Research on network marketing model based on big data analysis

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ABSTRACT

With continuous development of China's economy and increasing improvement of science and technology, people's living standards have been remarkably improved. From lag in technology to the computer age, big data has already become the subject of people's life. Big data is a very important resource. The coming of big data age plays a significant role in the Internet, and it has very high applying values. Network marketing under big data has already become an important means for marketing personnel to gain profits. Big data age is the second largest strategic resource of a country only nest to energy. Big data age plays a very significant role. It not only comprehensively influences people's life but also has a positive effect on enterprise marketing on this basis. For instance, an E-commerce enterprise can utilize big data to easily find clients if the enterprise masters big data technology. To a large extent, this reduces marketing time of products, and remarkably increases the success rate of product transaction. Moreover, great improvement is achieved in various aspects. In this paper, the author mainly discusses the research on network marketing model based on big data analysis.

KEYWORDS

Big data analysis; Network marketing model; Model research.
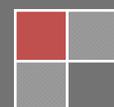
INTRODUCTION

With rapid development computer and continuous renewal of network information technology, computer already spreads all over the world. As mentioned above, network technology is highly popular, creating a new lifestyle and space for human beings. Global financial crisis makes Chinese enterprises to be confronted with emergent issues and fierce competition between enterprises. More rational marketing becomes priority among priorities. It is of great importance to select a favorable marketing pattern. With the arrival of big data age, numerous enterprises begin to implement network marketing model and take it as the marketing development mode. The establishment of network marketing model under big data is served as a precondition for some enterprises to develop network marketing business. Network is updated all the time, which also results in continuous changes and renewals of enterprises' network marketing models. Some decision makers fail to attach enough importance to network marketing and to correctly choose network marketing strategies suitable for them to a large extent. For instance, Alibaba purchased some shares of Sina Microblog, which reveals to a large extent a very important marketing strategic plan of Alibaba. Therefore, comprehensive understanding of network marketing model is also an important topic for many enterprises at present.

SUMMARY OF BIG DATA AND NETWORK MARKETING MODEL

Literally, big data means a mass of data. Its real meaning is to apply modern advanced computer technology to process mass data that is difficult to be processed manually or that can not be processed by conventional processing techniques. For traditional processing techniques, it is difficult for effective statistics of these mass resources. Thus, these mass resources will become useless resources. Due to continuously accelerating modern course, a mass of data is generated every day. As time goes on, data will become more and more and bigger and bigger. According to relevant statistics, 40ZB data will be generated by the Internet every day. The analysis on results of marketing activities is shown as Figure 1.
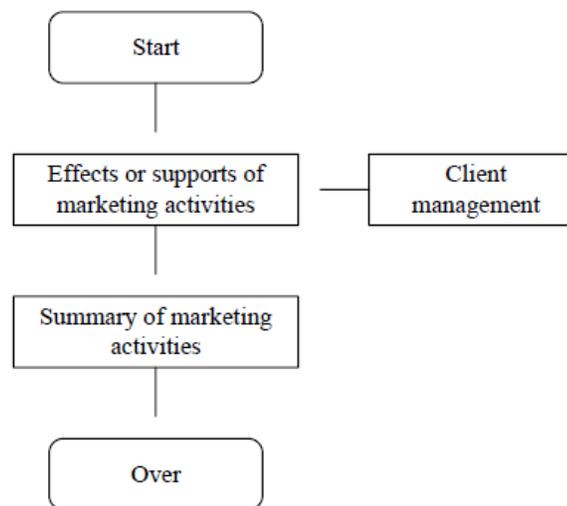

Figure 1: Analysis on results of marketing activities

In modern network marketing, many enterprises actually have sufficient data resources in the marketing process. The most important issue lies on the fact that it is difficult to process a mass of data. While engaged in economic businesses, enterprises need to make statistics for various links, and make concentrated statistical analysis on clients and market data. These data statistics together form a good deal of data. Undoubtedly, it is a great issue and challenge for enterprises to comprehensively and effectively manage and utilize such big data. Network marketing in the Internet era needs massive data. Moreover, it is necessary to use big data to decide marketing programs of enterprises. Therefore, it is of great importance for computer big data processing technology. The memory space of mainly visited table data is shown as TABLE 1.

