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The Japanese Social Game Industry

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Definitions

ARPPU refers to average revenue per paid user. It measures the average amount of money every paid user consumed in the game per day.

Complete Gacha, or "Kompu Gacha" in Japanese, refers to a mechanic that players are awarded with an extremely valuable prize by completing a certain set of different Gacha prizes.

DAU refers to daily active users. It measures the number of unique users who have logged in social game at least once in one day.

Freemium is a business model by which a digital gaming service is provided free of charge, instead a premium is charged for advanced features, functionality, or virtual goods.

Gacha is similar to a prize vending machine, users pay a small amount of money to receive an item at random.

KPI refers to key performance indicator, which is an industry jargon for a type of performance measurement. It is commonly used by an organization to evaluate its success or the success of a particular activity in which it is engaged.

Micro-transaction refers to small payments made with actual money in purchasing a premium in games, such as advanced features, virtual goods, etc.

Online game refers to digital games that are played on PC or dedicated game hardware with a constant Internet access.

Pay ratio refers to conversion rate, measuring the percentage of how many daily active users have become paid users per day.

SAP refers to social application providers who develop and distribute applications or games in SNS platforms.

Social games refers to games that adapt player's social networks within SNS for play purpose, and is distributed and played on that SNS.

Social graph is a term used to depict all personal relations, particularly relations that people know each other in their real lives.

Traditional video games refers to games which are played on a dedicated game hardware.

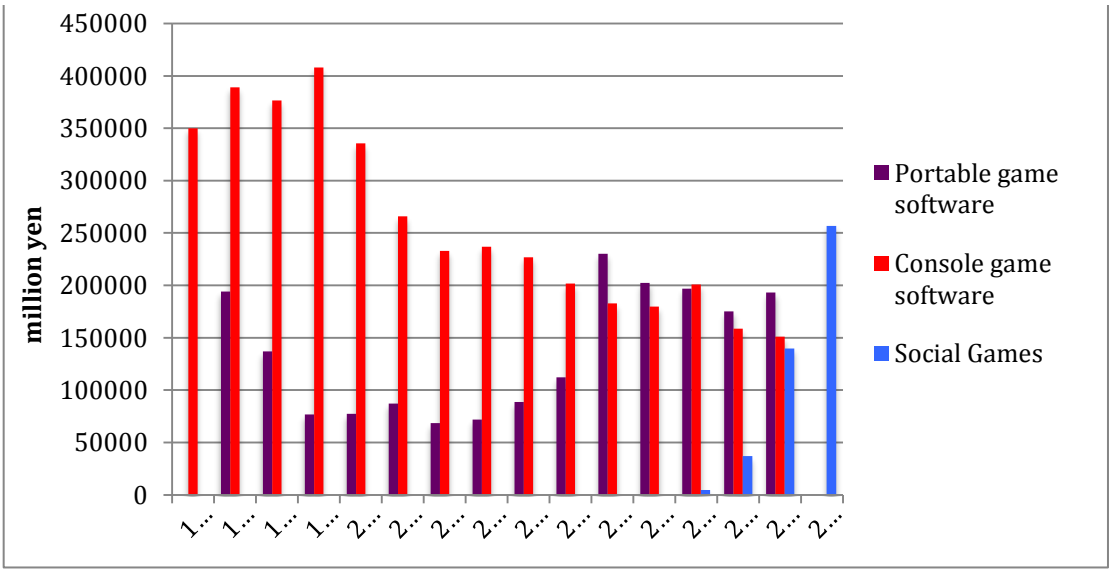
Virtual graph is a term used to depict all personal relations where people are bonded by similar interests and activities.

1. Introduction

With over 30 years of evolution of platforms and business models, the video game industry continues to grow and evolve. Japan remains an important part of this industry. For a long time, Japanese video game industry was known for their traditional video gamedevelopment. [1] However the business landscape is changing, as evidenced by the decline in traditional packaged software sales in the domestic and overseas markets during recent years (Ernkvist, 2012). By comparison, the social game market in Japan has achieved a rapid growth and is projected to continue to expand over the coming years (Figure 1). The Japanese domestic social game market was almost the same size as the market for console games or portable games in 2010 and is estimated to have become the single largest segment of the domestic game market in 2011. To some extent, it indicates that the Japanese video game industry is going through a transition; despite the decreasing presence of *traditional video games*, the *social game* market is thriving.

Some traditional video game companies are now making the shift to social games to take into account this transition. One example of this is the traditional video game developer KONAMI where sales from social game segment surpassed that of console packaged software segment in the first quarter of FY 2011 (Tsuchimoto, 2011).

Figure 1. Japanese game market by segment, 2007-2012



[1] Traditional video game refers to digital game which is played on a dedicated game hardware

Source: CESA Games White Paper (1997-2011), Yano Research Institute (2012)[2]

Meanwhile, social game companies from Japan are also making efforts to globalize their operations. DeNA acquired U.S. mobile game company ngmoco for US$400 million (Parkin, 2010), and GREE bought OpenFeint for US$104 million (Caoili, 2011). This globalization of Japanese social game companies is also evident in the creation of global platform standards and international joint ventures.

1.1 Aim of the report

The growth of social games in Japan has received significant attention in the media. However, there are very few academic studies of the social games industry in Japan due to their recent appearance. This report gather existing research and critical thinking on social games, and has carried out fieldworks to gain deeper knowledge and insights of this emerging industry. This is for the purpose of creating a comprehensive understanding of the Japanese social gaming industry and serving as a reference for the Hong Kong government and its game industry policy. Accordingly, the report aims to provide references for Hong Kong government to design cultural policies for developing and regulating its game industry as well as design business strategies for developing its local game companies. The report investigates the market implications of Japan's social game industry for Hong Kong's game industry with reference to the business model, partnership, as well as content creation and localization of the industry. The report also examines the synergies between social game and relevant creative industries in Japan, thus exploring potential strategies of integrating the social game industry into Hong Kong's existing creative clusters.

1.2 Structure of the report

This report consists of 2 parts, divided into 9 sections. In part 1, Section 3 begins with an overview of Japanese social game market – its origin, definition, characteristics, and its segmentation. Section 4, picks an industry perspective and analyzes the value chain of that industry. Section 5 examines human resource management (HRM) of companies within social game industry in Japan. Section 6 demonstrates different market segments' current growth. Section 7 studies the social impact of social games as they attracted a large formerly 'non-gamer' audience, which raises such questions as which demographics social games engage, for what reason they are played, and what kind of impact do they pose upon players. Section 8 covers some details of regulations and policies of this industry. Section 9 conducts

[2] Sales of advertisements are not included

a geographic cluster analysis, reviewing the synergies between social game industry and related creative industries.

In part 2, Section 10 examines both outward and inward linkages of globalization in the Japanese social game industry. Outward linkages are examined thourgh major Japanese social game companies' globalization strategies. Inward linkages are examined with a focus on Chinese social game developers' Japanese social game market entry experience. The final section provides implication of the reports findings for Hong Kong's game industry.

1.3 Methodology and empirical data

In order to conduct a comprehensive analysis of the aforementioned issues, the following methodologies and empirical data sources are used:

1.3.1 Business model analysis

This report has applied a value chain analysis framework (Kaplinsky & Morris, 2001) to map out the full range of activities that are involved in social game production.

1.3.2 Database of social games companies and related industries in Japan

Currently, there are no publicly available databases of the social game industry in Japan. This project has built up a unique database of Japanese social games companies and relevant related industries for this report. The database has enabled examination of grographic clustering and cross-industrial skill transfer between related industries. The database also enabled the selection and contact with developers for the expert interviews. See appendix 1 for a more detailed description of this database construction.

1.3.3 Expert interviews

15 industry field expert interviews were conducted. The interviewees were representing different business activities in the Japanese social game industry value chain: platform holders, developers, an industry consultant, a social game venture capitalist, and a journalist. In accordance with the aim of the report, specific efforts were made to include interviewees with international experience. Respondents were also from different positions to reflect different perspectives of the industry (see Appendix 2 for a full list of interviews). The interviews were subsequently transcribed and coded and analyzed using a general set of keywords related to the different topics of report coverage.

1.3.4 User interviews

15 user interviews were conducted to examine the usage of social games (See Appendix 3 for a full list).

1.3.5 Secondary sources

Companies' quarterly reports, annual reports, and press releases were collected from companies' websites respectively. Besides, business news database like LexisNexis and major game portals have been searched for articles related to the social game industry.

Part 1: The Japanese Social Game Industry

2 Defining and Segmenting the Japanese Social Game Market

2.1 What are social games in Japan?

Today's social game industry are still in the early stages of development. It has been less than 5 years since the first social game in Japan was introduced and major players such as mixi, DeNA and GREE subsequently opened up their platforms for third-party developers (Table 1). However, there is no established definition of the term social games that are shared by all actors in the industry. Generally, social games in the current shape are distributed and played on social networking sites, or social networking services (SNS), websites where users can update, post, communicate and share information with their friends. Deterding (2010) argues that as social games are still "in the making", definitions are bound to change with its object. But one element of social games that most agree upon is that they are "making use of social networks". Hence, the term 'social game' in this report is defined as games that adapt player's social networks within SNS for play purpose, and is distributed and played on that SNS.

