



APPCCELERATOR TITANIUM

AN INTRODUCTION

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ABOUT ME

- 15+ years of Development experience
- Primarily Microsoft platform up until 2012
- Employed or contracted for the following companies:
 - SYKES
 - PriceWaterhouseCoopers
 - L'Oréal Paris
 - Charles River Laboratories International, Inc
- First Mobile App in 2010
- Co-Founded Dently in April 2012
- Fan of rock & heavy metal

APPCCELERATOR PLATFORM

- **Analytics** - Development Lifecycle, Cloud & API Consumption, Adoption & Usage
- **Enterprise Connectors** - Oracle, SAP, Salesforce & more
- **Public Connectors** - Google+, Facebook, Twitter, Instagram & more
- Security, Caching & Synchronization
- Data Transformation, Payload Optimization & Data Orchestration
- Extensible, Open Platform & built on NodeJS

Free & Paid Versions

TITANIUM

- Titanium is a **cross-platform** development environment where you can build **iOS, Android, BlackBerry** and **Hybrid/HTML5** apps
- Titanium apps are written in **JavaScript**
- Your JavaScript interfaces with **native controls** through an abstraction layer (you're not building a webpage)
- Titanium features an Eclipse-based IDE called **Titanium Studio**
- Titanium has an MVC framework called **Alloy**, and Appcelerator offers **Cloud Services** to help bootstrap your app
- Titanium is **free** and **open-source**

IOS AND ANDROID DEVELOPMENT

- With **Android**, you write native apps in **Java**
- With **iOS**, you write native apps in **Objective-C**
- With **Titanium**, you write cross-platform apps in **JavaScript**, that run on Android, iOS and other platforms

HOW IT WORKS

- You write code in JavaScript
- Your JavaScript code is minified and optimized during the build process, but still **evaluated as JavaScript at runtime** on the platform
- At runtime, your application has 3 major components:
 - JavaScript source code
 - Titanium API implementation in the native OS
 - JavaScript interpreter: V8 (Android) or JavaScriptCore (iOS)

HOW IT WORKS

- The JavaScript interpreter runs your JavaScript code in an environment with proxies for the native objects (windows, controls, etc)
- `Ti.UI.createTextField()` creates a `UITextView` on iOS and a `TextView` on Android
- You are **not** creating a webpage with HTML and CSS (which is how PhoneGap works), you build UI through code or the Alloy MVC framework

GETTING STARTED

CREATE A FREE DEVELOPER ACCOUNT

<https://my.appcelerator.com/auth/signup>

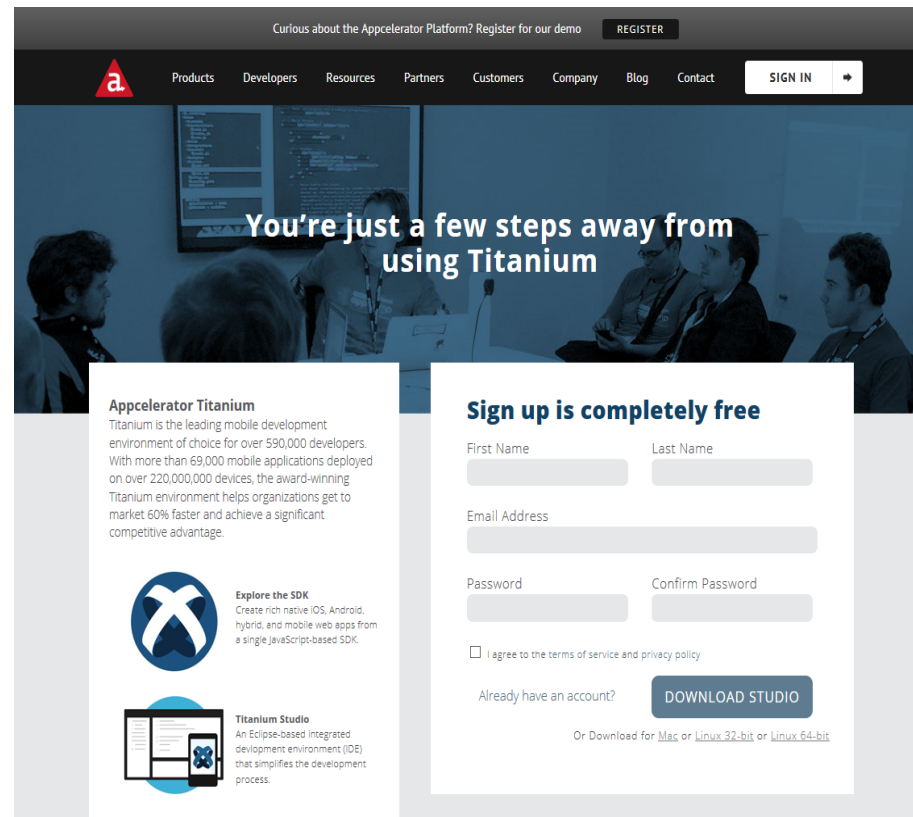
The Developer account is free. You can build, test and deploy to the app stores with the free account.

