FYP13026

Analysis and Conduct of Mobile Application Development

Project Plan

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Section 1 – Introduction

1.1 Overview

Mobile application becomes popular in recent year, which is a software application to be run on smartphones, tablets or even computer devices. In the application distribution platform, like Apple's App Store, Google Play, Samsung App Store, millions of mobile apps can be found with various categories and over billions of downloads.

Originally, mobile apps were designed for general usage and information organization, such as calendar, email, contact, weather and stock information. Increasing demand of public raised the rapid development of different categories of apps. For example, mobile game, photo editing, e banking, news and location services. Mobile game becomes the largest market in mobile application development.[1]

From all successful mobile game, we hope to do a research analyzing the key components to success. With the combination of all elements into a mobile game to find out the effectiveness of each of them leading to accomplishment.

Figure 1 Millions of Mobile App in Market

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[1] GameBeat, http://venturebeat.com/2013/06/06/global-games-market-to-hit-86-1b-by-2016-as-mobile-charges-ahead/

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1.2 Previous Work

According to Flurry (Figure 1.1), users spent 3 billion hours on mobile games each week and each player used 43% of their daily time in playing games.[2] Numerous researches are done on the essential factors for successful mobile game development, willing to find out the core components, with the inspection of the concept, design, gameplay and type of gaming app.3 As mobile game is a enormous commercial market, there is a increasing trend of game development.
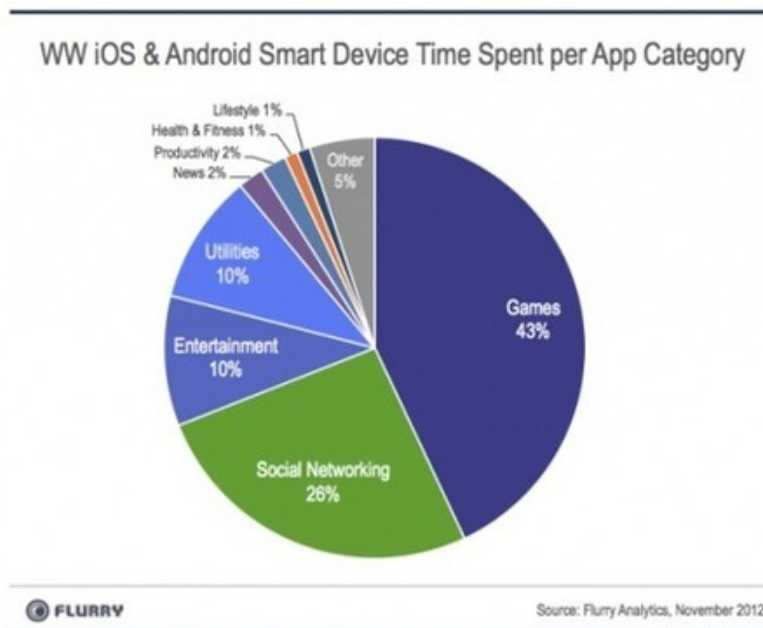

Figure 2 Time Spent Per App Category

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[2] Flurry, http://blog.flurry.com/?Tag=App%20Usage

[3] Hire phone app developer builder, http://hireiphoneappdeveloperbuilder.blogspot.hk/2013/02/4-essential-factors-for-successful.html

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Section 2 – Objective

Objective of this final year project:

- *To verify the possible key elements to successful current mobile game through mobile app development*

To classify what is a successful mobile games, we will take the mobile game from App Store Best of 2012[4], Apple'N'Apps 100 Best Games Of 2012[5], Google Best Android games of 2012[6], as our samples.

From the selection of best game of 2012, there is an investigation of the possible key elements of success of the games. Analyzing the way to combine all elements, which will then coordinate them into this mobile game project. The final product will be launched in the market and further analysis on the reflections of players.

Through this project, there will be a details evaluation and conclusion on the essential components of a successful mobile game.

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[4] App Store Best of 2012, http://mag.udn.com/mag/digital/storypage.jsp?f_ART_ID=430057

[5] Apple'N'Apps, http://applenapps.com/feature/the-100-best-games-of-2012-applenapps-picks-top-10

[6] Google Best Selection, http://www.phonearena.com/news/Google-picks-12-best-Android-games-of-2012_id38132

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Section 3 – Problem Setting

3.1 Problem Description

To attain the objective, our team has done some research on the recent successful mobile games, finding the possible elements leading to popular. We will coordinate all elements into our mobile game development and then further evaluate them through various means.

From the research, there are 3 general aspects in a successful mobile game – design, game type and setting. Design is definitely a very important issue of a game as the graphics affect the first impression of players. To increase the number of players and downloads, the target player should be female users. The style of the design of characters and game background should be cute, adorable, and clear. Especially the characters design, a very simple game with good characters

Figure 3.1 Chain Reactions in Candy Crush

also can leads to a popular game (e.g. Mushroom Garden).

