Coupay

Saving your money and troubles, and embracing a brand-new life.

Rishengchang Team

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CHAPTER 1 INTRODUCTION

1.1 BACKGROUND

With the popularization of smart phones as well as the development of Mobile Internet, smart phones have become closer to people's daily life. According to the data of China Internet Network Information Survey Center, by the end of June of 2013, the number of China's netizens was 591 million, of which about 80 percent surf with their mobile phones. Compared with the end of last year, the utilization of online payment by mobile phones has increased 4 percent, and netizens who pay online by mobile phones have increased 43 percent. In particular since April 2013, the Ministry of Industry and Information Technology has issued the standards for near field mobile payment based on 13.56 Mhz, and also certain relevant polices to stimulate domestic demands have been introduced. Since then, mobile payment has been meant to embrace the next stage of development. By integrating as many traditional payment instruments into a mobile device as possible, mobile payment takes advantage of the convenience of mobile devices so as to improve the paying process. With Cards, coupons and tickets bound together, mobile wallet, as a form of mobile payment, saves users the trouble of carrying different cards and realizes the visualization management of cards, coupons and tickets.

An overall view of mobile wallet service in the market shows the similarities as follows:

1, most released in the past six months. The market of mobile wallet is on the initial stage.

2, The convenience of mobile phones is not fully realized. Few fully use LBS or combine it with payment applications.

4, Not enough relevance to young people, who accounts for the largest proportion of mobile wallet users.

Therefore, developing a mobile wallet with clear features, targeting at young people and making full use of mobilization of cell phones for users are good ways to stand out in the strongly competitive market.)

As young people, we know that inconvenience of payment most likely happens when carrying cash, getting change when sharing the expenses, and owning plenty of membership cards and coupons but little time or energy to manage them. In addition, by data collection we have found that the comparatively mature mobile payment technologies like 2-dimensional bar code and NFC will be the trend of future. Therefore, we locate ourselves as a third-party mobile payment company. On one hand, with the technology of 2-dimensional bar code and NFC, we provide mobile wallet service to solve the inconvenience of carrying cash, getting change when sharing the expenses and managing cards and coupons, so as to provide integrated management of preferential information like membership and coupons and ultimately realize automation. At the same time, we get community involved and break the limit of time and space, in which case, users can share their consuming experiences and get consumption information of nearby area by GPS. With what mentioned above, we can give our users a new experience of "saving your money and troubles, and embracing a brand-new life". On the other hand, we provide a promotion platform for offline business to achieve mutual benefit.

The name of the system is Coupay, combining the words "coupon" and "pay".

1.2 SIGNIFICANCE

1. **For industry:**

- **The promotion of technology and creativity.**

  This system plans to combine the method of handling short-message based on user information, text categorization based on machine learning, recommendation algorithm based on collaborative filtering under social network and forum user interests detection based on community structure of complex networks. With this technology of data mining, we combine the text message, trade record and complex networks to analyze the interests and emotion of user based on business and supply personalization service for user.During the operation of the project, new needs of customers and the appearance of new problem would promote the development of technology and creativity.

- **More expensive reading to mobile payment**

  This system is characterized by more-than-one-person payment, automatic offer and use of coupons and community sharing, with special emphasis on automatic offer and use of coupons. By combining online management, marketing, promotion, publicity and offline payment, as well as consumer feedback, O2O circle is achieved and mobile payment is reformed. Mobile wallet not only free people from their physical wallets to a better lifestyle, but give more expensive reading to mobile payment by forming shopping a new way of social life by connecting payment with community.

2. **For users:**

   - **Solution of payment problems:**

     Closely relating to the reality of young people; solving the common payment problems like getting change and sharing the expenses.

   - **Improvement of life quality:**

     Integrated management and automatic use of preferential information and full use of resources provide high quality living for young people.

   - **Optimization of fund application：**

     The mobile wallet service acts as a steward of the pocket and helps to optimize the fund all the time, in order to keep users away from the life from paycheck to paycheck.

   - **Sharing the fun of shopping:**

     By recommending preferential information from community and publicity from nearby business, we break the limit of time and space to share the fun of shopping, making shopping a new way of social life.

3、 For traders:

- **Optimization of charging service:**

  Simplify the cumbersome charging to EDESO, so that the process would be more effective, customers more satisfied and consumption promoted.

- **Maintaining customer flow:**

  The use of community and management system of coupons and membership card results in precise marketing, values of customers and high quality customers.

- **Getting immediate feedback:**

  With account management system reflecting the sales, traders can get to know to market trend and make adjustments accordingly.

CHAPTER 2   MARKET ANALYSIS

2.1 STATUS AND TREND OF DEVELOPMENT

1, Policy Support, Cooperation and Competition In Many Ways

Firstly, The Twelfth Five-Year Plan states that we need to develop e-commerce actively, complete e-commerce services for medium-sized and small enterprises, propel the construction of support systems like credit service, online payment and logistics distribution of the whole country. Mobile payment, as an important infrastructure of mobile e-commerce, will benefit from the goverment's measures of pushing e-commerce development. What's more, in the subsequent plans issued such as The Twelfth Five-Year Plan of Software and Information Technology Service Industry and The Twelfth Five-Year Plan of Communication Industry, there are statements about pushing the development of mobile payment.

Secondly, Measures For the Management of Payment and Settlement issued by People's Bank of China states that all the e-payment service providers must have

qualified license. This statement standardizes the market, beneficial for the market's long-term steady development.

Thirdly, on April 5th, MIIT issued a NFC mobile phone payment standard based on 13.56Mhz, ending the argument of mobile phone payment standard and making way for mobile payment's further development.

In all, support from many ways such as the issue of standardized policy documents and unified standard builds a healthier environment for mobile payment industry's development. What's more, it creats a healthier, more open and win-win environment for cooperation and competition in the industry chain, helping to stimulate ideas of creative products, expand application scenarios and the market. A brighter future is waiting for China's mobile payment industry.

2, In Rapid Development Period, Have Great Potential

Source: IResearch

2010-1016 Parc of Smartphone in China
(One hundred million units)
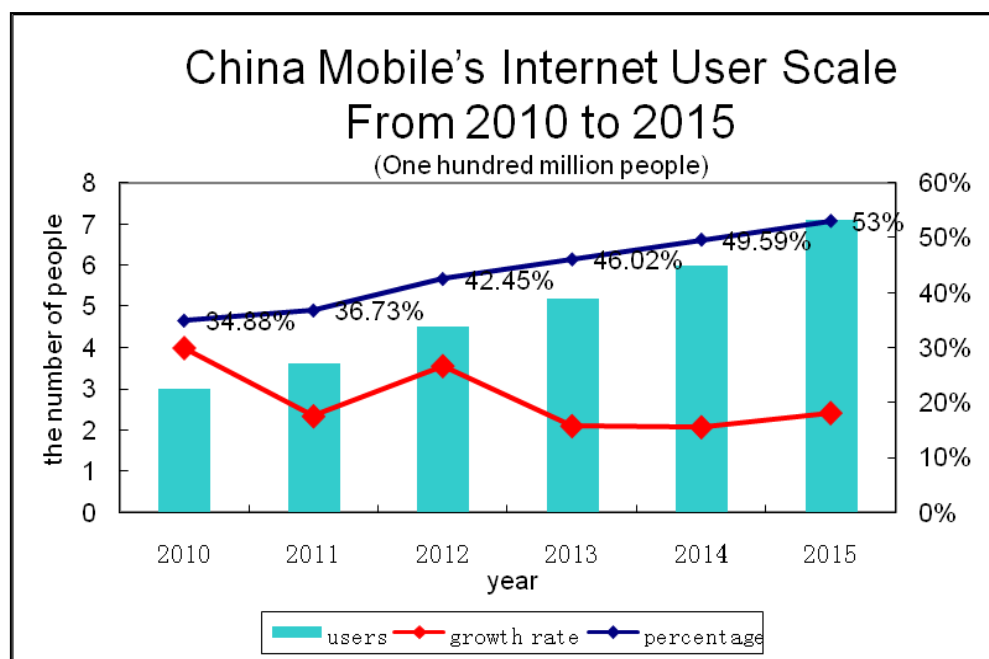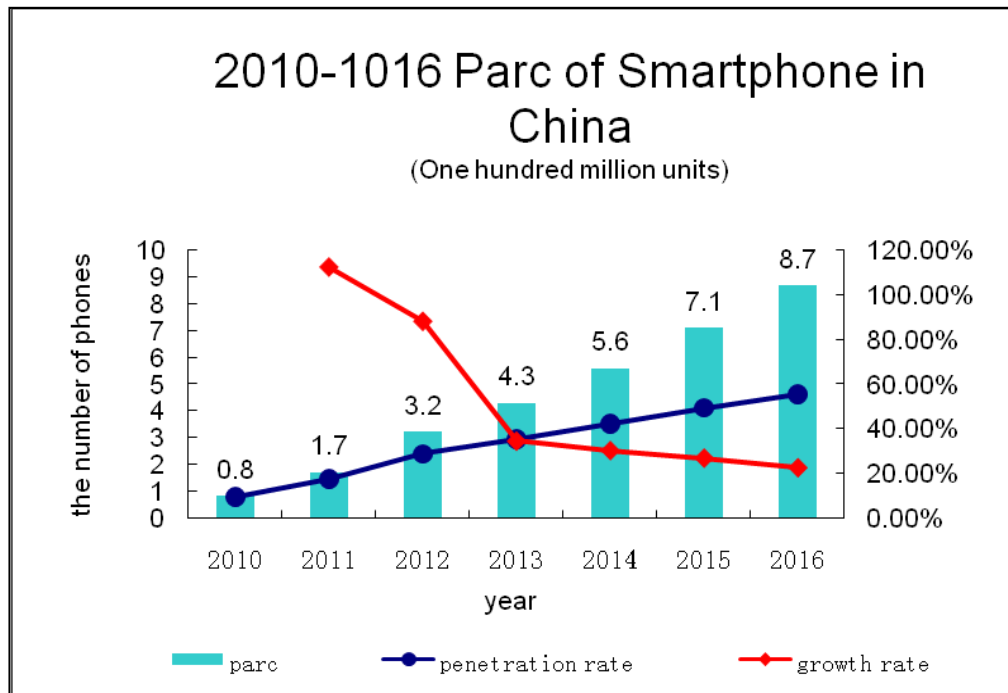
Source: IResearch

The development of Mobile Terminal, in which smartphone takes the main place, can provide visualized and convenient operation interface. Meanwhile, the improvement of infrastructures like mobile network lays a technical foundation for mobile payment. With the rapid development of technology, the wide spread of smartphones and users' pursuit for convenient life, more and more users choose mobile payment, accelerating its popularity.

From the integral development of smartphone and Internet users, we know that their growth rates are both above 20% and their penetration rates are both on the rise.

Comparison of Smartphone Penetration Rate From 2011 to 2015				
	China	America	Korea	Japan
2011	17.40%	39.20%	38.00%	17.00%
2012	28.70%	47.7%	51.00%	33.00%
2013	35.30%	55.50%	60.00%	38.20%
2014	42.10%	62.50%	Not available	50.00%
2015	49.40%	68.80%	Not available	Not available
Penetration rate = China's smartphone parc/ China's phone parc				
Source: IResearch, emarketer				

There are two other ways to know that China's mobile payment industry is in its rapid development period. One way is to compare with America, Japan and Korea. For smartphone penetration rate, America's and Korea's has reached 35% before 2011, while China's reached that percentage two years later. For mobile Internet user penetration rate, when China's reached 46%, Japan's and Korea's has already reached that in 2011. We also know that when America's, Korea's and Japan's smartphone or Internet user penetration rate reached 35% to 46%, these three countries' mobile payment industry were in rapid development. Thus we can infer that in 2013, China's mobile payment industry is in rapid development. The other way is to predict from the existing data. For smartphone penetration rate, it's estimated that in 2015, China's will be about 50%, which America's and Korea's have reached in 2013. For mobile Internet user penetration rate, China's is estimated to reach 50% in 2015, four years later than Japan and Korea. We also know that in 2013,

the other three countries' mobile payment industry are in their mature period. Thus, we can infer that besides rapid development, China's mobile payment industry is stepping toward its mature period, still having a large number of potential users and big development space.

