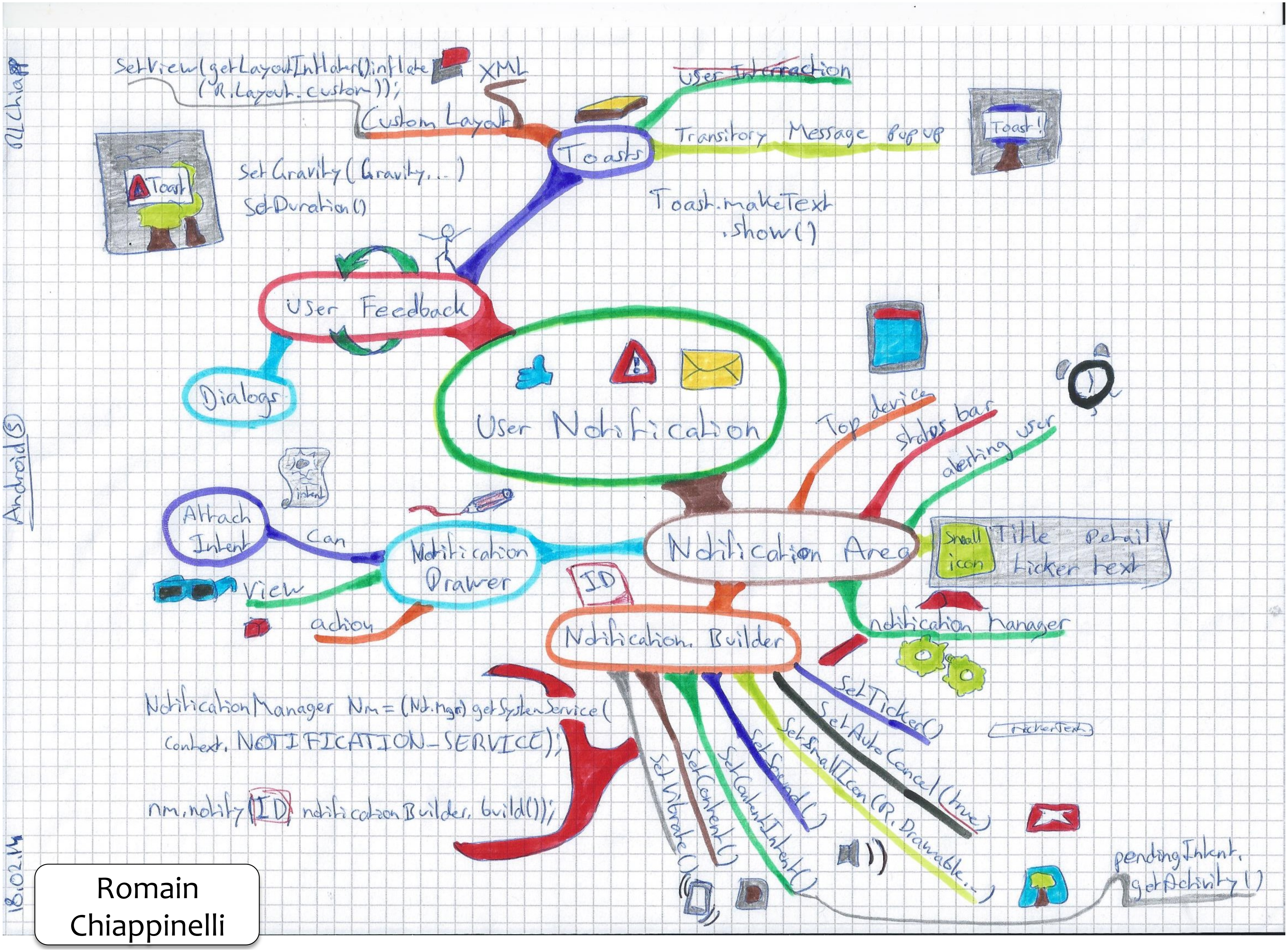


Romain Chiappinelli

Programming Handheld Systems

Adam Porter

User Notification

Today's Topics

Toast

Notification Area Notifications

User Notifications

Messages provided to the user outside of the normal UI

User Notifications

These include messages aimed at

- User feedback
  - Toasts
  - Dialogs
- Event notification
  - Notification Area notifications

