

ANDROID APPS FOR *PROFIT*

How to Make Money with Apps on the Android Market



Optimizing
Your App
Business
From *Idea*
to *Market*



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Apps for Profit

How to Make Money with Apps on the Android Market

Nathan Mellor

1st Edition

1. Should You Have an App Business?

From a young age, I've liked story problems. That's largely why I went into software development. Meanwhile, my wife and other English majors would be the first to tell me that the story problems never seemed to have enough story to them. No significant plot, and not enough character development for the audience to be fully vested in the outcome. Nonetheless, if we can look at building an app business in terms of story problems, many of you will be able to solve them in a way that creates a good business for yourself.

Sometimes decisions that change your life are made based on a combination of necessity and reckless determination. Hopefully, most of you reading this book will have an easier time deciding whether to start an app business than I did.

A GETTING STARTED STORY

After graduating from college, I worked for twelve years as a software engineer for a major printer manufacturer. I was not heavily involved in business, marketing, or even management. At the time I started, I thought that I might be with this company all the way through retirement, though that idea faded slowly with the changes in corporate culture.



Paperwork was in store for me that day at work

At a routine meeting with my manager in the Spring of 2009, I was informed that I had been chosen as a part of a company wide downsizing. At the time, I had recently moved into a new house with a mortgage that was already proving difficult to afford. My last working day at the company was a Friday. The next day, a Saturday, my third child was born.



Stork brings a new baby and some CORBA insurance bills

Under such circumstances, a more logical and reasonable human being would have simply looked for another job. During the course of my outplacement counseling services, though, I discussed what was my true passion: to run a successful online software business.

In 2010, I was developing an app for the outdoor recreation market called BackCountry Navigator. It was named after an app I had developed for the archaic Windows Mobile operating system, back when I still had a day job. I have a corner office, in the corner of my house that is, with a pastoral view.



Home Office in 2011. Earlier versions had a folding table with a laptop on it.



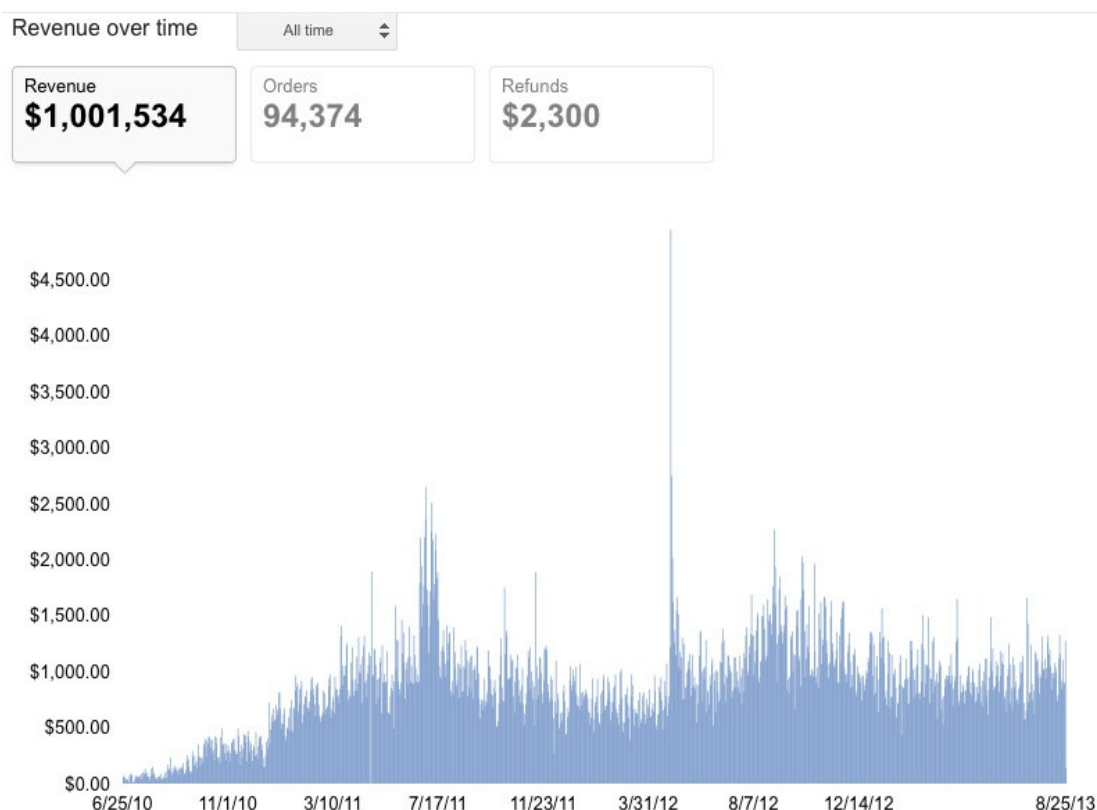
Pastoral View from Home Office

At the same time, I was going back to school. Because my job was eliminated due to hiring overseas, and because the downsizing had put the local market for my latest job title in decline, I qualified for a grant under the US Trade Adjustment Act. After making a convincing case for my reeducation, I was enrolled in the University of San Francisco Master Certificate of Internet Marketing program. I figured, and rightly so, that my programming skills were less important than understanding at least a little bit of the principles of marketing.



Certificates from the USF Internet Marketing Program still adorn my walls

When the app was first released in June 2010, I figured I needed about 56 sales a day to make this into a sustainable business venture. The first month, I was lucky to get seven a day. Over the course of that year, the app inspired both love and hatred among users, and both stress and triumph in myself. By January 2011, the app was at the top of its category, "Travel and Local", and remains in the top three grossing apps until the time of this writing. In August 2013, I took a screenshot from Google Wallet to celebrate the first million in sales from that app. Sales are not the same as profit, though one can hope. You can see from that screenshot that success has been far from instantaneous or steady.



Squiggly lines showing the history of an Android App's revenue.

Should you model your own endeavor after my adventure? Probably not. For one thing, not all of you could or should develop your own apps from scratch. For those that might want to, I will attempt to talk you out of it in Chapter 5. For another, few of you are going to weather a year of extreme poverty and focus in seeking to build your app business. Nor should you. Many of you are, like me, working out of your home, and not hoping for victory by size and scale alone, but by working smart and doing things right.

There are a number of ways you can get into the apps business much more smoothly than I did. By studying this out in advance as you are with this book, you are taking steps toward that end. For a number of reasons, my success over the next few years will depend on my ability to be more effective, efficient, and scalable. As a result, I've put together this book based on what I have learned, and I am sure to mention the things that I wish I had done from the beginning.

SHOULD YOU FOCUS ON ANDROID?

Another question you will face is whether you should spend time on the Android platform. While some of you are just getting started with apps, other may have already had success with the iOS platform, and are wondering if Android merits your attention. Probably the better question is how much attention. The big developers are already paying attention to Android. Should the smaller ones pay attention too?

It is no longer the case that having an app for both iOS and Android will always require twice as much investment as making only one app for iOS.

I will decline to take part in an OS war of words, arguing whether Android or Apple is inherently better. Even if we could design a scientific instrument that would answer the question to the satisfaction of all parties, it would not make a bit of difference to this question. What you need is users, and you should understand what is happening with the users.

When I started working on Android in Fall of 2009, it was in many ways too early to focus on Android,

and certainly too early to focus on it exclusively. Android had only one phone, the G1, and less than 2% market share. However, Verizon that year came out with the first Droid, and from there, things took off dramatically. Gartner was predicting that Android would surpass iPhone in a few years with 18% market share compared to 13% or so for iPhone. Both predictions turned out to be low. Android grew, through not at the expense of Apple, which has had tremendous growth as well. Some other popular operating systems, such as RIM, Symbian, and Windows Mobile, have simply imploded faster than predicted.

All throughout the growth of Android, journalists showed that they could be as loyal to the operating system on their favorite phone as they could to their favorite political party. The demise of Android has been predicted several times. All Android users, they've said, really wanted an iPhone in their heart of hearts and were only kept from it because they couldn't get or tolerate AT&T. Once the iPhone is on Verizon, they said, that will be the death knoll, the nail in the coffin, and Android will fade into irrelevance once again.

There are three trends to be aware of with respect to the Android operating system in comparison to iOS. Two of these trends are likely to continue, and one is not.

First, there are now more units running Android than there are running iOS, both in the US and worldwide numbers. According to VentureBeat, Android was on 80% of smartphones sold worldwide and over 51% of those sold in the US in a recent quarter. These facts are not in dispute, but the Apple loving journalists have been quick to write a series of articles to tell you five reasons why these numbers don't matter. The reasons they cite are due to the other two trends of which you should be aware.

Second, the average iOS user monetizes better than an Android user. This has been the case for some time, and has given appreneurs a reason to ignore Android even as the numbers grow. You can believe the stereotype that iOS users are a just a bunch of Apple fanboys who stand in line for whatever Steve Jobs tells them is the top of the line, accustomed to shelling out a few bucks for whatever app is new and trendy. You can believe that Android users are a bunch of geeks with no sense of style that just want to root their phone and install their custom mods rather than pay for apps. The fact remains that Apple users have a different demographic, with more disposable income. In the meantime, Android has a much wider demographic. It has been replacing feature phones in countries around the world, because it is cheaper than the flip phones people would buy instead. Some, not all, Android users are getting whatever phone comes for free with the very cheapest contract they can get. They were told by the salesperson that Android runs a lot of apps. A lot of FREE apps. Even though Android has many phones that are used by discriminating users at the cutting edge, and Apple is started to make phones with plastic casing that will be affordable even to, shall we say, "the peasants", this difference between Android and iOS is likely to continue.

The third trend is a result of the second one, and it is that iOS, as a whole, is generating more revenue for developers. As of this writing, the AppStore was earning twice as much for developers, even while losing market share on sheer number of users. This might be a reason to continue to ignore Android, if not for the fact that it is the trend that is unlikely to continue. The day of reckoning is coming.

The Day of Reckoning?

The day of reckoning will not be one where either side admits which OS is actually superior. The day will just be a matter of numbers, and it will come sometime in the next year or so. It will be the day that developer revenue from iOS and Android will be approximately equal. iOS users will still monetize better, but the sheer number of Android users will make up for it. Volume will win out over density.

On that day, many journalists will write to explain why these numbers still don't matter. They will explain, in case anyone is worried, why Apple is still the best and why it makes better margins than Google. But you, as an appreneur, should not be concerning yourself whether Apple or Google is "winning", by whatever measure

the articles choose. You should be far more concerned about where the money is flowing, and how you can get more of it to flow to you. Developers, as a whole, are a pragmatic bunch that are very good at math, and they will be thinking, on that day, that they really do need to worry about Android.

The reckoning will come in when many say to themselves "I reckon I should have started paying attention to Android a year or so ago." After all, not everything works the same, and understanding the ropes of the Android world will give you a jump over those who turn at the last minute. Many will regard this day of reckoning as a surprise, when even now, it is already predictable, and has been predicted by people much smarter than me.

If you were not convinced by what I've said, you probably closed the book at this point and put it aside for a year. Welcome back. How was your year? Does Android seem more important now?

ABOUT THIS BOOK

In this book, we look at some basic principles of marketing, and how you can apply them in building your app business. While there are specific actions to take, you are far ahead if you understand the principles behind them as well. Let's solve some story problems, and make some money in the process.

I haven't always included links to relevant sites that are mentioned in this book. Some of the tools are constantly changing, and my recommendations may change. To get a list of some links that will help you accomplish the things in this book, please subscribe at <http://eepurl.com/d9tZj>. I will send the list to your email. After that, you can choose to stay on the list if you want to get tips and updated ideas as I have them.

I don't need to start out this book with a disclaimer about all the earnings estimates you will see throughout this book and how they all depend on your personal skill and motivation and so forth. I don't have to do that because I haven't included any earnings estimates in this book. Instead, I encourage you to do your own research. This is the wrong book if you were looking for empty promises of wealth without personal effort. If, however, you are willing to work hard or even better, work smart, you can find something that works for you.

2. How Much Should You Know About Marketing?

A big question on your mind when starting an app business is "How much should I know about marketing?" Very few of you are going to take a year to study internet marketing in a formal program as I did. If you already have a good background in marketing, especially internet marketing, you can find out how some of those principles apply in the apps business throughout this book.

It is not necessary to be completely expert in marketing, but there are a number of concepts that I think that all app developers should understand. The following are concepts that are covered in this book. As your experience expands, you can find other resources to learn more about each principle if desired.

The Marketing Funnel is a helpful way of visualizing the process of gaining and retaining customers. The Marketing Funnel for apps is discussed in this chapter.

The Target Audience is one step in the marketing funnel and is helpful in the process of choosing, focusing, and refining your app.

Conversion is something that you will always want to track, analyze, and enhance. Much of conversion occurs after the end user installs your app. This is explained in this chapter and explored more fully in Chapter 8.

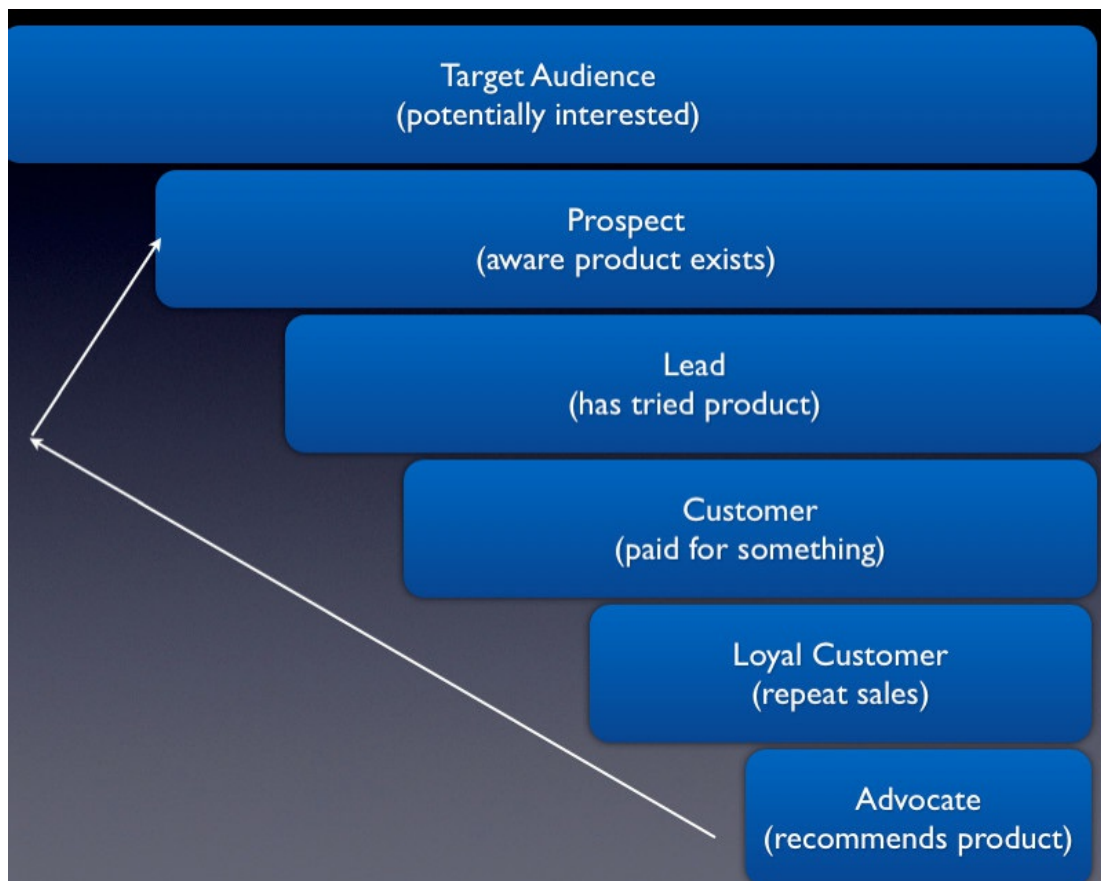
Competitive Research is a great way to choose your idea and refine it, and is covered in Chapter 4.

Keyword Research helps you optimize for search in or outside of the Market and is covered in Chapter 6.

Landing Page Optimization is a frequent marketing activity to enhance the conversions of a particular web page, and is explored in Chapter 7.

THE MARKETING FUNNEL FOR APPS

Funnels are frequently used to visualize the path of a potential customer, and they are frequently drawn in internet marketing. The following is a diagram of the Internet Marketing Funnel.



The Internet Marketing Funnel.

This funnel has several levels, with the number of people in each typically decreasing as you go down.

The Target Audience is the population of people who are potentially interested in your app.

Prospects are those who have discovered your app, possibly defined as the the people who have visited your app's listing on Google Play. We cover the finding process in Chapter 6.

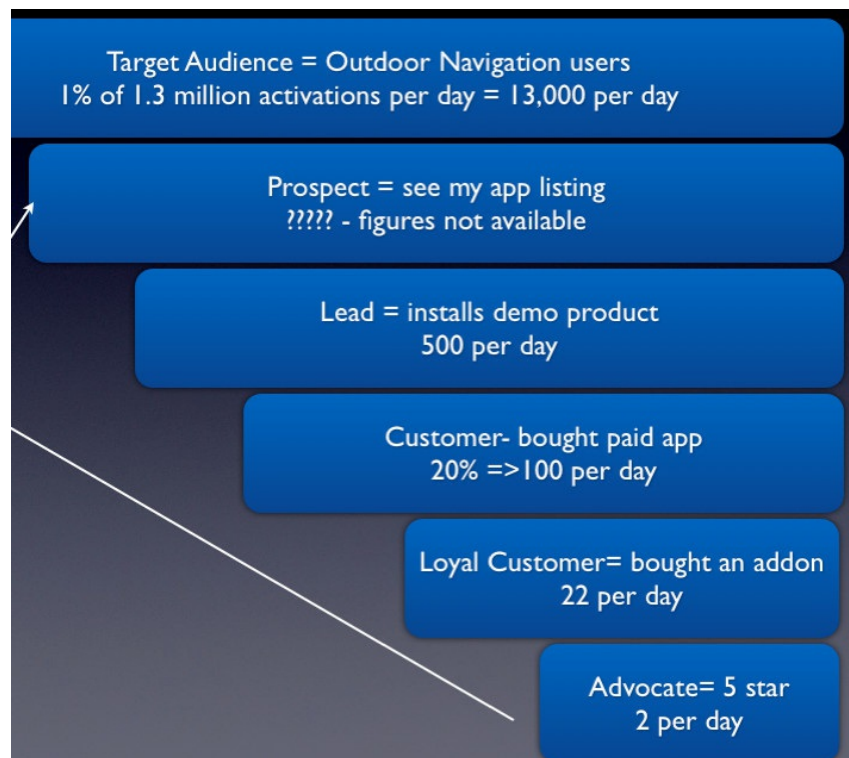
Leads are those prospects who have taken further action, likely by installing a free app from you.

Customers are those who have bought something from you. It could be a paid app or an inapp purchase.

Loyal Customers are those who bought more than one thing from you. This could be another app or an in app purchase.

Advocates are those who have not only bought your app, but are so happy that they are willing to be an unpaid salesperson and promote your app to others.

Further understanding of the App Marketing Funnel benefits from a more specific example with some numbers.



App Marketing Funnel with specific numbers.

Let's suppose you are targeting the outdoor recreation market with your app. Out of 1.3 million Android activations per day, you figure that 1% of them are target customers for your app. A certain number of them are able to find your app. You won't be able to know the exact number, because Google Play, as of this writing, does not give you statistics for those who visit your app listing but do not install your app. You are able to track the number of people who install your free app, and thus become a lead. You can track what the user does with the app after that point, and how many of them become a customer by buying a paid app or an in app purchase. A certain number of them will return to be a loyal customer to use and buy multiple things from you. If you can meet and exceed their expectations, they will rate your app with 5 stars, and share it in social media so that others can discover your app.

CONVERSION

Conversion is not the changing of the end user's religion.

Conversion in marketing terms is when a user takes a specific action that **you** want them to take. It is often associated with moving from one stage of the marketing funnel to another. For example, we would like a member of our target audience to discover our app by searching the market and clicking through to our landing page. When he does, he converts into a Prospect. We would also like him to press the install button, and when he does, he converts into a Lead.

Conversion can be expressed as a number per day, and often can be expressed as a percentage known as the conversion rate.

It is common that app developers want to increase their sales, and you could think of this as the only conversion that matters. However, if you look at conversion in the context of the full App Marketing Funnel, you see that there are multiple ways that you can increase the success of your apps. You can ensure that the target audience for the app is large enough and lucrative enough (Chapter 3 and 4), optimize the number of people that successfully discover your app (Chapter 6, 9, and 10), optimize the number of people who click through to install your app (Chapter 7), or optimize the experience after the install so that a greater percentage of the people who installed want to buy (Chapter 8).

APP BUSINESS MODELS

The marketing funnel can be applied to multiple business models, although you may need to adapt it slightly. Most any model involves something that is free and progressing to items that are not as free.

Paid apps

In this model, the users generally have access to a free version of the app that is limited in some way. It may contain less features, or simply contain ads, or be limited in time. This app serves as a sales force for the corresponding paid app. The paid app has full functionality and is available for a one time fee. As you make updates, all existing users get them for free.

There are some advantages to having a paid app. As shocking as this may sound, there are users who are ready to buy right away, and a paid app with a clearly defined price gives them this opportunity. The model seems to be very successful for utility apps that meet a particular need. Paid apps avoid an extra burden of implementing a purchasing flow that is needed for in app purchases, since all purchasing happens outside of your app.

There are some limitations of the paid app model, though. Most notable is the fact that the users pay once and get updates for life. This can be limiting if the app requires continuing investment. You are now counting on new users to pay for all the great new features you are providing to existing users that paid long ago.

There are paid apps that have an additional content or features for in app purchase, so that users can buy again. Even more common are apps that are initially free, but have items available for purchase, known as freemium apps.

Freemium Apps

This is a fancy way of describing a free app which has in app billing. Since in app billing became available in Android, these have quickly dominated the landscape of top grossing (top revenue producing) apps. The items offered in the app could be unlocking of new features, in game currency, or additional content or subscriptions.

Ad Supported

There are plenty of apps that may not have a paid equivalent, or any sizable contribution from in app purchases. In this case, ads are the form of monetization. Don't think that because you are monetizing through ads, that your work is done when a user installs your app. You also have to think about what happens after the install, and what kind of loyalty the user gives to your app. An app that doesn't get used doesn't earn much through ads. I know what you might be thinking. You've had some ad networks promise you revenue whether your app gets used or not. They promise it because they change user preferences, add a special search icon, or give you push notification ads. Well, I have to break some news to you. All those advertising methods were made illegal by Google's latest content policies in August 2013. Better take them out of your app before you get pulled from Google Play. There was no objection or public outcry from the users. They always hated them anyway.

Many successful apps have a combination of ads and in app purchases. In fact, any app with ads can add an inapp purchase to remove the ads. In this way, you call the bluff of anyone who thinks of complaining about the ads. Some may pay a dollar or two to get rid of the ads, but most won't, and you can continue to earn ad revenue for as long as they use the app.