Table 1. Significant events in Japanese social game market 2007-2011

Date	Key events
2007.5	GREE released first mobile social game "Tsuri Star"
2008.8	GREE released "Tanken Dorilland"
2009.8	mixi opened up its platform
2009.9	"Sunshine Ranch" released on mixi platform
2009.1	mixi opened up its mobile version platform
2009.1	"Kaito Royale" released on Mobage platform
2010.1	DeNA opened up its mobile version platform, Mobage-town (now Mobage)
2010.6	GREE opened up its mobile version platform, GREE
2010.9	"Dragon Collection" released on GREE platform

Source: companies' websites

2.2 Key characteristics and differences from other game industries

The sociality of social games is one of its most relevant, yet very complex characteristics. As Mäyrä (2008) has written, any gameplay session carries social significance, regardless of how many players are involved in a particular in-game action at the same time. In this broad

sense, traditional video games and *online games*[3] both carry the characteristic of social play which usually refers to competition or cooperation in a game, while in this report the sociality of social game means interactions happening around the game within the existing SNS's social network. The social network on SNS is often referred to as the "*social graph*", and it has been used to depict real personal relations, people who know each other in their real lives. For example, mixi or Facebook are based on social graphs. In Japanese social game industry, term "*virtual graph*" are often used to describe social network in which people who have similar interests and activities (through the internet) are connected. Mobage and GREE are based on virtual graph, and these platforms are more game-oriented.

A second characteristic is that social games have transformed the video game from a product to an online service, which has brought innovations into game business models and game development process (Deterding, 2010). Video games and online games are relying on high risk, high return, hit-driven business models, while social games enjoys *freemium*, *micro-transaction* models. In contrast to video game and online game developments that are usually taking long-term, with a large amount of developers, social game development is more like web service development that is short-term, agile, iterative and usage- and metrics-driven.

The last notable characteristic of social games is that they usually are game hardware independent and game client-free. Unlike traditional video games and online games, a dedicated game machine or PC is not necessarily required. Meanwhile, most of social games are cloud-based, and are running on browsers. With high penetration rate of mobile phone (Telecommunications Carriers Association, 2011), social games are becoming the most accessible form of digital games in Japan.

2.3 Segmenting the Japanese social game market

Japanese social game market can be roughly categorized into three segments:

2.3.1 Social games on feature phone

Japan is a leading country in regards to mobile phone technology and usage. Besides calling, features such as Internet browsers, high-resolution cameras, televisions, digital wallets, and train passes are integrated into mobile phones (usually called as "feature phone" or

[3] online game refers to digital game which is played on PC or dedicated game hardware with a constant Internet access

“Galapagos keitai” in Japan). Because of these features, mobile phones have become important in the Japanese everyday life. In addition, high-speed Internet access together with flat-rate data service enable Japanese people easily access Internet via their mobile phones. Currently, most social games can be played from mobile phones.

2.3.2 Social games on smartphone

With the introduction of iPhone and Android, smartphones (including tablets) have been growing rapidly in recent years, and Japan is no exception. Envisioning the growth in smartphone subscriber base, many social game developers began to offer social games in two versions. One version is for mobile phone, and the other is for smartphone. Meanwhile, some developers are focusing their resources on developing social games for smartphones only.

2.3.3 Social games on PC

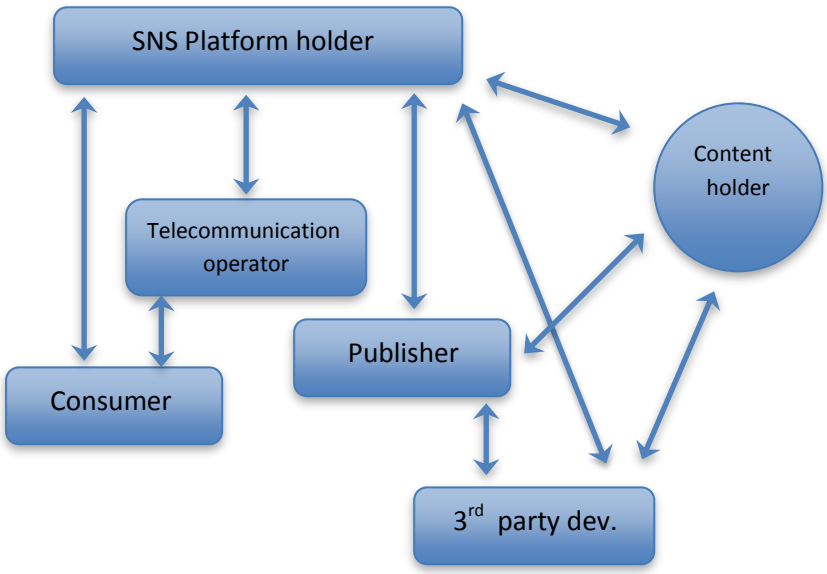
Besides mobile devices, there are also several SNS platforms with social games on PC. Japanese users usually visit mixi’s PC version, Yahoo!Mobage, Hangame, and Ameba to play social games on their computers.

3 Social Game Business Model

3.1 Business model of social game industry in Japan

Various kinds of companies are involved in the Japanese social game industry, specializing in different functions. A distinctive value chain could be drawn based on the business relationships between these companies. Companies involved in this industry can be distinguished as primary and supporting roles according to the internal value chain model. The primary roles are depicted in Figure 2 and discussed in more detail below.

Figure 2. Basic value chain of the Japanese social game industry



Source: Author's elaboration

3.2 Platform holders

Platform holders are companies that are providing SNS services. In order to engage their users for a longer time and generate higher revenue, applications and games are offered by the platform holders. Most of the games are utilizing the element of players' networks in the SNS. Some platform holders are developing in-house games, while others are exclusively reliant on 3rd party devlopers. The two leading platform holders in Japan (GREE and DeNA) are currently reliant on both in house and 3rd party developed games. With their platforms open, 3rd party developers are then allowed to distribute and market games in the platforms through a revenue sharing agreement with the platform holder. Among platform holders, competition revolves around getting the largest user base. A large user base support higher game sales, which then encourages developers to make new games for a specific platform. Platform holders provide advertisement spaces inside SNS for advertisers.

Currently, there are several major gaming SNS platforms in Japan, namely mixi, Mobage, GREE, Hangame and Ameba (Table 2).

3.3 Third-party developers

After platform holder mixi opened its platform in August 2009, a variety of companies with different backgrounds were rushing into the social game business. Companies that develop and distribute games on SNS are called 3rd party developers (also *SAP* in Japan, SAP refers to "social application provider").

There are 7 kinds of companies in Japanese social game industry, developing games for SNS platforms (Seed Planning, 2010).

- Web service companies

These companies were early entrants in the Japanese social game industry. When mixi opened platform in autumn, 2009, these companies firstly began offering social games by applying the knowledge and know-how from web-site construction and management.

- Mobile website design companies

Companies that have the knowledge of content production for mobile phone before.

- Mobile content providers (CP)

Companies that used to develop mobile games for telecommunication operators. Many of these companies expanded business into the social game market.

- Video game developers

Table 2. Overview of current major gaming SNS platforms in Japan

SNS Platform	Company	Date introduced	Hardware platform & Date opened up	Current user base (million)[4]	Geographic reach	Number of 3rd party developers	Revenue sharing (platform holder : developer)[5]	Milestone game (platform&release date)
mixi	mixi, Inc	2004/02	Mobile 2009/10; PC 2009/08; Smartphone 2010/09	27.11	Global	N/A	20% : 80%	• Sunshine Ranch (PC, 2009)
Mobage	DeNA Co., Ltd	2006/02	Mobile 2010/01; PC[6] 2010/10; Smartphone 2011/04	39.98	Global	317 (As of March, 2011)	30% : 70%	• Kaito Royale (Mobile, 2009) • Gundam Royale (Mobile, 2010) • Sengoku Collection (Mobile, 2010)
GREE	GREE, Inc	2005/06	Mobile 2010/06; PC (not open); Smartphone 2010/12	30.19[7]	Global	N/A	30% : 70%	• Tsuri Star (Mobile, 2007) • Tanken Dorilland (Mobile, 2008)

[4] As of March, 2012

[5] data from Seed Planning (2010), about 10% of gross sales will be charged as settlement payments by platform holder

[6] Yahoo!Mobage

[7] domestic number

								• Dragon Collection (Mobile, 2010) • FIFA World Class Soccer (Mobile, 2011)
Hangame	NHN Japan Corp	2000/11[8]	Mobile 2010/07; PC 2010/07; Smartphone 2010/07	47.77	Korea; Japan; US	N/A	N/A	N/A
Ameba	CyberAgent, Inc	2004/09[9]	Mobile 2010/09; PC (not open); Smartphone 2012/06	22.02	Global	N/A	N/A	N/A

Source: Companies' Press Releases; Seed Planning (2010); Wikipedia.

[8] date introduced to Japan, starting as an online game portal

[9] started as a blog service

Since 2006, many video game developers have shifted resources to portable game development after acknowledging the financial results of some SNS platform holders.

- Online game developers

Because the monetization practice in social games was already widely adopted in online games, they saw opportunities to expand their business into social game market.

- Former SNS providers

Companies that run their own SNS or develop SNS before became 3rd party developers to other SNS, attracted by the higher profit opportunities.

- Other companies

Includes e.g. companies that use social game as a new way for marketing and promoting their own products.

3.4 Telecommunication operators

Telecommunication operators/carriers are supporting platform holders to collect money from users in case of feature phone. They allow bills of purchase in the social games to be added to users' monthly phone bills, which lowers the barrier and brings convenience for users to make a purchase in the social games.

3.5 Supporting activities, suppliers

In addition to primary activities, various different kinds of companies are also evolved in the social game industry, serving as supporting roles. These include the following listed below.

- Data center

Data centers let developers run their games in the cloud. They enable developers to lower hardware cost, deploy applications faster and more easily scale their operations.

- Micro-transaction resolution providers

Companies that provide micro-transaction resolution or service for SNS platforms, especially for smartphones.

- Localization providers

Companies that localize game contents from Japanese to foreign languages or from foreign

languages to Japanese. Some companies also provide advices regarding 'culturalization' that make games fit local context and users' preference.

