Investigation and Study on the Present Situation of Enterprise Website Construction of Intellectual Property Agencies

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Abstract—**With the help of some research tools, this paper analyzes and studies the present situation of website construction of intellectual property agencies in Beijing from the aspects of website domain name and age, website information service and website influence. The investigation shows that the comprehensive quality of websites is not high; the website influence and radiation is comparatively small, and the website utilization rate is comparatively low. The difference analysis on website construction indicates that there is no significant difference of different domain name age in page elements and website functions except download function, but there is a significant difference in Google PR value; there is no significant difference of different Google PR value in page elements and website functions except download function and search function. Based on the investigation research, this paper puts forward some reasonable suggestions in the aspects of consciousness of e-commerce and management, website information and service construction, SEO strategy and implementation.**

Index Terms—**website construction, patent agency, intellectual property, search engine optimization, e-commerce, small and medium-sized enterprises**

I. INTRODUCTION

Intellectual property refers to creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce. It has the characteristics of invisibility, dualism, validation and monopolistic. With the continuous improvement of intellectual property protection, the role of intellectual property is emerging in the world economy and the development of science and technology. The intellectual property has become the strategic resource in national development and the core essential factor of international competitiveness. Electronic application refers to submitting application of intellectual property rights to the competent department of the national intellectual property in the form of electronic documents. In the patent law treaty and the detailed rules for the patent cooperation treaty drafted by the World Intellectual Property Organization (WIPO), the requirements of electronic application have been put forward and its legitimacy has been confirmed. The Japanese Patent Office is the first successful implementation of electronic application system. Since then, many countries have started to follow and consider the paperless patent literature as the development direction.

In China, although intellectual property system has just only 20 years of history, the speed of development is very fast. Take year 2012 as example, it is reported that China ranks the first in the world in the number of patent application with 635,000 pieces, and the fourth in the international patent application with 19,926 pieces; China has reached 3.23 pieces per million population in terms of invention patent ownership; the number of trademark registered is 1,648,000 pieces and the cumulative effective registrations of trademark continue to rank the first in the world; the number of works registration is 688,000 pieces and the number of software copyright registration is 139,000 pieces and both break the record[1].

At present, the competition of intellectual property industry is very fierce, and the intellectual property agencies are usually small and medium-sized enterprises (SMEs). With the development of information technology and the increasing economic globalization, the intellectual property agencies want to promote publicity and provide information services, expand scope of business and international market, promote informatization construction and improve enterprise competitiveness through network. The role of website in the enterprise development has received more attention of SMEs. Under the e-commerce environment, how to establish website and play its role fully will have the vital significance to realize the rapid development of intellectual property agency industry.

Now, the research perspectives on intellectual property could be summarized as follows:

One of the perspectives is based on the construction of network platform for intellectual property information. Xiaoqing Feng[2] pointed out that the construction of network platform for intellectual property information is

an important part of enterprise information construction, and is also an important safeguard for the enterprise to develop technological innovation activities and implement intellectual property strategy. Yu Jiang and Ye Chen[3] adopted the social network analysis which combine patent and trademark application data between 2000-2010 to analyze the network structure. Wei Huang, Ji Li and Wentao Wang[4] studied the network influence of provincial intellectual property office website of China by using link analysis.

The second perspective is based on the intellectual property culture. Fang Yao and Hua Liu[5] thought the practice of intellectual property culture in China mainly rely on the government. Hua Liu and Ying Zhou[6] structurally reflected current status of Chinese social public's IP protection awareness.

The third perspective is based on the information service system of intellectual property. Xiaofeng Yang[7] analyzed the current status of patent information services, problems and solutions based on a website sample survey method. Xiaoqing Feng[8] analyzed the present situation and problems of the service system construction of intellectual property in China.

Although the research on intellectual property has quite a few, the research involving the enterprises of intellectual property agency is comparatively few, especially website construction of intellectual property agencies. The agency work of intellectual property plays an important role in promoting the construction and development of the intellectual property system. It is necessary to analyze and study the present situation of website construction of intellectual property agencies, its problems and solutions.

This paper is organized as follows: First of all, it introduces the background of the research; secondly, it explains research content and object, data collection and analysis method; thirdly, it analyzes the survey results; fourthly, it provides some suggestions for enterprises to prompt and improve their website construction; at last of the full text, it comes up with the foresight and future work.

