A Moving Experience

Better Animation in Android Applications

Romain Guy

Chet Haase

Why?

Why?

Engage

Why?

Engage

Inform

Elements of Good Animations

Short

Smooth

Natural

Arbitrary

Purposeful

~~Arbitrary~~

Samples

List Animation

Animating ListView Item Changes

```
adapter.remove(item);
foreach (child in listview) {
    child.setHasTransientState(true);
    // get pre-layout location
}
ViewTreeObserver observer = listview.getViewTreeObserver();
observer.addOnPreDrawListener(new OnPreDrawListener() {
    public boolean onPreDraw() {
        observer.removeOnPreDrawListener(this);
        foreach (child in listview) {
            // get post-layout location
            int deltaY = preLayoutTop - postLayoutTop;
            child.setTranslationY(deltaY);
            child.animate().translationY(0);
            child.setHasTransientState(false);
        }
        return true;
    }
});
```

Activity Animations

Activity Animations: Launching Activity

```
Intent subActivity = new Intent(...);

subActivity.putExtra("package.propertyname1", val1).
            putExtra("package.propertyname2", val2);

startActivity(subActivity);

overridePendingTransitions(0, 0);
```

Activity Animations: Launched Activity

AndroidManifest.xml

```
<activity
    android:name="..."
    android:label="..."
    android:theme="@style/Transparent" >
</activity>
```

styles.xml

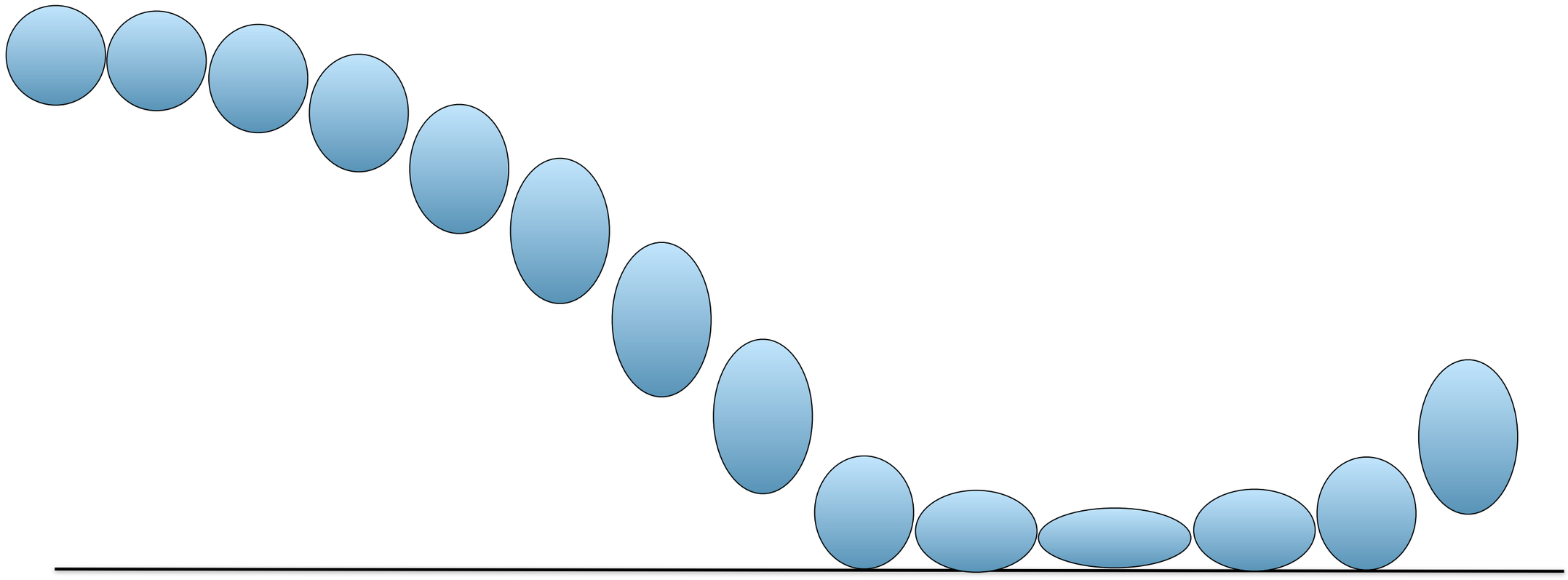
```
<style name="Transparent">
    <item name="android:windowIsTranslucent">true</item>
    <item name="android:windowBackground">@null</item>
</style>
```