NETWORK MARKETING MODEL OF BIG DATA

With the development of science and technology, computer technology is applied into network marketing model, which can summarize massive useful information, and make such information to become the network marketing model of a big data.

For normal operations of marketing in big data networking marketing model in Internet era, we first need to collect massive data. Collected information must be beneficial for us, for instance, some writing information, information in various forums and real time information of the society. Then, we need to add the collected information into network marketing model, classify relevant big data with the classifier computing method, make a concrete analysis on big data with the big data

computing method, extract analysis results valuable for our marketing, and then apply such useful data into network marketing model. There are many examples for this network marketing model in practical life, for instance, commodity association mining marketing of big data and commodity geographic marketing of big data.

TABLE 1: Memory space of mainly visited table data

System base	Data sheet	Order of magnitudes	Instructions
BSS system	User table	9 million	Extract data every day, and retain historical data according to specific conditions
	Real-time accounting table	10 million	Extract data every day, and retain historical data on a monthly basis
	Arrearage data sheet	27 million	Extract data every day, and retain historical data according to specific conditions
	Standing book log sheet	35 million	Extract data every day, and retain historical data according to specific conditions
	Phone bill	40 million	Extract data every day, and retain historical data
Billing system	User table	1.98 million	Extract data every day, and retain historical data according to specific conditions
	Detailed account table	6.37 million	Extract data every month
	Comprehensive account table	67.91 million	Extract data every month
	Phone bill	1.06 million	Extract data every day, and retain historical data
Comprehensive service system	User table	3.00 million	Extract data every day, and retain historical data according to specific conditions
	Daily work list	3.00 million	Extract data every day, and retain historical data
	Individualized table of mobile service	0.50 million	Extract data every day, and retain historical data according to specific conditions
	Individualized table of fix phone	1.30 million	Extract data every day, and retain historical data according to specific conditions
	Individualized table of broadband	0.50 million	Extract data every day, and retain historical data according to specific conditions
	Customer information sheet	2.88 million	Extract data every day, and retain historical data according to specific conditions
	Special offers (completion)	2.00 million	Extract data every day, and retain historical data according to specific conditions
	Information sheet of billing rules (completion)	3.02 million	Extract data every day, and retain historical data according to specific conditions
	Business development table	1.80 million	Extract data every day, and retain historical data according to specific conditions

FUNCTIONAL DEMAND ANALYSIS

Objective of marketing activity

The marketing objective of marketing management system refers to marketing policies to be published within a certain period and goals to be achieved through these policies. It is served as the precondition and data basis for the development of a series of marketing activities. According to overall plan of marketing, relevant marketing themes and policies are planned. According to product, that includes broadband, fixed-line telephone, mobile telephone, volume of business, value added service, residential client portfolio marketing, government and enterprise client portfolio marketing and business client portfolio marketing. At first, marketing personnel need to acquire relevant client information from relevant databases of the client management system, select corresponding product services and special offers from current telecommunication products such as various communication combos, and design a set of feasible product plans. Then, marketing personnel also need to obtain the pricing information from the marketing database, and finally determine the price of new product (combo).

Content of marketing activity

In this demand, marketing personnel needs to design new products and strategies while completely determining the objective of marketing activities. However, the design of a new marketing product can be truly finished only after

successfully obtaining network resources. In the design process of marketing channels, it is necessary for marketing personnel to consider whether to adopt the mode of agent or service hall, and budget advertising costs and marketing costs for each social or own channel. With respect to the implementation of marketing activities of the marketing management system, marketing personnel first need to specify the objective of marketing activities, and then determine the contents of marketing activities while implementing marketing activities and adopt which marketing means, such as network, print ads or large-scale activities. Specific flow of marketing activities are described as follows: personnel of the first production line select the objective of this marketing activity through the management functional module of the marketing activity, fully and completely verify conditions necessary for the marketing activity, and then return relevant information to the business handling system. The business handling system will save returned information (mainly including activities participated, selected plans, activity presents, service costs, special offers and restrictions on such offers), and provide necessary data support and guarantee for cost disposal and later effect analysis.

