| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/DragGestureRecognizer.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/dnd/DragGestureListener.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/dnd/DragSource.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/dnd/DragGestureRecognizer.html)    [**NO FRAMES**](http://docs.google.com/DragGestureRecognizer.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: [FIELD](#1t3h5sf) | [CONSTR](#lnxbz9) | [METHOD](#z337ya) |

## **java.awt.dnd**

Class DragGestureRecognizer

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

**All Implemented Interfaces:** [Serializable](http://docs.google.com/java/io/Serializable.html) **Direct Known Subclasses:** [MouseDragGestureRecognizer](http://docs.google.com/java/awt/dnd/MouseDragGestureRecognizer.html)

public abstract class **DragGestureRecognizer**extends [Object](http://docs.google.com/java/lang/Object.html)implements [Serializable](http://docs.google.com/java/io/Serializable.html)

The DragGestureRecognizer is an abstract base class for the specification of a platform-dependent listener that can be associated with a particular Component in order to identify platform-dependent drag initiating gestures.

The appropriate DragGestureRecognizer subclass is obtained from the DragSource asssociated with a particular Component, or from the Toolkit object via its createDragGestureRecognizer() method.

Once the DragGestureRecognizer is associated with a particular Component it will register the appropriate listener interfaces on that Component in order to track the input events delivered to the Component.

Once the DragGestureRecognizer identifies a sequence of events on the Component as a drag initiating gesture, it will notify its unicast DragGestureListener by invoking its gestureRecognized() method.

When a concrete DragGestureRecognizer instance detects a drag initiating gesture on the Component it is associated with, it will fire a DragGestureEvent to the DragGestureListener registered on its unicast event source for DragGestureListener events. This DragGestureListener is responsible for causing the associated DragSource to start the Drag and Drop operation (if appropriate).

**See Also:**[DragGestureListener](http://docs.google.com/java/awt/dnd/DragGestureListener.html), [DragGestureEvent](http://docs.google.com/java/awt/dnd/DragGestureEvent.html), [DragSource](http://docs.google.com/java/awt/dnd/DragSource.html), [Serialized Form](http://docs.google.com/serialized-form.html#java.awt.dnd.DragGestureRecognizer)

| **Field Summary** | |
| --- | --- |
| protected  [Component](http://docs.google.com/java/awt/Component.html) | [**component**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#component)            The Component associated with this DragGestureRecognizer. |
| protected  [DragGestureListener](http://docs.google.com/java/awt/dnd/DragGestureListener.html) | [**dragGestureListener**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#dragGestureListener)            The DragGestureListener associated with this DragGestureRecognizer. |
| protected  [DragSource](http://docs.google.com/java/awt/dnd/DragSource.html) | [**dragSource**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#dragSource)            The DragSource associated with this DragGestureRecognizer. |
| protected  [ArrayList](http://docs.google.com/java/util/ArrayList.html)<[InputEvent](http://docs.google.com/java/awt/event/InputEvent.html)> | [**events**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#events)            The list of events (in order) that the DragGestureRecognizer "recognized" as a "gesture" that triggers a drag. |
| protected  int | [**sourceActions**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#sourceActions)            An int representing the type(s) of action(s) used in this Drag and Drop operation. |

