2.1 Deciding between platforms: iOS or Android

There exists a long-running platform rivalry between Android and iOS. There is an argument that Apple exerts excessive control over the App Store. There is some truth in this, but not much. Developers have found their apps pulled from the store or denied entry if they violate the terms set out in Apple's guidelines, but the reality is that your app is unlikely to be rejected during the review process – and, usually, when it is, a few changes will render it acceptable to the reviewers. Although it is less widely publicised, Google will also pull apps from Google Play if they violate the terms of service. However, their guidelines are – on paper at least –more tolerant than Apple's.

Both Apple and Google automate the payment process. As a developer, you submit an application to become a developer and, once accepted, the companies provide daily itemised lists of the app purchases your customers have made. Google delivers app-sales data in real-time, as opposed to Apple's nerve-wracking 24 hour doses of sales-data. (Apple only allows app purchases through their official store, although a few rival stores, like Cydia, have sprung up. But, the majority of users have no idea stores such as Cydia exist, and we would recommend avoiding the confusion and potential controversy of operating outside the App Store.)

Until recently, Google allowed app customers a variety of payment methods that were not Google-sanctioned. But, recently, in an effort to improve the profitability of Google Play, the company has been encouraging developers to use Google's own payment system. As Reuters reported:

"Google warned several developers in recent months that if they continued to use other payment methods — such as PayPal, Zong and Boku — their apps would be removed from Google Play."

This change, among others, means that the Google Play marketplace is becoming increasingly like the Apple App Store. This makes it easier for developers to automate their ware. Once you are set up in either app store, day-to-day administration of your apps is surprisingly easy.

Show me the money

One of the biggest questions an app designer has when considering iOS or Android is: Which platform will make me the most money from my app? The answer, for the moment at least, is unequivocally iOS. There are over 315 million iOS devices out there (iPhone, iPod Touch and iPad sales combined), and Apple has the largest credit-card number reservoir in the world. Although Google does not provide precise sales data, The Loop estimates that in 2011 Apple enjoyed a 12.4 percent share of the mobile device market while Google's Android had 5.7 percent. If you had to pick just one platform, iOS will give you access to the largest number of customers, and more importantly the largest number of paying customers. The iPad alone is outselling every PC made by any major company: HP, Dell, you name it. However, this is not the end of the story. Many app designers are making a lot of money on the Android platform and 5.7 percent of mobile device market is nothing to sniff at.
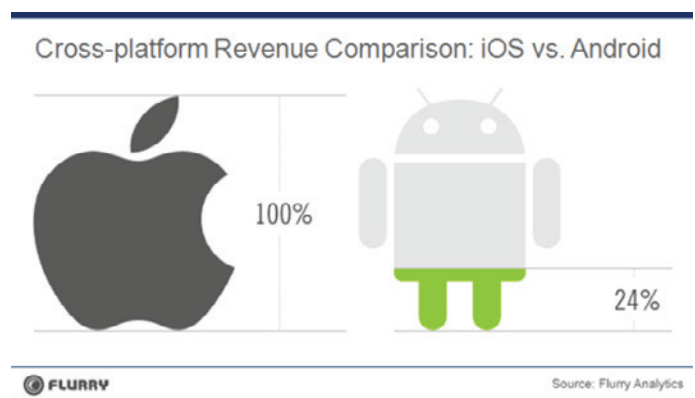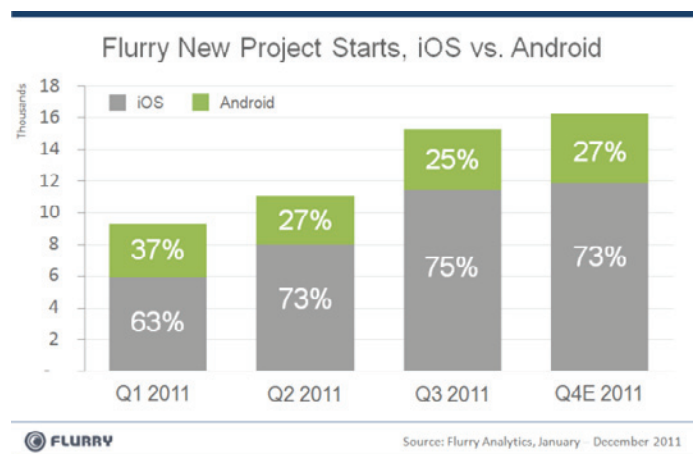
On average, for every $1.00 generated on iOS, the same app will generate $0.24 on Android.