People who follow the trends are telling advertisers that they need to be spending more money on mobile advertising. Bit by bit, mobile advertisers are listening. Mobile advertising spend is expected to double or triple over the next three years. Google is not ignorant of this trend. It is the whole reason they got involved in

Android in the first place. All of this bodes well for the long term in apps that are supported by advertising.

3. How Can You Choose the Best App Ideas?

In this chapter, think through some of your ideas, with the goal of making a top ten list of ideas.

WHAT MAKES A GOOD IDEA?

The Myth of the Secret Idea

If you are known as an app developer, sooner or later you will get an email from someone you don't know such as this one:

Hey, I have a great an idea for an app that will make lots of money. I will let you develop it for a split of

Should you pay for this idea? Just look at his extremely generous offer. All you have to do is contribute all the labor or development costs, ranging up to tens of thousands of dollars, and put all the work into marketing, promoting and supporting the app. In return, he will let you keep a portion of the money generated. A steal.

Of course, you know that his idea must be good because it is such a big secret. And you plan to keep it a secret all through development. Then you release the app and wonder why no one is finding it. Unfortunately, no one knows that they should be looking for it, because the idea is still a secret.

There is a good reason why you don't need to take the offer from the person offering you the secret idea.

Good Ideas are Common

"Good ideas are common - what's uncommon are people who'll work hard enough to bring them about": Ashleigh Brilliant.

This is the good news. You don't need to hire the email sage who is willing to give you his profound wisdom for a price. You are very much capable of coming up with an idea on your own, and a good idea at that.

Not All Good Ideas are Equally Valuable

The other side of the coin is that not all good ideas are equally valuable. That doesn't mean there is anything wrong with the idea or the person who has it. It might very well change the world. It just might not be rewarded in the marketplace.

People often ask "So, is there money in Android Apps", as if it were a binary question, answered with yes or no. One way to answer the question would be to take the average. And if you look at the "average" app on Android, the answer to the question is definitely no. If you go by the majority of apps on Android, the answer is still probably not.



Think of the yellow bullseye in this target as the top grossing apps. There are 500 of them. If you are aiming to make a full time living with one app, you'd better hit that bullseye. Around that bullseye are additional circles representing the top apps for distinct categories. About 34,000 apps are within those circles, and not all categories are equal. If you miss the target completely, you might at least hit the paper, and maybe you make a bit of money.

If you miss that, where do your arrows fall? That's right, in the mud. With over a million apps now available in Android, that's where most of them are.

There are other things to think about. According to AppBrain, 67% of apps have less than ten ratings. 89% of apps have less than 100 ratings. Even if some of these apps were a good idea, and maybe even done well, they didn't inspire enough love - or hate - for very many people to even comment.

SHOULD YOUR IDEA BE YOUR INTEREST OR PASSION?

Do not deceive yourselves - you being passionate about an idea does not change the market for the idea. Ideas succeed when lots of other people are passionate about them, or at least passively interested in them, or just plain need them.

Being passionate about the idea does not change the market, but it does change you. You need the mental and emotional strength to bring the idea to maturity before losing interest.

Fortunately, humans have a great capacity for being interested, or even passionate, about more than one thing. Make sure that your idea isn't one that you will keep obsessing over even if there is no market for it. And make sure that, if you pursue an idea, it is one you can at least care about deeply for long enough to bring it to market.

SHOULD IT BE YOUR HOBBY OR INTEREST?

Your hobbies and interests are great places to look for ideas. Just make sure the idea has mass market appeal.

Consider at this point whether your interest is a common one, shared by a large segment of the population, or whether it is an extremely narrow fan group. You may be tempted to go for something which is an

extremely niche topic, just to make sure you have little competition.

For an example outside the app world, look at the sales rank of a few different books on Amazon.

<i>Book</i>	<i>Amazon Sales Rank</i>
All New Square Foot Gardening, 2nd Edition	#4,629 in Books
Greenhouse Gardeners Companion	#23,593 in Books
The Pack Goat	#678,394 in Books
Practical GoatPacking	#3,054,219 in Books

Amazon Sales Rank for a few different types of books.

Look at the sales rank of a common topic, gardening, compared to an important but less understood topic, goatpacking. Notice that there are more digits on the goatpacking books, meaning an order of magnitude less people are buying those books. While greenhouse gardening is a more specialized topic than gardening for the average person, it still ranks above all of the pack goat books that are currently on Amazon, of which there are only two.

This is happening in spite of the fact that you think the gardening topic is so obvious that it wouldn't be worth writing a book about, especially if there are several thousands of books on that topic already. In spite of that number, some of them are quite successful.

You might be tempted to write about goatpacking, since you could have practically the whole market to yourself - there are only two books on the subject so far. But consider further the idea that most people reading this book have no idea what I'm talking about. It's just a very narrow segment of the human population that knows why you would want to learn about strapping a special pack to a well trained goat in preparation for a wilderness trek. I certainly think more people should be aware of this fascinating topic, but I can't count on a book paying off. If you are targeting a product for an audience this narrow, you should hope

that you can sell some higher price items. I've met the author of one of the above books, and she sells goats that are specially bred for packing, which fetch up to \$300 for the right customer. You could also consider selling a custom made goat trailer for \$1500. Mobile apps, however, do not typically sell for this high of a price.



This pack goat in training is wondering why she is so undervalued.

Of the two, gardening sounds like a more promising topic - if you are writing a book. We will look later at how this translates into the app world.

SHOULD IT BE UNIQUE AND INNOVATIVE?

As a software developer, I am all for innovation. Innovation brings new ideas to the world. Innovation can be an old thing done in a new way, or a new thing done in a new way, or anything in between. Innovation must surely always be rewarded in the marketplace, right?

The thing to understand is that innovation involves both risk and (potential) reward. Two types of risk are involved: technical risk, and market risk.

Technical risk is whether an idea can actually be made to work. If you are trying to make a energy efficient flying car with today's technology, you could have some doubts about whether you can accomplish it at all. It might take you ten years instead of two to get the first model out, and you might run out of funds long before then. It's less likely that the apps you are thinking of have that much technical risk, but if they do, you might want to reconsider. At least ask a trusted developer if it can be done.

Market risk is whether anyone will care. Not just say they care or think it is really cool, but actually modify

their behavior in a way that makes you profit. Maybe ten years from now, you have that great fuel efficient flying car. But unfortunately, most of the public thinks its cool, but can't afford one anyway. Those who actually have the money may prefer your competitor's flying cars, which, because of their use of obsolete technology, guzzle down fossil fuels as if they were soda. And you haven't managed to convince legislators to tilt the fuel efficiency standards in your favor. Just the same, you might be the first to invent gameplay using an innovative three finger swipe, and quite possibly no one will care.

What's the best investment? It is best if you can build on something that is already popular. Pick a theme that people already like, and design a new game around it. Choose gameplay that people already like, and look for a theme that might be popular. Find a utility app that people already need, and find out what needs aren't being fulfilled, and how to do them better.

THE FORMULA FOR PROFIT

I propose a mathematical formula for evaluating the value of an app idea.

$$\text{Profit}(\text{app}) = \text{Revenue}(\text{app}) - \text{Cost}(\text{app})$$

Did anyone get lost on this math? The profit derived from the app is the revenue derived from the app, minus your cost to produce such an app. Is this formula too simple? No. Far too many people fail to consider both aspects. They either figure that the revenue is going to be so huge that the cost doesn't matter, or they already have a set budget, and just work on whatever is easiest or funnest, without considering what will bring in money. Many others don't look too hard at either aspect, and find themselves with unpredictable results.

We look more at this idea in chapter four and five. While you may not be able to come up with an exact dollar figure, you will want to see your best ideas relative to each other in these two aspects - revenue and cost.

YOUR TEN BEST IDEAS

Even before you read this chapter, you probably had some of your own ideas in mind. Now which of them are best? You could put them in an email and send them to me, and ask me to tell you which of them are good. But you may not want to do that because you think I will steal your idea, and I might. Much better is to have a way to do your own research. I have gone through an exercise like this, and it helped me organize my thoughts.

Go to <http://bit.ly/1cwrX7E> for a copy of this spreadsheet. It is a Google Drive document that is read only, so you will need to make a copy.

Take ten of your ideas, and put them into the first column of a chart like this. You could name them according to the type of idea, such as "weather vane app", or "platform run game".

	A	B	C	D	E	F	G
1	Idea Name	Comparable app names	Free or Paid	Total Installs	Top	Gross	App or Game
2							
3							
4							
5							
6							

Spreadsheet allowing for research of app ideas.

Leave some spaces between each one to allow some room for the rest of the exercise.

What should you do if you have gotten to this point and think you have no ideas? Will you be unable to make progress? No. What I suggest is simple. Just go straight to the second column. Find some apps in Google Play that you like, think you know how to make, and wouldn't mind working on. Choose some that

are in the top charts or seem awesome. Find several of them that are similar to each other and put them in groups in the second column. You can then fill out the first column with a name for the group, and once you have ten groups, you will have ten ideas.

4. What is the Revenue Potential of your App Idea?

Hopefully, by now you have come up with a list of your top ten ideas, and are ready to see which one has the best revenue potential. The best way to measure the revenue potential is to see how similar apps have performed.

It is not our goal to reach an exact dollar figure for each app. If you want that much certainty, you need to work for someone else. We can, however, determine the relative value of each idea in a set. You may find that you start with two ideas that look about the same, and find that their revenue potential is quite different.

In a cartoon I sometimes show in my presentations, Dilbert presents to his mother the app he has been working on his spare time for months. He plans to charge 3.99 and sell a million of them. His mother, of course, points out she has already found seven apps like those on the Appstore and four of them were free. Dilbert responds "Thanks a lot, dream killer!"

Now is a good time for some introspection. Lets suppose you have a great idea, and a quick search of the market reveals that there are seven apps that do pretty much what you wanted to do. There could be more than seven, but these are the ones you could find right away. Is this circumstance a good thing or a bad thing?

If you want to achieve success reliably, you should think of this circumstance as a GOOD thing. If you are struggling with that idea, pay attention to the next two sections.

THE PESSIMIST'S VIEW OF COMPETITION



Are all the good app ideas taken?

It can certainly be harsh to discover that the app you haven't even released yet will already have competitors. Below are some of the thoughts that could be running through your head.

You thought your idea was unique, but someone else has thought of it. How can you succeed unless your idea is 100% unique?

Maybe a large, well funded company has released an app in this space. How can you possibly compete?

Maybe bunch of small, scruffy, low budget developers are releasing apps in this space. Some are even open source. How can you possibly compete?

You see a very successful app. Just some stupid little app that you think you, or your 11 year old daughter, could have written in a weekend. But, obviously, it is too late now.

You can't decide on any idea, because it seems any good idea you come up with is "taken".

In the Fall of 2009, I took a very naive view in my market research. Based on a quick search of the respective stores, I concluded that there were maybe five apps on iPhone like mine, and maybe only one or two on Android. Little did I know that there would be five or six major competitors by the time I shipped, and maybe 500-1000 as of this writing. Some are free, some are open source, and some are publicly traded. If I were of the pessimistic mindset, just looking at that would make me want to crawl back into a corner and cower in fear.

THE OPTIMISTS VIEW OF COMPETITION

If you are an optimist, you can see the same circumstance and have quite different thoughts.

How very fortunate that some big company has gotten involved. They may have done some great market research already. They probably have a bigger budget for design and marketing that I can probably take advantage of by seeing their best practices. In the meantime, if they have produced a popular app, it has paved the way for similar apps that people now know to look for.

How fortunate, also, that a bunch of smaller companies have tried out this market. Collectively, they have provided the best market research you can hope for. You can now see which ones succeeded, if any, and which ones haven't.

If you really think you can put together an app like a successful one you've seen in a weekend, why exactly is it too late? Last I checked, there are approximately 52 weekends in a year. If you think the first one to a market is always the one to succeed, ask yourself how many people reading this book are using WordPerfect as their office software. Think of one of the great success stories of the app world, Angry Birds. It was actually based on a concept from a similar, earlier game called Crush the Castle. By building on what is already popular, you are better positioned to make something even better.

Think of all that you can learn from an app that has already been tested in the marketplace. This includes UI conventions, business models, and which features are most needed and wanted by the market. These are all things that you could spend a lot of time hashing out endlessly in meetings. With the benefit of other's research, you can get started on the fun stuff much sooner.

Certainly it is worth asking yourself whether you should compete in an area, and how you should compete. But before you worry about that, first ask yourself, is it worth competing? Are you going to be racing against some conquistadors to fill a wheelbarrow full of bars of gold, or fighting against some mangy dogs to get the last scrap of food?



This guy looks a bit skinny. His market may not be worth competing over.



On the other hand, follow this guy just to see if some more coins fall out of that cart.

COMPARISON CHART

In the last chapter, you added your top ten list of apps you might build into the chart. At the end of this chapter, you will have something that looks like this:

Free or Paid	Installs	Top	Grossing	App or Game	Top	Grossing	Category	Top	Gross M	Weekly possibl CPM	Weekly income	Cost to build
Free	10M+			Game			Sports Games	34				\$\$\$\$
Free	10M+			Game	327		Arcade and Action	99	1000	\$0.56	\$560	
Free	10M+	214		Game	89		Arcade and Action	118			0	
Free	5M+			Game			Sports Games	116			0	
Free	100K+			Game			Sports Games	165	50	\$2.08	\$104	
Free	100K+	303		Game			Sports Games	17			0	
Free	50K+			Game	291		Sports Games	291	290			
Paid	10K+			Game			Sports Games	86				
Free	5M+			Game	442		Brain & Puzzle	74	202		0	\$\$\$\$
Paid	10K+			Game			Brain & Puzzle	140	417			
Free	10K+			Game			Brain & Puzzle				0	
Free	1M+			Game			Brain & Puzzle	471			0	
Free	500K+			Game			Sports Games	471	410	40	\$2.05	\$82 \$\$\$
Paid	1K+			Game			Sports Games	85				
Free	100K+			Game			Sports Games	419		\$0.67		
Free	100K+			Game			Sports Games	220				
Paid				Game			Sports Games	37	114			
Free				Game						\$1.58		
											0	
											0	
											0	
Free	10M+			Game			Arcade and Action	223			0 \$\$\$	
	100K+			Game			Arcade and Action	431			0	
	1M+			Game			Arcade and Action	269				
	100M+	44	503	Game	14	410	Arcade and Action	6	188	5000		
Free	50M+	27	216	Game	9	188	Arcade and Action	4	79		0	\$\$\$\$\$
Free	1M+			Game			Casual	229				
Free	1M+			Game			Arcade and Action	226				
Free	1M+			Game			Arcade and Action	423		400	0	
Free	1M+			Game			Casual	201		300		

While you cannot see much of the fine detail in this spreadsheet, we will zoom in on specific areas throughout this chapter. I am not showing you the first two columns, because I would like you to do your own research, and not just work on the apps I'm thinking about. In the following sections, I will give you some information about what goes into these columns.

LISTING COMPARABLE APPS

A quick search of the Google Play Store can help you find some competitors. In the second column of the chart, fill in the names of several competitors for each idea.

If you are still thinking that your idea is too unique to have any competitors, think instead of comparable apps. Think of the apps that your target market is likely using right now. Think of apps that you would want to put an ad for your app in. If you believe that 100% of those users would immediately want your app when they saw the ad, that is a good app to use for comparison.

The closer the fit, the better. If you can't find anything to compare against, then the rest of this chapter won't help you very much, so stretch a little bit if you have to.

How many apps are good for the comparison? Maybe start with five or so for each idea. We can add and take away based on the results. Of course, you should put priority on the top ranked and most successful apps, because you are planning on your app being one of them, aren't you? For comparison, you might also include some apps that look like they were written by some guy in his basement.

Be reasonable in expectations when you include apps that are boosted by a popular brand name. If you try to gain the same advantage by calling your app "Harry Potter's Invisibility Cloak", it will be short lived before you get pulled from the Play Store and face some sternly worded letter from the Warner Bros legal department. Are the installs it is getting because of the app itself, or a brand name?

With a list of competitors for each app you are armed to find out how much money each is making.

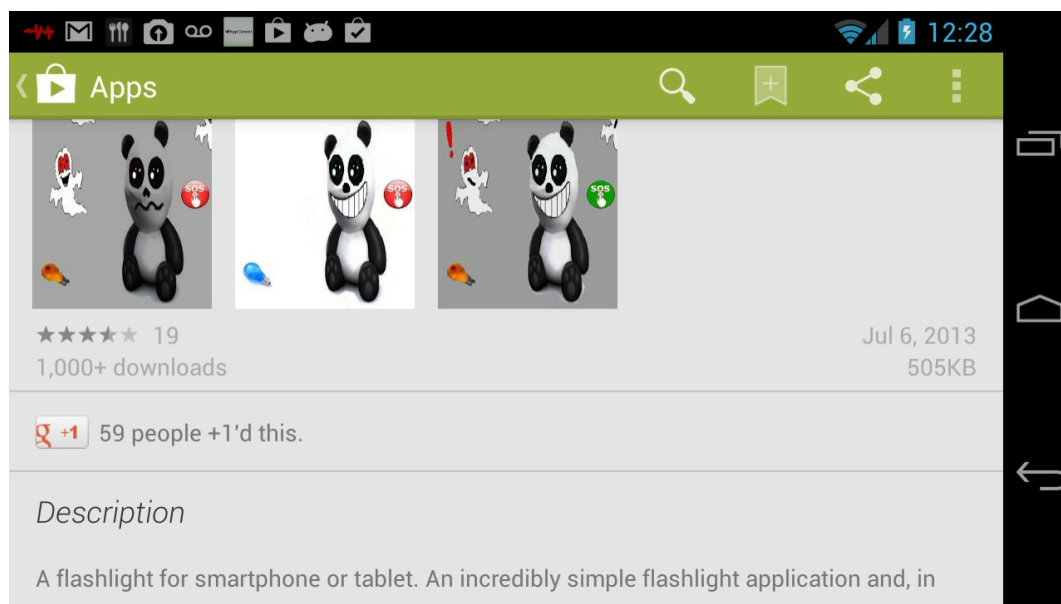
TOTAL INSTALLS

The first few columns are easy. For each comparable app, you can mark whether it is free or paid, and the range of total installs mentioned in Google Play.

Free or Paid	Installs
Free	10M+
Free	10M+
Free	10M+
Free	5M+
Free	100K+
Free	100K+
Free	50K+
Paid	10K+
Free	5M+
Paid	10K+
Free	10K+
Free	1M+

Total install ranges chosen in the chart.

The Google Play Store is very generous in giving you the lifetime install number for each of the apps in its store, at least in a broad sense. At a glance, we can see how many installs this has had in a lifetime.



This panda themed flashlight has had somewhere between 1000 and 5000 installs.

Don't give this too much importance. It is not obvious how long it took to get that many installs. What we would really like to know is how many installs this app is getting right now. Fortunately, we can get an idea of that number in the top app charts.

The top app charts are also freely available on the Google Play Store, but collecting the data for a lot of different apps can be a bit of a pain. At this point it is good to use a tool like App Annie (free with registration) or SearchMan SEO (subscription with trial).

TOP PAID AND TOP FREE

Top	Grossing	App or Game	Top	Grossing	Category	Top	Grossi
		Game			Sports Games	34	
		Game	327		Arcade and Action	99	
214		Game	89		Arcade and Action	118	
		Game			Sports Games	116	
		Game			Sports Games	165	
303		Game			Sports Games	17	
		Game	291		Sports Games	291	290
		Game			Sports Games	86	
		Game	442		Brain & Puzzle	74	202
		Game			Brain & Puzzle	140	417
		Game			Brain & Puzzle		
		Game			Brain & Puzzle	471	

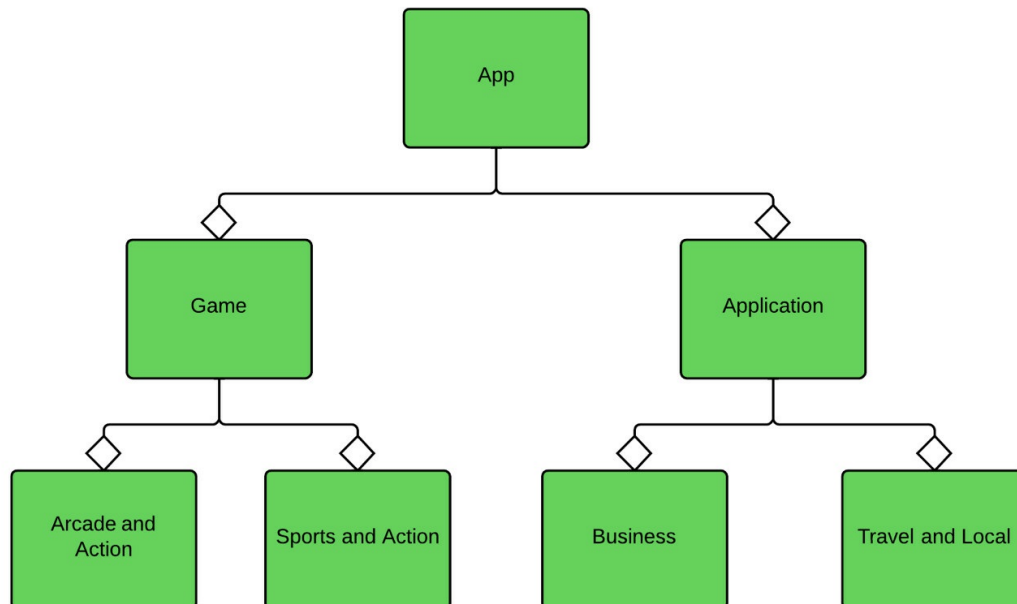
Top Ranks for several sets of comparable apps.

Top paid and top free charts are ordered by the number of installs. After some searching, you will notice that these numbers have nothing to do with the total installs number you just looked at. This is because, as Google has acknowledged, these charts are based on what has happened in the last several days. It takes a lot more installs to be on top of the free charts than it does for the paid charts.



App Annie shows an app that ranks for downloads in a category, in games, and overall.

There is a definite hierarchy in the charts. Google Play tracks the overall top 500 paid and free in the store. After that, an app is either considered a game or an application (a non-game), and then is further divided into a category. Besides that, each category has a list of the top paid and free. In all, there are probably 34,000 apps that can be in the top charts in their category, out of a million or so apps.



Hierarchy of top apps include overall, games or applications, and specific categories

Not all categories are equal. Having a rank in the very top chart is worth the most. A top rank in games is worth more at the present time than a top rank in apps.

Fill in the numbers for any top rank you find for the competitive app. Leave the others blank.

TOP GROSSING

Top grossing ranks are also calculated from the last several days, and are based on the amount of *revenue* each app is earning. Because of this definition, you might expect to find the top grossing apps to be the top paid apps with the highest price. Instead, you would find this chart mostly filled with free apps. These are freemium apps, apps with in app purchases. Since in app purchase numbers are not displayed publicly, and you can't even find out what in app purchases are available without installing the app, the top grossing charts are our best means of tracking freemium apps.