3.6 Strategies of development, marketing and service for social game in Japan

First, It is strategically important to choose which SNS platform to distribute games for 3rd party developers. User demographic and game portfolios inside SNS platform should be taken into consideration. Results will vary if the game doesn't fit the platform's game portfolio or doesn't meet the users' taste. Accomplishing the development of social game requires several areas of expertise: design, art, programming, and project management. The size of development team is relatively small compared to that of video game development. Generally, a social game development team has people ranging from a few people to 20. It should be noted that the social game development consists of different market segments in which development team members usually varies between games aimed at a large market and those for niche markets. As an example, one major SNS developer used a classification of 3rd party social game released on feature phone based on the DAU and development team (Table 3). According to this classification, a top game with the aim of reaching 250,000-500,000 DAU usually requires a team of 16-20 team members in development. However, it has also been pointed out by many interviewees that in the development of social game on smartphone, the cost will soar maily because of increasing graphic complexity. It takes around several weeks to several months to develop a social game, depending on the size of the game and the experience of the team.

Table 3. Classification of 3rd party social game (on feature phone)

	DAU	Number of development team member
A	250,000 - 500,000	16 - 20
B	100,000 - 250,000	>10
C	50,000 - 100,000	>10
D	20,000 - 50,000	>6
E	-20,000	>6

Source: Interview

Unlike video game development, social games adapt to change constantly after the game is launched. It is essential to make social games be entertaining in the first 10 minutes during first play, or players will quit. Social games are more of a service than a mere product, the key part to making a social game success lies more and more in the post-launch of the game

tan the operational service (Figure 3).

Figure 3. Breakdown of social game's post-launch

Source: Author's elaboration

There are a variety ways to reach potential players through advertisements on the Internet, TV, magazine, and outdoors. In terms of Internet ads, exposure on SNS homepage ensures certain traffic of players coming to the game. Our interviews indicated that a good relationship with platform holders in some cases might positively impact their chance to get advertisement exposure for their games. Besides, advertisement network or rewarding ad could be efficient if the advertisement is creative and targeting the right users. 3rd party developers seldom market their games on TV, but in some cases platform holders buy TV commercial slots or outdoor ad space for 3rd party developed games promotion. In addition, letting players invite other users by offering them rewards inside game, cross promotion in the games, and search engine optimization are common strategies of marketing.

It is important to design appealing mechanics to keep players engaged, preventing them from leaving. For instance, offering players different rewards as long as they frequently log in to the game on a daily basis. Time-limited sales and time-limited events are both strategies used to invite players back to the game. Since players' social graph is imported into the social game, metrics such as collaboration, competition, collecting, or caring can be engaging and viral.

Most social games currently are free-to-play (F2P). Advertising and virtual items sales are the business models for developers to generate revenue from their games. Virtual items have a range of different usage roles: decoration items for players to decorate their avatars, stamina recovery items or power-leveling items for players to advance more in the game, chances that allow players to withdraw cards from "*Gacha*" (like a virtual prize vending machine).

Three main factors make up the revenues that are captured from users in the service of social game (Figure 4).

Figure 4. Breakdown of social game revenue

Source: Author's elaboration

DAU refers to "Daily Active Users". It measures the number of unique users who have logged in social game at least once in one day.

Pay ratio refers to conversion rate, measuring the percentage of how many daily active users have become paid users per day.

ARPPU refers to average revenue per paid user. It measures the average amount of money every paid user consumed in the game per day.

These metrics (a.k.a *KPI*) are sometimes also calculated by month. Techniques and tools for data mining have become critical in the service, since the competition in the post launch phase is key for social game. Developers *iterate* the cycle of analyzing, optimizing and improving service by relying on knowledge of data mining and rapid implementation.

3.7 Case study: A third-party social game development process

This is an actual case with company name changed. Company X is a new startup, and considered releasing a game in one of the Japanese SNS platforms. Through the analysis of game in social game market, X thought that existing farming games left room for improvement. Missions in farming games were usually simple, asking players to plant white radish, cabbage etc., but players could quickly lose their interests. X thought it would be more engaging to mix the farming theme with the element of raising a turtle pet. Accordingly, he came up with the game idea of letting players feed a turtle with vegetables that they had planted and harvested in the game, and then let the turtle travel in the sea.

The games development team consisted of 2 planners, 4 engineers, 3 designers, and 1 illustrator. In traditional video game development, priority was given to the development of game. However when it came to social game, the priority shifted to the post-launch operational service of the game. During the operational service of the game, the team remained the same. There were 2 major work duties for the engineers. One was maintaining the game server, preventing the server from crash. The other was adding new features or new mechanics to the game, for example, designing a new mechanic for increasing the number of active players. Designer's work was to design attractive items for sales or for continuous login. Planner's work was to design broader strategies for the game to grow based on the data.

One of the opportunities for X at the time was that the total number of games in that SNS platform was not yet high and there was no farming game in that platform. In addition, that platform was famous for its blog service before, so players who played X's new game were posting on their blogs about that new game. Accordingly, a lot of other SNS users who read those posts came to the game and played. As a result, X's new game had attracted about 750.000 players without any other advertisement.

The team was monitoring user metric data on a daily basis. Around 20% of total login players were converted into active players. Around 5% of active players were purchasing in the game, i.e. paying users. Mechanics were continously and deliberately designed for the game to have an impact upon these metrics. For instance, if X wanted to increase the number of login players, X could use

advertisements. If X wanted to increase the number of active players, players were urged to login to the game every day in order to receive prizes, and they could get a special prize after continuous login for 30 days. A stamp book was designed so that players would receive a stamp every time they log in to the game. Players would be rewarded as long as they collected enough stamps. Regarding monetization, X was e.g. holding time-limited sales for some hours every day to sell special items. One person of the operational team was appointed to monitoring numbers during time-limited sales period on an hourly basis.

Takeaway points:

- Although imitation of successful game design is a widely used practice among social game industry, adding one new element to the existing successful game design might provide an innovative oportunity to differentiate a game in the market by making it easily recognizable and more engaging. However, mixing new element with eestablished game designs is always challenging. One risk is e.g. that game developers make games that are too complex to understand for players.

- In the social game business, post launch operational service is becoming increasingly important. On one hand, engineers have to maintain the server scalable in order to prevent server from being down because of the tempory heavy traffic of players. On the other hand, the ability of quick iteration is required to finetune the game's service and monetization.

4 Human Resource Management & Labor Practices

Despite the challenging macro-level employment conditions in Japan, the social game industry are actively recruiting, with experienced key social game development skills being in high demand. Securing talented people is a prerequisite for platform holders and developers to remain competitive in the long run. Many companies are willing to pay 30% more to recruitment agencies in order to hire skilled workers who have sufficient experience in planning, directing or engineering (Seed Planning, 2010). Some of the interviewed companies reported that salary for engineers has been increasing by as much as 20% annually in recent years. Regardless of the exact number, the lack of relevant engineers in Japan poses a major challenge for the industry. Major platform holders and some social game companies are holding summer internships for university and college students with high payments to screen for potential candidates. Besides, GREE established a collaboration with "Vantan Live Academy", a vocational school where students are trained to be specialized in developing social applications and smartphones (GREE, 2010). In 2012, GREE was hosting an International AI programming contest "SamurAI coding" with IPSJ (Information Processing Society of Japan) (GREE, 2012b). Some big social game companies are reported that they are relocating resources into social game development from other departments. Moreover, they are actively promoting collaborations with university laboratories, especially with those who have extensive knowledge of programming and statistics. Some interviewed companies argued that a close geographic proximity to one of the top universities could provide advantages when screening and recruiting for the best skills.

On the other hand, the mid-career labor market is also thriving in the social game industry. Many recruits are coming from related industries such as other Internet industries, the video game industry, and the anime industry. Workers with higher skills such as in production and planning often chose to start their own firms and work with other companies. There is also a high demand for people with advanced data-mining skills.

Tacit knowledge and learning by doing are the prime requisite in producing cultural products (Throsby, 2001). Therefore, On the Job Training (OJT) remains as the primary way of training new workers in social game companies. Normally, a mentor will be assigned to a new worker, offering advices during the project. After the "apprentice" has learned enough, the mentor will go to a new project and leave the "apprentice" to be in charge of current project. Some companies noted that it was desirable to put the new worker into a team that had

experience making hit games. It was presumed that workers could have a rapid learning curve though this arrangement. In some cases, Japanese social game companies outsource part of game development to China or other places in order to gain cost advantages. In these instances, programmers who have bilingual advantage such as speaking English, Japanese or Chinese are preferable.

Managers in higher positions are often offered stock options. Salary system varies depending on the company's philosophy. Some companies provide basic salary together with additional bonus payment tied to the results of the game project, suggesting that it might be an incentive for workers to improve the game and boost revenues. Some companies consider that providing bonus based on the performance of the game could make workers more risk averse. According to this argument, workers might be reluctant to make important changes in the game as failed changes could risk the bonus. These companies provide workers with better basic salary without bonus.[10]

[10] Apart from the above, some companies also provide other welfare such as: housing allowance for workers who live near companies in central Tokyo area otherwise traffic allowance, book allowance for further self-study, allowances for buying latest devices like new phones or tablets for game development

5 The Market for Social Games in Japan

5.1 Growth of different segments of the market

The market of social game was 6.9 billion yen in 2008, and a majority of revenues that year was generated by GREE's in house titles (Seed Planning, 2010). In 2009, mixi opened its PC and mobile SNS platform. Meanwhile, DeNA switched its business model from avatar decoration to virtual item sales, and released several big hit games (e.g. Kaito Royale). Together with GREE who was going ahead in social game market, the total revenue of the market was reported as 37.1 billion yen (Yano Research Institute, 2012). In 2010, DeNA and GREE both opened up their SNS platforms for third-party developers, which led to a significant increase in third-party companies that devleop social games and membership numbers of each platform (JeBA, 2011). The market grew rapidly in 2011, and was worth 257[11] billion yen (Yano Research Institute, 2012). The market is estimated to grow to reach 342.9[12] billion yen in 2012 according to one estimate (Yano Research Institute, 2012), or 383.2 billion yen according to another (Araki, 2012) .