Activity Animations: Launched Activity (2)

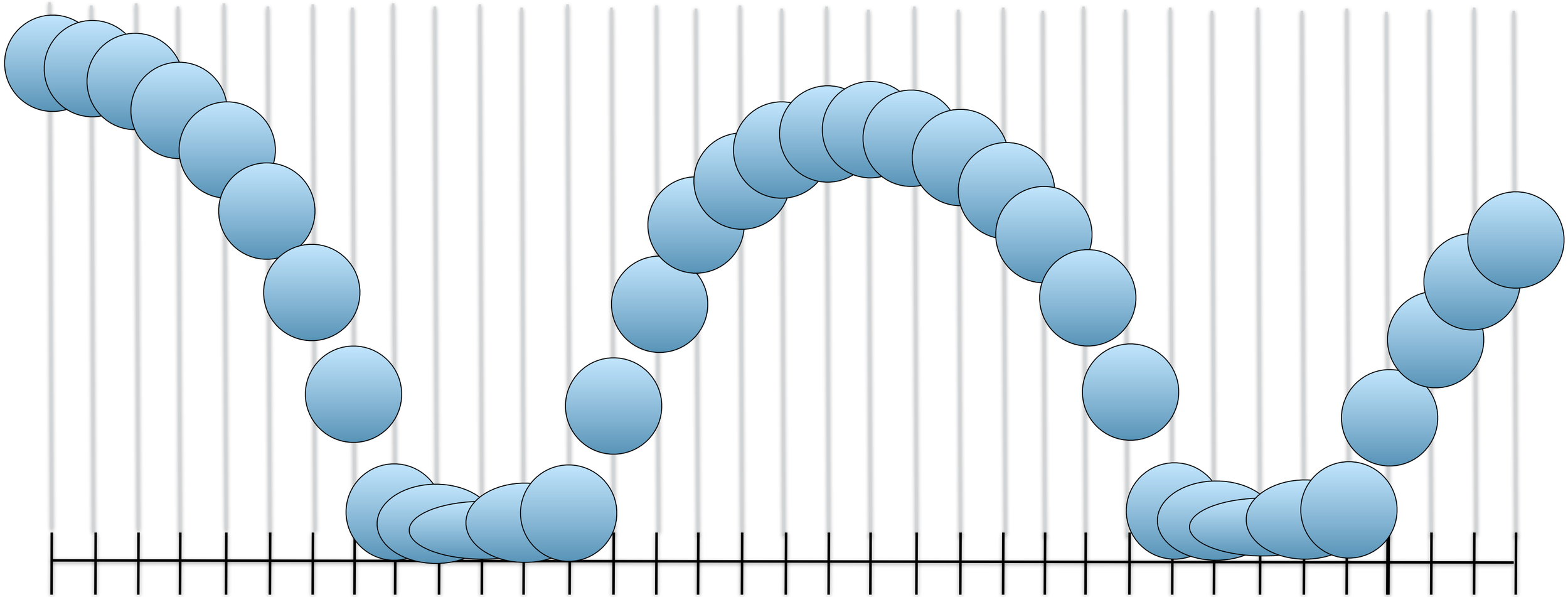
```
public void onCreate(Bundle savedInstanceState) {
    // ...
    Bundle bundle = getIntent().getExtras();
    String val1 = bundle.getString("packagename.propertyname1");
    int val2 = bundle.getInt("packagename.propertyname2");

    if (savedInstanceState == null) {
        ViewTreeObserver observer = mImageView.getViewTreeObserver();
        observer.addOnPreDrawListener(new OnPreDrawListener() {
            public boolean onPreDraw() {
                // Get post-layout view locations/sizes
                // setup/run animations
            }
        });
    }
}
```