There is an Enterprise plan that provides a SLA, analytics, more cloud, support, training and more.

TITANIUM STUDIO

Download Titanium Studio for free here:

<http://www.appcelerator.com/titanium/download-titanium/>



The screenshot shows the Appcelerator Titanium website. At the top, there is a navigation bar with links for Products, Developers, Resources, Partners, Customers, Company, Blog, and Contact. A 'SIGN IN' button is also present. Below the navigation bar, a large banner features the text 'You're just a few steps away from using Titanium' over a background image of people working. The main content area is divided into two columns. The left column contains a section titled 'Appcelerator Titanium' with a description of the platform, followed by 'Explore the SDK' with a description of the SDK, and 'Titanium Studio' with a description of the IDE. The right column features a 'Sign up is completely free' section with a registration form. The form includes fields for First Name, Last Name, Email Address, Password, and Confirm Password. There is a checkbox for 'I agree to the terms of service and privacy policy' and a 'DOWNLOAD STUDIO' button. Below the button, there is a link to download for Mac, Linux 32-bit, or Linux 64-bit.

Curious about the Appcelerator Platform? Register for our demo [REGISTER](#)

[a](#) [Products](#) [Developers](#) [Resources](#) [Partners](#) [Customers](#) [Company](#) [Blog](#) [Contact](#) [SIGN IN](#)

You're just a few steps away from using Titanium

Appcelerator Titanium
Titanium is the leading mobile development environment of choice for over 590,000 developers. With more than 69,000 mobile applications deployed on over 220,000,000 devices, the award-winning Titanium environment helps organizations get to market 60% faster and achieve a significant competitive advantage.

Explore the SDK
Create rich native iOS, Android, hybrid, and mobile web apps from a single JavaScript-based SDK.

Titanium Studio
An Eclipse-based integrated development environment (IDE) that simplifies the development process.