Although there is no specific break-down of these estimates by platform segment, most revenue was generated from feature phone in Japan in 2011 (author`s interview). For some interviewed companies, about 80% of the company's revenue was from feature phone, and revenues from smartphone took up about 20%.

Currently, many of the interviewed social game developers are focusing more on smartphones. Two trends support this development. First, the number of newly subscribers to smartphone surpassed those to feature phone from late 2011 (comScore, 2012). The rise in smartphone adoption opens the door for developers to expand their reach to potential players. According to the results of one survey, 54.4% of feature phone users want to have a smartphone, 83.3% of which will keep playing social game if they switch to smartphone. And also one third of players who now play social game on smartphone firstly began playing after subscribed to smartphone (ENTERBRAIN, 2011).[13] Second, many developers are perceiving

[11] Sales of advertisements are not included

[12] Sales of advertisements are not included

[13] The survey was conducted from Internet during the period of 2011.9.17~2011.9.20. The survey target were male and female players who have been playing social games at least 2 or 3 times a week with age from 15~59 in Japan. Through the suvey, 2000 valid samples were screened and collected out of total 19424 samples

Japan's social game market as becoming saturated. However, because of Japanese unique standards of feature phone, it is challenging for them to expand their business overseas. On the other hand, the technical standards of smartphone are mostly universal regardless of where they are used.[14]

The PC is the smallest social game segment in Japan. On the PC platform, most of social game players are hardcore players who are more used to, or tend to invest a large amount of time rather than money to achieve goals in games. As a result, despite having a large user base, the PC segment has not been growing as rapidly as the other 2 segments in Japan.

[14] However, there are several other aspects besides technical standards that could provide a challenge for overseas expansion, as elaborated on later in this report.

6 Social Impacts of Social Games

6.1 Factor behind the growth of social games and their social role

There are 3 major factors behind the widespread market expansion of social game in Japan:

1. Until the end of 2011 there were more than 120 million mobile phone subscribers, nearly all of which are contracts with 3rd generation phones, and estimated that 99% of all mobile devices can use high-speed data communication services in Japan (Telecommunications Carriers Association, 2011). Given the Japanese population, almost everyone has a high-end mobile phone. Furthermore, adoption of smartphone continues to grow (comScore, 2012). Considering the importance of mobile phone in Japanese peoples' life, there has been a solid foundation for the rapid growth of social games. Compared with the number of console game hardware or even portable game hardware, the number of mobile phone that can play social games in Japanese is much higher. This has made social game become the easiest accessible game in the market. At the same time, SNS platform holders' extensive spending on buying TV commercials, outdoor ad spaces, using idols and collaborating with other famous companies has increased the recognition of social game for a broader public.

2. The free-to-play business model and social graph inside SNS have played an important role in the growth of social game. Similar to online game, F2P is a business model that allows players to play games for free, generating revenues through premium purchase of services or items in the game. F2P enabled a larger group of users to come to enjoy social games. In particular, the game design mechanics of social game are usually simple. This made it possible to reach men and women of all ages, even those who had no prior experience from playing digital games. Meanwhile, making use of the social/virtual graph in the platform have stimulated a viral effect of game marketing, and increased players' stickiness in playing social games.

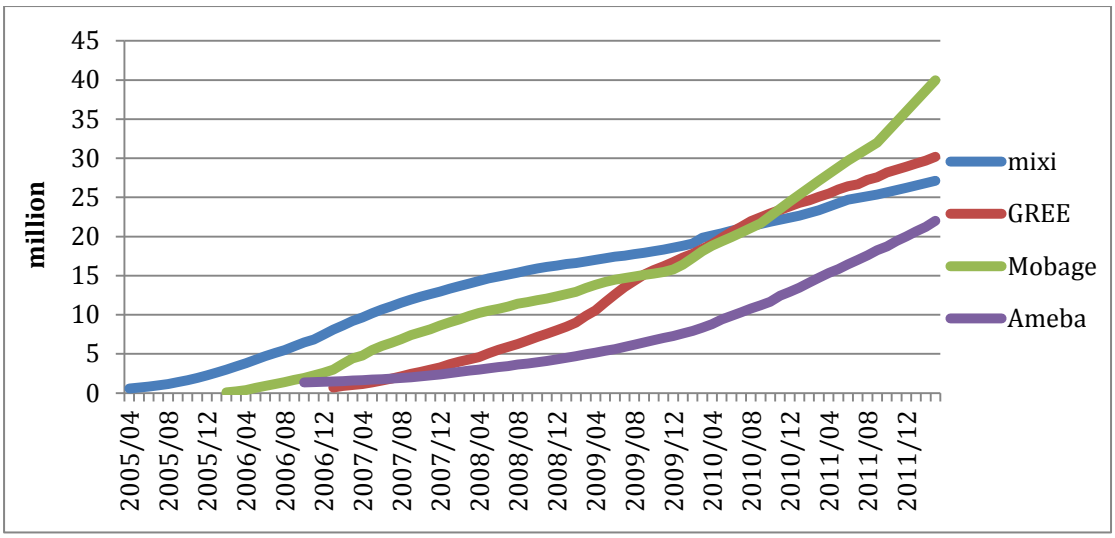
3. Well-known IP that are brought from video game industry or other related creative industries has attracted many players. Social games based on a famous IP have in many cases ensured a high traffic of players. However, it will fail to monetize players if the IP doesn't suit the design of social game.

6.2 The social game player demographic

Below is a chart of historical development of major SNS platforms' membership numbers in Japan (Figure 5). The total number of memberships of each platform has been growing

rapidly in recent years through extensive advertisement and game releases. Currently, Mobage was ahead of its rivals in membership because it included the membership number of Yahoo!Mobage (Yahoo, 2012). GREE was aggressively acquring users outside Japan through OpenFeint, while in domestic market its membership number was over 30 million. mixi had been surpassed in term of membership number since DeNA and GREE opened respective platform in 2010. Ameba was catching up on the other 3 platforms.

Figure 5. Historical development of membership numbers.



Source: Companies' quarterly reports.

Because of their simple design, social games are well embraced by the mass market. Not only teenagers, but also office ladies, businessmen in the 20s to 40s age range, and people over 50 also represent important demographic groups of social game players. People belong to 30-40 year-old age group spend most on average compared to other age groups.

Gender ratio of SNS users varies somewhat in different SNS platforms. In Mobage (40% female/60% male) and GREE (47% female/53% male), male user ratio is slightly higher than female users because both platforms are game-centered, while in mixi (52.9% female/47.1% male), female user ratio is slightly higher than male users because mixi functions as a virtual town, it provides public place for users to communicate, and promote real friendship with their friends. Ameba's UI is quite appealing to female users, so in Ameba there are more female users than male users.

6.3 Case study: Example of the social impact of social game based on an example from some key interviewed users and their life.

This is an actual story with fictional details added and interviewee name changed. Hebe is a university girl, and she is a huge fan of manga and anime. She lives alone in Tokyo and has a preference for game contents with themes of romance or boy's love (relationship between two male characters).

Hebe uses mixi to check her real friends' latest updates. She loves tweeting by using her iPhone when she is watching anime live. Through that she made a lot of friends, many which also become friends with her in mixi and GREE although they haven't met each other in real life. Hebes avatar in GREE platform is beautifully decorated. Users have to earn items in the social game or purchase by virtual coins inside platform. She subscribed to a mange site, so she could receive virtual coins from this platform and use received coins to purchase cute decorations. The stated reason why she dresses her avatar beautiful is because friends visit her page regularly. Sometimes she wants to give her friends a surprise, so she spends money to withdraw special items from 'Gacha'. Gacha is a system resembling lottery, players that are not lucky enough have to withdraw many times to win special items. The payment will be added to the feature phone bill automatically without inputting any credit card information. Friends or other new comers leave comments regarding her beautiful avatar, which make her happy.

Hebe is usually invited by her friends in GREE to play social game with them. One social game she is playing is called 'Kurinoppe', a game like 'Tamagotchi'. The game's aim is to raise a pet. The pet she raises in the game is also displayed alongside her avatar in her profile page. The game encourages player to visit their friends' pets. Hebe made a male friend in this game, and kept a communication with him for 3 months.

Another game she is playing is called 'Onmyōji' in mixi. It is a virtual card game. She collects cards through the battle in the game. There is a beautifully designed male character on each card. The higher level she advanced in the game, the better chance to get a more beautiful card. She loves to have well-designed card. Sometimes she will purchase virtual items to restore her stamina in the game she consumed out in order to keep playing the game. Some rare cards with beautiful design and powerful status can also be withdrew from Gacha. Every time of withdrawing costs 250 yen. Hebe pays to withdraw the Gacha during the discount price time or when the possibility of rare cards from Gacha is temporarily up. She spends average 1000 yen every month on social games, while some of her friends pay about 10,000 or 20,000 yen a month. She doesn't think it is strange to spend that amount of money on social games, because she pays for what she likes.

Takeaway points:

- Game genre of romance for female players has been growing during recent years in Japan, a genre hardly known for westerners. Games in this genre mostly have good-looking male characters, attracting voices, and beautiful graphics. For some female players, this kind of games fullfil their fantasies of having an ideal virtual male partner. The mobile phone is playing an important role in this game genre because the mobility enables the game contents as if they are keeping company with female players anytime and anywhere.

