

## Content table

<b>Acknowledge.....</b>	<b>ii</b>
<b>1 Introduction .....</b>	<b>4</b>
1.1 Background .....	5
1.2 Problem description.....	6
1.3 Purpose & Research questions .....	7
1.4 Description of the companies .....	7
1.4.1 Gfeng.....	7
1.4.2 139.ME .....	7
1.5 Terminologies.....	8
<b>2 Methodology .....</b>	<b>9</b>
2.1 Introduction .....	9
2.2 Inductive and deductive.....	9
2.3 Qualitative data analysis .....	9
2.4 Case study .....	10
2.5 First stage – secondary data .....	11
2.5.1 Literature search strategy .....	11
2.5.2 Literature classification .....	12
2.6 Second stage – primary data .....	13
2.6.1 Set the question list .....	13
2.6.2 Seek research targets.....	13
2.6.3 Contacting the companies .....	13
2.6.4 Semi-structured Interviewing .....	14
2.7 Interview guide .....	15
2.7.1 Develop research question into interview questions .....	15
2.7.2 Interview Outline .....	16
2.7.3 Interviews Results Analysis approach .....	17
2.8 Validity.....	17
2.8.1 Internal validity.....	17
2.8.2 External validity.....	18
2.8.3 Reliability .....	18
<b>3 Theory - Frame of Reference .....</b>	<b>19</b>
3.1 Summary of Our theory .....	19
3.2 Introduction of IOS Platform .....	19
3.2.1 Definition of iOS.....	19
3.2.2 History of iOS Platform .....	20
3.2.3 Applications enter the app store .....	22
3.2.4 Making an application .....	23
3.2.5 Apple store approval process .....	24
3.2.8 Positive and Negative Factors in Mobile Application Development.....	27
3.2.9 Characteristics of High-Tech Environments.....	27
3.3 Introduction of Marketing Strategy.....	30
3.3.1 Concept of Marketing Strategy .....	30
3.3.2 Marketing Planning .....	31

3.3.3	Innovative marketing in SMEs .....	32
3.3.4	Marketing Channels.....	33
3.3.5	Concepts of strategic marketing .....	33
3.3.6	Marketing on Web 2.0.....	34
3.4	Marketing Strategy Applied In Apps-making Industry.....	35
3.4.1	Paid and Free apps Strategies .....	35
3.4.2	Intellectual Property Strategy.....	37
3.4.3	Integrating social network and in-app email.....	39
3.4.4	Covering different download platform .....	40
3.4.5	Marketing though forums, micro-blogs and app reviews articles.....	41
3.4.6	Promotion .....	41
<b>4</b>	<b>Interpretation .....</b>	<b>43</b>
4.1	Introduction .....	43
4.2	Marketing strategies influence in Chinese Apps Industry .....	43
4.3	139.ME and Gfeng.....	47
4.4	Marketing strategies used by two companies for their typical apps.....	53
4.4.1	Colorful Aquarium created by 139.me .....	53
4.4.2	Duzhe created by Gfeng.....	54
4.5	Issues in social network strategy.....	55
4.6	Apps Marketing Strategy influence the future industry .....	55
<b>5</b>	<b>Conclusion.....</b>	<b>57</b>
<b>6</b>	<b>Discussion .....</b>	<b>59</b>
6.1	Implication for future research.....	59
6.2	Contribution and limitations of our study .....	59
	<b>Reference .....</b>	<b>61</b>
	<b>Appendix 1: Evolution of the App Store (McCann, 2012).....</b>	<b>64</b>
	<b>Appendix 2: 139.me .....</b>	<b>67</b>
	<b>Appendix 3: Gfeng .....</b>	<b>70</b>
	<b>Figure 1Main steps of qualitative research (Bryman, 2008).....</b>	<b>10</b>
	<b>Figure 2 how apple decide whether an app can be put on the apple store (Nitrozac &amp; Snaggy, joyoftech.com, Copyright © 2008 Geek Culture. Archived at GeekCulture.com) .....</b>	<b>26</b>
	<b>Figure 3Marketing analysis, planning, implementation and control (Kotler, Armstrong, Saunders &amp; Wong, 1999) .....</b>	<b>31</b>
	<b>Figure 4Key elements of marketing strategy formulation (Jain, 1999).....</b>	<b>34</b>
	<b>Figure 5Lima sky customized the app rating request in Doodle Jump to match the fun style of the game (Wooldridge &amp;Schneider, 2011) .....</b>	<b>39</b>
	<b>Figure 6 tell a friend example app in action on the iPhone (Wooldridge &amp;Schneider, 2011) .....</b>	<b>40</b>

<b>Figure 7 the splash screens in Optime Software's free apps effectively cross-promote its other apps (Wooldridge &amp; Schneider, 2011) .....</b>	<b>42</b>
<b>Figure 8 Chinese mobile apps developers scale distribution .....</b>	<b>43</b>
<b>Table 1 Email template.....</b>	<b>14</b>

# **1Introduction**

The CEO of the Apple, Steve Jobs announced that the total download amount of apps sales on the Apple Store reached 5 billion according to their official figure on The Apple Worldwide Developers Conference (WWDC). In 2008 the total download of Apps Store was 600 million and the total revenue was \$172 million. In 2009, the total download and the total revenue of Apps store grew rapidly to 2.4 Billion and \$686 million respectively.

With the development of apps, more and more developers who have the ambition to earn their first pot of gold determine to participate in apps development industry. However, a successful app not only requires the developers own strong technical skills and sensitive inspiration about the taste of consumers, but also the capability of making marketing strategy and business insight. To achieve that, it requires developers: knowing their specialties, knowing their experience, asking for testimonials and references, asking whether they have a customer warranty (Riman, 2011).

Learning the successful business mode of Apple's Apps store, other mobile system developers begin to embed similar apps market to their system. To get more customers, developers prefer to develop apps which will have multi-version to be compatible to different systems. Additionally, by the help of Web2.0, more and more apps are sharing their customers by adding connection with accounts in popular social network. Therefore, social network becomes an important marketing approach for current business.

Now many traditional companies also pay attention to use apps to market their products and their brand. In Sweden, Swedbank, systembolaget have already owned their apps. Their aim is to attract more customers and make their life more convenient. App marketing is an irreversible trend; App is expected to become the standard of corporate brand (Wooldridge &Schneider, 2011).

Marketing strategy plays a significant role in apps sales, which have been admitted by many well-known companies. Because of the technical issues (more and more developer can freely use their programming knowledge to make perfect functional applications on iOS) resolved by the development of practical maturity .The best apps will not depend on if this app have good users experience (we found that user intent to search some alternative apps if they decide to choose a more cost-effective way), however a successful app will rely on its marketing strategy provided by commercial group.

## 1.1 Background

Jeffrey (2011) said that “In the 1980s, the average supermarket carried about 7,500 items. Today, that same supermarket carries upward of 52,000 items! Every vendor is fighting for shelf space so more people will buy their products.” Also, at the same time he (Jeffrey, 2011) indicated that “As the store has grown, it has necessitated re-configuration numerous times to further segment the apps into logical groups where buyers can more easily connect with sellers. Apple continues to improve the search capabilities of the store, adding more home page app categories such as ‘Made for IOS 4’ and ‘What We’re Playing’ in the Games section. All of these groupings help your app to get more visibility if it’s rotated in for one of those groupings.”

When developers start to sell their apps on the Apple Store, some people think their development job is done at the moment Apple approves the application and puts their new apps onto the shelves in the App Store. After all, Apple runs TV commercials, places the magazine and newspaper ads, and funnels all traffic through iTunes to the App Store for the tens of thousands of apps out there.” (Nicholson, Elad & Stolarz, 2009) They expressed that “the first step is let people know that your application is available — and that it serves a particular function. The best way to do that (just now, anyway) is through reviews. Although Apple lets users review the apps they download, there are also lots of Web sites that constantly review the newest apps out there. These reviews give potential customers a better sense of what the app can deliver, and whether it's worth their money (or time) to go get it. Because recommendations are still one of the most powerful ways to encourage a sale, we're going to discuss how to approach these sites and get your app reviewed, as well as other techniques you can employ - such as writing articles - to let people know about your iPhone application” (Nicholson, Elad & Stolarz, 2009). When the first step obtained, the next is to deliver your sharks with a carefully crafted message. Demand is created when you help prospective customers see that you have a solution to their problem with a challenging game or puzzle. The demand for most products is already there; it’s just a matter of creating a message that resonates with that audience and gets them to notice your app” (Jeffrey, 2011).

The total revenue announced by the iPhone App Store is 1.4 Billion dollars. When it is divided by 5 billion total download, from 2008-2010, the average revenue of all the apps, including paid and free apps, is 29 cents. After taken 30% revenue by Apple, the average income earned by developers from end-user payments is 20 cents per downloaded app (Tomi, 2010). And Tomi (2010) stated that a third party named Distimo reported that of all iPhone App Store applications, 73% were paid apps and 27% were

free apps (obviously the smaller number of free apps get far larger numbers of downloads, that makes sense). This result is closed to the report from November of 2009 by Pinch Media, which presented that 77% of apps in Apps store were paid and 27% were free.

At latest WWDC (Worldwide Developers Conference), June of 2012, Apple CEO Tim Cook announced that the Cupertino, Calif.-based firm has 400 million App Store accounts. In addition, the company has 650,000 apps in its App Store, and users have downloaded 30 billion apps so far. All that mentioned has helped Apple dole out \$5 billion to developers since the marketplace's inception (Reisinger, 2012).

## **1.2 Problem description**

In 2009 and 2010, some fantastic applications such as angry bird make a lot of developers into millionaires. But during the 2011 and 2012, as the competition getting fiercer and the apps marketing becoming more and more crowded, the situation for developer is become complicated. As the homogeneity of apps becoming more and more serious, developers will find it hard to earn in the competition. Moreover, the App Store Competitive Index tracks the aggregate volume of downloads per day achieved by the top 200 ranked free iPhone apps in the U.S. In March, the Index decreased by almost two million daily downloads - a 30 percent drop - to 4.45 million, down from 6.35 million in February (Fiksu, 2012). This change is meaning that the marketing strategy is becoming more and more critical for these developers; otherwise they will be easily obsoleted in competition.

The problems in our research can be divided into two folders:

Firstly, from developers' perspective, before entering the market and starting a project, who they investigate the market first and confirm the viability of the project? Developing software need to consider many factors like legality, patents and copyright.

Secondly, after finishing developing the app, developers need to find proper strategies to market their product, but the issue in this section is that small companies or development team have very limited budget to make traditional advertisement.

The research will base on the developers' perspective to state that how to investigate the market for the application and what sort of strategy and skills will be adopted by them. Of course, most developers work for the IT companies.

### **1.3 Purpose & Research questions**

As smart phone users, we would like to try new apps and also expect more innovative apps to be developed, so we want to do the research on this special software development field. For such a rapid growing industry, there must be great benefit and bright future for these developers; otherwise we cannot see so many similar apps competing for the market share. These firms have different performance in the market, for similar products, not all of them can be successful. Many of them will not be noticed by users and quit the market.

Our research aims are to select two successful Chinese app-making companies as our case to investigate which kind of marketing strategies will be adapted by them during their business process. We also will compare the features of different marketing strategies, which existed in different company and different market context. What's more, we found that these apps-making companies will experience a process of developing marketing strategies which fit their future development.

Our research questions:

What are the marketing strategies used by development company to market their apps?

- a. What are the disadvantages and advantages of these strategies?
- b. How do these companies develop their marketing strategies ?

### **1.4 Description of the companies**

The case study concentrates on two Chinese apps-developing firms, which are: Gfeng and 139.ME. These two companies have different advantages to make apps and utilize some reliable marketing strategies respectively.

#### **1.4.1 Gfeng**

Gfeng is also a small company which started to develop App from 2008, and located in Shanghai and is the first generation App developer in China. Up to now, Gfeng have already served for more than 500 enterprises, including fortune 500 companies. Buick sales system is one of their successful Apps. In 2009, Gfeng developed first reading App of china. Now they promise the Apps they develop can pass Apple store's verification.

#### **1.4.2 139.ME**

139.me is founded in 2006 Beijing by a technique team which is consisted of prize-winning players from ACM (Association for Computing Machinery) and started to

develop Apps for iOS from 2008. 139.me is one of the oldest and most famous Apps developers in China. Currently there more than 60 Apps are in the Apple store and the total download has already overcome 5 million times. 139.me is a company with much experience on developing games and owns their own game development engine. Now it is a partner of IBM, Financial Times, State Grid Corporation of China.

## 1.5 Terminologies

Mobile apps	Applications used on mobile devices
ACM	A programming competition named Association for Computing Machinery
WWDC	Worldwide Developers Conference
CEO	Chief executive officer
iOS	Operation system developed by Apple for its i-devices
SDK	Software Development Kit



## **2Methodology**

### **2.1 Introduction**

Ghauri and Gronhaug (2010) state that choice of research design can be conceived as the overall strategy to get the information wanted. Bryman (2008) suggests that it is important to do a great deal of literature review before collecting data so as to understand the current academic research situation and learn the work of others in the same field. Appropriate methods as such will help ensure the collected data, analysis and result persuasive and reliable. Detailed elaboration on methodology of this paper will be demonstrated as below.

### **2.2 Inductive and deductive**

According to Ghauri and Gronhaug (2010), there are two ways to identify what is true or false and to draw conclusions: induction and deduction. In our research, inductive way of research will be considered as the main methodology. Induction is the process of observing facts to generate a theory and is perhaps the first step in scientific methods (Ghauri & Gronhaug, 2010). To prepare for our research, we have to study numerous literatures in order to make our questionnaire and understand the answers from interviewees. Thus, our research will follow the procedure like this: observations – findings – conclusion.

### **2.3 Qualitative data analysis**

Qualitative research is a mixture of the rational, explorative and intuitive, where the skills and experience of the researcher play an important role in the analysis of data. It is generally accepted that, for inductive and exploratory research, qualitative methods are most useful, as they can lead us to hypothesis building and explanations (Ghauri & Gronhaug, 2010). For our case as an inductive research, the qualitative method will be appropriate the research focus on understanding the practical challenge these companies are confronting and the way they generate their strategies according to the market.

Ghauri and Gronhaug (2010) also points out that qualitative research tends to be more explorative and un-structured, with emphasis on understanding, while quantitative research tends more to emphasize descriptions and testing of derived hypotheses. Mobile app industry is a comparatively new industry which is developing rapidly. It has similarity with traditional software development industry but also has distinguishable

differences. To develop a profound research, it is better to use qualitative research approach to explore this area.

Ghauri and Gronhaug (2010) consider that qualitative data to become information they must, however, be interpreted and researchers will be easily become overwhelmed by the mass of qualitative data. To avoid this embarrassing condition, we decide not to research too many companies, only seeking three successful companies which can be representative in this industry. Compared with data analysis, interpretation tends to be more intuitive and subjective (Ghauri & Gronhaug, 2010).

