

KIRANA MOBILE GAME

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ABSTRACT

Mobile game development is growing rapidly in all aspects. As many mobile game developers emerge everyday, the mobile gaming and innovations in this field improves rapidly. Since Mobile phone users' growth is rapid every year, the entertainment industries have shown a good interest towards mobile games. Kirana is a mobile game based on the ancient epics of Malaysia and Indonesia literature, Hikayat Panji Semirang. The game will be developed by Flash and using J2ME platform. The player will sent SMS to the game server and download the game through GPRS. Player can download accessories or weapons to increase power in a certain level. Revenue can be generating from this process. Firstly, the player should register and then download the game. Player can choose whether they want to submit their score to the game server or not. We will give prizes to the player that gets the highest score. Scores will be published on the web site. User will get all information about game on the website. Advertising new products through mobile games become familiar in mobile game industries today. For example, advertising the painkiller. This painkiller can be used to heal gamers.

ABSTRAK

Pembangunan permainan *mobile* sedang berkembang dengan pantas di dalam semua aspek. Seiring dengan pertambahan bilangan pembangun permainan setiap hari, bidang permainan *mobile* dan inovasinya semakin meningkat dengan pantas. Sejak berlakunya pertambahan pengguna telefon bimbit pada setiap tahun, industri hiburan telah menunjukkan minat yang baik terhadap permainan *mobile*. Kirana adalah sebuah permainan *mobile* yang diadaptasikan dari kisah epik, hikayat kesusasteraan Melayu dan Indonesia, Panji Semirang. Ia dihasilkan menggunakan Flash dan platform J2ME. Permainan ini perlu dimuatturun oleh pemain menggunakan GPRS dengan menghantar SMS ke pelayan permainan. Pemain boleh memuatturun aksesori atau senjata bagi menambah kuasa di dalam sesebuah tahap permainan. Keuntungan boleh diperolehi dari memuatturun aksesori tersebut. Pemain perlu mendaftar terlebih dahulu dan kemudian memuatturun permainan. Pemain mempunyai pilihan sama ada ingin menghantar markah ke pelayan permainan ataupun tidak. Kami menyediakan hadiah kepada pemain yang mendapat markah tertinggi. Markah akan dipaparkan di laman web. Pengguna boleh mendapatkan semua informasi mengenai permainan di laman web. Pengiklanan produk baru di dalam permainan *mobile* telah menjadi sesuatu yang biasa di dalam industri permainan *mobile* pada hari ini. Contohnya, pengiklanan ubat tahan sakit. Ubat tersebut boleh digunakan di dalam permainan untuk merawat pemain.

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CHAPTER 1

PROJECT OVERVIEW

1.1 Project Overview

A mobile game is a video game played on a mobile phone, smartphone, PDA or handheld computer. Mobile games may be played using the communications technologies present in the device itself, such as by text message (SMS), multimedia message (MMS) or GPRS location identification. With the number of mobile gamers around the world expected to reach 220 million by 2009, the mobile gaming business is projected to expand to higher levels and constitute a bigger portion of the profit pie for the cellular carriers and handset makers. Basically, this project will apply this method: Users will send SMS and get SMS from the server. Then, they will get a link that will connect them to the game. The process of downloading the game will start immediately after the users connect the link through GPRS. It just takes a minute to download the game. Then, the user can start play the game.

Initially, our target market will be the teenagers and young adults. Our core focus is the development of mobile games for J2ME platform.

1.2 Background of Problem

We can see that there's a vast growth in number of mobile game developers in countries from the West as well as players from Hong Kong and Japan. Although there are many mobile game developers globally, but it has yet to be taken seriously in our local market.

- i. Satisfying the need that motivates a user to interact with a mobile game is not enough to guarantee a positive user experience. Game performance must match or exceed the user's expectations.
- ii. Less interested in learning about customs and cultures of Malaysia.
- iii. Lack of interest as the primary reasons mobile phone users did not purchase another game (after an initial play or purchase).

1.3 Project Objective

Kirana mobile game's objective is:

- i. To design a prototype model of mobile games based on the ancient epics of Malaysia and Indonesia literature, *Hikayat Panji Semirang*.
- ii. To develop the model (level 1) of the games.
- iii. To publish mobile game using Sun's J2ME (Java 2 Micro Edition, recently rebranded simply "Java me") platforms.

