Designing and Marketing a Mobile Video Game

Case: 5 Elements: The Ancient Source

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ABSTRACT

The video game is a concept which was announced in the technology-developing era of the 90s. Since then, the video game, which applies both to the idea and computer technology behind it, has become a unique way of entertainment. Due to the significant development of technology and its applications in different sections of society, in this decade, the video game brings more benefits than just being an entertainment tool. Moreover, the video game industry is predicted to be extensively developed shortly. The traditional entertainment media has already been widely acknowledged; however, the video game is something new and entirely different from other entertainment. Because of the development of mobile technology, the mobile game, nowadays, becomes the essential application in every mobile phone all over the world.

The thesis aims to understand how mobile video games could gain more users, to analyze different features of well-known game titles and to show how adding game features relates to the business. Next, by analyzing data, this thesis introduces a case study, 5 Elements: The Ancient Source, and uses it as a blueprint for mobile game designing. After that, this thesis is going to point out some marketing strategies that the case company has used in launching this game on the market.

The data of this thesis is mostly collected from available books and research from the internet. Some other data is received from trusted newspapers from many different countries. The data is analyzed based on the investigations of specialists from related studies and by the knowledge of the author. However, due to the limitations of this study, further research is needed.

Keywords: video games, mobile technology, casual game, MMORPG, marketing

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1 INTRODUCTION

A mobile phone, nowadays, has become a widespread tool in society and has been used widely around the world. In this era, when the technology has been rapidly developing, people are more and more familiar with using a mobile phone. Since the first day of the invention, in 1973, the mobile phone has been authenticated as a massive revolution in telegraphing (Goodwin 2017, 1). Furthermore, as today society becomes busier and more dynamic than ever before, people need a device that helps them in accessing information and connecting with others in the fastest and most comfortable way. During the development era of the mobile phone, the invention of a new entertainment media has changed the purpose of using the mobile phone.

According to a study by Ashfaq Ahmad, media and entertainment are a critical part of our lives, and it would be impossible to live without them (Ahmad 2016, 1). Because the change in the economic situation does not allow spending much time on entertainment, people need a way to be able to access media, games, movies, and articles while on the go.

Indeed, thanks to the invention and development of mobile devices, at the end of the twentieth century, the era of mobile application development (or mobile game in details) has begun. Starting with small arcade game titles, ringtone setting, calculators or calendars, there are more and more operating systems which allow developers to create more applications or games. This shift could be known as a revolution in phone development because, in the first mobile production period of the mobile app, all information about the operating system was secretly kept within the inner circle of production. (Clark 2012, 6.)

Last but not least, further important developments during this era were a new concept "time-waster" games appearing and Nokia, a Finnish company, being the leader of putting a video game on the mobile phone. Some remarkable familiar game titles introduced were Snake, Pong, Tetris, and

Tic-Tac-Toe. These mobile games are undeniably the first stones on the road of the mobile game developing industry. (Clark 2012, 7-8.)

1.1 Research Background

Having been a game designer and a game producer in the internship period at Sajbernet Enterprise, a mobile game developing company in Vietnam, I believe that in order to create a successful video game, it is necessary to have a deep knowledge of the gaming market in Vietnam and other countries. By analyzing the gameplay of some example game titles on the market and using knowledge about the signature ethics of each country, this research will give a view that should be useful in starting implementing or investing a mobile game in each market for the new mobile game developers.

1.2 Research Question and Objective

Apparently, the main purpose of this research is answering the central question:

How should the mobile game be designed and published in this economic situation?

In order to answer the above question, this thesis will analyse some of the current well-known mobile video games. The analysis would be about their aesthetics, how the gameplays work and the purpose of using these gameplays in the game. Further, the meaning would also be related to the marketing strategies of each company.

As this research will have to analyze some game titles that are on top trending of the market, deep analysis in gameplay and business strategy of the publisher would be necessary for this research.

However, the topic is rather wide, and it depends upon the change of market trends and the state of the economy. Thus, this research can only show some theories that might be used as a reference for anyone who would like to start working in the mobile game industry.

1.3 Structure of Thesis

This thesis is divided into two different main parts. The first part is going to introduce the mobile game development and analyse some game titles in the view of a game designer and game producer. By analyzing some game titles from these countries, the author will point out the trend features in mobile game implementation nowadays. After that, this research will start learning how to implement and publish a game that meets all the requirements to earn profit from the game. At the end of this research, there will be a summary and further discussion about these studies by the author.

1.4 Organization and Project Background

Sajbernet Enterprise, which is located in Ho Chi Minh City, Vietnam, is an "outsource" mobile game and application developing company. To join their project as a game designer and producer, learning and understanding the current market trend in Vietnam and Canada, where the 5 Elements: The Ancient Source was first place that this game would be published, and specialized knowledge in game developing is necessary.

The game title called "5 Elements: The Ancient Source" is a mobile game developed by Sajbernet. This game is a combination of many game features such as 3-match, RPG, and real-time strategy. In order to prepare for implementation, there are two months for game designers and producers to analyze the market and choose a suitable way to implement the game. This game started in September 2017 and was playable at the end of November 2017. This game is still in the developing process.

2   RESEARCH METHODS

In this section, the author will introduce the research and data collection method. How can the data be reached and collected? How do these data support the research? These questions will be answered to clarify the answer to the primary purpose question of this study.

2.1   Methods

To understand the process of implementing a mobile game and the trend in the mobile game idea and design, this research uses a diversity of references. Most of them are collected from online articles, newspaper, and investigation of other authors. Besides, this research also uses data collected from trusted articles which could be found by school article database.

2.2   Approach

The primary purpose of this research is to serve as a reference document for people who are preparing to design a mobile video game and to point out some practical ways in the marketing business. By using the data which has been collected from the multiple sources that have been mentioned in the above section, the author used the deductive approach to complete this research.

Besides that, the author's self-reflection and results after the actual training process has also been used to improve the quality and the practical aspect of this research

2.3   Data collection

Detailed data was collected through online books, online articles, trusted newspapers, professional research in the mobile gaming industry and

academic research with a similar topic. Besides, the author uses the practical case study that helps to increase the practical feature of the study.

References are available and could be collected from many online sources. The academic explanations were found in game studies articles from Masto-Finna, Game analyses were obtained from well-known game analyzers from online forums or video game blogs, such as Polygon. At the end of the research, an introduction to game design and publication was deduced based on the data has been researched and self-experience.

According to the structure of this study, the research can be divided into two different sections. The first part of this study is a literature review. In this part, lots of concepts in a video game, especially a mobile video game, are listed and detailed. In this section, these are some articles that present the first era of gaming development, the invention of mobile entertainment and the purpose of it. Secondly, this research goes through the mobile game criticism. By analyzing the well-known game titles such as Candy Crush, this study applied lots of data from the criticism articles from many blogs of game developers and game analysts. According to the research about game criticism of Michael Heron, analyzing a game title can be known as similar to reviewing a film. The most effective way of evaluating game is by examining and critiquing. The whole review that includes critiques, discussion and offering a new perspective on a video game is always more effective than short comment good or bad. (Heron 2017, 1.)