- Social graph/virtual graph are useful in attracting SNS users to play social games. In some cases, both are also powerful in motivating players to spend money in SNS and social games. However, sometimes the results are adverse. For instance, social graph makes players hesitate to ask their friends to play the same game or reluctant to spend a large amount of money in the game.

7 Regulatory Framework and Industrial Policy of Social Games

7.1 Major regulatory bodies in social game and their role

Since the dawn of the social game industry, there has been no major regulation specifically imposed upon the industry until Consumer Affairs Agency considered stepping in in 2012 (Consumer Affair Agency, 2012). This agency was established in late 2009 with the aim of protecting and enhancing consumer benefits. It is not specifically set up for social game industry, but covers broader range of jurisdictions that are related to consumer problems such as 'trade', 'labeling' and 'safety'. Even now, there are no regulatory bodies that directly regulate this industry. Before potential moves emerged from the Consumer Affairs Agency, 6 major SNS platform holders formed a joint committee in march 2012 to self-regulate[15] and ensure that the industry is heading in the right direction (GREE, 2012a) .

Apart from these efforts, an independent organization named EMA (Content Evaluation and Monitoring Association) providines mobile content evaluation service. It uses its own filtering service to prevent minors from accessing mobile websites that are harmful for minors. Many social game companies are using EMA's evaluation of game contents as a certification to prove that the game content is proper for adolescents.

7.2 Social game administrative regulation

There are no laws or administrative regulations specific for social game industry. However, with the issues regarding real money trade (RMT) and "*Complete Gacha*"[16] being largely reported by the media, the following laws or administrative regulations could be potentially applied to this industry.

Financial Instruments and Exchange Law, originally Securities and Exchange Law, can be effective when virtual cards inside social game are considered as securities. Though social game providers strictly prohibit RMT of virtual cards inside social game, virtual cards are actively circulated in online auction sites. Particularly the amount of money regarding RMT and the fluctuation in the prices of virtual cards cannot be overlooked. Therefore, if virtual card is considered as one kind of securities, RMT will be under the regulation framework of

[15] Includes 1). Countermeasures against RMT, 2). Payment cap for players under age 18, 3). Clearer in-game rules and explanations, 4). Establishment of three respective working groups, 5). Tight cooperation with relevant organizations

[16] Complete Gacha, or "Kompu Gacha" in Japanese, refers to a mechanic that players are awarded with an extremely valuable prize by completing a certain set of different gacha prizes

this law.

Services of providing virtual currency inside SNS platform, as well as social game are regulated by Act on Settlement of Funds, including Order for Enforcement of the Act on Settlement of Funds, Cabinet Office Ordinance on Prepaid Payment Instruments, and Cabinet Office Ordinance on Fund Transfer Service Providers in particular.

One game mechanic that prevails in the most of the Japanese popular social games is called "Complete Gacha" ("Kompu Gacha" in Japanese), which encourages players to collect more than 2 different cards in order to exchange with a rare card in the social game. Such mechanic is regulated by Act against Unjustifiable Premiums and Misleading Representations, and CAA is currently taking investigation into this issue.

7.3 Contractual and legal regulation of virtual goods trade in social games

Real Money Trade (RMT) of game items and currencies is currently highly controversial (Lehdonvirta & Ernkvist, 2011). For players whose time is more scarce than money, it fulfills a latent demand. In Japanese social game, buying rare virtual cards from other players could literally help them save money. On the other hand, RMT can also cause negative externalities to other players and social game providers (Castronova, 2004, 2005).

Most social game providers are strictly against RMT, which are stated in their Terms of Services. Players have to click to accept these terms as a condition for entering the game. This is intended as a contractual prohibition against trading activities.

Nevertheless, there is widespread real money trade of virtual cards in some Japanese famous online auction sites. The joint committee formed by 6 major platform holders is initiating measures against RMT (e.g. reinforce traceability of virtual cards inside game, reinforce RMT-related deterrent, and implement tools that can automatically monitor the action of RMT).

7.4 Lawsuits among social game companies

Copying, imitation and extensive borrowing of elements from other developers successful game design has been a relatively widespread practice in the game industry. It seems particularly rampant in the realm of social game where the game design is relatively simple and cost of imitation is relatively low (Table 4).

Table 4. Significant lawsuits related to the social game industry in Japan, 2009-2012

Plantiff	Defendant	Lawsuit filed	Products and issues involved	Outcome
GREE	DeNA, ORSO	September 25th, 2009	DeNA's game "Tsurige Town 2" (developed by ORSO), which was sued for copying design elements and machanics from GREE's game "Tsuri Star".	Feburary 23rd, 2012: Tokyo District Court ordered DeNA to pay GREE 234.6 million yen (US$2.9 million) and stop the 'Tsurige Town 2" game service.
KONAMI	GMS Co., Ltd. (Currently gloops, Inc.)	September 5th, 2011	Konami claimed that gloop's social game "Dainekkyo!! Pro Yakyu Card", released on August 18th, 2011, infringed on the intellectual property rights of the game ("Professional Baseball Dream Nine", released by Konami in March 2011) mechanics, images and effects.	Pending
GREE, KDDI	DeNA	November 21st, 2011	DeNA's antitrust practices that blocked access in Mobage-Town to specific games provided by third-party developers who are also releasing the same titles in GREE platform meanwhile. Japan Fair Trade Commission issued a cease and desist order against DeNA on June 9th, 2011.	Pending
Klab	Crooz	December 6th, 2011	Klab claimed that Crooz infringed its game "Shin-Sengoku Buster", released on March 22nd, 2011, for copying a lot for game "TeamxKousou! Gang King", released by Crooz on September 6th, 2011, in terms of game and monetize mechanics, screen transition, etc.	Pending
DeNA	GREE	January 31st,2012	DeNA filed a libel suit against GREE	Pending

Sources: Company Press Releases.

The phenomenon of imitation is highly controversial. From traffic and revenue perspective, derivative together with original successful game all generate traffic and revenue for SNS platforms. However, long-term it might become a challenge for platforms because the saturation of similar games in one platform will hamper further acquisition of new users and the incitament of developers to innovate.

Another legal issue has been regarding SNS platform holders's competetive practices to get 3rd party developers to develop exclusive titles for their own platforms.

7.5 Industry support policy: National level

Japanese government initiated its first movement to support Japanese video game industry as a national policy in 2006 (Ministry of Economy Trade and Industry, 2006). Three strategies were included in this policy: development strategy, business strategy, and communication strategy.

Regarding the social game industry, there is currently no explicit national policy to promote this industry.

7.6 Industry support policy: Local level

There are a few local level policy initiatives aimed at developing the game industry. Fukuoka city has attracted attention from social game companies because of its relatively low cost of office rent, low living expense, and convenience of transportation across Asian countries comparing to Tokyo.

Koichi Prefecture, together with Shikoku Bank and Kouchi Bank hosted first local social network game design contest in 2011 with the aim of acquiring promising game scenarios and game characters. They also provide help for local companies in terms of techniques and know-how of social game development, fundraising of social game development, social game promotion, and IP management support.

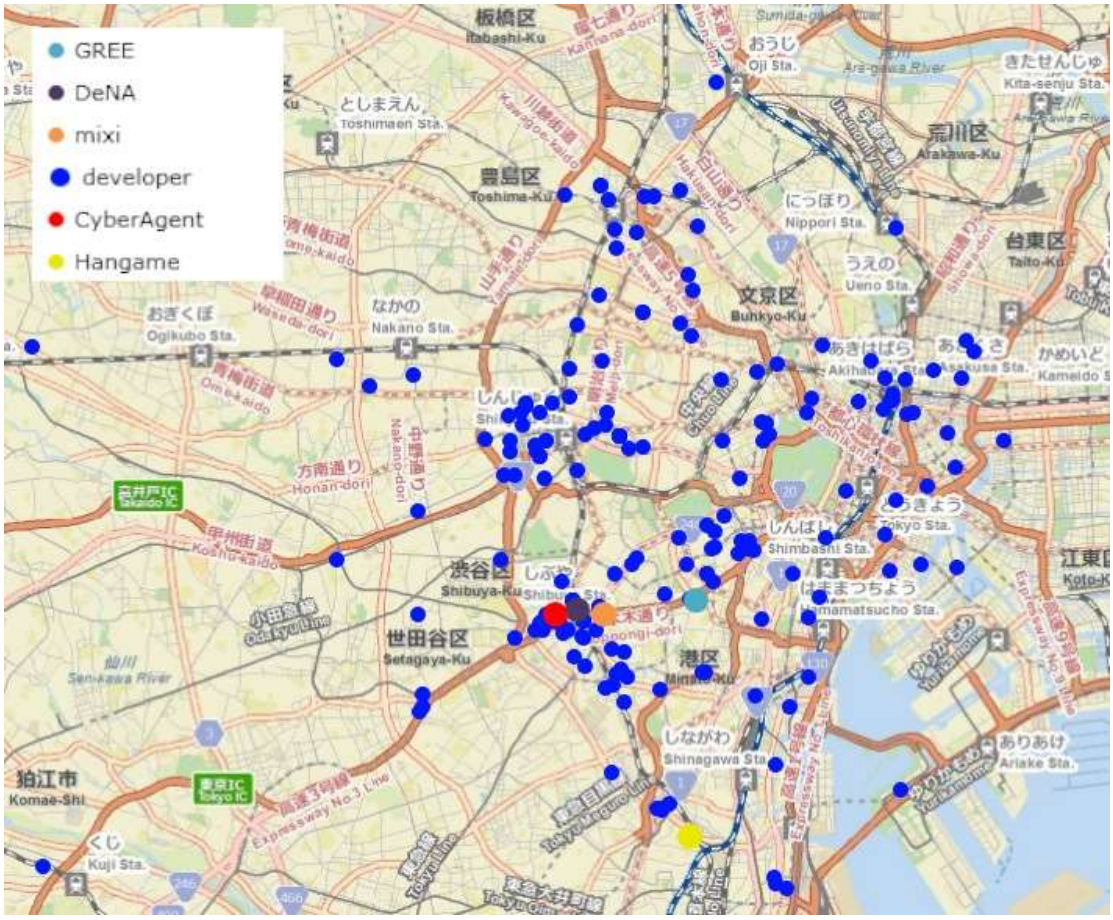
8 Cultural Cluster of the Japanese Social Game Industry

8.1 Map outlining social game cluster in Japan, agglomeration with other related industries

A database of Japanese social game companies was built for this project (Appendix 1). Below is a map of company locations within Tokyo metropolitan area where the social game companies are most heavily concentrated (Figure 6). Based on the database, 79 percent of social game companies are located within Tokyo metropolitan area (Table 5). In the map, four major agglomerations of social game companies can be identified. The social game companies tend to cluster and aggregate in Shinjuku ward, Shibuya ward, Minato ward, and Chiyoda ward.

