
GestureEvent Class Reference

User Experience



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GestureEvent Class Reference

Inherits from	UIEvent
Availability	Available in iPhone OS 2.0 and later.
Companion guide	Safari Web Content Guide

Overview

The `GestureEvent` class encapsulates information about a multi-touch gesture.

`GestureEvent` objects are high-level events that encapsulate the low-level `TouchEvent` objects. Both `GestureEvent` and `TouchEvent` events are sent during a multi-touch sequence. Gesture events contain scaling and rotation information allowing gestures to be combined, if supported by the platform. If not supported, one gesture ends before another starts. Listen for `GestureEvent` events if you want to respond to gestures only, not process the low-level `TouchEvent` objects.

The different types of `GestureEvent` objects that can occur are:

`gesturestart`

Sent when two or more fingers touch the surface.

`gesturechange`

Sent when fingers are moved during a gesture.

`gestureend`

Sent when the gesture ends (when there are 1 or 0 fingers touching the surface).

For example, for a two finger multi-touch gesture, the events occur in the following sequence:

1. `touchstart` for finger 1. Sent when the first finger touches the surface.
2. `gesturestart`. Sent when the second finger touches the surface.
3. `touchstart` for finger 2. Sent immediately after `gesturestart` when the second finger touches the surface.
4. `gesturechange` for current gesture. Sent when both fingers move while still touching the surface.
5. `gestureend`. Sent when the second finger lifts from the surface.
6. `touchend` for finger 2. Sent immediately after `gestureend` when the second finger lifts from the surface.
7. `touchend` for finger 1. Sent when the first finger lifts from the surface.

See [TouchEvent Class Reference](#) if you want to process just low-level `TouchEvent` objects.

Tasks

Accessing Properties

[altKey](#) (page 6)

If `true`, the alt key is pressed; otherwise, it is not. If there is no keyboard, this value is `false`.

[ctrlKey](#) (page 6)

If `true`, the control key is pressed; otherwise, it is not. If there is no keyboard, this value is `false`.

[metaKey](#) (page 7)

If `true`, the meta key is pressed; otherwise, it is not. If there is no keyboard, this value is `false`.

[rotation](#) (page 7)

The delta rotation since the start of an event, in degrees, where clockwise is positive and counter-clockwise is negative. The initial value is `0.0`.

[scale](#) (page 7)

The distance between two fingers since the start of an event, as a multiplier of the initial distance. The initial value is `1.0`. If less than `1.0`, the gesture is pinch close (to zoom out). If greater than `1.0`, the gesture is pinch open (to zoom in).

[shiftKey](#) (page 7)

If `true`, the Shift key is pressed; otherwise, it is not. If there is no keyboard, this value is `false`.

[target](#) (page 7)

The target of this gesture.

Initializing

[initGestureEvent](#) (page 8)

Initializes a newly created `GestureEvent` object.

Properties

altKey

If `true`, the alt key is pressed; otherwise, it is not. If there is no keyboard, this value is `false`.

readonly attribute `boolean altKey`;

Availability

Available in iPhone OS 2.0 and later.

ctrlKey

If `true`, the control key is pressed; otherwise, it is not. If there is no keyboard, this value is `false`.

readonly attribute boolean ctrlKey;

Availability

Available in iPhone OS 2.0 and later.

metaKey

If true, the meta key is pressed; otherwise, it is not. If there is no keyboard, this value is false.

readonly attribute boolean metaKey;

Availability

Available in iPhone OS 2.0 and later.

rotation

The delta rotation since the start of an event, in degrees, where clockwise is positive and counter-clockwise is negative. The initial value is 0.0.

readonly attribute float rotation;

Availability

Available in iPhone OS 2.0 and later.

scale

The distance between two fingers since the start of an event, as a multiplier of the initial distance. The initial value is 1.0. If less than 1.0, the gesture is pinch close (to zoom out). If greater than 1.0, the gesture is pinch open (to zoom in).

readonly attribute float scale;

Availability

Available in iPhone OS 2.0 and later.

shiftKey

If true, the Shift key is pressed; otherwise, it is not. If there is no keyboard, this value is false.

readonly attribute boolean shiftKey;

Availability

Available in iPhone OS 2.0 and later.

target

The target of this gesture.

readonly attribute EventTarget target;

Availability

Available in iPhone OS 2.0 and later.

Methods

initGestureEvent

Initializes a newly created GestureEvent object.

```
void initGestureEvent(
    in DOMString type,
    in boolean canBubble,
    in boolean cancelable,
    in DOMWindow view,
    in long detail,
    in long screenX,
    in long screenY,
    in long clientX,
    in long clientY,
    in boolean ctrlKey,
    in boolean altKey,
    in boolean shiftKey,
    in boolean metaKey,
    in EventTarget target,
    in float scale,
    in float rotation);
```

Parameters

type

The type of event that occurred.

canBubble

Indicates whether an event can bubble. If `true`, the event can bubble; otherwise, it cannot.

cancelable

Indicates whether an event can have its default action prevented. If `true`, the default action can be prevented; otherwise, it cannot.

view

The view (DOM window) where the event occurred.

detail

Specifies some detail information about the event depending on the type of event.

screenX

The x-coordinate of the event's location in screen coordinates.

screenY

The y-coordinate of the event's location in screen coordinates.

clientX

The x-coordinate of the event's location relative to the window's viewport.

clientY

The y-coordinate of the event's location relative to the window's viewport.

ctrlKey

If true, the control key is pressed; otherwise, it is not.

altKey

If true, the alt key is pressed; otherwise, it is not.

shiftKey

If true, the Shift key is pressed; otherwise, it is not.

metaKey

If true, the meta key is pressed; otherwise, it is not.

target

The target of this gesture.

scale

The distance between two fingers since the start of an event as a multiplier of the initial distance. The initial value is 1.0. If less than 1.0, the gesture is pinch close (to zoom out). If greater than 1.0, the gesture is pinch open (to zoom in).

rotation

The delta rotation since the start of an event, in degrees, where clockwise is positive and counter-clockwise is negative. The initial value is 0.0.

Discussion

Use this method to programmatically create a `GestureEvent` object.

Availability

Available in iPhone OS 2.0 and later.

Document Revision History

This table describes the changes to *GestureEvent Class Reference*.

Date	Notes
2010-02-24	First revisions in a collection document.

REVISION HISTORY

Document Revision History