Chapter 24. Free Mobile App: Lines in the Sand

Mobile Downloads

The mobile application business suffers from a “long tail” of popularity: a few apps do very well, but most of them flounder. According to Ken Seto, founder and CEO of mobile game company Massive Damage, “Some indie game developers get as few as a couple of downloads a day. This number is entirely dependent on your marketing, virality, and ranking in the app store.”

All businesses have competitors. But for mobile apps, the app store ecosystem puts that competition front and center. You can’t ignore your standings, and you can’t relax. “The tricky part,” he says, “is that it’s hard to stick at a certain ranking because everyone around you is trying to surpass you. So if your game doesn’t have natural hype—or isn’t promoted by Apple or paid marketing—you will slip in rankings. There’s no ‘typical’ here.”

Bottom Line

Expect yourself to be at the mercy of promotions, marketing, and the whims of the app store environment. The app store battle can be demoralizing, but smart mobile developers use the abundance of information about competitors to see what’s working, emulate their successes, and avoid their mistakes.

Mobile Download Size

As mobile applications get more complex, their file sizes increase. This poses a risk for developers, though; consumers on slower connections may abandon a download if it takes too long. Alexandre Pelletier-Normand, co-founder of Execution Labs, a game development accelerator, says, “If you want your app to be easily downloadable by anyone anywhere, it has to be under 50 megabytes, ‘on the portal’.”

An app that’s bigger than 50 MB for iOS devices will require a Wi-Fi connection. If a user doesn’t have a Wi-Fi connection, she won’t be able to download your app, and it’s unlikely she’ll bother trying again.

You can download apps that are larger than 50 MB on Android devices, but the process is greatly impacted by a warning from Google Play, which interrupts users and results in significant drop-off in the download process.

Alexandre makes a point of using the phrase “on the portal” to refer to the initial download from Apple’s App Store or Android app stores. He says, “Some developers will work around the limitation by having a small app on the Google or Apple portals, and this app will then download additional content ‘transparently’ from the developer’s servers while you play.”

Bottom Line

Keep your initial downloads small, and aim for less than 50 MB to minimize download churn.

Mobile Customer Acquisition Cost

Some application developers use third-party marketing services to pay for installations. This is an ethical gray area for mobile developers: you’re using mercenaries to artificially inflate your download numbers and juice your ratings, in the hopes that the resulting improvement in rankings will convince real users to download the app. There are legitimate marketing services out there for mobile application and game developers, but be careful who you work with. While few of the people we’ve talked with will go on record about pricing, such services cost from $0.10 to $0.70 per install at the low end.

Because few of these installations become engaged players, it’s critical that you segment out mercenary installers to avoid polluting your other metrics. The metric you really care about is how many *legitimate* users your mercenaries bring in, and how many of those become engaged, paying users.

A more legitimate form of acquisition is banners or ads within other applications. Typically, these cost $1.50 to $4.00 per installation; these installations are more likely to become legitimate users because they found out about the application and chose to install it themselves. “The trick is to get your average cost per installation (across both mercenary and legitimate installations) to somewhere between $0.50 and $0.75,” says Ken Seto. “These numbers are all based on free games [with in-game monetization], however. I don’t think it’s cash-efficient to do paid installs for paid games.”

Keith Katz also warns against spending up to your CLV, which he sees a lot of app developers doing:

> *Too many mobile game developers seem to think the math works when you spend dollar for dollar against your customer lifetime value. But they tend to forget that you pay tax on your revenue to the government and then there’s the “platform tax” incurred by Apple’s App Store or Google Play, which is 30%. If you’re spending $1 to generate $1 in revenue, you’re really spending closer to $1 to generate $0.60.*

Bottom Line

Pay around $0.50 for a paid (mercenary) install, and around $2.50 for a legitimate, organic one, but make sure that your overall acquisition cost is less than $0.75 per user (and, of course, less than the lifetime value of a user). These costs are increasing, in part because large studios and publishers are getting more heavily into mobile and driving costs higher, and in part because of the crackdown on some marketing service tactics for delivering paid installs.

