

Analysis on Fun Elements of the SNG in ANIPANG

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Abstract—This study analyzes on the Social Network Game (SNG), ANIPANG, in order to discover its unique fun elements, so that suggest new methodologies for development of SNGs. ANIPANG is the most popular SNG in the South Korea on 2012. Recently, the game industry is paying close attention to mobile-based SNGs due to the rapid prevalence of smart-phones and social network services. However, SNGs are not online games simply. Although the fun of most online games is the victory through competition with other players or the game system, the fun of SNG is the communication through the collaboration with other players. Thus, features of users and environments of game should be considered for the game industry and for the fun of SNG to users.

Keywords—Social Network Game, Casual user, Fun, ANIPANG.

I. INTRODUCTION

ANIPANG is the latest mobile-based SNG(Social Network Game). South Korea is crazed to ANIPANG. Women, men, young, and old are playing this smartphone game at anywhere, such as subway, school, company, etc. SundayToZ Corporation, ANIPANG's developer, reports totally 20 million smart-phones downloading until now and 10 million daily users playing after released on July 30, 2012. Especially 10 million daily users in Korea are very meaningful number when we consider that daily users of most popular FARM VILLE 2 on Facebook are 8 million. Why does ANIPANG have popularity so many?

A. Background of Study

The social network game is a type of online game that is played through social networks, and typically features multiplayer and asynchronous game-play mechanics [1]. Distinct features of SNGs are classified into two types. First, it is community [2]. That is one of distinct features of SNGs. Community provides the connection to the users so as to simulate the interaction among the users. Simulation of SNG's genres is best reflected this feature, and most popular in world at this time, such as FARM VILLE 2, HAPPY FARM, CITY VILLE 2. Second, it is no victory conditions [2]. Many SNGs don't have competitive system. No one is ever declared winner. Users share quest and mission of their game with friends to complete game goal. They are collaborators rather than competitors. These features make the difference between SNG and traditional game, such as video game, online game.

Differences are users of SNG and environments of game. Users of SNG are typical casual user. Feature of a casual user appears to have low level of loyalty for game compared with

hardcore user. They don't have a strong desire for gameplay on SNG, but log into a SNG to use practical their spare time. Another feature is that they should be treated carefully. They are sensitive on small changes. Casual users increase dramatically when game start to gain popularity. But if affair for the game system, such as fatal error or large-scale update, suddenly occur, they immediately stop game. User of SNG has one special thing compared with other casual user. That is a lot of female than male. According to a demographic survey in 2011, the ratio of female and male player playing on SNG was 47:53% [3]. Environments of game include system of game and playing-style of user. Playing games on the smart-phones comprised 78.6% of all purposes of using the smart-phones [4]. Most system of SNG is mobile-based. Users of SNG are free from temporal and spatial constraints. This is strong advantage because users can be always approach to SNGs. However, users of SNG don't stay on game for a long time. They only play game during around 10 minutes. Thus, strategies of SNGs are not to stay for a long time users in game, but is to connect often users to game. Biggest issues appear to playing-style of user. Users of SNG have low understanding on game rules, and don't even try to understand that. Difficult rules of game are stress to users of SNG. That is a barrier. They want to understand playing-method of game for a short time, and want to join game quickly. In addition, they are not working to improve playing-skills of game. Playing-skills of game are expected to improve naturally during playing game.

B. Purpose of Study

A lot of users say that SNG is trend. There are several reasons. First is the lack of diversity. SNGs are concentrated in simulation genre. Second is the lack of fun. Because features of SNG's user motioned in advance, rules of SNG are very simple. If rules are simple, users will lose interest quickly. So SNG have to find other ways to provide fun. In order to help users continuous attend SNG, developers of SNG should solve these issues.

In the paper, we investigate fun elements of ANIPANG to provide new fun elements to SNGs, and suggest new development methodologies for SNGs reflecting creative fun elements of ANIPANG.

II. SECRETS OF ANIPANG

ANIPANG is well-known HEXA style puzzle game. "ANIPANG" of game title is a compound word. "Ani" comes from the first syllable of animal and "pang" is the onomatopoeic sound for an explosion. The game is play on the KAKAOTALK Platform. The KAKAOTALK is a free SNS application of smartphone with 60 million users. Ways of game-play is very simple. You have to align same type of at least three animals either vertically or horizontally. At that moment, they explode with "pang" sound, and you get

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equivalent scores of each case. The score depends on the type and number of animals.



Fig. 1 ANIPANG

A. Fun of ANIPANG

We have discovered a variety of fun of ANIPANG. You take a look at the following.