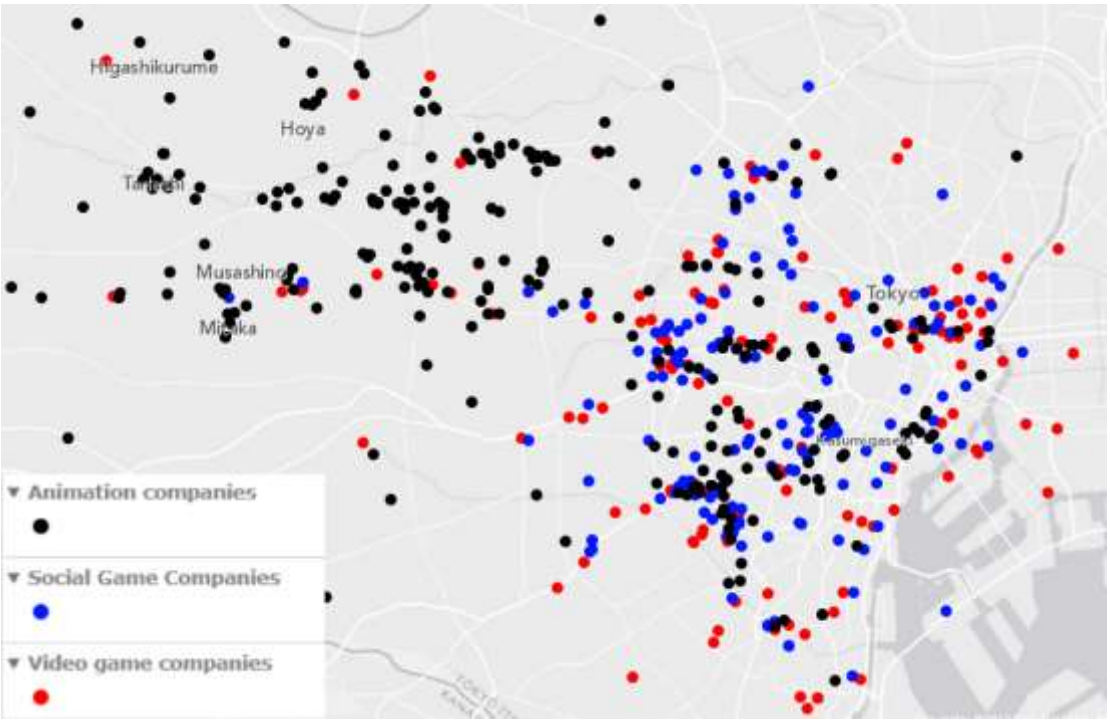
Figure 7 is a map of company locations of related industries, including video game companies and animation companies.

Figure 6. Clusters of social game companies in Central Tokyo



Source: Author's elaboration[17]

Figure 7. Locations of companies of relevant industries in Central Tokyo



Source: Author's elaboration

8.2 Clustering factors

With the rise of technology-based knowledge industries, many contend that physical constraints on location have been weakened (Friedman, 2008). But Porter (2000) counters that clustering remains important as firms take advantage of networks, suppliers, markets, and related factors. Research on high-technology industries finds that even knowledge-based industries like hardware and software tend to cluster around universities, networks of related firms and entrepreneurial talent, end-users, venture capital and specialized services (Saxenian, 1996). Jaffe (1986) has found that aggregation in knowledge intensive industries enjoys benefits such as knowledge spillovers that spur both innovation and commercialization.

As shown in Figure 7, animation companies in black dot can be identified as concentrating in western suburbs of Tokyo, whereas the agglomeration of video game companies is in the central Tokyo. Hanzawa (2004) argues this locational difference arises from divergences in the development paths of animation and video game companies.

[17] The latitude and longitude data of social game companies were obtained from NAPZAK *http://napzak.com/tool/map/*

In the case of social game companies, companies that are located in central Tokyo are accounting for 79% out of all social game companies in the database. This is a higher concentration to central Tokyo than video game companies. A higher concentration in particular ward comparing to video game companies is also found (Table 5).

Table 5. The number of social game and video game companies in Japan

	Companies located in Tokyo (%)	Companies located in Shibuya ward (%)	Companies located in Shinjuku ward (%)	Companies located in Minato ward (%)	Companies located in Chiyoda ward (%)
Social game industry (total Japan 256)	201 (79%)	53 (21%)	34 (13%)	35 (14%)	20 (8%)
Video game industry (total Japan 289)	187 (65%)	20 (7%)	28 (10%)	15 (5%)	20 (7%)

Source: Author's Calculation

The underlying reasons of those agglomerations of social game companies is difficult to establish with certainty. Yet, according to the exploratory expert interviews, 3 proposed reasons why those four areas cluster and aggregate are:

1. Regional brands. Areas like Roppongi area in Minato ward and Shibuya have a tradition of establishing mobile companies and Internet companies, while areas like Akihabara and Kanda in Chiyoda ward and Shinjuku have been hosting video game companies for years. In addition, these areas are commonly characterized by an environment of diverse activities that might be accomodating for the creative class and IT professionals. Thus companies

2. Office cost and convenience of transportation. Stations centered in these four areas are intersections of major railway lines in Tokyo metropolitan area. Besides, most SNS platform holders are located within these clusters. It is convenient for developers to meet people face to face from SNS platform holders or from other social game companies in both formal business meeting and informal social gathering such as bars, restaurants after work. Exchanges of information during informal personal gathering are usually important and useful.

3. Supply of the labor suitable for social game businesses. Most top-tier universities in Japan are located in Tokyo, as well as other relevant companies such as Internet companies and

video game companies. Therefore proximity to these local labor markets provides the basis of the growth of the cluster.

8.3 Synergies with other related industries

The social game industry is young and growing rapidly. Innovations constantly take place in social games in terms of both game design and game service. The sheer size of the market makes it lucrative, but competition is high as well. In order to stay competitive, companies are actively recruiting people from other creative industries, and takes best practices and know-how from these related industries to their game development.

For example, many companies started their business as developing Internet service before they switched to develop social game. They were good at making web-like service but lacked knowledge and know how of producing entertaining game content. Personel from the TV industry has enrich those social games by introducing ways of direction and techniques used in producing TV programs. Game design philosophy from video game industry is also applied in order to make gameplay of social game more interesting. Other synergies could be found in the design of virtual item. The increasing young female players want items that are looking fashionable. To cater to that need, designers who have knowledge and sense of fashion and trends are used in some development teams.

Part 2: Implication for Hong Kong Game Industry

9 International inward and outward linkages of Japanese social game industry to China and Asia

9.1 Outward linkages: Internationalization of Japanese social game industry in Asia/China (JV, Acquisitions, Partnerships)

Major platform holders from Japan are making efforts to globalize operations. This globalization of Japanese platform holders is also evident in the creation of global platform standards and international joint ventures (Table 6; Table 7). Platform holders are seeking partnerships with foreign SNS platforms or integrating foreign SNS platforms through acquisitions in order to promote and expand their total SNS user base. On the other hand, they are also preparing to increase game titles and the quality of game in the SNS platform through strengthening in-house game development and seeking collaborations with promising 3rd party developers. Platform holders like DeNA and GREE have expertise in producing hit social games, which they believe is the advantage of providing 3rd party developers techniques and know-how of game development. They believe that both strategies will create an upward viral effect: a larger user base attracts developers to develop more games, and then good games attract more users.

Japanese 3rd party social game developers are expanding their business overseas as well. In the domestic market, they provide service of content localization for foreign game developers or co-develop games based on famous IP with major foreign game developers. In the foreign market, they outsource parts of social game development to the countries such as China and Vietnam, or establish local studios for in-house development. Japanese social game developers also release their games in foreign major SNS platforms like Facebook, hi5, and RenRen.

Table 6. DeNA's overseas expansion[18]

Date	Target name (Deal type)	Target description	Target location and Reason
2006/07	DeNA Beijing Co., Ltd	Subsidary	China Expecting high growth of China's mobile market
2007/09	DeNA China	DeNA's Chinese subsidiary Shanghai Zongyou Network Technology Co., Ltd., also operating as DeNA China, has been providing browser-based Mobage services	China
2008/01	DeNA Global, Inc.	U.S. subsidiary of DeNA Co., Ltd	US
2009/07	WAPTX LTD., (Acquistion)	Owns the China's leading mobile-only social networking service	China PC-based social games are already popular in China and DeNA expects the mobile social gaming market to grow with the rapidly increasing popularity of smartphones.
2009/10	Aurora Feint. Inc (Capital Allicance)	Makers of the social gaming platform for iphone games - OpenFeint	US DeNA has taken a 20% stake in the company and is going to play an important part in AuroraFeint's international expansion.
2009/10	Ice Breaker U.S., Inc. (Acquisition)	A U.S. game developer and publisher	US
2010/09	Gameview Studios, LLC (Acquistion)	Gameview, formerly known as Bayview Labs, has made social games such as Tap Fish: Sharks (pictured) and Tap Birds.	US moving deeper into the U.S
2010/09	Astro ApeStudios, LLC (Business & Capital Alliance)	Astro Ape creates social game titles for the iOS platform, including Office Heroes, an iPhone app simulating a game within the corporate world.	US Through the Company's subsidiary, DeNA Global, Inc. These two companies will work together on strengthening the alliance on smartphone social game market in English-speaking countries.