Comparison of Mobile Internet Users' Percentage in Mobile Phone Users From 2011 to 2015

	America	Japan	Korea	China
2011	40.30%	57%	49%	36.73%
2012	45.20%	62%	63%	42.45%
2013	50.10%	68%	75%	46.02%
2014	53.90%	73.50%	82%	49.59%
2015	Not available	84%	85%	53%

Source: IResearch, emarketer

3,Mode of Payment: Combination of Means of Payment, High Potential for Proximity Payment

Source: IResearch
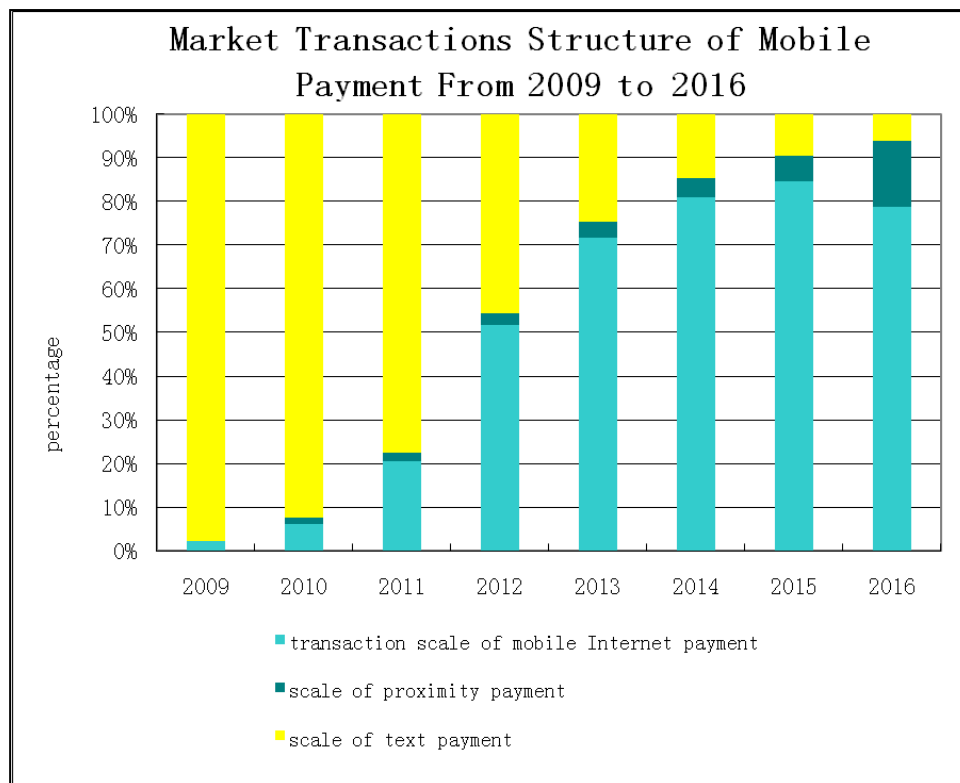
The convenience of mobile payment will combine online payment with offline payment, that is the combination of remote payment and proximity payment. From the Market Transactions Structure of Mobile Payment table, we can know that mobile Internet-based remote payment is still the mainstream and proximity payment is in its rapid development.

4.Payment Appllication: More Focus on Micropayment and E-coupon

According to Deloitte Research in 2012, 88.28% of respondents thought that micropayment and e-coupon would be paid high attention to in the next 3 years and 81.08% thought they would be paid moderate attention. That means in the next 3 years, mobile payment is still micropayment-centered and functions like e-coupon will be put into practice.

5.Payment Management: Combination of Account and Information Channel

Mobile payment exploits smartphone and mobile Internet's advantages to the full. It can not only take intelligent terminal as an access for means of payment, attracting people to use different paying accounts, but also break the geographical

limitations and change the situation of industrial chain division, making the combination of information processing channels come true while providing more convenient experience for users at the same time.

6.Business Model: Vital Model Will Be Born From Proximity Ecosystem and O2O Ecosystem

O2O Ecosystem formed by the cooperation of O2O e-commerce enterprises, mobile payment enterprises and social platforms is helpful to stimulate the enterprises' creativity in the ecosystem. What's more, it will be easier for enterprises that have complementary advantages to cooperate. The great flexibility of cooperation will help release the market potential and create a win-win situation.

In the ecosystem, the payment enterprises will not only take charge of gross settlement service, but also combine payment with marketing and develop its point consumption service, card and coupon consumption service, data service and CRM management, creating more value for users and merchants.

The offline market corresponds to the proximity payment. In this way, business model based on Proximity Ecosystem and O2O Ecosystem has strong vitality because it breaks the original way of revenue centered on payment rate and try to charge based on platform data.

7.Users: Young-centered

With the development of e-commerce, Internet payment organizations and mobile payment organizations, many users are accustomed to using e-payment, especially the young-centered. So it's estimated that with the widespread of mobile terminals like smartphones and tablet personal computers, people will get used to mobile payment. According to statistics, in 2012, users aging from 18 to 35 accounted for 80% of mobile payment users.

References:

IResearch: Investigation Report of China Mobile Payment Users From 2012 to 2013

IResearch: Explanation of China Mobile Payment Industry's Development and Trend

2.2 MARKET ORIENTATION

Based on the market trend analysis, this program's mobile wallet is oriented to people aging from 18 to 35 at the very beginning, aiming to provide various means of payment, management of optimized preferencial information and accounts and a community for sharing and recommendation to help them release from the fast-paced life and high economical pressure, meeting their demand of high-quality life as well. Given our unfamiliarity with the market, at the moment, we start the program just in Guangdong. We'll expand to market to other places in the country gradually.

2.3 ESTIMATION OF MARKET POTENTIAL:

2.3.1 ANALYSIS

◆ **Estimation of Potential Users：**

Number of potential users in a certain year= number of mobile payment users in a certain year× percentage of mobile Internet and proximity payment users in a certain year× percentage of Guangdong's mobile payment users in the country in a certain year× percentage of mobile payment young users

◆ **Data Specification:**

1, Mobile payment users are users who use mobile terminals for fund transfer for at least a time in the given year, including users who use proximity payment, mobile Internet payment and text payment.

2, Replace the percentage of mobile Internet and proximity payment users in the country with the percentage of mibile Internet and proximity payment users in the third party payment market.

Percentage of mobile Internet and proximity payment users in the thrid party payment market= (turnover of using mobile Internet and proximity payment/ person× number of mobile Internet and proximity payment users)/ (sum of turnover of using mobile Internet, proximity payment and text payment per person× number of mobile payment users)

Because of the way of getting the percentage of mobile Internet and proximity payment users in the third party payment market mentioned above, and the small payment of text payment, the turnover of using mobile Internet and proximity payment per person is close to the turnover of using mobile Internet, proximity payment and text payment per person. After the replacement, the percentage is lower and it's a conservative estimate.

3, According to IResearch, the percentage of mobile payment users in the country aged from 18 to 35 is about 80%. It is used to replace the percentage of the young mobile payment users in Guangdong.

4, According to IResearch, in 2012, Guangdong's mobile payment accounted for about 13.1%. Given that Guangdong's growth speed is a bit faster than that of the country, thus Guangdong's percentage will grow 1 to 2 percent each year.

5, Original Data

Estimation of China's Mobile Payment User Scale From 2010 to 2015		
	User scale(10 million people)	Growth per year
2010	1.48	
2011	1.87	26.40%

2012	2.37	26.70%
2013	3.08	30.00%
2014	3.87	25.60%
2015	4.92	27%
	Resource from: Analysys, Ｅyrie, China Securities	

Percentage of Mobile Internet and Proximity Payment in China's Mobile Payment Market **From 2009 to 2016**	
	Sum of percentages of two means of payment
2009	2.30%
2010	7.50%
2011	22.40%
2012	54.30%
2013	75.30%
2014	85.40%
2015	90.60%

2016	93.80%

2.3.2 PREDICTED RESULT:

Estimated Number of Potential Users From 2013 to 2018 (10 million people)					
	Users of mobile payment	Percentage of two means of payment	Percentage of Guangdong's mobile payment users	Percentage of young and middle-aged users	Potential users
2013	3.08	0.753	0.8	0.131	0.243
2014	3.87	0.854	0.8	0.151	0.399
2015	4.92	0.906	0.8	0.171	0.610
2016	6.25	0.938	0.8	0.191	0.896
2017	7.94	0.968	0.8	0.201	1.235
2018	10.08	0.972	0.8	0.211	1.654

2.4 ESTIMATION OF CAPACITY OF MARKET

Market Share of China's Core Enterprises in Third Party Mobile Payment in 2013

- Smartpay 4%
- Qiandaibao 2%
- Unionpay 5%
- Tenpay 5%
- China Mobile 5%
- Else 8%
- Alipay 61%
- UMPay 11%
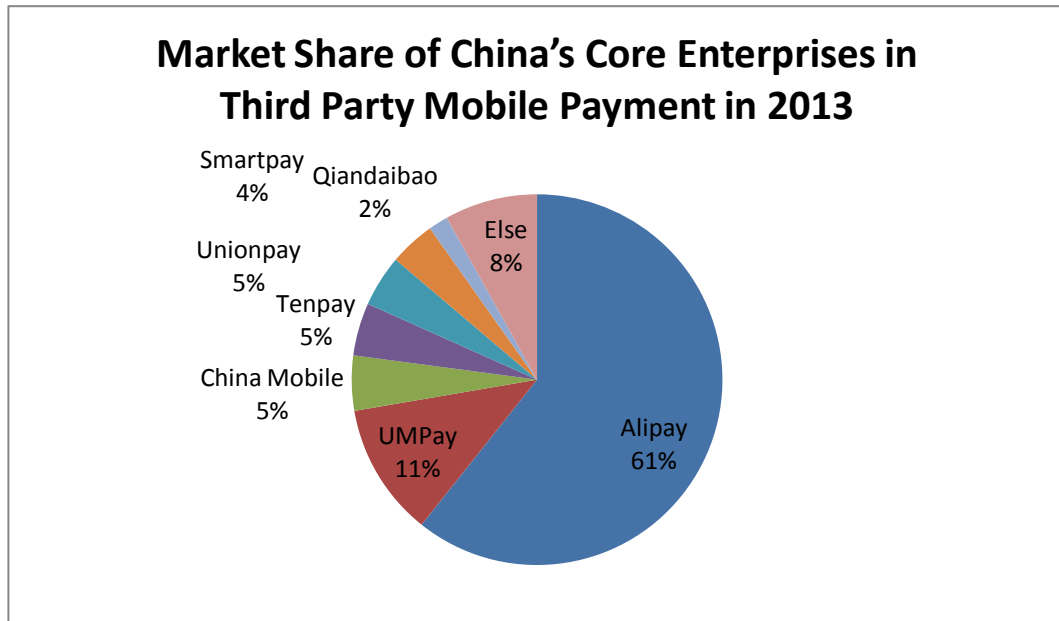
Source:Irsearch

From the market share pie chart above, we can see that Alipay claimed most of the market share. So, considering our competitive advantages, we expect our market share to reach 1%, that is to claim 1% of potential users in the growth period. We set our user's growth rate to 30% according to the user's growth rate in the mobile payment market. Our data of the estimated market share of each year are as follows:

Estimation of Capacity of Market From 2013 to 2018					
	Potential users（10 million people）	Growth rate	Market share	Capacity of market （person）	Increment of market （person）
2013	0.243	30%	0.0035	85069.72	
2014	0.399	30%	0.00455	181654.9	96585.2
2015	0.610	30%	0.00592	360994.9	179340
2016	0.896	30%	0.01	895560.7	534565.7
2017	1.235	30%	0.01	1235191	339629.8
2018	1.654	30%	0.01	1653541	418350.5

CHAPTER 3 INTRODUCTION OF THE SERVICE OF PRODUCT

This system is characterized by more-than-one-person payment, automatic offer and use of coupons and community sharing, with special emphasis on automatic offer and use of coupons. Thereby, according to the similar meaning and pronunciation of "coupon", Coupay is decided to be the name of the system.