1. A simple rules of the game and the difficult mastery

As announced above, rules of ANIPANG are very simple. If 5 seconds, you will be understood rules. Despite having additional rules and strategies, you can play the game without it. However, ANIPANG is not easy master. You will find additional rules and strategies during play the game. For example, the combo is important. When you explode quickly and continuous animals, you can get a high score. On other hand, it is the conscious activity for users to find rules and strategies, but is the unconscious activity for users to apply strategies to the game. In other words, users should be increased unconscious mastery, and will enjoy for a long time to increase mastery.

2. The visual and sound effects

ANIPANG provides attractive visual and sound effects. Characters of ANIPANG are cute animals. It was nice choice because everyone, irrespective of age and gender, likes animals. Sound effects are more important because including information. When game over nears, the background sound changes, and the user will move quickly unconsciously. Various effects provide immediate visual and sound compensations for effort of users.

3. Limited the play-time

Play-time of ANIPANG takes about only 1 minute. If play-time of game is too long, casual users are uncomfortable. Users of ANIPANG play on average 58 minutes a day. Users of MMORPG play on average 2 hours a quest. They can play a lot of game for a short time compared to users of MMORPG. With mobile-based gaming platform, it is element that users are often connected to the game.

4. Limited the number of items

Early ANIPANG doesn't have an item system. After updated recently, the developer created an item system. An item is a system to provide additional fun in game. Users use various strategies to use items. However, if there are too many items in the game, casual users feel harder difficulty. ANIPANG is limited the number of items. Users can use three of the five items during play game.

5. A combination of the luck and the ability

Users need the ability and the mastery for high score, and are required another one. That is the luck. The luck has a strong influence on ANIPANG compared to other games of puzzle and board genre, such as TETRIS, HEXA, OTHELLO and etc. ANIPANG doesn't provide important information affecting the game in advance. Important information is 1) the first arrangement of animals, 2) and re-arrangement of animals after exploding. For example, because TETRIS and HEXA begin in blank space, and are shown next block, these games are less affected by the luck than ANIPANG. Thus, users of ANIPANG play many times to get the lucky game.

6. The social ranking and weekly updated the scoreboard

ANIPANG is shown the social ranking to use KAKAOTALK contacts. The social ranking is different with the general ranking. The social ranking is generated through the social competition that occurs between acquaintances. Many games also use the social ranking through FACEBOOK, but can choose to participate in the ranking. However, ANIPANG is essential in order to play the game. When users join game, they participate in the social ranking at same time. It is motivation for users plying the game. The social ranking is significant compared to the general ranking. My rank is always significant in the social ranking. The ranking is the important element of fun to play continuous game. Though my rank is 10302 in general ranking, if my social ranking is in the top 3, users play constantly game in order to maintain our position.

In order to keep the competitive spirit fresh, each week scoreboard is updated and begins anew. Users are even more fun through weekly updated scoreboard. Every week the competition becomes more intense. Users competitively play game for better high score than each others. You can make it to top always.

B. Uniqueness of ANIPANG

ANIPANG is not new to users who know ZOOKEEPER and BEJEWELED BRITZ. The way of game-play of three games is same. Using animals as character is similar to ZOOKEEPER. Environments of game of ANIPANG are similar to BEJEWELED BRITZ, such as play-time, item.



Fig. 2 Zookeeper (Left) & Bejeweled Britz (Right)