An app that ranks according to revenue is in top grossing ranks.

Top Grossing also has charts at the total, game or application, and category level. Top grossing apps are also likely to appear in the top free or top paid charts in some cases. A rank in the top grossing is more valuable

than a rank in the top paid or free charts.

To get an idea of how much a particular category is worth, compare the top grossing apps in the category and see how they rank in the overall top grossing chart.

ADVERTISING INCOME

So far, none of the columns in the chart will allow you to evaluate the advertising income. There are a lot of variables that go into advertising. The fact that an app has been in the top free doesn't tell you everything. How many impressions do they get and what are each of those impressions worth?

Weekly M	possible CPM	Weekly income	Cost to build
			\$\$\$\$
1000	\$0.56	\$560	
		0	
		0	
50	\$2.08	\$104	
		0	
		0	\$\$\$\$
		0	
		0	
40	\$2.05	\$82	\$\$\$
	\$0.67		
	\$1.58		

I will show you some tricks that will give you a good idea.

Open your Adwords account. If you don't have one, just get one. You don't have to spend money with them yet, but you do want to use one of their tools, the Display Planner. This is a tool that you use to plan an ad campaign.

Enter some keywords and choose individual targeting ideas and the placement tab. Find the tab that says "Mobile Apps" and choose it. You will see something that looks like this:

Doodle Jump (Google Play...)			\$0.00 - \$1.00	500K - 1M
All Apps > Google Play Android Apps > Games			\$0.00 - \$1.00	100M - 500M
Happy Jump (Google Play)...			\$0.00 - \$1.00	350K - 400K
All Apps > Google Play Android Apps > Games > Arcade & Action			\$0.00 - \$1.00	50M - 100M
Extreme Droid Jump (Goog...			\$0.00 - \$1.00	5K - 10K
All Apps > Google Play Android Apps > Games > Casual			\$0.00 - \$1.00	100M - 500M

Display Planners shows ad inventory available in several apps with "jump" in their name.

Find an individual app, not a category, and look at the column that states "Impressions per week". This was made to help you figure out the impressions you could get if you targeted this particular app. Already you can see that apps with "500K-1M" are in a whole different league than apps with "5K-10k" in that column. In advertising, M stands for a thousand impressions, so enter 200 for "200k-250K" and 1000 for "1-1.5M".

There is one more piece of the puzzle. If you want to know what kind of CPM they might get, there are a few more steps. Choose the placement and put it into an ad campaign and run some ads in that app. Run it until you have a few thousand impressions and at least some clicks. Then look for what CPM you needed in order to be shown.

Placement	Status	Max. CPC	Clicks ?	Impr. ?	CTR ?	Avg. CPC ?	Avg. CPM ?	↓ Cost ?	Conv. (1-per-click) ?
Mobile App: Polaris Navigation GPS (Google Play), by DS Software	Managed	\$0.03	67	4,073	1.64%	\$0.14	\$2.34	\$9.55	10
Mobile App: GPS Surveyor Free (Google Play), by MobileBrigade	Managed	\$0.19	45	2,366	1.90%	\$0.16	\$2.95	\$6.98	9
Mobile App: Elk Hunting Calls (Google Play), by Pico Brothers	Managed	\$0.10	109	3,170	3.44%	\$0.06	\$2.15	\$6.83	21

Look at the Avg. CPM column in this campaign to get an idea of the CPMs possible in an app

That gives you a rough idea of what the "going rate" is to advertise in that app. You can multiply that number by the number of Ms and get an idea of the maximum ad revenue per week they are earning. Reverse engineering at its best!

You've probably already noticed that there are some limitations to this method. The first is that the app needs to be running Admob as an ad platform. Not all will, but since it is pushed by Google, it is fairly common in the Android world. The second is that the search is far from foolproof. I can't find apps that I know are running Admob, even when searching by the name or a common keyword. This is a new tool in July 2013, and hopefully it will get better. Nonetheless, even with these limitations, you are likely to find at least one app to compare to your own idea, and maybe generate several other ideas that weren't on your original list.

TAKING STOCK OF YOUR IDEAS

Congratulations. By going through the exercises in this chapter, you know a bunch more about your app's

potential than the average person who just jumped right into building an app. You may have found that several ideas that sounded about equal were actually quite different. Some ideas may be falling off your list, and some new ones will jump onto it.

Should you jump right into whichever app has the most revenue potential on your list? There is at least one other thing to contemplate first. It is important to know which ideas you can bring to market in a cost effective manner. We've only looked at the first half of the equation. For the other half, go through the ideas in the next chapter.

5. How much will it cost to provide your app?

Now that you have figured out the revenue potential for your idea, think about the cost of bringing the app to market and keeping it there.

Many people are so convinced of the enormous financial rewards of building their own apps, that they neglect to look at the cost. This is a big mistake, and will prevent you from finding the real gold in this market. An app that will make you a million dollars, and takes two million dollars to build, is not a winning idea. For most of us, even an app that costs a million to build and brings in two million dollars is not a winning idea. The reason is that most of us don't have a million dollars in investable cash. On the other hand, an app that costs \$1500 to build, and brings in \$2000 within a few months time with little maintenance, is a winning idea.

If you are not technical by nature, you may have little idea of the full cost to provide your app idea. On the other hand, if you are a software engineer like me, you only **think** you know how long it will take you to rush out and code it up. A clearer idea will come as you put a plan in place and get appropriate bids.

Before you even put in that much work, however, you can get a general idea by going through this chapter and considering some of the factors that make it more or less expensive. There are two factors that increase the cost of an app project. They are complexity and labor. There are four factors that decrease costs. They are leverage and reuse, planning and processes, tools, and effective outsourcing. We'll discuss each one in turn:

COMPLEXITY

Every app is more complicated than you think, but let's see how complex you are thinking first.

Suppose you have come up with two ideas that you could build into an app. You've gone through the process in the last chapter, and both look like a good idea in terms of revenue. One of the ideas looks like Idea A in the table below, while one is like Idea B.

	<i>A</i>	<i>B</i>
	Faucet App	Everything but the kitchen sink app
Engineering effort	You wrote it in a weekend	Several engineering years
Lines of code	300	70,000
Number of features	1	100
Number of features requested by users	0	300+
What to do when done	Work on another app	Never done
Bragging rights	"My 400th big hit"	"Still working on the same app I told you about last year"

One of these apps is probably an exaggeration. Maybe it can't actually be done in a weekend. In contrast, the other app is not an exaggeration at all. There are apps in the market that require this much effort, or even more. Some of the apps on your top ten list can be one of them.

If you come from a development background, the idea on the right is the one you might think of first. After all, if it is complicated, and has more lines of code, it must be more valuable, right? Not necessarily. If you've been through the exercises in Chapter 4, you may have a sense of what apps make more money than others. Also, you may have made the shocking discovery that the apps that make more money aren't necessarily more complex.

If you are not from a development background, you may have been wise enough to choose the one on the left. For your first app, this is a good thing. You can learn the process without putting too much money into it, and hopefully generate some revenue so you have more money, and more time, to do more apps.

I haven't set a good example for you in this regard. I went for the app on the right for my first one. And as predicted, years later, I still had only one real app. Over time, I realized that if I ever wanted to do more than one app, I need to be more efficient and start smaller.

A market you are going after may require a more complex app. If that is needed, just make sure that it fits the size of your organization and its resources. A person in my class at the developer conferences will often have an idea that is rather large in scope. Like him, you need to ask yourself if you actually have three developers hired and plenty of money to get you all through a few years of poverty and hope for a big reward at the end. If the answer is "well, it's really just me doing some coding in my spare time", then ask yourself when the project will be done. The answer is simple: never.

It is also possible for an idea to be too small for an organization. As counterintuitive as this sounds, imagine that you work for a major corporation. You got this app all coded over the weekend and brought it your boss on Monday. Will you be shipping it on Tuesday? Or will you be locked in meetings for the next six months about how the app fits into your overall corporate strategy, and whether its design is harmonious with your company's values, and so on and so forth?

LABOR

An app business is not one that involves the purchases or transport of many physical goods. Therefore, a dominant cost of any app project is labor.

But, as I am sure you will tell me, you've got a jumpstart on the labor costs. Maybe you are already an app developer. Or maybe you are thinking, how hard can it be, you did some PHP or visual basic code a few years ago, and you picked up a few books at the library, and you are raring to go. Therefore, you will be your own developer, thus giving you an advantage over other companies by saving your biggest labor cost.

Are you saving money this way? Did I? Absolutely not. You are on your way to getting into the business in the most expensive way possible. An important rule of business is that all labor costs count, including supposedly free ones.

Find the market hourly rate for an app developer in your area, and that's the rate you want to be able to pay yourself, and have money left over. If you have a day job, consider at least the hourly rate for that job, including any benefits and paid vacations.

Surely there must be some exceptions. After all, when I got started, I was unemployed in a poor economy, so I must not have had anything else to do. But many of you are aware that looking for a job is a full time job. To be enrolled in the Internet Marketing program, I had to propose the program as a full time student. I was creating an app, which I considered a full time job. I couldn't be looking for work, because I just didn't have time for three full time jobs.

Without really trying, I got plenty of calls for recruiters looking for software engineers. I put them off for the most part. When it came closer to the end of the year, my schooling was complete, and I still hadn't made

enough money to pay taxes that year, I got several calls about a job offer that was just about three miles away. You couldn't ask for a smaller commute. And they needed a person with a year of experience to work on - wait for it - Android apps. This was the hardest one to let go. I got off the phone thinking that was the stupidest thing I ever did. Only my faith in what I was doing compelled me to do it.

That is the situation that best taught me the true value of my labor. Here was an opportunity to work full time and earn a full time income, a situation that many people take for granted. Meanwhile, because I was working full time on my own app, including tech support, marketing, and public relations, I wasn't available.

Just remember to give yourself proper monetary credit for your labor, and you will have an easier start than I did.

LEVERAGE AND REUSE

Leverage and reuse reduce expenses by allowing you to use some code that is already in existence. This, hopefully, means that there will be less money to pay someone, like yourself, to develop something from scratch. This code could be something that you or your developer wrote for a previous app, and you find it useful for this one. But it could also be something that some one else wrote, and that you have acquired a license to use.

Leverage and reuse are software development terms, and have slightly different meanings. Leverage means that you will take some code, modify it, and then use it for your own purposes. Reuse means you will take some existing code, and use it without modification. In both cases, you probably add to it to complete your app. From those definitions, it doesn't sound like there is very much difference. But the difference is important. Reuse is almost always cheaper than leverage, and something that you can reuse intact has higher value. Think of replacing a water heater. If you get a new one that fits exactly into your house you are done much faster than if you get a used one that needs parts, repairs and some extra adapter before you can put it in your house. In software, if it is necessary to leverage some code by modifying it, it may also make it more difficult to accept updates from the original author if they become available.

It isn't just functionality you are looking for. If code has been proven to work across the many android devices, and bugs have been stamped out, it will save you time. If the code has been proven to have a high conversion rate or a great design, even better.

These are all things that your developer should worry about; just be aware of how they affect your cost.

Code for reuse can come in many forms.

A Library

A library might consist of a jar file with a clearly defined interface that a developer puts into your app. In many cases, you will not have the source code, and you pay a licensing fee, if applicable, to a third party. The advantage of this is that it is a reuse situation, and you don't have to modify the source code. The disadvantage is if you do need to modify it, and can't. If some new bug crops up in Android 5.3, you'll have to rely on the original developer, and hope he hasn't stopped supporting the code and moved to the Canary Islands.

A Multi Platform Framework

If you've been convinced that you need to get your apps running on Android, you may have gone to your developers asking how long it will take to "port" the app to Android. When they come back with two months time, you assume they must be gouging you somehow, because it only took two and half months to write the code for iOS in the first place. Can't they just run it through a quick converter program and make it work?

Here's the reality. There really isn't such a thing as "porting" when it comes to iOS vs Android. The proper

word is rewrite. Sounds harsh, huh?

The exception to this rule is if you started from the beginning using a framework that is meant for building for Android, iOS, and possibly other platforms. While it doesn't bring down the work to support a new platform to zero, it reduces it considerably.

For 2D games, there are frameworks such as cocos2d-x or Corona SDK (which also does useful apps). For 3D games, Unity is a common platform. There are also various frameworks that use HTML5. Look for programmers with crossplatform skills if you are thinking about multiple platforms.

It is worth noting that cross platform frameworks are not appropriate for all types of apps. There may be limiting factors, like taking advantage of native features, that are an impediment to your project. In some cases, it may be worth the extra effort to build two complete apps, but share ideas as much as possible.

Another caution is to avoid taking your iOS design and trying to fit it into an Android App. This may be what your designer wants to do, but you want to avoid having an Android app that looks like an iPhone app, or vice versa. The Android users will rebel, and Google Play editorial team may skip featuring your app. Do try to follow the design guidelines published for each platform, where applicable. This is more of a concern for utility apps than for game style apps, which typically have an all graphical interface.

Open Source Code

Since Android itself has an open source project, it has inspired a number of open source projects for it. Code can be contributed by many people, including yourself. You'll find many Android related projects at Google Code. Don't expect all of them to be a major worldwide endeavor involving hundreds of people sponsored by major corporations. Many of them are just some guy that posted some code and stopped updating it last year.

You might find something that is open source that will get you further ahead on your app project, and avoid reinvention of the wheel. But wait. Isn't open source born of an altruistic urge to make the world a better place while making sure that developers don't make any money? You can't profit from open source, or can you? It all depends on the license. These are a high level overview; consult the licenses and your legal department if needed.

Apache License 2.0 is what much of the Android source code is released under. It allows you to use the source as long as you cite the license in your long obscure license agreement that nobody reads. There are no restrictions on the use of it for commercial purposes.

LGPL, or Lesser GNU public license, allows you to reuse code as long as you essentially use it as a library. If you modify the library, you have to release your changes to the public, which you can do by submitting a patch at the host site. But you don't have to release the rest of your source code as open source.

GPL, or GNU Public License, is where it gets more tricky. If you use any code under this license, you must release the code of your app to the public. This doesn't preclude you from using it in commercial projects. However, all users of the app will have a link to a copy of the source code. If any of them want to, they can release a copy of your app that is free of any ads or in app purchases. And it would be illegal for you to stop someone from doing that.

If you can reuse open source code without modifying it, you are better off - if you expect there to be updates. But note that since many Android open source projects have been or will be abandoned, chances are good you will have to modify them at some point. And don't let your developer use GPL code and tell you that it is free without knowing the implications.

Purchased Source Code

It's not as common yet as it is in iOS, but there is a market opening up for the resell of app source code. This is especially valuable for the process known as reskinning. Ideally, you can reuse the code, change all the assets (images or models), and you have a brand new app from the user's perspective. This is common for games. Several web sites sell source code.

If a form of gameplay, for example, has been proven to be successful in the market place, it might just be successful again with a new theme and design. It isn't just small companies or individuals that see the value of reskinning. Have you heard of a company called Disney?



Reskinning has been discovered by large companies too.

Buying source code can be much cheaper than building an app from scratch. You should make sure of what you are getting for the money. Will it need significant rework and modification, and have a lot of bugs to fix? Or will it be ready to reuse by changing all the graphics and putting in your own ad network ID? Obviously the latter is more valuable.

In many cases, you are not getting an exclusive license for the source code you are buying. You might be asking yourself if you should buy something that few other developers have purchased, and has never been on the market, and therefore have the advantage of something that is unique.

First of all, an app that has been reskinned and is marketed under a different theme will be considered a different app by most users. I say most, because you are guaranteed to get at least one comment from some nitpicky user that the app is a blatant ripoff of some other app (even if it isn't). Are you going to let that one comment stop you? You will probably get several other comments that the app is like some other app only better. Sushi Chop has a comment that it is a ripoff of Fruit Ninja, and several others that people like it better than Fruit Ninja. That hasn't stopped Sushi Chop from getting over a million downloads and high ratings.

Secondly, for code that hasn't been released to the public or used by as many developers, you may have the privilege of discovering the bugs and the nuances of it for the first time. Or if you don't, your users will. If the source code you are planning on using has been released in some form to the market, you have the advantage of knowing how it has been received. You may be able to get an idea of whether the code has been high converting, and whether other reskins of it have been successful.

PROCESS AND PLANNING

It makes sense, when you think about it, that if you plan ahead and think through the things that will need to be done for a project, it will save you time and money in the long run. If you hire someone with a clear plan and specification for what to do, you can get a more accurate quote and a much more predictable schedule. If you are more like me and make up things as you go along, you can guess that it won't always be quite as smooth.

However excited you are about an idea, it makes sense to take some time to flush it out, write or draw it

up, and think about how it will work before you go full swing and get more people working on it.

On the other hand, you can't be too rigid or hope to know everything in advance. If you are hiring a developer, or anyone else for that matter, you should ask and answer questions. If you can't find the right people to work on an idea, you might have to put it aside and approach another idea in a different order than you thought. Expecting too much stability or predictability is bound to be a disappointment in this business.

TOOLS

Tools often facilitate good processes, and are another way of being more efficient. I list some examples of tools here, but it isn't important that you use the tools I mention. The important thing is that you do use tools. Don't go without because you don't want to spend \$15/month on some software that will save you \$120 in labor in the same month.


I've found over time that I have a marked preference for tools that work over the internet, and even more for ones that work well from a tablet or phone. Best are those that my offshore contractors can also access, so I don't have to do all the work.


Tools for communicating. I have found that most of my offshore contractors already use Skype. I've rarely used voice over Skype, and more commonly simply used the text messaging. I have a few people in the Philippines who are just coming online when it is 3 or 4 pm in the afternoon for me, and 8am for them. We exchange a few messages about what they are working on that day, and how what they are working on.

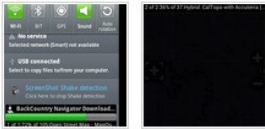
Tools for tracking assignments and projects, along with associated files. I've used BasecampHQ.com, and it is a lot like an online todo list. Not too complicated, and you don't usually need more complicated. It is missing some more hard core project management features like task dependencies or priorities. You and your workers can comment and include files and pictures.




Comments on this to-do from [Map Downloading](#)

☐ **Jaime Jr Dagwan:** Customize download notification

**Nathan Mellor** Thu, 3 Oct at 12:02pm
As mentioned, you need to look into how we can customize the notification so that it will work on all versi what we have.

**Jaime Jr Dagwan** Fri, 25 Oct at 7:20pm
Hi Sir, i have checked-in the update. I have attached some screen shot on how the notification looks.


[View all of these images at once](#)

**Leave a comment...**
Bold *Italic*  **Bullets**  **Numbers**

[Attach files to this comment...](#)

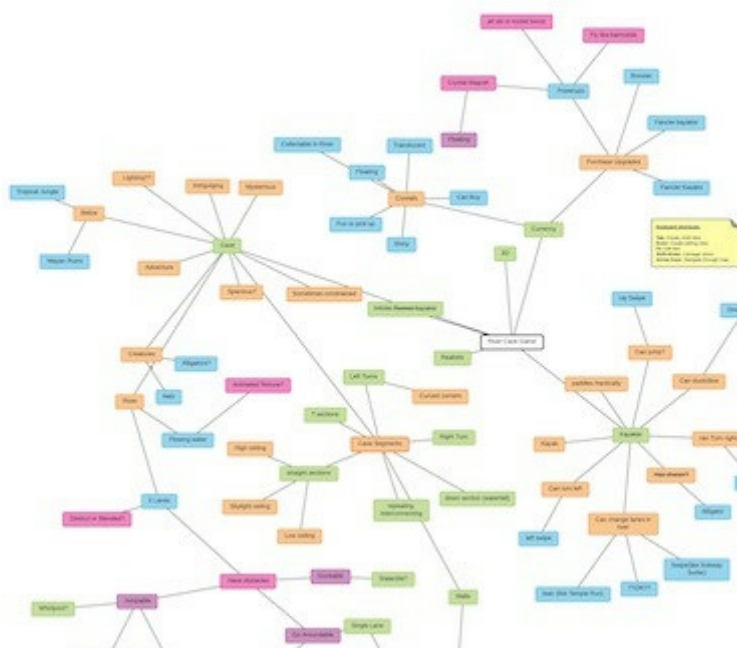
Using BaseCampHQ to track a coding task.

Tools for Source Control. A number of places will host repositories for GIT or SVN. Any source code you pay to have developed belongs to you, and you should keep it in a place you control.

Tools for testing and verification. AppThwack and some other sites allow you to test remotely on more devices than you can afford to get yourself. Places like uTest will crowd source testing with participants around the world. You may need these tools, or you just may need some hours of a human's time to do some testing of something more simple.

Tools for tech support. A helpdesk software like Zendesk will allow you to answer customer queries as tickets. You can hire someone to answer the tickets, at least the ones that you don't have to handle yourself. The complexity of your application will determine how often you get requests. My app, for example, is more complex and is up to support ticket #10,000.

Tools for communicating designs and ideas. As I increasingly hire other people to do the work, I find I need to good way to flush out some concepts or create a sketch of a design without it being the actual design. Recently, I discovered LucidChart. It's like Visio for the web. (I've designed a sprinkler system and a landscape in Visio). You can create all kinds of diagrams like flowcharts, interaction diagrams, and mind maps.



What you cannot see in the spider like diagram above is the mind map of the next great action game

EFFECTIVE OUTSOURCING

I use the term effective outsourcing because ineffective outsourcing will increase costs, but effective outsourcing will decrease them. I've learned both through hard experience.

Don't wait until you are well established and immensely profitable to hire someone. This is the age of the internet; you don't need a large office building and a pile of venture capital funding to hire someone for a task. If you are counting your labor as a cost, as you should, anytime you can hire someone to do something that would cost more to do yourself, you save money. Fortunately, with a global labor force, this is true most of the time.

Think first about what you want to hire someone to do. Major categories include the following:

Programming and Development.

Design and Graphics.

Writing and Content Creation

Marketing Tasks.

Technical or Customer Support.

What Kind of Employee Should You Seek?

When you think of hiring, there are a few ways to go about it. Is it most ideal to

- A. Hire a person for a fixed price job?
- B. Hire a part time freelancer on an hourly basis?
- C. Hire someone as a full-time, salaried employee?

The answer may not be what you think. The ideal, in my opinion, is to have a full time salaried employee. Let me give you an example. One week, I was in need of someone to do graphics for a reskin, as mentioned. That week I was talking to one of the people that works for me full time, about some icons and layouts in our Android app. He showed me a game for which he had done graphics when hired by a previous company. He had done the work in two or three weeks. Then it dawned on me that the person I needed was already working for me. I already know his talents. I already know how to communicate with him. And I already know what I would cost for him to work on this project for two to three weeks. I was able to skip several days of posting jobs and evaluating candidates. That is the essence of what having full time employees does for you.

The other side to that story, though, is that it may not be the way to start, and it isn't always easy to achieve. There is a high level of loyalty and trust expected for a full-time position. You may find several people who are good at churning out projects without finding one that is willing to stick around and worth keeping. With that in mind, you might want start with the first option and work from there. There are places for all three of these hiring modes.

