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**TEST YOUR
FREAKING APP!**

Outline

- The pain
- Frag battle !-!!
- Day dreaming
- It works - now what?
- Frag battle !!!-!!!!
- Testing with LessPainful

The Pain

- Devices

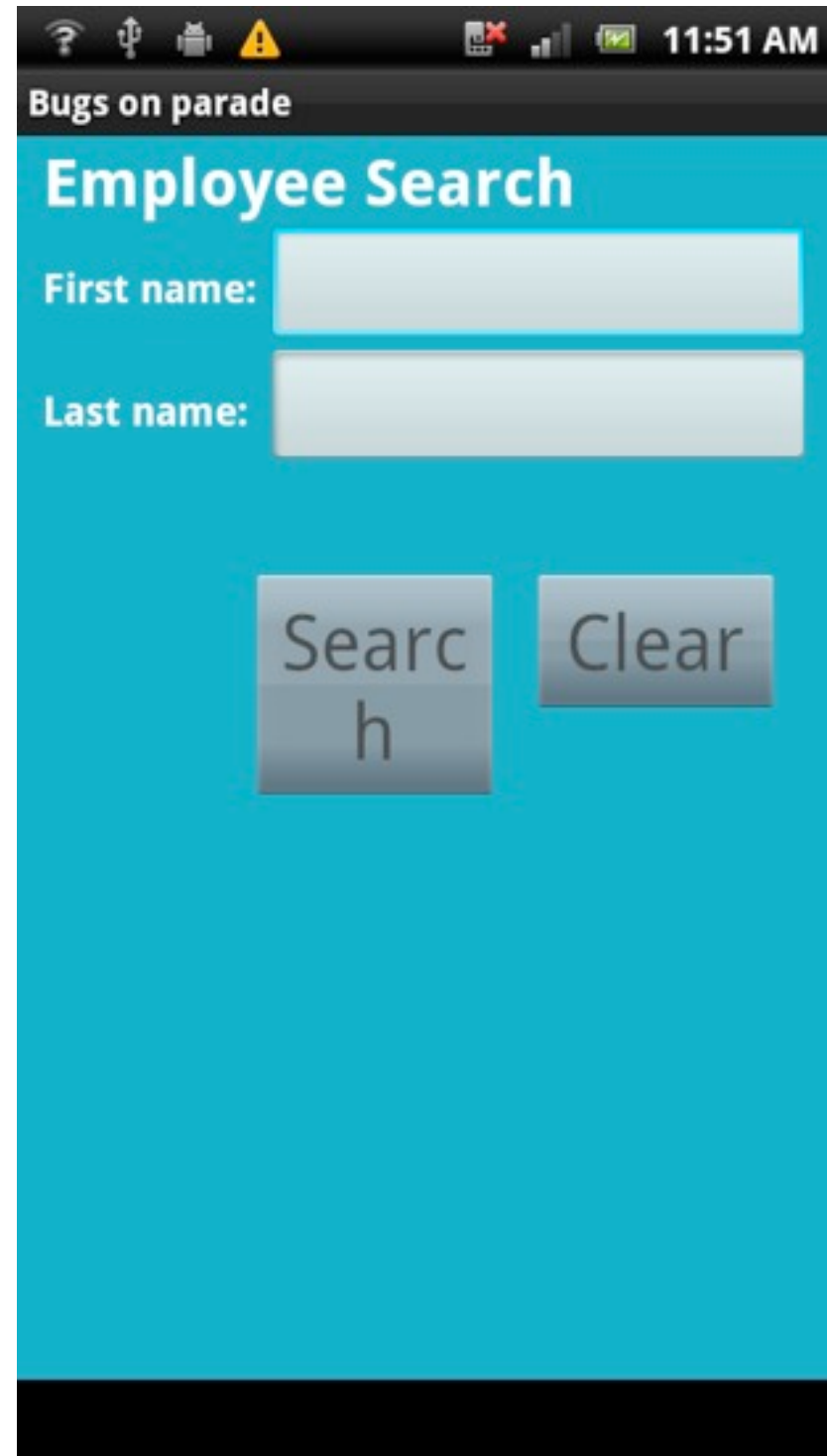
- HTC Desire
- HTC Gratia
- HTC Desire HD
- SE Xperia X10 mini
- Samsung Galaxy S
- Samsung Galaxy Tab