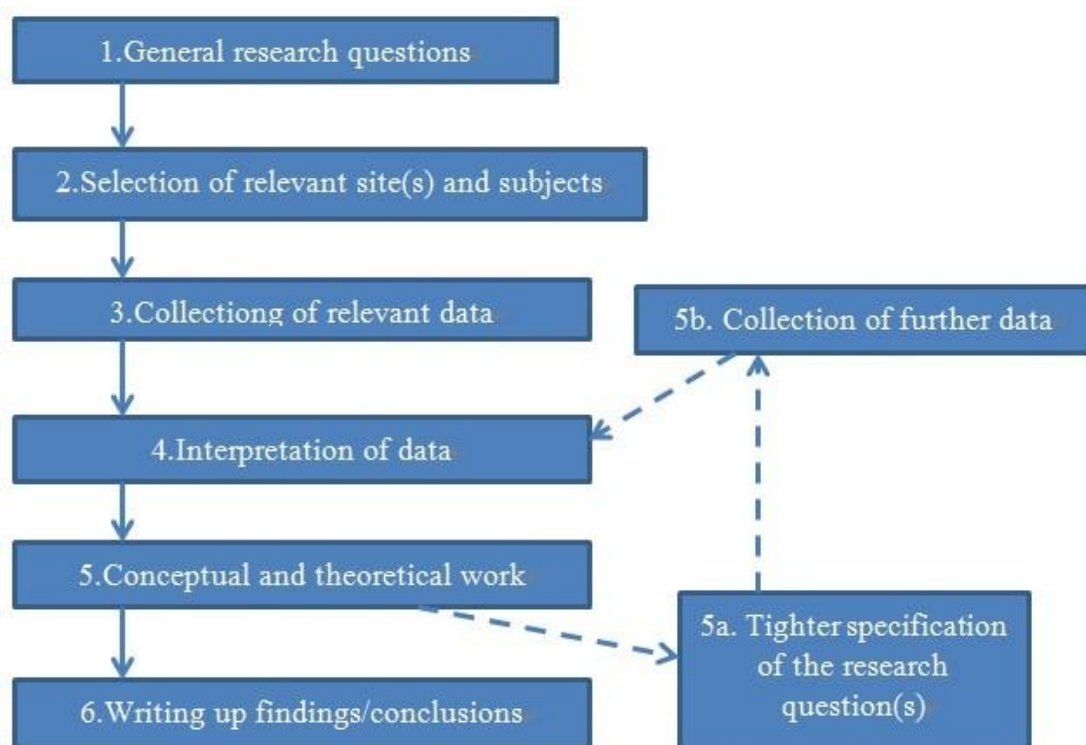


Figure 1 Main steps of qualitative research (Bryman, 2008)

According to Ghauri and Gronhaug (2010), “In qualitative research the investigator may and often does depart from some theory. When conducting exploratory, discovery-oriented research with a focus on understanding and construction of explanations, the investigator often holds prior assumptions and ‘hunches’ about critical factors and relationships.”

## 2.4 Case study

In business studies, case study research is particularly useful when the phenomenon under investigation is difficult to study outside its natural setting and also when the

concepts and variables under study are difficult to quantify (Ghauri & Gronhaug, 2010). On the area of marketing strategy, each company is facing to different situation and they will adapt reaction to their difficulties, so it is impossible to learn all the marketing strategy in the market. Case research, in our case, refers to qualitative and field-based construction and analysis of case studies. (Ghauri & Gronhaug, 2010) The best approach for our study, according to our study purpose, is case study.

According to Ghauri & Gronhaug (2010), the case study method is used when we want to study a single organization and we want to identify factors involved in some aspects or behavior of an organization or smaller unit. For the reason that the apps market is comparatively young and these development companies are also very young, it is not enough for us to study only one company's strategy. Multiple case study design is considered more appropriate for studies which do not involve rare, critical or revelatory cases. (Ghauri & Gronhaug, 2010) Finally, we selected two cases to engage our research.

## **2.5 First stage – secondary data**

Ghauri and Gronhaug (2010) regards secondary data is useful not only to find information to solve our research problem, but also to better understand and explain our research problem (Ghauri & Gronhaug, 2010). Literature review is necessary to structure our knowledge background. To conduct deep study in real companies which are facing to practical marketing issue, literature from different angles to analyze the problem or potential issues will be discussed. Moreover, they provide a comparison instrument with which we can easily interpret and understand our primary data (Ghauri & Gronhaug, 2010). The content of the literature is critical to guide the researchers to build their questionnaire for the survey and provide them with ideas to analyze the data they will collect.

### **2.5.1 Literature search strategy**

In order to get background knowledge, at the beginning, we searched books by the key words –“marketing” from the library of Jönköping University. After reading these books, we knew the marketing strategy is a very large definition for a company, so we narrowed down our research direction to the range of how to marketing their products in software industry. Then we searched many articles for journals through Google scholar which were related to “apps”, such as: software marketing, apps development, iOS development and apps marketing. To find latest information and views for apps industry, we changed our search measurement to use normal web search engine -

Google and Baidu, to look for blogs of industry experts and reports from industry consultant companies because there were few articles were in this area.

### **2.5.2 Literature classification**

Literature review brought a great amount of knowledge and interesting perspectives for us. The literature mainly comes from four different sources.

The first kind of source comes from typical and authoritative books in the area of marketing and management. These books comprehensively interpret the knowledge of marketing, marketing strategy and strategic planning. These concepts are relevant but distinguishing. Several ways to evaluate the marketing strategy and strategic planning are introduced and adopted for the analysis.

Secondly, new books written by famous industry experts or experienced developers introduce the normal procedure of developing an app and the usual ways to market the apps. Moreover, relevant articles from Internet (blogs and forums) by famous analysts and senior former manager of successful IT companies are also very valuable to study. Although these articles are not published by any press, the way of thinking and the discussion are really rational and profound. They discuss the factors which should be considered during the marketing process, rigorously analyze the difficulties, profit and cost of Apps developers from different angles with precise mathematical approaches. From some articles which present the weakness of apps store, it is clear that not all the people are optimistic to the apps market in the next few years. The truth is, as the competition getting fiercer, the marketing strategy is becoming more important to developers.

Thirdly, Apps development is a specific type of software development, so relevant academic articles about marketing of software industry are also useful to reflect some problems which also exist in apps industry. For example, as high-tech and innovative industry, the intellectual property protection can also be a serious problem for apps industry. Specific channels of marketing by Web2.0 also need to be discussed for those channels which have already become the most popular and effective ways for developers to market their products.

Finally, scientific papers written by Scholars to research software industry provide us many special views about the software market. Although these researches will be engaged in specific region and time period, their research questions can still tell us the problems in this industry. Some questions which have been researched by other researchers are still meaningful for us to study.

## **2.6 Second stage – primary data**

### **2.6.1 Set the question list**

The selection of information to be collected and to be analyzed, according our research topic, have to be carefully considered and well organized. To understand practical situation of each company and their marketing strategy, open questions are most suitable for our paper. Open question will not force interviewees to answer in the same terms as those foisted on them by response choices (Bryman, 2008). The questions we set were not totally the same to all the interviewees. After finishing the first interview, answers would be understood and analyzed. Based on specific circumstance from respective companies, more developed questions would be made for second interview.

### **2.6.2 Seek research targets**

As soon as the research topic and research questions are confirmed, the companies which are to be research targets should be determined. Our procedures of looking for companies are as follows:

1. Look into the most popular and authoritative mobile phone forums and check whether there are special sections which are for developers to communicate and post their project information. In the developers' sections of forums there are separate parts for different companies.
2. Select several companies which have most projects and most participants in the forum.
3. Visit the website of the companies to know the detail of the companies, including the project history, company culture, company scale and their business condition.
4. Eliminate the companies we consider are not successful and not proper for our research. Finally, there are 6 candidates in our list for the next step.

### **2.6.3 Contacting the companies**

We will mainly contact the selected companies via internet since all of them are located in China. On the webpages of these companies, there is contact information for sales representatives and customers support. The information will all involve QQ ID, telephone number and email address. For us, using QQ to contact is the most instant and easiest way to contact these IT people. QQ is instant messaging software which is developed by Tencent Company and used in China with the highest popularity. We contacted the staff in these companies and asked whether they could help us to finish

our research. For the reason of time difference, the invitations we sent could not be replied instantly. Sometimes invitations need to be sent again and again to get response. This could be explained partly because of their overwhelmed workload. Finally, we successfully contact staff in three companies that agreed to accept our interview.

There were difficulties on the way of interviews such as late response. When we contacted one of the companies and no one replied, we tried every way to send email to get in touch with them. The following is our email template translated from Chinese:

Dear Mr.Zhulianxing,

We are two master students in Sweden who are studying information technology and innovative management. Now we are writing our master thesis to do a research on the marketing strategy of mobile application development companies. We want to interview you and ask some questions.

Your company is a leading company and also the first generation of app developers in China, so information from you will be very important and valuable for us. We have tried to contact the QQ on your company's website. However, unfortunately, we could not get in touch with you. We have already prepared questionnaire. If you agree, we can send you our questionnaire immediately. We are looking forward to your response. Thank you very much!

Yours Sincerely

Letian Wang & Hao Wang

QQ: 188766711

Email: letianwong@vip.qq.com

Table 1Email template

#### **2.6.4 Semi-structured Interviewing**

Interview is the most direct and efficient way to get the answer to the research question. Interviews are often considered as the best data collection methods, but it demands a skilled and cautious interviewer Ghauri and Gronhaug (2010). Interview will be used as the main measure to collect our primary data and it will be done all through the internet by IM software and email. This part will be the most important to the

whole research, as the subjective analysis and the final conclusion will depend on the collected data. Therefore, the questions for the interview must be accurate without suggestive nature. The relatively unstructured nature of the semi-structured interview and its capacity to provide insights into how research participants view the research topic was important to us (Bryman, 2008).

## **2.7 Interview guide**

### **2.7.1 Develop research question into interview questions**

According to our interview strategy and research directions, the questions can be generally categorized into two folds as following:

First part of questions is designed to get more detail information of their strategies and how they evaluate the advantages and disadvantages of their strategies. These questions are distributed into the whole questionnaire and be presented from simple to difficult. Moreover, these questions seem to not answer our research question directly, but these detailed questions will reflect the practical effectiveness of their strategies and can be organized to figure out our issues. What are your main measures to market your apps? What difficulties you will encounter when you marketing your apps? How do you think your advantages and disadvantages in this industry? What is your company's main Profit channel?

Second part of questions is designed to learn how these companies develop their marketing strategies according their characteristics and the market dynamics. This process will start before they launch their projects. These questions such as what kind of market investigation you will do before the start of developing an app? In which phase of developing an app you will start to market the app? How much time usually you need to develop an app? Whether you can follow the development timetable strictly? Which category of app you prefer to develop? What are the factors to affect the development of app? Who are your main competitors?

Some more developed questions will be asked according to their answers to get deep knowledge and understanding. For example, after we get the answer of which category of app you prefer to develop? We will continue to ask the reason why they answer like this.

### **2.7.2 Interview Outline**

1. What's the scale of your company and how is the division of labor? What is your position in your company?
2. How do you evaluate the iOS development platform? What are the advantages and disadvantages of iOS app market?
3. How do you think your companies advantages and disadvantages in this industry? Who are your main competitors?
4. What is your company's main Profit channel?
5. What are the market opportunities you think it is important to your development?
6. What is the main source of your development project?
7. Which category of app do you prefer to develop? Why?
8. Which category of app do you think will get more users? Why?
9. Will you investigate the market before you start to develop an app? If yes, how do you do that?
10. Are there any factors that will influence the schedule of development? What are these factors and which ones should be considered in priority?
11. How much time usually it takes to develop an app? Can you always follow the development timetable?
12. If you cannot follow the development timetable, what kind of influence it brings to you?
13. Is there any situation that the development of app cannot reach the expectation? How do you deal with this condition?
14. In which phase of developing an app you will start to market the app?
15. What are your main measures to market your apps? Which ones are most effective? What difficulties you will encounter when you marketing your apps?
16. What is your strategy to market your app?
17. How much capital you will invest to market an app? Or how much capital you spend to market apps each year?
18. What is the relation between the investment to marketing and income?
19. How do you think the intellectual property protection of apps? What is your approach?
20. How do you think the future of free apps and paid apps? How do the free apps to earn profit?
21. Which one has better market performance, free apps or paid apps? Why are your opinions to this result?
22. If an app is determined to be a paid app, what factors you need to consider to pricing it?



### **2.7.3 Interviews Results Analysis approach**

For the reason that our interview questions are subjective and qualitative, it will be difficult for us to use statistical approach to engage quantitative analysis, so qualitative approach is chosen for our research. After discussion, thematic analysis will be used to do the research. According to Bryman (2008), thematic analysis is not an approach to analysis that has an identifiable heritage or that has been outlined in terms of a distinctive cluster of techniques. Thematic analysis is an emphasis on what is said rather than on how it is said.

Although interviewee's answers were complicated, our questionnaire is designed according to the research question after we carefully study the literature. Our strategy for conducting the thematic analysis of qualitative data is provided by framework to construct and index of central themes and subthemes (Bryman, 2008). Mentioned in 2.7.1, our questions could be divided into two folds. These two folds are with two categories of content. Comparing our interview memos to our literature framework, we can conclude results from the comparison. Bryman (2008) said that it does not necessarily tell the user how to identify themes, which, as the authors suggest, is likely to reflect the analyst's awareness of recurring ideas and topics in the data.

Considering our analysis is subjective and narrative, so we combined the interview analysis results and the analysis into a same chapter. This structure will be better for us to describe our results and interpret our analysis. Furthermore, it will let the readers read the content continuously and understand it better.

## **2.8 Validity**

Validity is concerned with the integrity of the conclusions that are generated from a piece of research (Bryman, 2008). A key purpose of the research design is to isolate and estimate the effects of potential causes (Ghauri & Gronhaug, 2010). According to Ghauri and Gronhaug (2010) and Bryman (2008), our research probably has following threats:

### **2.8.1 Internal validity**

1. Whether interviewing through Internet will be less effective than normal face to face interview and telephone interview?

Interviews through IM software can truly save our time and money to visit the interviewee's office or travel to other meeting places. But in the other hand, interview by IM software actually takes more time than normal way. Because of the flexibility of this way and the tense work of interviewees, interviews could be always interrupted and interviewers sometimes need to wait for a long time. To re-

duce this threat, we pay much patient and time on this procedure and record which question is on the process carefully.

2. All the interviews are done based on Chinese environment, is there any threat to the result by the translation from a different language?

Chinese as our mother language, there is no any issues in communication and understanding during all the interviews processes. Then we translate it into English and refine it into our thesis without changing any meaning of interviewees' expressions.

### **2.8.2 External validity**

This issue is concerned with the question of whether the results of a study can be generalized beyond the specific research context Bryman (2008). Our research is based on Chinese mobile apps developers, for the reason that nowadays information exchange very fast and the development process is similar among different companies and development teams, so our research can be considered that as common issues in this industry. But for the specific business context and the software development phase in China, our research result has limitation for the same industry in other countries and economic entities.

### **2.8.3 Reliability**

Our research is designed to learn the practical condition of Chinese mobile application development. According to Bryman (2008), our study can be replicated in the same circumstance. Our questions are considered carefully to avoid distorting the truth. We are confident that other observers will get the similar result.