Thus, this research will use these reviews as references. These reviews are practical experiences of other analysts or players that would show the fullest and trustable impression of that game title. These experiences are most suitable to understand and explain the theories, background story and the core mechanics of the games.

The game analysis in this literature review part will follow the steps in the Game Analysis Guidelines of MIT University.

- The first impression before writing: play the game. Having experience in gameplay and background story help us in shaping the rule of the game. The more master the game you can, the more knowledge you have in the gameplay. Indeed, it would be easier to understand and make a deep analysis of the game. Besides that, noting and reading all the comment of other players, users will give the whole and fulfill sight of the game. (Jakobsson 2011, 1-2.)

- Choosing Type of Analysis: As having been mentioned above, this research uses the comparative analysis and case study methods in analyzing data for the research question. According to this research of MIT, to strengthen the argument, the comparison between two games (or game and other media) is necessary that would define and enhance the terms that we are analyzing. In spite of that, choosing the features in comparison is exceptionally vital. Comparing two titles that have so little in common makes the research be fierce and digress. Thus, selecting an appropriate set of aspects in comparing would not only highlight the contrast between them but also strengthen the sharp point and weakness of both game titles. On the other hand, Case study method is quite more massive and uses lots of theories in game design. (Jakobsson 2011, 2-4.)

- Contextualize. This critical part allows audiences understand the concepts in game implementation such as the role of game implementing team, game genre, technological context, socio-historical context, audience and relations to other media. The mission of this part is aimed at the unknowledge audience in gaming; make it possible to read even this is out from their knowledge zone.

- Game overview: Briefly explaining all the aspect of the game. What would you do in the game? What kind of that game? Game rules? This part gives a deep understanding in-game elements. Lots of concepts such as Game world rules, Level of Abstraction and Game mechanics and resulting dynamics will be analyzed and compared to launch the relationships

between them and explore how the game system works. (Jakobsson 2011, 4-5.)

By following the guidelines of MIT in game analyzing, this research becomes the reference that possibly readable for both professional and non-pro in game implementation and publication.

2.4   Analysis

According to the introduction on the above section, all the study will be done within the reviews. After collecting data, a report is necessary to complete the research, and that leads to the result of this study, answering the research question. Furthermore, an analysis of the collected data will also improve the quality of the research. Most of the analysis will be done by the author, besides that, some of them will be based of consulting by other experts from online references.

3   LITERATURE REVIEW

3.1   Mobile Video Game

Before going to investigate and evaluate some the most well-known game titles in this decade, we must have a look through the history of the development of gaming industry and the mobile game development in details.

As mentioned above, with the development of technology in the 1950s, the video game has been known as one of the most commercial entertainment industries in the future said by Riad Chikhani, CEO of the gaming social network Gamurs. In his article, Video game and technology development have a significant relationship. The invention of high technology products has led to the revolution of the gaming industry and in the other hand, thanks to the development of gaming, there are lots of new features of high-tech products has been released. Thus, gaming in this era become more and more popular even the old people know what Angry Birds is. (Chikhani 2015, 1.)

The first digital game was released in late 1961 early 1962, which was "Spacewar!" of MIT. A short introduction to the first digital game Spacewar!, this game was invented by the group students and professors of the MIT. In the article of Russell Brandom of The Verge, the idea of this game is creating two spaceships against each other, and both of them fly around a central star. 'Spacewar!' is the one that changed the concept of the computers which were more than calculators. It introduced real-time action, graphic, sets of weapon, physics, and a virtual world. Indeed, we can say that 'Spacewar!' is one of the first stones that have created a new purpose of computer usage. (Brandom 2013, 1.)
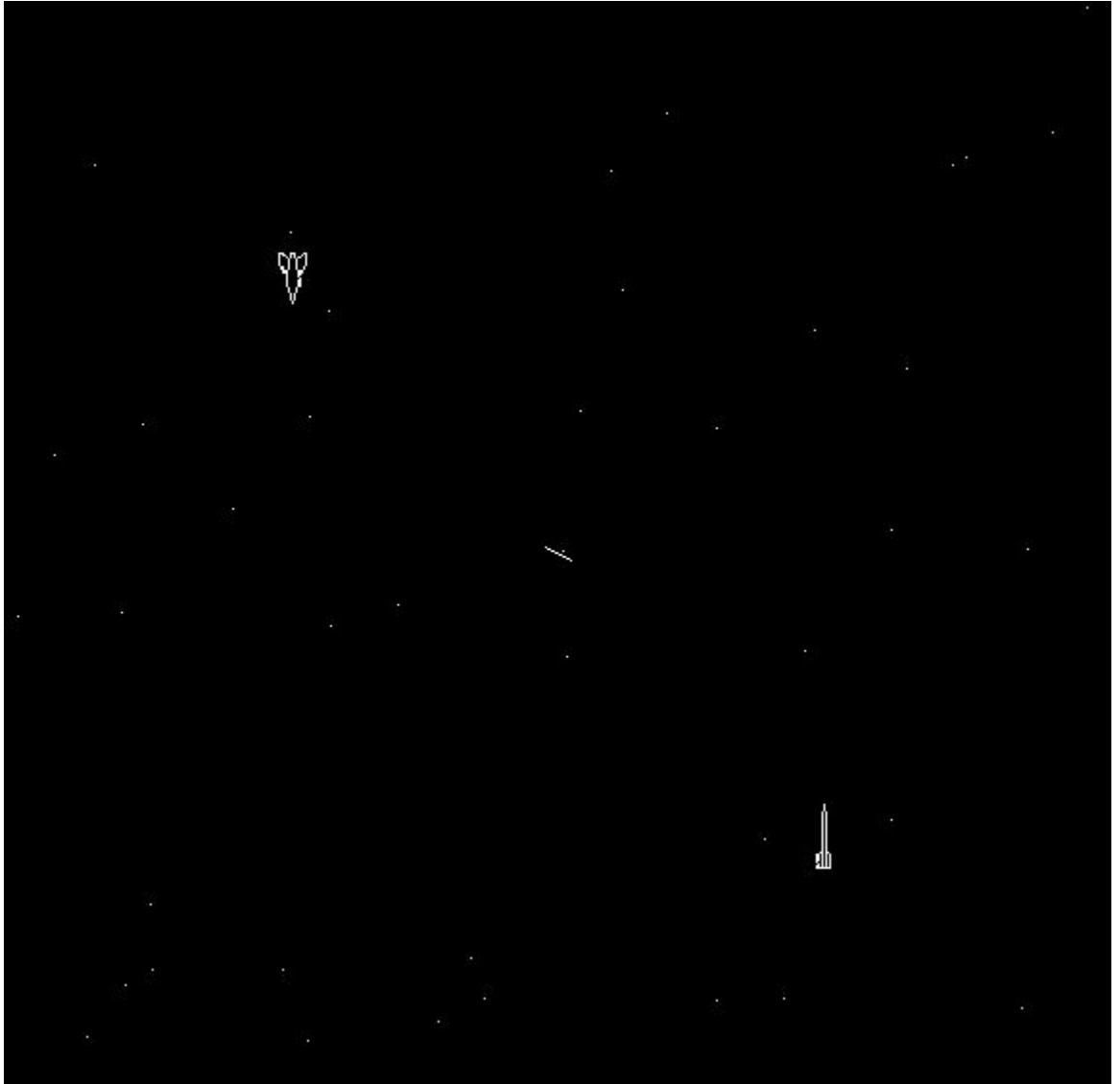
Image 1: The original Spacewar! (Brandom 2013)

