CREATING APPS

FOR **IPHONE 6** AND **IOS 8**

A NEW MOBILE LANDSCAPE

SOURCEBITS

A GLOBO GROUP COMPANY

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Introduction

According to Apple CEO Tim Cook, Apple's recent release of the iPhone 6, the iPhone 6 Plus, and iOS 8 represents "the next chapter in Apple's story." Launch sales of the iPhone 6 and 6 Plus soared to a record-breaking 10 million+, the iPhone 6 Plus sold out, and both of the new iPhones received rave reviews.

According to lab tests by DisplayMate, the iPhone 6 Plus has the best LCD screen it's ever tested, and according to many reviewers, the iPhone 6 display is almost as good. The Verge acknowledges that the iPhone 6 feels more like "a hybrid of iPhone and iPod touch," and that everything moved "briskly and smoothly."

In addition to the changes in the hardware, the OS updates bring a slew of other features, such as new APIs and sensors. With Apple the long-time app leader, Sourcebits has been following developments closely. The new iPhones and iOS 8 features should be carefully considered when creating new apps or updating existing ones.

This white paper will help you determine:

1. What cool new features can your app harness?
2. How will the bigger screens of the iPhones affect your app's appearance and functions?
3. How are these updates going to impact the user's experience?
4. How can iOS 8 affect privacy and data security?

We will introduce and break down Apple's most exciting new features to answer these questions and provide insights into the future of mobile.

New Screen Sizes

iPhone 5 and 5s

320 pt x 568 pt

iPhone 6

375 pt x 667 pt

iPhone 6 Plus

414 pt x 736 pt

iPhone 6

The rumors about a bigger iPhone have been swirling around the Internet for a while, and with the iPhone 6—and 6 Plus—they've finally come true. While a bigger screen seems like a straightforward change, it can affect everything from the way content is displayed to a designer's positioning of UI elements.

Screen: **4.7 inches**
Resolution: **375 x 667 points, 750 x 1334 pixels**

Changes

The iPhone 6 screen is an increase in real estate over the current generation of iPhones. The UI elements are spaced out more comfortably, easier to interact with, and have more area for content. As a result, it's important to consider how content in your app is represented.

Questions to Ask

1. Does your app content have enough value? Does visual placement reflect this?
2. Is your app using the new screen real estate effectively?
3. Should you consider enlarging or modifying your content?
4. Should you modify your UI controls to benefit users?

iPhone 6 Plus

Screen: **5.5 inches**
Resolution: **414 x 736 points, 1242 x 2208 pixels downsampled to 1080 x 1920 on screen.**

Changes

1. **Scaling Factor:** The 5.5” Retina HD screen renders design assets at @3x scaling factor, as opposed to iPhone’s 5, 5s and 6 @2x.

2. **Downsampling:** Internally rendered images are downsampled to the screen’s resolution of 1080 x 1920.

What This Means for You

With such massive screens, you have the opportunity to make your content more beautiful and to enable your user to do more, faster. It also means your app needs a new layer of design polish to achieve crispness and clarity on par with Apple’s iOS 8 apps. Downsampling in particular will force designers to reinvent their design process: since designs will display differently on-screen, designers need new tools to test in real time.

The iPhone 6 and 6 Plus should provoke designers into creating new interactions for users. They should explore new UI solutions, develop more complete and multi-purpose interfaces, and create more condensed workflows. The iPhone 6 Plus in particular opens up a plethora of iPhone app creation opportunities—reading materials on larger screens, watching movies is more exciting, and playing games that require sweeping, energetic touch input.

Finally, optimizing for these new, larger screens will make your apps increasingly less appropriate on the 3.5” screens of iPhones 4 and 4s. Given the rapid new phone user adoption rates amongst iPhone owners, it might be better to focus your future app design and development efforts on later generations of the iPhone.

Software and Hardware Features

It is important to understand that Apple's philosophy sees hardware and software as one. Jonathan Ive, as the head of both software and hardware design, is committed to delivering hardware and software that are intertwined more tightly than ever before. This has resulted in a more coherent user experience.

The new iPhones are designed to maximize the features developed in iOS 8, and vice versa. If you take that single-unit philosophy to heart, you will see great opportunities for how the iPhone's new sensors, APIs, and deeper OS integration can enrich your app's user experience.

Sensors

M8

M8 motion coprocessor allows for more accurate and energy efficient motion tracking with additions like a barometer, gyroscope, and accelerometer.

Ideas for Use

Activity tracking apps like Argus or Nike+ can track your steps and tell the difference between running vs. riding a bike. The improved M8 motion coprocessor has its own dedicated CPU (central processing unit) which uses less battery power. What motions could your app benefit from tracking? How can you integrate phone movements like shakes or tilts (vs. just finger taps and swipes) into the user experience?

HealthKit

HealthKit API combined with the M8 motion coprocessor, developers can build apps that utilize and exchange a plethora of health-related data. Apple is also reportedly working on a global platform that will enable medical companies to access and act on user's health information. Sport, fitness and health activities receive a lot of technology support with the release of new iPhones and iOS 8, so now is a great time to start building innovative apps for these verticals.

