| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/PageAttributes.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/MultipleGradientPaint.CycleMethod.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/PageAttributes.ColorType.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/PageAttributes.html)    [**NO FRAMES**](http://docs.google.com/PageAttributes.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: [NESTED](#3znysh7) | FIELD | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: FIELD | [CONSTR](#1t3h5sf) | [METHOD](#3rdcrjn) |

## **java.awt**

Class PageAttributes

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

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

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

A set of attributes which control the output of a printed page.

Instances of this class control the color state, paper size (media type), orientation, logical origin, print quality, and resolution of every page which uses the instance. Attribute names are compliant with the Internet Printing Protocol (IPP) 1.1 where possible. Attribute values are partially compliant where possible.

To use a method which takes an inner class type, pass a reference to one of the constant fields of the inner class. Client code cannot create new instances of the inner class types because none of those classes has a public constructor. For example, to set the color state to monochrome, use the following code:

import java.awt.PageAttributes;  
  
 public class MonochromeExample {  
 public void setMonochrome(PageAttributes pageAttributes) {  
 pageAttributes.setColor(PageAttributes.ColorType.MONOCHROME);  
 }  
 }

Every IPP attribute which supports an *attributeName*-default value has a corresponding set*attributeName*ToDefault method. Default value fields are not provided.

**Since:** 1.3

| **Nested Class Summary** | |
| --- | --- |
| static class | [**PageAttributes.ColorType**](http://docs.google.com/java/awt/PageAttributes.ColorType.html)            A type-safe enumeration of possible color states. |
| static class | [**PageAttributes.MediaType**](http://docs.google.com/java/awt/PageAttributes.MediaType.html)            A type-safe enumeration of possible paper sizes. |
| static class | [**PageAttributes.OrientationRequestedType**](http://docs.google.com/java/awt/PageAttributes.OrientationRequestedType.html)            A type-safe enumeration of possible orientations. |
| static class | [**PageAttributes.OriginType**](http://docs.google.com/java/awt/PageAttributes.OriginType.html)            A type-safe enumeration of possible origins. |
| static class | [**PageAttributes.PrintQualityType**](http://docs.google.com/java/awt/PageAttributes.PrintQualityType.html)            A type-safe enumeration of possible print qualities. |

| **Constructor Summary** | |
| --- | --- |
| [**PageAttributes**](http://docs.google.com/java/awt/PageAttributes.html#PageAttributes())()            Constructs a PageAttributes instance with default values for every attribute. |
| [**PageAttributes**](http://docs.google.com/java/awt/PageAttributes.html#PageAttributes(java.awt.PageAttributes.ColorType,%20java.awt.PageAttributes.MediaType,%20java.awt.PageAttributes.OrientationRequestedType,%20java.awt.PageAttributes.OriginType,%20java.awt.PageAttributes.PrintQualityType,%20int%5B%5D))([PageAttributes.ColorType](http://docs.google.com/java/awt/PageAttributes.ColorType.html) color, [PageAttributes.MediaType](http://docs.google.com/java/awt/PageAttributes.MediaType.html) media, [PageAttributes.OrientationRequestedType](http://docs.google.com/java/awt/PageAttributes.OrientationRequestedType.html) orientationRequested, [PageAttributes.OriginType](http://docs.google.com/java/awt/PageAttributes.OriginType.html) origin, [PageAttributes.PrintQualityType](http://docs.google.com/java/awt/PageAttributes.PrintQualityType.html) printQuality, int[] printerResolution)            Constructs a PageAttributes instance with the specified values for every attribute. |
| [**PageAttributes**](http://docs.google.com/java/awt/PageAttributes.html#PageAttributes(java.awt.PageAttributes))([PageAttributes](http://docs.google.com/java/awt/PageAttributes.html) obj)            Constructs a PageAttributes instance which is a copy of the supplied PageAttributes. |