Back to the history of mobile video game. At the very first era of mobile phone development, the mobile phone was known as a massive and heavy device that allows people to communicate from anywhere. Until 1997, when Nokia released the new feature of the mobile phone by a most well-known mobile game title, it changed the way that people think about the mobile phone. Since then, the mobile phone has also been used as a portable entertainment device, and the game title that makes the revolution of mobile entertainment is Snake. (Wright 2016, 1.)

Furthermore, thanks to the introduction of Snake, mobile gaming development became a new concept of mobile development, and it has been getting better and better in this decade. These days, some games could be comparable to games that run on other platforms such as PC and console.
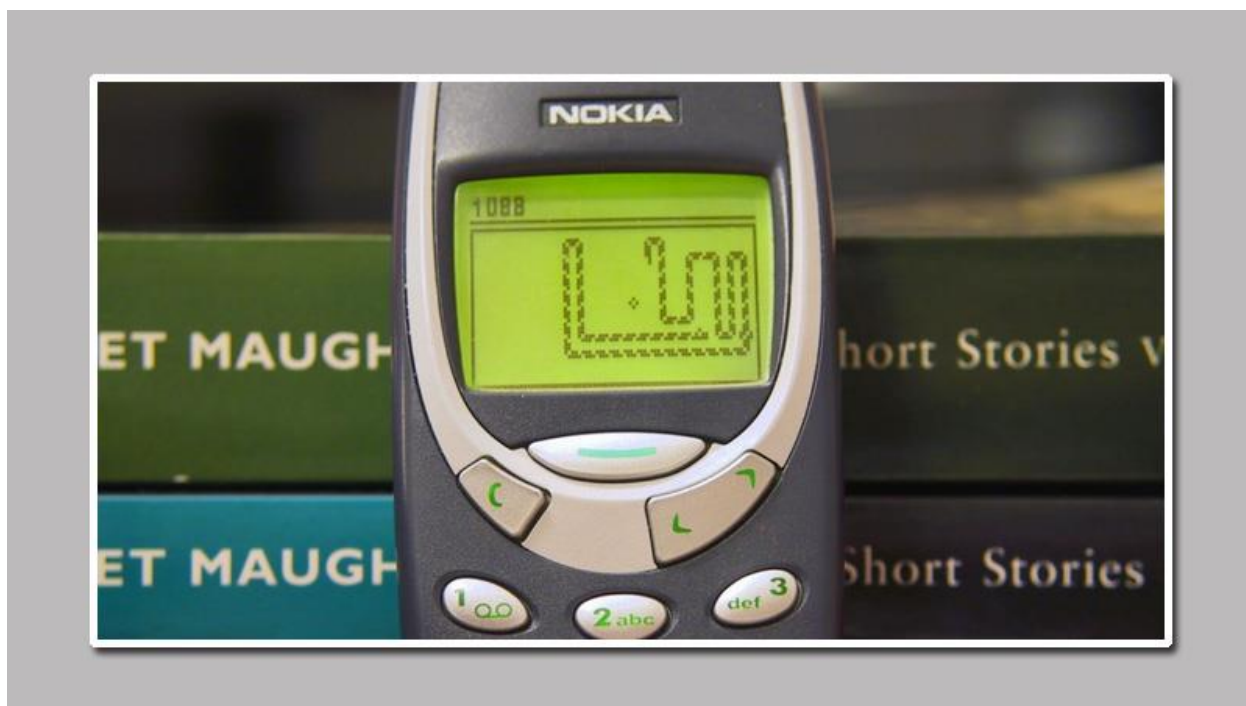

Image 2: Snake by Nokia. One of the most popular mobile game in the history. (Wright 2016)

In the next part of the thesis, author would like to introduce some well-known and typical game titles that have stood atop of the leaderboard in the recent years. These information can be used as references for the mobile game implementation and mobile game marketing in section 4 and section 5.

3.2 Candy Crush

Being dominating at the top of grossing charts for a long time, Candy Crush Saga, nowadays, is still an essential game in every mobile phone in the world. Even in the showroom for phone prototypes, Candy Crush is used as testing application. Originally released in 2012, the game, created by King, became the signature of a mobile game in this decade.

3.2.1 Art and Design

The first feature that the player and analyst should notice about this game is art and design (or we can call it Aesthetics). According to the main theme of the game is candy, this game is colorful and designed for all casual players. According to the analysis the menus UX of Matt Warren, the UX designer would like to reduce the confusion between buttons. Buttons, which have a different method, will have a different color. Whenever the process has been done, the switch will be disappear. (Warren 2014, 1.)

Image 3: Candy Crush login screen (Warren 2014)

Furthermore, if we have a closer look at the Login screen, the menu looks like a candy shop that has a bunch of candy in the front, colorful decoration on the roof and the shopkeepers that are welcoming players to join the game. The purpose of this design is to increase the friendly interaction between the game and players.

Map level is designed flattened to show the process of the player. People will have more motivation in doing something when they can see what they have completed before. That UI design would like to remind the players to motivate them to keep playing the game. Besides that, as a Facebook game, this map also reveals the current level of the player's Facebook friends which also causes motivation by a competitive feature.

Image 4: Level map in Candy Crush (Warren 2014)

Candy Crush is the Match-3 game so that the color contrast is necessary. In this game, the designer uses not only high contrast colors but also different shapes to represent the element in the matching table. Besides the main aspects (which are candies), there are some blocks or traps that we can quickly recognize without any description.

Definition of the match-3 game: match-3 games are the games that requires the player to relocate elements into a set of 3 items with the same feature to have a point. Although it is called match-3 game, there are some cases that player can make a set of 4 or 5 or even more elements and it still works. (Leonov 2014, 1.)

The most famous game in this category is "Bejeweled".

