Android Developers

Determining and Monitoring the Docking State and Type

Android devices can be docked into several different kinds of docks. These include car or home docks and digital versus analog docks. The dock-state is typically closely linked to the charging state as many docks provide power to docked devices.

This lesson teaches you to

- Determine the Current Docking State
- Determine the Current Dock Type
- Monitor for Changes in the Dock State or Type

You should also read

- Intents and Intent Filters

How the dock-state of the phone affects your update rate depends on your app. You may choose to increase the update frequency of a sports center app when it's in the desktop dock, or disable your updates completely if the device is car docked. Conversely, you may choose to maximize your updates while car docked if your background service is updating traffic conditions.

The dock state is also broadcast as a sticky `Intent` (https://developer.android.com/reference/android/content/Intent.html), allowing you to query if the device is docked or not, and if so, in which kind of dock.

Determine the Current Docking State

The dock-state details are included as an extra in a sticky broadcast of the `ACTION_DOCK_EVENT` (https://developer.android.com/reference/android/content/Intent.html#ACTION_DOCK_EVENT) action. Because it's sticky, you don't need to register a `BroadcastReceiver` (https://developer.android.com/reference/android/content/BroadcastReceiver.html). You can simply call `registerReceiver()` (https://developer.android.com/reference/android/content/Context.html#registerReceiver(android.content.BroadcastReceiver, android.content.IntentFilter)) passing in `null` as the broadcast receiver as shown in the next snippet.

```
IntentFilter ifilter = new IntentFilter(Intent.ACTION_DOCK_EVENT);
Intent dockStatus = context.registerReceiver(null, ifilter);
```

You can extract the current docking status from the `EXTRA_DOCK_STATE` extra:

```
int dockState = battery.getIntExtra(EXTRA_DOCK_STATE, -1);
boolean isDocked = dockState != Intent.EXTRA_DOCK_STATE_UNDOCKED;
```

Determine the Current Dock Type

If a device is docked, it can be docked in any one of four different type of dock:

- Car
- Desk
- Low-End (Analog) Desk
- High-End (Digital) Desk

Note that the latter two options were only introduced to Android in API level 11, so it's good practice to check for all three where you are only interested in the type of dock rather than it being digital or analog specifically:

```
boolean isCar = dockState == EXTRA_DOCK_STATE_CAR;
boolean isDesk = dockState == EXTRA_DOCK_STATE_DESK ||
                 dockState == EXTRA_DOCK_STATE_LE_DESK ||
                 dockState == EXTRA_DOCK_STATE_HE_DESK;
```

Monitor for Changes in the Dock State or Type

Whenever the device is docked or undocked, the `ACTION_DOCK_EVENT` (https://developer.android.com/reference/android/content/Intent.html#ACTION_DOCK_EVENT) action is broadcast. To monitor changes in the device's dock-state, simply register a broadcast receiver in your application manifest as shown in the snippet below:

```
<action android:name="android.intent.action.ACTION_DOCK_EVENT"/>
```

You can extract the dock type and state within the receiver implementation using the same techniques described in the previous step.