### **3Theory - Frame of Reference**

Before entering a field of research, comprehensive knowledge of sufficient literature is necessary for researchers. The depth and breadth of the literature review emphasizes the credibility of the writer in his or her field. Literature reviews also provide a solid background for a research paper's investigation (Unc.edu, 2011).

#### **3.1 Summary of Our theory**

We divided this chapter into three parts. In the first part, we introduced the IOS system which involved the platform's development, history and advantages. The most competitive platform is the basis of all business activities, which is also why we chose it as our research object. The second part, we introduce the basic concepts of marketing strategy to find a marketing strategy that can be used in the application marketing. At last, we combine these two parts and our interview to investigate the practical marketing strategy applied in apps-making industry on IOS.

#### **3.2 Introduction of IOS Platform**

##### **3.2.1 Definition of iOS**

People began to know iPhone from 2007. "iOS developed and distributed by Apple can be defined as a mobile operating system. iOS originally released in 2007 for the iPhone and iPod, it has been extended to countenance other Apple devices such as the iPad and Apple TV. Unlike Windows CE (Mobile and Phone) and Android, Apple does not license IOS for installation on non-Apple hardware. As of March 6, 2012, Apple's App Store contained more than 550,000 IOS applications" (Lee, 2010).

"The user interface of iOS is based on the concept of direct manipulation, using multi-touch gestures. Interface control elements consist of sliders, switches, and buttons. The response to user input is immediate and provides a fluid interface. Interaction with the OS includes gestures such as swipe, tap, pinch, and reverse pinch, all of which have specific definitions within the context of the iOS operating system and its multi-touch interface. Internal accelerometers are used by some applications to respond to shaking the device (one common result is the undo command) or rotating it in three dimensions (one common result is switching from portrait to landscape mode)" (Ovsyannykov, 2012).

The concept of the iOS user interface is the ability to use multi-touch direct manipulation. Control methods include sliding, touch switches and buttons. Interaction with the system including the slide (Swiping), tap (Tapping), extrusion (The Pinching, normal-

ly used to narrow down) and reverse extrusion. In addition, through its built-in accelerometer can make it rotate the device to change its y-axis to the screen to change direction, this design makes the iPhone easier to use iOS as a sign which owned by Cisco. (In the Apple devices which have been described)

In iOS, there are four abstraction layers: the Core OS layer, the Core Services layer, the Media layer, and the Cocoa Touch layer. The current version of the operating system (iOS 5.1) uses roughly 770 megabytes of the device's storage, varying for each model.” (Ovsiannykov, 2012)

### **3.2.2 History of iOS Platform**

On 1st of January, 2007, Apple introduced their new mobile product – iPhone. At the same time, they changed their company’s name from Apple Computer into Apple. From this change, we can see that iPhone can be considered as a milestone in the development of Apple. Before iPhone’s birth, Apple Company was well known for their personal computer and music player iPod. Most people think the iOS started from the iPhone, but actually we find that iPhone is rooted from iPod. Apple iPod is able to store calendar and contact information, and subsequent generation of iPod gave consumers the function to view photos and watch videos while iTunes was used to sync the files in iPod with Mac lines of computers (Morrissey, 2010). This Personal Digital Assistant’s abilities of iPod and iTunes constructed the footstone of the coming iPhone and iPad.

The first generation of iPhone was iPhone 2G, brought a breakthrough to the cellphone industry - MultiTouch input method. It also integrated some top technologies such as Bluetooth and 802.11 wireless communication technologies into its system. However, the main functions of iPhone were not just cellular communication, but also web access, email and PDA functions, and the connections to iTunes and YouTube. Since at that time the App Store was not existed yet, iPhone could install web application on its device.

The second generation of iPhone - iPhone 3G was released in June, 2008. It got use of the 3G network, thus, it was named as iPhone 3G. The better processor performance and network connection provided strong support for its new feature – assisted GPS. As the updating of the firmware, the App Store came to the new system and it became a model for other manufacturer to follow. Before the release of iPhone 3G, in March of 2008, the software development kit (SDK) for iOS was released. The SDK is the tool provided by Apple for the third party developers to develop apps for iOS.

Apple revised the iPhone OS twice. The first time was in January 2010, when Apple announced a magical and revolutionary product: the iPad. Because the iPad is a tablet computer that is based on the iPhone OS, this meant that there were instantly more than 250,000 applications that could run on the iPad. Then, in April Apple announced (and subsequently shipped in June) the next major release of the iPhone OS - 4.0. Apple also took this opportunity to rename this new release of the OS, calling it iOS (Lee, 2010).

In January of 2010, the development of Apple reached another milestone – the announcement of iPad. This new device owns all the functions of iPod Touch but iPad is a much larger device which owns 9.7 inch screen. The better display performance provides better performance on reading document, webpages and books via iPad. Undeniably, Apple changed the restriction of the application development in the cell-phone. Consumers who want to have access to Internet anywhere can choose the version of iPad with 3G, it has a mini-SIM card, but it's unable to use the 3G network to place calls (Morrissey, 2010). This restriction protects the market of iPhone.

In October 12, 2011, Apple announced that iOS 5 was released. As a new generation major OS released, many new features would also come to customers and developers. For developers, iCloud Storage APIs enable apps to store content in iCloud, keeping them up to date automatically (Apple.com, 2011). Business Model of App Store

According to Whitney (2012), “The App Store expansion follows an announcement by Apple CEO Tim Cook at latest Worldwide Developers Conference that the online store would branch out to the 32 new markets, adding up to 155 regions across the world. The App Store achieved its 25 billionth download just this past March, showing a steady rise since 2008. The first nine months saw 1 billion downloads. That number hit 5 billion in June 2010, 10 billion in January 2011, and then surpassed 18 billion last October”.

App Store is created for the iPhone and iPod Touch, iPad and Mac to allow users to browse and download apps from the iTunes Store or mac app store. Users can purchase or download free version of apps directly to iPhone or iPod touch, iPad, mac. These apps include: games, calendar, translation programs, library, and many useful software. “On July 11, 2008, Apple's App Store launched with roughly 550 apps for the iPhone in total. Today, the App Store has roughly 500,000 apps, and is seen by savvy developers and entrepreneurs as a potentially very lucrative market that has no intention of slowing down”. (McCann, 2011)

App store is a business model with a convenient and efficient sales system of software platform for third-party software provider. The third-party software providers with en-

thusiasm are developing apps for mobile phone users who demand personalization software. These developers make the mobile software industry enter the orbit with high-speed. Although the development of the business model of App store is commercial behavior, App store pioneered the development of the mobile software industry. There is no doubt that a new chapter in App store will become an important milestone in the history of the development in the mobile software industry. The significance of App store goes far beyond the iPhone software application store itself as well.

Industrial chain in the App Store is simple and clear, involving Apple, developers, users. In addition, there are third-party payments companies which only behave like the major players for the pay channels in the industry chain. Apple's role in this model is the main controller to master the development and management of the App Store.

Its main functions include four points: Firstly, it is a business platform which is responsible for the marketing efforts and the monthly settlement of the developer. Secondly, Apple often publishes their report to help developers understand users' demand, and provide the guiding opinions to lead the development application pricing. The price is adjustable. Thirdly, it can be seen as a market for developers to upload and update their products. The final function is for users. Users only need to register the landing App Store and bundle credit card to download the application. App Store provides users with more utility and a good user experience to facilitate the purchasing process. (McCann, 2011)

### **3.2.3 Applications enter the app store**

McCann (2011) gives us some guides on how do we make a success application if you want to put your own apps on the App Store.

#### **Step 1 Setting Your Aims, Costs, and Expectations**

A good app will be created by corresponded the following questions:

The application will solve what kind of problems? Have you seen what the product can also solve this problem? How to provide information to users? How do you solve the problem on the basis of production of a unique application? Applications can give users what kind of value?

#### **Step 2 Researching the App Store Market**

Types of applications from the app store distribution can be seen: the largest number of application categories books class (17%), lower development costs of the book applications can be batch operations; the second largest category is games class (14%). Undoubtedly, the game is the most profitable type of application in the App Store has

attracted a lot of developers; such as entertainment (11%), education, lifestyle is also more to be welcomed by consumers.

### **Step 3 Knowing Customers**

iOS users prefer to try new applications. The most likely to be the early users of IOS have more active and willing to try new things. Users' feedback is not only for the App subsequent improvements which play a very important role, but also they may become the App's most loyal early users to follow-up. If you want to choose a platform with such user's platform is clearly the preferred target.

### **Step 4 Creating Apps**

Apple's policy is to encourage everyone to participate in iOS development. How to make an attractive application will depend on your programming skills and imagination.

### **Step 5 Adopting Apple's Approach**

App Store has a lot of apps, 88% of which is free. The download of "angry bird" is 200 million, but this number also includes download of the lite version and free version. Do not forget Apple owns 30 percent commission. Problem is that the user base is ambitious, but there are not many real paying customers.

### **Step 6 Feedbacks, Maintaining, and Scaling**

A "release effect" will happen in the App Store which means that when you're just starting to release your app, there may be promotion activities and advertisement. Your app may get high download at the beginning but this condition may change after updates. Some updates, such as new hurdles to maintain the old players to help build community, but will not increase the number of users is not disapprove updates (Ali, 2009).

#### **3.2.4 Making an application**

As a developer, if you want to get started your own business on app store, all the work you should do will as follows.

##### **Preparatory work**

Hardware environment: Apple series of computers (must be a Leopard Snow Leopard or later operating system)

Software environment to prepare: Snow Leopard Leopard operating system (genuine Apple has), purchased Xcode software. The old version is free, but the latest version

needs to be paid to use it. Xcode is Apple's terminal device software development tools which are integrated with code editor, compiler, and virtual testing tools to develop software.

The basics of preparation: Apple's software developers use Objective-C language, is an improved version of Apple's standard C programming measure.

### **Start to program**

If you get any good ideas, you can start the software developments work in Xcode. Detailed can be guided by Xcode tutorial.

After finishing the writing parts, apps need to be tested in Xcode on a virtual test on iPhone, iPad to the actual test. The actual test will need to iPhone, iPad binding account registered as a developer, when the test is completed can be released.

### **Publishing Software:**

If you want to publish your app, you need to pass App store's approval. First the developers need registration certificate. An annual fee of the certificate is \$99. Then developers should submit their apps and instructions. By the way, developers need to provide their bank accounts. After approved by the App store, that means you have passed the app store approval and the apps can be put onto the shelves in App store.

#### **3.2.5 Apple store approval process**

Apple pioneered the App store mode, at the same time, Apple continues to provoke accusations, and these accusations come from dissatisfaction with the Apple App store on the strict review guidelines.

Shelves to apply for third-party developers in the App store submit, must accept the apple that opaque black box trial together. As long as Apple is not satisfied with the product shall not be able to enter sales into the App store.

Apple's practice, in fact, is such a backward concept which plays a leading role. From short-term, for protecting the interests of the Apple, but the long-term, not just Apple's kind of injury, more importantly, 3G has been the arrival of the Internet age of today, the backward ideas of the closed down delay the passage of this field of communication among the healthy development of the network.

Apple claims that since the 2007 launch of the iPhone and iPad, has sold about 1 million iPhones and ten million iPad want to get into the App Store because, from this data on self-evident to ignore people impressed with the installation steps. Apple's App Store, not only is a software shop, which is also an extension of the iTunes store.



Good positioning in the App Store is done by Apple employees and Genius recommendations of high-quality Apple's silent support. Coupled with the curatorial and the App Store must be for your application to provide potential customers. All you need is to pay \$99 a year for a developer license, which already includes a \$5 fee to pay for the development of software Xcode 4. However, this does not mean your application is approved, the process is easy but the difficulty is the unfortunate reality that the application development process is a complex game, and Apple control the entire situation. (Apple.com, 2012)

Apple acclaim the App store is open sales platform, but actually, it is not fully open platform. Apple will prevent those Apps which probably strongly compete with the development of Apple's own functions. For example, in 2009, Google voice was bared to enter the apple store until 2011 Apple opened this window to Google Voice. Another example is the cydia App store. Cydia supply a place to "adopt" these Apps which are not accepted by the Apple.

To become a developer and get the iPhone developer program license, an agreement called "iPhone developer program license agreement" must be read and always followed in the whole process. This agreement presents that apple creates an industry standard and keep censoring and standardize the app development industry. It is also responsible for users to download high-quality apps.

To protect users' safety, property and devices, many clauses are written in to this agreement, such as "Applications must not contain any obscene, pornographic, offensive or defamatory content or materials of any kind (text, graphics, images, photographs, etc.), or other content or materials that in Apple's reasonable judgment may be found objectionable by iPhone or iPod touch users" and "Applications must not contain any malware, malicious or harmful code, program, or other internal component (e.g. computer viruses, Trojan horses, "backdoors") which could damage, destroy, or adversely affect other software, firmware, hardware, data, systems, services, or networks". (eff.org, 2010)

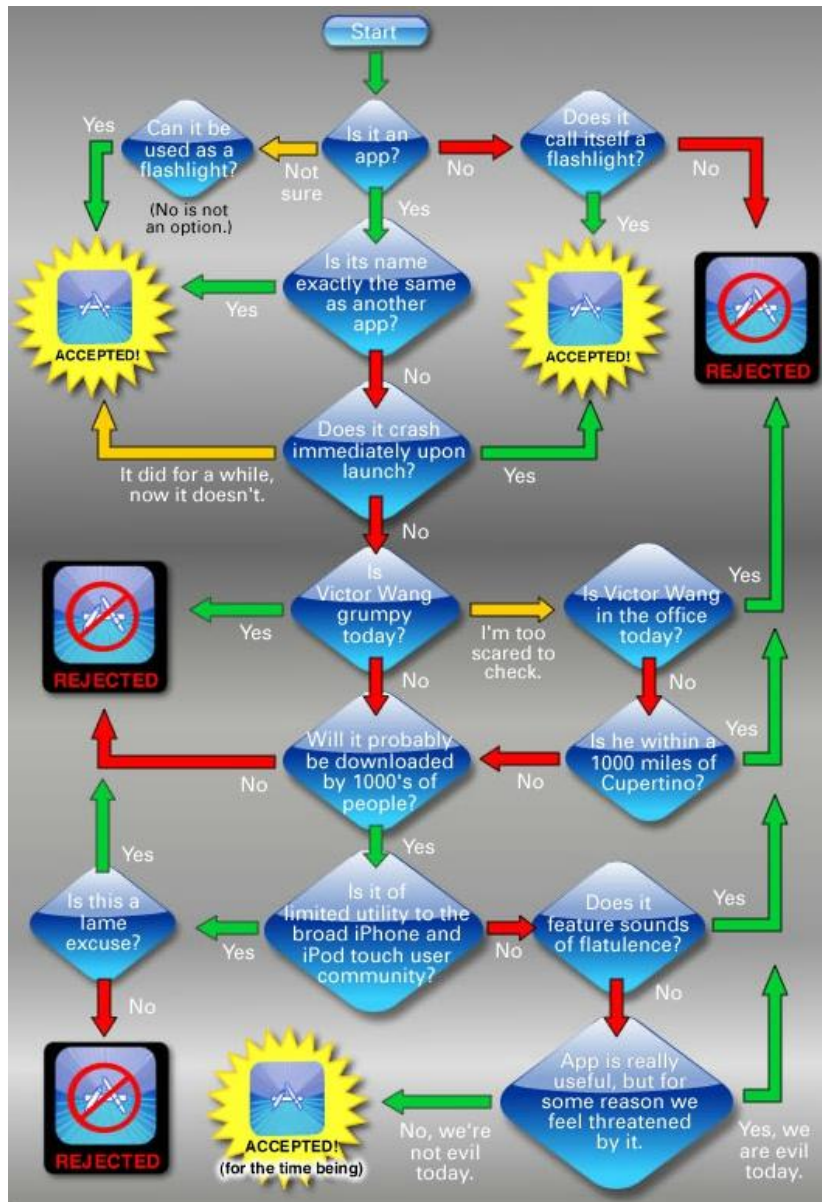


Figure 2 how apple decide whether an app can be put on the apple store (Nitrozac & Snaggy, joyoftech.com, Copyright © 2008 Geek Culture. Archived at GeekCulture.com)

### 3.2.7 Mobile applications

Mobile applications are not very popular compared to contemporary trend, since the first apps face to the market. The market is relatively small at that moment even cannot see as a business. However, today the mobile applications market is beyond our imagination. Anyway, what are mobile Apps? Mobile applications also can be called as mobile Apps, it is a term used to describe Internet applications that run on smartphones and other mobile devices. Mobile applications usually help users by connecting them to Internet services more commonly accessed on desktop or notebook computers, or help them by making it easier to use the Internet on their portable devices.