Sign up is completely free

First Name Last Name

Email Address

Password Confirm Password

☐ I agree to the terms of service and privacy policy

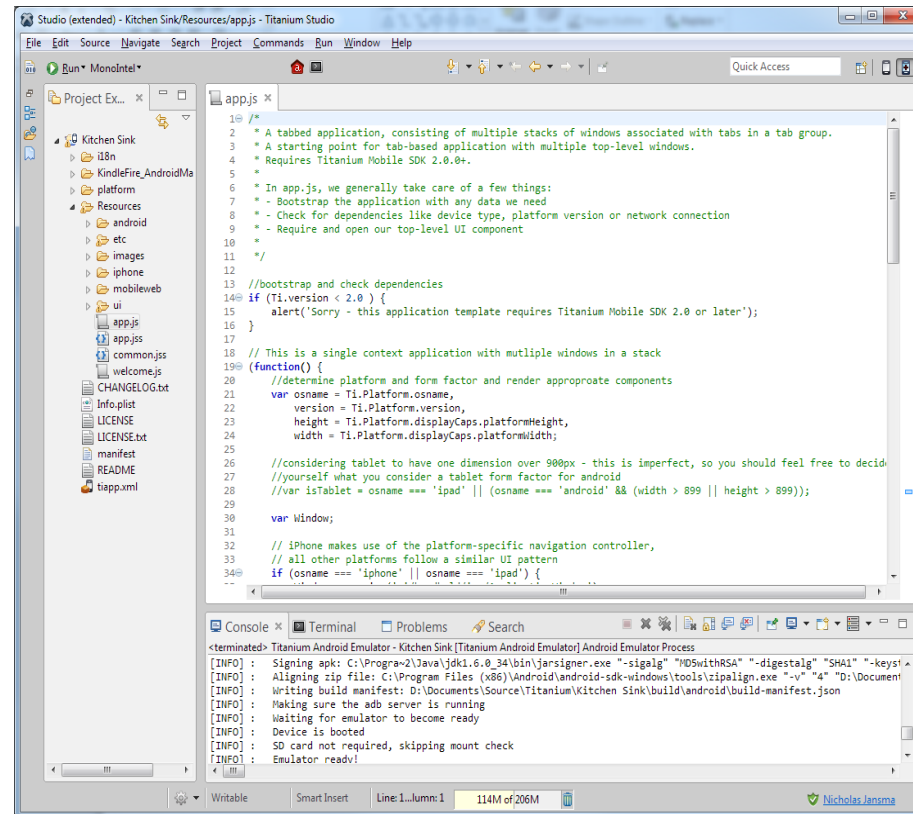
Already have an account? [DOWNLOAD STUDIO](#)

Or Download for [Mac](#) or [Linux 32-bit](#) or [Linux 64-bit](#)

Works on Mac, Windows and Linux

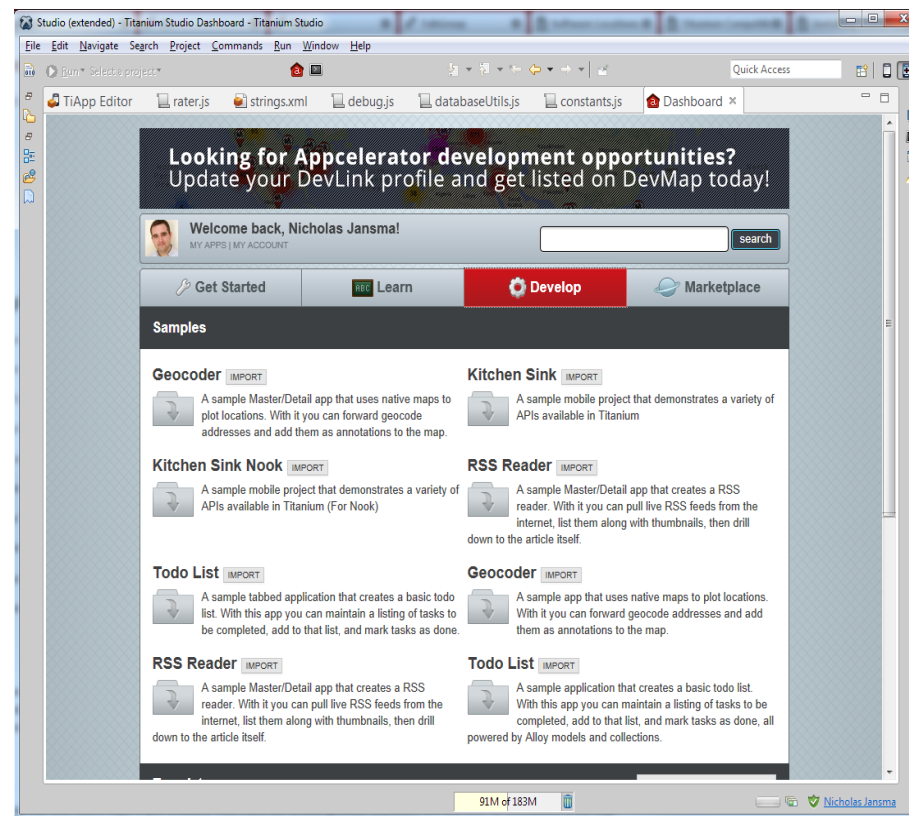
TITANIUM STUDIO

(based on Eclipse)