| **Method Summary** | |
| --- | --- |
| [Object](http://docs.google.com/java/lang/Object.html) | [**clone**](http://docs.google.com/java/awt/PageAttributes.html#clone())()            Creates and returns a copy of this PageAttributes. |
| boolean | [**equals**](http://docs.google.com/java/awt/PageAttributes.html#equals(java.lang.Object))([Object](http://docs.google.com/java/lang/Object.html) obj)            Determines whether two PageAttributes are equal to each other. |
| [PageAttributes.ColorType](http://docs.google.com/java/awt/PageAttributes.ColorType.html) | [**getColor**](http://docs.google.com/java/awt/PageAttributes.html#getColor())()            Returns whether pages using these attributes will be rendered in color or monochrome. |
| [PageAttributes.MediaType](http://docs.google.com/java/awt/PageAttributes.MediaType.html) | [**getMedia**](http://docs.google.com/java/awt/PageAttributes.html#getMedia())()            Returns the paper size for pages using these attributes. |
| [PageAttributes.OrientationRequestedType](http://docs.google.com/java/awt/PageAttributes.OrientationRequestedType.html) | [**getOrientationRequested**](http://docs.google.com/java/awt/PageAttributes.html#getOrientationRequested())()            Returns the print orientation for pages using these attributes. |
| [PageAttributes.OriginType](http://docs.google.com/java/awt/PageAttributes.OriginType.html) | [**getOrigin**](http://docs.google.com/java/awt/PageAttributes.html#getOrigin())()            Returns whether drawing at (0, 0) to pages using these attributes draws at the upper-left corner of the physical page, or at the upper-left corner of the printable area. |
| int[] | [**getPrinterResolution**](http://docs.google.com/java/awt/PageAttributes.html#getPrinterResolution())()            Returns the print resolution for pages using these attributes. |
| [PageAttributes.PrintQualityType](http://docs.google.com/java/awt/PageAttributes.PrintQualityType.html) | [**getPrintQuality**](http://docs.google.com/java/awt/PageAttributes.html#getPrintQuality())()            Returns the print quality for pages using these attributes. |
| int | [**hashCode**](http://docs.google.com/java/awt/PageAttributes.html#hashCode())()            Returns a hash code value for this PageAttributes. |
| void | [**set**](http://docs.google.com/java/awt/PageAttributes.html#set(java.awt.PageAttributes))([PageAttributes](http://docs.google.com/java/awt/PageAttributes.html) obj)            Sets all of the attributes of this PageAttributes to the same values as the attributes of obj. |
| void | [**setColor**](http://docs.google.com/java/awt/PageAttributes.html#setColor(java.awt.PageAttributes.ColorType))([PageAttributes.ColorType](http://docs.google.com/java/awt/PageAttributes.ColorType.html) color)            Specifies whether pages using these attributes will be rendered in color or monochrome. |
| void | [**setMedia**](http://docs.google.com/java/awt/PageAttributes.html#setMedia(java.awt.PageAttributes.MediaType))([PageAttributes.MediaType](http://docs.google.com/java/awt/PageAttributes.MediaType.html) media)            Specifies the desired paper size for pages using these attributes. |
| void | [**setMediaToDefault**](http://docs.google.com/java/awt/PageAttributes.html#setMediaToDefault())()            Sets the paper size for pages using these attributes to the default size for the default locale. |
| void | [**setOrientationRequested**](http://docs.google.com/java/awt/PageAttributes.html#setOrientationRequested(int))(int orientationRequested)            Specifies the print orientation for pages using these attributes. |
| void | [**setOrientationRequested**](http://docs.google.com/java/awt/PageAttributes.html#setOrientationRequested(java.awt.PageAttributes.OrientationRequestedType))([PageAttributes.OrientationRequestedType](http://docs.google.com/java/awt/PageAttributes.OrientationRequestedType.html) orientationRequested)            Specifies the print orientation for pages using these attributes. |
| void | [**setOrientationRequestedToDefault**](http://docs.google.com/java/awt/PageAttributes.html#setOrientationRequestedToDefault())()            Sets the print orientation for pages using these attributes to the default. |
| void | [**setOrigin**](http://docs.google.com/java/awt/PageAttributes.html#setOrigin(java.awt.PageAttributes.OriginType))([PageAttributes.OriginType](http://docs.google.com/java/awt/PageAttributes.OriginType.html) origin)            Specifies whether drawing at (0, 0) to pages using these attributes draws at the upper-left corner of the physical page, or at the upper-left corner of the printable area. |
| void | [**setPrinterResolution**](http://docs.google.com/java/awt/PageAttributes.html#setPrinterResolution(int))(int printerResolution)            Specifies the desired cross feed and feed print resolutions in dots per inch for pages using these attributes. |
| void | [**setPrinterResolution**](http://docs.google.com/java/awt/PageAttributes.html#setPrinterResolution(int%5B%5D))(int[] printerResolution)            Specifies the desired print resolution for pages using these attributes. |
| void | [**setPrinterResolutionToDefault**](http://docs.google.com/java/awt/PageAttributes.html#setPrinterResolutionToDefault())()            Sets the printer resolution for pages using these attributes to the default. |
| void | [**setPrintQuality**](http://docs.google.com/java/awt/PageAttributes.html#setPrintQuality(int))(int printQuality)            Specifies the print quality for pages using these attributes. |
| void | [**setPrintQuality**](http://docs.google.com/java/awt/PageAttributes.html#setPrintQuality(java.awt.PageAttributes.PrintQualityType))([PageAttributes.PrintQualityType](http://docs.google.com/java/awt/PageAttributes.PrintQualityType.html) printQuality)            Specifies the print quality for pages using these attributes. |
| void | [**setPrintQualityToDefault**](http://docs.google.com/java/awt/PageAttributes.html#setPrintQualityToDefault())()            Sets the print quality for pages using these attributes to the default. |
| [String](http://docs.google.com/java/lang/String.html) | [**toString**](http://docs.google.com/java/awt/PageAttributes.html#toString())()            Returns a string representation of this PageAttributes. |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [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** |
| --- |

