| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/InvocationEvent.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/event/InputMethodListener.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/event/ItemEvent.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/event/InvocationEvent.html)    [**NO FRAMES**](http://docs.google.com/InvocationEvent.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#3dy6vkm) | [METHOD](#1t3h5sf) | DETAIL: [FIELD](#3rdcrjn) | [CONSTR](#z337ya) | [METHOD](#2xcytpi) |

## **java.awt.event**

Class InvocationEvent

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 [java.util.EventObject](http://docs.google.com/java/util/EventObject.html)  
 [java.awt.AWTEvent](http://docs.google.com/java/awt/AWTEvent.html)  
 **java.awt.event.InvocationEvent**

**All Implemented Interfaces:** [ActiveEvent](http://docs.google.com/java/awt/ActiveEvent.html), [Serializable](http://docs.google.com/java/io/Serializable.html)

public class **InvocationEvent**extends [AWTEvent](http://docs.google.com/java/awt/AWTEvent.html)implements [ActiveEvent](http://docs.google.com/java/awt/ActiveEvent.html)

An event which executes the run() method on a Runnable when dispatched by the AWT event dispatcher thread. This class can be used as a reference implementation of ActiveEvent rather than declaring a new class and defining dispatch().

Instances of this class are placed on the EventQueue by calls to invokeLater and invokeAndWait. Client code can use this fact to write replacement functions for invokeLater and invokeAndWait without writing special-case code in any AWTEventListener objects.

**Since:** 1.2 **See Also:**[ActiveEvent](http://docs.google.com/java/awt/ActiveEvent.html), [EventQueue.invokeLater(java.lang.Runnable)](http://docs.google.com/java/awt/EventQueue.html#invokeLater(java.lang.Runnable)), [EventQueue.invokeAndWait(java.lang.Runnable)](http://docs.google.com/java/awt/EventQueue.html#invokeAndWait(java.lang.Runnable)), [AWTEventListener](http://docs.google.com/java/awt/event/AWTEventListener.html), [Serialized Form](http://docs.google.com/serialized-form.html#java.awt.event.InvocationEvent)

| **Field Summary** | |
| --- | --- |
| protected  boolean | [**catchExceptions**](http://docs.google.com/java/awt/event/InvocationEvent.html#catchExceptions)            Set to true if dispatch() catches Throwable and stores it in the exception instance variable. |
| static int | [**INVOCATION\_DEFAULT**](http://docs.google.com/java/awt/event/InvocationEvent.html#INVOCATION_DEFAULT)            The default id for all InvocationEvents. |
| static int | [**INVOCATION\_FIRST**](http://docs.google.com/java/awt/event/InvocationEvent.html#INVOCATION_FIRST)            Marks the first integer id for the range of invocation event ids. |
| static int | [**INVOCATION\_LAST**](http://docs.google.com/java/awt/event/InvocationEvent.html#INVOCATION_LAST)            Marks the last integer id for the range of invocation event ids. |
| protected  [Object](http://docs.google.com/java/lang/Object.html) | [**notifier**](http://docs.google.com/java/awt/event/InvocationEvent.html#notifier)            The (potentially null) Object whose notifyAll() method will be called immediately after the Runnable.run() method returns. |
| protected  [Runnable](http://docs.google.com/java/lang/Runnable.html) | [**runnable**](http://docs.google.com/java/awt/event/InvocationEvent.html#runnable)            The Runnable whose run() method will be called. |

| **Fields inherited from class java.awt.**[**AWTEvent**](http://docs.google.com/java/awt/AWTEvent.html) |
| --- |
| [ACTION\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#ACTION_EVENT_MASK), [ADJUSTMENT\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#ADJUSTMENT_EVENT_MASK), [COMPONENT\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#COMPONENT_EVENT_MASK), [consumed](http://docs.google.com/java/awt/AWTEvent.html#consumed), [CONTAINER\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#CONTAINER_EVENT_MASK), [FOCUS\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#FOCUS_EVENT_MASK), [HIERARCHY\_BOUNDS\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#HIERARCHY_BOUNDS_EVENT_MASK), [HIERARCHY\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#HIERARCHY_EVENT_MASK), [id](http://docs.google.com/java/awt/AWTEvent.html#id), [INPUT\_METHOD\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#INPUT_METHOD_EVENT_MASK), [INVOCATION\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#INVOCATION_EVENT_MASK), [ITEM\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#ITEM_EVENT_MASK), [KEY\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#KEY_EVENT_MASK), [MOUSE\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#MOUSE_EVENT_MASK), [MOUSE\_MOTION\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#MOUSE_MOTION_EVENT_MASK), [MOUSE\_WHEEL\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#MOUSE_WHEEL_EVENT_MASK), [PAINT\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#PAINT_EVENT_MASK), [RESERVED\_ID\_MAX](http://docs.google.com/java/awt/AWTEvent.html#RESERVED_ID_MAX), [TEXT\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#TEXT_EVENT_MASK), [WINDOW\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#WINDOW_EVENT_MASK), [WINDOW\_FOCUS\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#WINDOW_FOCUS_EVENT_MASK), [WINDOW\_STATE\_EVENT\_MASK](http://docs.google.com/java/awt/AWTEvent.html#WINDOW_STATE_EVENT_MASK) |