[18] As of 2011.12.31

2010/10	ngmoco, Inc. （Acquisition）	ngmoco creates and publishes games for the iPhone and beyond in collaboration with the best and brightest game makers in the world.	US Ngmoco will be responsible for bringing DeNA's "X-Device X-Border" strategy to Western markets by making DeNA's Mobage a global service and platform for games. A key focus for the company is the creation of a unified open developer platform that combines ngmoco's state of the art smartphone technology framework with DeNA's pioneering Mobage Open SDK.
2011/04	AMoAD (Jointventure)	Leading Japanese smartphone ad network consists of two major Japanese social service, "Ameba" and "Mobage"	Japan
2011/05	Rough Cookie (Acquisition)	Company focuses on smartphone games development. Star Defense was an early success; after ngmoco presented the game on the WWDC keynote stage, the title was a top-selling App Store game in the summer of 2009. The game earned Rough Cookie a Dutch Game Award as well as acclaim in the Top 50 iPhone Developers of the Year, by Pocket Gamer.	Netherlands Establish a presence for ngmoco in Europe as the company readies the global launch of its social network for mobile games, Mobage. The Netherlands-based studio is already working on new ngmoco games for the Mobage service.
2011/06	DeNA Seoul Co., Ltd.	A new South Korean subsidiary. DeNA Seoul Co., Ltd. will partner with South Korea-based companies, including game developers and hardware manufacturers, to create and distribute content for Mobage, the social games platform operated by the DeNA group	Korea Headed by president and CEO, Makato Haruta. Haruta's charter will be to steer partnerships with Korean companies, including game developers, to bring content to the Mobage network in South Korea, Japan and the US.
2011/08	DeNA Asia Pacific Holdings Pte. Ltd.	A wholly-owned subsidiary of DeNA, DeNA Asia will work with developers in Southeast and South Asia to bring high-quality social mobile games to smartphone users worldwide.	Singapore DeNA Asia will serve as a hub for DeNA Group's social games business in Southeast and South Asia. The subsidiary will also seek to strengthen the group's development capabilities through Acquisitions of local developers. Future activities will include localization of the global edition of Mobage.
2011/08	DeNA Sweden	Subsidary	Sweden

			DeNA Sweden LLC will be engaged in the development of the global version of social game Mobage. DeNA Sweden LLC will be capitalized at 60 million yen
2011/10	BDNA (Joint venture)	A Jointventure, expressly created to deliver social games and entertainment content to smartphone users worldwide.	Japan Combine NAMCO BANDAI Games's video game development savvy and DeNA's expertise in social games to leverage opportunities in the global market for mobile entertainment.
2011/09	Punch Entertainment Company Limited (Acquisition)	Will provide engineering support to DeNA's first-party game development team for Mobage, first in Japan and later in other territories.	Vietnam An excellent addition to DeNA's first party game development team with its proven track record of developing cross-platform social games,
2011/10	Atakama Labs S.A. (Acquisition)	As DeNA's first subsidiary in Latin America, Atakama Labs will enhance DeNA Group's development capabilities for Mobage Global	Chile Atakama Labs will primarily provide engineering support for ngmoco's first-party and third-party games, as well as the Mobage platform itself. The companies already have an established relationship through previous work commissioned to Atakama to port third-party mobile social games to Mobage Global.
2011/11	Grasshopper Social network service	Grasshopper Mobile will develop and operate social games for smartphones, provided exclusively on DeNA's Mobage social gaming platform in Japan and other markets	Japan Grasshopper Manufacture will transfer its existing mobile games resources to Grasshopper Social Network Service and DeNA will provide support for the company's game development. Through the Jointventure, DeNA aims to expand its catalog of high-quality social games on Mobage for the globally expanding smartphone market.
2011/11	Premium Agency Inc.	Engaged in the development of image and software contents, provision of multi-game platform development engine, as well as the education and producing support businesses in Tokyo	Japan Through the business alliance, the two companies will work together on the social game platform related businesses

Source: Company Press Releases

Table 7. GREE's overseas expansion[19]

Date	Target name (Deal type)	Target description	Target location and Reason
2011/01	GREE International	Subsidiary	US A focus on strengthening business collaborations and better supporting local game developers
2011/01	Tencent (Business & Capital Alliance)	Provide Internet and mobile phone value-added services and operate online advertising services, As of November 2010, the company is the third largest Internet company in the world	China Easily progress the social application program offered by a social application of the development partner who uses "GREE Platform for smartphone" and "Tencent Wireless Services Division" with mutual SNS. as the foothold of the business development in the Chinese mobile game market that grows up rapidly.
2011/04	Open Feint (Acquistion)	Leading mobile social gaming network for all app stores and mobile devices, with over 75 million registered users and a presence in over 5,000 games.	US Its entrance into the global market, providing the first and best global gaming ecosystem, with both the developer and consumer
2011/04	Project Goth, Inc (Business & Capital Alliance)	Boasting the user base of the total of over 47 million users mainly in the newly-rising nations of the Southeast Asia, India, and South Africa	US Enables social applications to be easily deployed in the both companies' application platforms.
2011/07	GREE Beijing	Subsidiary	China For development and strategic alliance purposes.
2011/07	Atlantis (Acquisition)	Founded in 2007 and has a 15-people team, runs a free ad server and smartphone ad network	Japan Marks GREE's entry into the mobile/smartphone ad business, which has been growing rapidly in Japan in recent months. Also the web traffic from the "GREE Platform" will boost the ad network business.
2011/08	CAVE Interactive	A game developer	Japan

[19] as of 2011.12.31

	(Business & Capital Alliance)		Strengthen internal game development for GREE
2011/08	UltiZen (Capital Alliance)	One of China's largest browser and smartphone game development and publishing companies. also the creator of the U-Pal web game platform for the Chinese market, as well as the leading art outsourcing provider.	China Not only strengthen the partnership financially, but will help to enhance the content and quality of GREE's mobile social gaming network as it plans to accelerate its global expansion.
2011/10	GREE UK	Subsidiary	UK The new overseas operations will enhance local business collaborations and help development support to local gaming developers. help to accelerate GREE's plan to expand its global footprint
2011/10	GREE Singapore	Subsidiary	Singapore Enhance local business collaborations and help development support to local gaming developers. help to accelerate GREE's plan to expand its global footprint
2011/10	GREE Korea	Subsidiary	Korea Enhance local business collaborations and help development support to local gaming developers. help to accelerate GREE's plan to expand its global footprint
2011/11	MARS, ltd. (Acquisition)	MARS possesses abundant development experience in smartphone apps through its subsidiary, FEYNMAN	Japan Expects to reinforce its development capability for smartphone apps and to create synergy among the companies
2012/01	GREE Netherlands	Subsidiary	Netherlands Enhance local business collaborations and help development support to local gaming developers.
2012/01	GREE Dubai	Subsidiary	Dubai Further GREE's expansion and support into the Middle East and surrounding regions.
2012/02	GREE Brazil	Subsidiary	Brazil

Source: Company Press Releases

9.2 Case study: The creation of Pan-Asia social game platform through the GREE and Tencent partnership

GREE has been promoting its global expansion of the business. For example, it invested in a mobile SNS which is called "mig33", and has approximately 40 million members, centering on the emerging countries including Southeast Asian countries. The service is provided by Project Goth, Inc. In addition to this, GREE has already released its platform for developers' providing social game on smartphone and promote its SNS platform.

On the other hand, Tencent is the largest online service provider in China. Its various online and value-added services, including IM QQ, web portal QQ.com, QQ game portal, multi-media social networking service Qzone and wireless portal have provided Chinese Internet users with adequate online experience. Tencent currently has over 7 billion users (Tencent, 2012), and surprisingly the number of daily concurrent users who are using IM QQ exceeds the total population of Japan.

The partnership between GREE and Tencent enabled standards of respective services, "GREE Platform for smartphone" and "QQ Wireless Game Center" to be compatible for each other, allowing developers who developed applications for "GREE Platform for smartphone" could easily import and distribute those applications to Tencent's "QQ Wireless Game Center" and vice versa.

GREE was hoping to extend its reach to over 120 million Chinese users who had experience of playing games on mobile phone (Enfodesk, 2011) through this collaboration. Therefore, together with "mig33" service, GREE has created a Pan-Asia social game platform. Taito and TECMO KOEI have released their games based on ones that were originally developed for GREE smartphone platform through this platform to Tencent.

9.3 Inward linkages: overseas expansion of Chinese companies in Japanese social game industry

More and more Chinese social game developers are turning their sights at the Japanese Internet market (LU, 2010). Several factors have made the Japanese SNS market attractive for Chinese SNS game companies: the high ARPU, the market size, geographic proximity, relative similarities in tastes and the challenges facing Chinese SNS companies at their domestic market. Several issues regarding Chinese SNS platforms are challeneging for social game developers: they are not open enough regarding e.g. payment control, provides an unattractive revenue split, and have in-house development teams imitate successful games and then promote them over the independent games (bbishop, 2010).

Due to its unique standards of feature phone, Chinese social game developers were mainly releasing games on PC platforms. Currently they develop and distribute social games for smartphone as well in Japan.