### PageAttributes

public **PageAttributes**()

Constructs a PageAttributes instance with default values for every attribute.

### PageAttributes

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

Constructs a PageAttributes instance which is a copy of the supplied PageAttributes.

**Parameters:**obj - the PageAttributes to copy.

### PageAttributes

public **PageAttributes**([PageAttributes.ColorType](http://docs.google.com/java/awt/PageAttributes.ColorType.html) color,  
 [PageAttributes.MediaType](http://docs.google.com/java/awt/PageAttributes.MediaType.html) media,  
 [PageAttributes.OrientationRequestedType](http://docs.google.com/java/awt/PageAttributes.OrientationRequestedType.html) orientationRequested,  
 [PageAttributes.OriginType](http://docs.google.com/java/awt/PageAttributes.OriginType.html) origin,  
 [PageAttributes.PrintQualityType](http://docs.google.com/java/awt/PageAttributes.PrintQualityType.html) printQuality,  
 int[] printerResolution)

Constructs a PageAttributes instance with the specified values for every attribute.

**Parameters:**color - ColorType.COLOR or ColorType.MONOCHROME.media - one of the constant fields of the MediaType class.orientationRequested - OrientationRequestedType.PORTRAIT or OrientationRequestedType.LANDSCAPE.origin - OriginType.PHYSICAL or OriginType.PRINTABLEprintQuality - PrintQualityType.DRAFT, PrintQualityType.NORMAL, or PrintQualityType.HIGHprinterResolution - an integer array of 3 elements. The first element must be greater than 0. The second element must be must be greater than 0. The third element must be either 3 or 4. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if one or more of the above conditions is violated.

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

### clone

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

Creates and returns a copy of this PageAttributes.

**Overrides:**[clone](http://docs.google.com/java/lang/Object.html#clone()) in class [Object](http://docs.google.com/java/lang/Object.html) **Returns:**the newly created copy. It is safe to cast this Object into a PageAttributes.**See Also:**[Cloneable](http://docs.google.com/java/lang/Cloneable.html)

### set

public void **set**([PageAttributes](http://docs.google.com/java/awt/PageAttributes.html) obj)

Sets all of the attributes of this PageAttributes to the same values as the attributes of obj.

**Parameters:**obj - the PageAttributes to copy.

### getColor

public [PageAttributes.ColorType](http://docs.google.com/java/awt/PageAttributes.ColorType.html) **getColor**()

Returns whether pages using these attributes will be rendered in color or monochrome. This attribute is updated to the value chosen by the user.

**Returns:**ColorType.COLOR or ColorType.MONOCHROME.

### setColor

public void **setColor**([PageAttributes.ColorType](http://docs.google.com/java/awt/PageAttributes.ColorType.html) color)

Specifies whether pages using these attributes will be rendered in color or monochrome. Not specifying this attribute is equivalent to specifying ColorType.MONOCHROME.

**Parameters:**color - ColorType.COLOR or ColorType.MONOCHROME. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if color is null.

### getMedia

public [PageAttributes.MediaType](http://docs.google.com/java/awt/PageAttributes.MediaType.html) **getMedia**()

Returns the paper size for pages using these attributes. This attribute is updated to the value chosen by the user.