2.2 Differences in spending patterns and device popularity

With Android phone sales dominating 39% of the market opposed to the 28% market share for iPhone (Nielson, 2011), why do you think so many apps are released only for the iPhone? You'd expect it would make sense to release your app for both mobile operating systems, and if not both, then just Android. The truth is considerably more complex. In reality, most apps are released only for the iPhone. We'll explain why: Although there is little dispute that Android-based phones are outselling iPhones, this alone is not enough reason to target your app towards Android users. The raw sales figures on Android devices are somewhat misleading and developers find that iOS

The Apple App Store shifted over $1.7 billion in sales in 2010, while Google Play mustered just $102 million. This means that Apple users make up a staggering 82.7% of mobile app revenue.

So, although Android phones outsell iPhones, developers still prefer to write for Apple first. The reason is more complex than raw sales data. It is also important to consider that, when you write an app for iOS, you are not simply writing it for iPhone owners, but also iPod Touch and iPad owners – two huge markets that Android phone sales statistics do not take comparative account of.

Google's executive chairman Eric Schmidt was convinced things would be different for the company this year. Back in 2011 he told an audience, "Android is ahead of the iPhone now. Ultimately,

Five years ago on June 29th 2007 Apple released the first iPhone. Since then, the iPhone has seen four updates and its success is arguably unprecedented.

