| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/RenderContext.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/java/awt/image/renderable/RenderableImageProducer.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/image/renderable/RenderedImageFactory.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/image/renderable/RenderContext.html)    [**NO FRAMES**](http://docs.google.com/RenderContext.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#3dy6vkm) | [METHOD](#3rdcrjn) |

## **java.awt.image.renderable**

Class RenderContext

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **java.awt.image.renderable.RenderContext**

**All Implemented Interfaces:** [Cloneable](http://docs.google.com/java/lang/Cloneable.html)

public class **RenderContext**extends [Object](http://docs.google.com/java/lang/Object.html)implements [Cloneable](http://docs.google.com/java/lang/Cloneable.html)

A RenderContext encapsulates the information needed to produce a specific rendering from a RenderableImage. It contains the area to be rendered specified in rendering-independent terms, the resolution at which the rendering is to be performed, and hints used to control the rendering process.

Users create RenderContexts and pass them to the RenderableImage via the createRendering method. Most of the methods of RenderContexts are not meant to be used directly by applications, but by the RenderableImage and operator classes to which it is passed.

The AffineTransform parameter passed into and out of this class are cloned. The RenderingHints and Shape parameters are not necessarily cloneable and are therefore only reference copied. Altering RenderingHints or Shape instances that are in use by instances of RenderContext may have undesired side effects.

| **Constructor Summary** | |
| --- | --- |
| [**RenderContext**](http://docs.google.com/java/awt/image/renderable/RenderContext.html#RenderContext(java.awt.geom.AffineTransform))([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) usr2dev)            Constructs a RenderContext with a given transform. |
| [**RenderContext**](http://docs.google.com/java/awt/image/renderable/RenderContext.html#RenderContext(java.awt.geom.AffineTransform,%20java.awt.RenderingHints))([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) usr2dev, [RenderingHints](http://docs.google.com/java/awt/RenderingHints.html) hints)            Constructs a RenderContext with a given transform and rendering hints. |
| [**RenderContext**](http://docs.google.com/java/awt/image/renderable/RenderContext.html#RenderContext(java.awt.geom.AffineTransform,%20java.awt.Shape))([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) usr2dev, [Shape](http://docs.google.com/java/awt/Shape.html) aoi)            Constructs a RenderContext with a given transform and area of interest. |
| [**RenderContext**](http://docs.google.com/java/awt/image/renderable/RenderContext.html#RenderContext(java.awt.geom.AffineTransform,%20java.awt.Shape,%20java.awt.RenderingHints))([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) usr2dev, [Shape](http://docs.google.com/java/awt/Shape.html) aoi, [RenderingHints](http://docs.google.com/java/awt/RenderingHints.html) hints)            Constructs a RenderContext with a given transform. |