Also this month, I had this pesky file that was giving my college intern some trouble because some of the parameters were unusual. I offered \$25 for someone on ODesk who could convert it correctly. Someone offered to do it for \$22, and it was done within a few hours. That's what a fixed price job can do.

How do you go about Hiring?

There is much that is written on the subject of hiring, including much that I have to learn myself. One of the best ways to learn about hiring, though, is to do it, so I suggest you start right away. You will learn so much more from trying to hire someone than spending six months thinking about how to do it.

Of course, I am sure you are already see some of the problems with that learning strategy. The downside is that you won't be able to get that experience with fake money. The lessons you learn will not only make you richer in terms of wisdom and experience, they will likely make you poorer in terms of cash. This is yet another reason, as we talked about in complexity, to start small. Start with a simple and well defined project. You can move into more complicated projects when you have people you can trust, and more experience in how much money they return.

Some of the major sites where you can hire include ODesk.com and eLance.com. You can post a fixed price job with milestones, or an hourly job. I have had luck hiring in the Philippines directly through onlinejobs.ph, and paying via paypal.

I wish I could tell you that no one will misrepresent their credentials. I wish I could tell you that no one will bid on a job that they can't really do, in hopes of hiring someone else to do it for them. I wish I could tell you that no one will ever overbook, causing you to wait for a month for a job they can do in a day. But I can't.

Fortunately, though, a lot of these people can be weeded out by following a simple principle, which I find repeated by apprenuers everywhere: hire slow and fire fast. Now, if I just could have the money back from

when I have down the opposite, hire fast and fire slow, I'd hire a few more people this very week.

Hiring Slow

You may be anxious to rush out and put together an online team, so that you can have your next app done by next month and be making money from it the month after that. In fact, you may be anxious to hire ten or twenty people and then leave town so they can do all the work. Even with all that enthusiasm, you can benefit from a little more patience, and follow a few more steps, in order to have a better long term outcome.

Post a job with the relevant details and the skills that you think you need. Posting is often more effective than searching for candidates and contacting them, because you get a response from those who, presumably, are looking for work and ready to apply. You can always invite people to your job. Mention that you will have future jobs and even full time work for the right candidate who applies.

Posted: 14h, 50m ago

Time Left: 14d, 9h

Location: Anywhere

Start: Immediately

Budget: Less than \$500

Fixed Price Job

Elance Escrow Protection

W9 Not Required

[Less Detail](#)

Client Info | new york, New York, United States

I am looking for someone to help with development of a simple marker tracking app linked to a web service with Vuforia and Unity 3d, deployable for Iphone/Android. The app will consist of tracking and reporting the motion of a moving marker within a virtual path. There will be 4 additional static markers to assure accuracy.
I will provide more details once the contract has been awarded.

Other requirements:

Be able to communicate well in English, both spoken and written.
Suitable internet connection (supporting video conference if needed)
Please be able to provide a portfolio of past projects.

Speedy delivery of the app is a must. No brainstorming is required. I will provide all necessary information and know-how to put together the app quickly.

Desired Skills

3d Modelling, Android, OpenGL

Job ID: 48725304

[Report Violation](#)

Proposals

Total Proposals (10)

Fixed Price Job Posted on eLance

When that job is posted, at an online site, it is good to leave it there for 24 hours. You will often find that the greatest influx of applicants comes within those 24 hours.

Weed out the people who have applied to your job without really reading it or understanding it. Many

people will just apply to everything. One trick to do this is to include a secret word deep inside your description. Instruct the applicants to use this word in their application, and those applicants who have read the full description will stand out.

Ask questions that are relevant. At first, you may not think you know the right questions to ask, but you may be surprised at your capacity to do just that. Asking some good questions will weed out people who don't really have the skills, but are trying to fake their way through by talking the talk. The questions could be about their related experience, their strongest skills, their work and communication styles, and why they would choose to use a certain library to complete a certain task.

One example is a question that peers encouraged me to ask: "How long would take you to add <some ad network>?". You don't have to be a developer to know about some task that should take them less than half an hour. I have to admit I was skeptical that such a question would actually weed out anyone or give me much insight. After all, I wanted to know more exciting things, like how long it would take them to write a physics based simulation of a bouncing ball, or convert GPS coordinates from one form to another. But, sure enough, I asked this question of several candidates, just for completeness. Sure enough, some of them said it would take no longer than five days. Saved me from asking those people any more questions.

Start with a small, fixed price task, known as the test task. The reason is simple. The fastest way to find out if someone is good to work with is to work with them. Certainly, you would like to have a full time employee, but I have regretted most of the times when I have jumped to that too quickly. The first tasks will vary according to what you want from the candidate. For example, you may have posted a fix price task to produce a certain app. You can include an early milestone that demonstrates they have done basic setup and implemented one simple feature, to make sure they actually have the skills. If you are hiring someone to do graphics, you could ask them to do an app icon, to check out their sense of style, or have them do some concept art for a game before working on the individual graphics you need.

The idea of a test task is very helpful. First of all, if they don't do the task, you don't need to pay them anything at all. If they do the task, you probably should pay them. But if you are not satisfied with the result, or don't like the experience of working with them, you don't have to go any further. If the result is still usable, you can use it. If not, you have lost some money, but not nearly as much as if you had gone through an entire project, or many months with them as your employee. Time to cut losses and move on.

Firing Fast

I must say that firing people is probably my worst skill. I can't say that I really want to get good at it, except for the fact that it is absolutely necessary in order to be. I won't go into all the mistakes I've made, including letting the employee talk me out of firing them, letting a person whose performance had remarkably dropped stay employed for far too long, or being unduly swayed by a person's personal problems.

I've learned from that. One of the things I have learned is that your first instinct to fire someone is usually pretty good. And that it is much easier to fire someone sooner in the process. Particularly if you have them assigned to a fixed price task, you can simply say you have no work for them after that. I can be very empathetic and flexible when people have personal issues, but except with a long term relationship of trust, I can only pay for actual work that gets done.

Hopefully this chapter has given you some new insight into the second half of the equation, the cost of providing an app. I hope you press forward and get your app done and on the market. Once you do that, you will need some people to find and install your app, so continue into the next chapter.

6. How will your app be found?

Once you have your app in Google Play, you will be concerned about making sure the right people find it, and then install it.

There is no doubt that many you would like your apps to be found by ranking in the top charts. In the meantime though, your best chance of being found is through keyword search.

Consider the fact that experts estimate over 60% of apps are found through keyword search. This is compared to the number of apps installed because of ads in other apps, which experts consider to be closer to 10%.

In addition, Google acknowledged at Google I/O 2013 that 12% of users search for apps daily, 50% of users are searching for apps weekly, and 6 million unique search phrases are used every month. With all of those numbers, there could be a significant number of people who are looking, not just for an app, but quite possibly for **your** app. Will they find it?

WILL NEW APPS GET SPECIAL TREATMENT?

I see iOS developers very concerned about the exact timing of their release, knowing that it is getting a burst. I see a top complaint of iOS developers as they come onto Android forums. Their app, which was wildly successful at launch on iOS, apparently didn't get a very big start on Android. With scorn and contempt in their voice, they claimed that Google did nothing to promote their app. It got nothing of the respect and special attention it deserved for being a new app.

From what I can observe, they are right. When I first entered the Android Market (as it was called back then), there was a category called "Just In". It was almost as prestigious as the Top Paid and Top Free in each category in terms of visibility. Many years ago, that category was abolished. Before that time, the "Just In" had become the entire marketing strategy for many. You could be in it by launching a new app or updating your existing one. With no review process for new apps, the list became the domain of spammers. You could find items such as 600 versions of "sexy wallpaper" which were updated every few days to change a color or two.

Should you expect a lot of fanfare for your app launch just for being new? No. Just acknowledging this puts you far ahead of the average app developer, who might be tempted to give up bitterly and retreat from Google Play when his work failed to bring instantaneous attention in its first week. You should also accept that Google doesn't owe you anything, you are in the market for your own profit and you are in it for the long term.

In more recent times, Google Play has sections called "Top New Paid" and "Top New Free". To be in these sections, you must be less than thirty days old, and the apps are ordered by the number of installs. With these sections, Google Play has said they are targeting existing users, who probably already know about all the top apps, and are coming back to see what is new and notable. So while simply being new won't pay off, being new AND worth installing can pay off in terms of visibility. Please note also that the thirty days only apply to an app that is new to the market as a whole, so a phased approach of launching in several countries one at a time won't work.

What can you take away from this? It is important that you give special attention to your app within the first 30 days. To help it along, do what you learn in this chapter and future chapters. Get as many installs as you can to enhance your standing in the the "Top New" lists. Beyond that, you are free to enhance your installs at any time.

A STORY ABOUT KEYWORDS

I was at a Google Conference once when they were asked a question that is on many of your minds. The question was "How can I see the keywords that people are using to find my app in the Android Market?". Their answer was "maybe someday". Unbeknownst to Google, though I had tried to tell them, I had been able to do this for about eight months. In the summer of 2010, I did some experimentation and found a loophole that allowed me to have this information. My analytics instructor, Joe Laratro, invited me to speak at PubCon as a result of this work. I was using this data as any good student of analytics should - I was finding out exactly which keyword were bringing me the most traffic - and which were bringing me the most money. Keep in mind, in 2010, apps in Android were limited to a 254 character description. Nonetheless, I was getting a lot out of that description, ranking for a large number of keywords and tracking the results. By the start of 2011, my app was ranking at the top of paid apps in its category, Travel and Local. I attribute much of that success to be the result of successful app discovery through keyword search.

Fast forward to today. There is no need to contact me for the secret. In the last few years, the loophole was closed by Google, who may not have ever known it existed. It is possible that they will bring this data back, this time on purpose, and I have some ideas for them if they are going in that direction. Nonetheless, there are a number of lessons that I have learned from this experience. It is very important that you find out what words you want to be found for, find a way to be found for as many of them as practical, and, to the extent possible, track the results.

KEYWORD RESEARCH: WHAT WORDS DO YOU WANT TO BE FOUND FOR?

Before you bring your app to market, or maybe even before you develop it, you may wish to find what keywords you want to be found for. This brings us to the topic of Keyword Research, as it is known in Internet Marketing.

Just in case there is any confusion, a keyword as used in this book does not necessarily mean a single word. It could be a phrase consisting of one or more words.

There are three things we consider when we do keyword research.

Traffic

Traffic is the number of people are likely to search for a certain phrase within a particular timeframe, such as a day or a month. Unless Google publishes the top keywords being searched within Google Play, we will never have an exact number. We make estimates based on some data available from tools.

Relevance

Relevance is the probability that a person searching for a particular keyword is interested in your app. You can evaluate the relevance based on your knowledge of the target audience. You may be able to refine your idea of which words are relevant as you see how users react to certain words in your paid and organic promotion efforts.

Competition

Competition is the probability that you will be successful in being included in a top result for the keyword specified. It is measured differently based on what way you are competing.

How broadly should you think?

There are two things that you will discover when doing keyword research. First there are a lot more keywords than you think. Second, the keywords that you think are the most important may not be the most important.

A rookie keyword researcher is one that thinks that there are at most ten keywords, but he already knows

the top two to three he cares about. Such a person would wonder why we need keyword research at all.

You should think much bigger, and cast a wider net. Try to get to 500. Of course, you will narrow it down and sift through it and in the end, you may have 50 or so keywords, a decent number.

Here are some things you should do:

Think of synonyms and alternate phrasing. Even if it is the same words in a different order, it counts as a different keyword.

Think of other things the target market would search for: complementary products, or an app that they are using now.

Think of what words they would use to look for your competitor's app, including searching for it by name.

Think of well known brand names in the target market.

KEYWORD RESEARCH EXAMPLE USING ADWORDS

Lets try an example. Suppose you want to create an app that is related to "video chat". You know that video chat can also be described as video conferencing, video call, or video conference.

You then consider some well known brand names, adding Skype, Google Talk, Google Hangout, and FaceTime. Wait, did I say FaceTime? Isn't this Android? Yes, but the brand name is well known, and don't discount the fact that an Android user has heard the name from his Apple-loving friends, and will be making the search for the same thing on Android.

We also do a quick search of Google Play and find that popular apps for this application are oovoo, tango, and camfrog.

Now we have 11 already, and we are just getting started.

Let's put these words into the Adwords Keyword Planner (this used to be called the Google Keyword Tool). If you have a choice, always choose exact match (this appears to be the default now) and choose "mobile devices with full internet browsers" (this option seems to be missing from the latest).

Let's look at what we discover when we process these keywords. First, "video chat" beats video conferencing and some others, but all of them are beaten by some of the well known apps. Beyond that, if you look at the well known brands, they dwarf all the other keywords in traffic.










Your product or service

rence, video conferencing, video call, skype, google talk, google hangout, facetime, oc

Ad group ideas		Keyword ideas	
Search terms	Avg. monthly searches ?	Competition ?	
skype	24,900,000	Low	
tango	1,500,000	Low	
oovoo	1,000,000	Low	
google talk	823,000	Low	
facetime	673,000	Low	
camfrog	673,000	Low	
google hangout	368,000	Low	
video chat	301,000	Medium	
video conferencing	27,100	High	
video call	14,800	High	
video conference	12,100	High	

Search terms given traffic estimates in Keyword Planner

Notice that you also have close to 800 keyword suggestions. You can pick through the list and throw out keywords that don't have enough traffic to bother with, or that aren't relevant enough.

Ad group ideas		Keyword ideas				Download
Keyword (by relevance)		Avg. monthly searches ?	Competition ?	Suggested bid ?	Ad	
facetime for android		 74,000	Medium	\$0.35		
tango download		 74,000	Medium	\$0.09		
tango for android		 49,500	Medium	\$0.07		
google talk android		 40,500	Medium	\$0.38		
www.skype		 40,500	Low	\$0.10		
www.tango.com		 40,500	Medium	\$0.08		
skype messenger		 40,500	Low	\$0.28		
facetime android		 40,500	Low	\$0.15		
tango for pc		 40,500	Low	\$0.16		

1 - 30 of 795

Keyword suggestions for video chat provided by AdWords.

The numbers that we see for traffic are the number of searches that Google receives each month for the exact phrase. This doesn't give us the exact frequency of the same searches on Google Play, but it should give us an idea of which keywords are the most valuable.

Note that there are competition metrics in Adwords that we won't look at right now. These competition numbers tell us the difficulty of bidding on that keyword in an Adwords ad, not the difficulty of ranking for the keyword in Google Play. You can consider these when you consider paid advertising in Chapter 9.

WHAT DETERMINES SEARCH RESULTS

Now that you have some keywords that you want to be found for, how do you make that happen inside Google Play?

If you are used to optimizing for iOS, there are some important differences, which you can see in this chart:

	<i>iPhone</i>	<i>Google Play</i>
Apps per page	1	7-8
Reaching app #25	25 flicks	1 Flick
App Title	Very Important (reviewed)	Very Important 30 characters
Tags (secret keywords)	Very Important (reviewed) 100 characters	Not used.
Description keywords	Unclear if used in search	Important in search 4000 characters
Other factors in search	Unclear	Installs and Uninstalls Ratings Links from outside Google Play

Search factors in iOS. Sources: Searchman, Google I/O 2013

There is a lot of good news in this chart. You have 30 characters in your title and 4000 words in your description to use in whatever way you want.

You won't have to fight with a bunch of Apple bureaucrats to get a certain title or keywords. Instead, if you do pick something that is outside the Google Play terms, you can expect that it will be pulled when someone complains, and you will instead have your developer account revoked with a vaguely worded message from Google. Don't expect to have easy access to a human reviewer to resolve that situation. Human interaction with Google can be quite rare.

OTHER FACTORS FOR SEARCH RESULTS

At Google IO 2013, Google Play confirmed that they use other metrics to aid their search results. Among these are the number of installs and number of uninstalls. Google is in a position to track, for each keyword search, whether the user actually installs the product and whether they uninstall it right away. Thus, they have a feedback loop where the users, by their actions, vote for which apps are really relevant to their search keywords. This is a good reason to use relevant keywords, and expect your ranking for them to grow over time.

Google also suggested that if you link to your Google Play listing from the internet, that you include "helpful" anchor text. This is something internet marketers are already familiar with. What it means is that if you have links from the internet using a particular keyword, it can boost your listing for that same keyword. Keep this in mind when we look at linking in Chapter 9.

CHOOSING YOUR TITLE

There are a number of things you would like to accomplish with your title. Unfortunately, there is some tradeoff in each of them. If you picked titles for iOS, you may be used to putting out a whole sentence, including your top two to three keywords, plus four or five from your competitors. You have 30 characters in Google Play, and only twenty five of them will be seen most of the time.

First, you would like to establish a brand name. You may choose a slick, fictitious name or unrelated name, which will soon become a famous brand name on everyone's lips. Short, catchy, and easy to remember.

Second, you want to convey, with your title, what your app actually does. At a glance, you want people to see the title and know exactly what the app does, whether it be something like "PowerPoint Viewer" or "Endless running game".

Third, you want to be found for relevant keywords. Your title is your best chance of being found for your most important keyword.

Lets look at some titles and see how they stack up.

	<i>Brand</i>	<i>Function</i>	<i>Word of mouth</i>	<i>Search term</i>
Pandora	Yes	No	Yes	If already familiar
Music Player	No	Yes	No	Yes
Amazon	Yes	No	Yes	If already familiar
Online Book Store	No	Yes	No	Yes
BackCountry Navigator	Yes	Yes.	Yes	Unlikely
GPS And Maps	No	A bit vague	No	Yes

We can see the strengths and weakness of each of these titles. First look at the branded titles. Brand names can be valuable if they are already known, but if not, they have little value in search. Were it not for millions of dollars in brand advertising, we would think of Pandora as a mythological character and Amazon as a river in Egypt.

So, what can you do? It is hard to accomplish all three in 30 characters. A title that accomplishes two of these objectives is likely to be weak on the third. In all, since I'm expecting most of us are small developers without a huge advertising budget, I would suggest you focus on these priorities in reverse. First, you need traffic. That is your lifeblood, so your top keyword should be in the title. Second, if the title can be meaningful enough to get the person to click through, do that. Third, if you can make the title unique enough to serve as a memorable brand name, you have accomplished all three.

Using short words in your title can pay off. If your name, or company's name is Dan, "Dan's Online Music Player" fits in 30 characters. This can be a brand name, a useful keyword, and a functional description. If your name happens to be Mahonri Moriancumr, "Mahonri Moriancumr's Online Music Player" is not going to fit into 30 characters. If you have a brother with a shorter name like Jared, though, you could come up with a nickname like "Jared Bro Online Music Player".

Avoid trademarked terms in the title, even if other apps seem to be getting away with them. For example, for a while, there were several dozen apps doing quite well with "Tetris" in their name. After all, Google Play doesn't have a human review process. But when the owner of the trademark made a complaint with Google, dozens of apps disappeared overnight.

CRAFTING YOUR DESCRIPTION

Your description can be up to 4000 characters, and fulfills a few vital purposes. First, it convinces a user to install your app if they get to the app listing in the store. This purpose is very important, but it applies only to the last few sentences, because that's all most people will ever read. The rest of the description is for you to include as many valuable keywords as possible.

The changes in your description will be live on the market within a few minutes to hours. You can then search for the appropriate keyword in the web store to see where you are placed.

How high of a ranking should you aim for? While six apps are listed on a phone screen and more on a tablet screen, Android users are very capable of scrolling, and the web version contains up to 48 for a search. In addition, your ranking is different according to device and country and may be higher than shown as a result. It can also improve as Google tracks the click to install ratio. These factors suggest that anywhere in the top 48 is likely to give you some traffic. On the other hand, if you are at position 148 and that doesn't improve after a few iterations, think of dropping it and focusing on other keywords that you can actually win for.

There are some cautions and limitations to keep in mind when using your description to target keywords. The first is that you should never keyword stuff. Many apps include a line in their description such as "Keywords: angry birds, temple run, fun, games, arcade, ..". In the fine print of the Google Play publishing guidelines, this is illegal. At such time as they decide to enforce it, it will hurt.

Instead focus on copywriting, as it is called in Internet Marketing. Use the words naturally, in grammatically correct sentences or bullet points. Your challenge is to make it coherent and readable for a human (for the few that read the whole thing), yet keyword rich and optimized for the Google Play search engine.

Should you make your description long or short? It depends. If you have a small number of keywords that are valuable, it's best to keep it short for maximum benefit of those keywords in density. If you fail to win on that small number, or have a much longer list you really need to target, plan on a longer description to incorporate more keywords.

Some evidence suggest that repeating a term more than five times has no additional benefit, but you will need to experiment to see what works for you. For two or more word phrases, using the exact phrase has more value than simply using the component words.

USING APP SEO TOOLS

While getting traffic through keywords sounded easy and fun at the beginning of this chapter, by now it might be sounding somewhat tedious. Once you have a description that you want to modify, how do you know if you got some more keywords without losing rankings for the keywords that already worked? How do you know if the keywords you picked are actually as valuable as you thought in the real world of Google Play? How can you evaluate competition?

This is a good time to be more efficient about keywords by using App Keyword tools. The examples here are from Searchman SEO, but you may use the App keyword tool of your choice. There are a number of them, in particular, that are available for iOS, and haven't been well optimized for Android yet. They will evolve, and it is worthwhile to keep a watch on them. Anything that allows you to do the things in this chapter more efficiently is worth trying out. If you are developing your own App SEO tool, contact me as I have some ideas how they could be better.

There are a number of things you can do with a tool like Searchman:

You can track a list of your most important keywords (50 in this example) and see how you rank for them over time.

You can track a list of your competitors (10 in this example) and see how you rank for certain keywords.

You can find more keywords by searching a keyword library or finding out what words other apps are ranking for.











All along, we've had to make some guesses about what keywords have a lot of traffic. With more tools, we have more ways to guess this. We can now add another mantra:

A keyword is valuable if similar apps that rank for it are successful.

We define successful in much the same ways that we did in Chapter 3. To evaluate that, we will look at this screen on Searchman.

Search results for 'dragon' on Google Play in United States.