Sincerely Learns the Challenges of Mobile Customer Acquisition

Sincerely Inc. is the maker of the Sincerely gifting network and a number of mobile applications including Postagram, Ink Cards, and Sesame Gifts. The company’s first application, Postagram, lets people create and send a custom postcard from anywhere in the world. Ink Cards, its second app, allows you to send personalized greeting cards. And Sesame Gifts allows you to send themed gift sets in a beautiful box. The company has evolved from the simplest shippable item—a postcard—to $30–$50 gifts with Sesame.

When the company first started in 2010, co-founders Matt Brezina and Bryan Kennedy assumed that mobile ads would be like Google AdWords in 2000—early movers (to using mobile advertising) would have a huge advantage in a giant, not-yet-efficient user acquisition channel. “We figured by selling the simplest gift on the planet, a 99-cent postcard, we could easily buy users, get credit cards, and begin to make our gifting network profitable,” says Matt. “This strategy was gut instinct and some small experiments we ran on an off-branded app (i.e., one that wasn’t obviously affiliated with the Sincerely brand).”

It turns out Sincerely was able to buy users through mobile advertising for Postagram, but not cheaply enough. “Our metric for success was buying a Postagram user cheaply enough that they’d become profitable in under one year,” says Matt. “And if not, could we cross-promote them to another, more expensive gifting app to get them profitable within one year, and eventually three months.”

Matt and Bryan found that not only were mobile adds too expensive, but also that they were hard to track and the conversion rate from initial acquisition to mobile installation and launch was abysmal. So they launched Ink Cards six months after Postagram and set a price point starting at $1.99 per card. “Through cross-promotion, we increased the lifetime value of an initial Postagram user by around 30%,” says Matt. “But the payback time *still* wasn’t what we wanted it to be.”

Now Sincerely has launched Sesame, which offers gifts at a higher price point. “We now hope to get into the zone of sustainably growing the business through ads,” says Matt. But as a result of the cost and challenges with mobile advertising, Sincerely spends a significant amount of time focused on virality. “Through necessity—because the mobile ad equation just doesn’t work well enough—we’ve learned a lot about driving growth by enabling our users to share their great experience with new friends,” Matt says. “We do this by giving users free cards for people they’ve never sent any to.” This focus on viral growth reduces the reliance on advertising alone for user acquisition in a mobile industry where acquisition tools aren’t yet mature or efficient.

Summary

- Sincerely launched Postagram to allow users to send 99-cent custom postcards, and assumed that mobile advertising would be inexpensive and efficient enough for the company to grow successfully.

- The company was able to acquire users, but it was too expensive (because mobile advertising was hard to measure, and drop-off rates were high) and not rewarding enough (because the lifetime value of the customer was too low).

- The company launched Ink Cards, personalized greeting cards with a higher price point. This improved lifetime value by around 30%, but the payback time was still too slow, and it wasn't enough for mobile advertising to be profitable.
- Now Sincerely has launched Sesame Gifts, curated gifts you can send to people for $30–$50. The founders hope that this new price point will allow them to grow profitably through mobile advertising, while they also focus more on growing virally to reduce their dependency on advertising channels.

Analytics Lessons Learned

Mobile advertising is more complicated and more expensive than you may initially realize, and you need to track the customer acquisition cost carefully. You also need to track how quickly users pay back the cost of acquiring them, as well as their lifetime value. Test different channels and track user behavior, and use virality as a means of lowering your acquisition costs.

Application Launch Rate

Simply downloading an application isn't enough. Users have to launch it, and some wait a long time to do so. In addition to the size constraints outlined previously, multiple tablets and phones connected to a single account may download the application at different times, skewing your launch analytics. In other words: it's complicated.

For free applications, many downloaders are just browsing applications casually and haven't committed to a particular game or application and the related in-game purchases, so a higher percentage of downloads are never launched. For example, Massive Damage sees roughly 83% of downloads for its flagship game, *Please Stay Calm*, lead to an application launch.