Costanich (2011) states that “When people use mobile content, their paramount concern is probably not whether someone has employed particular features of the device. But if designers neglect certain features or implement them badly, people will undoubtedly notice. Staying focused on content and on people’s needs should lead us to adopt the right behaviors and features for the right reasons. Makes much more sense to me than learning how to implement a feature first, then trying to think of a way to build an app around the behavior.”

### **3.2.8 Positive and Negative Factors in Mobile Application Development**

Developers who want to participate into the mobile application making have to confront with high costs, long development cycle and difficulties. Meanwhile the success rate is not very high because a few individual users are willing to pay the application fee. Even if some companies need great demand, but due to the impact of unfavorable factors, users’ acceptance for the software is not very satisfactory.

#### **Pros:**

1. Phone hardware’s performance continues to improve.
2. The improvement of wireless bandwidth.
3. More and more open operating system interface.
4. The increase of the development team, the accumulation of technology.
5. The development of transmission.
6. The mobile phone software become cheaper and cheaper.
7. Function diversification.

#### **Cons:**

1. The price of smartphones is still relatively high
2. Open platform is still poor
3. The higher the cost of mainstream operating systems
4. Small companies do not recognize the phone software
5. Most people now think that the expressive power of the mobile phone software is not good enough
6. The security of wireless data transmission

(Chinamobile.com, 2009)

### **3.2.9 Characteristics of High-Tech Environments**

The High-Tech environment contains a lot of characteristics - most important are market uncertainty, technological uncertainty and competitive volatility. Although one or two of the three characteristics might be present in some environments, the

simultaneous presence of all three factors characterizes most high-environments (Mohr, 2001).

✧ **Marketing Uncertainty:** Marketing uncertainty refers to ambiguity about the type and extent of customer needs that can be satisfied by a particular technology and arises from five sources (Mohr, 2001).

First, market uncertainty arises from consumer fear, uncertainty, and doubt (known as the FUD factor) about what needs or problems the new technology will address, as well as how well it will meet those needs (Mohr, 2001). For example, when Apple's touch screen came to the market, customers would be fear and doubt this new technology because it is total strange operation mode of mobile phone. Most people preferred the push-button phone at that time, but now touch screen phone has become the main stream of smart phone.

Second, customer needs often change rapidly, and in an unpredictable fashion, in high-tech environments (Mohr, 2001). For example, customers today may love to reading news on text style but two years later the main trend of news media will be changed to audio or video.

Third, customer anxiety is perpetuated by competing – and incompatible - technological standards for new products (Mohr, 2001). For example, there are so many video player software can be downloaded from Internet and most of them have almost same functions. But when one of them updates and can be used to play the 3D movie, this change will become a new dominant factor to be a high class video. Other video player need to develop their new functions or also follow this trend, otherwise customer will consider them outdated. Therefore, coalescing disparate product development efforts around a common industry standard can help reduce the perceived risk for customers, in turn serving as a catalyst for adoptions (Mohr, 2001). Having a common industry standard not only maximizes the value customers get from their investment in high-tech product, but it also stimulates the development of complementary products to create a robust industry infrastructure (Mohr, 2001).

The forth factor is the uncertainty among both consumers and manufacturers over how fast the innovation will spread (Mohr, 2001). For example, when Windows Vista is introduced to the market, it contains many innovations but it has really bad market performance because most people still enjoy using Windows Xp and they refused to try the new system. Oppositely, Facebook was first introduced to the public in Harvard University in February of 2004. To the end of 2004, Facebook had already got 1 million users.

The fifth factor is the difficulty for manufacturers to estimate the size of the market. Although estimating the size of the market is a very important procedure of market planning, it is still hard for manufacturer to predict the market size accurately.

✧ **Technological Uncertainty:** Technology uncertainty is that not knowing whether the technology – or the company providing it – can deliver on its promise to meet specific needs (Mohr, 2001).

First factor is whether the new innovative function can be reached. For example, an anti-virus software company plans to develop a new technology which is able to detect 97 percent of virus. But unfortunately, this function cannot be developed as well as they expected, only 85 percent virus can be detected.

Second factor is whether developers can follow their timetable strictly. In high-tech industries, product development commonly takes longer than expected, causing headaches for both buyers and sellers (Mohr, 2001). For example, Activision Blizzard, the most famous game developer of the world, always delays their products time schedule. One of their examples is the StarCraft 2. In 2007, StarCraft 2 was first announced to be shipped at the fourth quarter of 2009, but finally, StarCraft 2 was released at 27th, July of 2010. The project was delayed almost for one year. Part of Blizzard's fans lost their passion and were angry. From Blizzard's angle, they want to promise their product is in high quality and supplying a balanced competitive game. From their decision, we consider Blizzard put the first factor of technological uncertainty at a higher priority.

A third factor in technological uncertainty is whether the developer can provide prompt, effective service for the customers who have problems. For example, Skype (the Voice-over-Internet Protocol, or VoIP, service provider that allows customers to download a free software package onto their computer and then use their broadband connection to make phone calls for free anywhere in the world) faced a disabling computer glitch in its system: A standard Microsoft Windows update led to a chain of events that overwhelmed its network and millions of users lost their service (Mohr, 2001).

The fourth factor is that one is never certain just how long the new technology will be viable before and even newer development makes it obsolete (Mohr, 2001). This uncertainty is about the life span of technology.

✧ **Competitive Volatility:** Competitive refers to both intensity in degree of change in the competitive landscape and uncertainty about competitors and their strate-

gies (Mohr, 2001). Competitive volatility contains the uncertainty about three dimensions:

First, it is uncertain that which new competitors will exist in the future. For example, when there is already What's App in the market, which is used to communicate with friends by text, soon there comes Viber and Talkbox as competitors. These Apps have their own advantages, but the new competitors will share the cake together and take away some of the customers which was belonged to What's App.

Second dimension is about the market strategies used by the competition. New competitors that come from outside existing industry boundaries often bring their own set of competitive tactics-tactics that existing industry incumbents may be unfamiliar with and that undermine their existing business models (Mohr, 2001). For instance, since iTunes started to supply the legal music download service, the sales of CDs declines dramatically. The strategies of CD firms have to be changed to adapt to this new strike to their market. Moreover, when the Spotify is released, it supplies another mode of music business for customers. These new competitors are rewriting the rules of the industry for all the players in this market.

The third of competitive volatility is that product form competition-new technological developments that provide a different way to satisfy the same underlying customer need or problem (Mohr, 2001). For example, there are so many PC customers and they are using different kinds of operation system and software. In some offices they still enjoy using the old version Windows system and office while some company purchase the latest equipment and software but also use them to do the same business as before. The list of new technologies that satisfy the same underlying customer need but with a different value proposition (or way to do so) goes on and on (Mohr, 2001).

### **3.3 Introduction of Marketing Strategy**

#### **3.3.1 Concept of Marketing Strategy**

Marketing Strategy plays a significant role in commercial field and many researchers have contributed a lot to this field, so at the very beginning we need know some basic knowledge in order to better our future study.

Baker and Hart (2008) described that "Marketing strategy is a process that can allow an organization to concentrate its limited resources on the greatest opportunities to increase sales and achieve a sustainable competitive advantage".

At the same time, good plans and clear objectives will help the companies fulfill their future goals. Baker and Hart (2008) stated that "Plans and objectives are generally

tested for measurable results. Commonly, marketing strategies are developed as multi-year plans, with a tactical plan detailing specific actions to be accomplished in the current year. Time horizons covered by the marketing plan vary by company, by industry, and by nation, however, time horizons are becoming shorter as the speed of change in the environment increases”.

However, how to catch the key factor to make marketing strategies for the company? Baker and Michael pointed that “A key component of marketing strategy is often to keep marketing in line with a company's overarching mission statement” (Baker & Hart, 2008).

### 3.3.2 Marketing Planning

All the strategies initiate from planning, marketing strategy also needs to start with a purpose and target. A strategy should set a measureable corporate objective for a company and a strategic plan should include the measure that how to adapt the changing environment and seek opportunities among so many competitors according to the company’s capability. Planning is different from strategy. Strategy specifies direction and focus on content and logic, while planning needs to specify the sequence and timing. Marketing planning occurs at the business-unit, product and market levels, it also supports company strategic planning with more detailed planning for specific marketing opportunities (Kotler, Armstrong, Saunders & Wong, 1999).

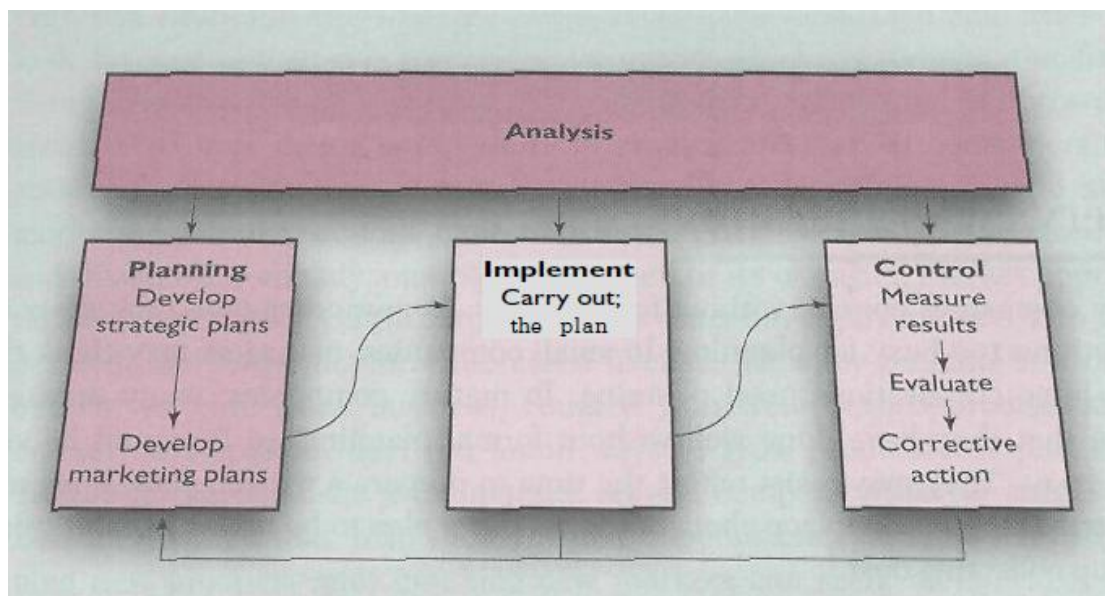


Figure 3 Marketing analysis, planning, implementation and control (Kotler, Armstrong, Saunders & Wong, 1999)

The planning process involves four stages: analysis, planning, implementation and control (Kotler, Armstrong, Saunders & Wong, 1999).



- ✧ **Analysis:** A company must gather information from their specific situation and analyze their advantage and disadvantage, competitors, the opportunity and threat of the current market.
- ✧ **Planning:** The main mission of this process is marketing, product and brand plans.
- ✧ **Implementation:** The action taken by the people both inside and outside of the company to achieve the company's marketing plan.
- ✧ **Control:** Control consists of measuring and evaluating the results of plans and activities, and taking corrective action to make sure objectives are being achieved. Analysis provides information and evaluations needed for all the other activities (Kotler, Armstrong, Saunders & Wong, 1999).

### 3.3.3 Innovative marketing in SMEs

According to O'Dwyer, Gilmore and Carson (2009), they illustrated that the main purpose of the business is to create a customer who determines what the business is. The enterprises have two basic functions: marketing and innovation in order to complete the goals of creating customers.

Doiron (2009) gives us a clear statement that SMEs need internet marketing since it is a fast-growing development pace for them. The recent researches have shown that nearly 85% of SMEs in industrialized countries have their own web sites, however less than half are utilizing the web sites to securely transact with their customers. Current media consumption is moving away from traditional media, such as newspapers and magazines to the internet. With the support of tools and technologies, it is important for online marketing. This makes it a golden time for SMEs to market their web sites and ultimately succeed online.

From many SMEs point of view, "innovation" is regarded as technically invention, which helps them to create means that advances in technology, equipment renewal. It seems that they don't want to take the risk of investing a lot of human, financial, and material resources into innovative things. A direct result of the consequences of misunderstanding on this will behave like that they will lack of strength of large enterprises "patent".

SMEs are seen as the leading force of economic development, however spontaneously facing with rising production costs, difficulties in financing, survival and development issues. The integration of new media, traditional media and traditional marketing model is being able to meet the business needs. Therefore, the mobile Internet marketing will become the new opportunities for development of SMEs. O'Dwyer (2009) stated that innovation is evidenced through the production of a unique concept pieced



together from existing ideas and concepts. Therefore, its success is determined by its newness, the extent of its adoption and its translation into an exploitable opportunity for the SME.

### **3.3.4 Marketing Channels**

Since human being started to trading and doing business, marketing become a necessary way to increase their companies' and products' reputation. In current society, there are many channels of marketing which are using old and new technologies to reach this purpose. For instance, successfully channels for tradition industries includes press releases, email blasts, word of mouth, TV or radio advertising and website search engine optimization (SEO). As the rapid development of information technology, new techs bring us more innovative ways of marketing. The era of Web2.0 has come and the new channels decrease the basic cost of marketing.

