TouchEvent Class Reference

User Experience

2010-02-24

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TouchEvent Class Reference

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

Overview

The `TouchEvent` class encapsulates information about a touch event.

The system continually sends `TouchEvent` objects to an application as fingers touch and move across a surface. A touch event provides a snapshot of all touches during a multi-touch sequence, most importantly the touches that are new or have changed for a particular target. A multi-touch sequence begins when a finger first touches the surface. Other fingers may subsequently touch the surface, and all fingers may move across the surface. The sequence ends when the last of these fingers is lifted from the surface. An application receives touch event objects during each phase of any touch.

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

`touchstart`
: Sent when a finger for a given event touches the surface.

`touchmove`
: Sent when a given event moves on the surface.

`touchend`
: Sent when a given event lifts from the surface.

`touchcancel`
: Sent when the system cancels tracking for the touch.

`TouchEvent` objects are combined together to form high-level `GestureEvent` objects that are also sent during a multi-touch sequence. See `GestureEvent` for details on `GestureEvent` objects and an example of the events sent for a two finger multi-touch gesture.

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`.

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`changedTouches` (page 6)
A collection of `Touch` objects representing all touches that changed in this event.

Initializing

`initTouchEvent` (page 6)
Initializes a newly created `TouchEvent` 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.

changedTouches

A collection of `Touch` objects representing all touches that changed in this event.

```
readonly attribute TouchList changedTouches;
```

Discussion
You manipulate this collection using `TouchList` methods.

Availability
Available in iPhone OS 2.0 and later.

Methods

initTouchEvent

Initializes a newly created `TouchEvent` object.

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```
void initTouchEvent(
        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 TouchList  touches,
        in TouchList  targetTouches,
        in TouchList  changedTouches,
        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) in which 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.

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touches

A collection of `Touch` objects representing all touches associated with this event.

targetTouches

A collection of `Touch` objects representing all touches associated with this target.

changedTouches

A collection of `Touch` objects representing all touches that changed in this event.

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 `TouchEvent` object.

Availability

Available in iPhone OS 2.0 and later.

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Document Revision History

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

Date	Notes
2010-02-24	First revision as a collection document.

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Document Revision History

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