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                              ┌─────────────────┐
                              │ Customer Version │
                              └─────────────────┘
            ┌─────────────────────────┴─────────────────────────┐
   ┌─────────────────┐                          ┌───────────────────────┐
   │ Syterm of paymen │                          │ System account        │
   └─────────────────┘                          │ management            │
                                                 └───────────────────────┘
```

| Pay via credit cards/debit cards/balance of system account | One person payment/ More-than-one-person payment | Bind the bank card | Balance management | Use and management of cupons | Bill management&Spending plan | Accumulate points management | Community:sharing&interaction |
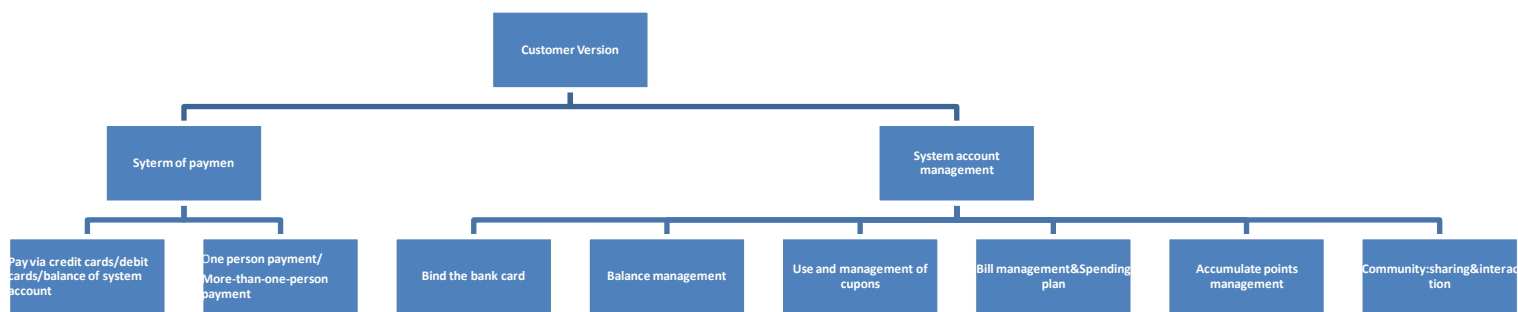
BASIC FUNCTIONS

3.1.1 CUSTOMER VERSION

1.Register

Customers need to register for an account of the system in order to store all kinds of information, such as personal information, coupons, bills, as well as the balance of the account.

Step1: Register

Step2: Login

2. Paying with electronic money

Customers can choose one of payments: 2-dimensional bar code and NFC. They are convenient and can be applied to different situations.

When customers choose to pay with 2-dimensional bar code, they can use the balance of their accounts of the system (customers can transfer their money to the system account by bank), or they can choose their credit card to pay by the system.

When customers choose to pay with NFC, they can use the balance of their accounts only.

◆ **Classified by business**

- **Common bricks-and-mortar stores:**

  When customers pay, if their system accounts have stored coupons or membership of the stores, all the preferential information would appear in the system automatically to reduce the price or collect shopping points. Once customers confirm the deal, they would get message of transferring from the bank and completely all the paying procedure.

- **Catering bricks-and-mortar restaurants:**

By scanning the unique 2-dimensional bar code on the table, customers would enter the menu system labeled with the name of the restaurants and the number of the table. After customers choose the dishes and confirm to pay, the money would go to the system first and be transferred to the account of the restaurant.

◆ **Classified by the number of people**

- **One-person payment:**

  The same as the procedure of common brick-and-mortar stores.

- **More-than-one-person payment:**

  When more than one person split the expenses, one of them can select his or her friends in the community or scan present friends. The system will reduce the price by coupons automatically and then split the expenses and send the bill to the related mobile phones. Each person can confirm payment accordingly.

Step1: Choose your way of payment↵

Step2: Receive your bill↵

Step3: If choosing more-than-one-person payment, add friends to complete payment↵

Step4:Reduce the price by coupons automatically

Step5: Pay via bank cards or balance of system account

Step6: Finishing payment and sharing experiment

3. Account management.

◆ **Balance management**

- **Recharging:**

  Customers can transfer the money of bank accounts or credit card to the system accounts. After transferring, customers can use the balance of system account to finish payment.

- **Withdrawing:**

  Withdraw money from the system to the bank account.

◆ **The use and management of coupons.**

- **Automatic use:**

  When customers travel by a certain area, the system would automatically push some preferential information nearby with geo-fencing technology. Customers can choose to accept if they like. When customers pay and there are some coupons or vouchers stored in the system, they can be used to reduce the price.

- **Integrated management:**

  Customers can store or manage the electric coupons by categories in the system. They can also add or delete coupons in the system.

◆ **The use and the management or membership card**

- **Automatic use:**

  Customers can store electronic membership card in the system which would appear when customers pay. After the payment, the system of business version would automatically collect points for the membership.

- **Systematic management:**

  Customers can check the accumulated points of all their membership cards, and get awards if the points are up to a certain standard. When customers get their awards, the system of business version would reduce the points accordingly.

◆ **Bills management and Spending plan.**

- **Bill management:**

  A bill with total consumption and details would be stored and classified in the system after every expense. Customers can search their bills according to the date or the store.

Step1:enter account management	Step2:Check your bill

- **Spending plan:**

With the goal of monthly expense set by customers, the system would provide financial plan according to the actual monthly expense by the end of a month.

◆ **Accumulated point management of system accounts**

Accumulated point of the system and that of a membership card of a store are independent. The system account would be rewarded points according to monthly expense. The more the expense by the system is, the more the points are.

Customers can exchange points to coupons (the system would cooperate with stores and provide coupons). Customers can also exchange the unused coupons for points in the system.

◆ **Community**

- **Sharing:**

Customers can add their friends using the same system to the community. Every time customers have experienced a consumption, a product or and a service, they can share their personal experience by photos or words. (There is a fixed pattern, in which case, the store as well as some information of the product must be included.)

Step1:Finishing payment you can evulate shops and share experences
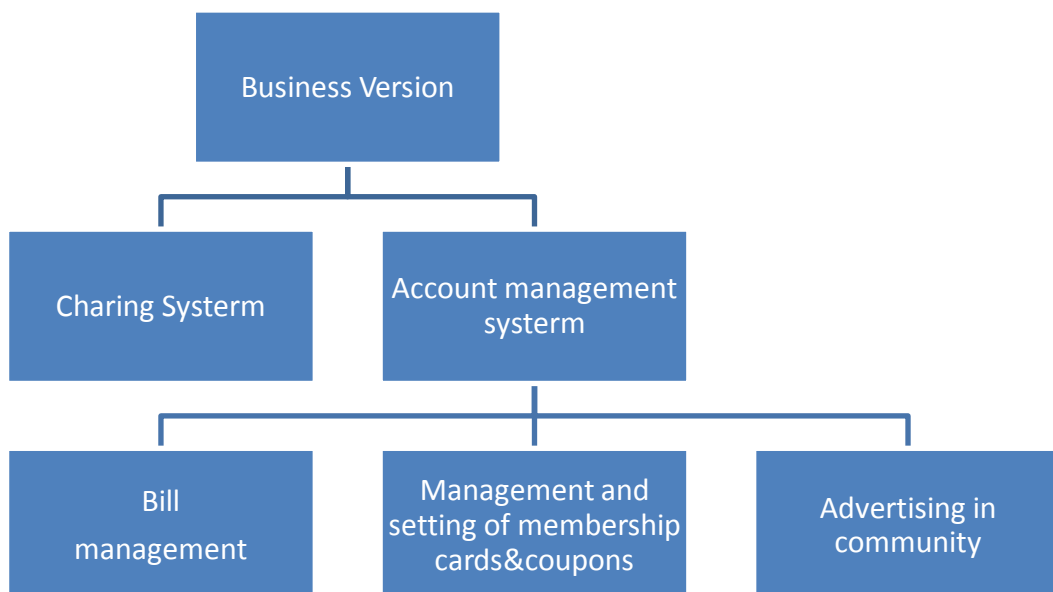
Step2:See sharings of your friends

- **Favorite stores:**

Customers can follow their favorite stores and the store would present preferential information and new products.

- **Friends' interaction:**

Besides, customers can send coupons, gift card and realize transferring between friends.

3.1.2 BUSINESS VERSION

```
                    ┌─────────────────┐
                    │ Business Version │
                    └─────────────────┘
              ┌──────────────┴──────────────┐
      ┌───────────────┐          ┌─────────────────────┐
      │ Charing Systerm │        │ Account management  │
      │                 │        │ systerm             │
      └───────────────┘          └─────────────────────┘
                    ┌──────────────────┼──────────────────┐
          ┌──────────────┐  ┌──────────────────────┐  ┌──────────────┐
          │ Bill         │  │ Management and       │  │ Advertising in │
          │ management   │  │ setting of membership│  │ community    │
          │              │  │ cards&coupons        │  │              │
          └──────────────┘  └──────────────────────┘  └──────────────┘
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- ◆ **Charging with electronic money**

- **Charging with 2-dimensional bar code:**

Business owners would the get 2-dimensional bar code, after scanning the Universal Product Code (UPC) of the products shopped by customers. Customers need to scan the 2-dimensional bar code, confirm and finish the payment. When

business owners receive the payment message, they should send preferential information such as coupons if the customer's consumption has reached a certain amount.

- **Charging with NFC:**

If business owners have related device for NFC, customers can also pay with NFC. Business owners would receive payment information after the deal and send preferential information such as coupons to customers' system.

◆ **Management and settings of membership cards and coupons**

- **Management and settings of preferential information:**

Business owners can set the due date and rules (for example, 20 Yuan off for every 200 Yuan) of preferential information such as coupons. When customers pay and reach a certain amount set by the business owners, the system of business version would send coupons to that of customer version.

- **Management and settings of membership point accumulation:**

Business owners can check members' information or add new members in the system. After the payment of customers, the business system would receive information of the deal, including name of the products, number, price and the amounts. Customers would get points according to rules set by business (for example, customers would get certain points when reaching certain total purchases). When a customer needs to exchange points, business owners type in the system the number of the product which the customer wants. The system of point accumulation would deduce the point accordingly.

◆ **Management of bills**

- **Bills query**:

Business owners can check the monthly income and the sales of every product for the convenience of verification of account.

- **Sales record:**

The system would keep a record of sales and best seller of every day, month, season and year. It would also analyze the sales peak for better resource allocation.

◆ **Information push and advertising**

• **Information push:**

Business would send new product promotion and preferential information to specific customers who have followed the business.

• **Advertising:**

Business owners can advertise in the community of customer version system (not for free).

3.1.3 SCENES

1. The use of more-than-one-person payment and coupon

Place: a KTV where customers can use a 10% off coupon with a full price of 200 Yuan.

People: Amy and her friends Sally, Mike and Peter.

Scene: The total expense of the KTV party is 200 Yuan. Amy scans the 2-dimensional bar code on the bill of the KTV, chooses more-than-one-person payment and selects Sally, Mike and Peter on her community friend list. The system would split the expense in 4 shares automatically and send the bills of 50 (200/4=50) Yuan to each of them. After the four friends confirm the payment, the consumption is finished.

According to the rules, a coupon of Amy or Sally would be used. The final expense should be 270 Yuan (300*0.9) and the system would split the expense and send a bill of 47.5 Yuan to four people. After the four friends confirm the payment, they finish the deal.
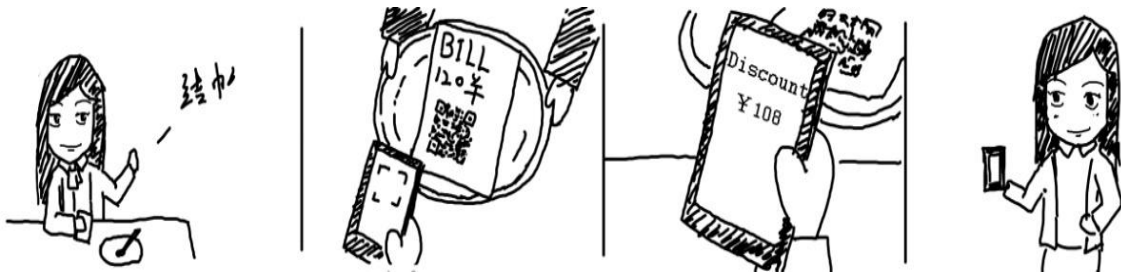
2.Automatic use and offer of coupons

◆ **Automatic use of coupons**

Place: A restaurant

Person: Amy (with a coupon of the restaurant).

Scene: Amy has dinner in the restaurant and the total cost is 120 Yuan. She scans the 2-dimension bar code on the bill. The system automatically reminds Amy that she has a electronic coupon in her account, and with the discount a new bill of 108 (102*0.9=102) Yuan is presented. Amy just needs to confirm the payment and finish the consumption.
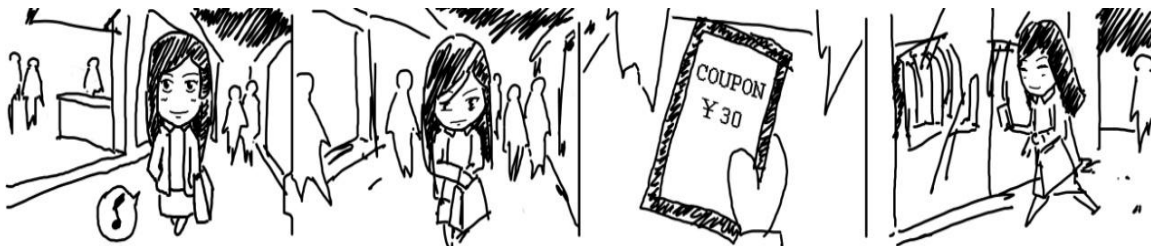

◆ **Automatic offer of coupons**

Place: A clothes store

Person: Amy

Scene 1: Amy gets near a cloth store within a range of 100 meters and receives a message from the store which includes the latest fashion and a voucher of 30 Yuan. As a result, Amy walks into the clothes store and chooses the clothes she likes joyfully.

Scene 2: In the business version, the clothes store has set the rules of coupon offer that any customer reaching a 200 Yuan payment would get a 10% off coupon. Amy shops clothes of 240 Yuan in the store. When she finishes payment, the system of the clothes store sends a 10% off discount to Amy's account in the system.

3. Community sharing and gifts from friends

◆ **Sharing**

Place: A restaurant

People: Mike and Sally

Scene: Mike orders a steak and finds it delicious in a restaurant on the Broadway Street. After the payment, Mike gives praise to the restaurant and shares his consumption experience in the community with words like "I just taste a delicious steak in a restaurant on Broadway Street with a reasonable price. I strongly recommend it!" One week later, Sally and her friend walk on the Broadway Street but have no idea which restaurant to go to. She taps the "nearby" in the community and sees the information of the restaurant. In addition, her good friend Mike also gave praise to the restaurant a week ago. Finally, Sally and her friend choose to enjoy their meal in the very restaurant.

◆ **Gifts from friends**

People: Amy and Sally

Scene: On the weekend, Amy is at home. Suddenly, she gets a gift card of a shop from her friend Sally. Amy is very happy and then goes shopping, getting rid of the boring day.
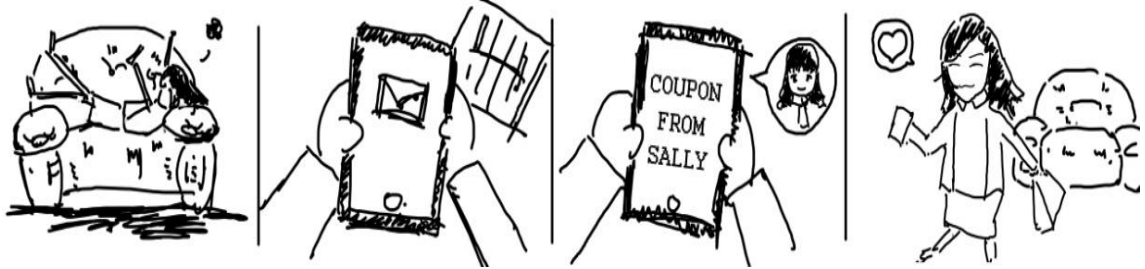
3.2 Other functions

1,Transport payment:

With NFC technology, the system just needs to get close to specific devices on the bus or subway to finish payment.