### **3.3.5 Concepts of strategic marketing**

Jain (1999) stated that “Within a given environment, marketing strategy deals essentially with the interplay of three forces known as the strategic three Cs: the customer, the competition and the corporation. Marketing strategies focus on ways in which the corporation can differentiate itself effectively from its competitors, capitalizing on its distinctive strengths to deliver better value to its customers. A good marketing strategy should be characterized by:

1. A clear marketing definition.
2. A good match between corporate strengths and the needs of market.
3. Superior performance, relative to the competitor, in the key success factors of the business.

Some fundamental elements involved in marketing strategy, we can get use of them to help companies combat with opening their target market.

Jain (1999) also expressed that “Based on the interplay of Strategic Cs, formation of marketing strategy require the following three decisions:

1. Where to compete, that is, it requires a definition of market. For example, a company should enter the entire market or several segments.
2. How to compete, that is, it requires a means for competing. For example, introducing a new product to meet a customer need or establishing a new position for an existing product).

3. When to compete, that is, it requires timing of market entry. For example, being first in the market or waiting until primary demand is established.

The marketing strategy, in terms of these three key constituents, must be defined as endeavor by a corporate to differentiate itself positively from its competitors, using its relative corporate strengths to better satisfy customer needs in a given environmental setting.” (Jain, 1999)

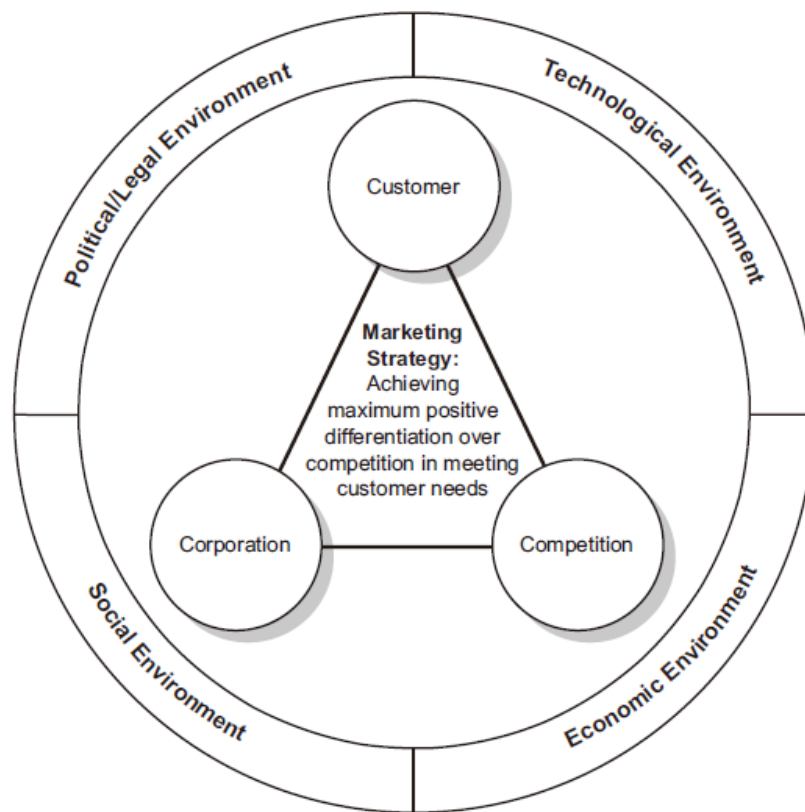


Figure 4 Key elements of marketing strategy formulation (Jain, 1999)

### 3.3.6 Marketing on Web 2.0

To be undeniable, it is era of Internet currently and the Web 2.0 is the hottest word in this field. Most of users share their information through the web-based platform. Compared to Web 1.0, Web 2.0 based on a particular set of technologies which incorporate a strong social component, involving user profiles, friend links and encourages user-generated content in the form of text, video, and photo postings along with comments, tags, and ratings (Ghauri & Gronhaug, 2008). Web 2.0 emphasizes connection between users and sharing information through the social network platform. Social network contribute mass to marketing,

Arun and Jagdish (2004) discuss that the web changes organizational level practices and the customer behavior. The Internet makes the marketing focus change from a “supplier perspective” to a “customer perspective”. Marketing must be understood not in the old sense of making a sale – ‘selling’ – but in the new sense of satisfying customer needs (Kotler, 2012).

From their perspective, firms do not need to spend mass advertising resources on retaining customers; once customers start receiving offerings based on their preferences, the switching costs are high and loyalty is maintained (Arun & Jagdish, 2004). Customers are divided into four categories based on two indicators: financial viability and strategy viability.

From the angle of changing customers’ behavior, Internet diminishes some of the locational dependence. The geographical separation led to customers seeking intermediaries in their geographic locations that advanced the interests of consumers in terms of information, communication, transactions, physical movement of goods and customer service (Arun & Jagdish, 2004). Customers can arrange their time more flexibly than usual to interact with marketers by the 24 hours access to the platform.

Facebook, twitter, YouTube videos advertisement, blogs, reviews and rating given by other customers are today’s most popular measures for marketing. The procedure of customers choosing apps can be generalized as follow. Before downloading apps through our mobile phones, they have the habit to read the description of the app by the developer and check the rating and review by other customers. Rating and review are almost the most important fact of the e-market. Experienced buyers on Amazon or eBay will put a lot of attention to the review to reduce the risk of encountering e-commerce default. Then some of them may watch the YouTube videos for introducing the app. These videos usually will introduce the functions of the apps and illustrate how to operate on them.

### **3.4 Marketing Strategy Applied In Apps-making Industry**

#### **3.4.1 Paid and Free apps Strategies**

Based on the data from 2008 to the half of 2010, Tomi (2010) analyzed that the price of the average downloaded paid apps which cost to the end-user, “We know it is more than 99 cents, because we know 99 cents is the floor price and we know there are paid apps that sell for more than 99 cents.” Obviously, cheaper apps have more downloads than the apps have higher prices. Tomi (2010) also mentioned two other reports for the Apps prices: Chetan Sharma reported in March 2010 that the average paid app price was \$1.90. Yankee Group also in March of 2010 reported the average paid app

price was \$1.99. Finally, Tomi made his result to the midpoint of these two results which is \$1.95. Moreover, Tomi (2010) calculated a more valuable figure, “The total paid apps earned \$1.43 Billion over 2 years. When we divide that by the average price paid of \$1.95, we get total paid app downloads of 733 million. In other words, of the total 5 Billion iPhone paid and free app downloads, 733 million - 14.7% - were paid, and obviously the rest, 85.3% of all downloaded iPhone apps were free. That is 4.27 Billion free apps.” The result calculated by Tomi (2010) is similar to the survey done in Sept 2009, by Yankee Group that actual iPhone App users and found 18% of their apps they had were paid, 82% were free.

A report by Supercollider Blog on 2 February 2010 showed that half of all the paid iPhone apps get less than one thousand downloads (Tomi, 2010). Angry Birds game and Bewelled 2 game, which got 4 million and 3 million paid downloads respectively, are actually existing in this market and creating their successful history. But the crucial truth is stated by Tomi (2010), “That number times \$1.95 per paid app gives the 'most typical app' the total revenues in its lifetime - the full two years of App Store existence - of \$1,948 dollars. This is before Apple takes its cut of 30%, so we are left with \$1,363 over two years or \$682 per year. This is so 'successful' that half of all of the developers of the 164,250 apps - will actually earn less than this.”

Free Apps are oriented to be advertisement based apps or sponsored apps. However, there are also some people develop apps without commercial intention or just want to practice their development skills. But the free apps without commercial intention only occupy a tiny section of so many free apps so they can be ignored.

According to Tomi’s (2010) analysis, the cost of developing a free app normally is \$35,000, and this amount probably is not enough for the first edition of the app. Moreover, to improve the performance, most apps need more or less updated after the first version is released and each updated may cost \$10,000. After finishing development, the app needs to compete with numerous free apps in the apps store. Customers need time to choose app to download and install in their devices, so how developers can make their app more competitive than others become a tough issue.

To those developers who want to develop free apps, Dave & Michael (2011) generalized three strategies:

1. Offer a free lite version of your app to help drive sales for the paid version, or use a free model with premium features available through In-App Purchase.
2. Give away your app for free to get as many people using it as possible. After you've cultivated a large loyal customer base that depends on your app, use that

basic free version to up-sell a separate premium version or In-App Purchase items that offer additional "must-have" features.

3. Make your app free, supported by in-app advertising. Implementing mobile ads in your app.

In the apple store, it is popular to see that apps with free version and paid version. Free version can be categorized into two different styles. One is trial version, this kind of free app contains all the functions but they have the utilization limitation for few days. Another kind of app is opposite to the former, they have not time limitation but with function limitation. Both of them are aim to attract consumers to buy their paid version of apps.

### **3.4.2 Intellectual Property Strategy**

Rao and Joseph (1994) states that, in marketing dimension, the software industry is characterized by a good deal of technological uncertainty, strategic uncertainty (i.e., no "right" strategy has been formulated yet), a large fraction of first-time buyers and newly formed firms, and the presence of a large number of relatively small firms made possible by easy entry and diverse market needs. They also mention that the legal dimension of marketing which emphasis the intellectual property of the software. Unlike other products, software is totally intellectual things since it does not need raw material to produce. Traditional software is written in CD/DVD and sold in store, but now most software can be downloaded from Web and the users only need to buy the serial number or other license to activate it, so protecting the intellectual property is one of the key points of marketing. Defining and understanding your company's intellectual property strategy will help you make better decisions and avoid pitfalls that could jeopardize the intellectual property assets you are trying to build (Wooldridge & Schneider, 2011). From our observation, there are plenty of similar applications in the Apple store in the same category. In apple store, if your app is simple in nature, the competitors will appear almost instantly (Wooldridge & Schneider, 2011), so the intellectual property protection should be established as soon as possible. Moreover, the apple store has the limitation of geography; Apple ID account information controls the access to Apple store in different countries to download apps. For example, you register an Apple ID with the location in USA, when you find an interesting app from Apple store in China and try to download it, it will probably come out a warning that your account is not allowed to do it. This phenomenon may result from the intellectual property protection in different region by different laws and agreements.

Basically, there are three types of intellectual property protect content:

- ✧ **Copyright:** The right granted by authors to dictate who can copy, distribute, publicly perform, modify, or create derivative works from their original work of authorship (Wooldridge & Schneider, 2011). Copyright is used for protect literal works and also for software, but different from the patents, it cannot be used to ban others to develop products with the same functions.
- ✧ **Patents:** The patents owners can request others to stop using their invention and defense to infringement of their innovative ideas.
- ✧ **Trademark:** Trademarks are used to let the customers to distinguish your company from others.

From Rao's (1992) paper, a survey result to the software industry group from the Yale university shows that the "superior sales or service effort" is ranked as the top one among the five methods of protecting the gains from product innovation (the other four methods are patents, secrecy, lead time and moving quickly down the learning curving. These five methods of protecting the gains also can be considered a priority of the marketing strategy chosen by these surveyed targets. The marketing assets also include superiority of product and customer awareness of it build by promotion; investment in channel development; superior information systems concerning markets, customers, competitors, and more.

After finishing developing the app and passing the apple store approval, the app will be put on apple store. Promoting strategies can effectively increase the apps' marketing performance and also bring the feedback from market to developers.

Review is one important factor to affect consumers' choices. From the reviews on the cover of books to the reviews for online shopping, and now the reviews in apple store are also vital for increasing downloads of an app. Consumers would like to read other consumers' review in order to reduce their trials and save their time.

According to Wooldridge & Schneider, some advises are given for developer to increasing their reviews:

1. After several days of usage, if users have not deleted your app yet, they must have found some positive value in it. The timing for asking for reviews maybe after 5 to 15 days of being installed.
2. If your app is a game, display the rating request dialog box when they're feeling good, like after finishing a difficult level or achieving a high score. Lima Sky's popular doodle jump gives a success example for this cue.

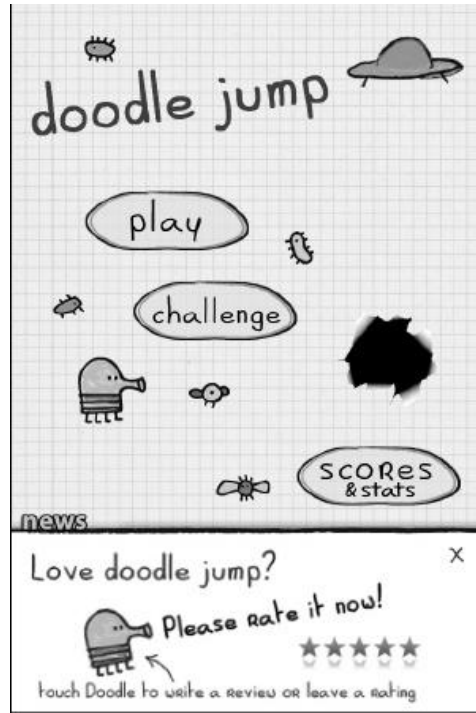


Figure 5 Lima sky customized the app rating request in Doodle Jump to match the fun style of the game (Wooldridge & Schneider, 2011)

3. If it's a productivity app, you may want to display the rating request dialog box when users have a positive sense of accomplishment—after writing a document, editing a photo, checking off a list of tasks, and so on.

### 3.4.3 Integrating social network and in-app email

In these years social develops quickly year by year, social network user accounts increases dramatically. Though social network such as Facebook and Twitter, People prefer can communicate and share what they want to share with others. And email is still the most popular approach to send information to others. To increase the popularity and reputation of apps and company, it is necessary to integrate them into the apps, especially for free apps.

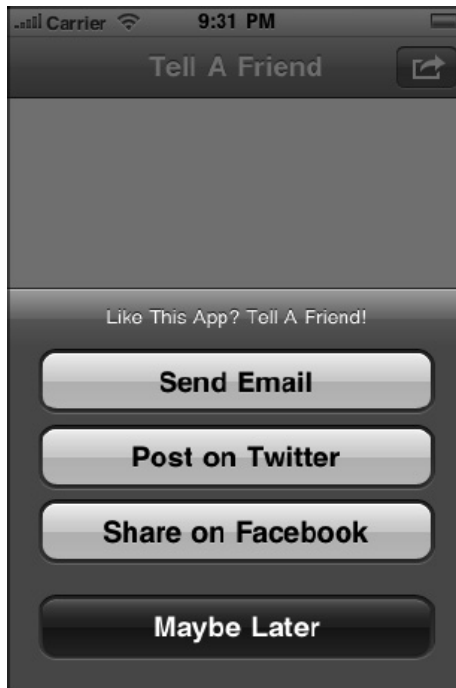


Figure 6 tell a friend example app in action on the iPhone (Wooldridge & Schneider, 2011)

Most of Games developers integrates in-app cross promotion for other apps. On one hand, most developers will develop at least several apps. With the experience of developing one app, they can develop better apps in the same category. As mutual promotion, some developers collaborate with other developers to recommend their apps for each other. This cross effect is aim to get better use of their customer resource and better profit. It is a win-win strategy for all developers.

Marketing needs to respect the regionalism of local market and follow local people's hobbies. Zhou (2012) generalized four main kinds of channels to market your apps in low cost.

#### **3.4.4 Covering different download platform**

The first step of marketing is to enter the market. Before putting your products on the shelves, whatever you do to marketing is useless and inefficient because consumer cannot touch the products.