| **Method Summary** | |
| --- | --- |
| [Object](http://docs.google.com/java/lang/Object.html) | [**clone**](http://docs.google.com/java/awt/image/renderable/RenderContext.html#clone())()            Makes a copy of a RenderContext. |
| void | [**concatenateTransform**](http://docs.google.com/java/awt/image/renderable/RenderContext.html#concatenateTransform(java.awt.geom.AffineTransform))([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) modTransform)            Modifies the current user-to-device transform by appending another transform. |
| void | [**concetenateTransform**](http://docs.google.com/java/awt/image/renderable/RenderContext.html#concetenateTransform(java.awt.geom.AffineTransform))([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) modTransform)  **Deprecated.** *replaced by concatenateTransform(AffineTransform).* |
| [Shape](http://docs.google.com/java/awt/Shape.html) | [**getAreaOfInterest**](http://docs.google.com/java/awt/image/renderable/RenderContext.html#getAreaOfInterest())()            Gets the ares of interest currently contained in the RenderContext. |
| [RenderingHints](http://docs.google.com/java/awt/RenderingHints.html) | [**getRenderingHints**](http://docs.google.com/java/awt/image/renderable/RenderContext.html#getRenderingHints())()            Gets the rendering hints of this RenderContext. |
| [AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) | [**getTransform**](http://docs.google.com/java/awt/image/renderable/RenderContext.html#getTransform())()            Gets the current user-to-device AffineTransform. |
| void | [**preConcatenateTransform**](http://docs.google.com/java/awt/image/renderable/RenderContext.html#preConcatenateTransform(java.awt.geom.AffineTransform))([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) modTransform)            Modifies the current user-to-device transform by prepending another transform. |
| void | [**preConcetenateTransform**](http://docs.google.com/java/awt/image/renderable/RenderContext.html#preConcetenateTransform(java.awt.geom.AffineTransform))([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) modTransform)  **Deprecated.** *replaced by preConcatenateTransform(AffineTransform).* |
| void | [**setAreaOfInterest**](http://docs.google.com/java/awt/image/renderable/RenderContext.html#setAreaOfInterest(java.awt.Shape))([Shape](http://docs.google.com/java/awt/Shape.html) newAoi)            Sets the current area of interest. |
| void | [**setRenderingHints**](http://docs.google.com/java/awt/image/renderable/RenderContext.html#setRenderingHints(java.awt.RenderingHints))([RenderingHints](http://docs.google.com/java/awt/RenderingHints.html) hints)            Sets the rendering hints of this RenderContext. |
| void | [**setTransform**](http://docs.google.com/java/awt/image/renderable/RenderContext.html#setTransform(java.awt.geom.AffineTransform))([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) newTransform)            Sets the current user-to-device AffineTransform contained in the RenderContext to a given transform. |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [equals](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [hashCode](http://docs.google.com/java/lang/Object.html#hashCode()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [toString](http://docs.google.com/java/lang/Object.html#toString()), [wait](http://docs.google.com/java/lang/Object.html#wait()), [wait](http://docs.google.com/java/lang/Object.html#wait(long)), [wait](http://docs.google.com/java/lang/Object.html#wait(long,%20int)) |

| **Constructor Detail** |
| --- |

### RenderContext

public **RenderContext**([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) usr2dev,  
 [Shape](http://docs.google.com/java/awt/Shape.html) aoi,  
 [RenderingHints](http://docs.google.com/java/awt/RenderingHints.html) hints)

Constructs a RenderContext with a given transform. The area of interest is supplied as a Shape, and the rendering hints are supplied as a RenderingHints object.

**Parameters:**usr2dev - an AffineTransform.aoi - a Shape representing the area of interest.hints - a RenderingHints object containing rendering hints.

### RenderContext

public **RenderContext**([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) usr2dev)

Constructs a RenderContext with a given transform. The area of interest is taken to be the entire renderable area. No rendering hints are used.

**Parameters:**usr2dev - an AffineTransform.

### RenderContext

public **RenderContext**([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) usr2dev,  
 [RenderingHints](http://docs.google.com/java/awt/RenderingHints.html) hints)

Constructs a RenderContext with a given transform and rendering hints. The area of interest is taken to be the entire renderable area.

**Parameters:**usr2dev - an AffineTransform.hints - a RenderingHints object containing rendering hints.

### RenderContext

public **RenderContext**([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) usr2dev,  
 [Shape](http://docs.google.com/java/awt/Shape.html) aoi)

Constructs a RenderContext with a given transform and area of interest. The area of interest is supplied as a Shape. No rendering hints are used.

**Parameters:**usr2dev - an AffineTransform.aoi - a Shape representing the area of interest.

| **Method Detail** |
| --- |

### getRenderingHints

public [RenderingHints](http://docs.google.com/java/awt/RenderingHints.html) **getRenderingHints**()

Gets the rendering hints of this RenderContext.

**Returns:**a RenderingHints object that represents the rendering hints of this RenderContext.**See Also:**[setRenderingHints(RenderingHints)](http://docs.google.com/java/awt/image/renderable/RenderContext.html#setRenderingHints(java.awt.RenderingHints))

### setRenderingHints

public void **setRenderingHints**([RenderingHints](http://docs.google.com/java/awt/RenderingHints.html) hints)

Sets the rendering hints of this RenderContext.

**Parameters:**hints - a RenderingHints object that represents the rendering hints to assign to this RenderContext.**See Also:**[getRenderingHints()](http://docs.google.com/java/awt/image/renderable/RenderContext.html#getRenderingHints())

### setTransform

public void **setTransform**([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) newTransform)

Sets the current user-to-device AffineTransform contained in the RenderContext to a given transform.