Cartoon Animation Techniques

Squash and Stretch

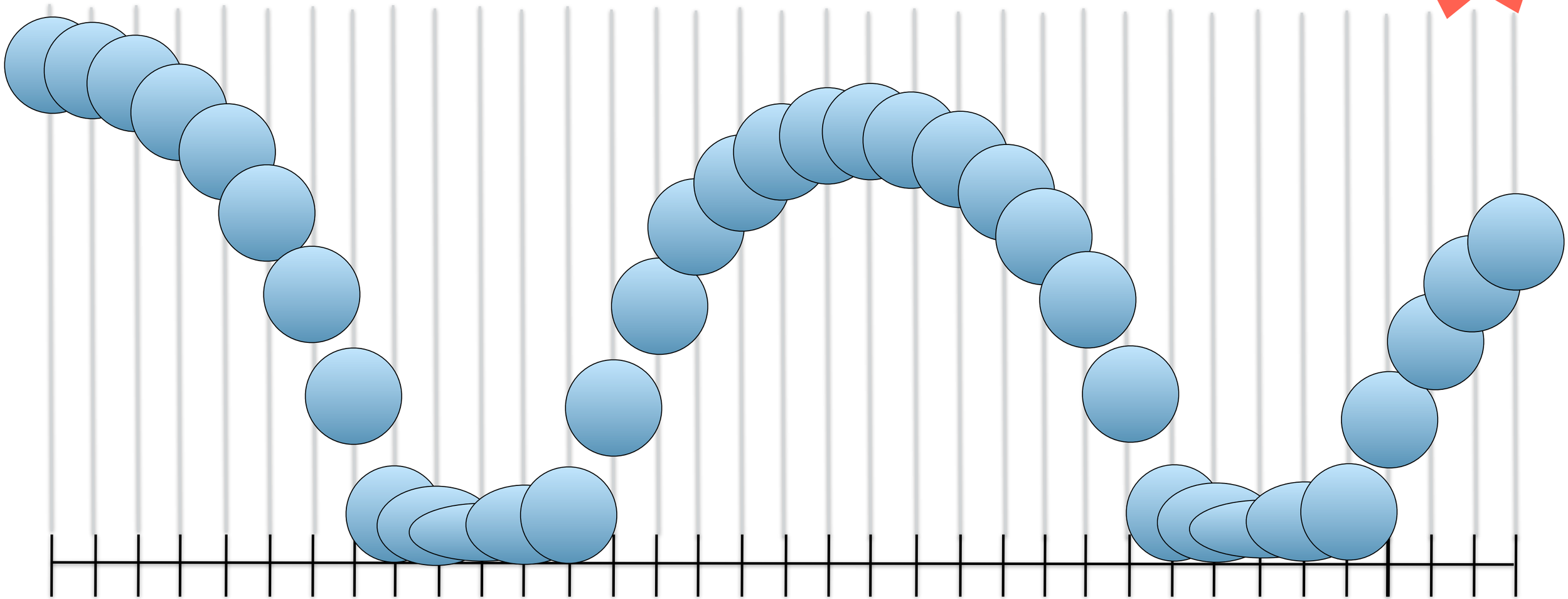


Timing



Timing

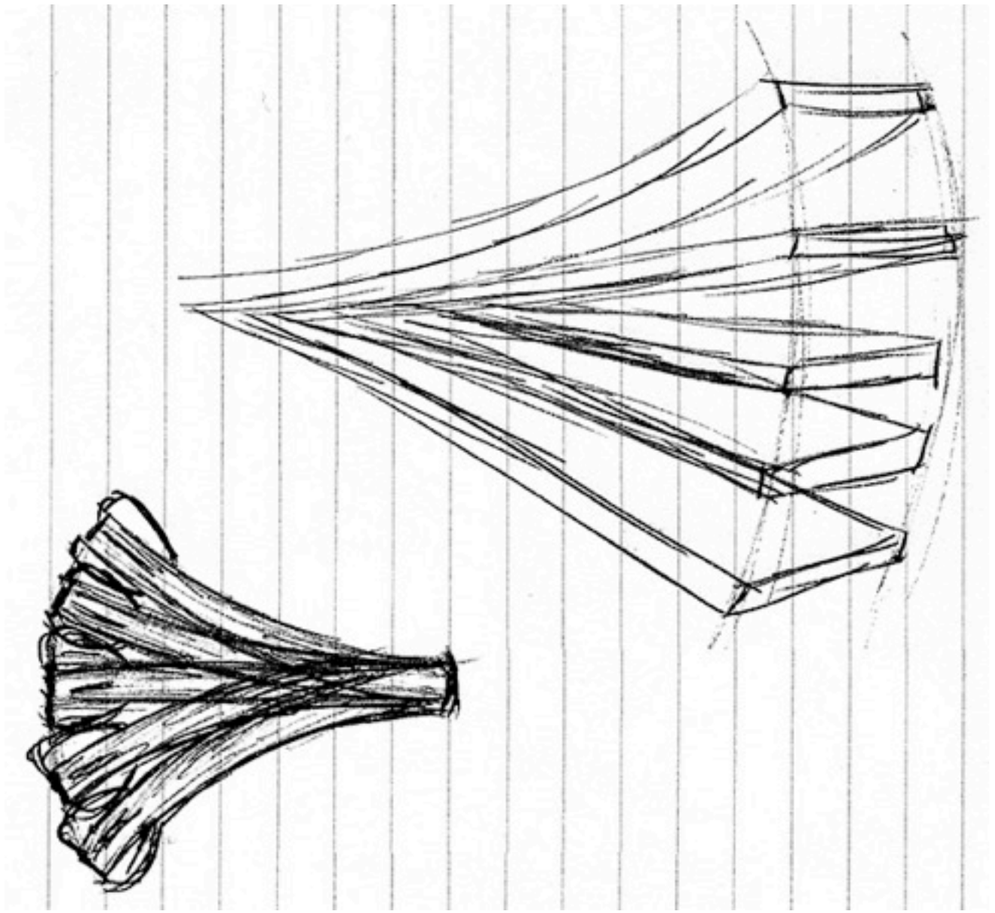
Demo!
Squash&Stretch



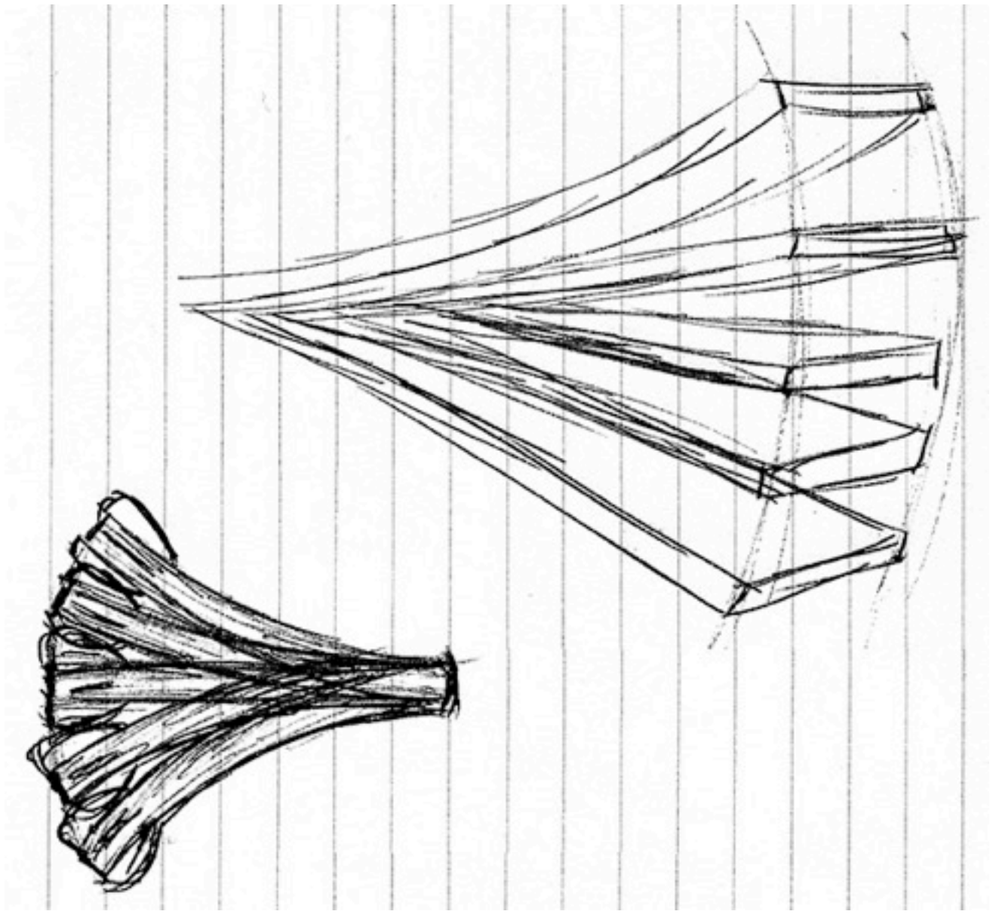
Antici

Anticipation