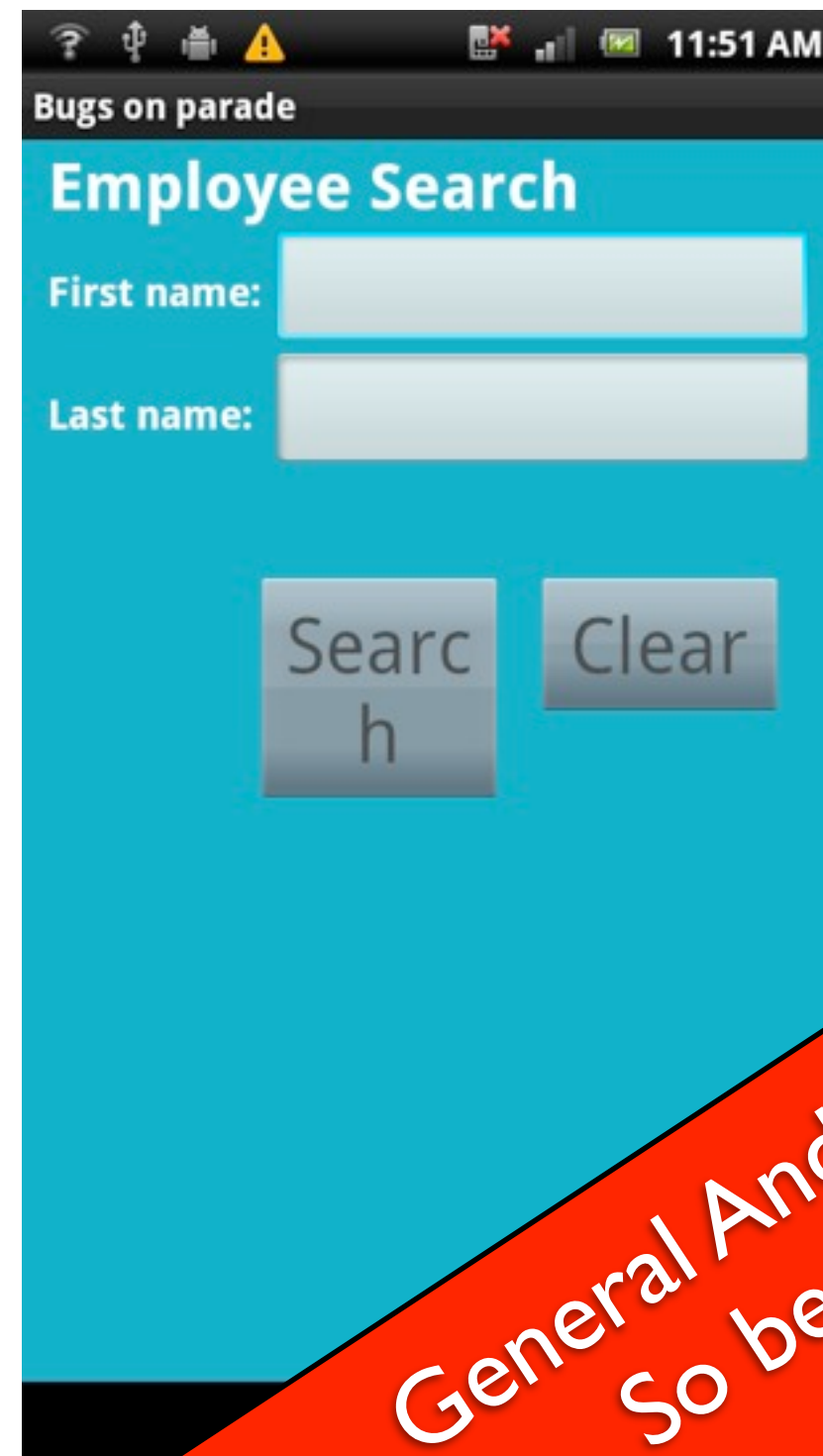
- Android versions

- 1.6
- 2.1
- 2.2
- **2.3**
- **3.0**
- **3.1**

Frag battle!

```
Button okButton = (Button) findViewById(R.id.ok);  
okButton.setTextSize(30);  
okButton.setTextColor(Color.rgb(63, 63, 63));
```





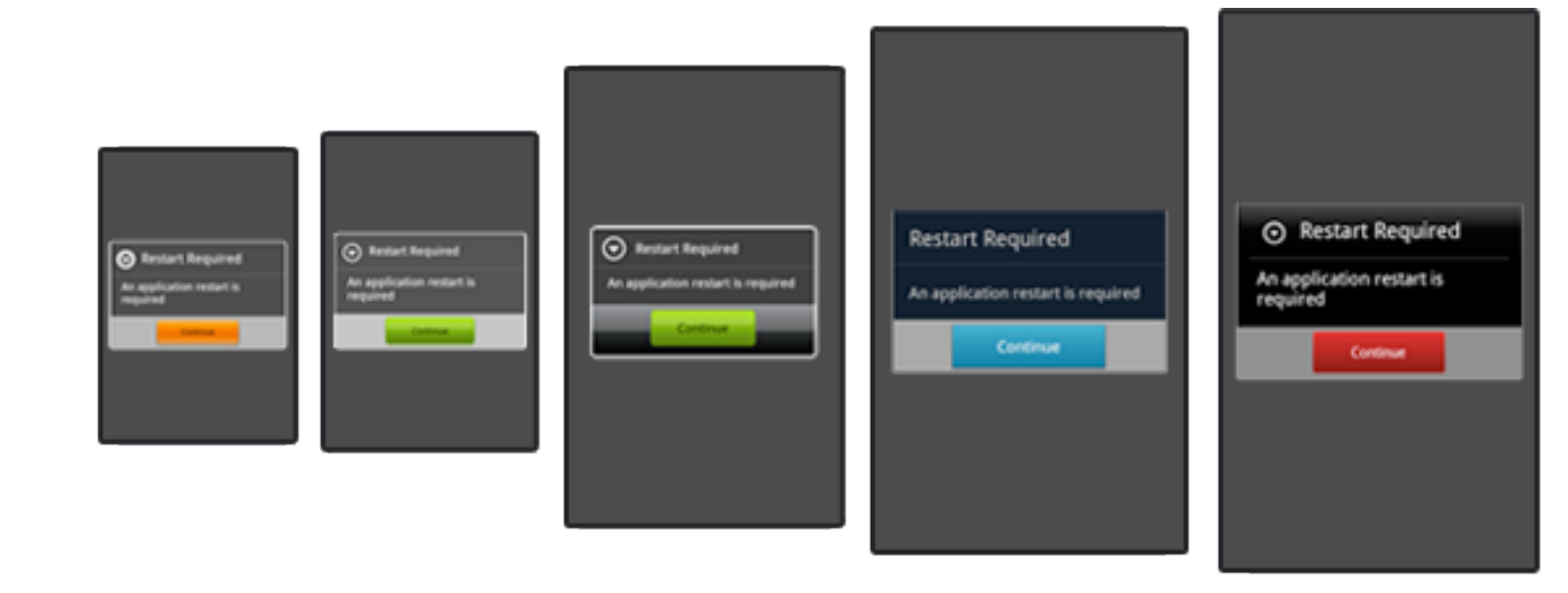
General Android issue
So be careful

Frag battle!!