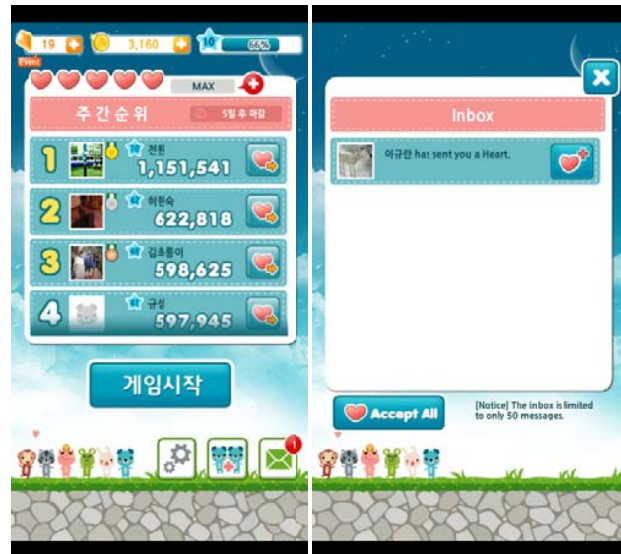


Fig. 3 The heart gift of ANIPANG

However, if ANIPANG doesn't have special elements, it would not be successful in South Korea. A lot of users say that why a great success of ANIPANG is using KAKAO platform. Because KAKAOTALK is the most commonly used SNS in South Korea, ANIPANG was able to retain a lot of potential users from the outset. But ANIPANG would not be successful without fun elements. Nobody does uninteresting game. ANIPANG has one more special with a variety of fun at above. There is coin system called 'heart.' 'Heart' is the same as a coin to play an arcade game. ANIPANG provide five 'hearts' by default. When user plays one game, there disappears one 'heart.' Disappeared hearts are regenerated after a few minutes. User will have to wait until to be generated hearts. So the developer of ANIPANG has made an option to give gift-heart to acquaintances. A user pass over the gift-heart, and when the receiver takes the gift, there is one heart generated immediately. This is a new attraction of ANIPANG. ANIPANG brings users into keen competitions with each other through the scoreboard. On the other hand, users obtain cooperation from each other through heart. Users in ANIPANG play together as rival and cooperator. Heart option has two advantages. The first advantage enables communication between users in non-simulation genre of SNG. If anyone sends heart to you, you can know that the sender is connected to the game. In addition, you realize that an opponent needs heart, and can give gift-heart to the opponent immediately. The second advantage is to increase the immersion of users. It is more significant. You need coins to play game in the arcade game shop or a casino. You can't play without the coin. If you have enough coins, you want to play game for a long time. Thus, users can be more immersive every game. Heart is an implement for communication and immersion of ANIPANG.

TABLE I
RELATIONSHIP BETWEEN DIFFERENCES OF SNG AND FUN ELEMENTS OF ANIPANG

	Differences of SNG	Related fun elements
User of SNG	Low level of the loyalty	1, 6, 7
	Sensitiveness on small change	1
	A lot of female user	2
Environments of SNG	Mobile-based the game system	3
	Short play-time	3, 5
	Low understanding on the game rule	1, 4

1. Simple rules of game, but not easy master
2. Visual and sound effects
3. Limited play-time
4. Limited a number of item
5. Combination the luck and ability of user
6. Social ranking and weekly updated the scoreboard
7. Heart

Fun elements of ANIPANG seen until now effectively solve differences of SNG at first. The table below shows related fun elements with each differences of SNG. New Methodologies of Design for SNG

III. NEW METHODOLOGIES OF DESIGN FOR SNG

A major challenge in creating a game design model is to conceptualize games on an abstract level, while also providing more rubrics for solving concrete game design problems [5]. We had been analyzed fun elements of ANIPANG, and conducted the study to provide new methodologies for SNG. There are classified four categories. This methodology should be considered at steps of an overall development of SNG.

A. A Simple Rule of the Game

The rule of the game is the matter among ways to connect easily user to the game. As motioned above, casual users to enjoy SNG has low understanding of the rule of the game, and don't want to learn. Therefore, the developer should provide a

simple rule of the game that users can quickly understand a way of game-play. When there is a simple rule, there are also fewer quests. Elegant rules allow players to focus on the experience of play rather than on the logic of the rules. Designing meaningful play involves building discernable and integrated relationship between action and outcome into all levels of the rules of a game [6]. During play the game, quests of user should not exceed five. In case of ANIPANG, quests of user are just three. First, user looks for the exploding animals, and explodes. And user can use items depending on the situations. Because a simple rule and less quests, the user can enjoy the game casually, and can connect anywhere and anytime.

However, if the rule of the game is simple, users are able to master the game quickly, and can be bored. This problem is solved through next two categories.

B. A Way of Game-Play and the Mastery

Users can acquire how to play the game on two ways. One is leaning. Another one is to embody. The user should learn the rule of the game, and should embody a way of game-play, such as skill. Interaction between the user and the game system can't be achieved only learning. The game tech us things so that we can minimize risk and know what choices to make. The destiny of games is to become boring, not to be fun [7].

As mentioned above, the rule of SNG is simple because feature of user. Thus, SNG should induce an interest of users through a way of game-play. A way to induce an interest is not a way of game-play to complex. That is the difficult mastery of the skill. Users can play a lot of the game in order to embody skill. If play-time of the game is short, user will play more and more. So we can expect that the loyalty of users will increase naturally.

C. The Relationship between the User and the Game System

We investigated about the combination of the luck and the ability of user among fun elements of ANIPANG. In fact, the luck is to provide the game system. Though the game system provides the favorable game, such as lucky game, to user through the algorism of the system, we will not know a chance that provides the favorable game, and will have to wait until to provide it. ANIPANG is designed into architecture that calculates score by the combination of the luck and the ability. Though the baseline of the score is decided by the ability, the deviation of the score grows by the luck.