Ideas for Use

Tracking daily nutrition information, sleep length and quality, and exercise is simple with the HealthKit API. Information can be pulled from any fitness or health app of your choosing and be stored in one centralized location. What health information could customize your app experience? How can your app populate data into HealthKit?

NFC

Near-Field Communication is essentially the foundation of the upcoming Apple Pay platform. Unfortunately, there is no public API for NFC available for third party developers in iOS 8. However, looking at how Apple has introduced similar features in the past, it is reasonable to assume that with iOS 9 (if not sooner), developers will get access to the NFC chip.

Ideas for Use

For now, Near-Field Communication is just being used for Apple Pay's mobile payments, but in the future it can have a myriad of uses, such as pairing devices or sharing files.

Barometer

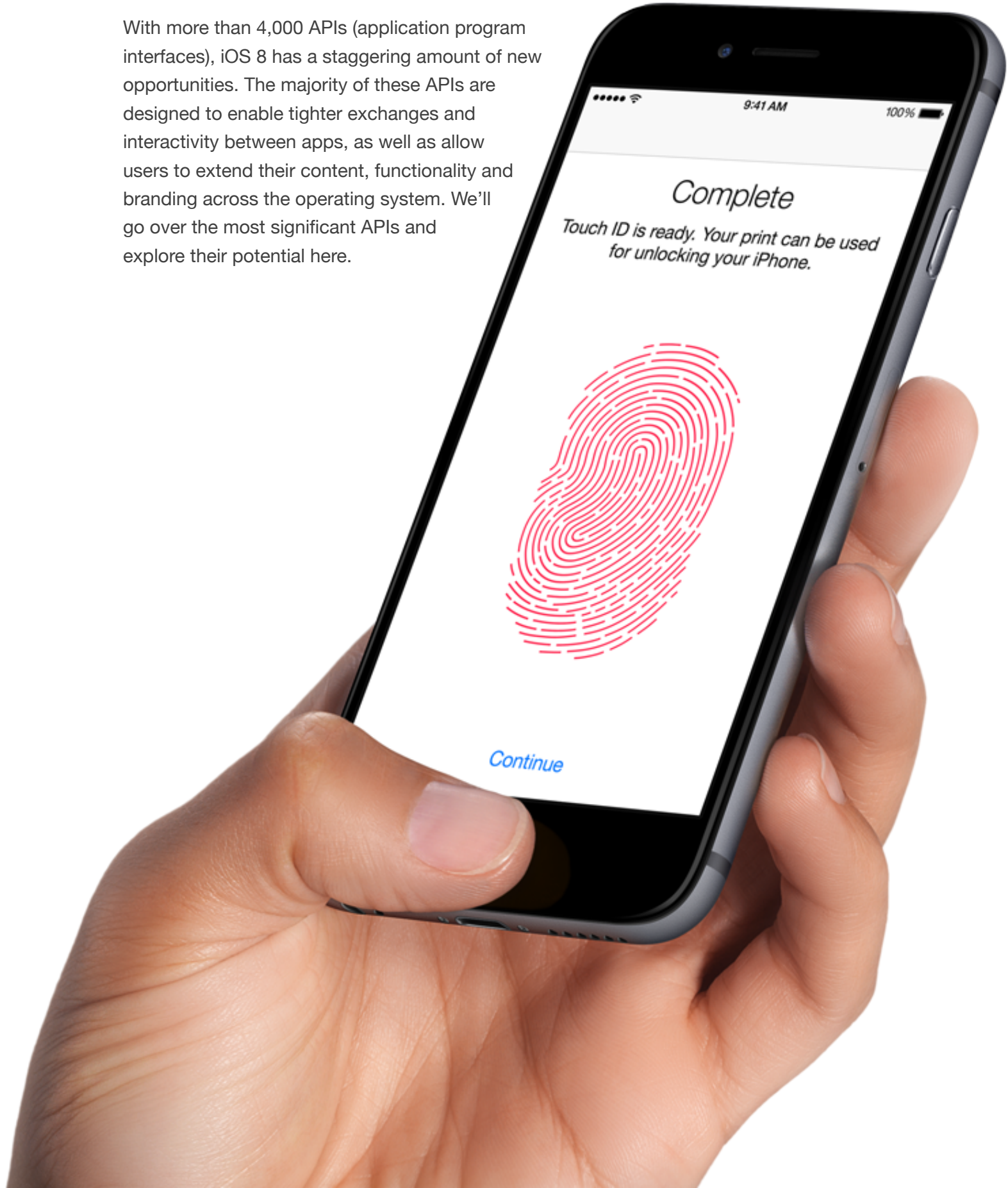
This allows us to measure the device's altitude above sea level. Although the most straightforward uses will be in sports/fitness apps, there are creative opportunities. Much in the same way the phone's microphone can be used as an ultrasound detector, exploring the barometer to create far more unique applications of the seemingly basic sensor technologies.

Ideas for Use

For fitness enthusiasts—especially for hikers, bikers, or mountain climbers—the barometer can be useful to detect changes in elevation and air pressure and provide accurate weather information.