Frag battle!!

```
AlertDialog.Builder builder = new AlertDialog.Builder(this);
builder.setMessage("Are you sure you want to exit?")
    .setNeutralButton("Ok", new
DialogInterface.OnClickListener() {
    public void onClick(DialogInterface dialog, int id) {
        finish();
    }
});
AlertDialog alert = builder.create();
alert.show();
```

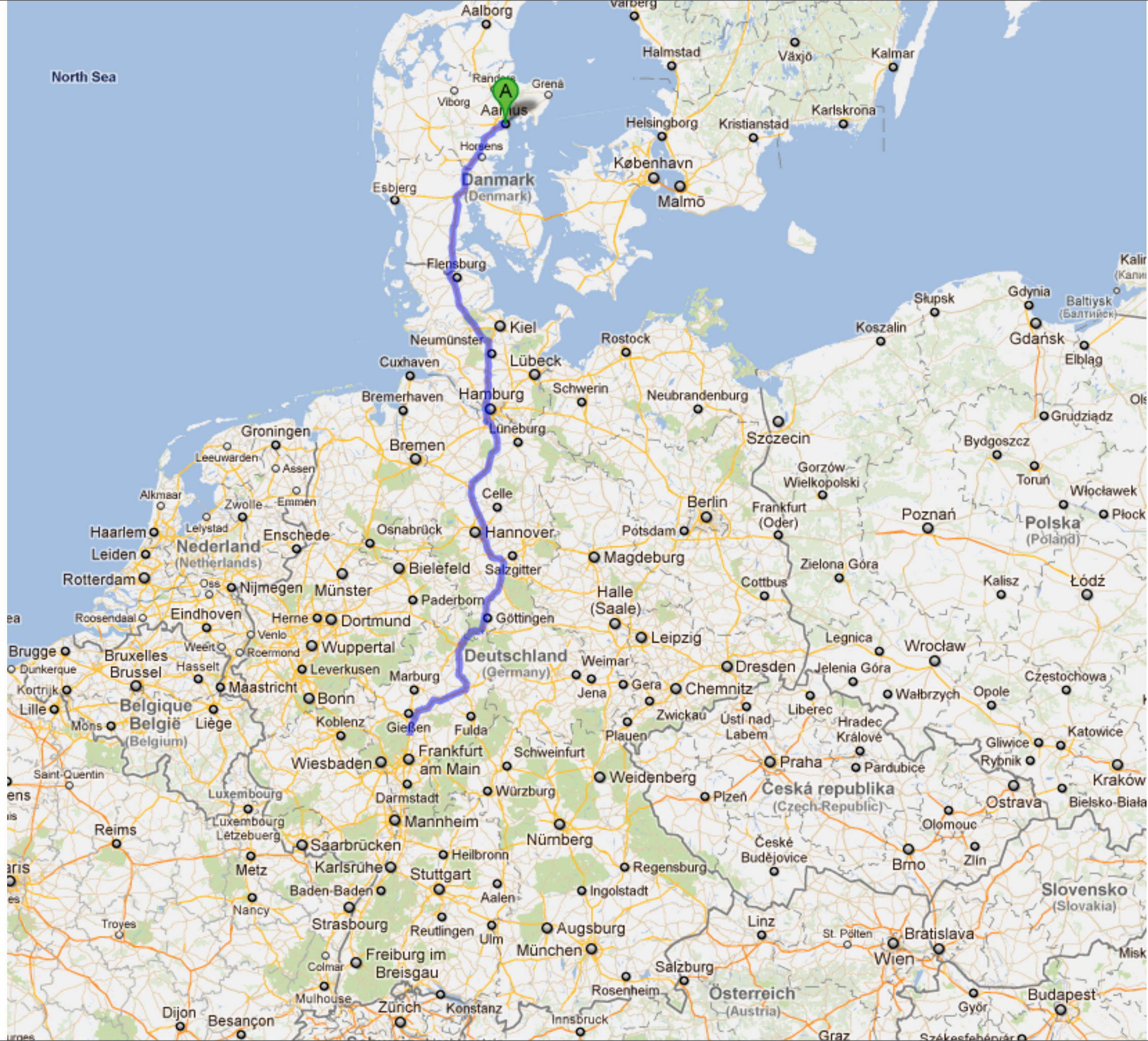
Frag battle!!