Image 5: Matching table in Candy Crush (Warren 2014)

Besides using color or shapes, animation of the elements is vital to make this game attractively. Squeezing and bouncing animation which is applied in this game, keep the UI feeling alive and also indicate things that player interacted. (Warren 2014, 1.)

3.2.2   Gameplay

The next thing that makes Candy Crush become one of the most successful casual mobile game is the gameplay of it. Player has 5 minutes maximum to complete a level, and the game requires the player to complete as many levels as possible. In this analysis article of Warren, he pointed out the core of the game is around using hearts. A level of the heart decreases when a player fails to pass a level. Whenever the heart's level reaches the value of

0, the player cannot continue to play the game until it regenerates free heart or player can purchase some. (Warren 2014, 1)

The level design of each level in Candy Crush is variable. There is no loop in level design. Basically, in each level, there are different challenges, different blocks and traps and different deck shape to test player's skill. In the analysis of Warren, he said that King's developers always require that each level could be solved by various ways. In every game updates, they have tried to include lots of new elements such as power-ups, challenges or goals to keep player learning and find the way to solve out the new levels. (Warren 2014, 1.)

In the business point of view, which are analyzed by Eliana Dockterman, the core gameplay of Candy Crush is also the chance that they not only could improve their in-app purchase but also keep player always get in touch with the game. By making player wait whenever the heart has already run out, the game constrains the player in spending too much time in playing which would decrease the attraction of the game (Dockterman 2013, 1). In the other hand, waiting for heart regeneration would bring a massive revenue from in-app purchasing. "You always want what you can't have.' I can't have more lives, and I want them"- said by Andy Jarc, one of the familiar players of this game who has reached level 440. By that quote, the impatient gamers will willingly purchase for more hearts.

3.2.3   Monetization

Nailing the currency in the game is one of the most necessary things that developers must pay attention. Because video game has it owns virtual world, the virtual monetization would make that virtual world becomes more real. Unlike other game, Candy Crush does not use any virtual currency. In spite of that, they still run their in-app purchase operation by selling power-ups with the price $0.99. Furthermore, the game also does not have any

shop to purchase thing. Instead of that, the purchasing pop-up will appear whenever a player needs it. With the low price of $0.99 per set of power-ups and player can purchase it when they need it most, there is no difficulty in having money by that IAPs strategy (Warren 2014, 1). In the previous version of the game, there was a shop called Yeti Shop, where player can buy power-ups with the indefinite amount and higher price. But this idea seems annoying because the game would be very easy just by using power-ups. Thus, King removed the shop and had changed into quick purchasing method before each level or after failing to pass a level. (Warren 2014, 1.)

Image 6: Yeti shop in Candy Crush. This feature has been removed in the game

3.2.4   Marketing

As a top-standing game on a grossing chart, Candy Crush fortifies their position by using enormous and aggressive advertising method. Because Candy Crush has gained profit massively, they have the budget to purchase traffic on advertisement networks. (Warren 2014, 1.)

Although Candy Crush has been released since 2001, we can still see an advertisement of this game on lots of media channel. By maintaining their ads, this game can attract new players and also remind the existing player that the game is still installed and played. (Warren 2014, 1.)

3.3   Brave Frontier

Like other Massively Multiplayer Online Role-Playing Game (MMORPG), the Brave Frontier invites players to the virtual world which is called Grand Gaia, where the heroes against the beasts of the dark gods. Player has the ability in summon own heroes to complete a team. Using this team to conquest all the main story level, side quests and challenges other player's formation are the main gameplay of the game. Released on December 13, 2013, by Gumi, Brave Frontier stand a-top of grossing chart in 2014 and 2015 until the developing team got a scandal in middle of 2015. Although the company has to stop updating the game due to the lacks of employees, in the recent years, according to the article on Sato on the Siliconera, the game has been re-run. Alim, the publisher of this title, announced that the 2nd version of this game was officially released in Japan on February 22, 2018. (Sato 2018, 1.)

Image 7: Brave Frontier PvP gameplay (bravefrontierglobal.wikia.com)

3.3.1 Art and Design

Brave Frontier has been categorized as an MMORPG and also JRPG. JRPG category is for games which are affected by the Japanese art style. Gumi is the Japanese developing company so that they apply the Japanese art style in this game. Not similar to the casual game Candy Crush that has been mentioned above, Brave Frontier is an RPG game which requires much more features in the gameplay. Thus, the UI design of the game is also more complicated.

Image 8: Brave Frontier main menu (bravefrontierglobal.wikia.com)

Although the UI of the main menu has lots of different elements, it can be separated into four main sections. At the top, we can see the player's information. This design has been used in various RPG mobile games where the player's information is important and changes times to times. Right under the player's information sections is squad's information. In this section, the player can see the artwork of the heroes that have been chosen in the combat squad. The special of this section lies behind the hero artwork. In this game, there are six different elements, and each hero belongs to once. There are Fire, Water, Wood, Thunder, Light, and Shadow (or Dark). Indeed, to define the elements of the hero, Artists applied the primary tone color on the Hero. For example, Fire hero will have Red tone in their outfit and Red tone in the background. Thanks to that simple method, Gumi create an easier way to design and to color the Heroes in the game.

Image 9: Each element has different primary tone color
(bravefrontierglobal.wikia.com)

The most apparent signature feature of this game is using both anime artwork and pixel art in game development. This method is the smart way of developing a 2D game like Brave Frontier. Using pixel in designing animation and hero creation in the game can massively reduce the production cost of the game. Furthermore, using pixel art in a video game is never obsoleted. In the other hand, due to the article of Glauber Kotaki who is an experienced 2D game artist, the reason why the pixel art game is not out-dated is that pixel art brings back a gaming experience for gamers who grew up playing Nintendo or Genesis. (Kotaki 2012, 1.)

Image 10: Anime artwork and pixel artwork in Brave Frontier (bravefrontierglobal.wikia.com)

3.3.2 Gameplay

Every RPG game needs land and a timeline to tell its story. In Brave Frontier, Summoners (players) will form their squad from heroes that they had by opening summoner's gate or in special events. Since the team is built, Player can send their hero to conquest different map in the Grand Gaia through Lucius Gate. The main mission of this game is completing all the main quest in the Grand Gaia world. In addition, just like other JRPG,

this game has huge side quest systems that easier or harder than main quests in which summoner can have extra experience, Zel and Karma (currency in this game) and even new heroes.

The combat system used in this game is turn-based, but there are not too many options to play. The combat is explained in the review of Nick Tylwalk, everyone on the player side always attacks first. Not similar to the gameplay of Pokemon, while both of them are turn-based combat, all player needs to do is tap on a screen to do a normal strike. After an attack or being attacked, heroes will earn Brave Burst, basically understand as mana. Whenever a hero's mana is full, that hero can unlock and use special strike which causes massive damage to the opponents. The battle ends whenever one side has no more heroes to play. As mentioned above, the heroes and creatures in this game have an affinity to one of six elements. These elements are under rock-paper-scissors relationships, instead of Light and Dark are strong against each other. (Tylwalk 2014, 1.)