CODE SAMPLES

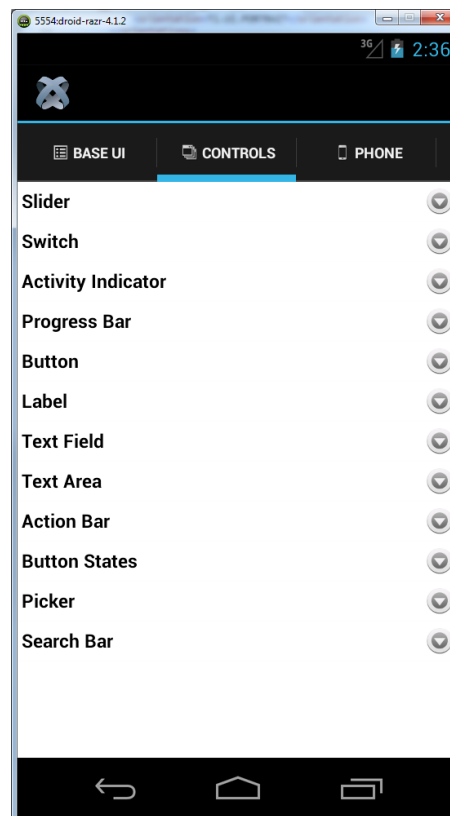
Get the "Kitchen Sink" sample from *Dashboard | Develop*, which has code demos for how to use all of the controls:



Also on github.com/appcelerator/KitchenSink

KITCHEN SINK

Code samples for how to access all of the platform's native controls through the Titanium APIs (Ti.*)