| **Constructor Summary** | |
| --- | --- |
| protected | [**DragGestureRecognizer**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#DragGestureRecognizer(java.awt.dnd.DragSource))([DragSource](http://docs.google.com/java/awt/dnd/DragSource.html) ds)            Construct a new DragGestureRecognizer given the DragSource to be used in this Drag and Drop operation. |
| protected | [**DragGestureRecognizer**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#DragGestureRecognizer(java.awt.dnd.DragSource,%20java.awt.Component))([DragSource](http://docs.google.com/java/awt/dnd/DragSource.html) ds, [Component](http://docs.google.com/java/awt/Component.html) c)            Construct a new DragGestureRecognizer given the DragSource to be used in this Drag and Drop operation, and the Component this DragGestureRecognizer should "observe" for drag initiating gestures. |
| protected | [**DragGestureRecognizer**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#DragGestureRecognizer(java.awt.dnd.DragSource,%20java.awt.Component,%20int))([DragSource](http://docs.google.com/java/awt/dnd/DragSource.html) ds, [Component](http://docs.google.com/java/awt/Component.html) c, int sa)            Construct a new DragGestureRecognizer given the DragSource to be used in this Drag and Drop operation, the Component this DragGestureRecognizer should "observe" for drag initiating gestures, and the action(s) supported for this Drag and Drop operation. |
| protected | [**DragGestureRecognizer**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#DragGestureRecognizer(java.awt.dnd.DragSource,%20java.awt.Component,%20int,%20java.awt.dnd.DragGestureListener))([DragSource](http://docs.google.com/java/awt/dnd/DragSource.html) ds, [Component](http://docs.google.com/java/awt/Component.html) c, int sa, [DragGestureListener](http://docs.google.com/java/awt/dnd/DragGestureListener.html) dgl)            Construct a new DragGestureRecognizer given the DragSource to be used in this Drag and Drop operation, the Component this DragGestureRecognizer should "observe" for drag initiating gestures, the action(s) supported for this Drag and Drop operation, and the DragGestureListener to notify once a drag initiating gesture has been detected. |

| **Method Summary** | |
| --- | --- |
| void | [**addDragGestureListener**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#addDragGestureListener(java.awt.dnd.DragGestureListener))([DragGestureListener](http://docs.google.com/java/awt/dnd/DragGestureListener.html) dgl)            Register a new DragGestureListener. |
| protected  void | [**appendEvent**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#appendEvent(java.awt.event.InputEvent))([InputEvent](http://docs.google.com/java/awt/event/InputEvent.html) awtie)            Listeners registered on the Component by this Recognizer shall record all Events that are recognized as part of the series of Events that go to comprise a Drag and Drop initiating gesture via this API. |
| protected  void | [**fireDragGestureRecognized**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#fireDragGestureRecognized(int,%20java.awt.Point))(int dragAction, [Point](http://docs.google.com/java/awt/Point.html) p)            Notify the DragGestureListener that a Drag and Drop initiating gesture has occurred. |
| [Component](http://docs.google.com/java/awt/Component.html) | [**getComponent**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#getComponent())()            This method returns the Component that is to be "observed" by the DragGestureRecognizer for drag initiating gestures. |
| [DragSource](http://docs.google.com/java/awt/dnd/DragSource.html) | [**getDragSource**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#getDragSource())()            This method returns the DragSource this DragGestureRecognizer will use in order to process the Drag and Drop operation. |
| int | [**getSourceActions**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#getSourceActions())()            This method returns an int representing the type of action(s) this Drag and Drop operation will support. |
| [InputEvent](http://docs.google.com/java/awt/event/InputEvent.html) | [**getTriggerEvent**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#getTriggerEvent())()            This method returns the first event in the series of events that initiated the Drag and Drop operation. |
| protected abstract  void | [**registerListeners**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#registerListeners())()            register this DragGestureRecognizer's Listeners with the Component subclasses must override this method |
| void | [**removeDragGestureListener**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#removeDragGestureListener(java.awt.dnd.DragGestureListener))([DragGestureListener](http://docs.google.com/java/awt/dnd/DragGestureListener.html) dgl)            unregister the current DragGestureListener |
| void | [**resetRecognizer**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#resetRecognizer())()            Reset the Recognizer, if its currently recognizing a gesture, ignore it. |
| void | [**setComponent**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#setComponent(java.awt.Component))([Component](http://docs.google.com/java/awt/Component.html) c)            set the Component that the DragGestureRecognizer is associated with registerListeners() and unregisterListeners() are called as a side effect as appropriate. |
| void | [**setSourceActions**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#setSourceActions(int))(int actions)            This method sets the permitted source drag action(s) for this Drag and Drop operation. |
| protected abstract  void | [**unregisterListeners**](http://docs.google.com/java/awt/dnd/DragGestureRecognizer.html#unregisterListeners())()            unregister this DragGestureRecognizer's Listeners with the Component subclasses must override this method |

| **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()), [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)) |

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

### dragSource

protected [DragSource](http://docs.google.com/java/awt/dnd/DragSource.html) **dragSource**

The DragSource associated with this DragGestureRecognizer.

