

Handling UIKit Shake Gestures

When the user shakes a device, UIKit evaluates the accelerometer data to determine whether it qualifies as a shake gesture. If it does, UIKit delivers motion events to the **active app's first responder** when the shaking starts and stops. You can use motion events to trigger behaviors in your app.

UIKit calls the `motionBegan:withEvent:` and `motionEnded:withEvent:` methods of your responder objects to report the start and end of a shaking gesture. (UIKit does not notify your responders while a shaking gesture is ongoing.) You can implement one or both of these methods to perform any related tasks. **You should also implement the `motionCancelled:withEvent:` method to handle cases where UIKit cancels the shaking gesture.** UIKit cancels a shaking gesture if the shake motion is interrupted or if it determines that the current motion does not constitute a valid shaking gesture—for example, if the shaking lasts too long.

Listing 15-1 is extracted from the sample code project *GLPaint*. In this app, the user paints on the screen, and then shakes the device to erase the painting. This code detects whether a shake has occurred in the `motionEnded:withEvent:` method, and if it has, posts a notification to perform the shake-to-erase functionality.

Listing 15-1 Handling a motion event

```
1  - (void)motionEnded:(UIEventSubtype)motion withEvent:(UIEvent *)event {
2      if (motion == UIEventSubtypeMotionShake)
3      {
4          // User was shaking the device. Post a notification named "shake."
5          [[NSNotificationCenter defaultCenter] postNotificationName:@"shake"
6              object:self];
7      }
```

Motion events **travel up the responder chain until they are handled.** If the `applicationSupportsShakeToEdit` property of `UIApplication` is set to YES (the default) and a shaking-motion event reaches the window object, UIKit automatically displays a sheet with Undo and Redo commands.

NOTE

You can simulate shake-motion events in iOS Simulator as you test and debug your app.