**Parameters:**newTransform - the new AffineTransform.**See Also:**[getTransform()](http://docs.google.com/java/awt/image/renderable/RenderContext.html#getTransform())

### preConcatenateTransform

public void **preConcatenateTransform**([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) modTransform)

Modifies the current user-to-device transform by prepending another transform. In matrix notation the operation is:

[this] = [modTransform] x [this]

**Parameters:**modTransform - the AffineTransform to prepend to the current usr2dev transform.**Since:** 1.3

### preConcetenateTransform

[@Deprecated](http://docs.google.com/java/lang/Deprecated.html)  
public void **preConcetenateTransform**([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) modTransform)

**Deprecated.** *replaced by preConcatenateTransform(AffineTransform).*

Modifies the current user-to-device transform by prepending another transform. In matrix notation the operation is:

[this] = [modTransform] x [this]

This method does the same thing as the preConcatenateTransform method. It is here for backward compatibility with previous releases which misspelled the method name.

**Parameters:**modTransform - the AffineTransform to prepend to the current usr2dev transform.

### concatenateTransform

public void **concatenateTransform**([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) modTransform)

Modifies the current user-to-device transform by appending another transform. In matrix notation the operation is:

[this] = [this] x [modTransform]

**Parameters:**modTransform - the AffineTransform to append to the current usr2dev transform.**Since:** 1.3

### concetenateTransform

[@Deprecated](http://docs.google.com/java/lang/Deprecated.html)  
public void **concetenateTransform**([AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) modTransform)

**Deprecated.** *replaced by concatenateTransform(AffineTransform).*

Modifies the current user-to-device transform by appending another transform. In matrix notation the operation is:

[this] = [this] x [modTransform]

This method does the same thing as the concatenateTransform method. It is here for backward compatibility with previous releases which misspelled the method name.

**Parameters:**modTransform - the AffineTransform to append to the current usr2dev transform.

### getTransform

public [AffineTransform](http://docs.google.com/java/awt/geom/AffineTransform.html) **getTransform**()

Gets the current user-to-device AffineTransform.

**Returns:**a reference to the current AffineTransform.**See Also:**[setTransform(AffineTransform)](http://docs.google.com/java/awt/image/renderable/RenderContext.html#setTransform(java.awt.geom.AffineTransform))

### setAreaOfInterest

public void **setAreaOfInterest**([Shape](http://docs.google.com/java/awt/Shape.html) newAoi)

Sets the current area of interest. The old area is discarded.

**Parameters:**newAoi - The new area of interest.**See Also:**[getAreaOfInterest()](http://docs.google.com/java/awt/image/renderable/RenderContext.html#getAreaOfInterest())

### getAreaOfInterest

public [Shape](http://docs.google.com/java/awt/Shape.html) **getAreaOfInterest**()

Gets the ares of interest currently contained in the RenderContext.

**Returns:**a reference to the area of interest of the RenderContext, or null if none is specified.**See Also:**[setAreaOfInterest(Shape)](http://docs.google.com/java/awt/image/renderable/RenderContext.html#setAreaOfInterest(java.awt.Shape))

### clone

public [Object](http://docs.google.com/java/lang/Object.html) **clone**()

Makes a copy of a RenderContext. The area of interest is copied by reference. The usr2dev AffineTransform and hints are cloned, while the area of interest is copied by reference.

**Overrides:**[clone](http://docs.google.com/java/lang/Object.html#clone()) in class [Object](http://docs.google.com/java/lang/Object.html) **Returns:**the new cloned RenderContext.**See Also:**[Cloneable](http://docs.google.com/java/lang/Cloneable.html)

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/RenderContext.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/java/awt/image/renderable/RenderableImageProducer.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/image/renderable/RenderedImageFactory.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/image/renderable/RenderContext.html)    [**NO FRAMES**](http://docs.google.com/RenderContext.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#3dy6vkm) | [METHOD](#3rdcrjn) |

[Submit a bug or feature](http://bugs.sun.com/services/bugreport/index.jsp)

For further API reference and developer documentation, see [Java SE Developer Documentation](http://docs.google.com/webnotes/devdocs-vs-specs.html). That documentation contains more detailed, developer-targeted descriptions, with conceptual overviews, definitions of terms, workarounds, and working code examples.

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