Image 11: Battle in Brave Frontier (bravefrontierglobal.wikia.com)

In this game, there is also a system that avoids player to spend too much time in playing the game. Such as the Candy Crush's heart system, in Brave Frontier, each player has their amount of energy which is depended on

summoner's level. The purpose of making this system similar to heart system in Candy Crush. Besides that, the unique feature of the RPG game is that player's strength is improve by every time playing. The more time player spends to play, the stronger his/ her character in the game is. Indeed, to balance the game and also manage the strength of players, creating that energy system is necessary.

Image 12: Energy system in Brave Frontier (bravefrontierglobal.wikia.com)

3.3.3 Monetization

In the MMORPG game, the currency is essential factor. One of the unique features of the RPG game is having a massive database of inventory and equipment. In the Brave Frontier, instead of having a database for stuff, this game has a huge data for heroes and creatures. Different from other RPG games, in Brave Frontier, player upgrades the power through evolving and upgrading heroes in their squad, which lead to the increase in team's strength. There is no equipment such as weapon or armour in this game. Heroes can be upgraded by merging with other heroes or creatures. For the evolving process, it costs Zel, Karma or Gems which are also the three main currencies in the game. Zel and Karma can be easily found by completing quests. Meanwhile, Gem can be gained only through ending a chapter of quest or in-app purchasing.

Different from Candy Crush monetization strategy, Gumi prefers player to buy Gem before using it to buy power-ups in the game. There are the various amount of Gem with different prices. Besides that, this game allows

user to purchase gem instantly whenever they need. For example, after being defeated in the quest, player can spend 1 Gem to regenerate all heroes in the squad with full HP and Brave Burst. The purpose of this in-app purchasing strategy is to remind player the necessity of Gem in the game. Furthermore, selling Gems as a bundle can allow the player to have discount while buying the larger amount.

Image 13: Purchasing gems in Brave Frontier (bravefrontierglobal.wikia.com)

4 MOBILE GAME DESIGN

As mentioned above, this essay will use the analysis of current well-known mobile games to support the design blueprint of the mobile game named "5 Elements: The Ancient Source". This section will describe all the processes in designing this game. By using the above analysis as references, this part will explain why the game designers apply these elements in this game and the purpose in doing that way. Indeed, this section will be introduced at the point of the game designer's view, which means there is no hard code in the game implementing. Most of the information in this part will be images, theory, and explanation.

4.1   Case Study: 5 Elements: The Ancient Source

This mobile game's idea was completely created in June 2017 by the game designers of Sajbernet Enterprise, the Vietnamese mobile application, and game developing company. 5 Elements: The Ancient Source (5E) is a combination of match-3 and MMORPG game style. The reason why author has chosen Candy Crush and Brave Frontier as references is that both of them are the signature mobile games which have match-3 and MMORPG features. Thus, in this game, player can not only build a unique character as an RPG game but also easily enjoy it as a casual game. This game is created by Unity2D and coding implemented by Visual Studio.

Image 14: 5 Elements: The Ancient Source commercial background

4.2 Background story creation

As mentioned above, the signature feature of RPG game is creating a virtual world with unique elements that is unrealistic in the real world. In 5E, players are sent into the world of Magic, where the war between dominations happens. There are eight characters which are represented by five different elements in this world which are Fire, Metal, Wood, Water, and Earth. These characters are:

- Knight and Archer: represent the power of Metal
- Lancer: represents the power of Water
- Assassin and Shaman: represent the power of Wood
- Mage: represents the power of Fire
- Barbarian and Cleric: represent the power of Earth

The rule of the relationship between these elements is the same as the Brave Frontier's rule which is rock-paper-scissors. The idea of using five these elements starts from the well-known relationship between 5 elements in society. In spite of the cultural differences in how natural elements are

portrayed, this game uses the elements within the cultural boundaries of Vietnam. There are tons of theories and rules about the relationship between the five elements. Indeed, in designing the game, the game designers have to learn how the rule is and what the special characteristic of each element is.

As we have known, in the Asian culture, there are two different calendar systems that are used in conjunction with one another. That explains why in the Asian culture, there are two New Year holidays. In the rules of 5 elements, each person has their element which represented for them. By using the day, month and year of birth besides sex, converting it to the lunar calendar, we can know which element pose to us. The meaning of understanding the represented element is used for belief. While the Western culture does not have much familiarity with this concept, in Asian culture, belief is the one which cannot be explained but still occurs in every activity of people every day.
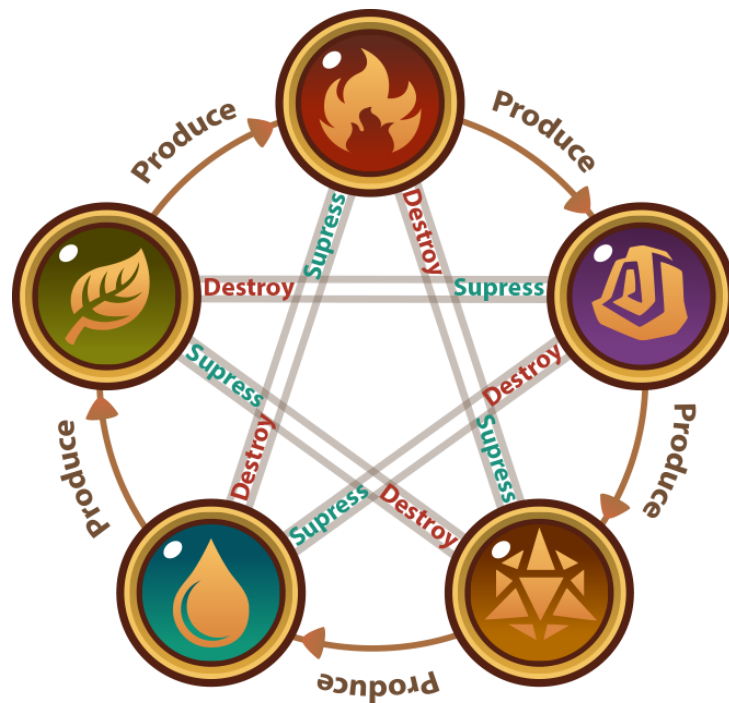

Image 15: Relationship between the five elements

Back to the story creation of the 5E game, although belief is essential in Asian culture, somehow, it has been forgotten, especially in the young generation. This game would like to remind the existence of the 5 elements in life through the relationship between characters.

4.3 Aesthetics

The second feature that makes an RPG game success is graphic. It has to be unique but clean, which not only be able to show the theme of the story but also show the unique feature of the characters.

