

Introduction to Android Battery Sensor

CS 436 Software Development on Mobile

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Battery

Why do we need to read battery status ?

1) Detect battery level

1) Adjust sensor update speed

2) Adjust display brightness

3) Bring application to sleep

2) Detect USB status

1) Charging

2) Connected to PC

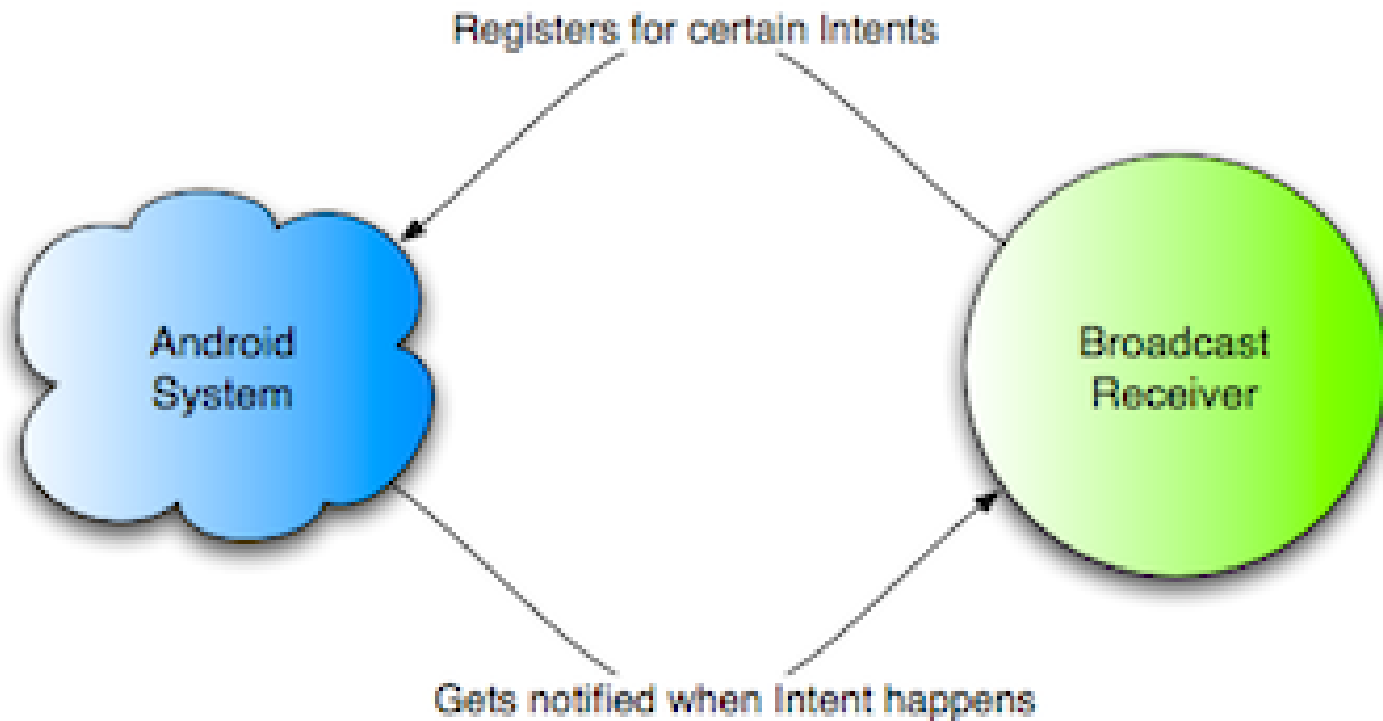
Battery

Battery status always broadcast from kernel

We can received them using broadcast receiver

Battery

Intent and Broadcast receiver



Battery

Registered intent and receiver

```
IntentFilter ifilter_charge = new  
IntentFilter(Intent.ACTION_BATTERY_CHANGED);
```

```
registerReceiver(batteryLevelReceiver,  
ifilter_charge);
```

Battery

```
BroadcastReceiver batteryLevelReceiver = new BroadcastReceiver(){
@Override
public void onReceive(Context arg0, Intent arg1) {
int level = arg1.getIntExtra(BatteryManager.EXTRA_LEVEL, -1);
int scale = arg1.getIntExtra(BatteryManager.EXTRA_SCALE, -1);
    int status=arg1.getIntExtra(BatteryManager.EXTRA_STATUS, -1);
    int chargePlug = arg1.getIntExtra(BatteryManager.EXTRA_PLUGGED, -1);
    boolean isCharging = status == BatteryManager.BATTERY_STATUS_CHARGING ||
        status == BatteryManager.BATTERY_STATUS_FULL;
    boolean usbCharge = chargePlug == BatteryManager.BATTERY_PLUGGED_USB;
    boolean acCharge = chargePlug == BatteryManager.BATTERY_PLUGGED_AC;
float batteryPct = (level / (float)scale)*100;

textView2.setText("Battery power:"+String.valueOf(batteryPct)+"%");
}
};
```

Thank you 😊