Android simulate touch event programmatically
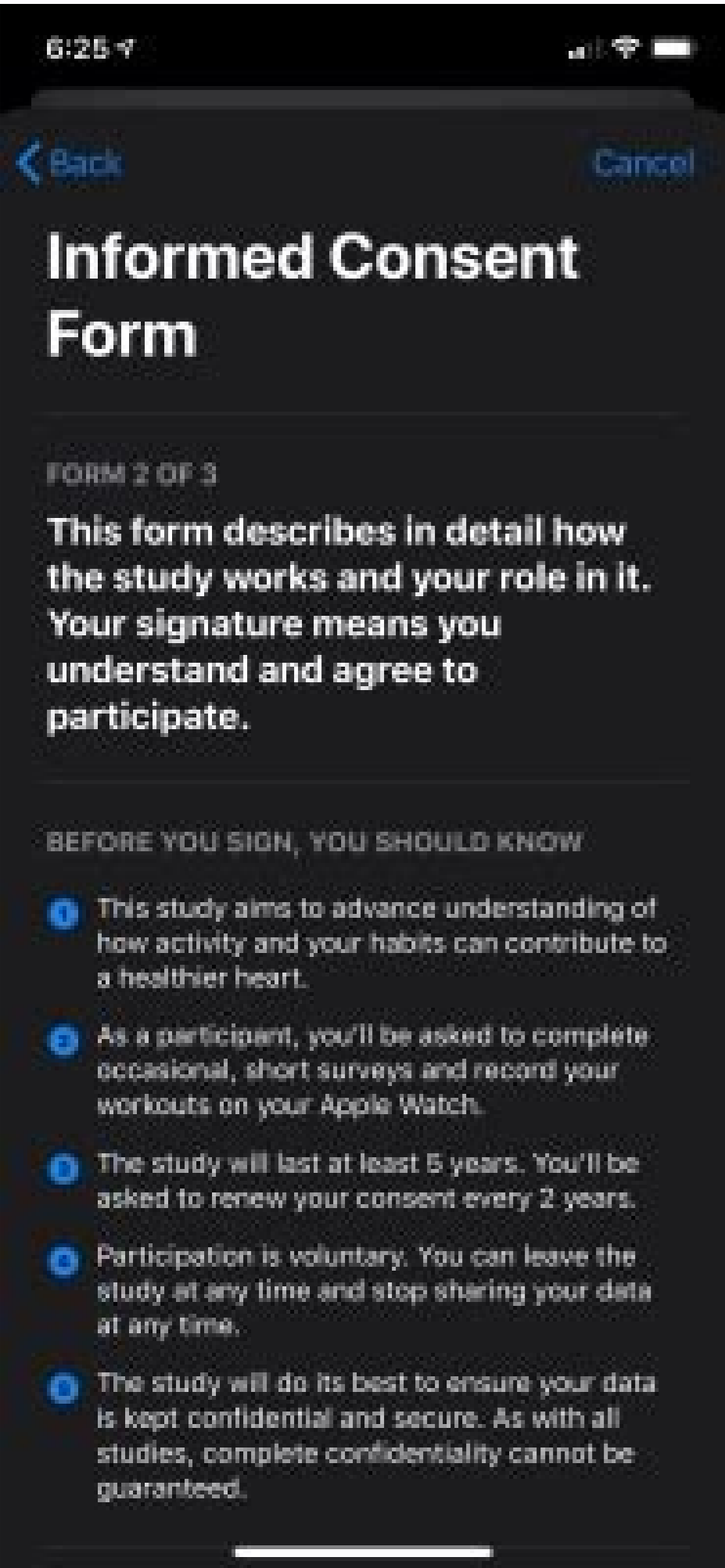
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Cinema 4D - Augment Help Center

March 4, 2014 Recent versions of Android include ADB shell touch input to simulate touch events on an Android device or simulator. However, older versions of Android (like 2.3) do not support this command. Fortunately, this functionality can be restored by running the getevent adb shell to capture events as they are generated. These events can be replayed later using the adb shell sendevent command. When you run the getevent adb shell, you may see something similar to the following when you touch the screen. Notice how the output is in hexadecimal format. /dev/input/event7: 0001 014a 00000001/dev/input/event7: 0003 003a 00000001/dev/input/event7: 0003 0035 000001ce/input/input3/inry0event27: 0000 0000 00000/input7: 0input7 /event7: 0003 003a 00000000/input/event7: /input0pute 3/0putevent 3/0pute 3/0deve 3:0deve 3:0deve 3/0deve/000 event7: 006030030 : 0000 0002 00 /dev/0 input/event7: 0000 0000 00000000 However, the sendevent adb shell command expects all of its inputs to be decimal. So if we want to repeat the above events, we should do something like below. Note that 462 and 898 are the x and y coordinates of this particular touch event. adb shell sendevent /dev/input/event7: 1,330 1 adb shell sendevent /dev/input/event7: 3 58 1 adb shell sendevent /dev/input/event7: 3 53,462 adb shell sendevent /dev/input/event7: 3 54,898 adb shell sendevent /dev/input/event7: 0 2 0 adb shell sendevent /dev/input/event7: 1,330 0 adb shell sendevent /dev/input/event7: 3 58 0 adb shell sendevent /dev/input/event7: 3 53 462 adb shell sendevent /dev/input/event7: 3 54 898 adb shell sendevent /dev/input/event7: 0 2 0 adb shell sendevent /dev/input/event7: 0 0 0 Note. Part two on Android development event injection has been published and is available here. The successful Android platform has been around for several yearsEnd users get a lot of bells and whistles with fancy apps, but developers find this "open" platform more confusing than ever. There are various APIs that still don't work, others are deprecated and out of date in one version, or some are blocked due to the higher security goals that platform developers so often refer to and probably think they've got the right answer. In general, Android also creates a lot of frustration, because the tools needed for various tasks or even more advanced applications are deliberately placed behind bars. Another example for many is the programmatic embedding of a key press or similar equivalent, the embedding of a touch (mouse) event. Because a malicious developer can create software that opens your app from the market and downloads paid apps without your knowledge, developers around the world can't programmatically send keystrokes to apps other than their own. That's just ridiculous narrow thinking. Of course, there will always be a balance between security and functionality, but with paranoia, this quickly turns into a complete failure. In other words, why restrict something so useful that can do so little harm? Users are alerted to threats with normal privileges, and other means should remain so. I'll leave them to their problems and get back to the point: I know of three ways to post events programmatically. This applies to both keyboard events (keys) and mouse events (touch events). Method 1. Using Internal APIs This approach carries risks, as always with internal, unpublished APIs. The goal is to access the WindowManager instance's injectKeyEvent / injectPointerEvent methods. IBinder wmbinder = ServiceManager.getService("window"); IWindowManager