5 Elements: The Ancient Source uses the JRPG art style in creating its characters. Similarly, the art style of Brave Frontier, each character has its color which represents the element of that character. That is the fastest way for a player to declare their class and element.

Image 16: Character design in 5 Elements: The Ancient Source

Moreover, the difference between the art styles of this game and Brave Frontier is the theme of characters. In 5E, to make the characters more realistic, the designers use the armour design from different cultures in the real world. For example, Archer looks like Robin Hood or Knight looks like infantry in Western Culture. Why did they do that? It relates to the commercial strategy. Our aim market is not only around the Asian area but we would also like to introduce our game to America and Europe. To make it suitable to Western culture, the designers have applied some signature features of Western culture in this game. Indeed, player, who does not know anything about the relationship of 5 elements, can still be able to play and

understand the mechanic of the character just by the basic knowledge about RPG game.

Image 17: Mage, who represents the element of Fire, has the Red outfit. She also has a "flying book". Thus, we know that she can use spell and high mana parameter.

The second feature of this game is match-3 game. Using Candy Crush as a point of reference, 5E declares the stones based on three main attributes which are color, shape and stone's feature. The color of the stone could represent the element its own, while the shape of the stone is used to differ with others, and the stone's feature helps the game mechanic completed.

Image 18: Stone deck in the main gameplay

The other important feature of RPG game is equipment system. An RPG game allows player to have the ability to customize their character. The 5E also aims to that goal which is building a massive database of equipment and customized stuffs. There are two phases of development for this feature. The first step, this game allow player to buy equipment to increase the character's parameters. The customization feature has not been available yet because of the limitation of time and human resources. Game designers have a responsibility in drawing and finding a prototype in designing equipment. There are lots of graphics prototype resources on the internet nowadays for designers to choose a prototype and send it to the artists.

Image 19: Prototype of Mage's spellbook. Mage's spell book in the game can be found in Image 17.

5 Elements: The Ancient Source is the 2D game. Indeed, all the graphics in the game are designed just by hand drawing in Photoshop. Besides that, by creating animations for both characters and stones, the company uses Adobe Illustrator to complete the work.

4.4   Gameplay design and game mechanic design

As the RPG game, this game would invite players to the world that they could be a warrior. Fighting with another player to gain experience and rewards, the more fights player joins, the stronger their character is. The idea of this game is applying casual gameplay to an RPG game. Indeed, the player can build their character with whatever the strategy is by using power-ups equipment such as armour and weapon. Then, using the skills in matching stone, player can against with other opponents by joinning the battle.

The rule of this game requires the player to choose one of these eight characters to join the game. After that, player can change the equipment and build a spell deck for their character as an RPG game and join the fight by matching elemental stones as a casual game.

One of the signature features in RPG game is a noticeable difference between characters. Creating, designing and balancing character's parameter are the most critical and challenging responsibilities of the game designers. Balancing parameter is a challenging concept that every game should face. The fact that no game is perfectly balanced said by Keith Burgun. Even in chess, one player has a chance to go first. Thus, balancing in a video game does not have any standard, or strict. It's a gradual continuum. (Burgun 2011, 1.)

In 5E, there are lots of parameters which affect the gameplay and game experience. One of which, the most essential and primary parameter is character's parameters. There are eight different characters so that there are eight different main parameters with that. Similar to other RPG game, there are three necessary parameters which are HP, defense, and attack. Besides that, to make this game become more fit with the different features of each character, there are some sub-features such as SP, accuracy, evasion, effect, and rage which affect to the main gameplay.

Image 20: Each character has a different parameter

By applying match-3 rules in stone matching, the damage per strike is calculated based on the number of stones that player gathered in one turn and the rule of this is quite complicated. Due to the relationship between the five elements (has been explained in the Image 15), each element has five different relationships with others which are known as destroy, suppress, main, produce and be produced. These relationships are used whenever player gathered several of stone's type in turn. The rule in calculating damage based on the relationship is set as:

Destroy (Des) (170%) => Be Produced (BeP) (130%) => Main (100%) => Produce(P) (80%) => Suppress(Sup) (60%)

In the match-3 game, there is a chance to make a streak combo. A streak combo can be understood as a row of successful continuous matching in 1 turn and normally, completing a combo can cause more points than normal match-3 combo. In this game, to calculate the damage while the player has a streak combo, there is a parameter which is called Streak Combo Parameter (SCP). Also, the streak combo can be built up to a large number so that in 5E, designers limited it to 7. Which mean if the streak of continuously matching is over 7, the computer will set the SCP equal 7. The formula will be:

Damage = (1,7xDes + 1,3xBeP + Main + 0,8xP + 0,6xSup) x SCP

In which:

- *Des, BeP, Main, P, Sup are stand-ins the number of stones that are related to the character. The relation rule is based on the relationship between the five elements in image 15.*
- *SCP: Streak Combo Parameter which increases from combo 1 (100%) to combo 7 (200%)*

The above-calculated damage happens in the perfect condition when it is not affected by another parameters such as defense or evasion. On the other hand, there are lots of parameters could affect the damage. The purpose of creating these parameters would make this game more balanced, and it leads to the increase in game experience and game realistic. Besides, there are some formulas to calculate other parameters:

- Defense:

$$Damage\ recived = (Elemental\ Attack\ Point * amount * attack) - \left(Elemental\ Attack\ Point * amount * attack * \frac{Def}{100}\right)$$

- Accuracy

$$Chance\ to\ Hit = \frac{Attacker's\ accuracy}{Attacker's\ accuracy + \left(\frac{Defender's\ Evasion}{4}\right)^{0.8}}$$

- Evasion

$$Chance\ to\ Evade = 1 - \frac{Attacker's\ accuracy}{Attacker's\ accuracy + \left(\frac{Defender's\ Evasion}{4}\right)^{0.8}}$$

By using these formulas in calculating parameter, this game is nearly completed in using mathematics in calculating parameters in game.

4.5   Testing

After six months of development from phases of conception to implementation, this game has released a beta version which can be tested by iOS users. Before being released, the company had spent a month on testing all the features in this game. In this section, the testing process will be reviewed in order to answer the question under a point of designer view: will it ready to be released?