Bottom Line

Expect a significant number of downloads to never launch your application, particularly if it’s a free app.

Percent Active Mobile Users/Players

When it comes to inactivity, the first day is always the worst. There’s a gradual decline in active users over time, but the first day decline can be as high as 80%. Following that, there’s a gradual drop-off each day: for a cohort of users, as few as 5% of them may be around after a month.

An October 2012 study by mobile analytics firm Flurry showed that across more than 200,000 applications, only 54% of users were still around at the end of the first month, only 43% were around at the end of the second, and only 35% were using the application by the end of the third.[111] On average, users interacted with the application 3.7 times a day, though these metrics varied highly with the kind of application being used.

It’s important to note that overall engagement has increased in the numbers shared by Flurry (from 25% to 35% in the third month), but that frequency of use has dropped (from 6.7 uses a week to 3.7 a week). Flurry also notes that device affects engagement: smartphone users interact with an app 12.9 times a week, on average, but do so for only 4.1 minutes; tablet users interact with an app 9.5 times a week, but do so for 8.2 minutes.[112]

Bottom Line

Assume that a big chunk of the people who try your app once will never do so again—but after that initial cliff drop, you’ll see a more gradual decline in engaged users. While the shape of this curve will vary by app, industry, and demographic, the curve always exists, so once you have a few data points you may be able to predict churn and disengagement ahead of time.

Percentage of Mobile Users Who Pay

If your application is paid-only, then this will naturally be “all of them,” but if you’re running a freemium model where users pay for enhanced functionality, then a good rule of thumb is that 2% of your users will actually sign up for the full offering.

full offering.

For a free-to-play mobile game with in-app purchases, Ken Seto says that across the industry roughly 1.5% of players will buy something within the game during their use of it.

In-game purchases follow a typical power law, with a few “whales” spending significantly more on in-game activity and the majority spending little or nothing. A key factor in mobile application success is being able to strike a balance between gameplay quality (which increases good ratings and the number of players) and in-app purchases (which drives revenue). In a multiplayer game, maintaining game balance between paid and free players is a constant challenge.

Bottom Line

For a freemium model, aim for a conversion from free to paid of 2%. For a mobile application or game with in-app purchases, assume that roughly 1.5% of users will buy something.

Average Revenue Per Daily Active User

The average revenue per daily active user (ARPDAU) is a very granular way of measuring traction and revenue. Most mobile game developers focus on daily active users, and in turn on the revenue those users create.

SuperData Research has published ARPDAU benchmarks for different gaming genres:[113]

- $0.01–$0.05 USD for puzzle, caretaking, and simulation games
- $0.03–$0.07 USD for hidden object, tournament, and adventure games
- $0.05–$0.10 USD for RPGs, gambling, and poker games

GAMESbrief.com collected additional information from three game companies, DeNA, A Thinking Ape, and WGT:

> *DeNA[114] and A Thinking Ape[115] have both claimed that for most mobile games, expected ARPDAU is less than $0.10. However, YuChiang Cheng [CEO] of WGT said at Login Conference 2012 that an ARPDAU of less than $0.05 is a sign of poor performance, and that a good benchmark for ARPDAU is $0.12–015. Cheng also said that ARPDAUs on tablets are 15–25% higher than on*

smartphones.

Bottom Line

A good metric here is highly dependent on the type of game, but aim for an ARPDAU above $0.05 as a minimum.

Monthly Average Revenue Per Mobile User

There's no good way to generalize this, as it depends entirely on your business model. You should analyze competitors to see what prices and tiers they're charging, but don't be afraid to shake things up with new pricing in the early stages of your launch, provided you can measure the effect. Several industry insiders have told us that for mobile games, a decent average is $3 per month per daily active player—or $0.10 per day.

Bottom Line

Like customer acquisition costs, customer revenue comes from your business model and the margin targets you've set. Every vertical has its own value. But in the mobile app world, if you know your ARPDAU, the number of days a user sticks around, and your cost per install, you can do the math fairly quickly and decide if you have a viable business model.