Toast

- Transitory messages that pop up on the current window
    - e.g., to inform user that an operation has completed successfully
- Automatically fade into & out of view
- No user interaction or response

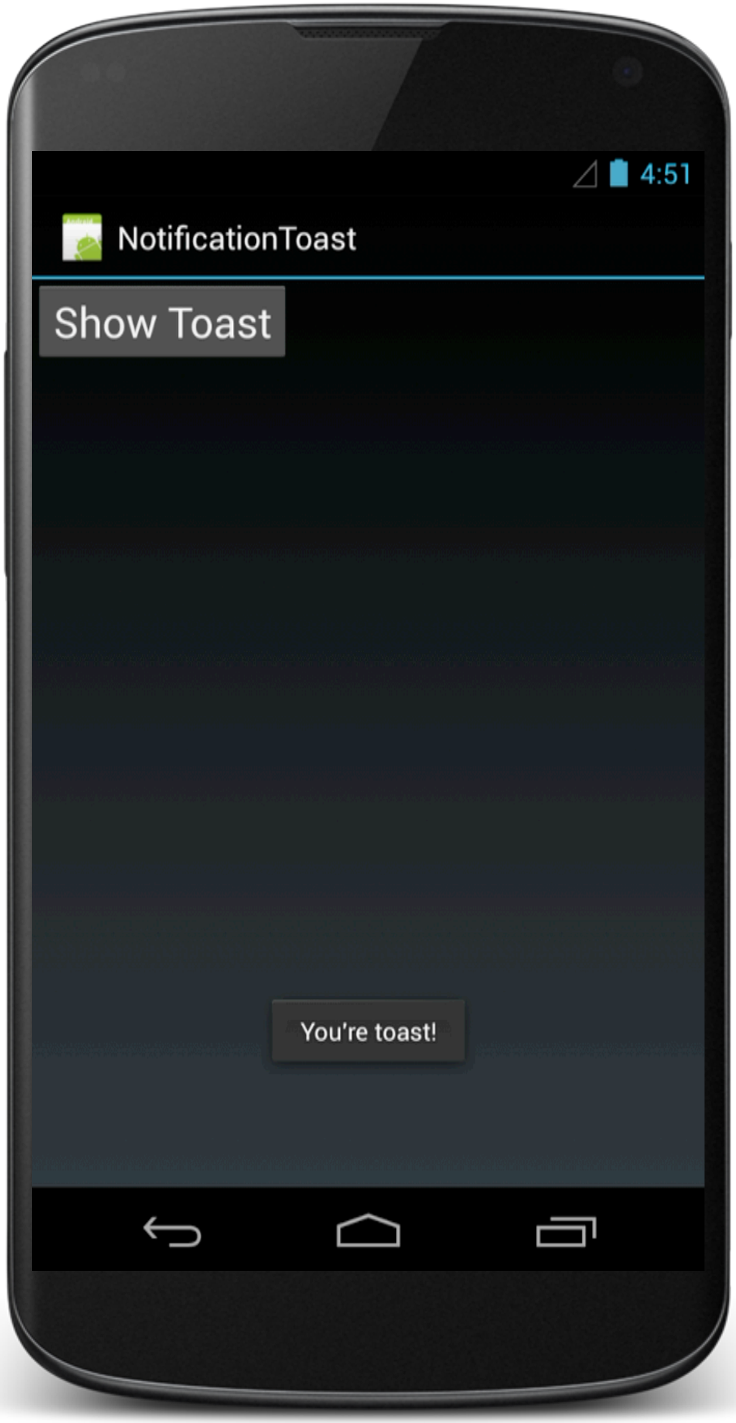
Creating Toast Notifications

Instantiate a Toast object by calling

```
Toast.makeText(context, text, duration)
```

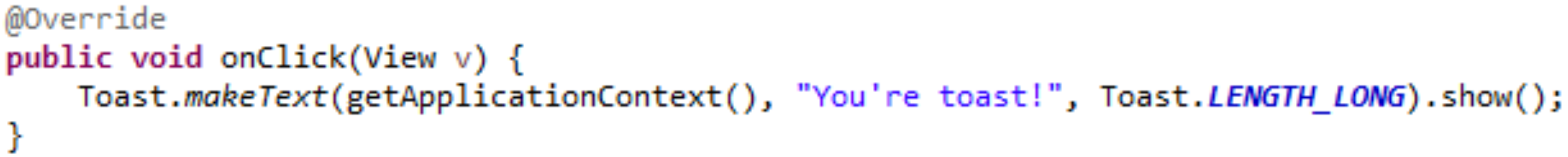
Show toast by calling

```
Toast.show()
```



You're toast!