In China, other than apple store, there are many unofficial platforms for customers to download apps to their devices. There download platforms can also be divided into several types:

1. Download market: All apps in these markets are official and legal. E.g. Apple store, Tencent apps center, Netease apps center, etc.



2. Mobile software Clients: This kind of software is mainly used to manage your phone, usually including cleaning, anti-virus and download apps, but can includes illegal apps such as cracked apps and unstable version apps. So before installing these clients, you need to jailbreak your devices. E.g. 91assistants, 360 mobile guard, PP assistant, etc.
3. Wap: These sites are specially designed for mobile devices users.
4. Web download: These sites provide apps files download, but it is traditional downloads.

#### **3.4.5 Marketing though forums, micro-blogs and app reviews articles**

At the bottom of the websites about mobile phones, usually there are many related forums. Zhou (2012) recommended marketing staff to use official and user posts to market your apps. At the same time, marketing staff can contact and negotiate with forum administrators to organize some activities to market apps. For example, those users whose comments or suggestion are adopted can receive one year's license to use the app or their name will be presented at the acknowledge page of the app.

Micro-blog is the newest way for marketing. Normally, promoters will contacts some micro-blog owners who have numerous followers and ask them post information to help them market their products. There are still much potential can be found out for marketing.

Another way to market the apps is the articles in IT websites to criticize apps. Good articles can be transferred among plenty of IT websites to increase reputation dramatically. These articles are always written by professional staff in this industry, and usually hide the intention of marketing. Moreover, their writing style is objective and critical, so people will get use to read these articles and choose the products according to their criticisms. These articles

#### **3.4.6 Promotion**

Partnership promotion is an unstable approach to market the apps. Compared to others an approach, partnership promotion is not easy to reach you marketing target and succeed. According to Zhou (2012), partnership promotion mainly depends on developers' interpersonal relationship and it usually requires that you apps can also supply the same service for your cooperator. In most situations, it requires apps have equal volume of users and visitors. This promotion approach is a kind of exchanging business. If your cooperator brings thousands of volume to you, and you can only bring hundreds of volume to them, this unequal business usually cannot continue unless you

have very good friendship. Zhou (2012) described that there are three paid promotion approaches: in-app paid promotion, paid by volume, Affiliate marketing.

In-app paid promotion is close to the in-app cross promotion described in 3.9.3. Differently, it is not exchanging marketing strategy but pay other company to embed your ads in their apps. By this approach, if you have successful apps, you can use them to earn great profit. Paid by volume is marketing company to use their own measures to help you reach a certain volume according to the contract.

Shekhar (2009) states that “Affiliate Marketing is an online marketing system in which a business payment one or more affiliates for each visitor or customer brought about by the affiliate’s marketing efforts.” In China, affiliate marketing is still in a fledging period, many people feel strange to it.

Apps can also be a tool to market other apps. In-app cross-promotion supply great contribution to the software marketing. This approach is widely integrated by most free apps. Dave & Michael described that “Upon launching one of Optima’s free ad-supported apps, a splash screen briefly appears. While the user is waiting for the app to load, the splash screen not only promotes the premium version of the free app they're using, but also lists several of Optime's other free apps.”

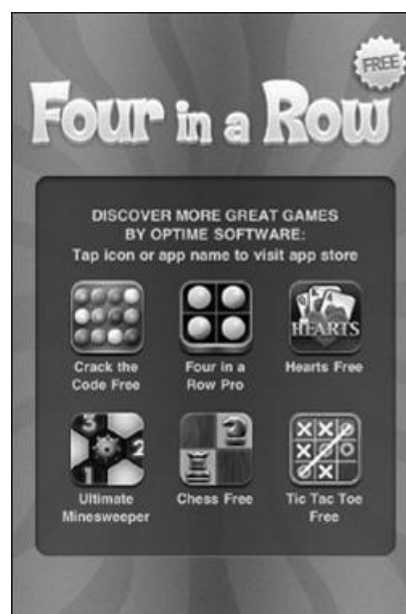


Figure 7 the splash screens in Optime Software's free apps effectively cross-promote its other apps (Wooldridge & Schneider, 2011)

## 4 Interpretation

### 4.1 Introduction

In this chapter we want to use their successful experience and our cognition for Chinese market to explain why these two companies' marketing strategies can succeed and how they understand this industry and what kind of opportunities in the future.

### 4.2 Marketing strategies influence in Chinese Apps Industry

According to Wingfield's (2012) report, Apple's quarterly revenue from China was \$7.9 billion, about 20 percent of total company revenue, which was triple as Apple's sales in China in the same period a year ago. In China, there are numerous iPhone fans. Additionally, more and more people are eager to own an iPhone. The potential market in China is incredible. Deutsche Bank's Chris Whitmore, whose iPhone estimate of 26 million units was the worst we saw last quarter, issued a note entitled "iPhone is just getting started in China" (Elmer-DeWitt, 2012). As the development of this new market, mobile apps companies are springing up like mushrooms. Other than companies, more and more individuals start to enter this industry to face the challenge and competition. According to a report from Iimedia.cn (2012), in the first quarter of 2012, individual developers occupy 28.6% of total developers in China. Development teams which are constructed by less than 5 persons occupy 64.1%, 5 to 20 persons' teams occupy 28.3%, 20 to 50 persons' and more than 50 persons' teams occupy 4.5% and 3.1% respectively.

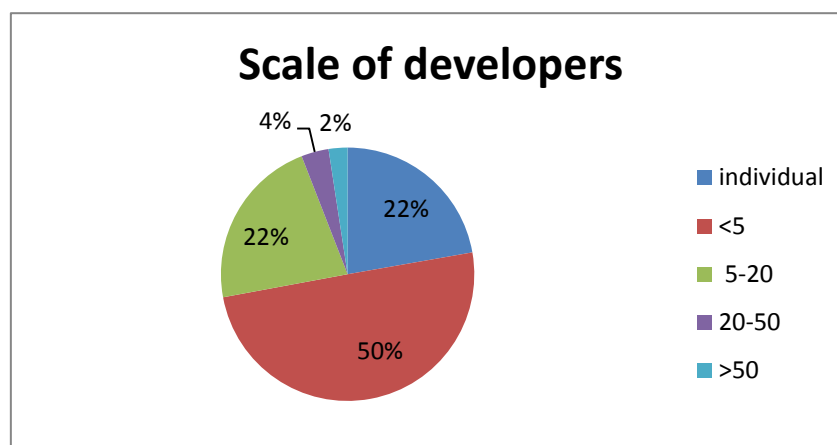


Figure 8 Chinese mobile apps developers scale distribution

These development companies can be established by several young and brave people who have same ideals and courage. Thus, compared to other industries, these compa-

nies are in small scale. At the beginning, these companies can be constructed by very few persons. It will be very difficult for them to get their first business opportunity to prove their ability. But after finishing one or two projects, they will receive more and more business opportunities. As the development of business, companies need to extend, but the number of staffs should be strongly controlled. As the number one developer in Shanghai, Gfeng is constructed by 50 staffs. Unlike 139.me, their business not only focuses on iOS, but also Android, HTML5 development and Internet marketing.

In IT industry, innovation is the core factor to compete with your opponents. But innovation is the weak point of Chinese company, as an owner of several patents, Gfeng still stated that their current disadvantage is lacking of innovative ability. To solve this problem, 139.me established the 3G DreamWorks to absorb fresh blood by collaborating with universities. We think that the cooperation with undergraduates and graduates is a marketing approach which can increase their companies' reputation and fans. But 139.me's CEO emphasized that "Our aim of implementing activities is to employ staffs for our development team, without intention of marketing." As successful developers, these two companies have their own strengths on developing apps.

The development of software cannot speed up without the development of hardware. Additionally, software development will also push hardware industry to be improved even making technique revolution. As a games company, each product from Blizzard Entertainment is attracting a great deal of players from all over the world. To satisfy and earn profits from them, hardware manufacturers will compete to develop stronger "weapons" for players.

Apps development is due to the development of smart phones and mobile OS. New mobile OS will bring higher requirement to mobile manufacturers. As the development of apps, new apps are having more and more functions and better UI design. It also means that apps will have larger size and need more communication data with servers. From the perspective from smart mobile users, using more intellectual functions and top technologies are the reasons to buy smart phones and 3G service.

Traditional 2G network will limit the performance of some apps. For instances, news and magazines can contain many images. Without high-speed network, users will feel painful to wait each image to come out to their monitors. Moreover, since online video becomes popular, it also bring higher requirement for communication network. As the popularization of 3G network and the development 4G network, smart phones and mobile apps are becoming more and more popular. In China, 3G network started to operate from 2009. Up to now, 3G users have reached about 15%

of mobile phone users. The growth of 3G users is very rapid, but there is still only a small part of people are using 3G for two main reasons: first, the price of 3G service is still not cheap enough; second, it needs users to change their SIM card which means users have to discard their current phone numbers.

Mobile apps development is a high-tech industry, which means that it is not a labor intensive industry but an intelligence intensive industry. Mobile apps development companies usually have very small scale. Both of our research targets are leaders in this industry in China. Although they have already been developing for a several years, they still strictly control their scale and labor cost. The structure of mobile apps development companies are also very simple. For instance, the CEO of 139.me, Lianxing Zhu answered that “We have 40 full time staffs that are separated into two departments: technical department and marketing department. Additionally, our 3G DreamWorks signed contracts with 150 part-time students.”

As a developing country, in most industries, China falls behind with developed companies. Software development, as a part of IT technologies, reflects the advanced degree in high-tech industries. Lacking power of innovation is a common issue for all Chinese companies in most industries. Similarly, mobile apps industry also requires innovation. Without innovation, it will be difficult to motivate consumers to download and pay. Our interviewees also conceded that lacking innovation also is one of their disadvantages in this industry. But they also have their advantages to survive in this circumstance. “We started to develop apps at an early stage, so we have better customer resource. And our fertile development experience is also our strength. By the recommend of customers, we get a lot of new customers.”

For a company to survive in this completion, it is necessary to keep finding opportunities in the market. Apps market is also extending as the popularizing of smart phones and other smart mobile devices. “The combination of tradition industries and mobile Internet is one important direction of our development. We are also observing the OTO market.” Different to traditional e-marketing (B2B and B2C), OTO (Online to Offline) actually is the extension of online group purchasing. The current chairman and CEO of Innovation Works, From the perspective from Gfeng, remote controlled electronics is considered that it will have much space to develop and bring great benefit to developers. *“In the future, electronics will trend to be intelligent. It has great potential for apps development.”*

According to our research, an app’s development time is about two months. Interviewee’s answers are 45 days and 8 weeks respectively. Both of them emphasized the importance of time schedule, otherwise it may bring bad results. “We must finish it on

time. If we cannot do that for our customers, it may result in default. If it is our own project, it will influence the whole schedule of marketing.” Even though following the schedule is really significant to the development of apps, they also mentioned that “it is really normal that some successful apps will need more time to do some improvement.” Moreover, there are also many factors that will affect the process of development. One factor is “similar apps come to market before ours” and “unclear needs for development and the need changes during the development”. To solve these issues and ensure the projects can be finished successfully, they also have their measures. “We will consider whether our development should be continued. According to the market response, we may give up.” “Before start the project, development needs must be cleared and detail schedule must be made.” It is not possible for a team to finish all projects perfectly. Inevitably, apps developers also will encounter the conditions that their work cannot reach their expectation. Interviewees responses us honestly, “There are many projects cannot reach the original expectation. Sometimes we have to announce the failure of our projects.”

As a high-tech industry, apps developers need to protect their intellectual property. In China, the problem of privacy is well known by the world. Foreign apps and developers seldom enter Chinese market is due to this issue. As the effort of Chinese government, the chaotic software market is becoming better gradually, but developers’ benefit is still easy to be violated. Developers also need to use laws and rules to protect themselves. “We have applied for patents for our main products. Most other developers will not do this.” Another weapon is the app store. “When we find Infringement, first we will contact the app store, if it cannot be solved, we will engage legal procedures.”

The next difficulty is when and how to promote their apps. As we learned from literature, there are many approaches introduced but we do not know which ones are effective. “In the early stage, during the alpha test, we will post information at forums, blogs, micro-blogs and portal sites to let the public know there will be such an app to come to market. At the late stage, we will look for app marketing company or use paid to promote to increase our download. When the amount of download reaches a certain level, it will attract more and more customers, just like a snowball.” According to 139.me, by their fertile experience, they mentioned that “Limited time free app is most effective to promote the product.” On the other side, 139.me said “Marketing and promotion will start after we send our apps to apple store for approval.”

Pricing strategy is not our core research question, but whether an app is free apps or paid apps is a dominant factor to its marketing performance. From our investigation, developers’ income mainly comes from paid apps. Before we did the interview, we

think the in-app ads will be a very important section of the total income, but the fact is not like our hypothesis. “Free apps and in-app paid approaches brings very little profits.” It seems that the most direct way of business approach is still the main measure of earning profits for most of the developers.

No paid, no gains. Everyone knows this principle, but people would try their best to save money under current heavy stress. “People will trend to pay for apps because it really takes time to find an app which is proper to you. Free apps have limited functions or have many annoying ads.” Although currently free apps are not as profitable as paid apps, interviewees believed that free apps could earn as much as paid apps even overcome paid apps in the future. “The value of free apps is getting close to paid apps.” That means free apps still have much space to be explored. In China, it is a fact that only the minority of people are willing to pay for software. If there are some free software can be used, even though the paid software is cheap, they will save their money. But the consuming attitude of consumers is also changing. Consumers start to realize that they need to pay for apps to protect these developers’ benefit and this industry.

### **4.3 139.ME and Gfeng**

139.me is founded in 2006 Beijing by a technique team which is consisted of prize-winning players from ACM (Association for Computing Machinery) and started to develop Apps for iOS from 2008. 139.me is one of the oldest and most famous Apps developers in China. Currently there more than 60 Apps are in the Apple store and the total download has already overcome 5 million times. 139.me is a company with much experience on developing games and owns their own game development engine. Now it is a partner of IBM, Financial Times, State Grid Corporation of China. As one of the largest scale apps developer, 139.me still only focuses on iOS platform, not extend their business to other platforms. For lacking of staffs, they are absorbing talent undergraduates and graduates from universities and supplying training for them. Now they have already 150 part-time students.

Gfeng is a small company which started to develop App from 2008, and located in Shanghai and is the first generation App developer in China. Up to now, Gfeng have already served for more than 500 enterprises, including fortune 500 companies. Buick sales system is one of their successful Apps. In 2009, Gfeng developed first reading App of china. Now they promise the Apps they develop can pass Apple store’s verification.

According to the literature and answer from interviewees, their development principle is following customers' need. "Most of our apps are used to get information such as news and message, and productivity apps. These apps aim to satisfy people's daily life needs." As the development of social network, communication apps may also have bright future. "Social communication software has very strong stickiness." Before starting a project, Gfeng will do survey inside their company to collect opinions whether this project is viable in competition. Oppositely, 139.me stated that "we never do market investigation. Our development depends on our understanding to the market." From the attitude to the market investigation, it seems to be not necessary.