The first feature which was tested is the aesthetic. Because the art for UI, UX or character is needed for creating UI prototype, Drawing is the earliest work that needs to be completed. Artists and designers had to working together every day to unify the theme of art. Whenever there was a completed feature, it would be instantly updated by the designer's prototype and sent to other groups. Updating the prototype's graphics does not only ensure the quality of art is up to standard but at the same time increase the team's productivity.
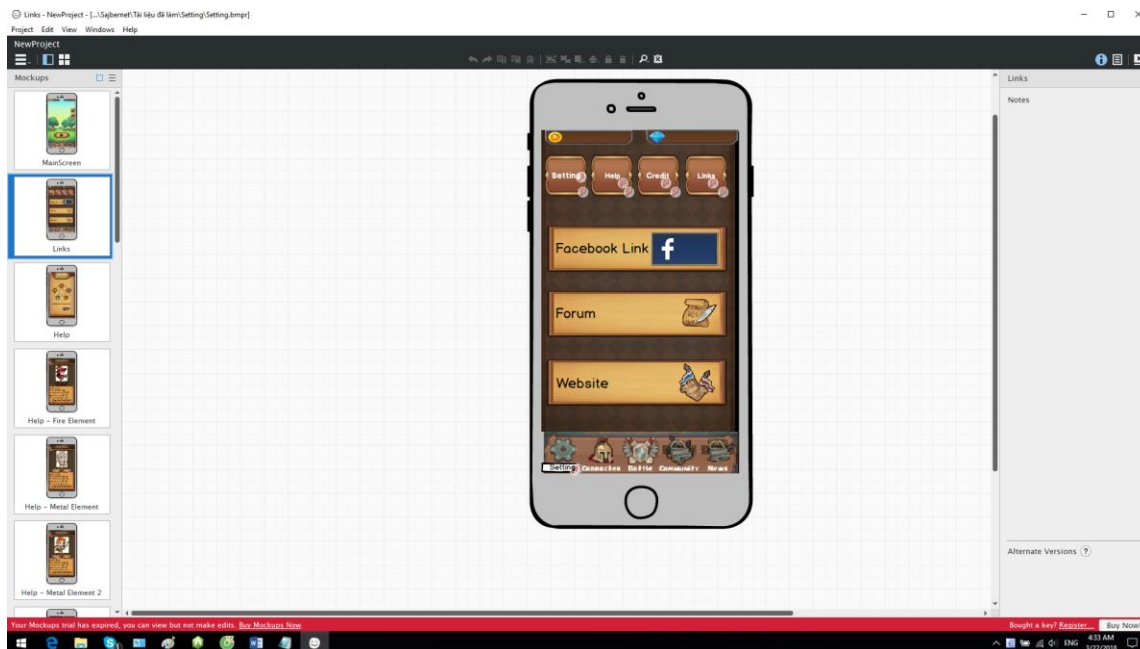
Image 21: UI prototype

The second feature is animation and effect testing. Developing mobile game, especially in this decade, requires a high standard of animation and effect. To quickly check these feature, the developing team has created a testing tool for testers and designers to check the quality of these. The testing tool is similar to real gameplay, but it allows testers to test all the animation of the combo as well.

In the end, every feature of the game would be checked out one more time. In the final day of testing, all the elements of the game such as art, gameplay, database and even game performance were checked and reported to game designers and clients. Then, the decision on releasing a game is to rely on the game designers and clients. Although there were still some deficiencies in gameplay features and art, the beta version game is acceptable to be released.

Recently, this mobile game can be downloaded and played on Apple App Store for free.

5   MOBILE GAME COMMERCIAL

This section is going to discuss how mobile game market is in the recent years. By analyzing the status of the mobile game market, this section would give us the answer to the following questions: "What is the biggest and the most important market that a game marketer should aim to?" and "What should a game marketer do in marketing game titles in this era?". This answer can be done through the practical study case of the game 5 Elements: The Ancient Source.

5.1   Market analysis

In the recent years, Gaming has become the new trend of technological development and has earned the huge amount of revenue to the countries' economy. According to the research of Krista Lofgren, nowadays, China becomes the largest gaming market in the world which has over $24 billion' revenue just in 2016 (a billion more than the second country is the US). Also the research has shown that the average age of the player is 35, and 65% of household, nowadays, owns devices for playing games. The most popular device to play video games is still Personal Computer or Laptop with the rate of 56%, following by dedicated game consoles with the rate of 54%. Due to the development of mobile technology, the percentage of gamers using a smartphone to play games has raised to 35% (just standing after these two above devices). Thus, together with the development of mobile technology, mobile games have a big chance to maintain and grow in this decade and the near future. Regarding the social situation, 54% of gamers play with other people (play online), and most of them prefer to play with their friend than their family. The significant growth of technology has changed the way people keep their relationship. The fact has shown that 53% of gamers determine that video games help them to contact with other people. (Lofgren 2017, 1.)

Image 22: China was on top 100 of the country has highest revenues in video games

These above parameters give us the general information about the current situation of the gaming industry and, somehow, show us the way that supports the development of the "5Elements" game.

- China is the most important market
- Due to the development of smartphone technology, games such as "5Elements", which are developed for the mobile platform, has a significant chance of developing
- More than 50% of players think that game is the "communicating bridge".

> ➢ The development of multiplayer game allows players to chat and have more friends.

- The average age of a player is 35 which relates to the game's difficulty; and, the complexity level must match the intended audience in order to either attract the players or don't make them bored.

Besides that, in the recent years, E-sport has become the new entertaining tools which have attracted 50% of most frequent gamer. According to the research of Statista, the total prize money for all E-Sport games in 2016 is over $93 million'.

> ➢ If the games can be recognized as an E-Sport game, it will be the gold mine for the game developers.

5.2 The current commercial situation of competitors

Analysing and evaluating competitors is the most important work that a marketer needs to pay attention to. The company would be able to point out the weakness and strengths of the competitor's products to know the current situation of competitor's game. Indeed, it would be the hint to forecast the risks and opportunities of our game in current mobile game market's condition.

As a game developer and marketer of 5 Elements: The Ancient Source, the biggest competitor of the game should be Scopely game developing company with the game title: WWE Champions – NEW RPG Puzzle Game. With the same idea in game development, Scopely is the biggest competitor in the Match-3 and RPG merging game style.

About Scopely: Scopely is the big player in America technological market. Founded in 2011 with four co-founders and approximately $8.5 million' seed, after four years, in November 2015, Scopely has become the #2

fastest-growing company in America by Deloitte Fast 500. With lots of experience in game developing, especially in puzzle topic, Scopely and WWE Champions is determined to be the largest competitor of our company in this gaming topic. Other puzzle game of Scopely: Wheel of Fortune: Game Show Word Puzzles, Gummy Link - Free line connect puzzle game.

- Daily Revenue Estimate: $51,728
- Daily Installs Estimate: 11,863
- Ranked: 77 on Top Grossing Games of thinkgaming.com
- Publisher: Scopely Games (Headquartered: United States)

➢ Games on top charts: 4
➢ Total revenue estimate: $212,527

(thinkgaming.com)

Besides Scopely, there are some others competitors with similar gameplay that we should know.

➢ Hero Emblems
- Revenue: $9000
- Download: < 5000
- Ranked: 1121 (June 9, 2017)
- Publisher: HeatPot Games Ltd.