2,Ticket management:

In the system, customers can manage electronic tickets like airplane tickets, usual tickets and film tickets. The information of electronic tickets would renew according to the agent and can be withdrawn from the account in the system.

3,Catering reservation:

By scanning the 2-dimensional bar code of a restaurant, customers can enter the interface of ordering, choose the dishes, confirm the reservation and pay bill to the system. After the consumption, the system would transfer the money to the system account or bank account of the restaurant. When customers walk within a certain range, with geo-fencing technology the restaurant would get the message and start preparing the dishes, which would improve the efficiency and save the time of customers.

4,Group charging:

The function is based on the community function, ensuring that group activities are carried out smoothly. Group leader, who issues the activity, can start a group by choosing the types (such as party, KTV, travelling and so on), adding members of the

activity and deciding the payment. When members see the message of payment from the group leader, they need to check information of the activity, payee and the amount of the payment, and they pay the group leader if everything is correct.

5,Advancement:

As the business goes along, the number of customers as well as their consumption information increases. They system would make use of these data and the customers information to evaluate members' credit. Customers with credit would have access to a small amount of load provided by bank dynamically and monthly.

3.3RELATED TECHNOLOGY

1. The technology of payment

(1)NFC

NFC, near field communication, is a short-distance, high-frequency contactless identification and transfer of technology. Compared with Bluetooth technology, the NFC is simple to match quickly, and compared with RFID technology, it has a wide range of usage, is writable and readable and can be integrated directly in your mobile phone. Compared with infrared, its data transfer is fast, has high security, low energy consumption.

(2)Two-dimensional bar code

Two-dimensional bar code is a kind of readable bar code expanded on the basis of the one-dimensional bar code, use black and white rectangle pattern for binary data. We can get the information it contains with the help of the scanning equipment. One-dimensional bar code just has data saved in one dimension of the graph. Two-dimensional bar code has the record of the data in both dimensions. Two-dimensional bar code has "anchor" and "fault-tolerant mechanism" which one-dimensional bar code doesn't have. Fault-tolerant mechanisms means that even without identification to all bar codes, or when the barcode defaced, the information can also be correctly restored on the bar code.

2.Technology of data mining

(1) Forum user interests detection based on community structure of complex networks
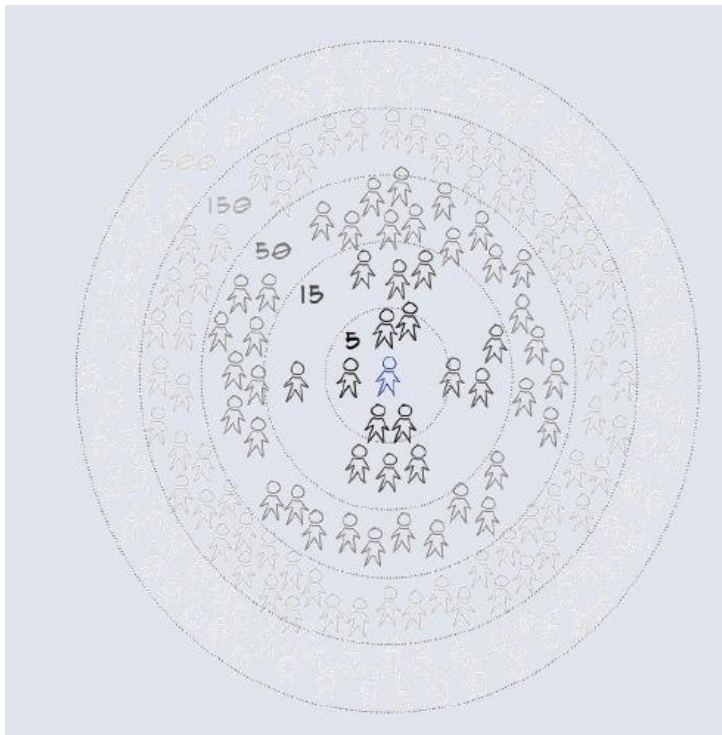

User interest community discovery algorithm technique is used to divide a large network into several subnets. Nodes inside subnet have more edges interconnected. Nodes between two subnets have relatively less interconnected edges. To apply user interest discovery technology to the SNS community, you can put users into different user communities. In the same communities of interest, there are more links between the users. And the linkages of two users who are in different communities is much loose.

Picture1： Forum user interests detection based on community structure of complex networks

(2)Natural language processing technology based on short-text

Natural language processing technology's central task is to get both as a result of analysis of the origin and as a machine to generate an intermediate representation. Now for the Chinese language segmentation technique on three major categories, namely, dictionary-based approach, based on statistical methods and rules-based approach. Three methods have their own characteristics, and has been successfully used in various application areas. However, SNS community information published on the platform is unique, most of the information that exists in the form of short texts, vocabulary is high novelty and grammatical structure is not complete. So that the original technology comes across big problems. Such as words on network make dictionary matching vocabulary success rate is no longer guaranteed, the lack of statistics greatly reduces the accuracy of segmentation and incomplete syntax affecting the effects of the simulation study.
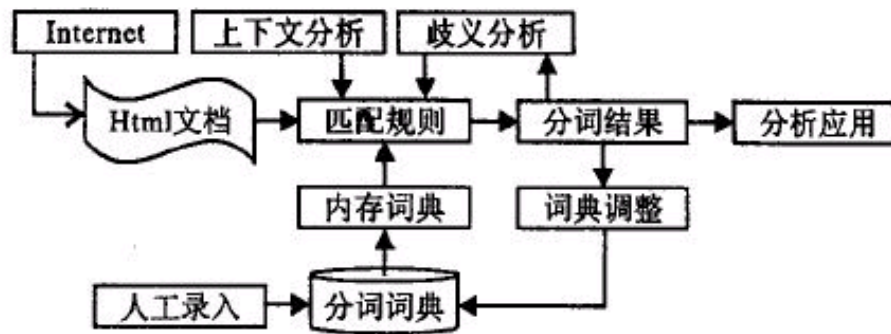
Picture 2：Natural language processing technology based on short-text

(3)Text categorization based on machine learning

Machine learning based short text classification technology projects will, informative for the SNS community involving extensive information, short-text, casual expressions, research an algorithm based on genetic and neural network for short text classification. As an important methodology of data mining, the traditional text categorization technology is relatively mature. The classical algorithm are KNN, SVM, neural networks, Bayesian method, statistical method. In this project, while analyzing a user's interest, we use KNN algorithm to identify the nearest highest similarity with several samples. Eventually we produce user interest categories. And this information will be the basic work for the next recommended.

Picture3：Text categorization based on machine learning

4、 Recommendation algorithm based on collaborative filtering under social network

In the field of data mining, there are variety of algorithm designed for recommendations. It mainly divided into content-based recommendations and collaborative filtering based recommendation. The former were based on the user's attention and interest in direct search results recommended, but not all users can be extracted interest, such as new user or multi-image messages, text messages fewer users. Combination of collaborative filtering, the use of clustering technology can compensate this weakness. Collaborative filtering requires evaluation from users. In the current context of SNS community platform, the evaluation scale is faultiness. This system will use the message-handling behavior and frequency weighted to score.
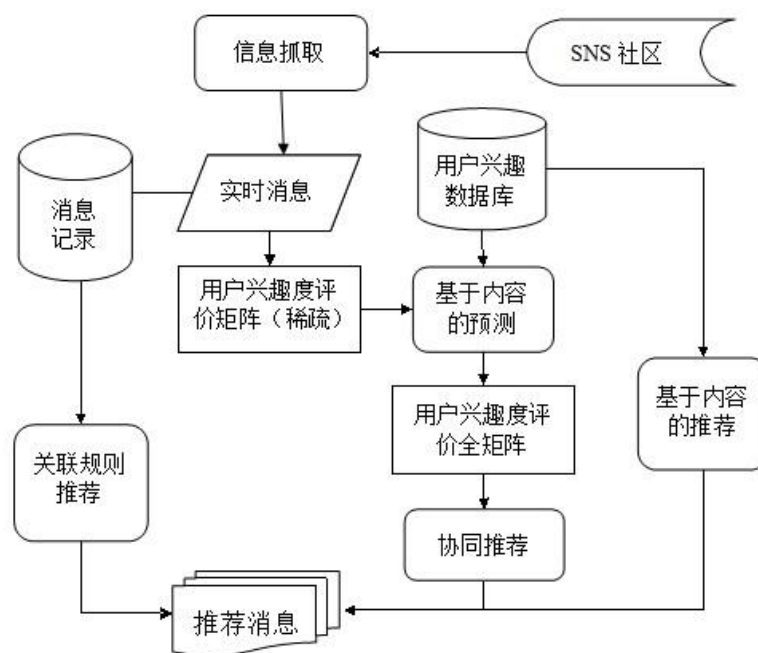
Picture4：Recommendation algorithm based on collaborative filtering under social network

3、 The technology of servicer side

(1)ssh framework

ssh framework is short for strusts-spring-hibernate framework, which is a popular framework　used to develope web application. Integrated ssh framework devides system responsibility into 4 parts: representation layer, business logic layer, persistence layer and　domain module layer so as to help developers develope web applications that have clear structure and are easy to reuse and maintain.Struts are used as the basic structure of the whole system to separate mvc(model,view and controller).It controls the dispatch of the requests and connects each business logic module.Hibernate is an orm(object-relation-mapping)framework,which is used to support persistence requirements.Spring is used as a container,managing struts and hibernate.Concrete steps to use ssh framework:Implement model objects as POJO(Plain Ordinary Java Objects);design dao（Data access objects） interfaces and implement these interfaces using hibernate technology so that data stored in the database is easy to be converted to java objects;finally,spring are used to manage struts and hibernate.

(2)server push

based on http protocal,the server can't push message to the client forwardly.To make up this disavantage,we use socket technology to implement a server-push mechanism.The principle of socket are as following:

server-end:An object of ServerSocket is used to monitor an appoint port,waiting for clients to connect to.When clients connected,a session begin and then the connection would be closed when the session ends.

client-end:A request is sent to connnect an appointed or distributed port,a session would begin after connecting.The connection lasts until the session ends.

A polling mechanizm is used:the server maintains the messages to be sent.The clients

connect to the server at regular intervals to get the messages.

CHAPTER4 COMPETITION ANALYSIS

4.1 MAIN COMPETITORS

◆ **Alipay**

- Alipay.com Co, Ltd (China) is an affiliated company of Alibaba Group, founded in 2004.

   In May,2011, it got the Third Party Payment License from People's Bank of China. Its services include onliine payment, mobile phone payment, issuing and acceptance of prepaid cards (for   recharging of online real name payment accounts only) and bank card acquiring service. In 2011, its amount of mobile payment transaction reached 10 billion yuan. At present, Taobao's mobile payment service has the biggest market share in China's mobile payment service because Alipay's mode of payment makes it easier to get into the mobile payment market. The core competiveness of Alipay is its over 60 million registered users.

- Advantages: large scale of user, high user engagement, high popularity, strong ability in market development, resource support from Alibaba Group, innovative product ideas and connective effects of group services.

- Disadvantages: safety problems of payment mode

◆ **UnionPay**

- China UnionPay Co, Ltd is the only domestic bank card organization in China. Founded in June,2002, it launched a payment platform around the country. In May,2011, it got the license of mobile payment and set up its own Mobile Payment Department. Its services cover bank card acquiring service, online payment and acceptance of prepaid cards. The types of customers include facilitation services like water and electricity, financial services like insurance, entertainment like game cards, business trip service like plane ticket and train ticket, and e-commerce of Jingdong Mall.

- Advantages: share holder of famous brand companies, multiple resources from banks, complete products and applications, high safety

- Disadvantages: low innovative ability and market developing ability as a state-owned company, moderate customer service, monotonous product types for online payment, small number of online paying customers, long settlement interval

◆ **China Mobile**

- China Mobile Limited is a mobile communication operator based on GSM and TD-SCDMA. It was founded on April 20th,2000. In December,2011, its subsidiary China Mobile Electronic Commerce Co, Ltd got the third party payment license. Its services include payment for mobile phones and bank card acquiring service.

  China Mobile was almost the earliest telecom operator to launch mobile payment service in China, including mobile payment and mobile wallet. It built its popularity gradually depending on the mobile payment service. The mobile wallet service was promoted mainly by operators in different provinces relatively, covering bus, chain stores, retailers, schools and so on.

- Advantages: strong capital support, strong technology research and development ability, large number of potential users and high user engagement

- Disadvanteges: slow reaction to the market, low innovation ability and moderate customer service

◆ **TenPay**

- Launched in October,2005, TenPay was Tencent's third party payment platform. It launched its mobile payment products at the end of 2008 and put it into application on a small scale after that. At the end of 2009, it issued its mobile payment strategy. It shared the same stragety of introducing itself into the mobile payment market as Alipay.

  In May,2011, TenPay got the thrid party payment license. Its services include online payment, mobile payment and fixed-line telephone payment

- Advantages: large number of potential users, high user engagement, multiple services' support from Tencent, strong technology research and development ability, innovative product ideas and connective effects of group services.

- Disadvantage: safety problems of payment mode

◆ **Sina Microblog**

- Sina Microblog is a platform for information sharing and communication covering all aspects of life. On July, 6th, 2013, it got the third party license. It is devoted to innovative paying experience in the social environment. Its services include online payment and mobile phone payment.