NotificationToast

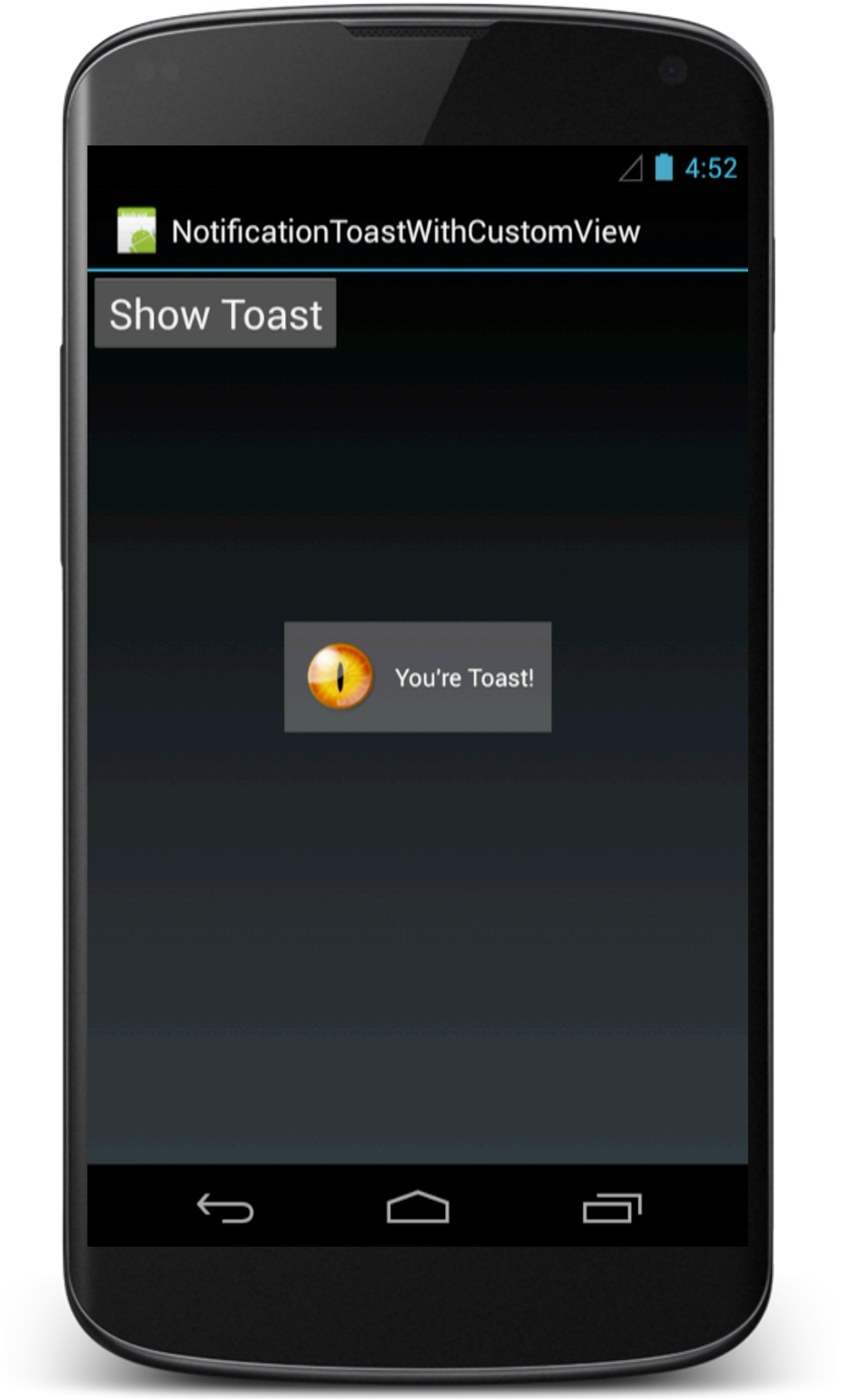


```
@Override
public void onClick(View v) {
    Toast.makeText(getApplicationContext(), "You're toast!", Toast.LENGTH_LONG).show();
}
```