New APIs

With more than 4,000 APIs (application program interfaces), iOS 8 has a staggering amount of new opportunities. The majority of these APIs are designed to enable tighter exchanges and interactivity between apps, as well as allow users to extend their content, functionality and branding across the operating system. We'll go over the most significant APIs and explore their potential here.



Touch ID

This fingerprint-based authentication method introduced with iPhone 5S is finally available for third party developers. It eliminates the functional requirement of entering usernames and passwords, resulting in an improved user experience.

Ideas for Use

Touch ID has many potential and massively useful applications, such as one-touch Amazon and PayPal purchases.

HomeKit

A foundation for a centralized platform which allows iOS devices to control supported home devices and appliances. The concept of smart homes has been on the technology horizon for a few years now, but adoption has been slow due to fragmentation. Apple may have the power to push smart homes to the masses.

Ideas for Use

For example, Nest thermostats are controlled through HomeKit. Third party tools may also use Siri to control a smart home's lights, locks, and temperature settings.

Continuity

Perhaps the best proof of Apple's dedication to seamless user experience, Continuity is designed to allow users to switch between devices and painlessly pick up their workflow where they left off. Documents, settings and features are seamlessly carried over, allowing users to continue their work without disruptions.

Ideas for Use

Apple's goal of interconnecting devices is admirable, especially if your products are present on multiple platforms. If you start typing an email on your laptop, you can switch to your iPhone and continue writing it.

Camera

Developers gain a much deeper integration with the iPhone's cameras. You will be able to build much more precise and professional-grade photo and video editing tools. Combined with the hugely improved camera hardware and the new large screens, suddenly the iPhone becomes a viable semi-pro photo editing platform.

Ideas for Use

You can adjust all the usual manual controls, such as shutter speed, exposure, and filters, without leaving the app you're using.

Gaming

Developers should be aware of SpriteKit, SceneKit and Metal: three new frameworks which enable deeper integration with device hardware, better tools for meeting gaming-specific requirements, as well as much more refined visual and physics-based effects.

Ideas for Use

Even if you don't have a game app, these API's can also improve the responsiveness of your graphics processing unit (GPU) and the potential of your photography, video, and audio.

Deeper OS Integration

Considering Apple's past practices, iOS 8 is making an unusually freeing move by encouraging entrepreneurs to strengthen their brands' presence across the OS. Apps are no longer limited to their container; you can keep users engaged with your app through a plethora of new, powerful tools we'll explore below.

Actions	Developers now have the ability to build custom actions for any content, which show up in the system-wide action sheet.

Ideas for Use

You can send web pages from Safari to your app, fill out website passwords automatically, or edit photos with your filters and editing tools, right in the Photos app. You can open a web page in Safari and add the content to an app like Pocket.

Notifications	Increased Interactivity in Notification Banners: These take the form of customizable buttons. This addition should result in a better user experience, since the user is able to perform meaningful actions to your content while they are in a different workflow without disrupting it.

Ideas for Use

In iMessage or Calendar, you can pull down on the banners to RSVP or respond to a message without leaving your current task.

CloudKit	Allows third party developers to use Apple ID for authentication, instead of building their own authentication methods. It makes understanding authentication needs simpler, removes many security considerations, and results in a much smoother user experience.

Ideas for Use

CloudKit lets developers focus on client-side app development and eliminates the need to write server-side application logic.

iCloud Storage	Developers get full access with multi-level folders and complete file management permissions. Apple decided to take on leading products in cloud storage such as Dropbox through much tighter integration in the OS, and thus an increased ease of use.

Ideas for Use

You can read documents, PDFs, and more from iCloud as well as storing and sharing data with other users.

Widgets	Developers are free to create widgets, which live in Notification Center. They provide information from a connected app, as well as allow for rudimentary interactivity.

Ideas for Use

Weather, iTranslate, and Kindle widgets are directly related to their corresponding apps. Kindle, for example, shows where you're at in the book you're currently reading, and takes you there with one tap.

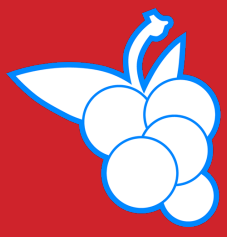
Conclusion

Apple has once again outdone themselves with many exciting new opportunities for developers, entrepreneurs, and designers to get familiar with and experiment in their apps. With additions that can impact, improve, and connect everything from your health to your home, your work to your entertainment, Apple's release of iOS 8, the iPhone 6, and the iPhone 6 Plus challenge the existing status quo. By digging in and understanding these new features, your app has the opportunity to reach its full potential and become a truly unique experience for your users. Contact Sourcebits today to understand how you can put these recent, intriguing developments into practice in your app.

About the Author

Piotr Gajos

When Piotr won an Apple Design Award in 2006, he caught the eye of our founder. When he visited India later that year, he left with a job — and the rest is Sourcebits history. Piotr recently moved from Poland to San Francisco, and now serves as Chief Innovation Officer. He leads our Innovation Strategy Workshops, brings new ideas to Sourcebits and consults on projects for many of our clients around the world. Piotr draws inspiration from film and music, and is enjoying the local scene when he's not coming up with cool concepts and designing awesome apps.



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