| **Fields inherited from class java.util.**[**EventObject**](http://docs.google.com/java/util/EventObject.html) |
| --- |
| [source](http://docs.google.com/java/util/EventObject.html#source) |

| **Constructor Summary** | |
| --- | --- |
| protected | [**InvocationEvent**](http://docs.google.com/java/awt/event/InvocationEvent.html#InvocationEvent(java.lang.Object,%20int,%20java.lang.Runnable,%20java.lang.Object,%20boolean))([Object](http://docs.google.com/java/lang/Object.html) source, int id, [Runnable](http://docs.google.com/java/lang/Runnable.html) runnable, [Object](http://docs.google.com/java/lang/Object.html) notifier, boolean catchThrowables)            Constructs an InvocationEvent with the specified source and ID which will execute the runnable's run method when dispatched. |
|  | [**InvocationEvent**](http://docs.google.com/java/awt/event/InvocationEvent.html#InvocationEvent(java.lang.Object,%20java.lang.Runnable))([Object](http://docs.google.com/java/lang/Object.html) source, [Runnable](http://docs.google.com/java/lang/Runnable.html) runnable)            Constructs an InvocationEvent with the specified source which will execute the runnable's run method when dispatched. |
|  | [**InvocationEvent**](http://docs.google.com/java/awt/event/InvocationEvent.html#InvocationEvent(java.lang.Object,%20java.lang.Runnable,%20java.lang.Object,%20boolean))([Object](http://docs.google.com/java/lang/Object.html) source, [Runnable](http://docs.google.com/java/lang/Runnable.html) runnable, [Object](http://docs.google.com/java/lang/Object.html) notifier, boolean catchThrowables)            Constructs an InvocationEvent with the specified source which will execute the runnable's run method when dispatched. |

| **Method Summary** | |
| --- | --- |
| void | [**dispatch**](http://docs.google.com/java/awt/event/InvocationEvent.html#dispatch())()            Executes the Runnable's run() method and notifies the notifier (if any) when run() returns. |
| [Exception](http://docs.google.com/java/lang/Exception.html) | [**getException**](http://docs.google.com/java/awt/event/InvocationEvent.html#getException())()            Returns any Exception caught while executing the Runnable's run() method. |
| [Throwable](http://docs.google.com/java/lang/Throwable.html) | [**getThrowable**](http://docs.google.com/java/awt/event/InvocationEvent.html#getThrowable())()            Returns any Throwable caught while executing the Runnable's run() method. |
| long | [**getWhen**](http://docs.google.com/java/awt/event/InvocationEvent.html#getWhen())()            Returns the timestamp of when this event occurred. |
| [String](http://docs.google.com/java/lang/String.html) | [**paramString**](http://docs.google.com/java/awt/event/InvocationEvent.html#paramString())()            Returns a parameter string identifying this event. |

| **Methods inherited from class java.awt.**[**AWTEvent**](http://docs.google.com/java/awt/AWTEvent.html) |
| --- |
| [consume](http://docs.google.com/java/awt/AWTEvent.html#consume()), [getID](http://docs.google.com/java/awt/AWTEvent.html#getID()), [isConsumed](http://docs.google.com/java/awt/AWTEvent.html#isConsumed()), [setSource](http://docs.google.com/java/awt/AWTEvent.html#setSource(java.lang.Object)), [toString](http://docs.google.com/java/awt/AWTEvent.html#toString()) |

| **Methods inherited from class java.util.**[**EventObject**](http://docs.google.com/java/util/EventObject.html) |
| --- |
| [getSource](http://docs.google.com/java/util/EventObject.html#getSource()) |

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

| **Field Detail** |
| --- |

### INVOCATION\_FIRST

public static final int **INVOCATION\_FIRST**

Marks the first integer id for the range of invocation event ids.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.awt.event.InvocationEvent.INVOCATION_FIRST)

### INVOCATION\_DEFAULT

public static final int **INVOCATION\_DEFAULT**

The default id for all InvocationEvents.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.awt.event.InvocationEvent.INVOCATION_DEFAULT)

### INVOCATION\_LAST

public static final int **INVOCATION\_LAST**

Marks the last integer id for the range of invocation event ids.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.awt.event.InvocationEvent.INVOCATION_LAST)

### runnable

protected [Runnable](http://docs.google.com/java/lang/Runnable.html) **runnable**

The Runnable whose run() method will be called.

### notifier

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

The (potentially null) Object whose notifyAll() method will be called immediately after the Runnable.run() method returns.

### catchExceptions

protected boolean **catchExceptions**

Set to true if dispatch() catches Throwable and stores it in the exception instance variable. If false, Throwables are propagated up to the EventDispatchThread's dispatch loop.