Toast with Custom Views

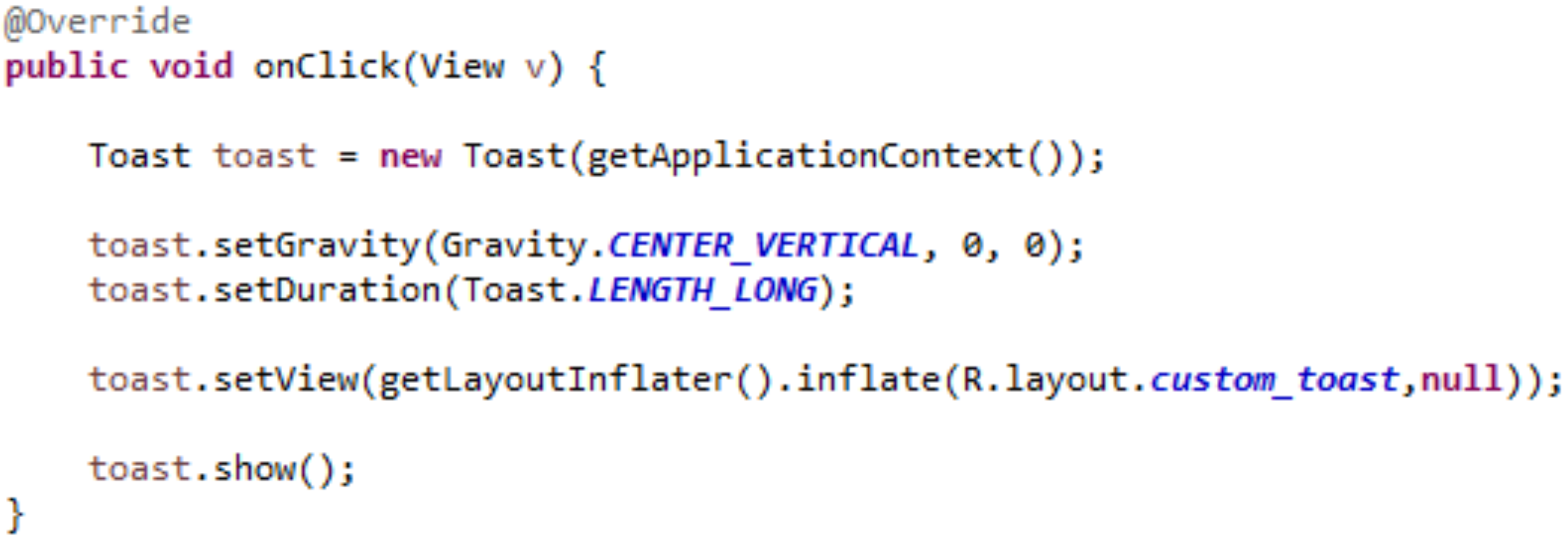
Can create custom layouts in XML

Set them using Toast.setView()



You're Toast!

NotificationToastWithCustomView



```
@Override
public void onClick(View v) {

    Toast toast = new Toast(getApplicationContext());

    toast.setGravity(Gravity.CENTER_VERTICAL, 0, 0);
    toast.setDuration(Toast.LENGTH_LONG);

    toast.setView(getLayoutInflater().inflate(R.layout.custom_toast,null));

    toast.show();
}
```

Notification Area Notifications

Android provides the notification area for alerting users about events

It also provides a notification drawer that users can pull down to see more detailed information about notifications

9:33
Google
9:33
SAT, AUGUST 24
28°C
Mostly Cloudy
Camera
Voice Dia..