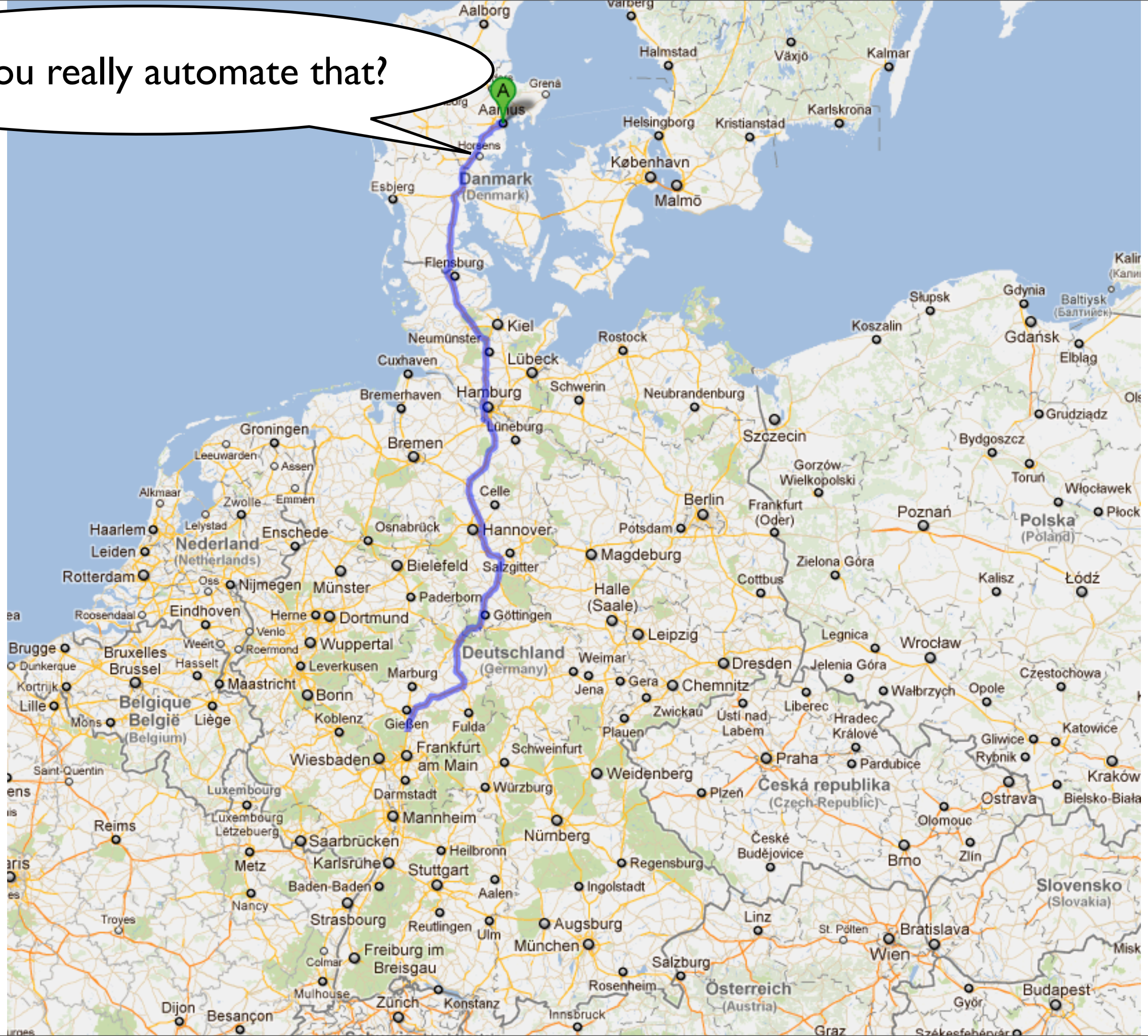
Day dreaming

- Automate UI tests
- Writing high level tests
- Multiple devices



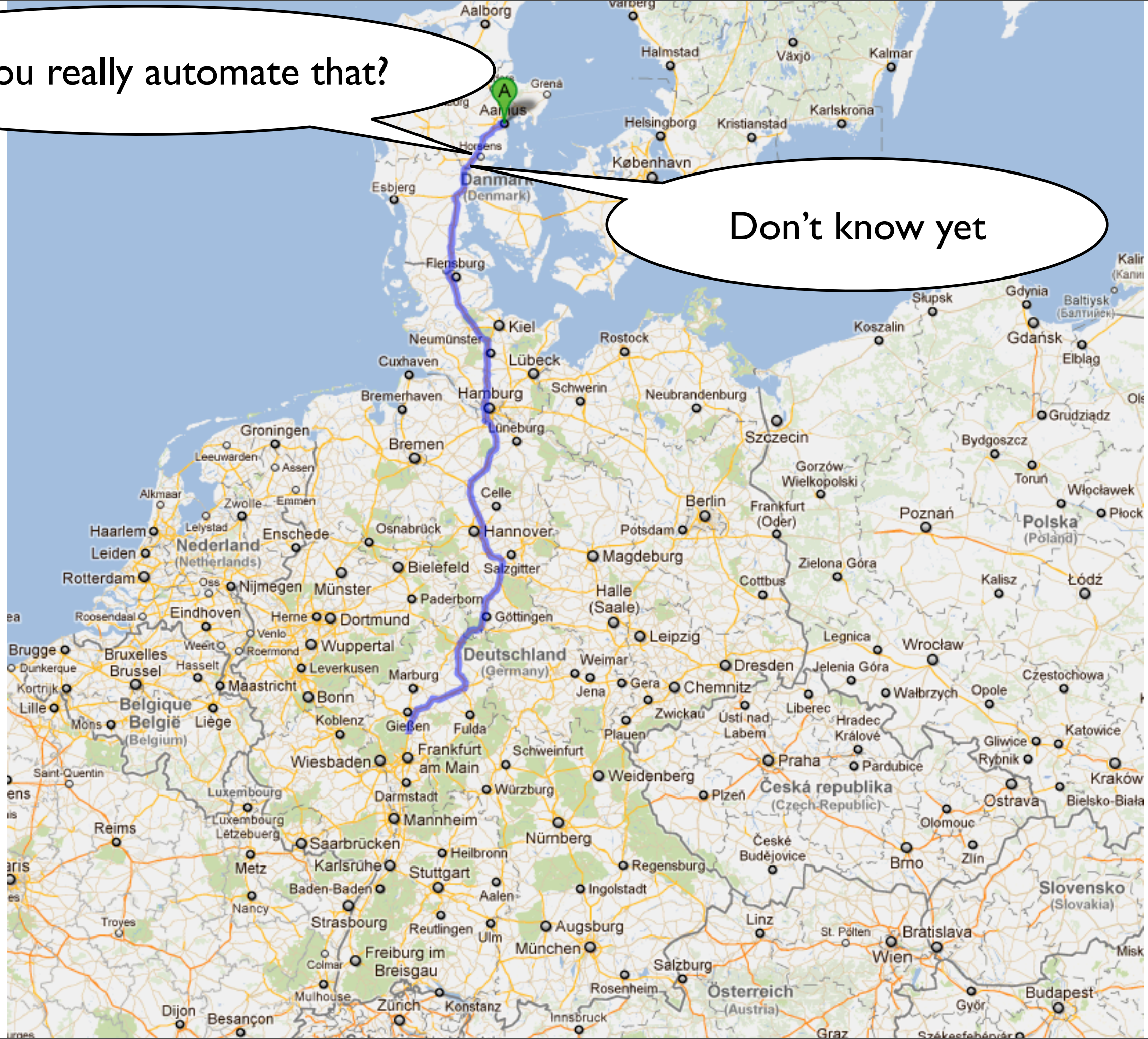


Can you really automate that?