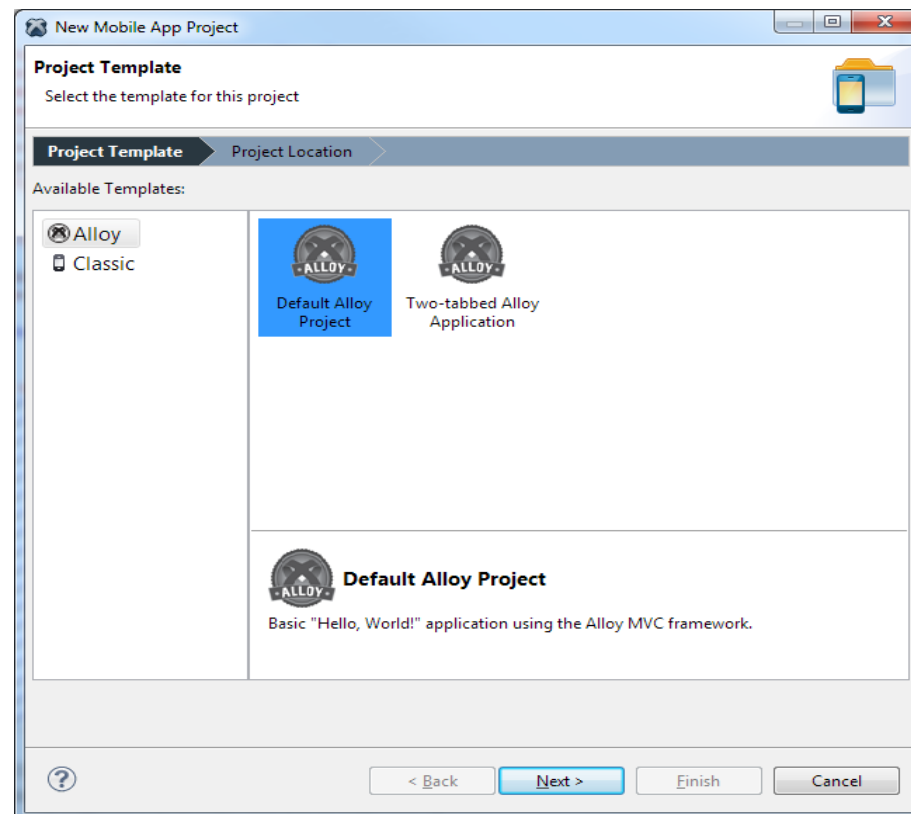


CREATING A NEW PROJECT

File | New | Mobile App Project

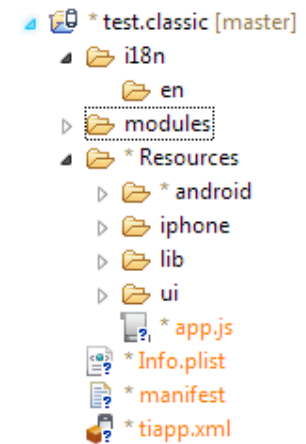
Alloy will use their MVC framework

Classic lets you build your own UI



PROJECT STRUCTURE (CLASSIC PROJECT)

- `i18n/`: Internationalization
- `modules/`: Native modules
- `platform/`: iOS/Android specific
- Resources: Core project code
 - `app.js`: Startup file
 - `android/` and `iphone/`: Platform images
 - `lib/`, `ui/`, `whatever/`: Your code



APP STARTUP

```
var win = Ti.UI.createWindow({
  title: 'Hello, World!',
  layout: 'vertical',
  backgroundColor: 'white'
});

var helloLabel = Ti.UI.createLabel({
  text: 'Hello World',
  color: 'black',
  font: { fontSize: '20sp' },
  height: '40dp',
  width: '250dp'
});
win.add(helloLabel);

var helloButton = Ti.UI.createButton({
  title: 'Click me!',
  font: { fontSize: '20sp' },
  top: '20dp',
  height: '40dp',
  width: '250dp'
});

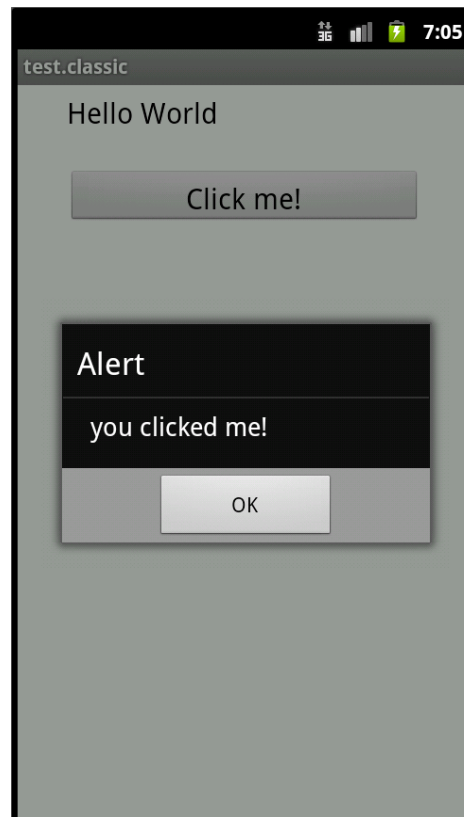
helloButton.addEventListener('click', function() {
  alert('you clicked me!');
});
win.add(helloButton);

win.open();
```