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

### InvocationEvent

public **InvocationEvent**([Object](http://docs.google.com/java/lang/Object.html) source,  
 [Runnable](http://docs.google.com/java/lang/Runnable.html) runnable)

Constructs an InvocationEvent with the specified source which will execute the runnable's run method when dispatched.

This is a convenience constructor. An invocation of the form InvocationEvent(source, runnable) behaves in exactly the same way as the invocation of [InvocationEvent](http://docs.google.com/java/awt/event/InvocationEvent.html#InvocationEvent(java.lang.Object,%20java.lang.Runnable,%20java.lang.Object,%20boolean))(source, runnable, null, false).

This method throws an IllegalArgumentException if source is null.

**Parameters:**source - the Object that originated the eventrunnable - the Runnable whose run method will be executed **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if source is null**See Also:**[InvocationEvent(Object, Runnable, Object, boolean)](http://docs.google.com/java/awt/event/InvocationEvent.html#InvocationEvent(java.lang.Object,%20java.lang.Runnable,%20java.lang.Object,%20boolean))

### InvocationEvent

public **InvocationEvent**([Object](http://docs.google.com/java/lang/Object.html) source,  
 [Runnable](http://docs.google.com/java/lang/Runnable.html) runnable,  
 [Object](http://docs.google.com/java/lang/Object.html) notifier,  
 boolean catchThrowables)

Constructs an InvocationEvent with the specified source which will execute the runnable's run method when dispatched. If notifier is non-null, notifyAll() will be called on it immediately after run returns.

An invocation of the form InvocationEvent(source, runnable, notifier, catchThrowables) behaves in exactly the same way as the invocation of [InvocationEvent](http://docs.google.com/java/awt/event/InvocationEvent.html#InvocationEvent(java.lang.Object,%20int,%20java.lang.Runnable,%20java.lang.Object,%20boolean))(source, InvocationEvent.INVOCATION\_DEFAULT, runnable, notifier, catchThrowables).

This method throws an IllegalArgumentException if source is null.

**Parameters:**source - the Object that originated the eventrunnable - the Runnable whose run method will be executednotifier - the Object whose notifyAll method will be called after Runnable.run has returnedcatchThrowables - specifies whether dispatch should catch Throwable when executing the Runnable's run method, or should instead propagate those Throwables to the EventDispatchThread's dispatch loop **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if source is null**See Also:**[InvocationEvent(Object, int, Runnable, Object, boolean)](http://docs.google.com/java/awt/event/InvocationEvent.html#InvocationEvent(java.lang.Object,%20int,%20java.lang.Runnable,%20java.lang.Object,%20boolean))

### InvocationEvent

protected **InvocationEvent**([Object](http://docs.google.com/java/lang/Object.html) source,  
 int id,  
 [Runnable](http://docs.google.com/java/lang/Runnable.html) runnable,  
 [Object](http://docs.google.com/java/lang/Object.html) notifier,  
 boolean catchThrowables)

Constructs an InvocationEvent with the specified source and ID which will execute the runnable's run method when dispatched. If notifier is non-null, notifyAll will be called on it immediately after run returns.

Note that passing in an invalid id results in unspecified behavior. This method throws an IllegalArgumentException if source is null.

**Parameters:**source - the Object that originated the eventid - the ID for the eventrunnable - the Runnable whose run method will be executednotifier - the Object whose notifyAll method will be called after Runnable.run has returnedcatchThrowables - specifies whether dispatch should catch Throwable when executing the Runnable's run method, or should instead propagate those Throwables to the EventDispatchThread's dispatch loop **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if source is null

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

### dispatch

public void **dispatch**()

Executes the Runnable's run() method and notifies the notifier (if any) when run() returns.

**Specified by:**[dispatch](http://docs.google.com/java/awt/ActiveEvent.html#dispatch()) in interface [ActiveEvent](http://docs.google.com/java/awt/ActiveEvent.html)

### getException

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

Returns any Exception caught while executing the Runnable's run() method.

**Returns:**A reference to the Exception if one was thrown; null if no Exception was thrown or if this InvocationEvent does not catch exceptions

### getThrowable

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

Returns any Throwable caught while executing the Runnable's run() method.

**Returns:**A reference to the Throwable if one was thrown; null if no Throwable was thrown or if this InvocationEvent does not catch Throwables**Since:** 1.5

### getWhen

public long **getWhen**()

Returns the timestamp of when this event occurred.

**Returns:**this event's timestamp**Since:** 1.4

### paramString

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

Returns a parameter string identifying this event. This method is useful for event-logging and for debugging.

**Overrides:**[paramString](http://docs.google.com/java/awt/AWTEvent.html#paramString()) in class [AWTEvent](http://docs.google.com/java/awt/AWTEvent.html) **Returns:**A string identifying the event and its attributes

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/InvocationEvent.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/event/InputMethodListener.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/event/ItemEvent.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/event/InvocationEvent.html)    [**NO FRAMES**](http://docs.google.com/InvocationEvent.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#3dy6vkm) | [METHOD](#1t3h5sf) | DETAIL: [FIELD](#3rdcrjn) | [CONSTR](#z337ya) | [METHOD](#2xcytpi) |

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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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