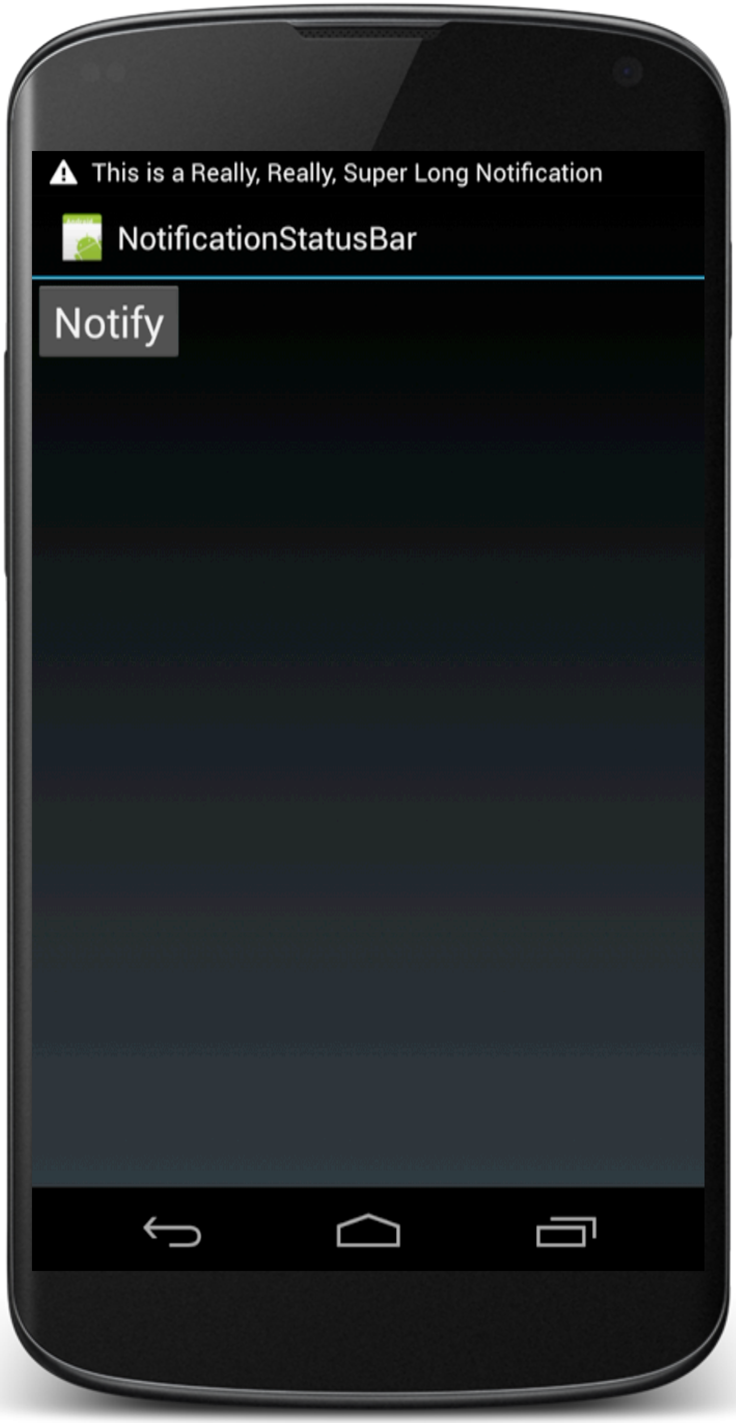
Notification Architecture

- Notification
  - Title, detail, small icon
- Notification Area
  - Ticker text, small icon
- Notification Drawer
  - View
  - Action