- Advantages: large number of potential users, high user engagement, strong brand name

- Disadvantages: new comer in mobile payment industry, lack of experience

4.2 COMPARISONS OF MAIN COMPETITORS

	Alipay	China Mobile	UnionPay	Microblog	Coupay
Release time	2013．1.6	2013.6.19	2013.7.12	2013.3.5	2013.10
Chances: at the initial stage of development, still having chances of gaining great market share					
Condition of payment	Offline payment, remittance, personal application	Offline payment	Offline payment	Online shopping, transfer of account on Microblog, offline payment, Personal	Offline payment (main), remittance, personal application, long-distance payment

				application	
Advantages: clear orientation: oriented on offline payment market					
Mode of payment	One-person payment or more-than-one-person payment, sound wave, Internet, two-dimension code, card reader	Mobile phone with NFC-SIM card	POS reader specially for UnionPay card	Internet NFC(not yet in service)	One-person payment or more-than-one-person payment, sound wave, Internet, two-dimension code, Mobile phone with NFC-SIM card
Advantages: close combinition with the young's living habit, flexible and quick					
Management of payment	Support binding with various bank cards; provide custom actions management for consumption record of e-coupons, electricity and so on	Support binding with various bank cards; provide custom actions management for applications like SPDB co-branded card, bus card.	Support binding with various bank cards; e-ticket management; centralized management of coupons; Management of consumption record	Support binding with various bank cards; Management of consumption record; Coupon management	Support binding with various bank cards; Systematic point collection management; e-ticket management; integrated management of preference; · Management of consumption record · Management of merchants' trading

					record
Safety guarantee	Identity authentication; custom way of authentication; secure transmission mechanism based on Http and Private Secure Aglorithm; update corresponding identification code of mobile phone hardwares of keys perodically	Set consumption limit; digital authenticatio n; real name authenticatio n; risk monitoring system; security measures of detecting accounts' abnormality		Real name authentication; code of payment; dynamic password; virtual wall; security certificate; professional risk management team; all-day surveillance	Encryption of transmit data; Log-in password and payment password authentification; Digital certificate; Detection of unusual client; Dynamic password; Real time monitoring of unusual transactions; Urgent blocked transactions Monitoring of professional team

Advantages: close relation between payment link and other links; close combination with the young's living habit; high proficiency of payment-related information management; optimization of users' experience

Marketing channel			Consumers are offered coupons by cooperated merchants and collection of	Cooperate with Taobao and launch Sina of Taobao version	Community sharing; automatic searching; recommendation from friends; automatic propelling

		consumptio n points		of preference
Connection between payment link and other links	Payment link connects with management of consumption record, while separating with other links.			Payment link connects with users' management of preference and bills, as well as merchants' management of preference and trade.
Incentive measures	Collection of points; the points can be used to consume in Taobao	Consumption points can be used in exchange of gifs	Part of the points can be used to consume in all the cooperated shops	Coupons can be downloade d	Points are provided by the system and can be exchanged for the system's coupons
Advantages: combination of payment and marketing; community interaction; word-of-mouth effect; optimization of preference management				

4.3 COMPETITION AND SWOT ANALYSIS

◆ **Advantages:**

1.Innovative Product Contents:

• **Combination of Payment and Marketing**

    ✓ **Community:** Share comments on the products and recommend good shops and products nearby, making shopping as a kind of social activity. Serving like in a community also improve user engagement and the

number of active users, laying the foundation of further development and making way for merchants' advertising and interactive and precision marketing.

- ✓ **Preference management:** Improve coupons' utilization rate by offering services like integrated management of preferencial information, automatic use of coupons and interchange of coupons and points, while providing information of potential superior customers for merchants, strengthening customer relations management and distributing coupons.

- **.Close Connection Between Payment Link and Other Links**

  - ✓ **Preference management:** For users, it's very convenient that their phones connect with the payment system and search system automatically; for merchants, automatic identification of preferencial consumers can lower their expense on learning to use the system, simplify the payment process, decrease the waiting time, optimize users' payment experience and improve the coupons' utilization rate.

  - ✓ **Bill management:** For users, it's convenient that their consumption record is recorded, classified and counted at the end of the month; for merchants, automatic record and count of deals in every month is convenient for them to monitor the market and respond to it immediately.

- **Close Combination With Teenagers' Living Habits:**

  - ✓ Compare users' goal of spending limit at the beginning of the month with their expenditure at the end of the month, helping users develop money management habits.

  - ✓ Integrated management of preferencial information helps users adjust to fast-paced life and meets their demand of higher quality life.

  - ✓ Preference and information sharing and recommendation from friends in the community meet users' demand of social activity.

2．Clear Orientation:

Customers are oriented from 18 to 35. The exploitation of the product places emphasis on integrated management of preferencial information and automation. It develops experimental units and then promote the product to other places. This strategy helps centralize the limited resources, exploit customer value thoroughly, capture market share and build the brand, laying foundation for further development.

3．High Appreciation Ability of Subsequent Products:

The subsequent products are dining reservation, payment in group, advance, ticket booking, bus taking and so on. They have applications in a wide range of fields and have high appreciation ability, attracting new customers and helping the product to have secondary development on old customers.

4.Flexible and Efficient Team Management:

The team members are mainly tenagers so they are sensitive to the market and can respond to it quickly. The quick response to the market can meet the demand of consumers so that they can grab the business opportunity.

The team members are capable. One example is that the members of technological development are active, creative and have solid basic knowledge and are familiar with software exploitation. One of the members of business analysis is a financial engineering master of the department, capable of analysis. The other three members all have solid financial knowledge and have taken part in student research program. Also, they are capable of data collection and analysis.

5.Security and keep pace with the times

In security, our system focus on the user's habits, uses the popular technology i n the market and reduces the learning costs and time of the users. Therefore , the us ers can get the protection of their privacy and their money through the simple opera tion.

◆ **Disadvantages:**

• **Unknown Brand Name**

As a new comer in the market, it doesn't have well-known brand name so the new products and new services it launched don't have a foundation of customers. Thus, it needs a great number of advertisements to open its market.

- **Fund Shortage At The Beginning**

At the beginning, the small size of the company and shortage of fund prevent it from market development, product innovation and subsequent exploitation.Thus it needs specific capital budget and spending plan.

- **Inexperience In Operation and Management**

Because of the company's inexperience in operation and management, it needs to learn how to operate and manage from other mature products and explore its own road in practice.

◆ **Opportunities:**

- **Policy support**

The Fourth China Mobile Payment Industry Forum was held in Beijing in 2012. In the forum, leaders of Ministry of Industry and Information and leaders of Ministry of Business said respectively that they would continue to support the development of mobile payment industry in policies.

- **Enough Time For Development:**

The real competition in Near Field Communication started after NFC was unified in 2012. Because all kinds of mobile wallets were just launched for a short time so we still have time for further development.

- **Big Development Space In Some Market**

Most mobile wallets use the strategy of gradual promotion, so in some market where their promotion is weak, we have big space of development.

- **Lack of Conspicuous Products**

All the mobile wallets are similar to each other and have weak pentinency. So we can orient on the integrated information of the yonng and the middle-aged and claim market share.

◆ **Threats:**

• **Fierce Competition from Existing Products**

Other mobile wallets are sufficient in human resource, fund and other resources and they are strong in research and development ability. Also, they are sensitive to the market and can respond to it efficiently.

• **Potential Entrants**

Because of mobile payment products' easiness in imitation, there are many potential entrants. As soon as the Internet companies get the third company payment license, they will try to claim the market share, Tencent's Wechat payment and Baidu's Baifubao are the examples.

• **Consumer Psychology**

• It's hard to change consumers' psychology and make them accept this new way of payment Mobile Payment quickly and easily.

• **Rapid Development of Technology**

Old technologies can be replaced by new technologies at a fast speed.

In all, this system's orientations are as follows:

First, provide mobile wallet to prevent payment problems like bill dispenser, the inconvenience of taking cash and taking lots of cards; second, provide integrated and automatic management of membership cards and coupons; third, share consuming comments and information and recommend good cunsuming places using GPS in the community.

From the above mentioned, we can know that our system is better at the payment link and its supporting management. We also provide more meticulous services and more considerate value experience, particularly pertinent in the young

and the middle-aged. We believe that these advantages can make us overcome our shortcomings and exploit our advantages to the full, helping us claim the market share as well.

In order to respond to market changes and keep our competiveness, we plan to take some corresponding strategies, they are as follows:

- **Quick Response Strategy**

  Meet the demand of the market; learn、explore and use new technology to improve the existing products; make scientific judgement according to the change of the market and adjust business strategy in order to expand the market.

- **Mutual Benefit and Cooperation Strategy**

  Keep close cooperation with stakeholders in the same industry chain; exploit each other's advantages and learn from each other; complement each other's advantages; stimulate healthy development and provide guarantee for rapid development.

- **Brand Strategy**

Make reasonable marketing strategy; develop users' using habits through various ways; promote the products to the young and the middle-aged in order to build a healthy market image; attract more investments; loans and customers by a well-known brand name and expand the market for subsequent products.

- **Efficient Management Strategy**

Make specific fund budget and spending plan; distribute and use the profits reasonably; improve the utilization efficiency of the capital; make full use of the resources; seek all kinds of financing ways; seek well-known enterprises as bondsmen of the program's loans; seek support from the innovation fund for technology based firms; improve work efficiency; decrease overheads; learn from other excellent teams and make some judgements accordingly.

CHAPTER5　DEVELOPMENT STRATEGY AND INPLEMENTARY PLAN

5.1 BUSINESS MODEL

5.1.1 MOBILE PAYMENT INDUSTRY CHAIN ANALYSIS

Our system's business model is centered on third party mobile payment suppliers. The participants of the industry chain mainly are the third party mobile payment suppliers, banking and financial institutions, merchants, mobile phone users, operators and equipment suppliers,　including mobile phone manufacturers and POS manufacturers.

Merchants

Catering(restaurant,coffee shop...)

Entertainment(KTV,hairdresser,cinema...)

Retailing(supermarket,CVS, drugstore,clothes...)

Public transport (bus, subway,light rail...)

Third party mobile payment suppliers

Banks

Bank A　Bank B　.....

Equipment suppliers

Mobile terminal suppliers

Mobile payment POS suppliers

MOBLIE USERS

Operators

(provide mobile Internet)
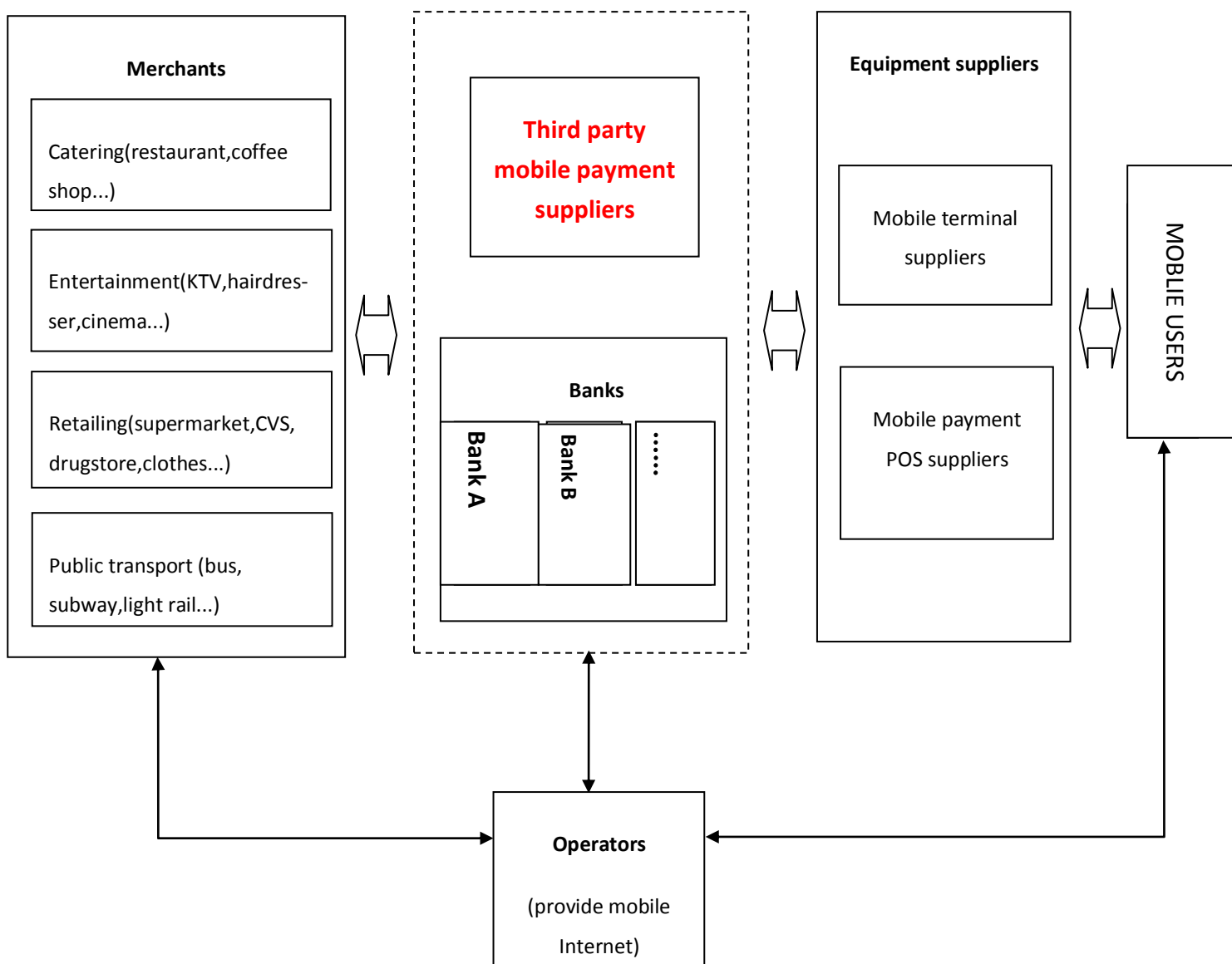
◆ **Third party mobile payment suppliers**

Third party mobile payment suppliers are market participants that combine offline business with mobile payment and offer all kinds of value-added services to merchants and users.