Can you really automate that?

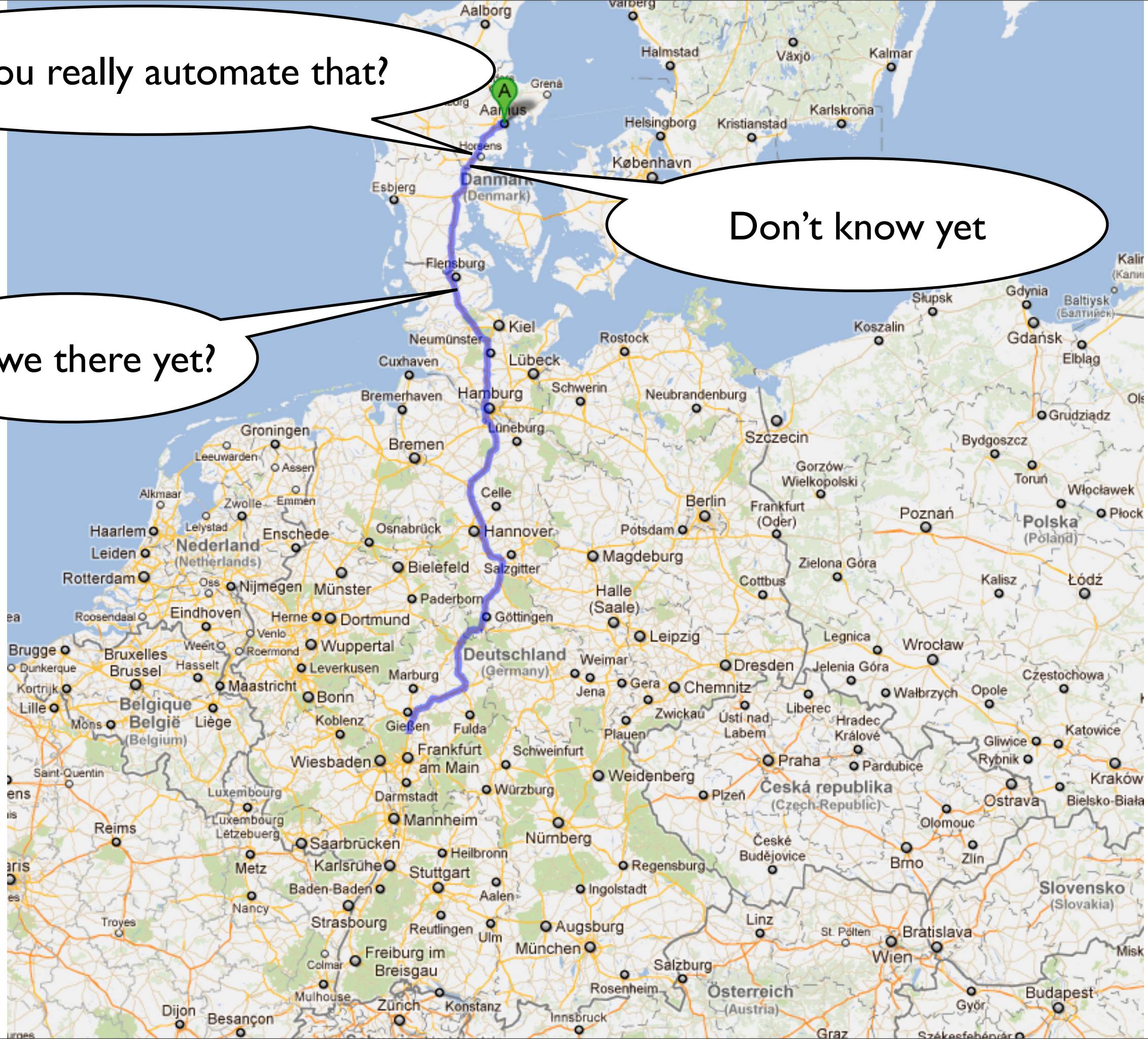
Don't know yet



Can you really automate that?

Don't know yet

Are we there yet?





Can you really automate that?

Don't know yet

Are we there yet?

Testing makes
my brain go numb!
Please make it go
away!

Can you really automate that?

Don't know yet

Are we there yet?

Testing makes
my brain go numb!
Please make it go
away!

OMG IT
WORKS!



Can you really automate that?

Don't know yet

Are we there yet?

Testing makes
my brain go numb!
Please make it go
away!

OMG IT
WORKS!

Now what?

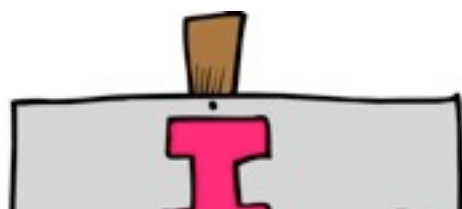


Now what?