RESEARCH ON NETWORK MARKETING MODEL UNDER BIG DATA

Commodity association mining marketing

Commodity association mining marketing is of great promotional value. For this marketing mode, there are many successful examples in network marketing, for instance, classic examples in foreign countries: beer and diaper. Marketing personnel sell commodities to various supermarkets. Operators of supermarkets place beer and diaper together. To a large extent, this method can result in an unexpected sales volume of both kinds of commodities. Many people think that there is no remarkable correlation between the two commodities. However, there is great correlation according to careful research. All foreign people like to drink beer very much, and most American women are housewives who hardly have time to go out for shopping. In most cases, many things are bought by their husbands after work. Children will use many diapers every day. Therefore, many people incidentally buy beer while buying diapers. Under such circumstance, beer and diaper form a sort of relevance to some extent. Under this marketing mode, therefore, it is necessary for marketing personnel to use big data as exploitation basis and to find out relevance between single data and single data. No matter the number of single data is greater or the value in use is higher, that will be lower than the value after the formation of relevance. Therefore, original data should be analyzed to establish correlation between data and data. The design principle of marketing model is shown as Figure 2.
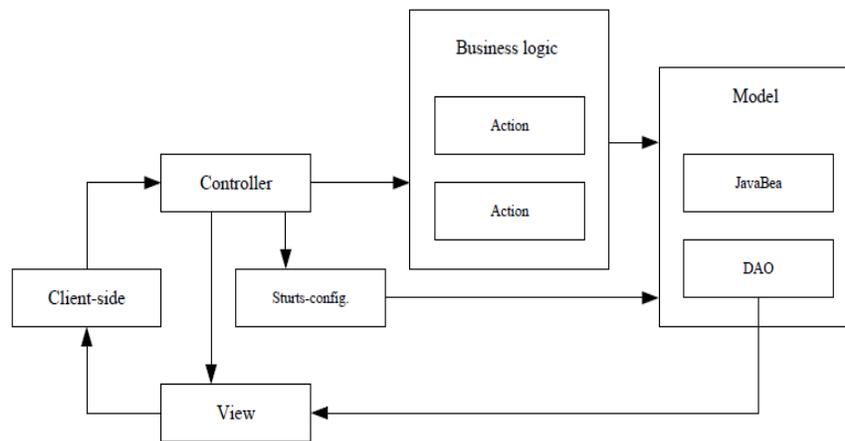

Figure 2: Design principle of marketing model

Social network marketing of big data

Data produced with social data network marketing model is relatively big, for instance, online friends, QQ friends and Twitter. We can utilize the information for social network marketing. For instance, network resources of Mengniu Yogurt and Renren are used in combination. Coupled with celebrity effect, "Mengniu Yogurt Music Dream" is taken as the theme at various places and colleges, which vigorously advocates Mengniu Dairy while encouraging young people at colleges and universities to pursue for their dreams, making people to drink Mengniu milk and enjoy high-quality life. Here goes another example. The ad of red rice mobile phone is forwarded in QQ zone for vigorous promotion, making the sales volume of red rice to be remarkably increased and even exceed the expected volume. Moreover, "VANCL style" popular in the Internet in the last year is highly chased after by netizens. Actually, these simply things are served as media that the sponsors use big data for promotion of social network marketing. The Operating Principle in Social Network Marketing of Big Data is shown as Figure 3.
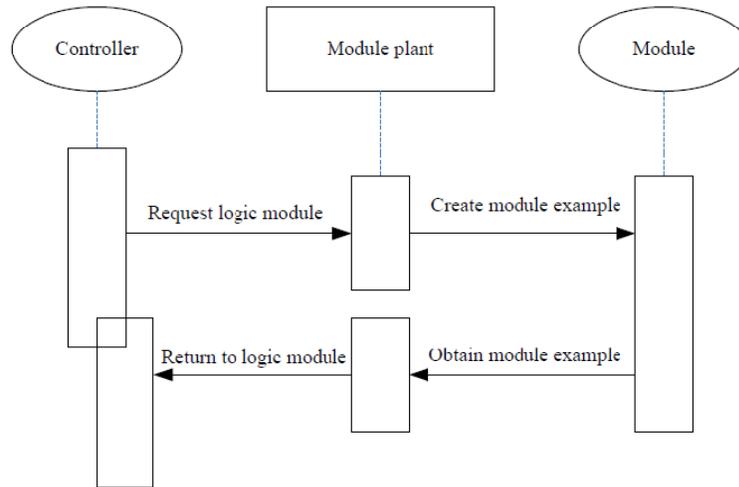
Figure 3: The operating principle in social network marketing of big data