II. RESEARCH CONTENT AND METHOD

A. Research Content

E-commerce is becoming more and more popular in the world because of its convenience and without time and space limitation. Today, e-commerce has become a jot point of economy. Either the traditional manufacture or the new industry takes e-commerce as a new commercial mode of business operation, and invests to establish website, so as to engage in commercial activities. Because of the improvement of enterprise operation environment and lower cost operation, e-commerce has been adopted by more and more SMEs to face market challenges and opportunities.

The enterprise website is an important window for external publicity through network, and an important platform to provide services. The website target audiences of intellectual property agencies usually have

professional background, so the ability of website information and service is more targeted. Investigation on the present situation of website construction can provide better understanding of the network application of intellectual property agency industry. Some reasonable suggestions are put forward to solve the problems existing in the process of website construction and promotion, so enterprise websites can provide better service for the development of intellectual property agencies.

Based on literatures of website evaluation research and principles of measurability, integrity and feasibility, this paper carries out the research from the following aspects, as shown in Table Ⅰ.

Website domain name and age: website domain name and website domain name age.

Website information service: website language, website column, website function, sitemap, page three elements, website traffic statistics and Baidu snapshot date. The website functions mainly include data

TABLE I.
THE RESEARCH CONTENT

Aspects	Items
Website domain name and age	Domain name
	Domain name age
Website information service	Website language
	Website column
	Website function
	Sitemap
	Page three elements
	Traffic statistics
	Baidu snapshot date
Website influence	Website ranking
	Google PR
	Baidu inclusion
	Number of inverse link

download, online consultation, message board, customer management, search function, business information, enterprise e-mail, online application and internal office, etc. The page three elements include title, keywords and description.

Website influence: website ranking, Google PR, Baidu inclusion and number of inverse link.

B. Research Object

Being the national cultural center with the most concentrated colleges, Beijing is the center of education, decision-making, high-level talents training, modern education thought and mode, international education exchange, scientific education research and education resource. In recent years, the intellectual property agency industry has developed continuously along with the market demand of Beijing. The development of intellectual property agencies in Beijing is faster than other parts of China. Beijing has become the most intensive distribution area of national patent service organizations and professional talents. It is reported that the total of patent application in Beijing was 546,113 pieces which is the largest in China by the end of 2012[9],

and the number of patent agents in Beijing accounts for about one third of the country's total. By the end of June 2013, there had been 255 patent agencies in Beijing which had registered on the website of State Intellectual Property Office of the People's Republic of China (http://www.cpo.cn.net/). Among them, 205 agencies (80.4%) have independent website domain names, and the rest have either established websites on the third-party platform or have yellow pages. Thus this paper selects the patent agencies in Beijing whose websites have independent domain names as research objects.

C. Data Collection Method

With the help of some research tools, the survey on present situation of website construction of patent agencies in Beijing was made on December 12th-16th in 2013. The work on data collection was done by six professionals, and three professionals in a group did a sample survey together in order to prevent deviation. Data collection mainly divides into the following three steps:

Most of website domain names are obtained through the website of Beijing intellectual property office (http://www.bjipo.gov.cn/) and others are found by Baidu search.

The information including website language, website column, website function, sitemap and traffic statistics, is collected by accessing website directly. The information including title, keywords and description of homepage is gathered by viewing source file of page. The entry is recorded as 1 if the website has the related content; otherwise it is recorded as 0.

The information including website domain name age, website ranking, Baidu snapshot date, Google PR, Baidu inclusion and number of inverse link is gotten by the tools (http://tool.chinaz.com/).

D. Data Analysis Method

The statistical analysis software SPSS is used to analyze the survey results and some methods of statistical analysis are adopted, such as contingency analysis, variance analysis and T-test analysis.

Firstly, the overall situation of website construction is analyzed by calculating the proportion of each option that is the proportion of 1.

Secondly the differentiation analysis of website construction is made. Enterprise websites are divided into four groups according domain name age, that is, within 3 years (represented as a1), between 3 and 5 years (represented as a2), between 5 and 10 years (represented as a3) and more than 10 years (represented as a4). Then the contingency analysis between domain name age and information service is made; the variance analysis between domain name age and Google PR is completed; the T-test analysis between information service and Google PR is conducted.