◆ **Banking and financial institutions**

Banking and financial institutions are the upstream part of the third party mobile payment industrial chain, having technological advantages in settlement by transfer of account. On the one hand, the third party mobile payment service can improve users' activeness and engagement; on the other hand, it overlaps with the banking service in some way.

◆ **Merchants**

They are dealers who access third party mobile payment service, make collections by this system and use all kinds of value-added services. This system is offline merchants-oriented, covering catering, entertainment, retailing, public transport and so on. The merchants are the key for various mobile wallet application situations. The relationship between merchant and user is like that of chicken and egg. It's hard to know whether merchant or user comes first. But at the very beginning of the third party mobile payment service, we have to claim a big share in the merchant market so that there will be more users.

◆ **Mobile phone users**

Mobile phone users are participants in our system's mobile payment service and other value-added services. The target users of this system is young and middle-aged fashionista and the white collar.
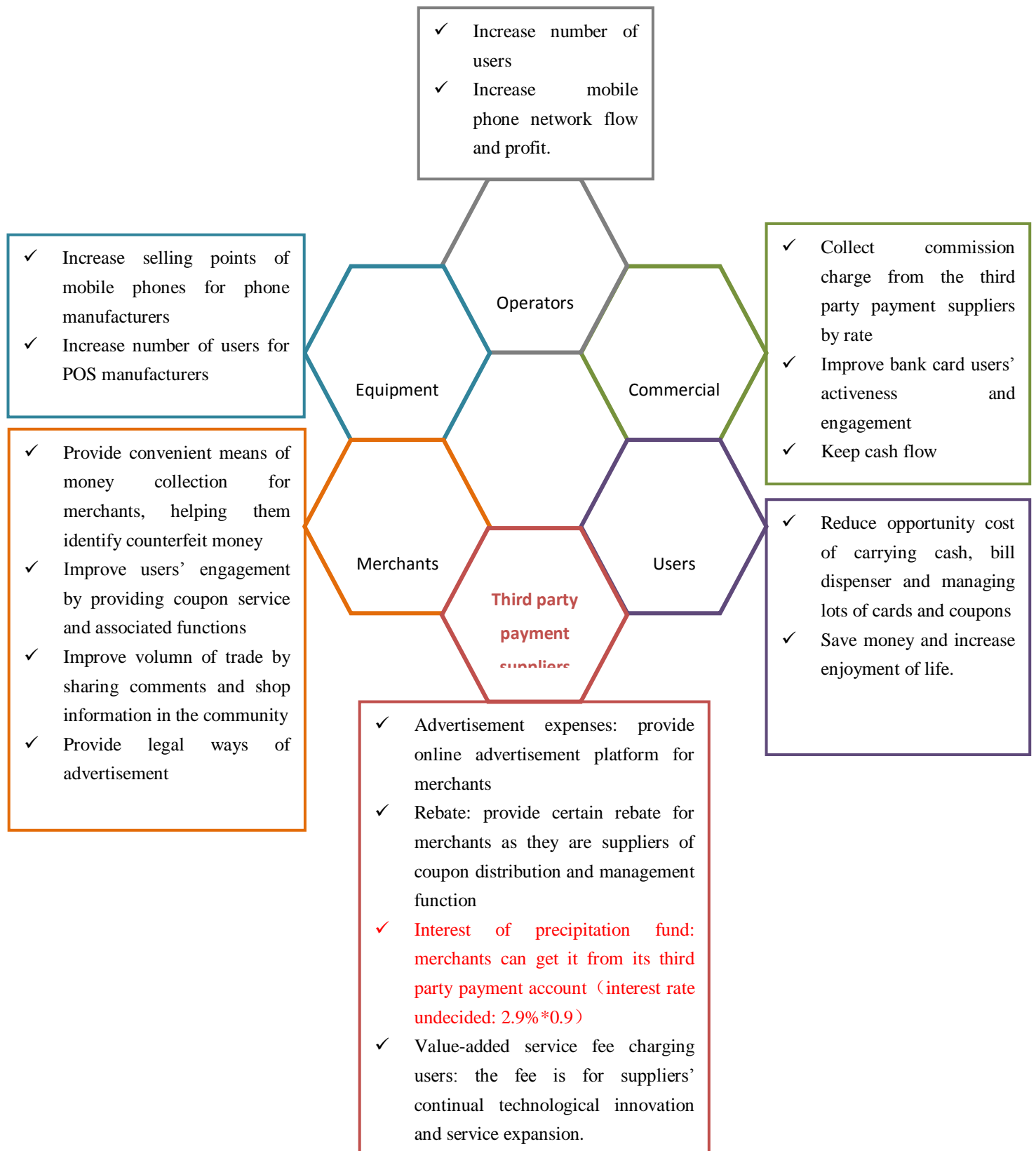
◆ **Equipment suppliers**

Equipment suppliers mainly are manufacturers of custom smartphones with NFC function and manufacturers of POS capable of near field communication.

◆ **Operators**

Operators are suppliers of mobile Internet.

Operators
- ✓ Increase number of users
- ✓ Increase mobile phone network flow and profit.

Equipment
- ✓ Increase selling points of mobile phones for phone manufacturers
- ✓ Increase number of users for POS manufacturers

Commercial
- ✓ Collect commission charge from the third party payment suppliers by rate
- ✓ Improve bank card users' activeness and engagement
- ✓ Keep cash flow

Merchants
- ✓ Provide convenient means of money collection for merchants, helping them identify counterfeit money
- ✓ Improve users' engagement by providing coupon service and associated functions
- ✓ Improve volumn of trade by sharing comments and shop information in the community
- ✓ Provide legal ways of advertisement

Users
- ✓ Reduce opportunity cost of carrying cash, bill dispenser and managing lots of cards and coupons
- ✓ Save money and increase enjoyment of life.

Third party payment suppliers
- ✓ Advertisement expenses: provide online advertisement platform for merchants
- ✓ Rebate: provide certain rebate for merchants as they are suppliers of coupon distribution and management function
- ✓ Interest of precipitation fund: merchants can get it from its third party payment account（interest rate undecided: 2.9%*0.9）
- ✓ Value-added service fee charging users: the fee is for suppliers' continual technological innovation and service expansion.

5.2.1 MARKETING OBJECTIVES

Marketing Objectives	Introduction Period (Year 1 and 2)	Growth Period (Year 3 and 4)	Mature Period (Year 5)
General Description	✓ Improve brand popularity ✓ Increase times of free product using	· Maximize market share in Guangdong	✓ Keep market share in Guangdong · Prepare for expanding market to places nearby
Market Share	0.45%	1%	1%
Number of Users	181654	895560	1235191

5.2.2 MARKETING STRATEGY

5.2.2.1 Introduction Period (Year 1 and 2)

At the beginning of the introduction period, we take Guangdong as the experimental unit and promote our product in it gradually. Our product has functions like coupon provision, automatic use of membership card, integrated management and more-than-one-person payment. By offering preferencial price, we build good relationships with merchants and users. By intensive advertisements and promotion on the Internet and in campuses, we try to popularize our brand and products, enhancing free product using rate as well.

1, Product Strategy: provide basic products as follows:

User System	Merchant System
· Two dimentional bar code payment and NFC payment · Automatic use and integrated management of coupons and membership cards · Points exchange for coupons · Management of bills and money · Comment and preference sharing, shop information sharing.	· Money collection · Distribution and management of coupons and membership cards · Online advertisement platform

2, Pricing Stragety:

attract more merchants and users by offering preferencial price (the lower price in third party payment industry)

（1）Users: free

（2）Merchants:

- Rebate (get a certain percentage of volumn of trade)

Industries	Guiding price	Price of introduction period	Status of industry
Catering	3%	**1%**	1%-4%
Entertainment	4%	**2%**	2%-4%
Retailing	1%	**0.5%**	0.5%-1.5%

- Advertisement: 4 yuan/CPM (Cost per thousand)

[P.S: Merchants' advertisement fee is estimated according to a mobile advertisement test report of America, Europe, Asia and Latin America launched by moPub,an advertisement trading platform]

3, Promotion

Open the market and improve the brand name's popularity by offering preferencial price, having intensive advertisements and campus promotion.

(1)Small scale experimental unit:

Choose Guangdong as the experimental unit because of its large population and fast development.

(2)Personal selling

mainly by salesmen's door-to-door selling

- **Hunt for merchants:** Focus on chain stores such as 7-eleven and Cafe De Coral because they have visitors flow rate and wide coverage and high visitors flow rate.

- **Hunt for users:** Increase free product using rate through various means of promotion.

(3)Advertisement

place emphasis on brand and functions introduction of the product, hightlighting the concept of money-saving and life enjoyment

- **Run Banner advertisement on Zhongguancun Website**——According to an online survey of Zhongguancun, most of its website's users favor IT and age from 19-35. So the website's target users are almost the same as our system's.

Estimation: Valid audience of Guangdong Zhongguancun Website's Banner adverisement= average number of users of Zhongguancun Website in

Guangdong per year from 2013 to 2014* percentage of teenagers in Guangdong * audienct rate of Internet advertisement= 600000* 28%* 20%= 33600 (Data from an online survey of website visitors of Zhongguancun and a sampling survey of population change of National Statistics Bureau)

[Explanation for Valid Audience: Audience is the receivers of adveriements. Valid advertisement means that the advertisement can attract the audience's interest and stimulate them to buy something. So this kind of audience is called Valid Audience]

- **Run mobile advertisements on various mobile phone softwares**

  the target users of this system aged from 18 to 36. The young use mobile phone softwares more frequently.

- **Station advertisements at A+ level metro stations in Guangzhou and Shenzhen**

  the intensive visitors flow can help attract more attention to the product and improve its popularity.

  Estimation: Audience rate of metro station advertisement in Guangzhou and Shenzhen= average visitors flow of Guangzhou and Shenzhen's metro from 2013 to 2014* percentage of the young and the middle-aged in Guangdong * valid audience rate of metro adveriement= 11000000* 28%* 9%= 277200   (Data from passenger flow volume surveys of Guangzhou Metro and Shenzhen Metro)

（4）Internet Promotion——cost less but can improve product's popularity in a larger scale

- Construct a company website and apply for a Microblog ID

- Video promotion: Make a short brand and product introduction video and upload it to websites like Youtube and Tudou for further promotion

- Microblog promotion: Upload the promotion video, some photos and brief introduction to microblog. Then take full use of the existing team members' interpersonal relationships to encourage our friends to repost that piece of microblog. Hold a repost sweepstakes activity to attract attention and the 5 lucky dogs who are chosen will get a Samsung S4 mobile phone equipped with our system respectively.

（5）**Public Relations**：

promote in 15 of the colleges and universities in Guangdong.(The colleges and universities chosen are Sun Yat-Sen University, SCUT, Ji'nan University, SCAU, SCNU, Traditional Chinese Medicine University of Guangzhou, Guangzhou Medical College, Guangdong University of Technology, Xinghai Conservatory of Music, Guangzhou Academy of Fine Arts, Shantou University, Guangzhou University, GUBS, Guangdong University of Finance and Shenzhen University.)

- Hold an innovation and business-starting sharing meeting. Besides the share of experience and feeling, we promote our system by providing free use of our system at that place.

- Put up posters and banners, and promote in QQ groups and BBS of colleges and universities.

  Estimation:Valid audience of colleges and universities promotion in Guangdong= number of students in the chosen 15 colleges and universities in Guangdong* valid audience rate of campus promotion= 380000* 25%= 95000

（6）**Word of Mouth**

- Our system has a function of community sharing. When the users share their consumption comments or feelings in the community or microblog, our system is promoted through our users at the same time.

- Mouth-to-mouth promotion among friends and relatives.

5.2.2.2 Growth Period

Many expanded functions will be provided, such as tickets management, traffic fee payment, dining reservation and payment in groups, offering more individualized experience for users. What's more, by using diversified means of marketing such as personal selling, advertisement and Internet promotion, we expect a bigger market share and a greater number of users. Meanwhile, we plan to charge users for fees of expanded functions. In that way, we can get more profit.

1, Product Strategy: expand functions on the foundation of basic functions, they are:

（1）Traffic fee payment

（2）Ticket management

（3）Dining reservation

（4）Payment in groups

（5）Credit payment [Because this function will be expanded 5 years later, so it is included in the financial analysis]

2, Pricing Strategy: use value pricing and raise prices similiar to competitors'

（1）Merchant

- Rebate

Industry	Guiding price	Status of industry
Traffic	1%	Not available

- Advertisement: 6/CPM

（2）Users' Service Fees

Functions	Guiding Price
Ticket management	Free
Dining	Charge 5 yuan/ year for dining reservation users

reservation	
Payment in groups	Charge 0.5% service fee each time. If less than 1 yuan, fee is in accordance with 1 yuan. 25 yuan service fee at most each time.
Credit payment	Charge 1.8% for each deal: 1% from merchants and 0.8% from users (ps: Bank get 3% revenue from credit payment)

3, Promotion——claim a bigger share of market and higher profit by having more expanded products

（1）**Continue to take Guangdong as experimental unit**

（2）**Personal selling——increase the number of salesmen**

- Develop merchants：Have business talks with ticket reservation enterprises such as Ctrip.com, traffic departments such as Yangcheng Tong card department and restaurants. Meanwhile, build and strengthen relationships with small and medium-sized customers.