As of March 2012, Apple had sold a stunning 218 million iPhones.
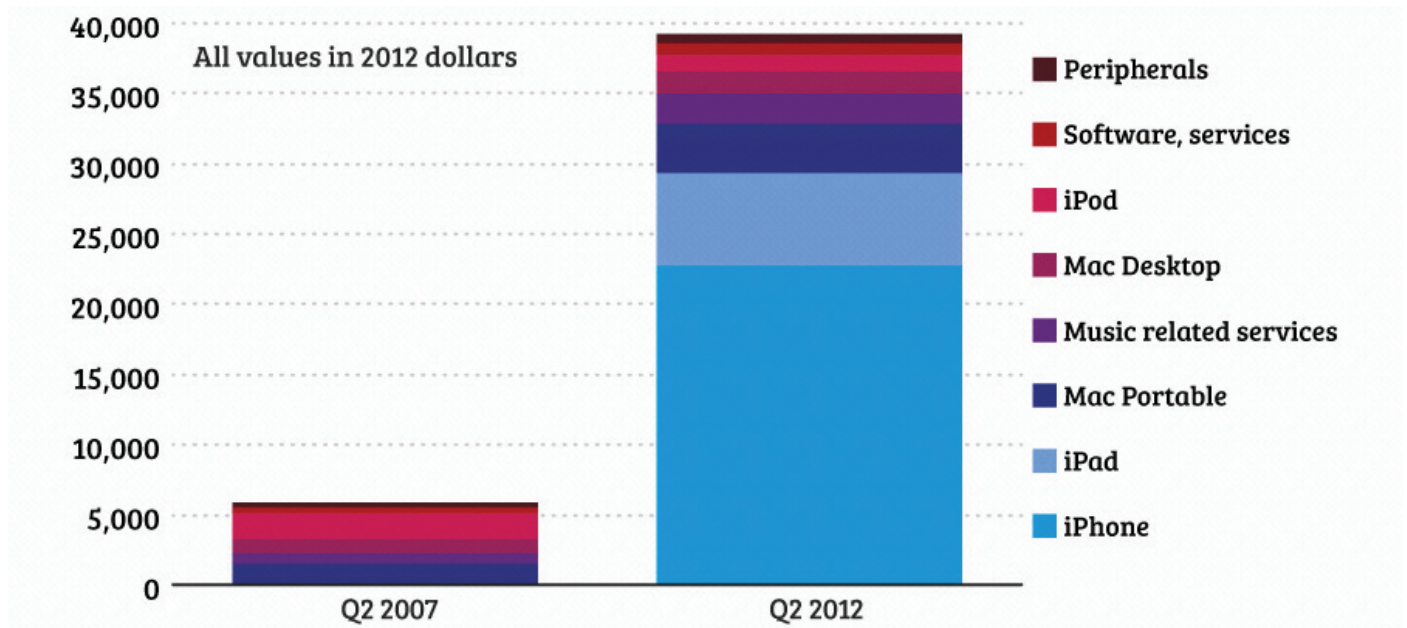
Cumulative iPhone sales in million units
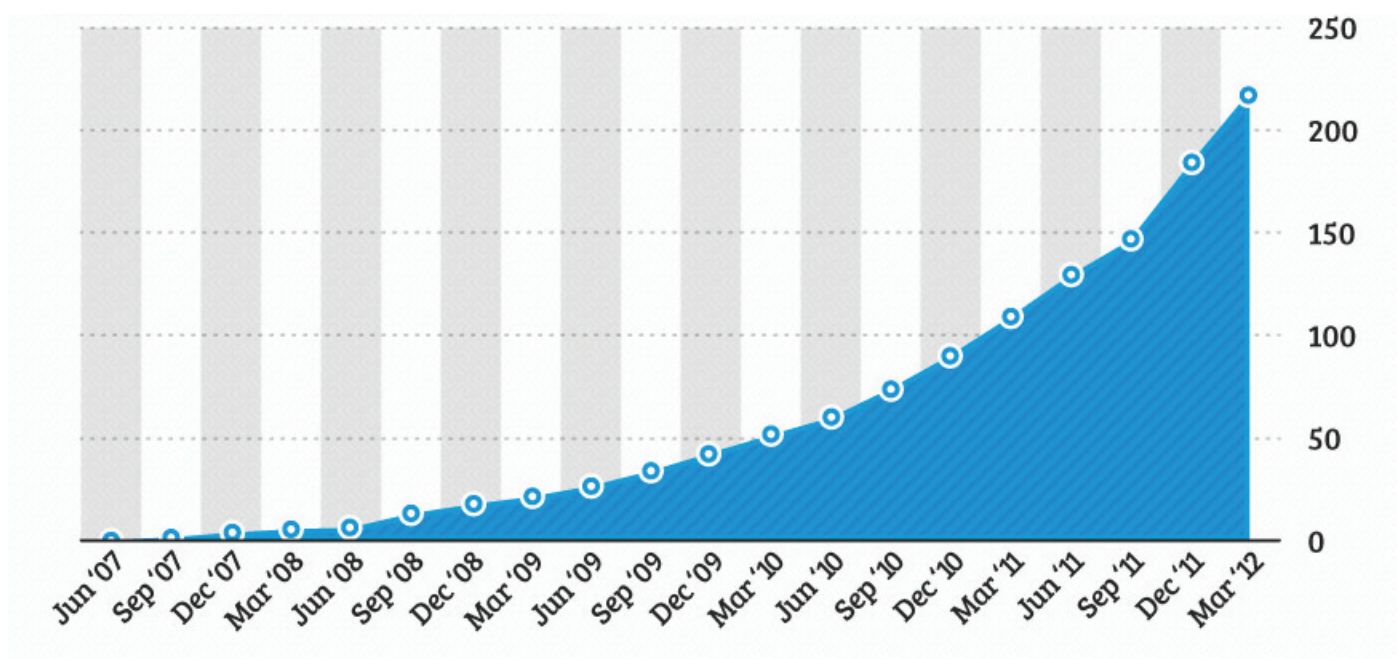
device owners spend more on apps, more often.

For the foreseeable future, it makes the best economic sense for you, as an app designer, to focus your efforts on launching a paid app on iOS and then, later, once you have the financial security of a successful iOS app, to consider gambling on Google's platform.

application vendors are driven by volume, and volume is favoured by the open approach Google is taking. There are so many manufacturers working so hard to distribute Android phones globally that whether you like Ice Cream Sandwich [the 4.0 release of Android] or not… you will want to

In just five years the iPhone has changed Apple's business dramatically. In the past quarter, the iPhone accounted for 58% of Apple's revenue.

Cumulative iPhone sales in million units

All values in 2012 dollars

Legend:
- Peripherals
- Software, services
- iPod
- Mac Desktop
- Music related services
- Mac Portable
- iPad
- iPhone

Q2 2007　　Q2 2012

Apple's iPhone business is now bigger than some of the largest companies in U.S.