III. RESULTS AND ANALYSIS

A. Situation of Website Construction

- Website domain name and age

Domain name is the bond that links the enterprise and internet, and the sign of enterprises on the internet. It plays an important role in identification of enterprise website. The domain name should not only relate with the industry, but also be in accordance with the marketing goal of enterprise. The survey indicates that there are 70 websites (34.1%) containing the IP (Intellectual Property) characters in the domain name.

Domain name age refers to the period from registration time to query time of domain name. It directly affects the trust of domain name, and domain names of 10 years old have a big advantage[10]. The survey shows that the website domain name age of patent agencies in Beijing is comparatively long, with websites whose domain name age above 5 years accounting for about 70%. There are 52 websites (25.3%) whose domain name age is above 10 years, 92 websites (44.9%) whose domain name age is between 5 and 10 years, and 61 websites (29.8%) whose domain name age is less than 5 years. The website domain name age of Beijing Deheng law offices (http://www.dhl.com.cn/) has a history of nearly 17 years.

- Website information service

The statistical results of website information service are shown in Table II.

Enterprise websites usually operate in multi-language to provide prosecution, litigation, transaction and consultation services relating to patent, trademark, copyright and other intellectual property related matters

TABLE II
THE STATISTICAL RESULTS OF WEBSITE LANGUAGE, FUNCTION AND PAGE ELEMENTS

Items		Number of agency	Percentage (%)
Website Language	Chinese	202	98.5
	English	182	88.8
	Japanese	103	50.2
	Traditional Chinese	21	10.2
	German	4	2.0
	French	4	2.0
	Korean	44	21.5
	Russian	3	1.5
Website function	Data download	117	57.1
	Online consultation	48	23.4
	Message board	80	39.0
	Customer management	24	11.7
	Search function	65	31.7
	Business information	34	16.6
	Enterprise e-mail	17	8.3
	Online application	3	1.5
	Internal office	9	4.4
Page elements and other information	Title	195	95.1
	Keywords	111	54.1
	Descriptions	102	49.8
	Traffic statistics	20	9.8
	Sitemap	26	12.7
	Independent title	93	45.4

for customers from China and around the world. There are 182 websites (88.8%) with more than 2 languages, 113 websites (55.1%) with more than 3 languages, 51 websites (24.9%) with more than 4 languages, and 8 websites (3.9%) with more than 5 languages. It is shown that patent agencies in Beijing usually attach great importance to multi-language websites construction because they usually have foreign business and expect to develop international market through network. Yet without taking into full account of users' habits of different languages when agencies plan and construct their multi-language websites, the style and design of these websites are almost the same.

The enterprise websites of patent agencies in Beijing generally have the columns of about firm, company news, patent, trademark, copyright, regulation, professionals, links, download, contact us, etc. The column structure of website is simple. The column structure of enterprise website of Beijing Huicheng Zhilin intellectual property agent co., Ltd (http://www.zhilinlaw.com/) is shown in Fig.1.
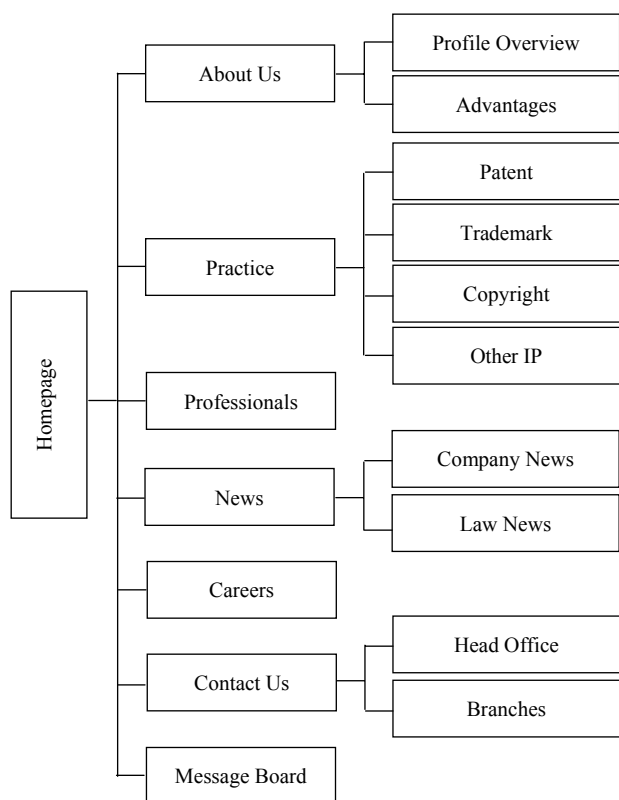

Figure 1.   The main website columns of Huicheng Zhilin intellectual property agent co., Ltd.