➢ Saber's Edge – Puzzle RPG
- Revenue: <$5000
- Download: < 5000
- Ranked: 1492 (June 11,2017)
- Publisher: Hibernum Creation Inc.

(sensortower.com)

5.3 Risks and opportunities of this game in the current situation

➢ Risks

- There are many other companies, for example, our main competitor Scopely, who have more experience and more budget in gaming development
- Must compete with other game titles and topics (Action game is always the hot topic)
- Development of VR technology => lead to the trend in developing and playing a mobile video game in 3D mode or 360-degree mode. (Our game is not a 3D game or support a 360-degree platform).

➢ Opportunities

- Puzzle game is familiar with many people (starting from the game Bejeweled)
- Now combined with action element and become more aggressive => first step to be an E-Sport game
- The trend of Puzzle and Action RPG is back (from both on Apple App Store and Google Play Store).

5.4 Marketing plan

The final step in developing a game is promoting it into the current mobile game market. According to the article on the blog of Ian Blair about Mobile App Development, there are several ways of promoting mobile games in the recent years.

5.4.1 Get in Touch

What is the meaning of this? To introduce the game before bringing it to market.

Why do we have to do this? To clarify what should we do and the thing is suitable for the customers.

How to do:

- List all company's customers
- Send email for noticing about this game
- Survey about the game's topic then get some overall idea
- Co-operate with the customers in game creation process.

Indeed, this is not only the promotion way but also we can understand and adapt to the customer's expectations.

There is a quote from Bain and Co.: "…a 5% increase in customer retention can increase a company's profitability by 75%". Retain your customers by letting them know about your app's idea and ask them what they would like to see in it."

5.4.2   Reach out to Influencers

Influencers are people or groups which have the right in buying and engagement decisions of a group or company.

Sponsorships will aid company much more and help to build a stronger relationship with customers.
Let influencers know about the game making process. If it is available, we should discuss with them about games development and gather feedbacks. If the influencers are important to us, we should give them the section in our game.
For example: if our sponsor are other game companies, we should have a tab which introduces their games.

5.4.3 Create a demo video

Not only PC games but also mobile games need a demo (a video demo or gameplay demo). A Demo (or trial) is the version of the game that developers introduce to the customers. The customer can test the gameplay, UI and have a comment about the game before its official release. A Demo is one of the most critical parts of the game. It does not need to have everything about the gameplay (should not have), but through that, players can have an overall sense about the game (how the game work, the graphic, gameplay, and game style).

Once we are done creating the demo, we should use some favorite social media to promote our video or demo of our gameplay. Some of the big titles use the different way; they create a trailer. Just like a movie, they create a short film by using a game engine (nowadays, we can create a short film 100% by using animation in the game engine, such as Unreal Engine).

Self-comment: The demo needs to be honest and authentic. There are lots of game titles which use images of other games or using some animation in the demo, which is not actually in their game. It causes the worst feeling to players; they will feel being fooled.

5.4.4 Take a screenshot

Many games are just taking screenshots of their game and posting them on the marketing pages without saying anything. Yes, it brings the most realistic images of the game, but it is not the smart way to do marketing. As a seller, we always want our product to be sold as much as possible. Indeed, an important thing is that we should provide the informative screenshots for customers.
For example:

- Create images for advertising.

- Still using screenshot but need to have some more description about the game.

5.4.5 Update patches

The update is a requirement for maintaining a game. Just like in real life, if we want to develop, we should have to change. What we have done to create the first version of the game is just a potential. If we want to make our game more popular and receive more profits, we should learn how to improve it through updating patches. What update should we think about and do in these patches? 80% updated patches are fixing the bug, fixing the balance of gameplay. Besides that, to increase the excitement of our game, we should release some significant changes in our game such as release new items, new characters, and new events and so on. These ideas will be gathered from communicating with our customers. Customers are only not our profit source but also the idea source. They will help us to think about the new ideas if we maintain a good relationship with them.

6   DISCUSSION AND CONCLUSIONS

In the last section of this thesis, a brief of reminder of what has been analyzed and mentioned above. Comparing the analysis to the topic question, the reader will have an overall knowledge about game designing through some well-known game titles. Furthermore, the methods used in the 5 Elements: The Ancient Source game development are also listed and explained. Also, in this section, the author mentions about limitations and some suggestions for further studies.

6.1   Summary

Due to the topic question, this thesis focuses on analyzing the purpose of game designing from some well-known game titles. Using an analysis from game development to game publishing method, the thesis leads to the theme and idea decision in developing the author's mobile game which is also the study case of this research. This research has pointed out some reasons why the casual games like Candy Crush and RPG games like Brave Frontier becane successful and have stayed at the top of the grossing chart for a long time.

In the study case analysis, two parts that directly affect the game development are designing and publishing. What are the critical features in mobile game development? What should we do to promote our game after thoroughly implementing it? Everything has been mentioned in this research.

In conclusion, this research can be a reference for those who want to design and publish their game in the future, especially in the Vietnamese game market.

6.2   Objective versus Outcome

With the main purpose being a reference for another game designer who wants to start implementing their mobile game, this research has completely answered the topic question:

How should the mobile game be designed and published in the economic situation?

The game in study case section represents the outcome of this research. This game, recently, has been developed and published not only in Vietnamese game market but also in several markets worldwide.

6.3   Limitation

There are two limitations that affect the success of this research:

The first one is the change in the players' habits. In this decade, gamers prefer to play a casual game which does not require too many skills in performing. On the other hand, as in an RPG game, the player has a chance to customize a virtual character and live in a virtual world. But no one know in the future, when the condition of technology changes, the habits in gaming experience will also be improved.

The second limitation is the difference in law and legality in different regions. Basically, in some areas, especially the Vietnamese market, the marketing and publishing digital products are simpler than other things which could be affected by taxes or legality.

Due to its limitations, this research should be used as a theoretical reference rather than an example game.

6.4 Reliability and validity

By using a qualitative researching method in this research, the author has referred to the analyses from different sources. These analyses were written by many reviewers and bloggers who are experts in the game reviewing industry. These references were published in the recent years. Thus, there are no references that are obsoleted. Furthermore, the reference games, which are Candy Crush and Brave Frontier, have become the prototype of thier game style. These are the signature games of the casual and RPG style.

The validity of this research is consolidated by the existence of the case study game which is 5 Elements: The Ancient Sources on the market. The main purpose of this research, which was to build an example of a game designing and marketing plan, has actualized since the case study game has been realistically built and published on the market. The results of the analysis based on literature, the author, and also the game designer, have been applied into a real game development process.

6.5 Suggestions for further study

Although this research can be used as a reference in game designing, this research mostly explains the match-3 and RPG game theory. The fact that there are many different kinds of game categories nowadays, this research is useful for the one who wants to learn more about match-3 and RPG combination game type. In the future, to complete this kind of research for all game type, the study and research must be wider and more specific.

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