Revenue in the first quarter of 2012

$22.69b Apple iPhone*

$17.41b Microsoft

$11.14b Coca-Cola

$9.63b Walt Disney
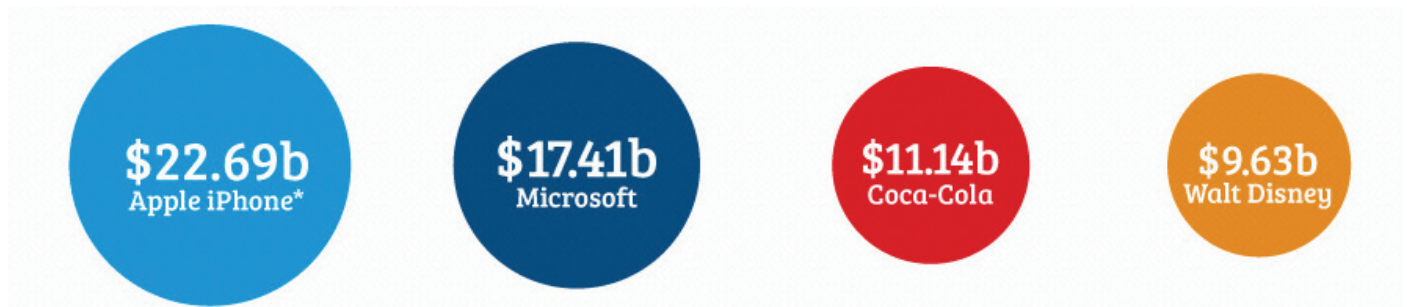
*includes iPhone sales, iPhone services and accessories

statista The Statistics Portal ⓒⓒ creative commons ⓘ ⊜

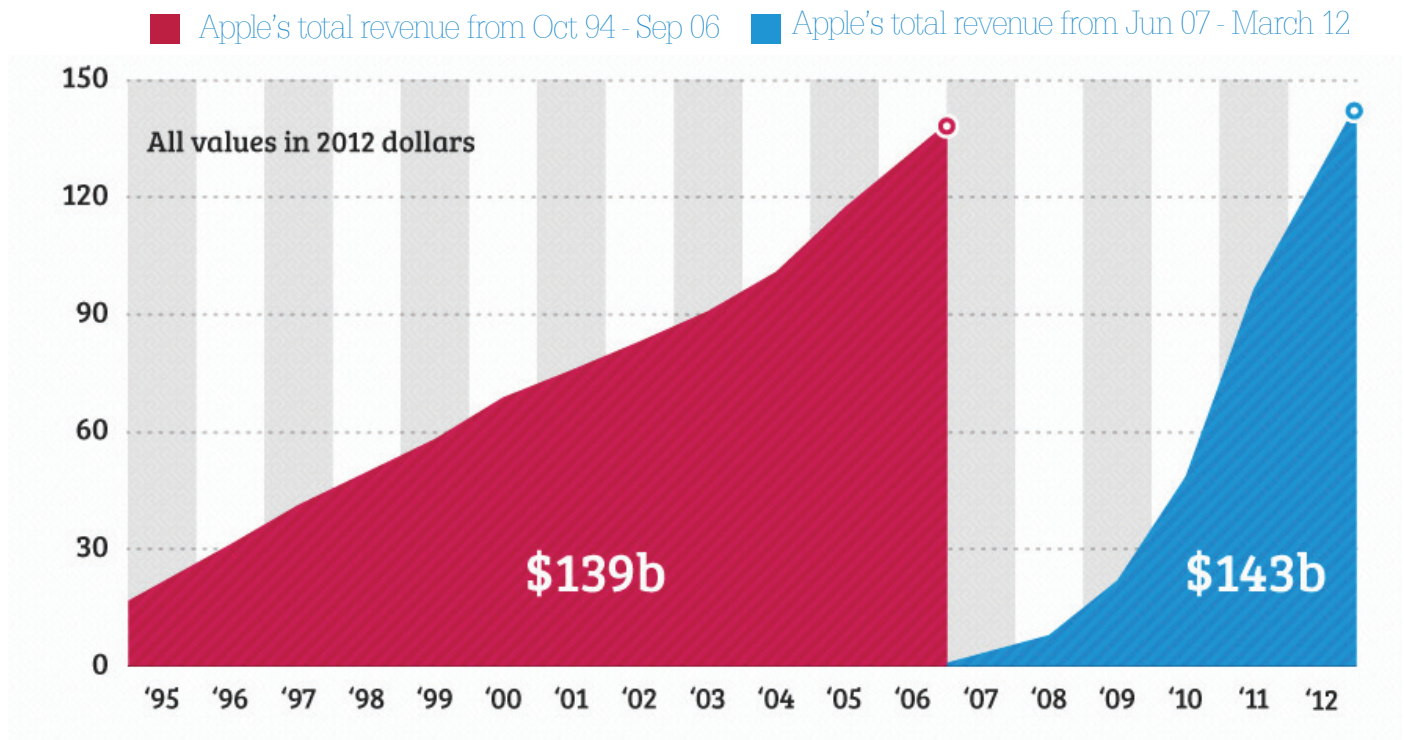develop for that platform, and perhaps even first… "

Sadly, for Google, 2012 has turned out to be very different indeed.