Average Revenue Per Paying User

Figuring out a good benchmark for average revenue per paying user (ARPPU) is hard. It's highly dependent on the type of app (and we're focused primarily on games here) as well as the operating system.

Nicholas Lovell of GAMESBrief.com splits paying users into three categories: minnows, dolphins, and whales:

> *Real whales can spend an enormous amount of money. Social Gold reckons the highest group of spenders has a lifetime value of over $1,000, with some spending over $20,000 on a single game.* [116] *Flurry, meanwhile, says that on iOS and Android in the US, the average transaction value for an in-app purchase is $14, and 51% of revenue is generated from in-app purchase transactions of over $20.* [117]

Nicholas recommends looking at ARPPU for whales, dolphins, and minnows

Nicholas recommends looking at ARPU for whales, dolphins, and minnows separately:

- Whales: 10% of payers, ARPPU of $20
- Dolphins: 40% of payers, ARPPU of $5
- Minnows: 50% of payers, ARPPU of $1

"These [averages] are dependent on your game," says Nicholas. "Not just which platform or genre, but how you design. For your whales to reach an ARPPU of $20, some of them must be spending over $100. Is this possible? Your dolphins need to have a good reason to keep spending a little bit of money each month. Have you created one? Your minnows need to be converted from freeloaders to buyers. What will make them jump?"

Bottom Line

Recognize that in a free-to-play multiplayer game, most users are just "fodder" for paying users. Early on in the user's lifecycle, identify a leading indicator in her behavior—like time played per day, number of battles, or areas explored—that suggests whether she's a non-payer, minnow, dolphin, or whale. Then provide different kinds of in-game monetization for these four segments—adapting your marketing, pricing, and promotions according to that behavior—selling bling to minnows, content to dolphins, and upgrades to whales (for example).

Mobile App Ratings Click-Through

Good ratings and reviews have a significant impact on downloads, but encouraging users to rate an app can be tough. After a few uses of the application, most developers pop up a message asking for a review; some developers even vary the message to try to encourage ratings. For example, one mobile developer asks questions like "Do you like this application?" or "Would you like to see more features and free content?" in the pop up; clicking "yes" takes the user to the ratings page.

Alexandre Pelletier-Normand warns that any message that offers something in exchange for a rating and isn't neutral could get you blocked from an app store.

But he also says, “You must proactively offer users the ability to rate your app at a strategic moment—ideally early in the game, since you want many ratings quickly—after a memorable gameplay sequence. Ratings are the most important factor considered in the ranking of the app.”

Review rates vary by app price and type. In one Quora response, a developer said expensive paid apps had a 1.6% review rate; cheap paid apps had a 0.5% review rate; and free trial apps had only a 0.07% review rate.[118] As that poster observed, sites like *xyologic.com* have detailed data on download and ratings counts, so you can compare yourself to your particular segment. For free games, Massive Damage sees a 0.73% ratio of downloads to ratings.

Bottom Line

Expect less than 1.5% review rate for paid apps, and significantly less than 1% for free apps.

Mobile Customer Lifetime Value

There’s no good way to generalize the lifetime value of a customer, because it’s a function of spending, churn, engagement, and application design. But it’s a fundamental part of any business model, and it anchors other factors such as customer acquisition cost and cash flow.

GigaOm’s Ryan Kim observed[119] that according to recent data,[120] freemium apps (in which users pay for something within the application) have eclipsed premium apps (where the developer offers a second, paid version) in terms of revenue, as shown in Figure 24-1.