Follow Through and Overlapping Action

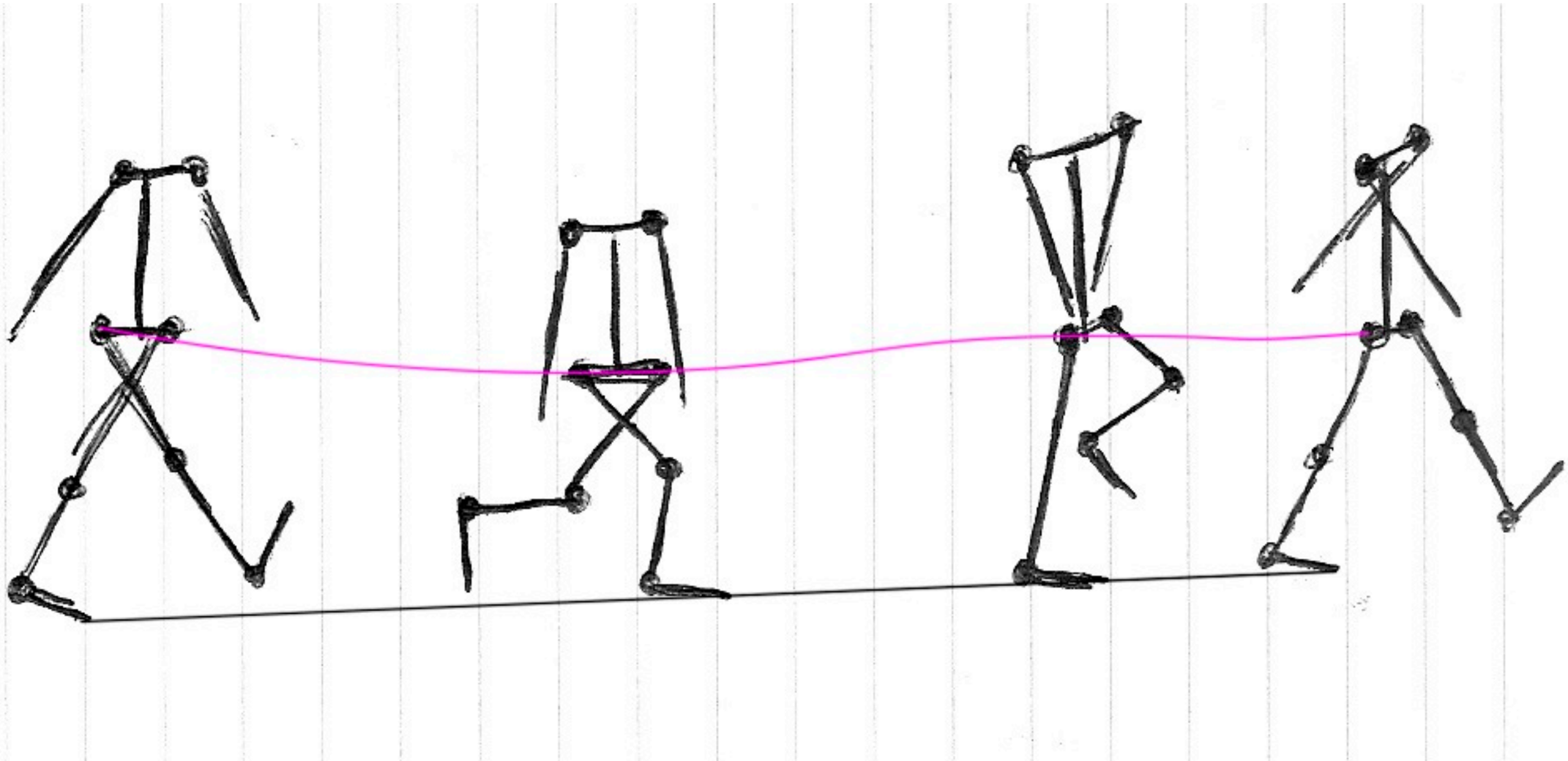


Follow Through and Overlapping Action



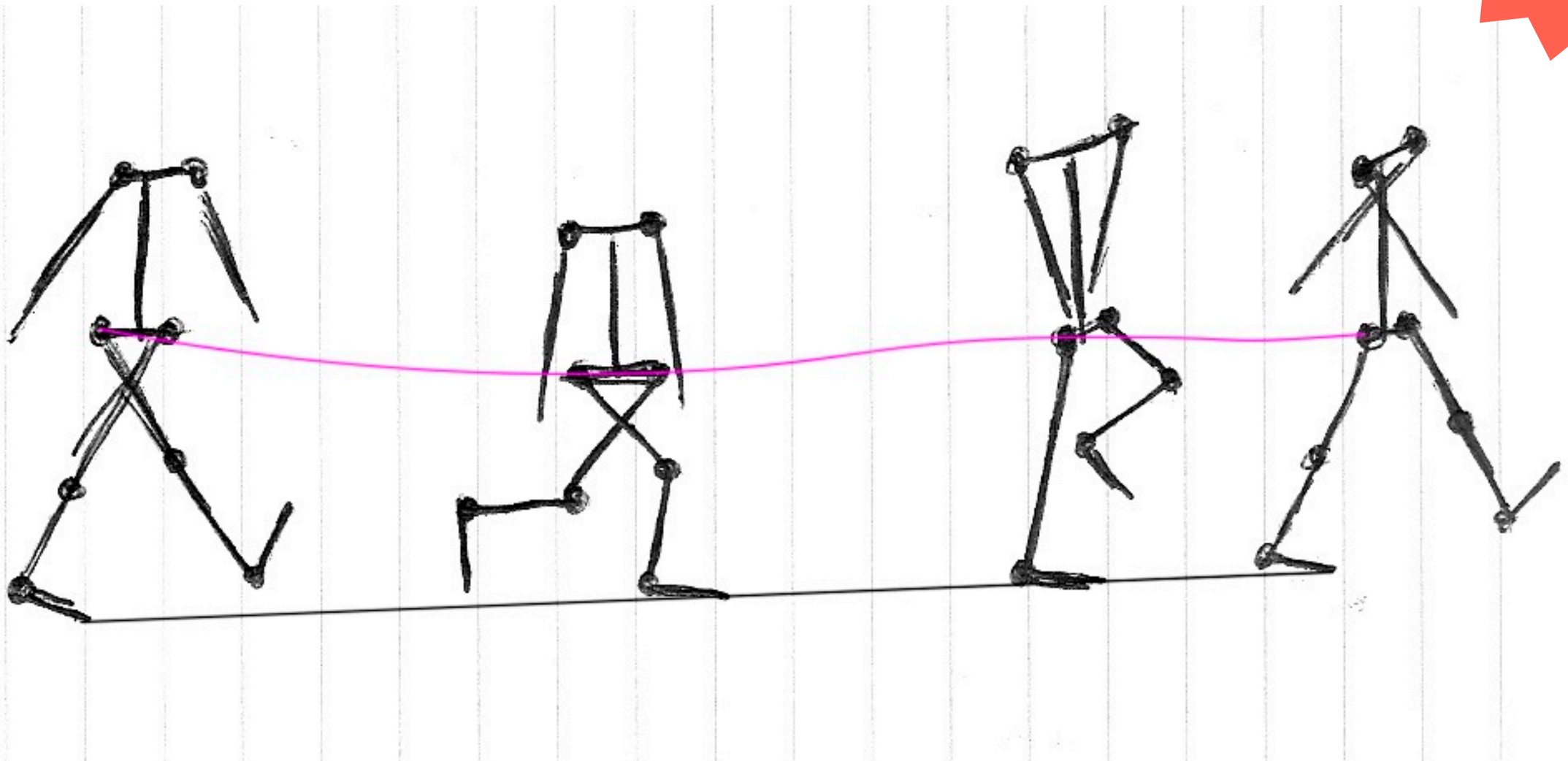
Demos!
LiveButton
&
Anticipation

Non-Linear Motion



Non-Linear Motion

Demo!
CurvedMotion



Exagggggggggggggggggggeration

Exaggggggggggggggggggeration

Tips

Avoid Layout

ViewTreeObserver

Layers

Parleys.com
Animation Rules (Devoxx 2009)

Youtube.com
DevBytes (androiddevelopers channel)

More info

The Illusion of Life
Thomas and Johnston

Chet's Tips & Tricks
graphics-geek.blogspot.com

Romain's Tips & Tricks
www.curious-creature.org

More info

google.com/+ChetHaase
google.com/+RomainGuy

@chethaase
@romainguy

Q&A

Google
Developers