Add to NotePad











	Apps	Ratings Downloads	Search Visibility Rankings	Category Rankings
#1	 Dragon Mobile Assist ... Nuance Communications, Inc	★★★★★ 9,453 100,000+	- Productivity	98 ▲5 Productivity Free
#2	 Dragon Story™ TeamLava Games	★★★★★ 67,851 5,000,000+	- Games - Casual	27 ▼2 Games - Casual Top Grossing
#3	 DRAGON SLAYER Glu Mobile	★★★★★ 85,360 1,000,000+	- Games - Arcade & Action	390 ▼24 Games - Arcade & Action Top Grossing
#4	 Dragon, Fly! Free Four Pixels	★★★★★ 121,059 10,000,000+	- Games - Arcade & Action	295 ▲3 Games - Arcade & Action Free
#5	 Dragon Gem ITREEGAMER	★★★★★ 48,223 5,000,000+	- Games - Casual	186 ▲1 Games - Casual Free
#6	 Tap Dragon Park Pocket Gems	★★★★★ 45,282 1,000,000+	- Games - Casual	242 ▲3 Games - Casual Top Grossing
#7	 Dragon Hunter II Feelingtouch Inc.	★★★★★ 43,562 1,000,000+	- Games - Arcade & Action	- Games - Arcade & Action Free
#8	 Dragon Rush Pro TerranDroid	★★★★★ 6,923 1,000,000+	- Games - Arcade & Action	- Games - Arcade & Action Free
#9	 Dragon Pet A&A Games	★★★★★ 29,544 1,000,000+	- Games - Casual	461 ▲13 Games - Casual Free
#10	 Dragon Hunter FT Games	★★★★★ 36,146 1,000,000+	- Games - Arcade & Action	- Games - Arcade & Action Free

The keyword 'dragon' looks very good, given many well ranked games and even a productivity app

Here we see a valuable keyword. The apps that rank for this keyword also rank well in their respective categories and/or the top charts. The searches for this keyword could be both a cause and effect. The keywords were common enough that they contributed to the success of this app. In addition, a successful, well-known app will encourage people to look for apps like it.

In this example, we see another keyword. Remember, we considered gardening to have more mass appeal than packgoating in a previous chapter, based on the ranks of corresponding books in Amazon. Now, however, as we do a search for gardening, none of the apps ranking for the keyword are ranking very highly in the market, till you get to number 10, which is actually a network communication tool. Based on this limited information, it would appear that one should stick to books when appealing to the gardening market. Maybe someone will figure out to make a gardening app a big hit, but it appears, at least on Android, they haven't yet.















Search results for 'gardening' on Google Play in United States. [Add to NotePad](#)

	Apps	Ratings Downloads	Search Visibility Rankings	Category Rankings
#1	 Beginners Gardening ... TSW Apps Design	★★★★☆ 14 10,000+	- Lifestyle	- Lifestyle Free
#2	 Garden Manager : Pla ... LemonClip	★★★★★ 237 10,000+	- Lifestyle	- Lifestyle Free
#3	 Garden Design Ideas ZaleBox	★★★★★ 188 100,000+	- Lifestyle	- Lifestyle Free
#4	 Secrets of Herb Gard ... Biz App Media	★★★☆☆ 4 5,000+	- Lifestyle	- Lifestyle Free
#5	 Mushroom Garden Seas ... BeeworksGames	★★★★★ 33,114 5,000,000+	- Games - Casual	- Games - Casual Free
#6	 Mushroom Garden BeeworksGames	★★★★★ 27,439 5,000,000+	- Games - Casual	- Games - Casual Free
#7	 Mushroom Garden Delu ... BeeworksGames	★★★★★ 23,454 1,000,000+	- Games - Casual	- Games - Casual Free
#8	 Inner Garden Dust*flake	★★★★★ 6,407 1,000,000+	- Games - Casual	- Games - Casual Free
#9	 Organic Gardening Fr ... Diginik	★★★★☆ 3 5,000+	- Books & Reference	- Books & Reference Free
#10	 Open Garden Open Garden	★★★★★ 5,497 1,000,000+	- Communication	118 → Communication Free

Gardening keyword shows few top rated apps among the results, except for a communication app

When you have found another keyword that is valuable, you can add it to tracked keywords in Searchman and incorporate it into your description. You *could* spend a long time in deep analysis of whether you can compete effectively on that keyword. But there is no point. Just try it. You will know within a few days by monitoring the keyword matrix.

50 / 50 Keywords | 10 / 10 Competitors

Volume ?	Hits ?	KEI ?	Trend		Compare	Compare	Compare	Compare	Compare	Compare	Compare
100	19	2.0 M		15 ▲ 1	-	13 ▲ 1	-	-	-	-	-
100	6	78 K		5 →	-	-	-	-	-	-	3 →
100	100	75 K		-	-	-	-	25 →	22 →	-	-
100	59	464		25 →	-	-	-	-	-	199 ▲ 1	63 →
62	23	71.22		2 →	-	21 →	-	-	-	64 →	-
55	13	58.10		10 →	-	-	-	-	-	46 →	14 →
100	62	39.16		54 →	91 →	21 →	-	-	-	-	-
67	76	14.56		45 →	-	18 →	-	-	-	-	-
67	100	10.95		26 ▼ 1	-	-	-	-	27 ▼ 1	-	109 →
30	33	6.64		4 →	-	-	-	-	-	120 ▲ 4	16 →
14	11	4.13		13 →	-	-	-	-	-	-	4 →
25	41	3.65		29 →	2 →	-	-	-	-	-	-
37	100	3.28		-	-	-	-	-	-	-	-
30	76	2.90		31 →	-	32 →	-	-	-	-	-

Searchman keyword matrix shows your progress on various keywords

If you moved up on this keyword, and didn't lose much ground on other keywords that you care about, its a keeper. If you are still ranking 150 or so for it, it might not be worth bothering with. In either case, move on to the next keyword that you want to target.

7. How can you get installs?

If you have been successful using the principles in the last chapter, you should have a larger number of people finding your app. That isn't enough. You need them to actually install it.

The decision to install is often made within a few seconds, and it relies on conscious and unconscious visual cues. Mobile users are similar to web users in the fact that they do not read through pages in full. Instead, they tend to ask themselves two questions. The first is: Am I on the right page? The second is: Where do I click next?

In internet marketing courses, they teach a concept known as Landing Page Optimization. A landing page is a page where users have arrived, where we would like them to take a further step, like buy button or an install button. In optimization, we want to maximize the percentage of people who take that step. There are entire seminars, physiological studies, and suites of software designed to overanalyze this process. An average user might find the obsession with this topic excessive, until you looked at the numbers. If you are able to change the percentage of conversions on a page from 4% to 6%, you can expect a huge increase in your bottom line.

For this reason, internet marketers tweak the color of the button, the shape of the button, the position of the button, the images on the page, the lines of text, whether the model in the photo shows cleavage, and dozens of other parameters. They run tools such as Google's Website Optimizer to randomly reshuffle these elements for each user that comes. They send hundred or thousands of users to the page.

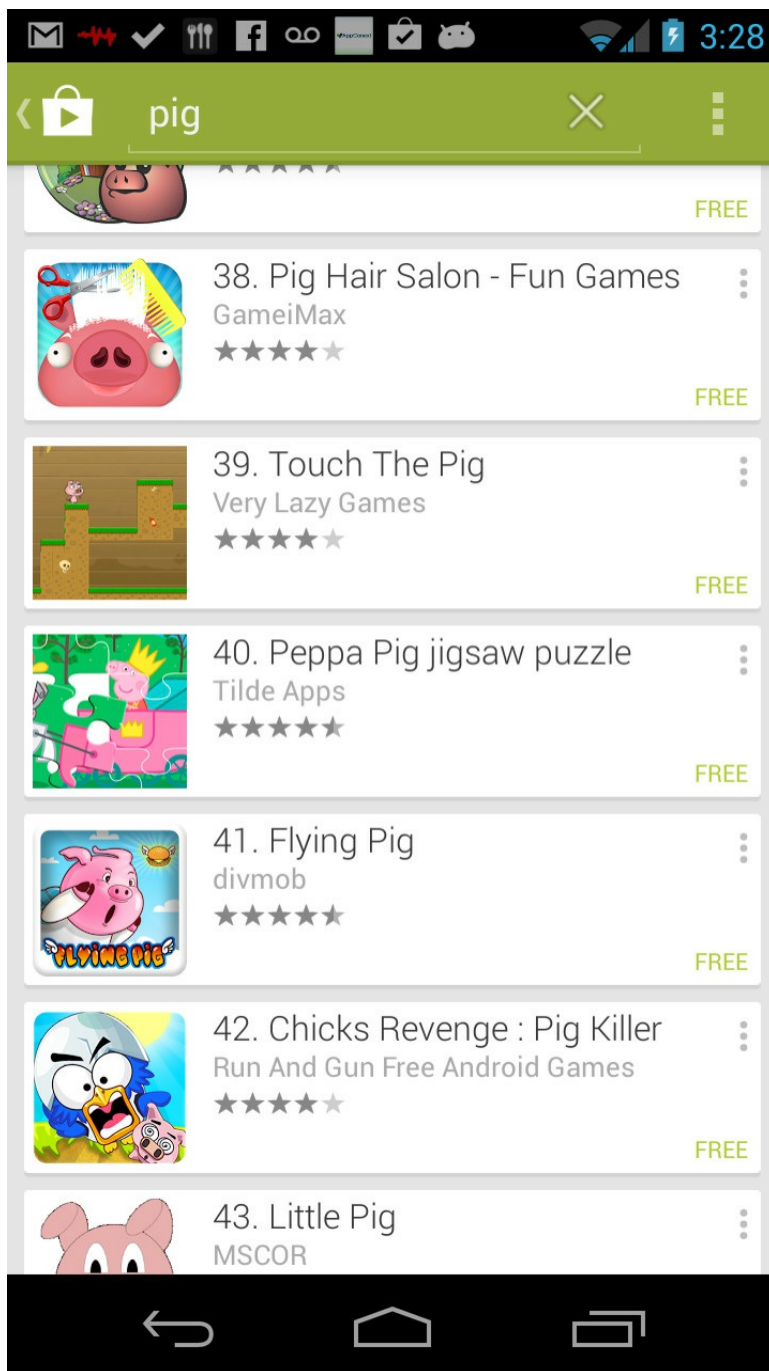
In Google Play, much of this process is a black box for us. Do you know how many people are coming to your app listing, and what percentage of them are installing the app? Neither do I. Do you know how many of them see your app in some search results, yet choose some other app in the list? Neither do I. While I am starting to see some of this data in Google Analytics, it is not for the search traffic within Google Play, which is the largest traffic source.

There are experiments that you can and should run using paid advertising as explained in Chapter 9. For now, though, let's look at what people see so you can best influence their install decision.

BEING CHOSEN FROM A LIST

Every app is chosen from a list before it is installed. That could be a list of the top charts, the top new charts, or, if you are lucky, from a featured list. For many cases, the list is one that is returned from a search result.

Here is an example of what a list looks like. It will look slightly different on a device or the web:



What will help the user know what to click on next? We can see a few items that are your best chance to reassure the user that they should click on your app.

The Icon

The full size icon (512x512) is often the first thing that a user notices, and your best chance to reassure the user that your app is what they want. First, make sure that the icon doesn't look like a developer made it in photoshop. Unless you are a designer, hire someone to do the icon. I am not at the level where I would know how to design an icon that catches the right attention, or even how to tell a designer how to design one, but I am at least getting to the point where I can see a difference in the ones that work.

Icons are not constrained, as they are in iOS, by the rounded rectangle outline. Look at the Android Design website for guidelines.

It is worth hiring the right person to design your app icon, even if that means hiring a different person than the one doing the rest of your graphics

Name

Your name is the next chance to tell the user that you are what they want to click on. We talked about the importance of keywords in the title, and the tradeoff with a functional description. Here is the part where a title that says what the app does in two words will really shine.

Ratings

At this point, they can probably see five stars that reflect your rating. An extra smidgeon of yellow color is helpful at this point. They may see in parentheses a number of reviews that contribute to the overall rating, so they can get an idea if it is just from your close relatives.

Price in Local Currency

This could be the place to show off that your freemium app is free (at least initially), but if you going the paid app route, it may be the chance to show off a high price, and let the high price shout quality at the user. Should the price end in .99? Yes it should. As silly as it seems that people are worrying about the penny, it is more or less standard and looks more official, even compared to using an even dollar. Think also about the apps you see priced at \$8.27 or \$3.73. In many cases, they weren't deliberately chosen, they were just an automatic conversion to your local currency. To many, this can decrease conversions because it shows off the fact that it was made in another country. The Developer Console gives you a chance to specify prices in local currency. You can make them look a bit more official by filling these out.

Company Name

In some views, the list shows a company name. It is not nearly as important as icon or title, but have one that sounds good. You do not need to form a corporation or LLC to have a company name, a sole proprietorship will even do.

Not anymore: First Sentence

You used to have the first sentence or two of your app show up on the list to further entice people. Based on my most recent look at the Play Store, on the phone, a tablet, and on the web, that no longer appears to be the case. This makes the name and icon even more important.

GETTING AN INSTALL

The users now need to make one more click, which is the install button on your app listing page. Take a look at one of these pages to see what will influence the user's decision.

Feature Image

In the Developer Console, you have the chance to upload what is know as a feature image, this is a 1024x500 and has certain guidelines mentioned in the Developer Console help. This should not be a screenshot or contain screenshots.



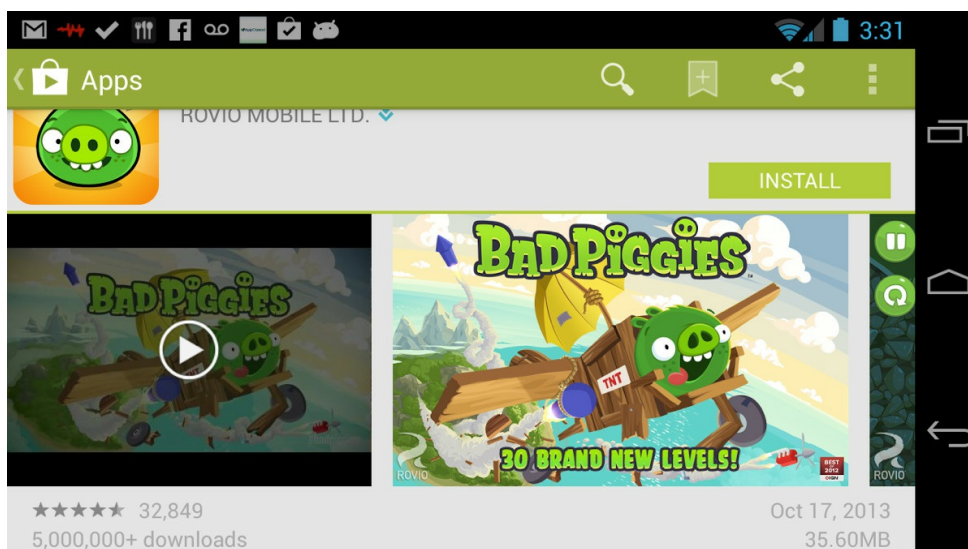
A promotional image should be “Vivid, yet understated”. I have no idea what vivid yet understated r

This used to be displayed prominently on the web version of your Google Play Listing page. In recent months, that no longer appears to be the case. However, the feature image is still seen when an app is featured in a category, or in several of the other lists made by the Google Play editorial staff. If your image appears in one of these special categories, you will certainly want to have a high click through rate to take advantage of the most traffic possible.

When this image first appeared as a requirement for Android developers, it was not well understood what this image was for. In the middle of the next year, I got a message from the Android Marketing Team. They said that they wanted to feature me on the web version of the Android Market (before it was called Google Play), but that my feature image sucked (not their exact words). Under the circumstances, you can imagine that I had the situation corrected within a few days. I even let them pick from a few options we were considering.

Large version of App Icon

Instead of seeing the promotional image as I did in times past, you can now expect to see your app icon featured prominently at the top of the listing. This icon should reassure the user, as it did before, that this is the right app. This reinforces the need for an icon that communicates the purpose of your app both in small and large sizes.



Screenshots

Your screenshots should give the user an idea at a glance what your app is about. You are not going to show

off your menu or settings page, but should jump right into what makes your

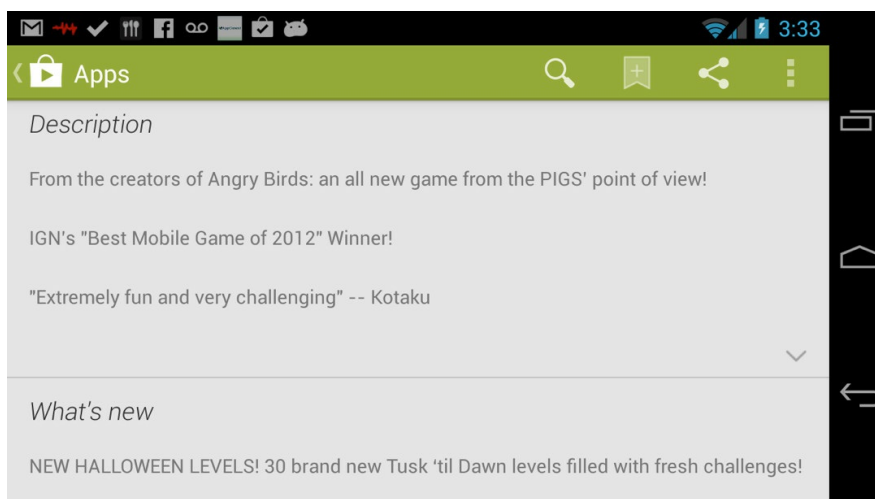
A best practice I have seen, and plan to do more of in my own screenshots, is the use of captions inside the screenshots. Instead of hoping the user will get a certain message from a screenshot, tell them what message they should be getting. Captions can be such things “32 unique and challenging levels”, “7 great power ups available”, “squash enemies using flash power”, or “Edit powerpoint documents right on your tablet!”. Some of these words will be redundant with what you have in the full description, but that is just fine, since most won’t read through the entire description anyway.

Video

While there is definitely a user for many types of video in your youtube channel, think of a movie trailer when you are thinking of what video to place here. Don’t have a long boring explanation of how to use every feature in your app. Some suggest that the video should be no longer than 30 seconds, consistent with the guidelines of Google Video ads. At present, videos tend to get a lot of views from the web version of Google Play. It is uncertain how many view the videos on a mobile device. For that reason, make sure that the preview pane of your video is compelling even if they don’t watch the video.

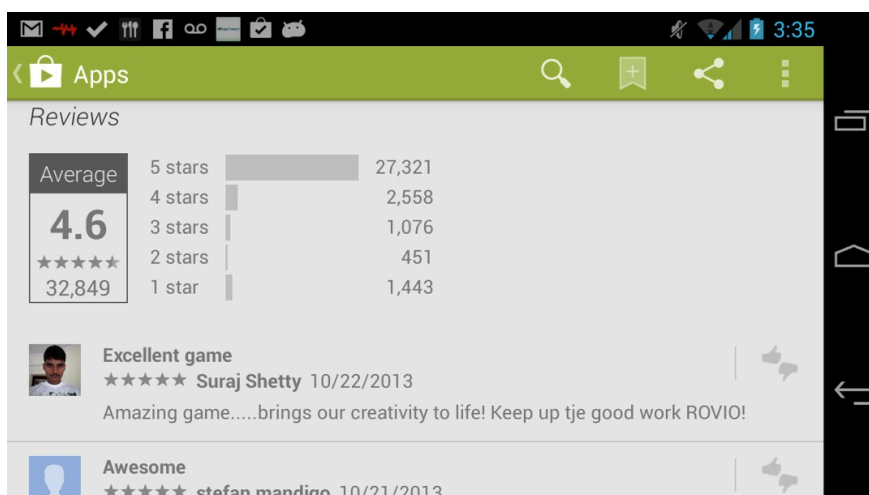
First few sentences

You can note that, without clicking further, most users will only see the first few sentences of your description. This is a good time to get right to the point and tell them why they should install your app.



Bar Graph of Ratings

Users are able to see at a glance, not only the overall rating on a scale of one to five, but how long the five star bar is relative to the number of one star comments.



"Most helpful" Comments

Also on this landing page are three or more comments that Google, in their infinite wisdom, has determined to be the most helpful to the user. While some will click through and see the full list of hundreds and thousands of comments, a larger number will only see these first few. The comments that Google chooses to show are somewhat weighted to recent ones, and do not seem to correspond very well to the ones that users have chosen as most helpful. If, for example, you got 20 new positive comments in one weekend and two negative ones, I don't know why they feel obligated to show the negative ones at the top. In any case, accept that you won't have control over which ones will show.

GETTING MORE COMMENTS AND RATINGS

According to AppBrain, 65% of apps have less than 10 ratings, and 79% of apps have less than 100 ratings. Only a very small percentage (2.3%) have more than 1000 ratings. Can your app attract more reviews and ratings? Here are a few of the most effective strategies.

The fastest way is to wait until you have a large installed base, and then release an updated version that will crash for everyone. Don't ask me how I know this. Suddenly, tons of people who may have previously been apathetic about your app will rush out to comment that it is not working. I don't actually advise this strategy, though, because even if you fix the problem in a couple of hours, not everyone will update their comment.

The second fastest way is to change your app to require some new, scary sounding permissions. Something like `READ_PHONE_STATE` will do. The key benefits of this strategy include the fact that Google Play will highlight permissions that have changed during an update, and the user has to accept them. Also helpful is the fact that permissions are too broad in the Android system, and that they are described in Google Play in the scariest way possible. You might have a legitimate need to know if the phone is in use, but to the users, it will sound as if you want to record all their phone calls and send them to the FBI. Users will be quick to comment about their privacy being attacked, demanding an explanation, without listening to one, and threatening not to upgrade. This is also not something I recommend, because it will bring down your sales in the meantime. If you don't really need a permission, don't ask for it, but if you will need one at any time, have it in your manifest from the very first release of your app.

There are slower and steadier ways that are better for increasing your reviews and ratings. First, release updates that are meaningful to your users. Second, talk up your updates to encourage enthusiasm. Third, invite people to comment at opportune times.

To best understand these methods, we can talk about a few myths and facts about app ratings.

MYTHS AND FACTS ABOUT RATINGS.

Lets evaluate the following myths as they pertain to Android reviews.

A free app will naturally get better ratings and reviews, because user expectations are lower.

Under this strategy, you release a free or low priced app because you assume that your app's completeness will be judged against its price point.

A good app can reasonably avoid getting negative comments and will naturally get good ones.

This is what you will hear from many people. Simply make your app good, and you will have nothing to worry about.

If you make fixes and improvements, users will come back to update their rating.

This is a comforting thought, when you get comments such as "I will rate this 5 stars as soon as they add a gold spinning feature" or "5 stars as soon as stops crashing on my Droid X every other day". You know exactly what to change in order to get that rating up.

Users can easily see past three recent comments from people who obviously have an attitude problem.

It's obvious that some people commenting are having a bad day, can't even use their phone properly, or certainly didn't give your app a fair chance. Your faith in humanity tells you that other people will discount those comments without being discouraged.

Anyone who finds fault with your app must have unrealistic expectations or a defective world view.

Ok, maybe there were some bad comments. But it certainly must be something wrong with the user. You know your app is good.

You can get good comments by getting the "right" people to comment.

If you could just control who comments on your app, you can be sure to get the ones who are uniquely qualified to appreciate your app's unique beauty.

Let's look at each of these myths in turn.

A free app will naturally get better ratings and reviews, because user expectations are lower.

False. Just the opposite is true. A user who is willing to buy something is more likely (but not guaranteed) to be part of the target market. They show more commitment, for one thing, to actually learn the app. A free app takes no commitment or meaningful discernment. Users do not make their reviews relative to any price point. When it comes to free apps, they are more than willing to look a gift horse in the mouth, and trash it mercilessly if it doesn't meet their expectations.