DEMO



DEMO



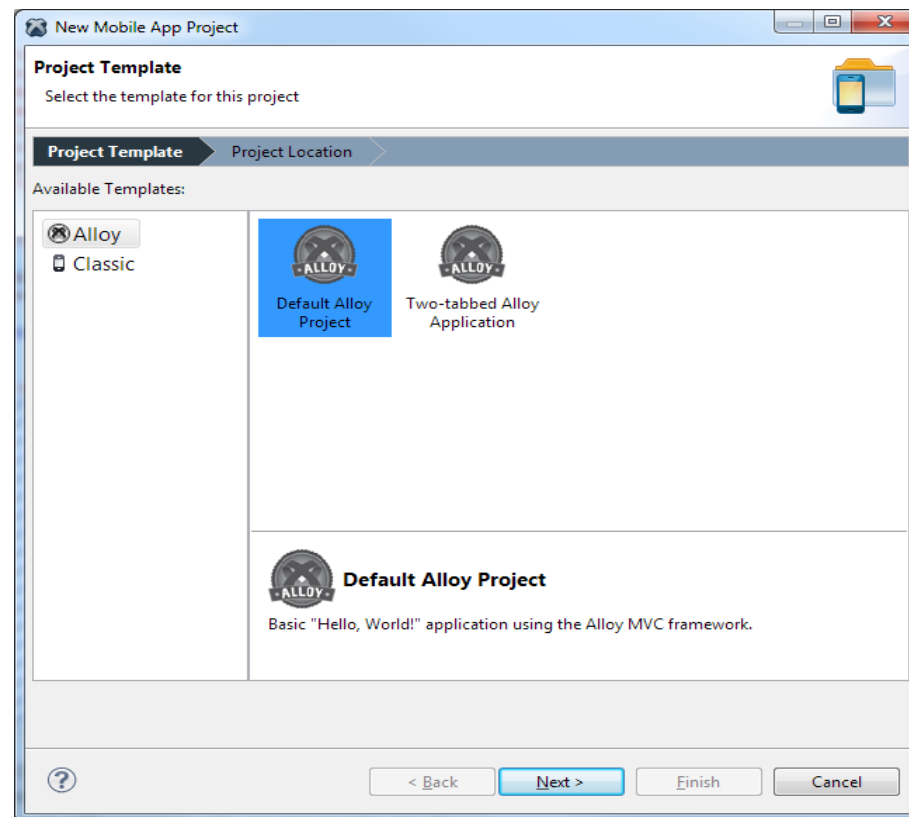
ALLOY

- Alloy is an open-source **model-view-controller** (MVC) framework for Titanium
- Alloy provides a simple model for **separating** your user interface, business logic and data models
- Alloy uses **XML and CSS** to create and style your views
- Alloy is fully integrated into **Titanium Studio**

GETTING STARTED

First, install Alloy via Node.js's NPM:

```
sudo npm install -g alloy
```



CODE

app/views/index.html:

```
<Alloy>
  <Window class="container">
    <Label id="label">Hello World</Label>
    <Button id="button" onClick="doClick">Click me!</Button>
  </Window>
</Alloy>
```

app/controllers/index.js:

```
function doClick(e) {
  alert('you clicked me!');
}

$.index.open();
```

app/styles/index.tss:

```
".container": {
  backgroundColor: "white"
},
"#label": {
  top: 20,
  width: Ti.UI.SIZE,
  height: Ti.UI.SIZE,
  color: "#000"
}
```

DEMO



TITANIUM MOBILE APIS

- AJAX / web services
- In-App Purchases
- Geolocation
- Camera
- Calendar, Contact
- Media, Photo Gallery
- Gestures, Accelerometer
- Maps
- Analytics
- Social Sharing (Facebook, Yahoo, etc)
- Extensible with your own native iOS/Android packages

PROS

- One codebase for two+ platforms
- You'll (theoretically) spend less time than if you write two native apps
- Maintenance on one codebase should be easier in the long run
- Native interface controls: your app looks native, not like web controls
- Might be able to reuse your JavaScript in other parts of your project
- As time progresses, code re-use percentage increases

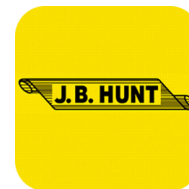
PROS

- JavaScript is great for rapid prototyping, and works really well with Titanium
- Titanium is open-source:
github.com/appcelerator/titanium_mobile
- The platform is mature and stable
- Appcelerator is well funded
- SDK and API documentation, tutorials and samples have improved dramatically over the last year
- 610,000 developers, ISVs and partners
- 238,512,651 Devices are running apps built with Titanium (as of this morning)

CONS

- Need to learn a new platform / SDK / quirks
- Knowing the ins & outs of native iOS / Android will help
- It's necessary to have `if (ios) {}` and `if (android) {}`
- Performance isn't 100% of a native app (but better than running in a web control)