Software industry has the characteristic of specific category focusing. For example, Microsoft is famous for operation system and office software while Blizzard is well known for Games. Even though this globe top software companies can only focus few areas, as small companies, these developers cannot widen their business to the area they are not good at. Different companies have different views to the market.

It is not difficult to image the success of 139.me. When it was established in 2006, they were a professional programming team composed by prized ACM member. At that time, these people were top programmers in China. Thus they are confident to gain the trust from clients. 139.me is famous for their games development and they are one of the companies have their own 2D/3D engine to develop games.

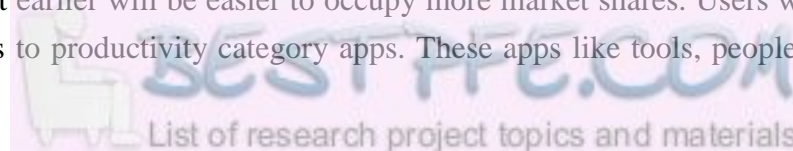
Gfeng is responsible for programming projects throughout the software development companies of various industries, including government and enterprise management software, air tickets reservation, LBS positioning, tourism and remote control. Its strength is developing reading software. In 2009, they developed the first Chinese reading app in China – PM reader. This app has ever been downloaded for more than one million times and now there are more than 100 thousand vip users. As a leader in developing news and magazine apps, they are always looking for new opportunities. Now their business covers iOS, Android, Windows and WebOS platform, website design and apps marketing. Different from 139.me's insistence on high-quality development route, Gfeng chooses diversification development. These two different ways can generalize the main development routes of most apps developers in China. First one is trying their best to develop top apps. Like Finnish developers who developed the angry birds and the developers who developed the fruit ninja. Another one is trying to develop more apps to cover more area of the market to earn more chance. Which one is better, it is really hard to say. But we believe that it is better to find a balance point between these two strategies.



Jing and Guo (2010) stated that the most frequently used apps categories are games, mobile reading, mobile search, mobile browser, instant massager and mobile music. Games are top one category, it occupies 68%. Most of smart phone users are young people, they have strong passion to play games and try new apps. Now there are more and more third party platforms providing apps download which will increase apps marketing channels and market covering. As the rapid growth of games, developers are contending for copyright and intellectual property becomes a vital issue in this industry. But each coin has two sides. This exposed issue will also push this industry to be standardized. Games development requires developers have strong innovative ability. Users will be easy to feel boring about keep playing similar games without something new. A short cycle of download, install and uninstall become very common for users. This is also due to too many similar free apps. To avoid the chance of failure in this crowd market, 139.me determined to reduce their development of games.

Mobile reading including news, magazine, books and blogs, is another hot category of apps. Mobile reading can not only contain text, but also voice and video. In the era of information, reading through mobile devices is becoming a hobby of modern people. Different needs of information provide a board development space for mobile apps developers. With the development of Panel PC, mobile devices strongly strike the paper-based reading industry. Some states of America have tried to use iPad to replace paper-based material in education. Telecommunication operators also embed some mobile reading apps to their contract smart phones. These apps always cannot be uninstalled directly. By the cooperation with telecom companies, these apps gain great reputation and millions of users. But in China, people still have no strong willing to pay for apps. They can pay for books and newspaper, but not reading apps. The situation of apps market in China is that most of users want to use high-quality free apps. But the new generation of Chinese is becoming more and more awareness of protecting intellectual property and learning to respect software developers' effort.

Mobile search engine occupies another important market share as rapid growth of the smart phone users. Mobile searching engine is different from the searching engine in PC because it is mainly based on WAP search. Recently, voice search engine is introduced and becoming more accurate to identify different people's pronunciation and languages. Enterprises start to pay more attention on mobile search market. Mobile search can easily cover more users than traditional searching industry. Now almost everyone has a cellphone, some people even own more than one phone. In the future, it is no doubt that smart phones will replace normal phones. Those developers who enter this market earlier will be easier to occupy more market shares. Users will have strong stickiness to productivity category apps. These apps like tools, people always



will not choose the most expensive and latest one, but choose the one they are familiar to. As description from Gfeng, the process to find an app which is real fit to users really takes much time and these tools will become necessities for smart phone users' daily life, so there are many opportunities to develop these tools.

As the concept of Internet of things introduced and the development of network technologies, intellectual electronics trends to be combined together with mobile internet. It also brings many opportunities for apps market. Remote control apps will make our smart phones become another kind useful device to control our electronics. The combination of mobile Internet and traditional industries will push the apps development to another dimension.

According to Wingfield's (2011) research, developing a great mobile application is just half of the battle to App Store domination. Savvy marketing techniques and judicious combinations of traditional and new age marketing tools are important to the ultimate success of your application and your revenue from the app. Cross-selling and up-selling are important since the mobile app, once in use, has a captive audience that is perfect for these techniques. (Wingfield, 2011)

Even though 139.me has no special funds for marketing they still try to find other alternative way to carry out their marketing approaches, by using reputation marketing strategy they earn a lot of customers. Their difficulty is the company should produce competitive products to gain word of mouth. However, they enter this market earlier than many other developers, so they create the best timing to occupy the market. This advantage can reduce their marketing budget. In this situation they save a lot of resources that should be put into the marketing investment. The outsourcing business has occupied 80 percentage income of the company. Based on good reputation, large enterprises from other industries including fortune 500 companies also come to collaborate with them. Now they are not necessary to actively seek for customers as what they have to do when the company was just established. 139.me almost have no advertising input. Its advertising cost only take up 0-0.3% of sales, while the average value in this industry is 3.5%. From another angle, savings in advertising have become a source of profit for them.

Even though marketing is important and developers also know the importance, it seems that in China, developers in apps industry will not invest much on marketing. Now most of their marketing approaches are based on Internet and cost very little even though nothing. For the research of marketing approaches, we tried to collect detail figure of real companies to learn the relationship between marketing expenditure and company income. But when talking about this topic, they also feel difficult to an-

swer. “It cannot be explained, it is really difficult to estimate. Every industry is different.” The answer from 139.me surprised us, “Actually, we have no special funds for marketing.”

Without funds for marketing, they still need to market their products, so they must have a marketing strategy. “Our products depend on word of mouth. It also is accumulation of our 4 year’s hard work.” In a relatively new industry, excellent word of mouth can bring many business opportunities. 139.me is the app developer who has the best reputation and word of mouth. They can get many projects from companies in all industries. In this circumstance, outsourcing becomes another approach to increase their business and income. “Now outsourcing has occupied 80 percentage income of the company.”

Gfeng’s branding depends mainly on two aspects of implementation: First, their products have their own characteristics. Conveniently, fast running speed, reasonable price and fast update speed to satisfy the consumer. Once you do not download their app, it usually can be used for a few days. But after these free days, if you want to continue using them, you need to pay. Secondly, they rely on apps ranking in apple store. Thanks to the success of the previous products, their apps always appear in the top-ranking position so consumers can easily search and download their products.

On the area of promoting the apps, different period they will utilize different methods. When their app experience alpha test they will post information on forums, blogs, micro-blogs and portal sites to let the public know there will be such an app is about to come to market. Nevertheless, when their app experience beta test they will look for app marketing company and use paid to promote to increase their download. This resourceful strategy not only improves the revenue for them, but also helps them get good reputation from the market. Interestingly, 139.me believes that marketing and promotion need to be launched after t their apps sent to apple store. Differently, Gfeng considers that they should start to popularize their product during alpha test. From their opinions, we can understand how fierce the competition is in this market. No marketing, no market share.

Gfeng put some human resource in sales channel innovation but 139.ME insist their App Store direct marketing strategy. The CEO of 139.me said that they would not change this idea in the short term. When customers are surfing on the apps store, at the moment they try to download their apps, they start to show their interest on the apps. That means that their products are attractive and competitive. This business model is still believed by Lianxing Zhu to be the best model in current market.

In order to make apps sold in a speedy and inexpensive way; these two companies are adopting “app store direct sales” strategy. Nevertheless, Gfeng do not give up innovation in the expansion of sales channels, their sales channels are still mainly operated in the app-store, in spite of the embedded advertising is grow rapidly. From 2010, Gfeng acquired three other small companies which focus on offline sales; in 2011, Gfeng cooperated with a media advertising company in Shanghai and started the embedded advertising. Finally they achieved initial success. After striving 4-5 years in this high-tech industry, they know this industry will have a good future.

As users in China are still not willing to pay for apps, many good apps also are free. In-app promotion becomes the most important approach for free apps to make profit. They also concede that the free apps’ value is getting closer to paid apps. Paying money to download the software embedded ads in order to obtain the sales revenue should rely on advertising revenue. If this strategy can be used properly, they can integrate several ads into each product. By their reputation and high-quality products, these in-app ads can have very good market influence and also can have a certain profits.

These two companies are commonly taking low-cost price strategy. Gfeng chooses young people with high income and high education as their target consumers. Their ages are mainly distributed around 25-35 years old. 139.me also treat young people whose age between 15-30 years as their target consumer group. This group owns high sensitivity on the latest technology. At the same time, these people have sufficient consuming power. Both of these two companies are able to create low-priced products which meet the needs of this group of consumers, but there are still significant differences when they have products to be released.

Gfeng always emphasized that their goods should get into the market in a rapid way. In Shanghai, Gfeng has two offices. 50 percent of its products are created by themselves, while 50% of the products are completed by 40 other companies. But these products developed by other companies were still developed following its own design. In order to ensure rapid delivery of goods, Gfeng insist on internet advertising and marketing their goods in different channels, which also improved the development cost.

## **4.4 Marketing strategies used by two companies for their typical apps**

### **4.4.1 Colorful Aquarium created by 139.me**

As the first successful product of 139.me, Colorful Aquarium made this team of developers become famous in this industry.

In 2008, 139.me started to develop apps on iOS when Apple Store was just established. At that time, there were only about 1500 applications in Apple Store and 500 of them were games, but there were already more than 15 million iPhone users all over the world. There were only a minority of developers pay attention to this platform even there were less than 100 people attending the first iPhone training for developers in China.

As the first generation of iOS developers, at the beginning, they earned very little money by developing some outsourcing projects and simple apps, such as an app used to calculate the periods of the female, but they gathered huge experience. Up to 2009, the number of games in Apple Store had increased to more than 50000, but most of these games were with low quality. In this situation, 139.me determined to develop a more complicated and real high-quality game. They thought that each time when people went to restaurants and coffee houses, they would spend much time on appreciating fishes. Consumers' behavior is a factor which determines whether the product can attract consumers' interest.

In May of 2009, Colorful Aquarium entered Apple Store. Different from other games, Colorful Aquarium was the first game utilizing 2.75 dimension visual engine in Apple Store. This technology made the graphic effect become vivid in iPhone's high-quality monitor. To gain more users, 139.me developed free and paid version. This strategy accurately aimed at consumer psychology. Users would like to try the product and test whether it is proper to them first in order to avoid losing money on unsatisfied products. Moreover, the paid version of Colorful Aquarium was set as \$2.99. This low price was easily accepted by consumers.

Although 139.me is a team of developers in China, but at the beginning, their target customers were mainly in North America and Australia. Compared to Chinese market, people in these countries are rich and open-minded. Thus, the software industry in these countries is much more advanced. Their company would be very risky if they put all their wagers on developing apps for Chinese market. Even through in present, the software industry in China is still not good for developers, it was really tough at

that time. Choosing a proper market, for a company's survival, it is of vital importance.

By using these strategies, Colorful Aquarium got 1 million download, the daily income exceeded \$1000 and brought them more than \$150,000 in 4 months. After that fantastic initiation, 139.me did not stop but continued to update this game. As the iPad introduced to the public, the old version of Colorful Aquarium was not so good in larger monitor of iPad anymore, so 139.me developed a HD version for iPad specially. In May of 2010, Colorful Aquarium was rewarded as "staff's favorite app" and was presented at the home page of App Store. Recommended by Apple Store, the fame of Colorful Aquarium grew greatly.

#### **4.4.2 Duzhe created by Gfeng**

Duzhe was sold on app store first time in 2010, this application destined to become the most popular e-magazine on IOS in Chinese market. Because of this application, Gfeng became the pioneer in creating magazine media applications.

At the very beginning, most of Chinese consumers get used to buy traditional magazine before 2010. Because the smart phone was not that wide-ranging used in China and the smartphones users have no good channel apps-download (There were not many apps-makers working for it). However, everything has been changed since the apple devices became more and more popular in smartphone users. Gfeng foreseed that smartphone's future and then they decided to become the leading e-magazine apps-maker. After creating the first multifunctional e-magazine app named Duzhe they received a negative market response. They realized that if you want to sell a wonderful application you should not only have good app but also should carry out some market strategies.

They have utilized two different strategies to market their product. The first one is time limit free strategy. However; this strategy didn't bring any profit to them, because this strategy still need charge some download fee after the limit people get the activate account. People still don't want to pay some money on an unfamiliar app especially when the apps market was not so mature in China. This app only get not more than 1000 download amount and earned only \$1500 after releasing on app store at the early of 2010.

Fortunately, the marketing department found a solution, which was integrated this app with the Sina micro-blog. Sina micro blog is the top social network platform in China which own more than 400 million positive users sharing their interested news and personal store on it. This is the best channel to make their app well-known by users. After two weeks' negotiation with Sina marketing department, they agree that Gfeng

can release their download address and ads on Sina official micro-blog. The final result proved that this marketing strategy was successful. In the first month after this move, the download amount of Duzhe reached 20000. Eventually, Duzhe won 500000 downloads in the end of 2010, which also brought more than \$600000 to Gfeng.

#### **4.5 Issues in social network strategy**

From the era of Web 2.0, social media is always considered as the most potential and effective approach to market products. But actually, social media also will bring many issues for marketing staff.

Frist, it will be very complicated to evaluate that whether this strategy is effective. For example, an app's webpages get 1 million visits. But this number does not mean that there are 1 million people are interested in it. Even though all of them are this app's fans, it is still difficult to know how many practical users are from them.

Second, social media can transfer information rapidly. This characteristic of social network is considered the most easy and effective way to market products because it can get use a great number of free promoters. If those people like your product and prefer to share their information, their fans will probably get the information of your product. But from another angle, if your products have flaws, this news will also be reposted by your fans quickly. Negative news can also be transferred and discussed and result in losing users. So it will be better to release your app when it is close to perfect and keep the app updated in time.

#### **4.6 Apps Marketing Strategy influence the future industry**

The technical part is not difficult thing in app-making industry now. The competition among apps-making companies will be the marketing strategy. We can say that the one owns good ideas and practical marketing strategy will win the market. In today's crowd market, it is very difficult to develop a totally new app, even though you have many innovative concepts to the market. Although keeping your price below that of competitive apps may seem like the obvious move, don't sell yourself short just yet (Dave & Michael, 2011). If you find the app you develop is not so innovative and comparative, so it is better to pricing the app below other similar apps. But if your app has very attractive UI, even though it has only the same features with other similar apps, it can be pricing at not less than average price.