### component

protected [Component](http://docs.google.com/java/awt/Component.html) **component**

The Component associated with this DragGestureRecognizer.

### dragGestureListener

protected transient [DragGestureListener](http://docs.google.com/java/awt/dnd/DragGestureListener.html) **dragGestureListener**

The DragGestureListener associated with this DragGestureRecognizer.

### sourceActions

protected int **sourceActions**

An int representing the type(s) of action(s) used in this Drag and Drop operation.

### events

protected [ArrayList](http://docs.google.com/java/util/ArrayList.html)<[InputEvent](http://docs.google.com/java/awt/event/InputEvent.html)> **events**

The list of events (in order) that the DragGestureRecognizer "recognized" as a "gesture" that triggers a drag.

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

### DragGestureRecognizer

protected **DragGestureRecognizer**([DragSource](http://docs.google.com/java/awt/dnd/DragSource.html) ds,  
 [Component](http://docs.google.com/java/awt/Component.html) c,  
 int sa,  
 [DragGestureListener](http://docs.google.com/java/awt/dnd/DragGestureListener.html) dgl)

Construct a new DragGestureRecognizer given the DragSource to be used in this Drag and Drop operation, the Component this DragGestureRecognizer should "observe" for drag initiating gestures, the action(s) supported for this Drag and Drop operation, and the DragGestureListener to notify once a drag initiating gesture has been detected.

**Parameters:**ds - the DragSource this DragGestureRecognizer will use to process the Drag and Drop operationc - the Component this DragGestureRecognizer should "observe" the event stream to, in order to detect a drag initiating gesture. If this value is null, the DragGestureRecognizer is not associated with any Component.sa - the set (logical OR) of the DnDConstants that this Drag and Drop operation will supportdgl - the DragGestureRecognizer to notify when a drag gesture is detected

**Throws:** IllegalArgumentException - if ds is null.

### DragGestureRecognizer

protected **DragGestureRecognizer**([DragSource](http://docs.google.com/java/awt/dnd/DragSource.html) ds,  
 [Component](http://docs.google.com/java/awt/Component.html) c,  
 int sa)

Construct a new DragGestureRecognizer given the DragSource to be used in this Drag and Drop operation, the Component this DragGestureRecognizer should "observe" for drag initiating gestures, and the action(s) supported for this Drag and Drop operation.

**Parameters:**ds - the DragSource this DragGestureRecognizer will use to process the Drag and Drop operationc - the Component this DragGestureRecognizer should "observe" the event stream to, in order to detect a drag initiating gesture. If this value is null, the DragGestureRecognizer is not associated with any Component.sa - the set (logical OR) of the DnDConstants that this Drag and Drop operation will support

**Throws:** IllegalArgumentException - if ds is null.

### DragGestureRecognizer

protected **DragGestureRecognizer**([DragSource](http://docs.google.com/java/awt/dnd/DragSource.html) ds,  
 [Component](http://docs.google.com/java/awt/Component.html) c)

Construct a new DragGestureRecognizer given the DragSource to be used in this Drag and Drop operation, and the Component this DragGestureRecognizer should "observe" for drag initiating gestures.

**Parameters:**ds - the DragSource this DragGestureRecognizer will use to process the Drag and Drop operationc - the Component this DragGestureRecognizer should "observe" the event stream to, in order to detect a drag initiating gesture. If this value is null, the DragGestureRecognizer is not associated with any Component.

**Throws:** IllegalArgumentException - if ds is null.

### DragGestureRecognizer

protected **DragGestureRecognizer**([DragSource](http://docs.google.com/java/awt/dnd/DragSource.html) ds)

Construct a new DragGestureRecognizer given the DragSource to be used in this Drag and Drop operation.

