStereoCalibrator**
extends java.lang.Object

Field Summary

Fields

Modifier and Type	Field and Description
private java.util.List<**LeapCVCamera**>	**cameras**
private java.util.Map<java.lang.Integer,java.util.List<org.opencv.core.Mat>>	**corners**
private java.util.Map<java.lang.Integer,java.util.List<org.opencv.core.Mat>>	**imagePoints**
private java.util.List<org.opencv.core.Mat>	**objectPoints**
private org.opencv.core.Size	**patternSize**

Constructor Summary

Constructors

Constructor and Description
LeapCVStereoCalibrator(**LeapCVCamera** left, **LeapCVCamera** right)

Method Summary

All Methods	Instance Methods	Concrete Methods

Modifier and Type	Method and Description
void	**calibrateLeapCameras**()
org.opencv.core.Mat	**create3dChessboardCorners**(org.opencv.core.Size boardSize, float squareSize)
void	**findChessboardCorners**()

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

cameras

private java.util.List<LeapCVCamera> cameras

corners

private java.util.Map<java.lang.Integer,java.util.List<org.opencv.core.Mat>> corners

imagePoints

private java.util.Map<java.lang.Integer,java.util.List<org.opencv.core.Mat>> imagePoints

objectPoints

private java.util.List<org.opencv.core.Mat> objectPoints

patternSize

private org.opencv.core.Size patternSize

Constructor Detail

LeapCVStereoCalibrator

public LeapCVStereoCalibrator(LeapCVCamera left,
                              LeapCVCamera right)

Method Detail

calibrateLeapCameras

public void calibrateLeapCameras()

create3dChessboardCorners

public org.opencv.core.Mat create3dChessboardCorners(org.opencv.core.Size boardSize,
                                                     float squareSize)

findChessboardCorners

public void findChessboardCorners()

PACKAGE   CLASS   TREE   DEPRECATED   INDEX   HELP

PREV CLASS   NEXT CLASS   FRAMES   NO FRAMES   ALL CLASSES
SUMMARY: NESTED | FIELD | CONSTR | METHOD   DETAIL: FIELD | CONSTR | METHOD

com.leapcv

Class LeapCVStereoUtils

java.lang.Object
    com.leapcv.utils.LeapCVStereoUtils

```
public class LeapCVStereoUtils
extends java.lang.Object
```

Constructor Summary

Constructors

Constructor and Description
LeapCVStereoUtils()

Method Summary

All Methods	Instance Methods	Concrete Methods

Modifier and Type	Method and Description
double	**getCycle**()
org.opencv.core.Mat	**getDisparityMap**(org.opencv.core.Mat left, org.opencv.core.Mat right)
org.opencv.core.Mat	**getDisparityMap2**(org.opencv.core.Mat left, org.opencv.core.Mat right)
org.opencv.core.Mat	**getDisparityMap3**(org.opencv.core.Mat left, org.opencv.core.Mat right)
double	**getFi**()
double	**getLambda**()
double	**getLevels**()
double	**getMaxDisp**()
double	**getMinDisp**()
org.opencv.core.Mat	**getPointCloud**(org.opencv.core.Mat disparityMap)
double	**getPolyN**()
double	**getPolySigma**()

double	**getPyrScale**()
void	**savePointCloud**(org.opencv.core.Mat pcl, java.io.File destination)
void	**setCycle**(double cycle)
void	**setFi**(double fi)
void	**setLambda**(double lambda)
void	**setLevels**(double levels)
void	**setMaxDisp**(double maxDisp)
void	**setMinDisp**(double minDisp)
void	**setPolyN**(double polyN)
void	**setPolySigma**(double polySigma)
void	**setPyrScale**(double pyrScale)

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

LeapCVStereoUtils

```
public LeapCVStereoUtils()
```

Method Detail

getCycle

```
public double getCycle()
```

setCycle

```
public void setCycle(double cycle)
```

getLevels

```
public double getLevels()
```

setLevels

```
public void setLevels(double levels)
```

getPyrScale

```
public double getPyrScale()
```

setPyrScale

```
public void setPyrScale(double pyrScale)
```

getPolyN

```
public double getPolyN()
```

setPolyN

```
public void setPolyN(double polyN)
```

getPolySigma

```
public double getPolySigma()
```

setPolySigma

```
public void setPolySigma(double polySigma)
```

getFi

```
public double getFi()
```

setFi

```
public void setFi(double fi)
```

getLambda

```
public double getLambda()
```

setLambda

```
public void setLambda(double lambda)
```

getMinDisp

```
public double getMinDisp()
```

setMinDisp

```
public void setMinDisp(double minDisp)
```

getMaxDisp

```
public double getMaxDisp()
```

setMaxDisp

```
public void setMaxDisp(double maxDisp)
```

getDisparityMap

```
public org.opencv.core.Mat getDisparityMap(org.opencv.core.Mat left,
                                           org.opencv.core.Mat right)
```

getDisparityMap2

```
public org.opencv.core.Mat getDisparityMap2(org.opencv.core.Mat left,
                                            org.opencv.core.Mat right)
```

getDisparityMap3

```
public org.opencv.core.Mat getDisparityMap3(org.opencv.core.Mat left,
                                            org.opencv.core.Mat right)
```

getPointCloud

```
public org.opencv.core.Mat getPointCloud(org.opencv.core.Mat disparityMap)
```

savePointCloud

```
public void savePointCloud(org.opencv.core.Mat pcl,
                           java.io.File destination)
```

com.leapcv

Class Main

java.lang.Object
    com.leapcv.Main

```
public class Main
extends java.lang.Object
```

Field Summary

Fields

Modifier and Type	Field and Description
private static **LeapCVImageUtils util**	

Constructor Summary

Constructors

Constructor and Description
Main()

Method Summary

All Methods	Static Methods	Concrete Methods

Modifier and Type	Method and Description
static void	**main**(java.lang.String[] args)

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

util

```
private static LeapCVImageUtils util
```

Constructor Detail

Main

```
public Main()
```

Method Detail

main

```
public static void main(java.lang.String[] args)
                 throws java.io.InvalidObjectException
```

Throws:
java.io.InvalidObjectException

Classes

LeapCVCamera
LeapCVController
LeapCVImage
LeapCVObjectDetector

Enums

LeapCVCamera.CameraSide

Package com.leapcv

Class Summary

Class	Description
LeapCVCamera	Class that stores information about the leap motion cameras
LeapCVController	Class to be initialised to interface with the leap motion.
LeapCVImage	Image class for leap motion and OpenCV types
LeapCVObjectDetector	Class for carrying out object detection

Enum Summary

Enum	Description
LeapCVCamera.CameraSide	Enumeration of the camera sides 0 = left 1 = right

Hierarchy For Package com.leapcv

Package Hierarchies:
All Packages

Class Hierarchy

- java.lang.Object
    - com.leapmotion.leap.Interface
        - com.leapmotion.leap.Image
            - com.leapcv.**LeapCVImage**
    - com.leapcv.**LeapCVCamera**
    - com.leapcv.**LeapCVController**
    - com.leapcv.**LeapCVObjectDetector**

Enum Hierarchy

- java.lang.Object
    - java.lang.Enum<E> (implements java.lang.Comparable<T>, java.io.Serializable)
        - com.leapcv.**LeapCVCamera.CameraSide**