The statistical result of website functions, as shown in Table Ⅱ, demonstrates that enterprise websites of patent agencies in Beijing have only basic functions, such as data download, message board and search function. There are only 3 websites with online application platform; they are the website of Beijing Chofn intellectual property agent co., Ltd (http://www.chofn.com/), the website of Beijing Eastking intellectual property right agent co., Ltd (http://www.eastking.net/) and the website of Beijing DrugIP intellectual property agent co., Ltd

(http://www.drugip.com/). There are only 26 websites (12.7%) integrating with enterprise e-mail or internal office system. The patent agencies in Beijing need to improve their website functions further.

Page title, usually displayed at the top of browser window, and whose role is to prompt page theme to search engine, is an important part of the search result. As shown in Table Ⅱ, most of website pages have set up page titles and there are only 45.4% websites whose each page is put up the independent title, and most of page titles are only the name or abbreviation name of enterprises. The survey indicates that enterprises do not conduct in-depth study on search engine and the page title need to be improved, especially the title of each page.

Keywords are used to specify page theme, and are the basis for search engine to judge page content. As shown in Table Ⅱ, there are only 54.1% websites whose homepage set up keywords. This displays that about 46% websites are without keywords, and the websites with keywords also need further improvement in keyword choice.

Description is used to illustrate the main content of website. It affects hits and it is also one part of the search result. As shown in Table Ⅱ, there are only 49.8% websites whose homepages have description information, while other 50.2% do not.

Website traffic is an important index to measure a website, and it can help enterprises to analyze the detailed data of visitors so as to increase website traffic[11]. The traffic statistics software can be installed to obtain the geographical location, source and numbers of visitors. As shown in Table Ⅱ, there are only 9.8% websites with traffic statistics software. This reflects that enterprises do not attach enough importance to traffic statistics and data analysis of visitors.

Sitemap is a navigation file generated according to structure, framework and content of website, and it is an indispensable factor of website optimization. Sitemap may facilitate spiders of search engine to grab pages and clearly understand website architecture, and it can increase numbers of important pages inclusion. As shown in Table Ⅱ, there are only 12.7% websites with sitemaps. This indicates that enterprises need to strengthen the consciousness of submitting sitemap to search engine.

Baidu snapshot refers to a backup file of pure file generated when a page is included. Baidu snapshot date has become one of the criteria to evaluate the importance of website. Baidu snapshot is associated with update frequency of website. Usually website update faster, and so does Baidu snapshot. The better snapshot date is always within 3 days. The survey indicates that there are 52 websites (25.4%) whose Baidu snapshot date is within 3 days; 40 websites (19.5%) whose Baidu snapshot date is from 3 to 30 days; 35 websites (17.1%) whose Baidu snapshot date is from 30 to 90 days; 78 websites (38%) whose Baidu snapshot date is above 90 days. These data show that the enterprises' less emphasis on website optimization have resulted in little unique content on their websites and the need to improve it.

- Website influence

Alexa[12] ranking can reflect the influence of website. One of the website optimization goals is to improve website ranking. The survey indicates the comparatively low website ranking of patent agencies. The website ranking of Beijing Chofn intellectual property agent co., Ltd (http://www.chofn.com/) is the highest in patent agencies in Beijing, with its alexa ranking is 221,728.

Google PR (Page Rank) is a method for evaluating the importance of page and is used to represent page level. PR value is from 0 to 10; the higher the PR value is, the more important the page is. Usually the PR value above 7 illustrates that the website is very popular, and PR value of 4 means the website is good[13]. The survey shows that page level of patent agencies in Beijing is not high, with the PR value of 148 websites (72.2%) under 4; only 3 websites' PR value is 6, the highest figure. They are the website of Beijing Shengfeng law firm (http://www.lawyer8.com/), the website of Beijing Yingke law firm (http://www.yingkelawyer.com/) and the website of Beijing Zhongyin law firm (http://www.zhongyinlawyer.com/).