**Parameters:**ds - the DragSource this DragGestureRecognizer will use to process the Drag and Drop operation

**Throws:** IllegalArgumentException - if ds is null.

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

### registerListeners

protected abstract void **registerListeners**()

register this DragGestureRecognizer's Listeners with the Component subclasses must override this method

### unregisterListeners

protected abstract void **unregisterListeners**()

unregister this DragGestureRecognizer's Listeners with the Component subclasses must override this method

### getDragSource

public [DragSource](http://docs.google.com/java/awt/dnd/DragSource.html) **getDragSource**()

This method returns the DragSource this DragGestureRecognizer will use in order to process the Drag and Drop operation.

**Returns:**the DragSource

### getComponent

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

This method returns the Component that is to be "observed" by the DragGestureRecognizer for drag initiating gestures.

**Returns:**The Component this DragGestureRecognizer is associated with

### setComponent

public void **setComponent**([Component](http://docs.google.com/java/awt/Component.html) c)

set the Component that the DragGestureRecognizer is associated with registerListeners() and unregisterListeners() are called as a side effect as appropriate.

**Parameters:**c - The Component or null

### getSourceActions

public int **getSourceActions**()

This method returns an int representing the type of action(s) this Drag and Drop operation will support.

**Returns:**the currently permitted source action(s)

### setSourceActions

public void **setSourceActions**(int actions)

This method sets the permitted source drag action(s) for this Drag and Drop operation.

**Parameters:**actions - the permitted source drag action(s)

### getTriggerEvent

public [InputEvent](http://docs.google.com/java/awt/event/InputEvent.html) **getTriggerEvent**()

This method returns the first event in the series of events that initiated the Drag and Drop operation.

**Returns:**the initial event that triggered the drag gesture

### resetRecognizer

public void **resetRecognizer**()

Reset the Recognizer, if its currently recognizing a gesture, ignore it.

### addDragGestureListener

public void **addDragGestureListener**([DragGestureListener](http://docs.google.com/java/awt/dnd/DragGestureListener.html) dgl)  
 throws [TooManyListenersException](http://docs.google.com/java/util/TooManyListenersException.html)

Register a new DragGestureListener.

**Parameters:**dgl - the DragGestureListener to register with this DragGestureRecognizer.

**Throws:** [TooManyListenersException](http://docs.google.com/java/util/TooManyListenersException.html) - if a DragGestureListener has already been added.

### removeDragGestureListener

public void **removeDragGestureListener**([DragGestureListener](http://docs.google.com/java/awt/dnd/DragGestureListener.html) dgl)

unregister the current DragGestureListener

**Parameters:**dgl - the DragGestureListener to unregister from this DragGestureRecognizer

**Throws:** IllegalArgumentException - if dgl is not (equal to) the currently registered DragGestureListener.

### fireDragGestureRecognized

protected void **fireDragGestureRecognized**(int dragAction,  
 [Point](http://docs.google.com/java/awt/Point.html) p)

Notify the DragGestureListener that a Drag and Drop initiating gesture has occurred. Then reset the state of the Recognizer.

**Parameters:**dragAction - The action initially selected by the users gesturep - The point (in Component coords) where the gesture originated

### appendEvent

protected void **appendEvent**([InputEvent](http://docs.google.com/java/awt/event/InputEvent.html) awtie)

Listeners registered on the Component by this Recognizer shall record all Events that are recognized as part of the series of Events that go to comprise a Drag and Drop initiating gesture via this API.

This method is used by a DragGestureRecognizer implementation to add an InputEvent subclass (that it believes is one in a series of events that comprise a Drag and Drop operation) to the array of events that this DragGestureRecognizer maintains internally.

**Parameters:**awtie - the InputEvent to add to this DragGestureRecognizer's internal array of events. Note that null is not a valid value, and will be ignored.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/DragGestureRecognizer.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/dnd/DragGestureListener.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/dnd/DragSource.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/dnd/DragGestureRecognizer.html)    [**NO FRAMES**](http://docs.google.com/DragGestureRecognizer.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: [FIELD](#1t3h5sf) | [CONSTR](#lnxbz9) | [METHOD](#z337ya) |

[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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