m_WndManager = IWindowManager.Stub.asInterface(wmbinder); ServiceManager and WindowsManager are defined as stubs. Then we can connectthose services and method calls we need. The interfaces are part of the sample code included at the end of this article. To send the key, do the following: // Key down m_WndManager.injectKeyEvent(new KeyEvent(KeyEvent.ACTION_DOWN, KeyEvent.KEYCODE_A),true); // Inject key m_WndManager.injectKeyEvent(new KeyEvent(KeyEvent.ACTION_UP, KeyEvent.KEYCODE_A),true); To send touch/mouse events use: //posx goes from 0 to SCREEN WIDTH , pos goes from 0 to SCREEN HEIGHT m_WndManager.injectPointerEvent(MotionEvent.obtain(SystemClock.uptimeMillis(), SystemClock.uptimeMillis(),MotionEvent. ACTION_DOWN, posx , pose, 0), true); It works fine but only in your app. When trying to insert key/touch events into another window, it closes with the following exception: E/AndroidRuntime(4908): java. lang.SecurityException: m_WndManager.injectPointerEvent(MotionEvent.obtain(SystemClock.uptimeMillis(), SystemClock.uptimeMillis(),MotionEvent.ACTION_UP,posx, pos, 0); Embedding in another application requires INJECT_EVENTS permission Not very funny because INJECT_EVENTS is a system permission. A possible solution is discussed here and here. Method 2: Use the Instrumentation Object This is a clean public API solution, but unfortunately still requires the INJECT_EVENTS permission. Instrumentation m_Instrumentation = new Instrumentation(); m_Instrumentation.sendKeyDownUpSync(KeyEvent.KEYCODE_B); For touch events you can use: //posx goes from 0 to SCREEN WIDTH , pos goes from 0 to SCREEN HEIGHT m_Instrumentation.sendPointerSync(MotionEvent.obtain(SystemClock.uptimeMillis(), SystemClock.uptimeMillis(),MotionEvent.ACTION_DOWN, pos, pos, 0); Inside the test app everything is fine and when you try to inject Don't key for external applications because access does notbut because the developers of Android decided to do it. Thanks guys, you're doing it! Are not. If you look at the sendPointerSync code, you'll quickly see that it uses the same approach as method 1. So it's the same thing, but nicely packaged in an easy-to-use API: public void sendPointerSync(MotionEvent event) { validateNotAppThread(); try { (IWindowManager.Stub.asInterface(ServiceManager.getService("window"))) .injectPointerEvent(event, true); } catch (RemoteException e) { } } Method 3: Passing events directly to /dev/input/eventX Linux provides a single input event interface for each device as /dev/input/eventX, where X is an integer. We can use it directly and skip the Android platform permission issues mentioned above. We need root access for this to work, so this approach only works on a rooted device. I found it easier to support Linux using native C code, but implementation in pure Java is also possible. So I added a little JNI component to manage the interface with /dev/input/eventX. The example code I wrote doesn't automatically determine the number X, so be sure to set it before running the code. I set it to event3 by default. You can change this in NativeInput.java, see below code. As mentioned, the latter method requires root. By default, eventX files have permissions of 660 (read and write for owner and group only). To insert keys from our application, we need to make them writable. First do this: adb shell such chmod 666 /dev/input/event3 You need root to run the chmod command. AndroidKeyInjector sample code Other great resources: Generating keystrokes programmatically Internal handling of input events in the Linux kernel and Android userspace androidscreencast Note. The second part has been published and is available here. Instantly share