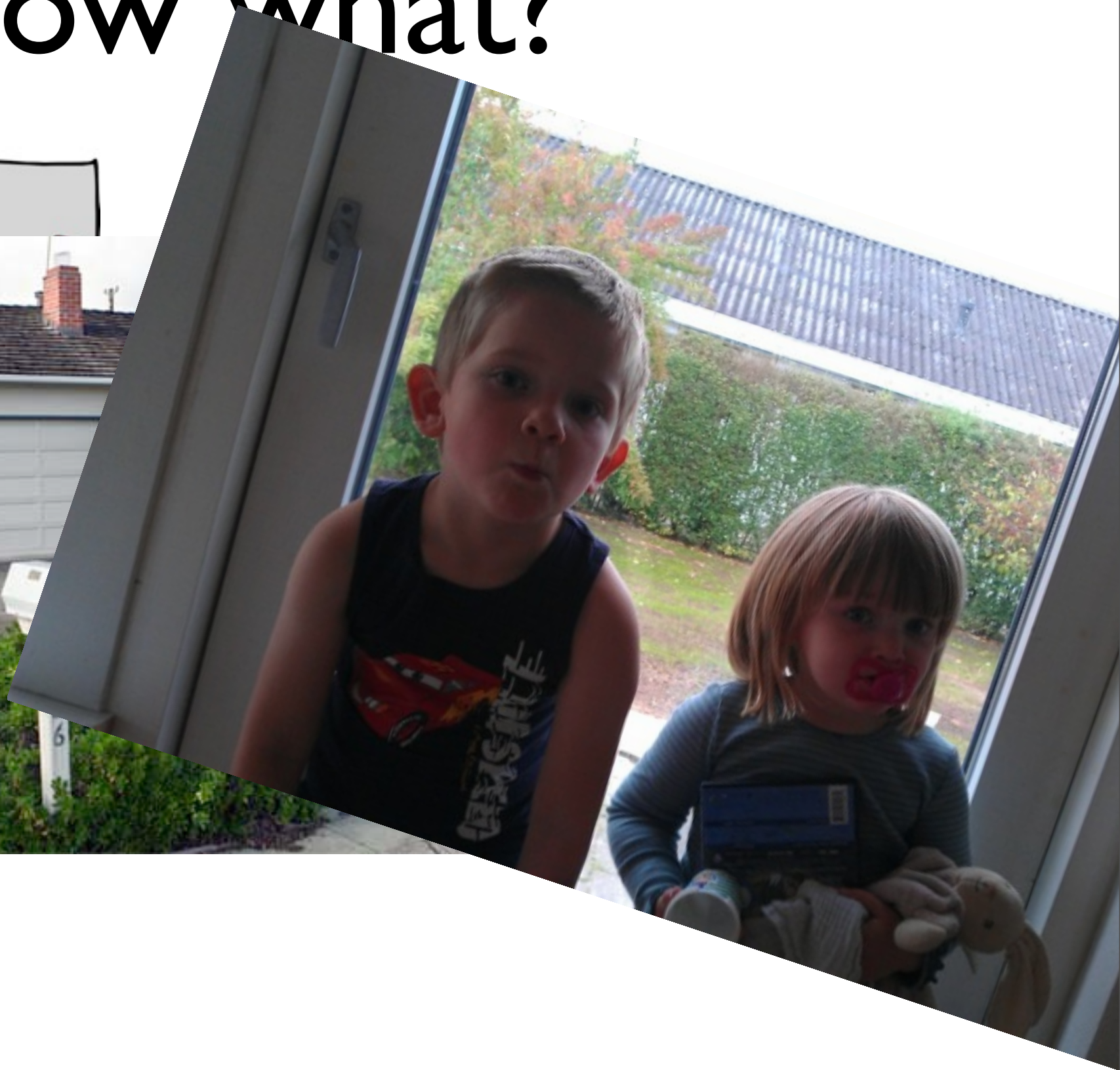
Now what?



Now what?



Now what?



Now what?



Frag battle!!!

Frag battle!!!

```
<LinearLayout android:orientation="vertical"
    android:layout_width="480px"
    android:layout_height="730px">

    <TextView android:layout_width="fill_parent" android:layout_height="wrap_content"
        android:text="Employee Search"
        style="@style/MenuText"/>

    <LinearLayout android:layout_width="fill_parent" android:layout_height="wrap_content"
        android:orientation = "horizontal">
        <TextView android:text="First name:" />
        <EditText android:contentDescription="first name" />
    </LinearLayout>
```

📶 ⌚ !

