

Controlling Device Vibration

In Chapter 8, you learned how to create Notifications that can trigger vibration to provide additional user feedback when signaling events. In some circumstances, you may wish to vibrate the device independently of Notifications. Vibrating the device is an excellent way to provide haptic user feedback and is particularly popular as a feedback mechanism for games.

To control device vibration, your applications need the VIBRATE permission. Add this to your application manifest using the code snippet below:

```
<uses-permission android:name="android.permission.VIBRATE"/>
```

Device vibration is controlled through the Vibrator class, accessible using the getSystemService method, as shown in the following code snippet:

```
String vibratorService = Context.VIBRATOR_SERVICE;  
Vibrator vibrator = (Vibrator) getSystemService(vibratorService);
```

Call vibrate to start device vibration; you can pass in either a vibration duration or pattern of alternating vibration/pause sequences along with an optional index parameter that will repeat the pattern starting at the index specified. Both techniques are demonstrated below:

```
long[] pattern = {1000, 2000, 4000, 8000, 16000 };  
vibrator.vibrate(pattern, 0);  
vibrator.vibrate(1000); // Vibrate for 1 second
```

To cancel vibration, you can call cancel. Alternatively, exiting your application will automatically cancel any vibration it has initiated.