Baidu inclusion refers to the collected data of each page snapshot of a website, and it directly reflects the content and position of the website. The survey as shown in Table Ⅲ indicates that Baidu inclusion quantity of patent agencies in Beijing is comparatively low and there are 89.8% websites whose Baidu inclusion quantity is under 1000. The Baidu inclusion quantity of Bejing Deheng law offices (http://www.dhl.com.cn/) is up to 38,000 which is the highest in patent agencies in Beijing. The lower Baidu inclusion quantity reveals the slow updating of website information and the poor website navigation.

The number of inverse link is also an important part of the search result. External link pointing to the website of a patent agency is reverse link. The certain quantity and

TABLE III
THE STATISTICAL RESULTS OF BAIDU INCLUSION AND NUMBER OF INVERSE LINK

Items		Number of agency	Percentage (%)
Baidu inclusion quantity	≤1000	184	89.8
	1000~5000	14	6.8
	5000~10000	2	1.0
	>10000	5	2.4
Number of inverse link	≤100	201	98.0
	>100	4	2.0

quality of reverse link is important to obtain good ranking, which can bring traffic and improve website ranking. The survey as shown in Table Ⅲ demonstrates that numbers of inverse link of patent agencies in Beijing are very low and there are only 4 websites whose numbers of inverse link are above 100, they are the website of Beijing Shengfeng law firm (http://www.lawyer8.com/), the website of Beijing Yingke law firm (http://www.yingkelawyer.com/), the website of Beijing Dacheng law offices (http://www.dachengnet.com/) and the website of Beijing Chofn intellectual property agent

co., Ltd (http://www.chofn.com/). The number of inverse link of Beijing Chofn intellectual property agent co., Ltd is 255, which is the highest in patent agencies in Beijing. This indicates that the construction of inverse link is ignored and the quality of inverse link is not very high.

B. Differentiation Analysis of Website Construction

- Website domain age and information service

The result of contingency analysis between domain name age and website information service is shown in Table Ⅳ. The result indicates that there is no significant difference between different domain name age and website function (p>0.05), with the only exception of download function (P<0.05). The reason may be that new websites are always willing to imitate mature well-known websites due to lack of experience. The websites whose domain name ages are more than 10 years old are more willing to provide download function for users because these websites usually have accumulated abundant network resources.

There is no significant difference between different domain name age and page three elements (p>0.05). In general, the longer the website domain name age is; the more attention to content construction is paid. But the actual situation is not so, and the possible reason is that although patent agencies in Beijing set up page elements

TABLE IV
THE RESULT OF CONTINGENCY ANALYSIS BETWEEN DOMAIN NAME AGE AND INFORMATION SERVICE

Items	Website domain name age				
	a1	a2	a3	a4	$P(\chi^2\text{Test})$
Data download	47.2%	36.0%	59.8%	69.2%	0.025
Online consultation	11.1%	16.0%	30.4%	23.1%	0.096
Message board	27.8%	28.0%	43.5%	44.2%	0.208
Search function	22.2%	32.0%	27.2%	46.2%	0.061
Title	100%	96.0%	93.5%	94.2%	0.473
Independent title	36.1%	48.0%	50.0%	42.3%	0.511
Keywords	69.4%	44.0%	51.1%	53.8%	0.189
Description	58.3%	36.0%	47.8%	53.8%	0.329

a1, a2, a3, a4 represent <3years, 3~5years, 5~10years and >10years respectively.

at the beginning of website construction, they do not pay attention to optimizing page elements and content due to lack of awareness of website promotion.

- Website domain name age and PR value

The result of homogeneity test of variance (F-test) between domain name age and PR value is shown in Table Ⅴ, and the result of least significant difference (LSD) between domain name age and PR value is shown in Table Ⅵ.

The results show that there is a significant difference between different domain name age groups and PR value (P<0.05). Usually the older domain name age can bring more traffic and be very beneficial to improve website ranking in search engine.