**Returns:**one of the constant fields of the MediaType class.

### setMedia

public void **setMedia**([PageAttributes.MediaType](http://docs.google.com/java/awt/PageAttributes.MediaType.html) media)

Specifies the desired paper size for pages using these attributes. The actual paper size will be determined by the limitations of the target printer. If an exact match cannot be found, an implementation will choose the closest possible match. Not specifying this attribute is equivalent to specifying the default size for the default locale. The default size for locales in the United States and Canada is MediaType.NA\_LETTER. The default size for all other locales is MediaType.ISO\_A4.

**Parameters:**media - one of the constant fields of the MediaType class. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if media is null.

### setMediaToDefault

public void **setMediaToDefault**()

Sets the paper size for pages using these attributes to the default size for the default locale. The default size for locales in the United States and Canada is MediaType.NA\_LETTER. The default size for all other locales is MediaType.ISO\_A4.

### getOrientationRequested

public [PageAttributes.OrientationRequestedType](http://docs.google.com/java/awt/PageAttributes.OrientationRequestedType.html) **getOrientationRequested**()

Returns the print orientation for pages using these attributes. This attribute is updated to the value chosen by the user.

**Returns:**OrientationRequestedType.PORTRAIT or OrientationRequestedType.LANDSCAPE.

### setOrientationRequested

public void **setOrientationRequested**([PageAttributes.OrientationRequestedType](http://docs.google.com/java/awt/PageAttributes.OrientationRequestedType.html) orientationRequested)

Specifies the print orientation for pages using these attributes. Not specifying the property is equivalent to specifying OrientationRequestedType.PORTRAIT.

**Parameters:**orientationRequested - OrientationRequestedType.PORTRAIT or OrientationRequestedType.LANDSCAPE. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if orientationRequested is null.

### setOrientationRequested

public void **setOrientationRequested**(int orientationRequested)

Specifies the print orientation for pages using these attributes. Specifying 3 denotes portrait. Specifying 4 denotes landscape. Specifying any other value will generate an IllegalArgumentException. Not specifying the property is equivalent to calling setOrientationRequested(OrientationRequestedType.PORTRAIT).

**Parameters:**orientationRequested - 3 or 4 **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if orientationRequested is not 3 or 4

### setOrientationRequestedToDefault

public void **setOrientationRequestedToDefault**()

Sets the print orientation for pages using these attributes to the default. The default orientation is portrait.

### getOrigin

public [PageAttributes.OriginType](http://docs.google.com/java/awt/PageAttributes.OriginType.html) **getOrigin**()

Returns whether drawing at (0, 0) to pages using these attributes draws at the upper-left corner of the physical page, or at the upper-left corner of the printable area. (Note that these locations could be equivalent.) This attribute cannot be modified by, and is not subject to any limitations of, the implementation or the target printer.

**Returns:**OriginType.PHYSICAL or OriginType.PRINTABLE

### setOrigin

public void **setOrigin**([PageAttributes.OriginType](http://docs.google.com/java/awt/PageAttributes.OriginType.html) origin)

Specifies whether drawing at (0, 0) to pages using these attributes draws at the upper-left corner of the physical page, or at the upper-left corner of the printable area. (Note that these locations could be equivalent.) Not specifying the property is equivalent to specifying OriginType.PHYSICAL.

**Parameters:**origin - OriginType.PHYSICAL or OriginType.PRINTABLE **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if origin is null.

### getPrintQuality

public [PageAttributes.PrintQualityType](http://docs.google.com/java/awt/PageAttributes.PrintQualityType.html) **getPrintQuality**()

Returns the print quality for pages using these attributes. This attribute is updated to the value chosen by the user.

**Returns:**PrintQualityType.DRAFT, PrintQualityType.NORMAL, or PrintQualityType.HIGH

### setPrintQuality

public void **setPrintQuality**([PageAttributes.PrintQualityType](http://docs.google.com/java/awt/PageAttributes.PrintQualityType.html) printQuality)

Specifies the print quality for pages using these attributes. Not specifying the property is equivalent to specifying PrintQualityType.NORMAL.

**Parameters:**printQuality - PrintQualityType.DRAFT, PrintQualityType.NORMAL, or PrintQualityType.HIGH **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if printQuality is null.