User behavior analysis marketing of big data

The big data user behavior analysis marketing model is mainly used to record and make objective analysis on data of users surfing the Internet, analyze valuable clients, and then rationally implement marketing plans. For instance, a social communication tool - Yunxin is researched and developed for marketing. This social tool has strong automatic analysis ability, which can analyze attitudes of customers towards products according to evaluation of customers towards products and historical records of social communication, establish the customer buying inclination model, make a systematic analysis on the model, and then select clients according to analyzed results and provide reliable clients for future network marketing. User behaviors are analyzed in Yunxin page. Then, products are subject to classified marketing according to analyzed results. Specific data is shown in TABLE 2.

TABLE 2 : Classification of marketing content indexes

Index	Category			
	1	2	3	4
Product marketing	7	3	1	4
Activity marketing	3	3	1	1
Brand marketing	2	2	2	4
Hot point marketing	3	4	1	3

Individualized marketing recommended for big data

Big data individual recommended marketing is also a very important model in network marketing. For some forums, communities, microblogs and other large-scale social communication platforms in many social communications, users can completely establish their own social circles based on their hobbies. In their friend circles, they can randomly release the information that they want to release. Such information is of great value in use for adverting enterprises. Based on such information, psychological needs of customers can be analyzed. Network propagation speed and huge social groups are used in this individualized marketing model. This model is of great significance in network marketing. Therefore, some analysis tools continuously come into our eyes. Different from ordinary analysis tools, these analysis tools are mainly used for specific marketing through individualized algorithm.

Big data analysis marketing of modern communication

Modern communication data analysis marketing is also widely applied, for instance, quantum constant statistic in Taobao. With respect to function, quantum constant statistic mainly includes two aspects: quantum constant website statistic and quantum constant store statistic. Quantum constant website statistic is mainly used for specific statistics of users, information about the third party and some contents, for instance, blog visit and the third party statistic users. Above data is subject to comprehensive monitoring and systematic analysis. Statistic analysis on data in the Internet is used to analyze use laws of users in the Internet, and analyzed results are used to adjust relevant network marketing plans. Quantum constant store statistic is generally applied into Taobao stores for real time data statistics.

ANALYSIS ON MICROBLOG MARKETING CASE BASED ON BIG DATA

Nowadays, marketing of microblog is very hot, which attributes to the emergence of microblog. Thousands of users are concentrated in microblog. There are many people in common hobbies gathering together. Therefore, it is very easy for

advertisement distribution. Moreover, the scope of distribution is wide. It is very important for promotion of ad data in such circles. Each character in microblog represents a special meaning. For instance, small circle stands for users; red small circle stands for VIP users; and green small circle represents core data hole users. If products are promoted from celebrity circle to writer circle, it is necessary to connect "core structure hole users" of the two circles for better conveying of both circles.

CONCLUSION

Wide network marketing can cut down advertising costs to a large extent, and enable enterprises to have better benefits and profits. Big data has already penetrated into people's life. Therefore, we should make the best of big data. Future trends of network marketing are described as follows: 1. processing capacity of network marketing itself; data in the network is very big, it requires more time and techniques to process such data through computer. At present, renewal of big data processing technology is a great task and challenge; 2. the issue of privacy; most pages in computer have memory function which can automatically memorize browse contents of users, and summarize users' website browse habits within a certain period. Based on these habits and contents of users, enterprises can make reasonable marketing plans. As a result, network data of users is disclosed to some extent. At the same time, users' security is reduced as well. Some network information contains real information of users. Therefore, places with loopholes should be technologically updated, so as to protect basic privacy of users. To a large extent, it is necessary for network maintainers to perform comprehensive maintenance. However, such protection is a technological challenge. At the same time, relevant law measures should be taken for protection in real world. Network behaviors violating laws should be detected and strictly punished.

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