- Website information service and PR value

Enterprise websites are divided into two groups according Google PR value. As shown in Table Ⅶ, the

TABLE V
THE RESULT OF VARIANCE ANALYSIS BETWEEN DOMAIN NAME AGE AND PR VALUE

	Items	SS	df	MS	F	P
PR	Inter-group	122.160	3	40.720	25.817	0.000
	intra-group	317.030	201	1.577	-	-
	Total	439.190	204	-	-	-

TABLE VI
THE RESULT OF LSD ANALYSIS BETWEEN DOMAIN NAME AGE AND PR VALUE

(I)Website domain name age	(J)Website domain name age	MD(I-J)	STDEV	P
a1	a2	0.984*	0.327	0.003
a1	a3	1.705*	0.247	0.000
a1	a4	2.271*	0.272	0.000
a2	a3	0.721*	0.283	0.012
a2	a4	1.287*	0.306	0.000
a3	a4	0.566*	0.218	0.010

a1, a2, a3, a4 represent <3years, 3~5years, 5~10years and >10years respectively.
*. $\alpha = 0.05$.

result of T-test indicates that there is no significant difference in page three elements in terms of different PR groups ($p>0.05$). This result is consistent with the result of differentiation analysis between different domain name age and page three elements. But the actual situation is not so, and it is possible that enterprises do not pay attention to content optimization due to lack of the consciousness of website promotion.

For different PR groups, there are no significant differences in online consultation function and message board ($p>0.05$), while there are significant differences in

TABLE VII
THE RESULT OF T-TEST ANALYSIS BETWEEN PR VALUE AND INFORMATION SERVICE

Items	Google PR value		
	<4	≥4	P(T-test)
Data download	52.0%	70.2%	0.019
Online consultation	23.0%	24.6%	0.811
Message board	38.5%	40.4%	0.810
Search function	27.0%	43.9%	0.020
Title	95.3%	94.7%	0.687
Independent title	43.9%	49.1%	0.184
Keywords	55.4%	50.9%	0.097
Description	50.0%	49.1%	0.265

data download function and search function ($P<0.05$). It is possible that websites with higher PR value are more willing to provide download and search function for users because they have rich network resources.

Through the investigation, the present situation of website construction of patent agencies in Beijing has been understood. The investigation shows that the domain name age of enterprise websites is comparatively long; the website language is rich, and the website function is not very perfect; the Google PR value is relatively low, the website content updates slowly, the website navigation is not clear, and the quality of reverse

link is not high. The difference analysis on website construction indicates that different domain name age has a little effect on page three elements and website function except download function, but there is a significant difference in Google PR value; the page three elements and the website functions have a little impact on Google PR value except download function and search function. In short, most of the websites of patent agencies in Beijing are information release websites with functions of data download, message board and internal search; the comprehensive quality of websites is not high; the website influence and radiation is comparatively small and the website usage is comparatively low.

IV. DISCUSS AND SUGGESTIONS

In view of the existing problems, some advices will be put forward through the reasons analysis.

A. Consciousness of E-Commerce and Management

E-commerce can provide substantial benefits to SMEs via improved efficiency and raised business volume. It is very important that e-commerce can give a competitive advantage, and it can help strengthen market position and open up new business opportunities to improve profits.

The consciousness of management and e-commerce of enterprises is relatively backward. Even in today, some business decision-makers think that e-commerce means only sending business messages by e-mail, or just having a domain name registered on the internet, or creating a website at www. In fact, e-commerce is far more than that, it refers to a series of business activities in which inquiring, offering, ordering, marketing, advertising, paying and so on are handled or arranged through internet, intranet and extranet, etc. In addition, on the management side, there still exist some problems, such as duties and division of labor not clear, no person for network, and these problems will restrict the development of the enterprise.

The intellectual property agencies in Beijing should enhance the awareness of e-commerce. Enterprises also should apply a variety of ways to promote website, not only the ways of internet, such as search engine optimization, reciprocal linking, but also the ways of traditional mass media, such as television and print advertising. The information management system of intellectual property agencies will be developed to realize the standardization of process management including patent application, fee payment, query of intellectual property review status and legal status.

B. Website Information Service

Based on the previous survey, it is shown that the majority of websites of patent agencies in Beijing belong to information release websites, that is, the primary role of website is to publicize business philosophy, promote corporate culture and establish corporate image. Therefore, from the aspect of website information service, patent agencies in Beijing need to pay more attention to the following questions:

- Paying attention to users' habits

With the acceleration of internationalization, multi-language website has become an indispensable part of an enterprise. The website design style of different regions or countries varies greatly according to different users' habits. The page layout of Chinese websites is usually symmetrical and looks a bit complicated because of using more colors, pictures and animations. While those websites in European and American countries are usually concise because of using more text. So patent agencies in Beijing should pay considerable attention to users' habits of different areas and try to display pages in different styles and languages.