A good app can reasonably avoid getting negative comments, and will naturally get good ones.

False. First, embedded in this myth is a black and white view of apps, where some apps are "good", and their goodness was a result, presumably, of good programming. The reality is that a users perception of an app is far more complex, and takes into account a lot of things beyond programming, including some things that you don't fully control. A user with a low end Android phone is more likely to be unhappy with all of his apps, and his phone in general. Add in a few people who obviously put their comment on the wrong app, and you are likely to get some negative comments along with the positive ones. I've had some pretty harsh comments about my app's "social networking features" and "unique but confusing way of showing RSS feeds". Both were on an app that showed no RSS feeds and didn't have social networking features.

If you make fixes and improvements, users will come back to update their rating.

False. Sorry, with some exceptions, that person who promised to come back and rate it higher won't show up. In fact, your app might already have the feature and he just never found the menu. Of course, you should carefully consider what fixes and improvements to put into your app, but don't be unduly influenced by one

person in a comment. When you do add a feature or fix, you should plan on recruiting new people to add their comments. The chance a person will come back decreases in direct proportion to their rating. A five star rater shows enthusiasm, and will likely comment when you exceed their expectations yet again, while a one or two star rater has likely already uninstalled your app.

Users can easily see past three recent comments from people who obviously have an attitude problem.

False. I hear this from developers all the time, but it just doesn't match what the reality of what most studies will show. Certainly, people, taken individually, are pretty smart. Collectively, though, they will be influenced by whatever comments are most visible. Experienced Android developers have seen this phenomena many times, since what comments show up on the front page is determined by Google's mysterious algorithm. Other things being equal, an app that has one positive, one mediocre, and one negative review, can easily have 25% less installs than the same app on a different day when it happens to have three glowing comments showing on the front page. The reason is obvious when you consider Landing Page Optimization. It's just as easy for users to hit the back button as to go forward to read more comments, so you can lose a certain percentage of them who want to go and try a "safer" app.

Anyone who finds fault with your app must have unrealistic expectations or a defective world view.

True. While this sounds harsh, I do plan to explain what I mean. User's perceptions, for one thing, are influenced by other apps that they have tried, regardless of what your app was intended for, and regardless of what you post in the description.

You can get good comments by getting the "right" people to comment.

True. There are likely a lot of people out there very happy with your app, and only a small percentage of them have bothered to comment so far.

So what can you do? You may be seeing a bleak picture based on what I have written here. You will get negative comments, you have little control over which ones show up on the front page, and you will be get bad ratings for things you can't fully control. After all, the top installed free app on Android, Facebook, has its share of negative ratings, being rated only 3.7 as of this writing. It has a much larger development, PR, and marketing team, than you are ever likely to have. But an app that is as complicated (and intrusive) as Facebook is is likely to have some failure cases as well, and will have an active user base with strong opinions.

On the other hand, I am assuming that each of you want to build a "good" app. And by a good app, I mean one that appeals to or meets the needs of the market you have chosen. You won't be trying to please everyone with it, but you will seek to do a good job with that target market.

The target market is the reason I can state so confidently that some people are a better fit than others for the app. In your efforts to attract people to your app, you will invariably attract some people are not part of your target market. Consider two comments for the same app.

"I can't believe they charge so much money(\$10) for this app. The maps are older and less detailed than tl

"This app saved me from spending \$400 on some dedicated hardware. It does all I need and more"

Both statements are true, but the statements tell you a bit about how well the customers fit the target market. The second customer is the one I want more of, for a variety of reasons.

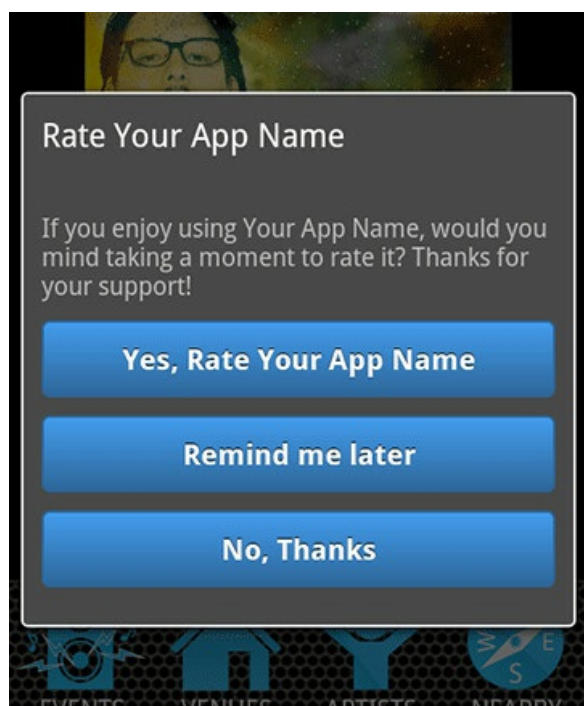
Be cautious also of the idea that adding more features will boost your ratings. You might figure if your app is twice as good as last year, feature wise, it's ratings should be half a point higher at least. But you may find

that the ratings still follow a similar pattern. There are other avenues to pursue besides feature set to improve ratings - and sales.

ENCOURAGING MORE GOOD COMMENTS

One of the greatest ways to encourage good ratings and comments is to make the invitation. One of the ways to do this is to make the invitation through whatever social network you encourage them to join. In my case, about 25% join an email newsletter where they can get tips, news, and advice about new features. At the end of the newsletter, I always respond to some recent comments in Google Play, good and bad, and encourage the users to add their own. Out of many thousands of readers, many will click through and maybe six or so will leave a comment.

Another good place to ask for ratings is in the app itself.



Example of prompt for ratings. Source: AppIrater for Android

If you were to show this to your customers, who would be the best person to show it to? And when would be the best time to show it to them? Your knowledge of the patterns of your customers is your best guide for doing this.

You can show it every third time they run the app, or some other reasonable number. That may be good enough, but you can get even smarter if you want to get better results. Ideally, you would probably want to interview each customer, review their facial expressions, and read their mind if possible. If you can't do that, look at a couple of factors to get as close as you can.

Perhaps you know that your users tend to get to the third level of your game and then either get bored or addicted. You'd want to hit up the users either before they get bored or after they get addicted, so maybe the second or fourth level is a better time than the third level. If your app is a utility app, maybe you want to ask for review when you know the user has successfully created a document and shared it with someone else. You can look for when they sign into your social network. You can look at their frequency of use.

The good news is that all of the above factors can be measured within your app.

If it justifies this level of complication, you can even do a little mini survey like the following:

How are you liking the app so far?

I love it! Great - would you like to click through and leave a comment in Google Play? (or share us on FaceBook, Plus us on Google+, etc).

I'm not sure yet. Hope you will like it - here is a link to our help pages and some tips to get more out of the experience.

I'm not. Are you having trouble? Would you like to get some help? Here is a link to our helpdesk, where you can troubleshoot or report a problem.

We'll talk more about tracking what happens inside your app in the next chapter. It may give you ideas of how and when to hit up someone for a review.

8. How do I convert users after the install?

If you have made it this far, you have successfully received some installs for your app. That's a good thing. For all the previous steps in the process, it did not matter whether your app was good. Now the app is installed on the Android device, and now whether your app is good matters. What's also beneficial is that you can now track how “good” your app really is.

Tracking user behavior within an app or web site is known as Analytics. The Google Analytics is well known as an analytics library that your developer can include in your app. There are other libraries for analytics, including Flurry, and many others that may be specific to a particular type of app, such as a game, or included with an ad network. While I show examples in this chapter in Google Analytics, you or your developer may be using something else. It is important, in this chapter, to understand the why of analytics, even as we talk a little bit about the how.

HOW VALUABLE IS YOUR APP?

We've wondered in previous chapters how we can know if your app is good. I am going to propose a very simple definition that, hopefully, will allow you to measure the value of your app in numeric terms.

The most important task that your app must do is to produce conversions. Conversions, as we discussed in a previous chapter, are when users take action that you want them to take. Therefore, you define what those conversions are. The most important goal of analytics is to track those conversions. When those conversions are tracked, you can count them. Conversion rate can be measured as both a number and a percentage.

One example makes this clear. In earlier times, the ratio of paid installs to free installs was about 12%. Out of 100 people that tried the free app, 12 would buy the paid app. In a more recent sample, about 22% of free users became paying customers. In that sense, the conversion ratio increased from 12% to 22%, and we can say the app is converting better. We can look at other ratios, then, on the number of people who buy extra add ons after the install, to determine the conversion rates for them as well.

The number of conversions is also important. If, in the example, above, you find that the total number of sales did not increase, you may need to look elsewhere to find out if you are attracting an adequate number of users through search, and a sufficient ratio of users that click through to an install.

A high converting app is valuable. It is much easier and less expensive to promote, and gives you a better return for the traffic you are able to bring to it. It is worth analyzing and comparing, the conversion that you get across many of your apps, and finding anything you can do to improve it. It is also worth looking at other high converting apps that are doing well in the market, and see if you can find some best practices to apply to your app.

WHAT INFLUENCES CONVERSION?

When a user has installed an app, he continues to ask himself if this is the app he was looking for when he started his search minutes ago. You may have less than three minutes for that person to decide that this is the right app, as he is opening it for the first time. If he still isn't sure, he may uninstall fairly soon, or simply move on to some others that he also just installed. The users want to get a taste of what you are offering them right away, so get to the point as soon as you can.

The questions users ask themselves on starting a useful app are: Will it do what I want? And how do I do it? In my outdoor app, there was quite a range of scenarios that people wanted to do right away. While there some (in my mind) simple decisions that are valuable for people to make right away, the same decisions can get in their way if they are trying to see something else first.

On entertainment or game apps, meanwhile, they could be asking "Is it fun?". You will probably have a short time to answer that as well. There are games I have installed that seem to take forever setting up your character, buying trinkets, fitting armor, setting up skills, and so forth. I was thinking when do I get to the actual game, and then I realize that setting up the character IS the entire game. In that sense, then, they did get to the main point of their app rather quickly.

Usability is very important in your app. Don't assume this is easy. Google, Samsung, and other big companies have made plenty of mistakes in usability, in my opinion, so I don't feel quite as bad that there are still many strides to be made in my own app. Developers can be bad about seeing the app from a user's point of view. I am saying that as a developer.

WHAT USER ACTIONS SHOULD YOU TRACK?

Through many analytics libraries, you are able to process a large range of user actions, from screens that they visit, to menu items, buttons, and keystrokes. While it may be worthwhile to do all that, unless you have a big team to analyze everything, it makes sense to prioritize. Figure out a small number of actions, or goals, that you want to track, that are most valuable to your business, and then make all other items secondary to them. It might still be worth capturing those screen views and buttons, but it will make more sense if you know how they lead to some of your goals.

Therefore, I suggest an exercise. Make a list of the main actions you want your user to take. As obvious as you think these are, write them down today. If there are too many, prioritize. Look at the user goals in two categories, monetary, and non monetary.

What User Actions Make You Money?

As you can imagine, the most important actions taken by a user, from your perspective, are those that make you money. Especially if you know how much money they are worth, these actions are worth tracking. Whenever you can put an exact dollar figure on an action, do so.

The first thing to track, then, is the in app purchase. In the proper place in your code, record the transaction and its monetary value. Use the transaction method of the Google Analytics tracker.

Another thing you probably want to cover is a purchase of a paid app. You might think this is easy to do, especially given how easy it was to record an in app purchase. Unfortunately, in my experience it is not. You can detect that the user is running a paid version, and if you believe that this the first time that the user has run the paid version. That part is straightforward. Unfortunately, doing this results in a huge overpayment recorded in Google Analytics. I wish the app was bringing in as much money as it said. First of all, a user can buy an app and use it on several devices. Second, if they completely uninstall the app, clean up their storage card, and then reinstall it later, it also looks like a new install. At present, the number reported is four at five times its actual value.

At the same time, I am not completely sure if the users that installed the free app first are having the original source credited for the revenue. At least some of the time, this appears to be the case. This is important, if you are trying to precisely attribute revenue to a campaign as you will in paid promotion in the next chapter.

The over reporting and underreporting of paid apps are yet another motivation for choosing a freemium app with in app purchase over a free and paid app combination.

For many apps, the majority of revenue will come from advertising. Your advertising networks may provide you enough analytics to figure out what the value of each user is. If, however, you can combine that data with other actions that you have chosen in the next section, it becomes more valuable.

What Other User Actions are Valuable?

To come up with other actions we want to track, you can ask a simple question. While you are hoping they will buy something (or be monetized), what do they usually accomplish before they buy?

If you have a game where the users pay to play more levels after level four, it makes sense to track if they are finishing the first, second, and third level. In games without levels, you might want to track how much progress they are making and if they are earning virtual currency.

If you are providing a utility app where they are creating a presentation document, they are likely going to want to successfully create a document before buying the paid version.

It's not safe to assume that everyone completes the easy things (in your opinion) that they do at the beginning to get started with the app. Don't underestimate the ability of users to get confused, even if your app has only one button, and you push it for them.

Think of some things the users do that shows commitment to the app, like creating their profile, connecting with a social network, and sharing a document or accomplishment.

Write down some of your goals for your users so that you are best prepared to track the things that matter.

TRACKING THE USER ACTIONS.

Small snippets of code record virtual page views, events and transactions within an app. These allow us to see all kinds of things in Google Analytics reports.

Ecommerce in Google Analytics.

When in app purchases are recorded through the transaction methods, monetary values will show up in reports. You can associate the dollars with the users and find out all kinds of things. In this we can see that many products are appreciated in their own state and in neighboring states.

Product	Region	Quantity ?	Unique Purchases ?	Product Revenue ?
		429 % of Total: 2.97% (14,441)	429 % of Total: 2.97% (14,441)	\$5,887.18 % of Total: 5.67% (\$103,832.06)
1. bcn_c_blm_ca	California	19	19	\$189.81
2. bcn_c_blm_co	Colorado	17	17	\$169.83
3. bcn_p_s_mapsrc_accuterra_year_0	California	13	13	\$259.87
4. bcn_c_gmu_wa	Washington	10	10	\$99.90
5. bcn_p_s_mapsrc_accuterra_year_0	Washington	10	10	\$199.90
6. bcn_c_blm_mt	Montana	8	8	\$79.92
7. bcn_c_blm_wy	Colorado	8	8	\$79.92
8. bcn_p_s_mapsrc_accuterra_year_0	Colorado	8	8	\$159.92
9. bcn_c_blm_or_wa	Oregon	7	7	\$83.93
10. bcn_c_blm_or_wa	Washington	7	7	\$83.93
11. bcn_c_blm_idaho_00	Utah	6	6	\$47.94

An eCommerce report in analytics

Goals in Google Analytics.

Conversion events are tracked as goals in Google Analytics. You can define either an event or page view as a goal value. In the Google Analytics interface, you can define up to 20 goals.

VIEW (PROFILE)
All Mobile App Data
View Settings
User Management
Goals
Filters
Channel Grouping
PERSONAL TOOLS & ASSETS
Segments
Annotations
Custom Alerts
Scheduled Emails
Shortcuts

✓

Goal setup

Edit

Template: *Place an order*

✓

Goal description

Edit

Name: *Place an order*

Goal type: *Destination*

3

Goal details

Destination

Equals to

App screen name or web page URL

Case sensitive

For example, use *My Screen* for an app and */thankyou.html* instead of *www.example.com/thankyou.html* for a web page

Value **OPTIONAL**

Off

Assign a monetary value to the conversion.

Funnel **OPTIONAL**

Off

Specify a path you expect traffic to take towards the destination. Use it to analyze the entrance and exit points that impact your Goal.

Verify this Goal
See how often this Goal would have converted based on your data from the past 7 days.

Create Goal

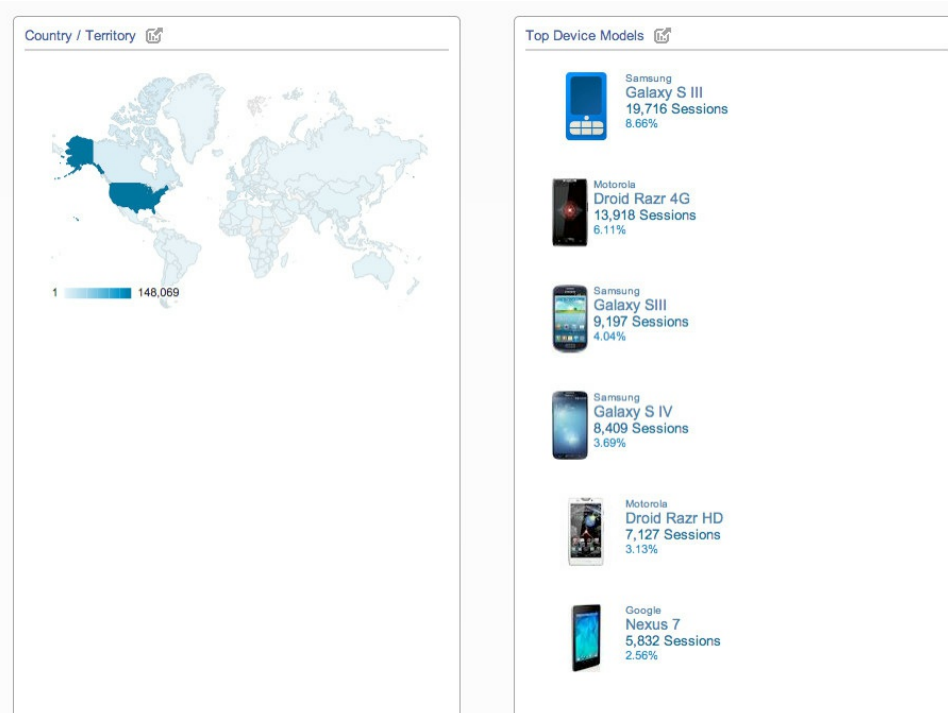
Cancel

You have the opportunity to attach a monetary value to any goals. This might be a good option if you don't have any monetary transaction that will have an exact value, such as will be the case when you are monetizing through advertising.

What goals should you track? The list you made in your last section should tell you that.

Where Are the Users Coming From?

Without much extra work on your part, Google Analytics can show you some information about your users, including their location, network, and Android device.



The traffic source for your users is a key part of the tracking. If you combine your knowledge of the traffic source with the tracking of key goals within the app, you have a great way of tracking which traffic sources are valuable.

Unfortunately, a lot of your traffic is coming directly from Google Play, which is somewhat of a black box. You would like to know what keywords are bringing people to your app, how many come from your top

rankings in the category, and so forth.

For traffic that you refer to Google Play, from either paid or organic promotion, you should refer them with a specially tagged url. This will be passed through Google Play and end up as a traffic source within analytics. You can make one using the Google Play Url Builder.

Google Play URL Builder

Use the tool below to generate URLs for Google Play Campaign Measurement.



Scan this QR code to test your URL!

Package Name: *	<input type="text" value="com.crittermap.backcountrynavigator.license"/> (Java package, e.g. com.example.application)
Campaign Source: *	<input type="text" value="kindle"/> (original referrer, e.g. google, citysearch, newsletter4)
Campaign Medium:	<input type="text" value="book"/> (marketing medium, e.g. cpc, banner, email)
Campaign Term:	<input type="text" value="analytics"/> (paid keywords, e.g. running+shoes)
Campaign Content:	<input type="text" value="uglyurl"/> (ad-specific content used to differentiate ads)
Campaign Name:	<input type="text" value="analyticschapter"/> (product, promotion code, or slogan)
<input type="button" value="Generate URL"/> <input type="button" value="Clear"/>	
<input type="text" value="https://play.google.com/store/apps/details?id=com.crittermap.back"/>	

Creating a tagged url for tracking purposes

Out of this you get a really long and ugly URL like:

https://play.google.com/store/apps/details?id=com.crittermap.backcountrynavigator.license&referrer=utm_source%3Dkindle%26utm_medium%3Dbook%26utm_term%3Danalytics%26utm_content%3Duglyurl%26utm_campaign%3Danalyticschapter

Google Adwords campaigns will add these tags automatically. You can give slightly different urls to different places where you post links.

LOOKING AT REPORTS

If you are collecting data from users, be sure and take a look at it once in a while. Google Analytics already includes a number of standard reports. To harness the full power of the data you are now collecting, study up on custom reports in Google Analytics. In this custom report, you are comparing a number of traffic sources and how they perform on various goals and monetary income.

▼

Reporting

Customization

Report Content

Report Tab ×

+ add report tab

Name

Report Tab

Type

Explorer

Flat Table

Map Overlay

Metric Groups

Metric Group

+ add metric

+ Add metric group

Dimension Drilldowns

+ add dimension

Filters - optional

+ add filter

Views - optional

☐ Any view

☒ All Mobile App Data ▼

Save

Cancel

Creating a Custom Report in Google Analytics

When you finally see this data together, you are in a much better position to see how users are performing in various ways.

Campaign ?	New Users ? ↓	In-App Revenue ?	Map Chosen (Goal 1 Completions) ?
	34,340 % of Total: 100.57% (34,147)	\$102,134.29 % of Total: 100.00% (\$102,134.29)	23,943 % of Total: 100.00% (23,943)
1. (not set)	33,436	\$100,695.83	22,887
2. fromdemo	606	\$1,179.82	858
3. Android US	194	\$83.88	125
4. BackCountry Navigator for Android	71	\$27.96	44
5. PlayButton	15	\$122.83	19
6. details	6	\$0.00	7
7. appcenter_ads	5	\$0.00	2
8. appbrain	2	\$0.00	0
9. appbrain_cpi	1	\$0.00	0
10. appszoom	1	\$0.00	0

There are a number of things we now know as a result of this report. Here, we are comparing a number of different traffic source, including a few paid campaigns through AdWords. However, we could use these same techniques to compare users across a number of different attributes. If we look at Goal Number 1, an action we expect users to complete the first time they open the app we notice that, in general, two thirds of users complete the goal, but less than half of them do so from a certain AdWords campaign. Our greatest revenue source is still Google Play traffic, though, as I have mentioned, the numbers are inflated.

OTHER THINGS YOU CAN SEE IN GOOGLE ANALYTICS

Some interesting things are showing up in the latest versions of Google Analytics that are worth mentioning here. More could show up.