Notification Manager

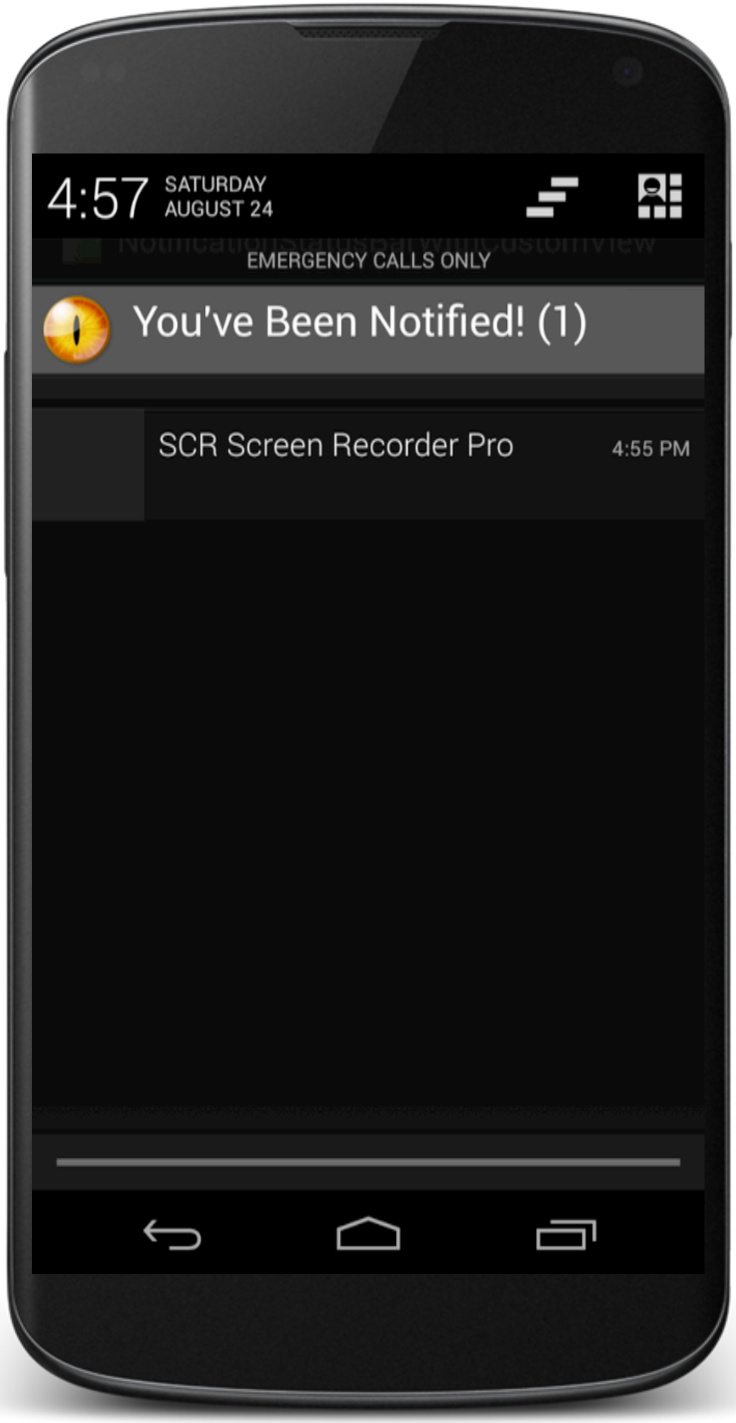
System service that manages Notifications