For example,

- (1) The first arrangement of animals is determined by luck. It can be both good and bad.
- (2) How fast user will find and remove animals is determined by the ability.
- (3) The re-arrangement of animals after exploding is determined again by luck.
- (4) The score to get using items is determined by the ability.

Though users can play a lot of the game in order to embody a way of the game-play, they should play a lot of the game in order to get the favorable game that the game system provides. If the fewer favorable game provides, skilled user will get high score always, and non-skilled user will get low score always.

So the game is not fun. On other hand, if a lot of the favorable game provides, the game is not fun due to disappear the distinction between skilled user and non-skilled user. Thus, when the game system is designed, the timing to provide the favorable game is important.

D. The Practical use of SNS

SNS can do two functions in SNG. There are the lure of the participation and the inducement of the competition. When we play SNG with a lot of acquaintance, SNG is even more fun. So users directly promote to acquaintances. Such promotion way is not pressured, and can lure participation naturally. In case of ANIPANG, though nobody did not thinks that their own promote, users promote ANIPANG through the sending and receiving heart.

Moreover, for the inducement of the competition, SNG needs a way to actively use the social ranking. In fact, the user of SNG is looking for an experience that is either built n connections, or incorporates some interaction with others who like the same kinds of games. Users want to compete, collaborate, socialize, and connect through chat and other forms of online communication [8]. Because Social ranking is given motivation for meaningful competition, that provide strong fun to the user.

IV. TWO PROPERTIES FOR THE ARCHITECTURE OF SYSTEM OF SNG

The architecture of SNG should be reflected two properties found through such methodologies. There are nudge and push-pull relationship.

A. A Tug of War

A tug-of-war exists into a variety of relationship of the world, such as between lovers, parents and a child, a seller and a buyer, and even user and interactive system. A tug-of-war occurs in situation that each other two being want to achieve different purpose. For example, we look into relationship between sports agent and sports club. When negotiate sales for player, the subtle psychological quarrel exists in their relationship. Sports agent wants to sell player at high prices, but sports club wants to buy good player at low prices. Sports agent and sports club have entered a tense tug-of-war.

Such a tug-of-war exists between the game system, such as interactive system, and user. Users play the game in order to master. So they train skills. Of course, fun is the default. In contrast, the game system doesn't want to be conquered by the user. So that provides difficult quests and skill's mastery. A tug-of-war exists across all game systems as well as SNG. In case of MMORPGs, the force of the game system is stronger than the user. The power of the game system is the game contents, such as rules, quests, items, and etc. So hardcore users can endure the force of MMORPGs that is pulling the users, but casual users can't withstand. Thus, casual users can not enjoy the game, and are uncomfortable. In case of casual game, casual games have weak force than MMORPGs. So, casual users can balance with the force of casual games. But hardcore users can easily master casual games because hardcore users is

strong than the system of casual games. Finally, in case of SNG, though the force of the system is similar casual games, extra fun is added to SNG through SNS. Even if hardcore users easily master the game, constantly play the game in order to maintain our social ranking. Game developers should provide elements to occur a tug-of-war between users and game systems constantly.

B. The Nudge

A nudge is to push mildly or poke gently in the ribs, especially with the elbow. Richard Thaler and Cass Sunstein, behavioral economist, said that the nudge is any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives. [9] They emphasize that soft intervention is more effective than coercive instruction to induce a particular behavior.

SNG can do the nudge marketing using SNS effectively. Though the nudge marketing induces people in the direction you want, that is way which the freedom choice still give to individuals. Heart of ANIPANG is good example of the nudge marketing. We are not sure an intention of ANIPANG developer, but the user is encouraged to promote ANIPANG through the heart of the essential elements of the game. The nudge marketing using SNS will be a powerful force for SNG.

V. CONCLUSION

The game industry can inspect the goal of SNGs from two perspectives. One is the perspective of fun on the game. The other one is the perspective of the sociality on SNS. Because a lot of preceding studies investigated SNG in the perspective of the sociality, they have conducted studies on simulation games reflected the sociality of SNS. But we investigated SNG in the perspective of fun, and conducted study on new methodologies and properties of the game system to provide fun to users. The reason is as follows. SNG is also one kind of the game, and is due to include a variety of games in addition to simulation games.

Though effects did not appear for methodologies and properties of the game system suggested through this study, they are expected to do a great role to provide fun to SNG. Thus, next study will conduct a study on the development of SNG reflected results of this study. For the growth of game industry, the growth of SNG is required to be continued. In the future, studies need to conduct researches on the improvement in quality of SNG using SNS.

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