WHO USES TITANIUM

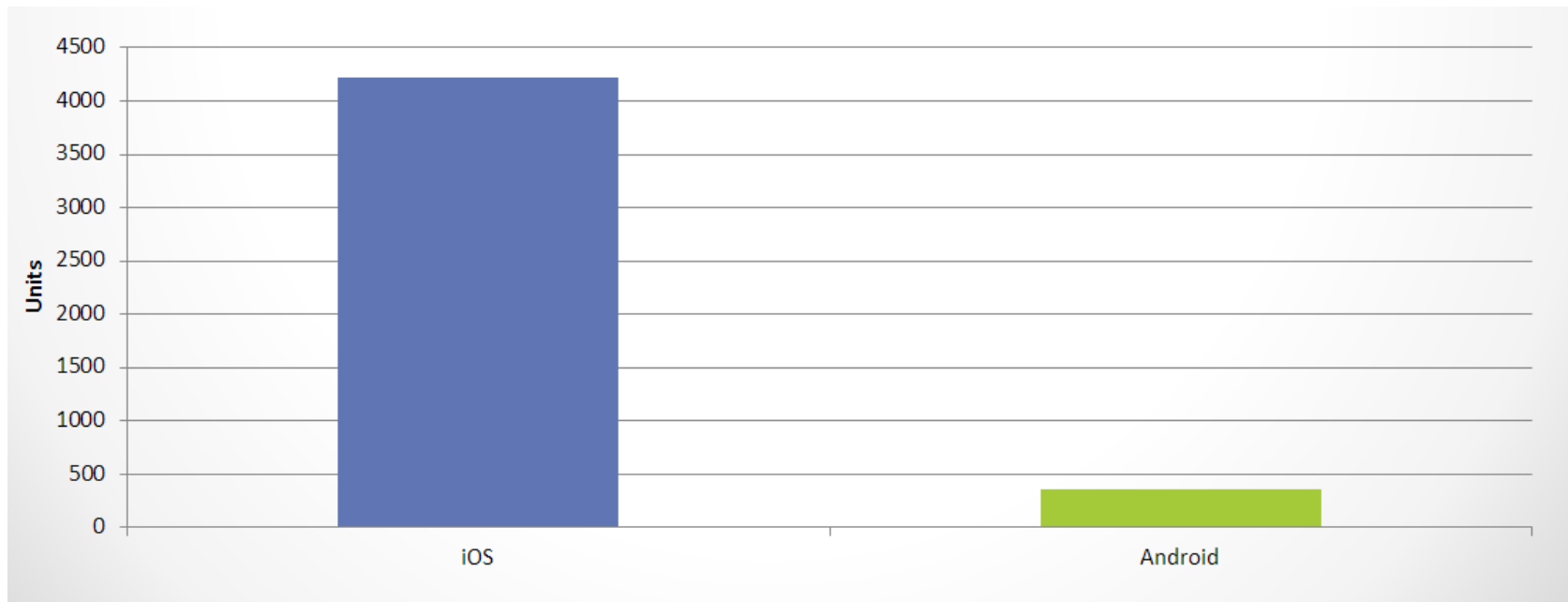


LESSONS LEARNED

- Your first Titanium app, from development to release will take longer than you expect.
- Once you are over the first hurdle, subsequent apps & updates will be faster
- It takes time to ramp-up on good JavaScript patterns: CommonJS modules, Crockford-isms, etc
- iOS simulator is a lot faster to test on. For Android, use Genymotion!
- For community support, you'll need to use a combination of the Appcelerator API Docs, Q&A site, videos and StackOverflow

LESSONS LEARNED

- You won't double your sales just by releasing on both platforms



- Setting up your testers to use your app (prior to release) is harder than expected

LINKS

- Appcelerator: appcelerator.com
- Alloy MVC: appcelerator.com/platform/alloy/
- Titanium Studio: appcelerator.com/titanium/titanium-studio/
- Code samples:
docs.appcelerator.com/titanium/3.0/#!/guide/Titanium_Sample
- Videos: vimeo.com/appcelerator

Thanks to Nic Jansma for the foundation of this presentation - nicj.net - @NicJ