send & cancel notification



⚠ This is a Really, Really, Super Long Notification

NotificationStatusBar



4:57 SATURDAY
AUGUST 24

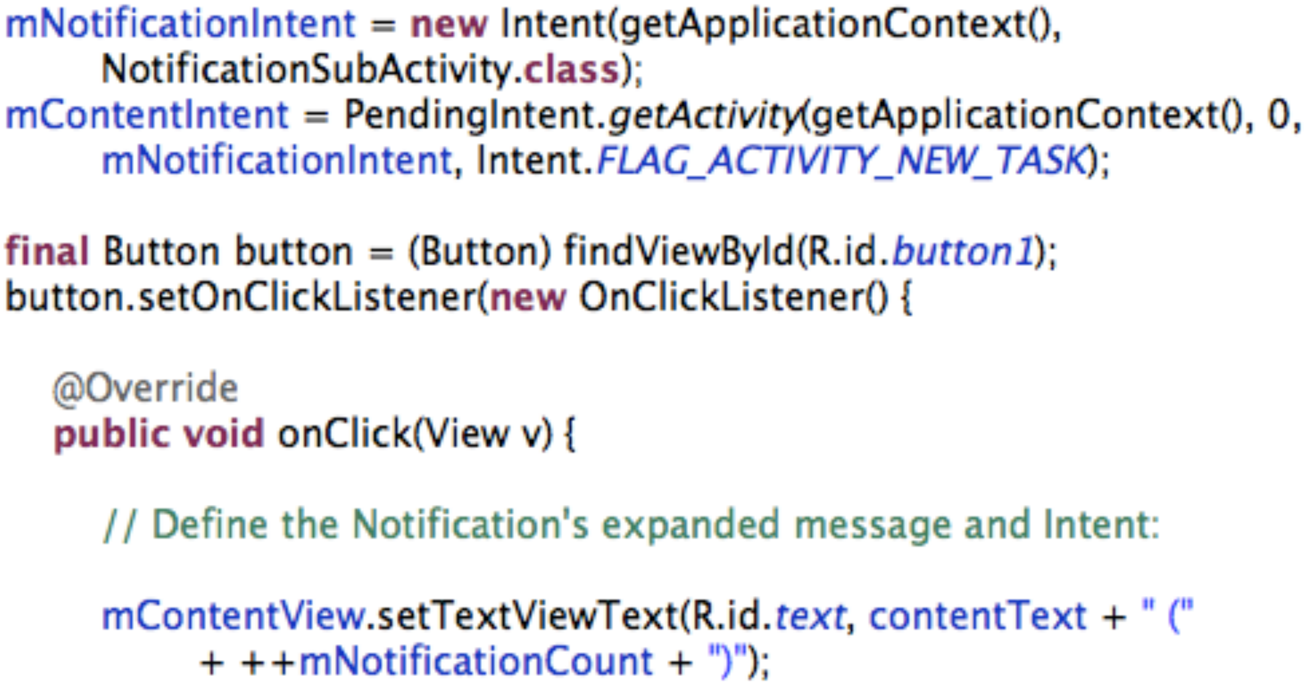
NotificationStatusBarWithCustomView

EMERGENCY CALLS ONLY

You've Been Notified! (1)

SCR Screen Recorder Pro 4:55 PM

NotificationStatusBarWithCustomView



```
mNotificationIntent = new Intent(getApplicationContext(),
        NotificationSubActivity.class);
mContentIntent = PendingIntent.getActivity(getApplicationContext(), 0,
        mNotificationIntent, Intent.FLAG_ACTIVITY_NEW_TASK);

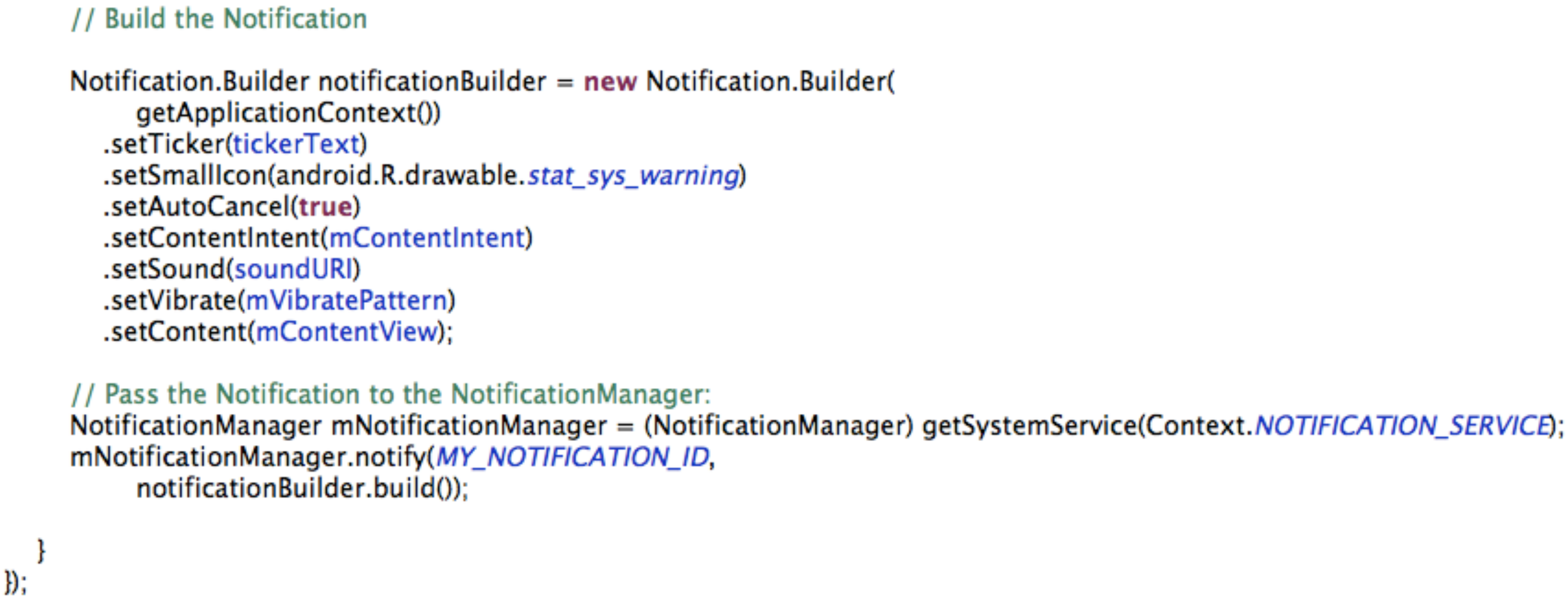
final Button button = (Button) findViewById(R.id.button1);
button.setOnClickListener(new OnClickListener() {

    @Override
    public void onClick(View v) {

        // Define the Notification's expanded message and Intent:

        mContentView.setTextViewText(R.id.text, contentText + " ("
                + ++mNotificationCount + ")");
```