Figure 4.2 Mushroom Garden

Chain reaction with beautiful and gorgeous visual effect is another factor that gives player an expectance of further fancy scene, like the elimination of candies in Candy Crush.

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Figure 5.3 Game Map of Plant vs. Zombie 2

Game type is the second thing that players focus on. Successful mobile games usually include many levels in the big game map and the playtime of each level is just a few minutes. For short term goal, player ne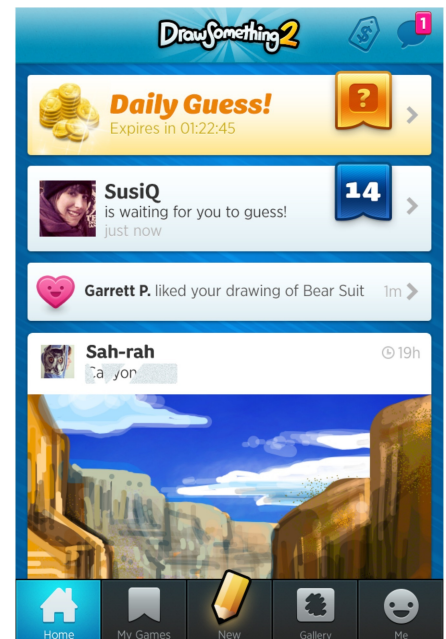eds to pass the corresponding levels to get the best performance; for long term target, players needs to use the fastest time to clear all levels in the big game map. The map of Plant vs. Zombie 2 is the best illustration of the above elements.

Bonus levels should be included in order to give a surprise to players and some of them are needed to cooperate with friends to unlock such that there are interactions between players, like the play and pass function of draw something.

Figure 3.4 Friend List of Draw Something

Setting of the game is the most different part for the game implementation. The control of the game must be simple with several gestures as it is a mobile game not a computer game. Skill is not a crucial part in the game yet the game is influenced by luck. In the game setting, the balance between player skill and luck is the challenging implementation.

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3.2 Graphic Design – 3D Modeling

3D graphics will be used in our mobile game development to display a better quality and visually effect of the game. The whole game map and characters are designed in 3D modeling and all of them are designed by comprehensive 3D animation software, Autodesk Maya. After 3D rendering & imaging, the objects will be imported to game engine for further implementation.
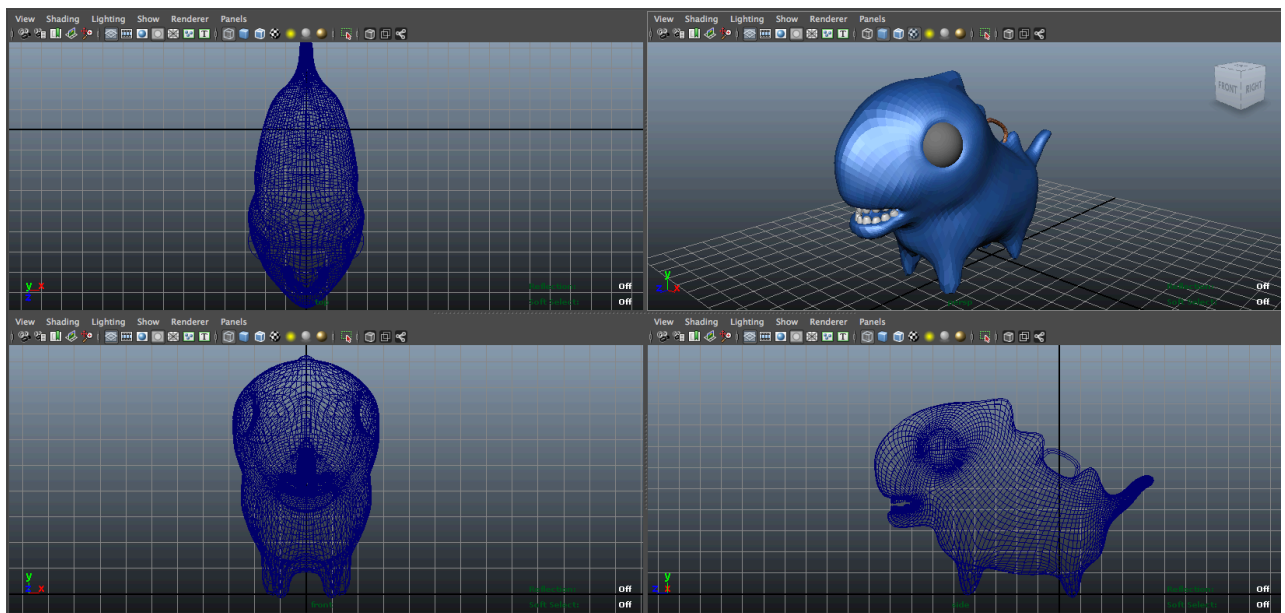

Figure 4 3D Modeling of Character