Deployment Plan

EECS 448

Project-4: GroupLoop

Team: Ferocious Hammerheads

Team members: Bisher Anadani, Jon Greene, Ryan Kass, Kate Ramge

We as Team Ferocious Hammerheads built an Android application centered on community living which includes but is not limited to family houses, apartment buildings, dormitories, etc.

As such our deployment plan must include costs of hosting, monitoring, advertisement, and customer support.

- ## Hosting

  We built an Android app in Java, which means we have a couple of options to deploy the app which include hosting the apk file on a personal website or alternatively on an apk hosting website, or publishing it on Google Play. We will probably also need to create

a Website for the application which would serve as both a way to access the app on PC for users to use as a kind of admin mode or on mobile as an alternative/complement in addition to the app for uses that don’t wish to download the app or can’t because of technological limitations

1. Google Play:

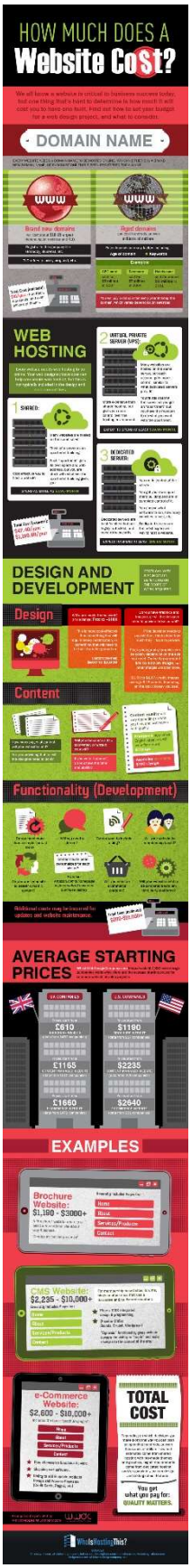
   Google Play is clearly the best option for publishing an Android since it provides great access to the 1 Billion monthly active users on the platform. That would mean great exposure for the app but also provides ease of access to the users from the standpoint of reaching the largest slice of the user base. The cost of getting the app published on Google Play is $25. There might also be other incurred costs in possible modifications/updates to the app to meet Google Play guidelines for security, intellectual property rights, and monetization etc.

2. Alternatives to Google Play:

   There are plenty of other platforms that allow app developers to publish their applications. That includes Amazon Appstore, SlideME, or Samsung Galaxy Appstore. These stores have costs ranging from free to $50 to get published, and all have their own pros and cons. In terms of exposure to the largest user base, Google Play is still the best option.

- Website

  Actually getting a website with similar functionality to the application might be the highest cost; nevertheless it would really improve the functionality of the service by expanding the reach of the application. As can be seen in the, research online shows that overall cost of getting a website is high. The cost of hiring a developer to write it ranges from $2500-$10000. The cost of hosting the website would then range depending on the service used. It could be using Virtual Private Server which costs around $400 a year, to about $1500 a year for a dedicated server for the



service, which would probably be the option chosen for the app given the requirements of the services.

Total Estimated Fixed Cost: ~$7500

Total Estimated Recurring Cost: ~$1500/year

- Monitoring and Database services:

Most applications have some kind of monitoring/analytics software along with licensed Database applications on dedicated servers or online Database servers. GroupLoop uses Firebase which is a service provided by Google. Other services provided by Google like Google Analytics could also be utilized in the future. The app as it is right now uses the free plan from Firebase, but as the app gets published and starts scaling we will have to move on to a paid plan. Firebase offers a fixed price $25 monthly subscription for growing apps, but even as the app gets bigger we would have to move on to a “pay-as-you-go” model which can incur an estimated cost of around $2000 a month. Also, a premium Google Analytics account costs around $150,000

a year. Despite the important info a GA account would provide in terms of insight, the cost is exorbitant.

Lower Estimate of Cost: $1500/year

Upper Estimate of Cost: $250,000/year

- Customer Support:

  As the app scales up and gains more users, the need for a customer support department grows. An increased size of users also means the chance of bugs coming up increases. To be able to manage the massive amounts of customer needs, we would probably need a customer support team of about 2-5 trained technicians responding to phone/email feedback and writing technical costs. Customer support technicians would have to be paid hourly at an estimated cost of $15/hour. They will also have to be trained on interacting with customers and using tools which would cost around $2000.

- Advertisement and possible revenue streams:

  - As outlined in the previous pages of this Deployment Plan, it's clear that the deployment of the application as it scales will

incur massive costs. To offset these costs the app would have to find ways to bring in revenue. The first option considered is selling NFC chips. The whole premise of the GroupLoop app is to use the NFC chips to “tag” objects and that is the main selling point of the app. So we could sell our own proprietary NFC chips which can be purchased for cheaply at about $25c/chip and then sold for $1-$2 per chip to the users. Depending on the popularity of the app and willingness of customers to pay for premium of having chips, this stream could generate revenue anywhere between $5000-$15,000. The other option involves advertisements. Advertisements would also have two use cases. The first use case is advertising the GroupLoop app, which includes running advertisements on websites that draw the GroupLoop demographic, generally teenagers. So that could be banner or video ads on websites like Facebook, YouTube, Twitter, or Reddit to attract new customers to the app. Taking Facebook as an example, those cost of advertisement could break down to: the average Cost Per Click (CPC) which is about $0.35 globally and about $0.28 in the U.S.,

the average cost per like which is $0.23 in the U.S., and the average cost per app install is $2.74 in the U.S. This would come to an estimated cost of $1500-$5000/year depending on the type of ads ran, how long they're ran for, and what platform we choose to have the ads ran on. The second usage of advertisements would actually be to run native third party ads on the Group Loop app. This could be a potentially lucrative revenue stream as it can bring in revenue estimated to be between $12,000-$100,000 a year. The reason the range of estimated revenue for ads is very large is that Google usually takes a cut between 30%-70% of ad revenue depending on the deal negotiated. In addition, ad revenue is greatly dependent on the number of monthly active users the app has, the type of ads ran (ex. Video, Banner, etc.), and the clicks to third parties generated. The final possible revenue generating model is the paid or Premium ("Freemium") model. With the paid model, we would charge the users for downloading the app, a reasonable price based on market analytics would be $4.99-$5.99. Unfortunately, if published on Google Play, Google would also

take a cut. At an estimated 100,000 new users every year the estimated revenue generated would be $350,000-$450,000. The other model would be the “Freemium” model where the app itself would be free but would come with restricted access to certain features that would only be available to users paying a monthly subscription. This subscription plan would be reasonably priced between $0.99-$1.99 based on market analysis. With Google also taking a cut out of in-app revenue, 100,000 new users every, and about a 30% conversion rate of non-paying to paying users, the estimated generated revenue would be between $540,000-$750,000.