### setPrintQuality

public void **setPrintQuality**(int printQuality)

Specifies the print quality for pages using these attributes. Specifying 3 denotes draft. Specifying 4 denotes normal. Specifying 5 denotes high. Specifying any other value will generate an IllegalArgumentException. Not specifying the property is equivalent to calling setPrintQuality(PrintQualityType.NORMAL).

**Parameters:**printQuality - 3, 4, or 5 **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if printQuality is not 3 , 4, or 5

### setPrintQualityToDefault

public void **setPrintQualityToDefault**()

Sets the print quality for pages using these attributes to the default. The default print quality is normal.

### getPrinterResolution

public int[] **getPrinterResolution**()

Returns the print resolution for pages using these attributes. Index 0 of the array specifies the cross feed direction resolution (typically the horizontal resolution). Index 1 of the array specifies the feed direction resolution (typically the vertical resolution). Index 2 of the array specifies whether the resolutions are in dots per inch or dots per centimeter. 3 denotes dots per inch. 4 denotes dots per centimeter.

**Returns:**an integer array of 3 elements. The first element must be greater than 0. The second element must be must be greater than 0. The third element must be either 3 or 4.

### setPrinterResolution

public void **setPrinterResolution**(int[] printerResolution)

Specifies the desired print resolution for pages using these attributes. The actual resolution will be determined by the limitations of the implementation and the target printer. Index 0 of the array specifies the cross feed direction resolution (typically the horizontal resolution). Index 1 of the array specifies the feed direction resolution (typically the vertical resolution). Index 2 of the array specifies whether the resolutions are in dots per inch or dots per centimeter. 3 denotes dots per inch. 4 denotes dots per centimeter. Note that the 1.1 printing implementation (Toolkit.getPrintJob) requires that the feed and cross feed resolutions be the same. Not specifying the property is equivalent to calling setPrinterResolution(72).

**Parameters:**printerResolution - an integer array of 3 elements. The first element must be greater than 0. The second element must be must be greater than 0. The third element must be either 3 or 4. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if one or more of the above conditions is violated.

### setPrinterResolution

public void **setPrinterResolution**(int printerResolution)

Specifies the desired cross feed and feed print resolutions in dots per inch for pages using these attributes. The same value is used for both resolutions. The actual resolutions will be determined by the limitations of the implementation and the target printer. Not specifying the property is equivalent to specifying 72.

**Parameters:**printerResolution - an integer greater than 0. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if printerResolution is less than or equal to 0.

### setPrinterResolutionToDefault

public void **setPrinterResolutionToDefault**()

Sets the printer resolution for pages using these attributes to the default. The default is 72 dpi for both the feed and cross feed resolutions.

### equals

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

Determines whether two PageAttributes are equal to each other.

Two PageAttributes are equal if and only if each of their attributes are equal. Attributes of enumeration type are equal if and only if the fields refer to the same unique enumeration object. This means that an aliased media is equal to its underlying unique media. Printer resolutions are equal if and only if the feed resolution, cross feed resolution, and units are equal.

**Overrides:**[equals](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)) in class [Object](http://docs.google.com/java/lang/Object.html) **Parameters:**obj - the object whose equality will be checked. **Returns:**whether obj is equal to this PageAttribute according to the above criteria.**See Also:**[Object.hashCode()](http://docs.google.com/java/lang/Object.html#hashCode()), [Hashtable](http://docs.google.com/java/util/Hashtable.html)

### hashCode

public int **hashCode**()

Returns a hash code value for this PageAttributes.

**Overrides:**[hashCode](http://docs.google.com/java/lang/Object.html#hashCode()) in class [Object](http://docs.google.com/java/lang/Object.html) **Returns:**the hash code.**See Also:**[Object.equals(java.lang.Object)](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [Hashtable](http://docs.google.com/java/util/Hashtable.html)

### toString

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

Returns a string representation of this PageAttributes.

**Overrides:**[toString](http://docs.google.com/java/lang/Object.html#toString()) in class [Object](http://docs.google.com/java/lang/Object.html) **Returns:**the string representation.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/PageAttributes.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/MultipleGradientPaint.CycleMethod.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/PageAttributes.ColorType.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/PageAttributes.html)    [**NO FRAMES**](http://docs.google.com/PageAttributes.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: [NESTED](#3znysh7) | FIELD | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: FIELD | [CONSTR](#1t3h5sf) | [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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