📶 📶 ! 📶 🔋 1:04 PM

Bugs on parade

Employee Search

First name: Erik Mejer

Last name: Hansen

Search Clear

📍 ! ⚠️ 📶 📶 ! 📶 🔋 2:43 PM

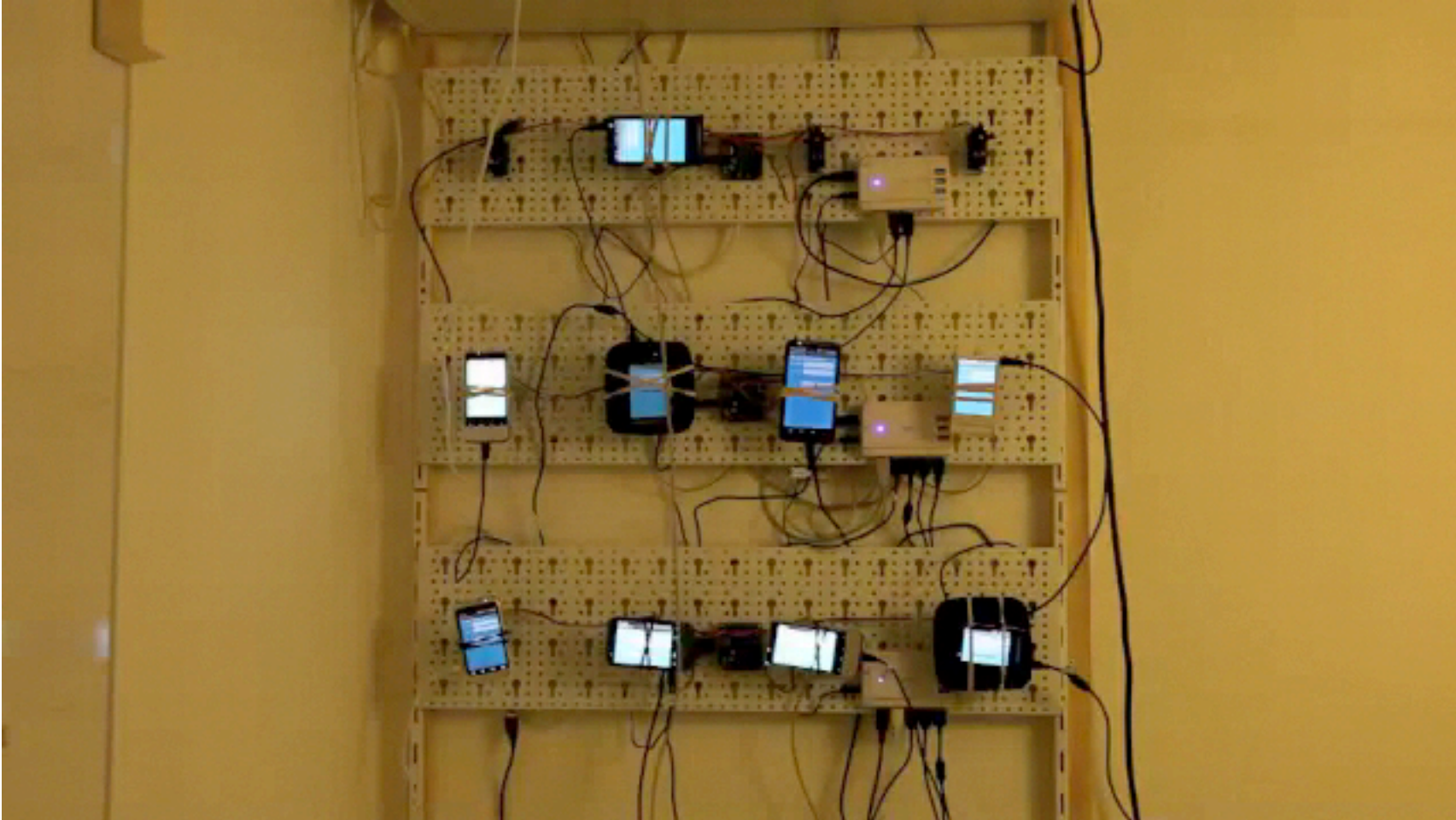
Bugs on parade

Employee Search

First name: Erik Mejer

Last name: Hansen

Search Clear



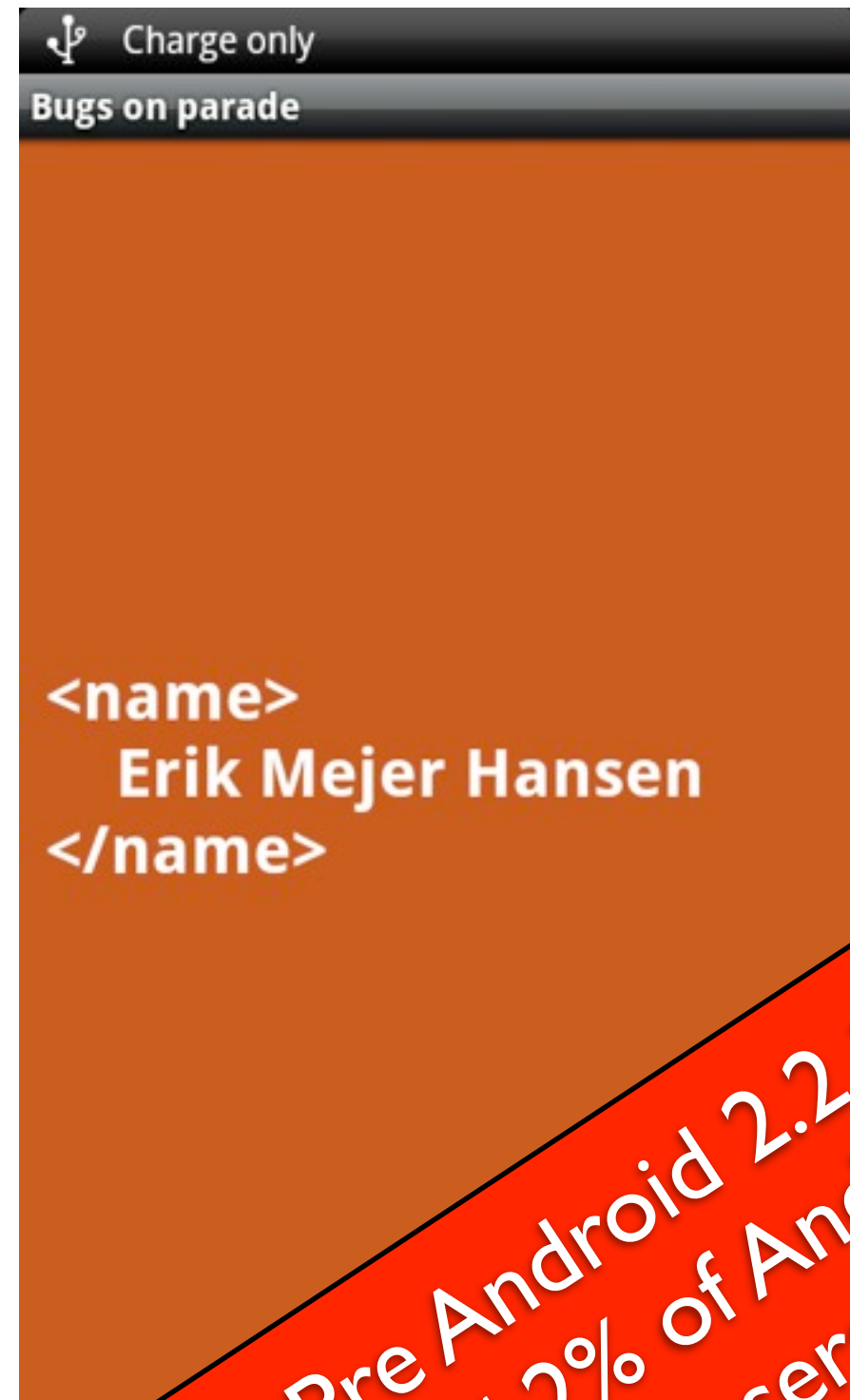
Frag battle!!!!