9.4 Case study: The Japanese entrance experience of a Chinese social game developer with overseas office in Japan

This was an actual case with company name changed. Happyfish's headquarter was located in Beijing. The company had already expanded their business to some other Non-English social game markets, e.g. Taiwan. Then, the company decided to expand its social game business to Japan.

The office in Japan was led by a Japanese who had a MBA degree. He headhunted a man from big telecommunication company as the CTO of Japan office, and another man who was sufficient in both English and Japanese as the window of Japan office.

Happyfish had a hit fish-theme game in Facebook Taiwan, and the company wanted to develop a derivative from those existing assets. Development of games for Japanese SNS platform was done at Beijing headquarter in a quick pace. However, the speed compromised the quality of the game. Extensive code bugs were discovered, and a great majority of game-related issues were reported in the game community. Unlike Chinese players, Japanese players were highly critical about the bugs in the game. Unless the reported bug could be solved rapidly, players would likely abandon the game. The Japan office asked Beijing headquarter to fix those reported bugs. At first, Chinese engineers were uneven with the quality of game because they did not solve the bugs thoroughly. But later on, quality of engineers' work improved.

The role of the local Japan office is to (1), change game UI that fits the Japanese players' taste and (2), plan and market the events inside social games. Beijing headquarter and Japan office had regular meetings every week, discussing events and campaigns inside game, but bug solving and customer support.

Japan office also had the role to build a solid relationship with key people from the major SNS platforms. Information could not be disclosed in the formal meeting was exchanged during informal meetings, thereby supporting developers operational service.

9.5 Social game content localization strategies (Japan to China, China to Japan)

Social game companies who have made hit games often release their game overseas. In terms of localization service provider, there are both companies specialized in localizing video game content as well as one-stop solutions provided by major SNS platform holders, which includes localization. There are also individual localization freelancers. Chinese social games that are released in Japan are often localized by Japanese social game developers.

The most challenging part in localization is how well the game content will fit the local context.[20]

[20] For example, in Japan people do not like to compete, at least on PC side, while it is interesting that they like to compete on mobile side. Japanese players don't like to put their friends in disadvantage situation, don't like to bother their friends. They need to be designed to be more cooperative than purely competitive.

9.6 Case study of a social game localization experience (China to Japan)

Sunshine Ranch is the most successful Chinese social game in Japanese market. The game was developed by Rekoo and distributed in mixi, and had attracted over 5 million players within six months.

First localization for Japanese release was done by some Chinese employees who knew Japanese well. However, the details inside the game such as UI, expression, language were considered strange from the Japanese user's point of view. Communications regarding these aspects were very challenging. However, later on players started to take that for granted because they thought it was natural for a Chinese social game company to translate into Japanese like that. The strange details increasinlgy started to be considered the identity of Sunshine Ranch as a game. Despite the revision of game UI, expression, and language, players are still using most of those "strange details".

Instead of mere translation of game text, Rekoo has also designed and integrated Japan's special features such as "Tsuyu" (rainy season) into the game.

When realizing the popularity of mobile phone daily usage in Japan, Rekoo appointed over half of its developers to the development of mobile phone version of Sunshine Ranch. They released the mobile phone version of Sunshine Ranch in 2 months, and made a big hit.

Takeaway points

- Social games consist of many cultrual design elements (UI, expression, language) that are challenging for foreign game designer to capture. However, this might not always be disadvantage. In some instances this also present an opportunity to differentiate the games and create a distinct identity.
- Besides localization, "culturalization" which includes not only UI, expression, and language, but also the local distinct phenomena, for example local special events, local special weather phenomenon, etc might be suitable to integrated into the game in order to enhance the game experience for local players.

10 Key learning points for Hong Kong game industry from the Japanese social game industry

10.1 Potential areas for future development

One of the objectives of this research has been to provide references for Hong Kong's creative industries. The research conducted on the Japanese social game industry described in this report leads to the following conclusions, as well as suggestions of a few learning points for the future development of Hong Kong's creative industries.

- Japanese game industry has been going through a transition, and current scale of social game market is surpassing that of video game market. This large and rapidly growing market has attracted various compaines from different industries, as well as foreign game developers to develop social games. As the value chain of social game business are spreading globally, Hong Kong could play an important role in various segments of this market.

- Japanese social game platform companies have aggressively been expanding their business outside Japan in recent years thourgh various strategies (overseas subsidiaries, partnerships, joint ventures, platform localizations). This has not only increased the user base on their gaming platforms, but also enabled game developers to easily introduce their games globally. Partnerships with local game companies are usually supporting foreign game developers to provide more optimal localization of their games. The same is true for companies aspiring to enter the Japanese social game market.

- The rapid growth of Japanese social game industry results a high demand of people with experienced key social game development skills, and this makes the recruitment more competitive. In addition, some companies are also actively recruiting university and college students through internships and by paying a good salary. OJT remains as the primary way to train new workers in social game companies. People like engineers who have bilingual advantages are preferable.

- After the introduction of social game in Japan, the increase in social game players has been expanding the game market to new user groups. Meanwhile, the high ARPU of Japanese players is noticeable according to our interviewees with knowledge of doing social game business both in Japan and overseas. However the overuse of monetizing

mechanics (e.g. Gacha in game design) has put the industry under the pressure of self-regulating to avoid potential governmental regulation.

- Japanese social game companies are heavily concentrated within Tokyo metropolitan area, especially tending to cluster and aggregate in places with the characteristics of having 1. regional brands 2. office cost and convenience of transportation 3. supply of the labor suitable for social game business. Know-how and practices in other creative industries (e.g. animation and film) are actively introduced into social game industry. There is also a significant “buzz” regarding trends, human resources and business practices that could be captured thorough active participation and social relationships in the Tokyo game cluster.

Appendix 1. Methodologies for database construction

The database for this research consists of companies from 4 creative industries in Japan social game industry, video game industry, animation industry, and film industry. A few other related industries (web services, manga) were also considered. However, they were eventually not included due to a lack of any publicly available industry wide company directories.

Table 8. Details of four industry databases

Name	Method	Date	Number of companies
Social game industry	Collected by the author	2012	255
Video game industry	Collected by the author	2011	289
Animation industry	Industry directory	2006	376
Film industry	Industry directory	2009	337

Social game companies: There was no public availabe database of social game industry in Japan. Thus this part was first started buiding based on a company list that GREE had released in 2011[21]. Then new companies were added into the database by searching news in *gamebiz.jp* and through the game lists in major SNS platforms on smartphone and PC, because the game is associated with its' developer's name. Companies' detailed information were obtained from each company's website. Games on feature phone were unable to be searched through, due to the limited time frame and resources.

Video game companies: this part was using a database set of Japanese game developers that first were developed by Fujihara (2010) and later updated and expanded for a CEO survey project. The database was checked, developed, and updated through information from each company's Internet homepage.

Animation companies: this part of the database was based on an industry directory in 株式会社産業構造総合研究所 (2007)

Movie companies: this part of the database was based on an industry directory in キネマ旬報映画総合研究所 (2010)

[21] The list includes companies who decide to develop social games on smartphone in GREE platform.

Appendix 2. List of industrial interviews

Method: Semi-structured interviews, 60-110 minutes long.

Organization	Type of organization	Position of interviewee	Date	Location
Geisha Tokyo Entertainment Inc.	Developer	Engineer	2011.11.24	Tokyo
Happy Elements K.K	Developer	CEO	2011.11.25	Tokyo
mixi, Inc.	Platform Holder	1. Executive Officer of Alliance Division 2. Employee at Alliance Division	2011.11.28	Tokyo
(THE) One of Them, Inc.	Developer	CEO	2011.11.29	Tokyo
gumi, Inc.	Developer	President & CEO	2011.12.02	Tokyo
Self employed/Freelancer	Independent Journalist	Journalist	2011.12.08	Tokyo
Looops Communications, Inc.	Consulting Firm	Consultant	2011.12.09	Tokyo
RockYou Asia Inc.	Developer	COO	2011.12.13	Tokyo
Synthesis Asia, Inc.	Localization company	General Manager	2011.12.16	Tokyo
GREE, Inc.	Platform Holder	Director of Strategic Alliance and Investment	2011.12.19	Tokyo
MIRACLE POSITIVE Co., LTD.	Developer	CEO	2012.5.7	Tokyo
Ubiquitous Entertainment Inc.	Developer	1. President & CEO 2. Technical Evangelist	2012.5.8	Tokyo
WEBGEAR CO., LTD.	Developer	CEO	2012.5.10	Tokyo
Ambition co., ltd.	Developer	1. Head of Corporate Planning Department 2. Leader of Corporate Planning Department	2012.5.14	Tokyo
CyberAgent Ventures, Inc.	Venture Capitalist	President & CEO	2012.5.21	Tokyo

Appendix 3. List of player interviews

Method: Semi-structured interviews, 20-30 minutes long. Around half of the interview questions for each industry side interview were shared, with the rest unique for the specific context of each interviewee.

Occupation	Age	Gender	Date	Location
Students	24	Female	2011.11.20	Tokyo
Students	23	Male	2011.11.27	Tokyo
Students	29	Female	2011.12.2	Tokyo
Salary man	34	Male	2011.12.08	Tokyo
Salary man	30	Male	2011.12.08	Tokyo
Students	22	Male	2012.5.5	Tokyo
Students	24	Female	2012.5.5	Tokyo
Students	23	Male	2012.5.5	Tokyo
Students	28	Female	2012.6.9	Tokyo
Students	25	Female	2012.6.9	Tokyo
Students	22	Male	2012.6.9	Tokyo
Salary man	28	Male	2012.6.24	Tokyo
Office lady	29	Female	2012.6.24	Tokyo
Students	29	Female	2012.6.24	Tokyo
Students	28	Male	2012.6.24	Tokyo

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