1.4 Scope

The project scope has been identified to develop the prototype of the game as listed below:

1. The game will be based on the ancient epics of Malaysia and Indonesia literature, *Hikayat Panji Semirang*.
2. The development of mobile games for J2ME platform.
3. The typical customer profile for this project falls in two separate categories, which are teenagers and adults. Based on several reasons, younger users or the youth market are more likely to be comfortable with the intrusive nature of mobile communications. Most teenagers own mobile phones and are very aware of the latest technology trends in the market.
4. The backgrounds of the game for each level are static. The background / environment will change for each stage.

Game Features:

- i. We will provide the interactive user interface to make sure it is easy for gamers to use the interactive features of the game.
 - a. Interactive User Interface – Every stage will be different in term of environment and background.
- ii. User friendly regardless of age and mobile friendly.
 - a. Gamers can download easily through SMS and GPRS.
 - b. We provide simple user manual before the game start.
- iii. Easy-to- navigate play experience.
 - a. We provide simple user instruction for the key manual.

1.5 Importance of Project

The importances of this project are:

- i. The mobile gaming market is growing very fast and it will capture the market of pc games soon. Day by day, game developers are increasing in this field because of the increasing mobile phone users all around the world.
- ii. Mobile gaming makes a lot of noise but little real impact locally at present. Most of the impressive mobile game developers are Westerners or joint ventures with them. In Asia it is considered a new trend and still at an infant stage. It will need some more time before the move to mobile gaming really takes off – but when it does, it will be a huge new market contributing to big success. We take this as a positive sign. This is the right time to venture into mobile game business before it really takes off and by the time it happens, we will established a brand name in the mobile game market. (Longoria, 2004)
- iii. To instills Malay cultural and positive values because nowadays, people are less interested in learning about customs and cultures of Malaysia.

1.5.1 Enabling Technology

The enabling technology that we applied to develop the total system are:

1. The total system that will be developed is for Microsoft Windows environment.
2. The scheduling system will be using Flash as a programming language.
3. Mobile games are developed using Sun's J2ME (Java 2 Micro Edition, recently rebranded simply "Java ME") platforms and technologies.

1.6 Structure of the Thesis

1. Chapter 1

Chapter 1 covers background of the project. The complete description of the project will be explained more details in subsequent chapters. We will grab the opportunity from the problem that we see in mobile game markets. The scope and objectives of the project have been identified to guide us in the process of development. The contribution and important of the project also been discussed in this chapter. The enabling technology that will be applied to develop this project has been identified.

2. Chapter 2

Chapter 2 describes about the literature review. The history of mobile games is reviewed. The technology in mobile game and programming language that will apply in the development of this project are pointed out. The mobile game characteristics, types of mobile games, the mobile value chain, short message service, history of flash, overview of the JAVA Environment, the client-server

architecture, the world wide web, apache, MySQL, Macromedia Dreamweaver 8 and PHP are then described on detail. We also did a similar product analysis and gave the example of Malaysian J2ME games.

3. Chapter 3

Chapter 3 introduces the methodology that will be applied to this project. A project methodology covers all things that need to do until the project complete. Agile Game methodology was the methodology that we choose to apply in this project. The traditional method is compared with this method. Scrum is a more specific implementation of the agile method. The characteristics of scrum, the process and each phase have been defined. The UML has been applied at the design stage to ensure that each process is clearly defined. We used the Gantt chart for planning and scheduling operations.

4. Chapter 4

Chapter 4 presents about the design aspects of the development of mobile games. We will use Java 2 Platform Micro Edition (J2ME) as the platform. In this chapter, the J2ME Architecture has been discussed. The component design of this project which includes the class and sequence diagrams is pointed out. The use-case has been described detailed in this chapter. The state-chart diagram and activity diagram also been documented. The main difference between activity diagrams and state charts is activity diagrams are activity centric, while state charts are state centric. The example of the web interface for this project is also been shown.

5. Chapter 5

Chapter 5 presents the business plan for this project. Each aspects of marketing, market research, operation, risk analysis, competitor analysis, business and revenue model, customer support and financial planning has been clearly identified. The product description and value propositions also been discussed.

6. Chapter 6

Chapter 6 summarizes the achievement, constraints and challenges and recommendations for this project.

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