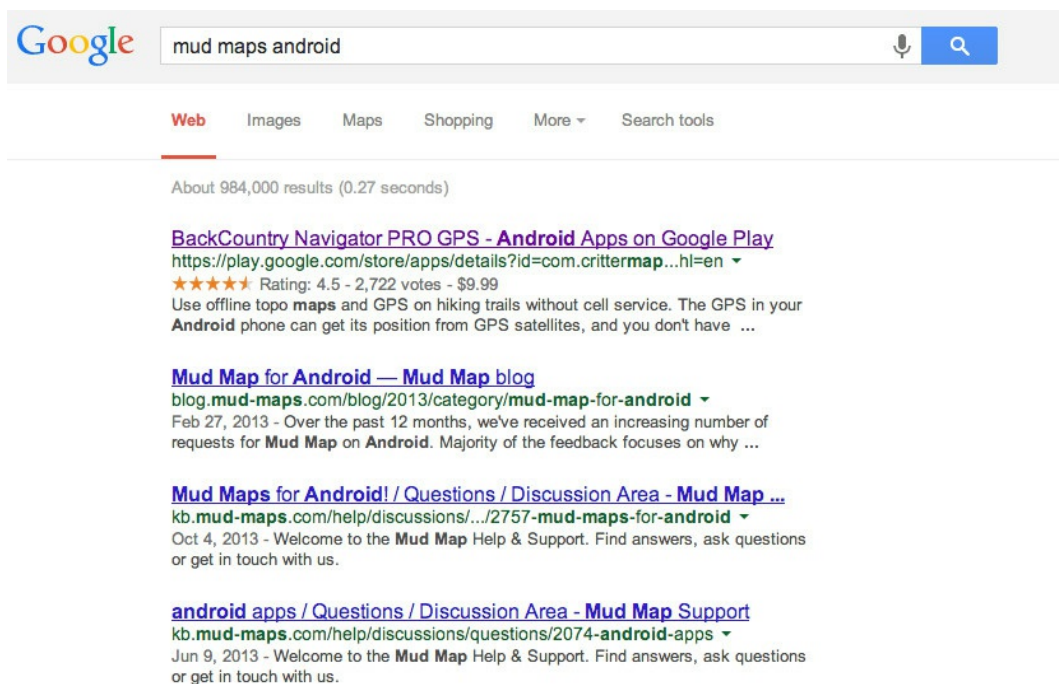
Referrals from Google Search

One of the reports you can find in Google Analytics is under the section entitled “Acquisitions”. Find App MarketPlace, then Google Play and look at Sources. I chose a source/medium combination called “google/organic”. I added a secondary dimension called Keyword (under advertising) and I came up with a report like this.

Source / Medium	Keyword	New Users
		80 % of Total: 0.23% (34,493)
1. google / organic	backcountry navigator	6
2. google / organic	backcountry navigator pro	3
3. google / organic	backcountry navigator pro gps	3
4. google / organic	backcountry+navigator+pro	2
5. google / organic	best+topo+gps+app+for+android	2
6. google / organic	mud maps android	2
7. google / organic	topo+apps+android	2
8. google / organic	android app mark hike trails no cell service	1

Report shows referrals from Google Search

To understand where these are coming from, think of an effect that you have seen in your browser. If Google detects that a search is likely to be an app, it may suggest one or more apps within its search results. (Yes, Google knows if you have an Android device). Apparently two people searching the web for “mud maps android” ran across my app and bought it. I tried the search myself.



Google makes app suggestions for an internet search

This isn't a keyword I've done any specific targeting for, but Google has a lot of data about user preferences and link referrals throughout the internet. Watching these reports may give me and you more ideas of words to target.

Play Store Views

In the same general section that I mentioned above, you can find another section called Referral Flow. It has a visualization as well as a chart.

Source / Medium	Play Store Views	Installs
app / inapplink	6.47K 100% of 6.47K	571 8% of 6.47K
google / cpc	884 100% of 884	266 30% of 884
google / organic	824 100% of 824	86 10% of 824
Website / Link	225 100% of 225	19 8% of 225
bestappsmarket.com / android-app	11 100% of 11	4 36% of 11
...	43 100% of 43	7 16% of 43
All referrals	8.45K 100% of 8.45K	953 11% of 8.45K

Recent functionality in Google Analytics gives you an idea of Google Play views from some sources

What you see here are some of the users that are making it to your app listing. These are certainly not all Play Store views, but it will give you some ideas. What can I tell from the data above? Well for one thing, of those that click the upgrade link in my demo app, 8% complete the purchase of the paid app. From an Adwords campaign, 30% of them are installing the demo app. From my website, 8% are installing the app from the button. Can these percentages be improved? Well, if they can, it will improve my bottom line.

There is a lot more that can be done with Analytics if you are going to go hard core. There are whole classes on it, including some free ones offered by Google online. I hope this chapter has given you some idea of how to measure how valuable your app is, and how valuable the traffic in the app is. That will help you as we try to bring in even more of that traffic.

9. Paid Promotion

Paid promotion is one of the ways that you can drive traffic to your apps and hopefully get installed.

Paid promotion is not mentioned in this book as being mandatory. You may not have a large budget for advertising, and you may not find that advertising provides a positive return on investment, or a noticeable increase in traffic, for all of your apps. Nonetheless, by doing some experimentation with advertising, you can gain experience and insights into your marketing message that you can't easily get in any other way.

I have never had any significant amount of traffic from paid promotion sources as compared to organic sources, but I don't rule out being able to do more in the future.

One of the best ways of profiting from paid advertising is to be a recipient of it. If your app includes advertising, you are. Understanding things from the advertisers' perspective can only help.

AN ADVERTISING COMMON SENSE RULE

A common sense rule for advertising is similar to the one for profit. Spend less money on advertising than it brings in. This sounds simple, but it is easily ignored. Think of the person that says "We spent \$200 last month on advertising, but we are sure glad we did because our sales increased by \$600".

While this sounds nice, can you spot what is wrong with it? Does that person know whether the \$200 they spent actually brought in a certain number of users that were responsible for at least \$600 in revenue. Probably not. Unless you have a trail from the traffic source to the revenue earned, you don't know which traffic sources are most valuable.

Note that you can probably find other books that might advise you to go outside this advice. Much of what they advocate is dated, or may not apply to you as a small developer. The theory is that you can lose as much money as you want, just lose it as fast as possible, so you can get enough installs to land you at the top of your category. From then, it will be all smooth sailing, because your app will of course stay at the top of the category and continue to get great traffic there.

There are a number of problems, though. Experts estimate the cost of gaining some of those top positions at \$96,000 per day, a bit more than \$1 per install, and rapidly growing. And that is for a free app. If you could get \$1 installs for an app that costs 1.99, everyone would do it. Many of the people reading this book do not have a \$96,000 budget to begin with. Remember also, what we know about the top free and top paid categories. You must earn your position every few days. Some apps may be able to stay in there once they are in, and others may not.

I would instead consider the following formula. Actually, it's an inequality.

Revenue from Install > Cost Per Install.

To solve this inequality, you need to monitor the cost per install, and monitor the revenue that the install gives you.

THE COST OF AN INSTALL

There are advertising networks that will allow you to bid a certain price per install. You first thought might be to bid \$4 for a \$10 paid app because you can't lose. That was my first thought as well, but unfortunately, that doesn't work well in practice. Only a few of the advertising networks even allow you to advertise paid apps, and they will generally stop showing your ad if they aren't making very much money. In general, you need to advertise a free app, and you may have to bid \$1-2 per install. Who in their right mind would basically pay \$1 to get someone to install their free app? In the long run, only those who have found out that the install is worth that much.

Many other advertising networks will allow you to bid on a per click basis. As long as you can track how many of the clicks turn into installs, you can convert this into a cost per install. Adwords now allows you to define an install as a conversion.

New Conversion
Settings
Next steps

Conversion name ?

Source ?
☐ Webpage
☐ Call on-site
☒ App download ?
☐ Import

Save and continue
Cancel new conversion

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Defining an App Install as a Conversion in AdWords

If your advertising network has another method of tracking installs, be sure and use it. If this fails, use a custom Google Play URL as shown in the last chapter. You will be able to verify for yourself.

If you do this, you can rapidly come up with an idea of what the installs are costing you. Be aware that the installs may take a few days to show up in Adwords, or even in Analytics.

Placement	Status	Max. CPC	Clicks ?	Impr. ?	CTR ?	Avg. CPC ?	Avg. CPM ?	↓ Cost ?	Conv. (1-per-click) ?	Cost / conv. (1-per-click) ?	Conv. rate (1-per-click) ?
Mobile App: Polaris Navigation GPS (Google Play), by DS Software	Managed	\$0.03	67	4,073	1.64%	\$0.14	\$2.34	\$9.55	10	\$0.96	14.93%
Mobile App: GPS Surveyor Free (Google Play), by MobileBrigade	Managed	\$0.19	45	2,366	1.90%	\$0.16	\$2.95	\$6.98	9	\$0.78	20.00%
Mobile App: Elk Hunting Calls (Google Play), by Pico Brothers	Managed	\$0.10	109	3,170	3.44%	\$0.06	\$2.15	\$6.83	21	\$0.33	19.27%
Mobile App: Compass PRO (Google Play), by Mobile Essentials	Managed	\$0.11	73	2,924	2.50%	\$0.07	\$1.71	\$5.01	7	\$0.72	9.59%
Mobile App: Compass 360 Free (Google Play), by The Droid Dev	Managed	\$0.19	21	1,766	1.19%	\$0.12	\$1.39	\$2.45	1	\$2.45	4.76%

AdWords campaign data snapshot showing cost for conversion for various app placements

Remember that we defined an install as a conversion for purposes of this campaign. Once you are tracking this, you can optimize your campaign parameters to bring the cost of each install down. However, in doing so, remember that you are still only solving half of the inequality above, and you will have to look at more factors to determine the eventual value of that install.

CROSS PROMOTION

While you may have to pay to get ad impressions, there are ways to get some for free. Some ad networks

allow you to trade impressions with other apps.

The best possible place for cross promotion is within your own apps. I know of apprenuers that don't rely on paid promotion at all, but instead rely on having a network of apps that can drive traffic to newer apps, or apps that may monetize better than the others.

If the ad impressions within your app are worth money in your ad networks, this method isn't completely free. But it may be more cost effective than buying impressions somewhere else.

TARGETING AN AD CAMPAIGN

Targeting is the process of showing your ads to a specific audience. Ideally, this is your target market. In a perfect world, your ads would only be shown to people who are already eager to find your app, so that every one who clicked on the ad will install, and all of the people who install your app will love it and start spending money in it right away. Don't count on the fact that you are paying per click or installs to save you from poor targeting. People with no interest will indeed click, people who have not even read the description will indeed install, and the results are less than satisfactory.

Some months ago, I received a phone call about a promotional opportunity for my app. A new movie starring Nicholas Cage was being made. In this movie, Nicholas Cage would use my app to land a Boeing 747 after the pilots were taken by the rapture and the plane navigation system was damaged. The fine details of whether someone could actually use my app to land a plane in real life are somewhat irrelevant, since Boeing has already said that a single, untrained person couldn't land the plane anyway. It's just a movie. The agency wasn't really asking for me to give permission to use the app in the movie, though. They wanted \$30,000 up front.

This is a pretty good example of *untargeted advertising*. The kind that most of you should avoid. Only 1% or so of the people seeing the movie would be interested in the app to begin with. Even those people, though, would be unlikely to make the connection between an app used to land a fictitious plane and one used to navigate on a backpacking trip. For targeting advertising, think of the opposite of the Nicholas Cage movie.

Unfortunately, most mobile advertising you will consider for your apps isn't targeted much better than the Nicholas Cage scenario. It is only a few steps above "Give us a wad of money and trust us". All of the advertising networks will advertise that they have a variety of laser precise targeting options. When you get to running an actual campaign, though, you will find that you can choose a few target countries and (maybe) the version of Android.

Following are some targeting options to look for.

By Operating System

In case you were wondering what operating system to target, Android is the right one for an Android App. As obvious as this is, not checking this can waste your money on a bunch of people who aren't even eligible for your product. It is certainly possible for a person to find out about your app on their desktop computer and then install your app on their mobile device. In the process, though, you will likely lose the tracking information for that person, which is vital for the system in this chapter to work. You also lose the immediate gratification that is helpful in converting a user. To start at least, show your ads on an Android device.

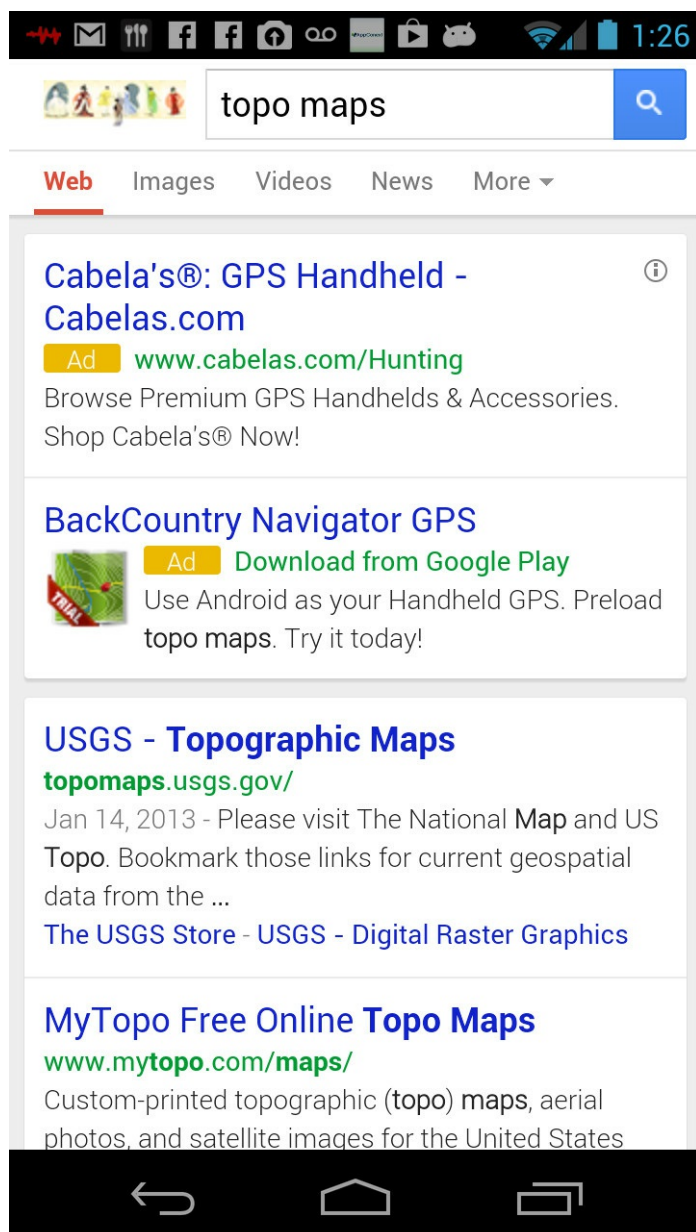
By Age or Gender

If you happen to know that your app is perfect for a particular age and gender range, by all means target that in your ad settings. But be sure and read the footnotes. The ad networks will warn you that, most of the time, they don't actually know the age and gender. Either they are guessing, or your ad will get very few impressions

because they don't know that information. If you don't know how those demographics affect your app, you can find out pretty fast by running a test campaign. Even then, though, you may not find that this narrows down your targeting very well. Whatever you do, don't get your numbers backwards. For example, I know that 96% of the people using my app are male. But that is NOT the same as saying that 96% of male individuals want my app. Not by a long shot.

By Keyword used in a Search (Google Adwords)

This gives you an opportunity to show an ad when an Android user types a search term in the browser. This method of targeting users has been time tested, and is how Google makes most of their money. Be aware that you are competing not just against people who are advertising apps. A dealer selling actual race cars can afford to bid higher than you can if you are advertising a car racing app. You may have to experiment to find words you can afford and that will bring you targeted traffic.



AdWords ads show as links to apps in response to specific search terms.

By App the Ad is being Shown In (Google Adwords, AirPush)

In 2013, Adwords started to let you handpick which apps show your ads. I've done a fair amount of experimentation using this method. You can start with the apps that you evaluated for revenue potential in Chapter Four.

By Other Apps They Have Installed (AirPush HyperTargetting)

Even if they are using some other app, some ad networks may be able to target their ads by what apps are installed on the system.

By Personas (Flurry, AirPush, others)

A popular concept in advertising it is the ability to target a certain persona, or a person who fits certain characteristics. They have names for these categories such as “Appaholic” or “Business Traveler”. If you fit these profiles, it may be worth targeting them.

By their Likes and Interests (FaceBook)

I have not yet done a full test with Facebook as of this writing, although I will probably have done one by the time you read this. Based on the opinion of large companies with much more money to spend than I have, I plan to do more. Professionals who run mobile ad campaigns for companies for a living tell me that Facebook is probably the only way to run audience targeting at scale. They expect to see other offers from twitter in the near future.

When you are targeting, remember that you are only forming an initial hypothesis. You are picking parameters where you **think** that people will want your app. Very shortly, you will have actual data with which to make decisions. The important thing is to use that data to make your campaign more efficient, or cancel it if necessary.

REVENUE PER INSTALL

Calculating the revenue per install takes more time and involves looking at your analytics cross-referenced with your traffic sources, as described in the previous chapter.

An easy mistake to make would be to apply a blanket conversion ratio to all of your traffic. If, for example, you find that users, on average, are spending \$1.12 in your app, you could (wrongly) assume that installs that come from advertising are also worth that amount. But that is not good enough. You want to find out how much money the users that came from a particular ad campaign with particularly settings are worth.

In the following report we can see some of the goals completed and revenue generated from two Adwords campaigns.

Campaign ?	New Users ? ↓	In-App Revenue ?	Map Chosen (Goal 1 Completions) ?
	272 % of Total: 0.80% (33,841)	\$125.82 % of Total: 0.12% (\$101,638.61)	168 % of Total: 0.72% (23,481)
1. Android US	189	\$90.87	121
2. BackCountry Navigator for Android	83	\$34.95	47

Results from two Adwords Campaigns in dollars and goals

From looking at this, we can already come up with an estimate that the first campaign is worth around .48 per install, while the second is worth about .42. We can drill down further on the ad campaigns to see how they are performing grouped by a specific ad, keyword or placement.

Keyword ?	New Users ? ↓	In-App Revenue ?	Map Chosen (Goal 1 Completions) ?
	188 % of Total: 0.56% (33,841)	\$90.87 % of Total: 0.09% (\$101,638.61)	121 % of Total: 0.52% (23,481)
1.	63	\$55.92	48
2.	30	\$6.99	20
3.	21	\$6.99	16
4.	17	\$0.00	3
5.	14	\$6.99	9
6.	6	\$0.00	5
7.	4	\$0.00	2
8.	4	\$0.00	1
9.	2	\$0.00	2






Campaign performance by keywords (keywords not shown).

By looking at this chart, we can see very quickly that most of the money is generated from one keyword (#1). If we can get installs for this keyword for less than .88, this is a winning keyword. Meanwhile, we can get rid of keywords like #4, that have installs but are not bringing in money.

CAMPAIGN OPTIMIZATION

If you are just dabbling in advertising, you may be tempted to make a very minimal effort. Just create one ad image, one ad text, and a few targeting parameters. If you want to get the most out of the experience, however, think bigger. Create a whole bunch. Try a few different images, try a few different wordings, even if they don't look much different to you. Adwords and other ad networks will run these ads against each other.

For reasons I cannot completely explain, a recent Adwords campaign had a large increase in traffic from adding one particular wording and a particular image. This is valuable information. Even if the ad campaign itself doesn't turn out to be successful, you know what images and words you most want to try out in other ad campaigns, in your organic promotion efforts, or even in your app listing.

Ad	Campaign type ?	Campaign subtype	Labels ?	Status ?	±% Served ?	Clicks ?	Impr. ?	CTR ?	Avg. CPC ?	Cost ?	Avg. Pos. ?	Conv. (1-per-click) ?	Cost / conv. (1-per-click) ?	Conv. rate (1-per-click) ?
 TopoDownloadOffline 320 x 50 View full size image ad (mobile)	Display Network only	Mobile apps	FreeTrial	Approved	78.54%	373	28,564	1.31%	\$0.08	\$30.42	1.0	64	\$0.48	17.16%
 BackCountry Navigator GPS Use Android as your Handheld GPS. Preload topo maps. Try it today! Preview ad (mobile)	Display Network only	Mobile apps	FreeTrial	Approved	11.94%	75	4,343	1.73%	\$0.12	\$8.90	1.0	10	\$0.89	13.33%
 BackCountry Navigator GPS Topo Maps for Outdoor Adventures. Try GPS App free for 21 days Preview ad (mobile)	Display Network only	Mobile apps	FreeTrial	Paused	8.57%	46	3,117	1.48%	\$0.13	\$6.02	1.0	5	\$1.20	10.87%
 320x480-download 320 x 480 View full size image ad (mobile)	Display Network only	Mobile apps	--	Approved	0.52%	11	188	5.85%	\$0.06	\$0.68	1.0	1	\$0.68	9.09%
 GPS App for Hiking Preload topo maps for hiking trips. Navigate in the wild. Try it today! Preview ad (mobile)	Display Network only	Mobile apps	FreeTrial	Approved	0.11%	2	41	4.88%	\$0.10	\$0.19	1.0	0	\$0.00	0.00%

Ads compared on click through rate (CTR) and install rate (conversions)

Campaign optimization is generally a process of selective pruning. Get rid of the placements, targeting, or ads that aren't performing. If your effective cost per install is too high, bid lower on that placement. If it is too low, and you want more traffic, bid higher.

If you get a message that you are eligible to use Campaign Optimizer, these are the same things that Campaign Optimizer does. You can then bid on an install, and let the automated process take over. This is only worthwhile if you trust the campaign optimizer. After a trial or two, I didn't decide to trust it, and just did these optimizations myself.

WHAT YOU WILL LEARN WITH PAID ADVERTISING

Take some time to look at what you have learned along the way.

Whether I, or anyone else, has luck with paid advertising is not an indication of whether you will. You will need to try it for yourself. In some ways, my app is a fit for advertising because the prices are higher compared to other apps. In other ways, it is more of a challenge because the app appeals to a more narrow audience. All of these things vary across your app and its own audience.

I have completed a recent experiment using Adwords. In the end, only a very few targetting options produced a positive return on investment, while other placements brought in a lot of traffic but very little revenue. In particular, I was able to optimize the campaigns to get installs for only .79 in many cases. Unfortunately, the value of the installs was somewhere between .03 and .20. While I could not continue the full campaign, the placements and targetting that paid off are still active. In the process, I learned most of the things I hoped to learn.

First, certain advertising messages and images performed much higher than others. Second, while many keywords brought traffic, a smaller subset of them were extremely valuable. These are the keywords and messages I will incorporate into my landing page and organic marketing efforts.

In addition, I got some insight into parts of the marketing funnel that were working well. On the whole, a good percentage of the people who made it to the app listing clicked through and installed the demo app. That's good. At the same time, less than half of the people who installed were completing some basic tasks in the app, including one that they are prompted to do the very first time they open the app. While this is something to look for at any time, it was especially prevalent among those who discovered the app through an ad rather than a market search or referral from friends.

One thing that you will likely notice, as I did, is that the keyword or app placement that triggered the ad influenced the behavior of the user all the way through install, first usage, long term usage, and purchasing. This confirms what I have said at the beginning: not all traffic sources are equal.

Once you have a good idea of how traffic is performing, you are better prepared to expand your organic promotion efforts.

10. Organic promotion

Organic promotion involves strategies to bring traffic to apps in ways other than paid advertising. You can refer to it as free traffic, although you know it isn't completely free, because labor costs go into this. For this reason, you should not look at the ideas in this chapter as giving you more things to do, but instead think of ways you can use both tools and virtual assistants (i.e. people you have hired) to accomplish the tasks in this chapter.