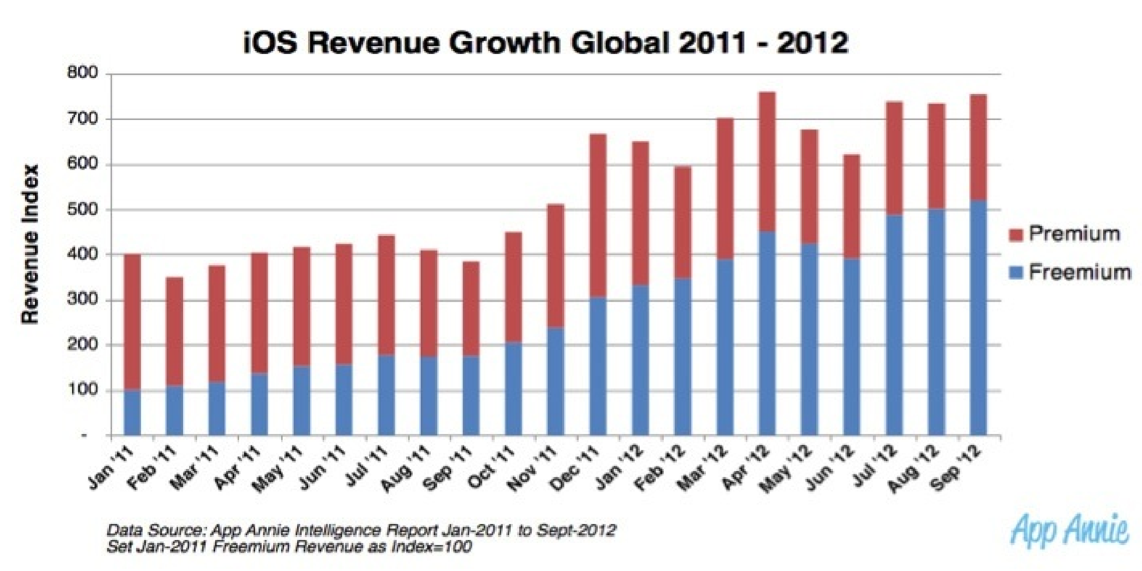

Figure 24-1. Premium is so 2010

Customer loyalty is also linked to lifetime value, and loyalty depends heavily on the kind of application. Flurry has done extensive research, as seen in Figure 24-2, across mobile applications that use its analytical tools.

Figure 24-2. Maybe it's not just you: engagement varies by app category

As TechCrunch's Sarah Perez points out, splitting application types into two dimensions—how frequently an application is used, and what kind of user retention the application sees in a 90-day period—suggests different loyalty patterns.[121] These can in turn inform pricing strategies to maximize user revenue:

- Frequently used apps that retain loyal customers may be a better vehicle for advertising, recurring fees, or well-designed in-app content.

- Frequently used apps that lose users after a while may satisfy a need (such as buying a house, or completing the game) and then go away. A per-transaction fee on completion, as well as the right to reach out to the user when the need occurs again, will matter more than long-term engagement.

- Infrequent, low-loyalty applications need to "grab money" early on, so they may be better as a sold application or using a one-time fee.

- Infrequent, highly loyal applications need to make the most of those infrequent interactions by upselling, encouraging the user to invite others, and making sure they stay in the user's "utility belt" of useful tools.

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[111] *http://blog.flurry.com/bid/90743/App-Engagement-The-Matrix-Reloaded*

[112] *http://blog.flurry.com/bid/90987/The-Truth-About-Cats-and-Dogs-Smartphone-vs-Tablet-Usage-Differences*

[113] *http://www.gamesbrief.com/2012/09/arpdau/*

[114] *http://techcrunch.com/2012/06/13/the-1-grossing-game-on-android-and-ios-denas-rage-of-bahamut-has-almost-even-revenues-from-both/*

[115] *http://www.insidemobileapps.com/2011/11/16/a-thinking-ape-interview-kenshi-arasaki/*

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[118] *http://www.quora.com/iOS-App-Store/What-percentage-of-users-rate-apps-on-iTunes*

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[120] *http://www.appannie.com/blog/freemium-apps-ios-google-play-japan-china-leaders/*

[121] *http://techcrunch.com/2012/10/22/flurry-examines-app-loyalty-news-communication-apps-top-charts-personalization-apps-see-high-churn/*