Although the raw number of Android phones sold has continued to grow (to over 300m units) and despite Android being installed on 50% of mobile smartphones sold each quarter, the big money is still with iOS and few developers are willing to risk the expense of developing for Google's relatively unprofitable platform. Apple's App Store generates $5.4 million each day in app sales for the top 200 grossing iPhone and iPad apps. Compare this to Google Play, which is estimated to pull in just $679,000 – roughly 12% of Apple's revenue. For every ten apps that developers build, roughly seven

are for iOS," according to app-trackers, Flurry.

iPhone users are prepared to pay for apps, while Android users, largely, are not. Since Apple started selling apps, iOS developers had been paid a total of $4 billion – Google refuse to release comparable data. It is estimated that a developer who got $1 on the iTunes App Store would get $0.24 from Google Play. This makes Google Play a tough place for you to do business especially if you are developing on a low budget, or working on a project that aims to make a profit. Developing for Android is more often a personal choice than a commercially viable option. The increased profits to be made on iOS make programming for Android a luxury that few developers can justify. Nevertheless, if you choose to use an advertising-funded model for your Android

Since June 2007, the iPhone generated $140 billion in revenue for Apple. Accounting for inflation, that's more than Apple's total revenue in the 12 years before the iPhone.

Apple's total revenue from Oct 94 - Sep 06   Apple's total revenue from Jun 07 - March 12

All values in 2012 dollars

$139b $143b

The iPhone has made Apple what it is today: the most valuable company in the world!

Apple's market cap

$106b $148b $127b $229b $310b $536b

June 2007   June 2008   June 2009   June 2010   June 2011   June 2012

statista — The Statistics Portal   creative commons

Sources: Apple, YCharts, Statista

app, and are convinced that your design has wide appeal, you can make substantial sums of money on the Android platform – it's just considerably harder.

New developers will have more luck coding first for iOS and then using the profits from that platform to consider experimenting with Android. You couldn't have picked a more exciting time to begin your adventure onto this new platform!

2.3 Why mobile tablets are not just big phones

Tablets, in particular the iPad, are an immensely popular new platform with consumers. The marketplace for these devices is exploding. However, it's important to recognise that there is a big difference between designing apps for tablet-

sized screens and mobile phones. Just scaling your interface will not cut it. The ergonomics of a tablet are radically different from those of a mobile phone. Take a look at the finger placements in the diagram below. The reach patterns on a tablet are different, depending on how the device is held. As a touch-screen increases in size, the usage pattern changes.

Rather than bewilder you with a complex theory of how a tablet-interface should be designed, these diagrams are provided to illustrate two important points: 1. You must test your designs with real users, and 2. You must not assume that a mobile phone app will scale well to a tablet. This is rarely, if ever, the case. Observe the hand and finger

interface must adjust itself to the new orientation. Of course, you could elect to present your app in a fixed orientation, so that the screen does not react to rotation. However, generally this is a poor solution – most users will expect the interface to react. Both the Android and iOS SDKs make provision for rotational interfaces. You may also find, in the case of iOS that Apple may reject your app if it does not re-orientate itself when the device is rotated. There are logical exceptions to the rule. *Alice for the iPad* is just one example of an app that would not function properly if it re-orientated itself on rotation. But, with utility apps in particular, you should make every effort to have a fully-rotational interface.

Far from being a troublesome extra step in the development process, the rotational ability of modern mobile devices makes for some wonderful opportunities to explore new interfaces and sell more copies of your app.

Consider this *Mail* app, which provides different organisational systems depending on which way round the device is held.

positions of your users when they interact with your app: Do they look efficient and comfortable? We'll cover this issue in more detail in Unit 13.

2.4 Using 360 degrees of rotation

Newcomers to the app-design world often overlook an important feature of these new mobile devices: They can be rotated 360 degrees, from portrait to landscape, both ways. As a result, the on-screen