- Paying attention to information resource management

Now only a few enterprises use management system to manage information of patent, trademark, copyright and customers. Therefore, patent agencies in Beijing should speed up informatization construction of enterprises and use management system to manage enterprise customers and website content, and connect internal information with external information to enhance the working efficiency of enterprises through building network information platform, thus to achieve the maximization of efficiency and effectiveness.

Patent agencies in Beijing should reinforce the customer relation management, do market research on customer satisfaction, analyze the question feed-backed in the BBS, e-mail and MSN, deal with the complaints of customers effectively, and improve the communication with customer.

- Paying attention to page content quality

Page content is the most active factor in website and its role is to meet users' demands for information[14,15]. For any website, content quality is the core factor of website effect, and a website with high quality original content and rich information can usually get more traffic. With the rapid development of internet and the increasing number of users, the construction and maintenance of website content are also becoming more and more important. Patent agencies in Beijing should pay attention to the novelty and originality of website content, timely updating and regularly maintaining to avoid misleading of users by out-dated information, and attract more users to click and browse.

C. SEO Strategy

Search Engine Optimization (SEO) refers to using reasonable means to make the basic elements of website more suitable for search engine, more friendly to users, and to be collected and prioritized more easily by search engine[16]. SEO plays an important role in website promotion. Enterprise websites using SEO techniques can display their products and services to target customers and potential customers better, enhance enterprise popularity and improve enterprise influence, bring more customers for enterprise. The survey indicates that patent agencies in Beijing have not been fully aware of the necessity and importance of SEO to enterprise website, and have not yet implemented SEO strategy. Therefore, patent agencies in Beijing need to strengthen the consciousness of SEO and implement SEO strategy

actively in order to provide users with better information and services.

- Optimizing page three elements

Each page can be set unique and different title tag. The homepage title should follow the principle of "site name + keywords", and the column title should follow the principle of "column name + site name". Setting different titles will help websites increase exposure rate. The homepage title can use patent agency name or website name, and other page titles can be associated with the content of each page. At the same time, it should be paid attention to controlling the length of title, with no more than 30 Chinese characters.

Choose the right keywords. Put important keywords in the front of the title and pay attention to the numbers of keywords in the title and their occurrence frequency in the article. Better choose no more than 5 keywords and keep each keyword in less than 8 Chinese characters.

The statements of description information should be smooth, with appropriate keywords and no more than 80 Chinese characters. Different description information should be set up according to different pages of enterprise website. Description information can include the introduction of products and services, the company features and advantages, and contact information. It is better to use creative but not exaggerate statement to optimize description information and attract more possible users to access page.

- Optimizing website structure

Website structure tends to be flat structure which is beneficial for spiders of search engine to crawl and grab. Keep website directory as simple as possible with no more than 3 layers. Website column is a tree-like structure and website navigation should be clear. It is best to add text descriptions for pictures. To make link for each path will be conducive for spiders to find related pages quickly.

It is better to submit a sitemap actively to search engine. Search engine can use the sitemap to understand the internal structure of website clearly. If there is any change in the website, the sitemap will inform search engine immediately, which can improve the speed of page inclusion.

- Optimizing website link

Internal link refers to links between pages inside a website, and the reasonable website link can improve page inclusion and PR value. Internal link should try to use the text instead of image, flash and client script. It is very important to ensure that the internal link has unique URL, and each page has a link to homepage. In addition, according to Google rules, the number of internal link should be kept under100.

The large number of external link can not only raise website ranking, but also bring more visitors to website indirectly. Establish exchange links to some related websites with higher PR value, but pay attention to the quality and quantity of exchange links and keep the number under 40. In addition, it is better to return partner's website irregularly to check the link to your website.

Ⅴ. Conclusion

The present situation of website construction of intellectual property agencies in Beijing is investigated from the aspects of website domain name and age, website information service and website influence. The main problems existing in the process of website construction and promotion are analyzed deeply. Then, some reasonable suggestions are put forward based on the investigation research. These research results can guide intellectual property agencies to establish their websites and play their role fully.

The investigation and study obtains the certain valuable conclusions, but there are still some limitations: the research objects are limited to patent agencies in Beijing and the research scope is small. The present situation of website construction of intellectual property agencies in other provinces and cities needs further research. All in above, we can believe under further research and practice concerning enterprise websites, the intellectual property agencies will have more achievements and contributions to the applications of e-commerce in Internet.

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