- Develop users：Promote expanded products and develop new users; provide after-sales service.

（3）**Advertisement Promotion**

- Internet advertisement: Run search engine advertisement on Guangdong's Baidu Promotion.

- Station advertisements at A++ level metro stations in Guangzhou and Shenzhen

- **Estimation:**

  Audience rate of metro station advertisement in Guangzhou and Shenzhen=average visitors flow of Guangzhou and Shenzhen's metro from 2015 to 2016* percentage of the young and the middle-aged in Guangdong

* valid audience rate of metro adverisement= 36500000* 28%* 9%= 919800

（4） **Internet Promotion**

- Update the company website and make an expanded products promotion video

- Microblog promotion

  · Show and introduce new products

  · Have active interaction with target users, such as replying their comments and private messages.

（5）**Public Relations:**

Take part in all kinds of mobile payment industry forums and innovation and business-starting meetings. Take full use of these chances to promote our new products to media and other companies besides sharing experience.

5.2.2.3 Mature Period (Year 5)

Besides providing the basic functions and expanded functions mentioned above, in this period, there will be continual exploit of new functions and services. While strengthening the market share in Guangdong, we will be making promotion preparations for the plan of claiming market share in provinces nearby after mature period, such as Zhejiang, Fujian, Sichuan, Hunan and so on. We hope that in this year, we can prepare well and make it easier for our products to share the market in other provinces.

1, Product Strategy (the same as growth period's)

2, Pricing Strategy (the same as growth period's)

3, Promotion

（1）Focus on Guangdong's market and start preparations for development in provinces nearby, such as Zhejiang Province, Fujian Province, Sichuan Province and Hunan Province.

（2）**Increase numbers of salesmen**

- Salesmen taking charge of Guangdong market: keep the existing customers, including users and merchants

- Salesmen taking charge of market in provinces nearby: design posters, make promotion videos and make marketing plans for each provinces

（3）**Advertisement**

- Run search engine advertisement on Baidu Promotion of Guangdong, Zhejiang, Fujian, Sichuan and Hunan respectively.

  Estimation:

  Valid audience of Guangdong's Baidu Promotion= number of mobile payment users in Guangdong in 2017* Baidu's coverage rate of Internet users* estimated advertisement clicks ratio= 158800000* 95%* 0.95%= 1433170

- Run Banner advertisement on Zhongguancun Website

  Estimation:

  Valid audience of Guangdong Zhongguancun Website's Banner adverisement= average number of users of Zhongguancun Website in Guangdong in 2017* percentage of teenagers in Guangdong * audienct rate of Internet advertisement= 1000000* 28%* 15%= 42000

（4）**Internet Promotion——more promotion on microblog**

- Design promotion posters, make videos and prepare promotion words for each province nearby; hold prize-giving repost activities on microblog.

- Take use of Fans Advertisement in microblog, helping promote our product into provinces nearby.

（5）**Public Relations**

- Campus Promotion: Hold sharing meetings in Zhejiang University, Xiamen University, Sichuan University and Hunan University; put up posters in campuses and do product promotion.

- Take part in various mobile payment industry forums and related activities around the country; take full use of these chances to promote our products to merchants and users present.

CHAPTER6　FINANCIAL FORECASTING

6.1 MAIN FINANCIAL HYPOTHESES

1. Our team has a fund of 200,000 yuan from our members, a start-up loan of 200,000 yuan. And a strategic investment of 1000,000 yuan. Thus in all, we have 1400,000 yuan to start our business.

　2. According to Guangzhou's entrepreneurial preferencial policiy for university students,the enterprises of consulting, information or technical service founded by the newly graduates can get an income tax exemption for two years if permitted by the tax department.For the unemployed and the graduates who start their own business,they are exempted from paying for 26 kinds of administrative and institutional fees like management,regristration and license. They are also exempted from paying the operating fees or pay by the minimum standards,including 16 kinds of operating service fees priced or guided-priced by the government.Thus in all,there are 42 kinds of fees for the self-employed.

P.S.This program is in the field of technical service.

3. Tax rate of business income tax is 25%; rate of business tax is 5%; rate of education surtax is 3% and rate of city maintenance and construction tax is 7%.

4.5-year loan interest rate is 6.4%.

6.Take the value of fixed assets as entry value; use method of line for depreciation; rate of remaining value is 5% and depreciation life is 3 years.

7. Of a year's business income,90% is taken into the account as cash while the other 10% is taken as receivable. If there is no bad debt, all the receivable can be gotten.

8.According to Accrual,the earned surplus ratio is 10% and the extract for discretionary earning surplus ratio is 25%.

9.The price of renting and decorating the office is estimated according to the estimated price of Guangzhou Youth Business Institution.

10. The discount rate is 10%.

6.2 ACCOUNTING STATEMENTS AND ATTACHED LISTS

◆ **Balance Sheet**

Balance Sheet					
	Year 1	Year 2	Year 3	Year 4	Year 5
Assets					
Current assets					
Cash and cash equivalents	920,242.15	729,442.10	2,038,630.81	7,618,420.81	11,736,485.81
Accounts receivable	115,000.00	253,000.00	712,500.00	1,542,500.00	3,274,000.00
Advances to suppliers					
maturing within one year					

Other current assets					
Total current assets	1, 035, 242. 1 5	982, 442. 10	2, 751, 130. 8 1	9, 160, 920. 8 1	15, 010, 485. 8 1
Non-current assets：					
Fixed assets	56035	30070	135305	74505	13705
Other non-current assets					
Total non-current assets	56, 035. 00	30, 070. 00	135, 305. 00	74, 505. 00	13, 705. 00
Total assets	1, 091, 277. 1 5	1, 012, 512. 1 0	2, 886, 435. 8 1	9, 235, 425. 8 1	15, 024, 190. 8 1
Liabilities and stockholder ' s equity					
Current liabilities:					
Short-term loans					
Transactiona l monetary					

liabilities					
maturing within one year					
Other current liabilities					
Total current liabilities	0.00	0.00	0.00	0.00	0.00
Non-current liabilities:					
Long-term loans	200,000.00	200,000.00	200,000.00	200,000.00	0.00
Bond payable					
Other non-current liabilities					
Total non-current liabilities	200,000.00	200,000.00	200,000.00	200,000.00	0.00
Total liabilities	200,000.00	200,000.00	200,000.00	200,000.00	0.00
Owner's equity:					
Paid-in	1,200,000.0	1,200,000.0	1,200,000.0	1,200,000.0	1,200,000.00

capital	0	0	0	0	
Capital surplus					
Less: Treasury stock					
Earned surplus	0. 00	0. 00	483, 091. 64	2, 872, 600. 25	6, 431, 867. 18
Undistributed profit	−308, 722. 85	−387, 487. 90	1, 003, 344. 17	4, 962, 825. 57	7, 392, 323. 63
Total owner's equity	891, 277. 15	812, 512. 10	2, 686, 435. 81	9, 035, 425. 81	15, 024, 190. 81
Total liabilities and owner's equity	1, 091, 277. 15	1, 012, 512. 10	2, 886, 435. 81	9, 235, 425. 81	15, 024, 190. 81

◆ **Income Statement**

Income Statement					
Items	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	1150000	2530000	7125000	15425000	32740000
Less:Cost of sales	787401	1371333	2184533	3049800	14042800

Oparating tax	54,389.85	173,800.05	741,070.05	1,856,280.00	2,804,580.00
Sales expense	364116	740616	1123116	1401000	7059000
Financial expense	12800	12800	12800	12800	12800
Administrative expense	240016	310216	564916	639800	835800
Loss of impairment of assets					
Add:Changes of fair value of assets					
Investment income					
Operating profit	−308,722.85	−78,765.05	2,498,564.95	8,465,320.00	7,985,020.00
Add:Income from non-operating activities					
Less:Expense from non-operating activities					
Profit	−308,722.85	−78,765.05	2,498,564.95	8,465,320.00	7,985,020.00

Less:Income tax			624,641.24	2,116,330.00	1,996,255.00
Net profit	−308,722.85	−78,765.05	1,873,923.71	6,348,990.00	5,988,765.00
Add:Undistributed profit at the beginning of the year		−308,722.85	−387,487.90	1,003,344.17	4,962,825.57
Others transferred in					
Profit available for distribution	−308,722.85	−387,487.90	1,486,435.81	7,352,334.17	10,951,590.57
Less:Legal surplus			148,643.58	735,233.42	1,095,159.06
Bonus and allowance bond					
Profit available for owner's distribution	−308,722.85	−387,487.90	1,337,792.23	6,617,100.76	9,856,431.51
Less:Preferred stock dividend					
Other surplus reserve			334,448.06	1,654,275.19	2,464,107.88

Ordinary stock dividend					
Undistributed profit	−308, 722. 85	−387, 487. 90	1, 003, 344. 17	4, 962, 825. 57	7, 392, 323. 63

◆ Cash Flow Statement

Cash Flow Statement					
Items	Year 1	Year 2	Year 3	Year 4	Year 5
Cash Flow From Operating Activities					
Cash from selling commodities or offering labor	1, 035, 000. 00	2, 392, 000. 00	6, 665, 500. 00	14, 595, 000. 00	31, 008, 500. 00
Refund of tax and fee received					
Other cash received related to operating activities					
Cash inflow	1, 035, 000. 0	2, 392, 000. 0	6, 665, 500. 0	14, 595, 000. 0	31, 008, 500. 0

subtotal	0	0	0	0	0
Cash paid for commodities or labor					
Cash paid to and for employees	648,000.00	954,000.00	1,296,000.00	1,620,000.00	17,010,000.00
Taxes and fees paid	54,389.85	173,800.05	1,365,711.29	3,972,610.00	4,800,835.00
Other cash paid related to operating activities	717,568.00	1,442,200.00	2,489,800.00	3,409,800.00	4,866,800.00
Cash outflow subtotal	1,419,957.85	2,570,000.05	5,151,511.29	9,002,410.00	26,677,635.00
Net cash from operating activities	-384,957.85	-178,000.05	1,513,988.71	5,592,590.00	4,330,865.00
Cash Flow From Investing Activities					
Cash from investment withdral					
Cash from investment income					

Net cash from disposing fixed assets, intangible assets and other long-term assets					
Net cash from disposing subsidiaries and other busiiness entities					
Other cash received related to investing activities					
Cash inflow subtotal	0.00	0.00	0.00	0.00	0.00
Cash paid for buying fixed assets, intangible assets and other long-term investments	82,000.00	0.00	192,000.00	0.00	0.00
Cash paid for investment					

Net cash paid for acquisition of subsidiaries and other business entities					
Other cash paid related to investing activities					
Cash outflow subtotal	82,000.00	0.00	192,000.00	0.00	0.00
Net cash provided by investing activities	−82,000.00	0.00	−192,000.00	0.00	0.00
Cash Flow From Financing Activities					
Cash received from accepting investment					
Borrowings	200,000.00				
Other cash received related to					

financing activities					
Cash inflow subtotal	200,000.00	0.00	0.00	0.00	0.00
Cash paid for debt					200,000.00
Cash paid for dividend, profit or interest	12,800.00	12,800.00	12,800.00	12,800.00	12,800.00
Cash paid for interests					
Other cash paid related to financing activities	12,800.00	12,800.00	12,800.00	12,800.00	212,800.00
Cash outflow subtotal	187,200.00	−12,800.00	−12,800.00	−12,800.00	−212,800.00
Net cash provided by financing activities	0.00	0.00	0.00	0.00	0.00
Foreign Currency Translation Gains(Losses)	−279,757.85	−190,800.05	1,309,188.71	5,579,790.00	4,118,065.00

Add:Cash at the beginning of the reporting period	1, 200, 000. 00	920, 242. 15	729, 442. 10	2, 038, 630. 81	7, 618, 420. 81
Cash at the end of the reporting period	920, 242. 15	729, 442. 10	2, 038, 630. 81	7, 618, 420. 81	11, 736, 485. 81

6.3   ANALYSIS OF INVESTMENT INCOME AND RISKS

1, NPV=1,170,302.50>0

	Operating Revenue		Operating Costs	
Fluctuation	10%	-10%	10%	-10%
NPV	¥11,692,612.54	¥6,541,691.23	¥8,166,681.68	¥10,067,622.09

From sensitivity analysis, we know that even if the operating revenue or the operating costs has a fluctuation of 10%, this program's investment NPV is still greater than zero.

2, Identification And Countermeasures of Other Risks

Number	Content	Degree	Description	Countermeasure
Environmental risks				

1	External environment	Low	Disadvantageous changes from economy, business and politics.	Pay close attention to country's policies
2	Competitors	High	Other online paying softwares like Alipay have big market shares,providing more complete services.	Pay close attention to competitors; do market survey and make quick response to the market.
3	Cooperative merchants	Relatively high	Cut of discounts from cooperative merchants.	Keep good contact with cooperative merchants.
4	Customers	Moderate	Customers' faith in mobile payment is low. Thus the number of customers grows slowly.	Attract customers and improve their faith in mobile payment by better services and simpler ways of software usage.
Strategic risks				
1	Development ability	Low	It's not sure whether we can be innovative and meet the requirements of the market for the sake of further development.	Conduct deep survey on the market and improve the product's quality actively and innovatively.
2	Price of products	Moderate	The price is too low to make enough profit.	Do market surveys before pricing and make changes on the pirce according to the market's condition.