Frag battle!!!!

```
SAXParserFactory spf = SAXParserFactory.newInstance();  
SAXParser sp = spf.newSAXParser();  
XMLReader xr = sp.getXMLReader();  
xr.setContentHandler(new EchoHandler());  
xr.parse(xml);
```

```
<employee>  
  <name>Erik Mejer Hansen</name>  
</employee>
```





Pre Android 2.2 issue
14.2% of Android
users

Fragmentation!!!!

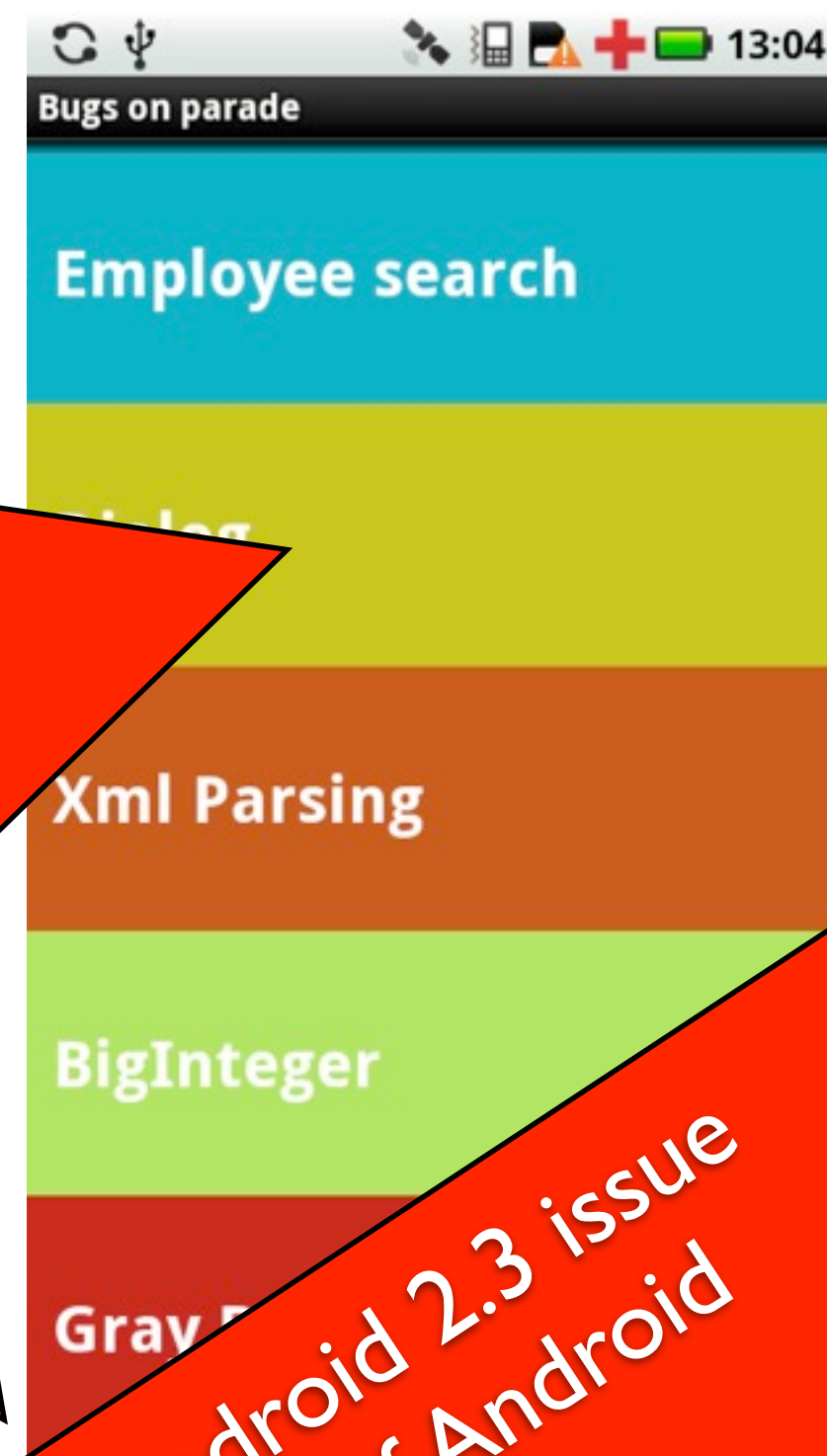
Fragmentation!!!!

```
private class BigIntModPow extends AsyncTask<Void, Void, BigInteger> {  
    protected BigInteger doInBackground(Void... paramArrayOfParams) {  
        BigInteger p, g, x;  
        p = new BigInteger("17852069350191746422036908206282426376025506...  
        g = new BigInteger("52680892519394113657452635546178945733451035...  
        x = new BigInteger("73309732902683150681129856571649732684090083...  
        return g.modPow(x, p);  
    }  
  
    protected void onPostExecute(BigInteger result) {  
        assert result.equals(new BigInteger("992744521355764213450404493...  
    }  
}  
  
for(int i = 0; i < 50; i++) {  
    new BigIntModPow().execute();  
}
```






Pre Android 2.3 issue
59.5% of Android
users



59.5%!

Pre Android 2.3 issue
59.5% of Android
users

Testing with LessPainful

Testing with LessPainful

Feature: Bug parade

Scenario: Filling out the form

Given my app is running
And I press "Employee Search"
Then take picture

When I enter "Erik Mejer" as "first name"
And I enter "Hansen" as "last name"
And take picture
And I press "Search"
And take picture
And I wait for progress
Then I see the text "@erikmejerhansen"

Then take picture

Test report

(Go look at the browser now)

You can test

- GPS
- Rotation
- On 1-20 devices
- 8 Android versions
- Soon iOS devices

- Hosted service is available at www.lesspainful.com
- It's free to try
- Try it at www.lesspainful.com/instant

**TEST YOUR
FREAKING APP!**