code, notes, and snippets. This operation cannot be performed at this time. You have logged in using a different tab or window. Reload to refresh the session. You signed out in another tab or window. Reload to updatemeeting. To add to @bstar55's great answer above: if you want to create a "touch" event like a user clicking on a view, you need to simulate the user touching the screen and then removing their finger in short order. To do this, "send" an ACTION_DOWN motion event followed shortly by an ACTION_UP motion event. The following Kotlin example has been tested and works reliably: //Create and send a touch event to the current target in the PhotoView //After testing (on the original Google Pixel), the touch event requires an ACTION_DOWN followed by a short //ACTION_UP , so first send both events// / create and send ACTION_DOWN MotionEvent var originalDownTime: Long = SystemClock.uptimeMillis() var eventTime: Long = SystemClock.uptimeMillis() + 100 var x = your_X_Value var y = your_Y_Value var metaState = 0 var motionEvent MotionEvent .obtain(originalDownTime, eventTime, MotionEvent .ACTION_DOWN , x, y, metaState) var returnVal = yourView.dispatchTouchEvent(motionEvent) Log.d(TAG,"returnVal: " + returnVal) //Create and dispatch ACTION_UP MotionClockTime= .uptimeMillis)+ 100 motionEvent = MotionEvent.obtain (originalDownTime, eventTime, MotionEvent.ACTION_UP, x, y, metaState) returnVal = yourView.dispatchTouchEvent(motionEvent) Log.d(TAG,"rrernVal : " + returnVal) ReadDi scuss Improve article Save the Touch Detection article confirms that the screen is fully functional. The developer has to deal with the touch response. Since Android devices have touch input, everything is programmed by touch. In order to explicitly call methods in the application, the touch action must be recognized. Such methods may have special functions. Common applications that use these special features include: Games. Most games have touch listeners that call different functions for different touch applications.does not unlock the device. Instead, the user must make a gesture or swipe to unlock the device. Example: pattern-based locks, sliding locks. Please note that we will implement this project using Kotlin. To check if screen touches occurred in Android, follow these steps: Step 1: Create a new project. To create a new project in Android Studio, see Create/Run a New Project in Android Studio. Remember that you have chosen Kotlin as your programming language. No changes were made to the activity_main.xml file. Step 2: Working with the MainActivity.kt file Finally, navigate to the MainActivity.kt file and look at the following code. Below is the code of MainActivity.kt file. Comments are added to the code to make it easier to understand. Replace fun onCreate(savedInstanceState: Bundle?) { super.onCreate(savedInstanceState) savedInstanceState) xintage set. See r main replace fun ontouchevent (event: motionevent): Boolean {â â â â â â â â aa}} exit: run on physical devicehtps: //media.geeksforgeeks.org/wp -content/20200928203119/ Move-online-video-cutter.com-1.mp4 To search for touch gestures in a specific view on the screen, follow these steps: Step 1: Create a new project Learn how to create a new project in Android Studio, see How Tonew project in android studio. Remember that you choose Kotlin as your programming language. Step 2: Working with the activity_main.xml file Go to the activity_main.xml file representing the user interface of the application and create a LinearLayout, give it a dark background and nothing else so that we can see the tactile experience. Below is the code for activity_main.xml.

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