According to Dave and Michael (2011), consumers will lash out with negative ratings in the App Store and the cheaper the app is, the better the reviews are. Thus, even though your app has killer features and cool UI and best functions, it is not recom-

mended to pricing it at very high price because the consumers' psychology should be considered. Apps can be replaced other cheaper apps which also involves similar functions.

Since the iPad were introduced to the world, there are many developers developing apps for both iPhone and iPad. Many apps are designed to be compatible to be installed at both iPhone and iPad. Dave and Michael (2011) stated that unless you have a good reason to price your universal app at 99 cents, it's in your best interest to go with a higher price based on the perceived value, your competitors, and what the market will bear for that category.

Although mobile apps are inexpensive compared to traditional desktop software prices, they are no longer considered impulse buys, as they were in the early days of the App Store. In the past year, users have packed their iPhones, iPads, and iPod touches with so many apps that they've gradually become much more selective about which apps they choose to download (Wooldridge & Schneider, 2011). It is simple to think about current app buyers' psychology. Most of buyers will read the app description and reviews, choose one they think is best for them to download and install.



## 5 Conclusion

What are the marketing strategies used by development company to market their apps?

- a. What are the disadvantages and advantages of these strategies?
- b. How do these companies develop their marketing strategy?

a. Based on our interpretation we can only conclude that different marketing strategies have different disadvantages and advantages, companies should choose analyze the consumer behaviors to utilize the most suitable strategies before they start the project. Some marketing approaches can increase the sales of the apps, but on the other hand these strategies often bring huge budget at the same time. Such as free-limit which can be known as the most economical and practical. We have to admit that some strategies do not need to invest much money, the only thing they need is decision-makers' exploration and proper inspiration. From the perspective of promoting the apps, social network will be an efficient approach to enhance users' understanding about your apps. These promotion activities should be launched before apps sent to apple store for approval. Since their main income is from the paid apps, limited time free apps are most effective way to market their apps. Another popular marketing approach, in-app marketing including in-app paid and in-app ads, actually is not so effective and profitable. On the other hand, outsourcing projects only undertake little marketing pressure, the importance is to find customers and develop an ideal product according to the requirements. In the following table we will list the advantages and disadvantages among different marketing strategies.

Market strategy	Advantage	Disadvantage
Promotion	Low-cost and Rapid market response	the high risk of abandoning by the users
Integrating social network	Facing and locating to a great number of social network users	High-cost
Get paid by users	Profitable	Need super unique and practical application(time-consuming)

b. Companies in China are still adopting the market-oriented approach which we would like to define it as a "secure" strategy. They prefer not to try to utilize any strategy that may make their company face an unstable situation. They own the most efficient way to develop the marketing strategy. When they have different

resources (such as smart developers, good government relationship and collaborators) they will find the best way to develop their own marketing strategy. Based on our research, we want to suggest that companies should involve the customer in the core creative process, utilizing the customer as volunteers to promote time-consuming apps. Based on the feedbacks of public, improve the product in time and adjust the promoting strategies dynamically will be the best strategy.

## **6 Discussion**

### **6.1 Implication for future research**

Today, smart phone and application have changed people's life style since apple creative this win-win business model. In the recent three year the industry has seen many technological and commercial changes.

In large scale companies, research and development model to keep competitive in completion is very popular, but in middle and small scale apps companies, this model seems to be very difficult to be established. How to producing innovative products is a difficulty for the global developers.

During our interview, Gfeng mentioned that they will pay for other companies to market their products. As the apps market becoming more and more crowded, apps marketing companies start to develop. But what measures adopted by these apps marketing companies to market other companies' products and whether these approaches are efficient are interesting. If these companies' approaches are more efficient, what is their differences from the approaches we know?

Another research topic which we think is interesting is that the combination of mobile apps and electronics in the future. Now all over the world is developing this new industry. Especially, all home electronics may be smart and controlled remotely in ten or twenty years. Mobile phones now are almost taken with people for the whole day, so it has much space to be developed as private remoter. Installed in mobile phones, apps will be a key section in these control system, so what kind of opportunities and challenges will present to market?

### **6.2 Contribution and limitations of our study**

We believe that we have discovered a new phenomenon within apps-making companies. When conducting our study, we realized that there is a few research is mainly directed towards the marketing strategies of apps-making companies. Our findings are limited to interviews concerning two different firms of small and medium size. We should admit that the development firms interviewed are currently developing most of the discussed issues. At the same time we think our research cannot cover every different apps-making company so it will hard to give explicit implications on our perceived interpretation.



However, we believe that our research gave us very related and elaborate insight in what improve the apps download amount and what marketing strategies they go by. We need to keep thoroughgoing attitude when trying to explain marketing generalizations regarding the new industry. In addition, there are still fields which we would have wanted to finish in more detail. We premeditate consecutive interviews or other means which combine both quantitative and qualitative data collection. Chinese apps market is a very big market which contains a lot of opportunity. Therefore, we hope our study is perceived to contribute towards future research and people who are determine to make some amusing apps.

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## Appendix 1: Evolution of the App Store (McCann, 2012)

YEAR	MONTH	EVENTS
2008	July	<p>Over just the first three days, the number of available apps shot up more than 40 percent to 800. The number of downloads in this time was 10 million. In an early interview with the <i>NY Times</i> on launch day, Steve Jobs was quoted as stating that 90 percent of apps would cost less than \$9.99 (<a href="http://www.nytimes.com/2008/07/10/technology/personaltech/10apps.html">www.nytimes.com/2008/07/10/technology/personaltech/10apps.html</a>). Little could he guess just how right he would be.</p> <p>Early metrics by Medialets (<a href="http://www.medialets.com">www.medialets.com</a>) indicated that the average price for an app dropped from \$4.65 that initial Friday to \$4.25 by Sunday, nearly 10 percent. Paid apps also saw a similar decrease. So, it wasn't just an influx of free apps that caused the swing, but classic undercutting was taking place in a competitive market. It was a trend that continues to this day.</p> <p>Another interesting finding from the same report showed another developing trend. Free apps were garnering 25 percent more reviews than paid apps. Not only that, reviews tended to be more positive, by a quarter of a star. That's nothing to sneeze at in a 5-star rating system (especially considering that Apple rounds the ratings to the nearest half percent).</p>



YEAR	MONTH	EVENTS
	September	Despite any negative feedback, there was no slowing down. In this month, Apple reached 100,000 downloads with more than 3,000 apps available for download. In addition, Apple maintained Jobs' launch price point of 90 percent of the apps costing less than the \$10 barrier.
	October	During the late part of October, the number of downloads (200,000) and the number of apps available (7,500) nearly doubled from the September totals.
2009	April	In early 2009, the App Store reached the half million download barrier and had more than 15,000 apps. On April 23, 2009, the 1 billionth download took place, while at the time 35,000 apps were available in 19 categories.  According to <a href="http://Fiercedev.com">Fiercedev.com</a> , a researcher broke down early iPhone download use and found that nearly two-thirds of all iPhone users downloaded at least 16 to 20 apps. That's a huge adoption rate.
	July	On the one-year anniversary of the App Store, 1.5 billion downloads had been recorded from both iPhone and iPod Touch (iPad came out in April, 2010), with more than 65,000 apps, and more than 100,000 developers signed up for Apple's developer program.
	September	Apple reaches the 2 billion download mark with more than 85,000 apps available.
	November	Along with more than 100,000 apps now available in the App Store, Pinch Media (who created software for app developers that, at the time, extrapolated from more than 10 percent of all downloads) released some interesting findings. The ratio of paid to free apps was 9,300 to 71,000. Further, it found that the average app in the top 10 percent received roughly 75,000 downloads, while the average app in the next 10 percent only got a little over 9,000, and from there the next 10 percent averaged just below 4,000. Pinch Media stated that more than 50 percent of all paid apps were downloaded less than 1,000 times. This equates to a very top-heavy market with "successful" apps being in the minority.

YEAR	MONTH	EVENTS
	December	By the end of 2009, according to Neilson's "App Playbook," the adoption rate had doubled from April totals, at roughly 37 apps downloaded per user.
2010	January	Available apps reach 120,000, and downloads reach a new milestone at 3 billion.
	March	For the first time, the Books category takes the lead over Games, and there are more than 150,000 apps available in the App Store. (The Games category has since retaken the lead, and currently maintains an only marginally higher percentage of active apps.)
	April	This is a big month for Apple. Not only does the App Store reach 4.5 billion downloads with more than 200,000 apps available, the iPad (Apple's first tablet) launches with more than 5,000 apps available. The iPad goes on to sell more than 1 million units with more than 12 million app downloads in its first month. Further, a similar pattern of top categories for the iPhone ensues, with Games, Entertainment, then Books being the iPad's top three categories.
	September	The total of available apps reaches 250,000, and the total number of downloads hits 6.5 billion. This month, Apple also finally released documentation on some of its submission policies. The "App Store Review Guidelines" for iOS apps was a list of all Apple's conditions for submitting an app, among them the now-infamous "fart" reference: <i>"We have over 250,000 apps in the App Store. We don't need any more Fart apps. If your app doesn't do something useful or provide some form of lasting entertainment, it may not be accepted."</i>
	October	The number of downloaded apps reaches 7 billion, and the number of available apps reaches 300,000.
	November	Apple's Hall of Fame appears, highlighting 50 apps Apple claims are the "best of the best."
	2011	January
June and Onward		In June, Apple claimed there were more than 425,000 apps available for download, with more than 14 billion downloads. By September, the count will be roughly 500,000 apps and counting.

## Appendix 2: 139.me

**Company:** 139.me

**Date:** 2012-07-25&2012-08-02

**Interviewee:** Lianxing Zhu (CEO)

**Interviewer:** Letian Wang

What's the scale of your company and how is the division of labor? What is your position in your company?

*We have 40 full time staffs that are separated into two departments: technical department and marketing department. Additionally, our 3G DreamWorks signed contracts with 150 part-time students.*

How do you evaluate the iOS development platform? What are the advantages and disadvantages of iOS app market?

*Although iOS is the most dominating apps market, there are too many apps in this market. It is extremely saturated.*

Could you give us some introduction about your company's advantages and disadvantages in this industry?

*Our advantages are our techniques and company scale. Our company has 4 years' experience on developing apps. Additionally, our company scale is one of the largest in China.*

What is your company's main Profit channel?

*Our main profit channel is outsourcing business. Now it already occupies 80% of our income.*

What are the market opportunities do you think which is important to your development?

*The combination of tradition industries and mobile Internet is one important direction of our development. We are also observing the OTO market.*

Which category of app do you prefer to develop?

*We developed many games before, now we reduce the development of games. Now we focus on productivity apps.*

Which category of app do you think will get more users? Why?

*Social communication software has very strong stickiness.*

Will you investigate the market before you start to develop an app? If yes, how do you do that?

*We never do market investigation, we depends on our understanding of the market.*

Is there any factors that will influence the schedule of development? What are these factors and which ones should be considered in priority?

*There are many factors that will affect the development, but the principal problem is unclear needs for development and the need changes during the development. Before start the project, development needs must be cleared and detail schedule must be made.*

How much time usually it takes to develop an app? Can you always follow the development timetable?

*Normally, apps development will not take more than 8 weeks, but time extension is also normal phenomenon.*

Is there any situation that the development of app cannot reach the expectation? How do you deal with this condition?

*There are many projects cannot reach the original expectation. Sometimes we have to announce the failure of our projects.*

In which phase of developing an app you will start to market the app?

*Marketing and promotion will start after we send our apps to apple store for approval.*

What are your main measures to market your apps? Which ones are most effective?

*Limited time free app is most effective to promote the product.*

How much capital you will invest to market an app? Or how much capital you spend to market apps each year?

*Actually, we have no special funds for marketing.*

How do you think the intellectual property protection of apps? What is your approach?

*When we find Infringement, first we will contact the App Store, if it cannot be solved, we will engage legal procedures.*

How do you think the free apps and paid apps? How free apps to earn profit?



*Profit mainly comes from paid apps. Free apps and in-app paid approaches brings very little profits.*

Which one has better market performance, free apps or paid apps? What are your opinions to this result?

*The value of free apps is getting close to paid apps.*

## Appendix 3: Gfeng

**Company: Gfeng**

**Date: 2012-05-30 & 2012- 07-23**

**Interviewee: Lanjun Gao (operation manager) Interviewer: Letian Wang**

Can you give us a brief introduction about the scale of your company, the employee's distribution and your position?

*Our group has 50 employees, which include R & D department (25-people), products sector (5-people) and operation department (20-people). My title is the operation manager.*

What is your opinion on IOS platform and what are the advantages and disadvantages of IOS app market.

*Apple's mode is to encapsulate apps, but it supplies very easy and convenient way to develop. It censors apps very strictly, apps in apple store are normative, but the approval time is very long.*

What is your company's core competence and weakness?

*We are the pioneers in this industry so we have good resources; the weakness is that we need innovative way to carry out our next 5-year business.*

Which market opportunities you value?

*We found that Remote-Controlled Household Appliances have huge opportunities.*

What are your main sources of your project?

*We make use of internet and customers' recommendation.*

What kind of application you prefer to develop? Why?

*We choose remote control and E-magazine as our main business because we own rich experience on them.*

Which software do you think there will be more users? Why?

*There are lots of apps needed by consumers, such as information and utility, people need them to bring more convenience.*

Before you decide to produce one application, what kind of market investigation will be needed?

*Currently, we do the internal test questionnaire only.*

What kind of unstable factor will happen during the whole development process?

*The unstable thing will be our own products, sometimes similar applications will online earlier than ours, based on market response, and we will make the decision if we need to give up or not.*

How long is your development cycle? Can you finish whole work on time, if not, what impact will happen to your group?

*We must complete the work in 45-day, if we cannot complete the task we need face default punishment signed in the contract. We will postpone the product when we make one application by ourselves.*

Do you have any apps which not achieve the desired goals?

*Yes, we have a lot.*

Which stage you choose to begin the marketing, what is your main method to popularize the apps and what are the difficulties during this period?

*We start our marketing during the alpha. We take advantage of forum, blog, micro blog to let everyone know that there will be a product online. Later, we collaborate with app companies and pay money to spread. Basically, we have to ingratiate the fastidious taste of users.*

Any marketing strategy will be used during the spreading? Do you have any plan to do the marketing?

*That will depend on the products, currently, our apps mainly through word of mouth.*

Do you learn marketing strategy from other company?

*Yes we need new ideas form others.*

Do you have any policies for patent protection of application?

*Our main products have been patented; most domestic companies do not consider that much.*

What do you think about free and charge apps? Can you tell us if the free-app will bring profit and which are the profit channels from this market?

*Free apps mainly earn by ads.*

What are your company's profit sources?

*Application sales and advertising.*

As you mentioned, why you value the market opportunity in Remote-Controlled Household Appliances?

*Remote-Controlled Household Appliances represent the development of Artificial Intelligence; there will be huge commercial profits in it.*

How do you confirm the price of your apps when this app has been defined as tolling app?

*The prices of products are determined according to the input of development.*

Tolling app market is not as good as the free app? Why?

*People will tend to pay for applications because they need consume more time to find apps which you really want. Free app will bring dysfunction or advertising, people don't like that.*