These ideas allow you to go beyond Google Play to find more opportunities for your app to be discovered. While search traffic in Google Play is probably your most cost effective source of users, these other methods will cast a wider net and generally complement your efforts within the market.

THE BASIC OF INTERNET MARKETING

The goal of your efforts in internet marketing is, in short, to have a page that ranks well highly for a particular search term that will drive traffic to your app from the internet.

As you might guess, doing so involves keyword research. Again you want to evaluate traffic, relevance, and competition. In this case, the competition metric is simple. To get any meaningful traffic, you want to be in the top ten search results. In order to be in the top ten results, you must replace a page that is already there. Therefore, use a tool, like Market Samurai, that allows you to evaluate the strength of your top ten competitors.

	DA	PR	IC	BLP	BLD	BLEG	DMZ	YAH	Title	URL	Desc	Head	CA
pds	-	0	548	8	949	0	N	N	Y	Y	Y	Y	1
	-	0	5,750,000	0	797,005	0	N	N	Y	Y	Y	Y	9
	-	1	56,400	0	1,854,618	0	N	N	Y	Y	N	Y	2
	3	0	75,200	0	1,591,369	0	N	N	Y	Y	N	N	3
	-	3	-	0	1,626,987	0	N	N	N	N	N	N	0
in.aspx	-	3	750,000	15	5,430,868	0	N	N	Y	N	Y	N	-
2	6	3	1,500	0	4,916	0	N	N	Y	Y	Y	Y	3
st.full	-	0	221,000	0	1,101,569	0	N	N	Y	N	Y	Y	8
ith-your-smartphone/	-	0	398	0	5,809	0	N	N	Y	Y	N	Y	2
	10	0	270,000	0	905,666	0	N	Y	Y	N	Y	Y	-0

Using a tool such as Market Samurai, you can see the top ten listings for a keyword and evaluate thei.

Keep things simple. You are looking for one page on your site that ranks for one keyword phrase. Each page that ranks for a relevant keyword brings you that much more traffic. You could establish a blog with wordpress, add a post every day, and work on getting some links to that page. At the end of a year, you will have 200+ keywords in the first page of Google.

On Page Optimization

You want to construct your page so that it ranks well for a particular keyword phrase. You can come up with a checklist for each of your blog posts and have it done by the person you have writing articles for you.

A well optimized page mentions the phrase (ie “Android Farming App”)

- In the url
- In the <title> tag
- In the <meta Description> tag
- In an <h1> tag
- In the first sentence

- In the first sentence of the last paragraph
- 2-3 times in between the first and last paragraph
- Naturally in the context of 250-750 words.

That's all!

Optimizing a page is fairly straightforward. Doing so may be enough to get top rankings for some less competitive, yet valuable term. Where more of the creative ideas for SEO come in is in link building, as described in the next section.

Link Building

In the past, I have mostly used link building to build the ranking of my app's website. Now that Google Play has acknowledged that outside links influence Google Play, link building is important for your Google Play listing as well.

A valuable link has certain characteristics.

From an important website. An important website is one considered authoritative. It's a circular definition in the sense that important websites are important because they get links from other important websites.

Contains anchor text with an important keyword. The anchor text is the text that shows as blue or underlined (depending on the style of the website, of course). More specifically, it is the text between `` and ``. Inasmuch as you have control of this text, you should use a keyword that you want the page to rank for.

From a relevant website. If possible, there should be a link in the subject matter between the other site and your own.

Have Traffic. While links can have value if they simply help our website to have more link authority, it is even better if they have traffic. For this reason, links on social sites, which will not always pass link authority, are still very valuable if they pass real users.

Link Building Methods

Link building takes a variety of strategies. Here are just a few of them.

Optimized Press Releases. There are outlets that are free and those that will take money for news about your app. Besides hoping to get picked up by blogs and news organizations, you are collecting a large number of links pointing back to your website for a specific keyword.

Article Marketing. You have an article that you have written that can be published on other websites in exchange for a specific link.

Directory Links. Directories list a number of links that are relevant to a particular topic. Perhaps your page or site could be one of them.

Competitive Link Analysis. Using tools, like Raven SEO or many others, you can find the top links for some of your competitors. You can consider them competitors because they provide a competing product or service, or simply because they rank highly for a keyword that you would like to rank for. By seeing where they get their links, you take advantage of the research they have done. If the same pages are appropriate, try to get some links for yourself as well.

Review Sites. You've already been encouraging users to rate and review your app within the market. The

challenge now is to find places where users will write about or mention your app on other websites. Keep a list of such places in a spreadsheet, along with the last time you contacted them and any reviews they have given you in the past. Inasmuch as you can control the link on these pages, give them a special tagged link. Some of the review sites, such as appbrain, bestappsmarket, and appzoom, already tag their links, and I see them in analytics reports.

Call to Action

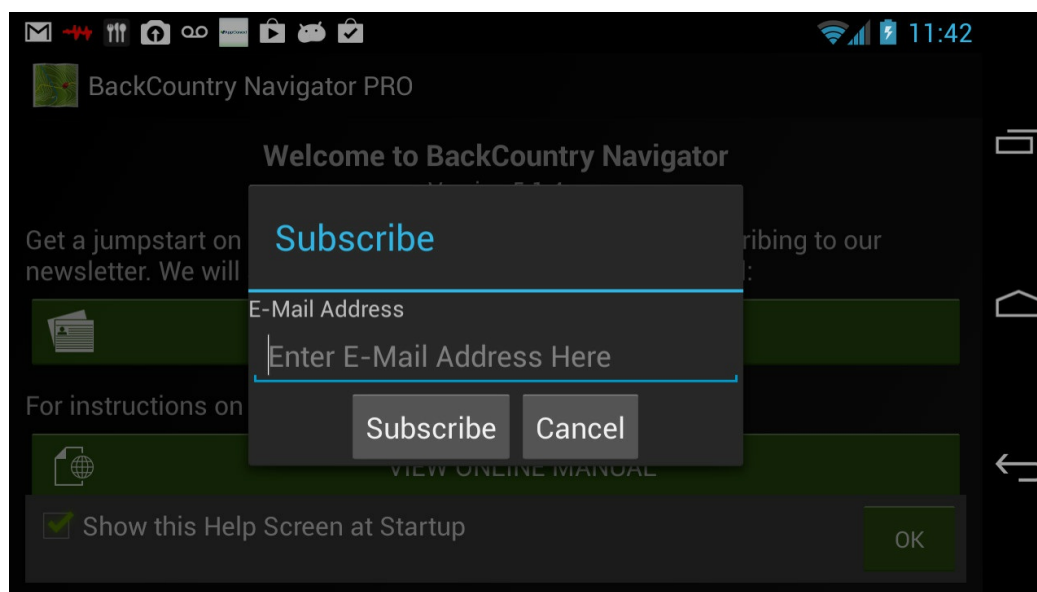
Make no mistake. When you are attracting traffic to your website, you are not doing so to keep users at your website for an extended period of time. In fact you don't care if they read whatever article you posted that came up in their search. Provide a convenient obvious button that is above the fold (meaning that they can see it without scrolling) that will take them directly to the app on the store. Make sure that you tag this link so you can track what traffic you get from it.

SOCIAL NETWORKING

Social networking may be helped along by establishing a following for your app in various networks, such as Google+, FaceBook, and Twitter. Nonetheless, I believe one of your greatest chances to take advantage of social networks is to build functionality for it within your app. What social networks your users will be enthusiastic about, or tolerant of, will vary according to the type of app and the target audience. The following are some ideas to consider.

Subscriptions and notifications

Email is an old school style social network that is still very effective. You can include a signup directly in your app.



Example Signup using Mailchimp

Send out a weekly newsletter via email sending them relevant news, tips, and invitations to promote or rate your app.

Besides a weekly newsletter, you can use what are called auto responders. You can send them certain information when they first sign up, and at some predetermined time periods thereafter, send followup emails.

They do need to opt in for an email list. An alternative is to use messaging and notification that occurs within the app. Frameworks such as AppTentive and AppsFire allow you to automate these.

Becoming a Follower

Having your users become part of a group, a fan page, or a follower is what you might usually think of when it comes to social networks. If you are setting up a group like this, you should plan to share items on a regular basis.

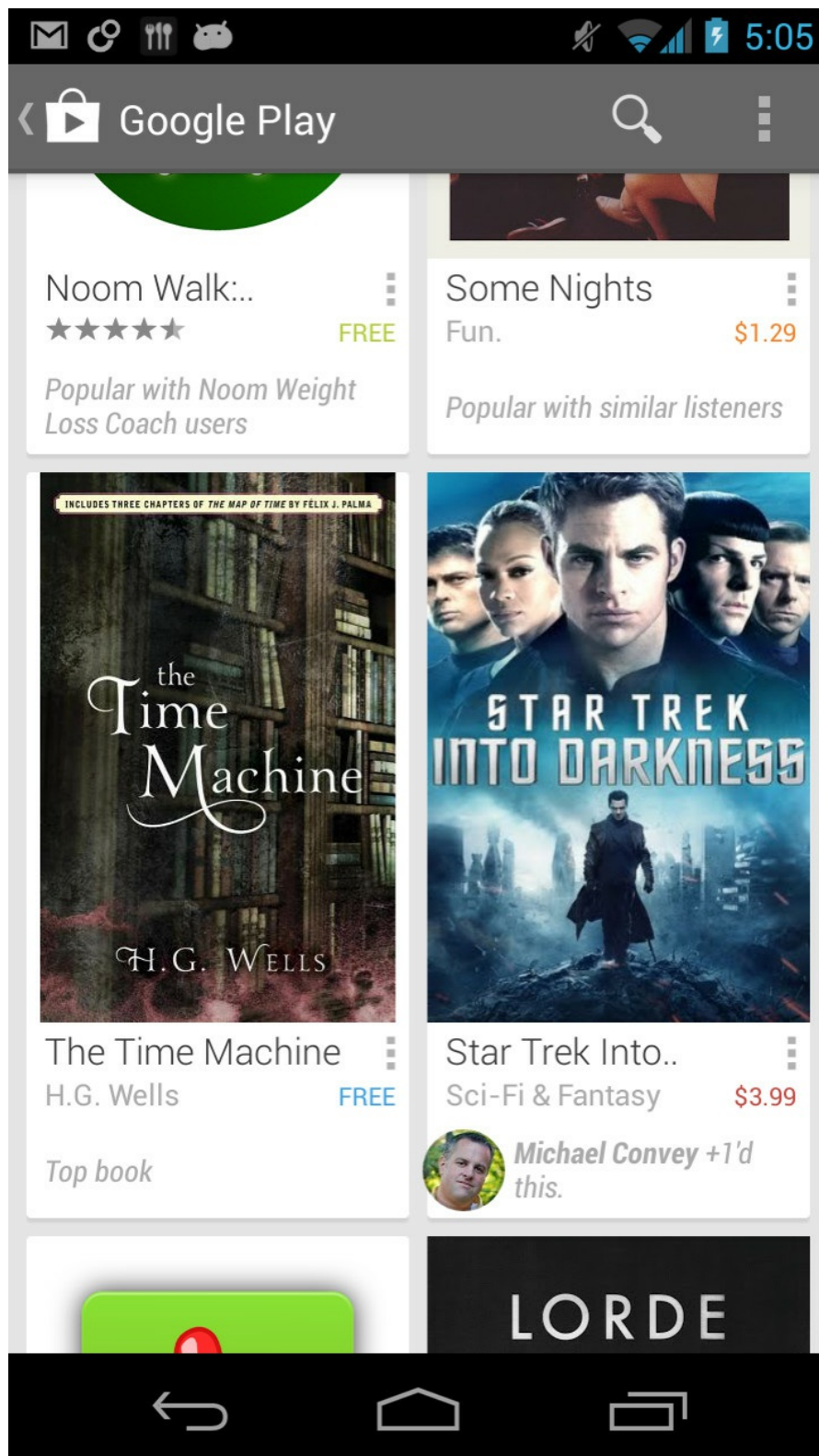
Your motive for watching their likes and shares is much different from what it might be when posting on Social networks as yourself. You are not trying to estimate your own social worth, find out whether people like you, or feel good about something you said that was considered profound.

What you are doing is testing different messages and ideas to see what has an impact on your target audience. For instance, some things I might want to share with a group might be an article on a new feature or tips on using the app. However, such items rarely got very many views. Even a highly rated YouTube video was rarely watched and shared on Facebook. However, a high quality, high resolution photograph was highly praised. Over time, both our Facebook and Google Plus pages have become rather like an outdoor photography sharing group.

Your App Plus One

As long as you are hitting up targeted users to share your app or rate it, consider putting in a button that will rate it on Google Plus.

Look at the effect this has on the personalized recommendation section.



Personalized Recommendation Section in Google Play

Without actually picking up the phone or emailing a friend, Michael Convey has made a recommendation for an app to another.

Sharing Info or Accomplishments.

You would like to have people sharing the news about your app, but you have even more potential for people to share what they are doing with your app. What people may want to share depends on your app and includes photos, accomplishments, news, or information.

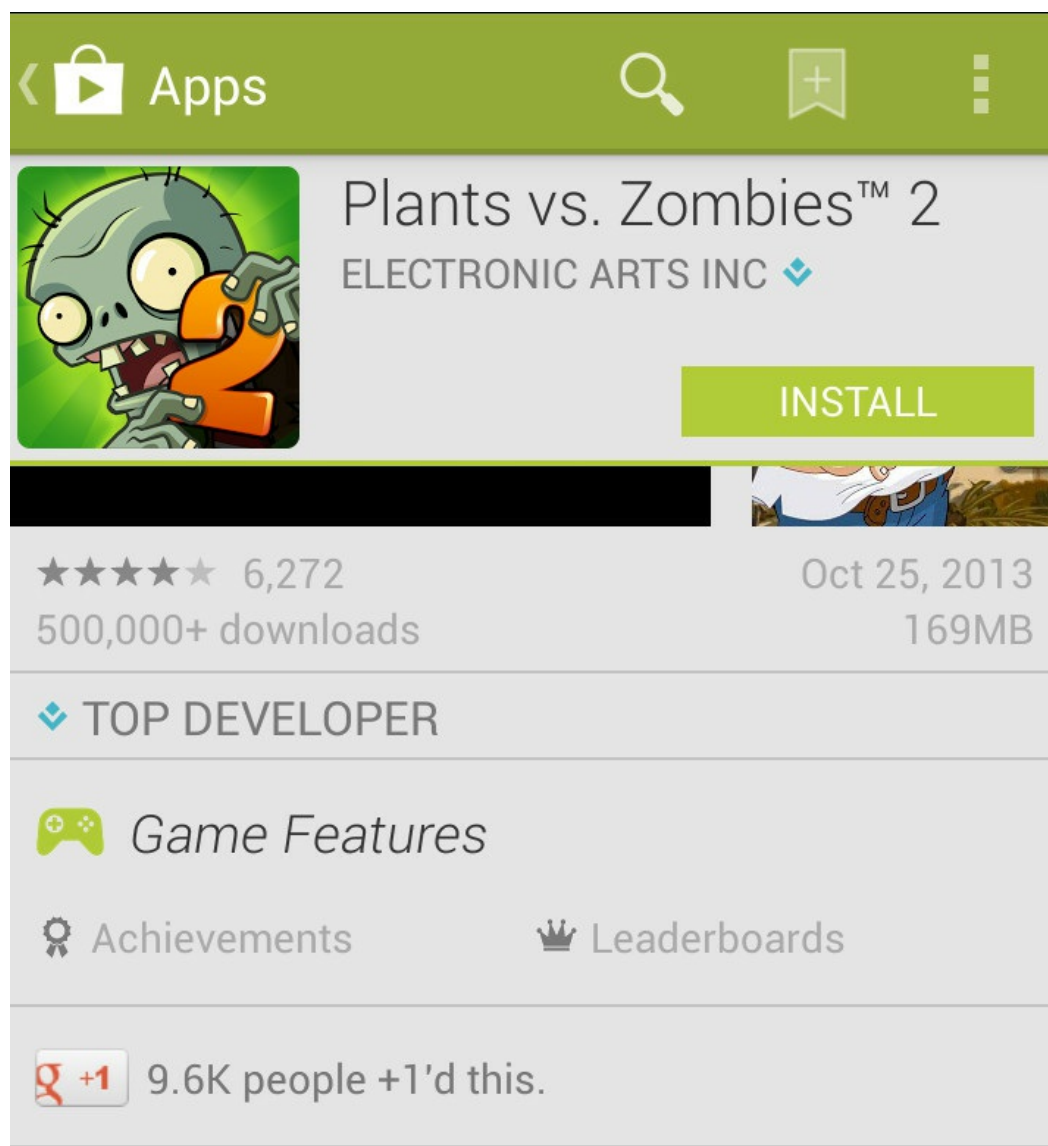
Each time they share something from your app on a social network, there is a chance also to expose the name of your app to friends.

When it comes to games, I myself would be the last person to think that reaching a certain level in a game is an accomplishment worth tweeting or facebooking to all my friends. I don't feel the need, if playing a game, to invite any friends to play. However, based on current trends, I am out of step with a large segment of mobile users. A large number of people do want to do just that. For that reason, consider Gaming Networks as well.

Gaming Networks

Gaming networks are available where people can share high scores, boast of accomplishments, and even take place in competitive multiplayer scenarios across the internet.

Google now has its own services, Google Play Game Services to accomplish many of these tasks. Games which use these features are highlighted.

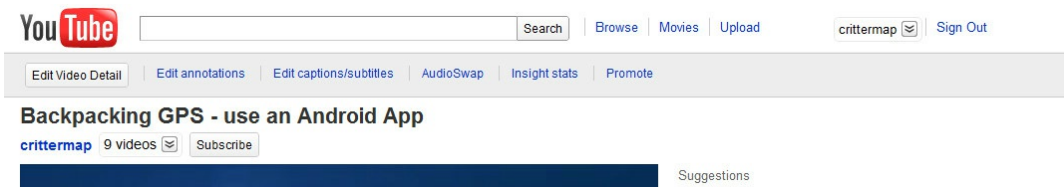


Game Services featured highlighted in an app listing

Even if you don't think at first that your game has much of a social aspect, it is worthwhile to consider integrating with gaming networks for the additional exposure alone.

VIDEO MARKETING

If you managed to have great success promoting your apps through the world's top search engine, you might turn your attention to the second biggest search engine in the world. This is not Bing, not Yahoo, but YouTube.



YouTube, owned by Google, is a search engine in itself.

While you may already have at least one YouTube Video on your app listing page, you are not limited to one. And you are not limited to the people who discover the video through the app listing. They can also discover the video through a web search, a search in YouTube, or anywhere the video has been shared on a blog or other social media.

Creating videos.

You might consider creating videos using a camera like this:



IPEVO2 Camera can capture your app usage complete with the disembodied finger

You may have other ways of capturing video. Even better, you can give the task to someone that you have hired. Or allow them to create some great 3D animated videos using Adobe After Effects or a tool of their choice.

Should you do videos that are like a movie trailer that sells your product? Should you do videos that explain how to use your product? Should you do great videos that give a general overview of your product, or videos that highlight certain aspects, news, or features? The answer is all of the above, and is limited only by your time and resources.

Targeting videos.

Videos in Youtube should target keywords. These keywords should be included in your title, keywords

field, and description. As shown in this example, the first part of your description is the place to put a link.



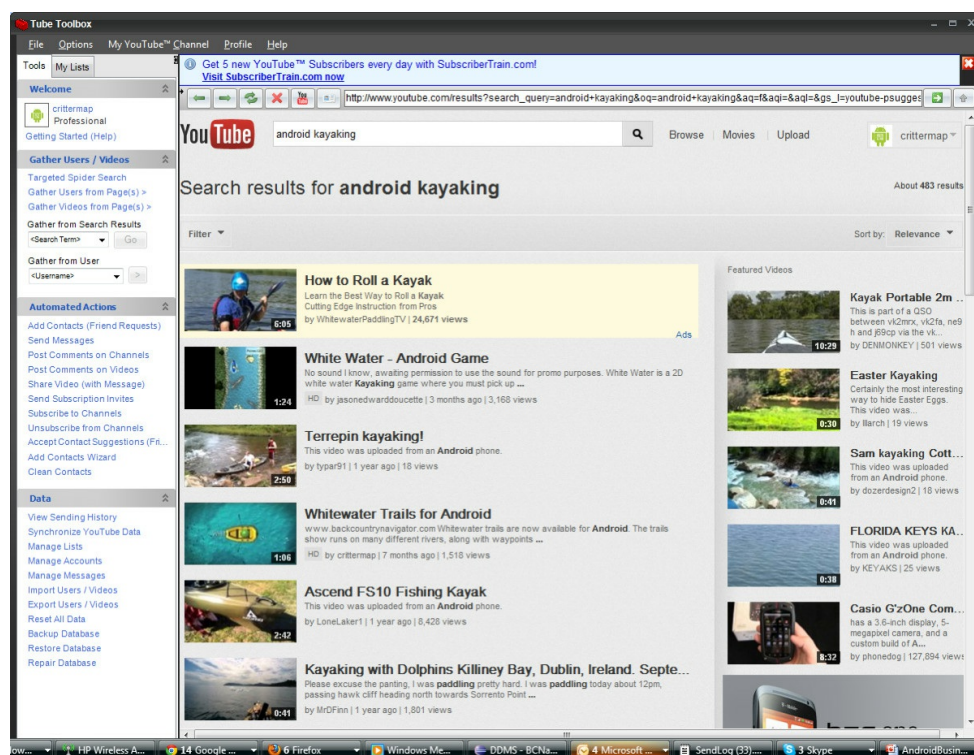
The URL you want to drive traffic to should be the first part of your description.

Promoting videos.

Besides being a search engine, Youtube is a social network. It is increasingly integrated with Google+. You want to get people in your network to watch and comment, and gain friends and subscribers for your YouTube Channel. You want to find friends, find subscribers, and invite people to read.

You could do this by basically hanging out all day on youtube and finding friends to invite that way. Much better to use some tools.

In the past, I have used TubeToolbox. It is windows software that will run in the background and will periodically invite people you have targeted to watch your videos. It complies with YouTube service terms of use, so you won't be just spamming. To use it, you can first gather a list of potential viewers by searching through YouTube.



Tube toolbox lets you gather potentially interested viewers by searching YouTube.

Given my preference for cloud based tools, I am looking at TubeAssist for future video campaigns.

Conclusion

Congratulations on reading this far. You have invested far more time than most people in learning about the environment where you plan to make money. There is still plenty to learn and I hope you will learn it through experience. Go forward and make some profit from apps.

If you wish to get quick links to some of the tools mentioned throughout this book (instead of googling them one by one), signup at <http://eepurl.com/d9tZj> and I will send you some clickable links by email. I plan to send out information periodically as I discover more things about the industry and do more experiments in the market. I promise to at least send out an update about whether a game about goatpacking is successful. I know you are waiting on the edge of your seat for that one.