Operational risks				
1	Technical change	Low	Appearance of new technology	Pay close attention to the changes of new technology and start some new technology training programs.
2	Customers' satisfaction	Moderate	Customers' disatisfaction leads to lower usage rate	Do periodical surveys on customers and make improvements on the basis of the survey result.
Infrastruction risks				
1	Financial management	Relatively high	Debt crisis and capital financing	Keep a watchful eye on the financial condition and supervise money received and paid.
2	Human resource	Low	Unreasonable human distrubution and salary	Make some changes on the company's organization structure and human distribution in different developent periods to improve competiveness.

Appendix 1　Sheet: Convert Net Profit to Cash Flow From Operating Activities

Convert Net Profit to Cash Flow From Operating Activities					
Items	Year 1	Year 2	Year 3	Year 4	Year 5
Convert net profit to cash flow from operating activities:					
Net profit	−308722.85	−78765.05	1873923.71	6348990.00	5988765.00
Depreciation for fixed assets	25965.00	25965.00	86765.00	60800.00	60800.00
Financial expenses	12800.00	12800.00	12800.00	12800.00	12800.00
Decrease of operation receivables	−115000.00	−138000.00	−459500.00	−830000.00	−1731500.00
Net cash flow from operating activities	−384957.85	−178000.05	1513988.71	5592590.00	4330865.00
Investing and financing activities not involved in cash:					
Debt converted to capital					

Convertible bond maturing within one year					
Leasehold improvements					
Net increase of cash and cash equivalents					
Cash ending balance	920242.15	729442.10	2038630.81	7618420.81	11736485.81
Less:Cash beginning balance	1200000.00	920242.15	729442.10	2038630.81	7618420.81
Add:Cash equivalents' ending balance					
Less:Cash equivalents' beginning balance					
Net increase of cash and cash equivalents	-279757.85	-190800.05	1309188.71	5579790.00	4118065.00

Appendix 2 Cost Accounting

Cost Accounting

	Year 1	Year 2	Year 3	Year 4	Year 5
Operating Costs					
Salary of technical team members	288000	432000	576000	720000	10800000
Welfare	48000	60000	96000	120000	180000
Depreciation for fixed assets	17733	17733	78533	60800	60800
Rent of server	427800	855600	1426000	2139000	2852000
Website construction	5000	6000	8000	10000	150000
Developer authentification	868	0	0	0	0
Subtotal	787401	1371333	2184533	3049800	14042800
Management Costs					
Salary of administrative staff	144000	216000	288000	360000	540000
Welfare	12000	15000	24000	30000	45000
Rent	72000	72000	243600	243600	243600
Depreciation for fixed assets	4116	4116	4116	0	0

Low priced and easily worn articles	1000	1500	2000	3000	4000
Interent fee	1600	1600	3200	3200	3200
Organization costs	5300				
Subtotal	240016	310216	564916	639800	835800
Selling Expenses					
Salary of salesman	144000	216000	288000	360000	5400000
Welfare	12000	15000	24000	30000	45000
Advertisement	200000	500000	800000	1000000	1600000
Depreciation of fixed assets	4116	4116	4116	0	0
Low priced and easily worn articles	1000	1500	2000	3000	4000
Business trip expenses	3000	4000	5000	8000	10000
Subtotal	364116	740616	1123116	1401000	7059000
Financial Expenses					
Interest expense	12800	12800	12800	12800	12800
Subtotal	12800	12800	12800	12800	12800
Total	1404333	2434965	3885365	5103400	21950400

Appendix 3 Income Forecast

	Year 1	Year 2	Year 3	Year 4	Year 5
Items	Aggregate amount	Aggregate amount	Aggregate amount	Aggregate amount	Aggregate amount
Advertisement	200000	500000	2500000	5000000	9000000
Commission	950000	2030000	4620000	10400000	23640000
Receipts from service	0	0	5000	25000	100000
Total	1150000	2530000	7125000	15425000	32740000

CHAPTER7 TEAM MANAGEMENT

7.1 INTRODUCTION

The team of the program consists of 11 university students from School of Software Engineering and School of Economics and Commerce, South China University of Technology and School of Foreign Language, Central China Normal University. All the members are equipped with experience of social activity and academic research,

Chen Zhutian

Department:

Undergraduate student of Grade 2011, Software Engineering Major, South China University of Technology. Former Director of Information Department, MSTC. Director of Quality Training Centre, the Student Union, School of Software Engineering. Planning Group Leader of the Year, also MSTC. Member of debate team, School of Software Engineering. Member of CIKE Laboratory, School of Software Engineering. With outstanding academic fruits in the area of swarm optimization algorithm :

A Modified Particle Swarm Optimization Algorithm For Distributed Search and Collective Cleanup and

Improving Particle Swarm Optimization Algorithm for Distributed Sensing and Search. Mastery of C++, Java, Python. Familiar with the development of Android and QT.

Recipient of the third prize in the United States of America Mathematical Modeling Competition. Recipient of bronze award in the 4th Total Environmental Design Contest. Recipient of the first prize of Guangdong area in Lanqiao Cup Contest hold by Ministry of Industry and Information Technology. Recipient of the third prize of Scientific Challenge Cup, South China University of Technology. Recipient of Outstanding Training Works of C++ in School of Software Engineering.

Li

Xiaoying

Department:

Finance

Undergraduate student of Grade 2011, Finance Major, South China University of Technology. Participant of the undergraduate tutorial program, School of Economics and Commerce. Participant of a student research program on quantitative finance, with outstanding performance and pursuit of knowledge. Former member of Information Center, the Student Union, South China University of Technology, with diligence and approval from colleagues. Participant of AIA program of Hong Kong HCIA Business

Zhu

Linhui

Department:

Finance

Position:

- -

Former member of Entertainment Department, the Student Union, School of Economics and Commerce, South China University of Technology.

Director of Financial Management Department, the Association of Students' Clubs, South China University of Technology. Awarded Outstanding Student Cadre of the Year. Volunteer of social activities. Former volunteer of Guangdong Tourism Expo, the 112th and 113th Chinese Export Commodities Fair. Participating in the student research program of South China University of Technology in the second term of sophomore. Member of Enterprise Culture Research Contest. With strong

Yang Zhi
Department:

Marketing

Position:

Manager

Yang Zhi   Postgraduate student of Grade 2011, Finance Major, South China University of Technology. Former Member of Liaison Department, the Postgraduate Student Union, South China University of Technology. Teaching assistant of Financial Program Laboratory, South China University of Technology. Participant of many project teams. Main participant of Financial Crisis Measurement Based on Complex Science Project Team. Former consultant of IResearch Company Limited. Passed the Level-3 test of National Computer Rank Examination. Mastery of office software, data processing software like Eviews and Matlab. Sincere, meticulous and attentive spirit with ability to analyze and deal with practical problems. Work with plan, coordination and method. Strong thirst of knowledge and positive thinking. Excel at independent thinking. Teamwork spirit.

Wu Yongyan
Department:

Finance

Position:

Manager

Undergraduate student of Grade 2011, Finance Major, South China University of Technology. Former member of Youth League Committee Office, School of Economics and Commerce. Outstanding member of the Year. Project Manager of Internationale Nederlanden Group in Hong Kong HCIA Business Immersion Program whose team was the runner-up in the business proposal contest. Group leader participating in preliminary contest the 6th Xingxiang Research Contest, Participant of Guochuang Cup Marketing Contest, School of Economics and Commerce. Strong sense of social responsibility and voluntary spirit. Volunteer of Guangdong Tourism Expo, 111th and 112th Chinese Export Commodities Fair. Volunteer teacher of, Qingyuan Teaching Smile Group, Qiushi Institute, South China University of Technology. Active member of summer social internship,

Li Jianmin

Department:

Finance

Position:

Undergraduate student of Grade 2011, School of Foreign Language, Central China Normal University. Video Team Leader of Technology Group, School of Foreign Language, with experience of video making. Former Director of Study Department, English Major, School of Foreign Language, with experience of preparing grand activities and competition. Former Director of Training Department, Nanfeng Cantonese Association, Central China Normal University. Participant of academic research named English Vocabulary Self-education Approaches with Development of Smart Phones in the creativity training program of Central China Normal University.

Xiao Fanjie

Department:

Technology

Undergraduate student of Grade 2011, Software Engineering Major, South China University of Technology. Member of Pubic Relation Department, IBM Creativity Club, South China University of Technology. Member of Creative Department, Zaca Animation Association, with outgoing and positive personality, strong ability to communicate. Strong learning capability. Teamwork spirit and sense of responsibility. Participant and volunteer of Ericsson Great wall Program in the year of

Luo Wei'ang

Department:

Technology

Position:

Undergraduate student of Grade 2011, Software Engineering Major, South China University of Technology. Mastery of C++ and Jave programming. Developing experience of Qt, j2ee.Solid foundation of professional knowledge. Great enthusiasm of academic work. Excel at independent thinking and have unique understanding of the profession and program developing. Work
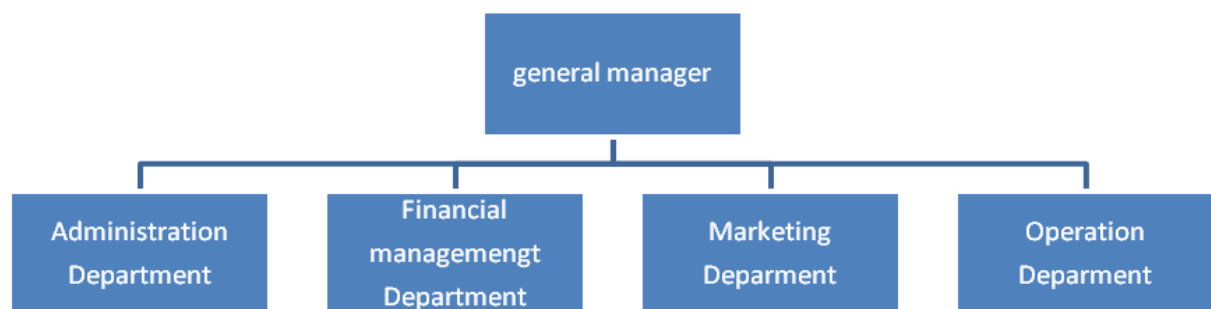
Li Guobao

Department: Technology

Position:

Undergraduate student of Grade 2011, Software Engineering Major, South China University of Technology. Vice Chairmen of Photography Association, South China University of Technology with experience of organizing grand photography contest in the university. Outstanding Member of Association. Solid foundation of professional knowledge. Great enthusiasm of profession. Strong

Wu Zebin

Department: Technology

Undergraduate student of Grade 2011, Software Engineering Major, South China University of Technology. Director of Media Department, MSTC, making advertising video for Beauty of Microsoft Programming Contest. Wide range of hobbies. Great enthusiasm of technical design. Hard working and pursuit of perfection.

Xie Xiaojia

Department: Technology

Undergraduate student of Grade 2011, Software Engineering Major, South China University of Technology. Director of Media Department, MSTC, making advertising video for Beauty of Microsoft Programming Contest. Wide range of hobbies. Great enthusiasm of technical design. Hard working and pursuit of perfection.

7.3 MANAGEMENT

7.3.1 MANAGEMENT STRUCTURE

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                           ┌─────────────────┐
                           │ general manager │
                           └────────┬────────┘
         ┌──────────────┬───────────┼───────────┬──────────────┐
┌────────────────┐ ┌──────────────┐ ┌────────────┐ ┌────────────┐
│ Administration │ │  Financial   │ │ Marketing  │ │ Operation  │
│   Department   │ │ managemengt  │ │ Deparment  │ │ Deparment  │
│                │ │  Department  │ │            │ │            │
└────────────────┘ └──────────────┘ └────────────┘ └────────────┘
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7.3.2 BRIEF INTRODUCTION OF DEPARTMENT FUNCTIONS

1, General Manager: In command of the operation of the project. Supervise the functions of each department, as well as the progress and effect of the project.

Administration Department: Responsible for the team administration. Direct responsible for human resources, logistical support and related documents.

2, Financial Management Department: Manage team funds. Decide financial plans, incorporation plans. Supervise the financial situation of the company.

3, Marketing Department: Market research. Communicate with customers properly. Product Promotion and advertising.

4, Operation Department: Manage online products and users information. Improve the function of the product according to proposal.

7.3.3 COOPERATION BETWEEN DEPARTMENTS

A:Administration Department Financial Management Department: Hand in the funds declaration of project or office supplies. Deliver the commands.

B:Administration Department Marketing Department: Summarize research reports of all kinds of market. Deliver the commands.

C.:Administration Department Operation Department: Supervise the operation of the product. Deliver the commands.

D: Financial Management Department Administration Department: Hand in financial statistics. Reimburse the cost.

E:Financial Management Department Marketing Department: Plan budget. Reimburse the cost.

F:Financial Management Department Operation Department: Plan budget. Reimburse the cost.

G:Marketing Department Administration Department: Regular working reports.

H:Marketing Department Financial Management Department: Marketing proposal and expenditure forecast.

I:Marketing Department Operation Department: Deliver changing information of the market and present better operation plan.

J: Operation Department Administration Department: Regular working reports.

K:Operation Department Financial Management Department: Hand in the expenditure forecast.

7.3.4 SALARY AND MOTIVATE MECHANISM

1, Basic constituent of salary: Basic salary and annual bounus.

2, Motivate machanism: Pay rise, bounus increace and free trip.

3, Principle: Bounus is the main motivate method. Enrich members' life experiences for the sense of belonging, thus promoting the development of the product as well as the team.