NotificationStatusBarWithCustomView



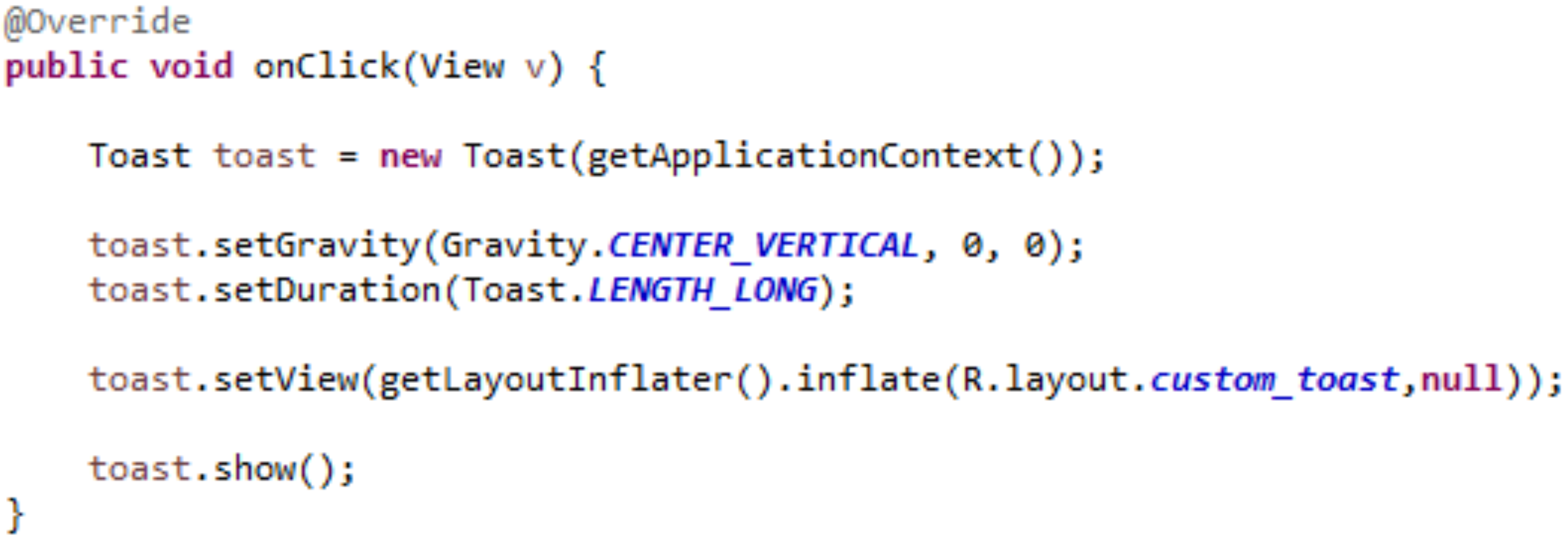
```
        // Build the Notification

        Notification.Builder notificationBuilder = new Notification.Builder(
                getApplicationContext())
            .setTicker(tickerText)
            .setSmallIcon(android.R.drawable.stat_sys_warning)
            .setAutoCancel(true)
            .setContentIntent(mContentIntent)
            .setSound(soundURI)
            .setVibrate(mVibratePattern)
            .setContent(mContentView);

        // Pass the Notification to the NotificationManager:
        NotificationManager mNotificationManager = (NotificationManager) getSystemService(Context.NOTIFICATION_SERVICE);
        mNotificationManager.notify(MY_NOTIFICATION_ID,
                notificationBuilder.build());

    }
});
```

NotificationToastWithCustomView



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    toast.show();
}
```

Next Time

The BroadcastReceiver Class