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WEB N.0, THE NEW DEVELOPMENT TREND OF INTERNET

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Abstract: This article analyzes the Internet basic theory, the network foundation environment and the user behavior change and so on, Which analyzes the development tendency of existing partial Internet products in the future Internet environment. The article also hot on the concept of cloud computing, Demonstrates the relation between Cloud Computing and Web 2.0 from the angle of Cloud-based end-user applications, The possibly killing application in the future was discussed.

Key words: web2.0, SNS, P2P, Long Tail, Blue Ocean Strategy, Cloud Computing, e-zine, IM,HTML5

Nobody can forecast whether the concept of web N.0 will be sensationalized. In fact, it does not matter whether the concept of web N.0 will come into being. What is important is that the development of the internet will not slow down and we can not exactly forecast the development tend of the future internet. However, it is certain that the future development of the internet will go beyond our imagination.

As we know, from web 1.0 to web 2.0, we have experienced the development from passively receiving information to initiatively creating information. Web 2.0 is only a symbol indicating the changing internet. Its most predominant characteristic is individualization and decentralization. Besides, web2.0 emphasizes socialization, opening, share, participation and creation. What will happen in days of the foreseeable web N.0? In this paper, the author has briefly explained the variance of some basic environment of

the internet (including some basic theories and network hardware), analyzed the possible expression forms of some existing internet products and programs in the future internet environment and forecasted the new applications which are likely to come into being.

1. THE VARIANCE OF THE BASIC ENVIRONMENT OF THE INTERNET

1.1 The introduction and development of basic theories and concepts

1.1.1 Six Degrees of Separation has been introduced into the internet.

We According to the Six Degrees of Separation principle, any two individuals in the world can find the other through at most six people, no matter whether they know each other. At present, the theory functions as a theoretical base of constructing community, telecommunication and cooperative products.

1.1.2 The application of the Long Tail theory.

The basic principle of the Long Tail theory: if the channel of storage and circulation is large enough, the market share possessed together by the unpopular products or products with less demands can compare with that of a few popular products. That is, innumerable small markets will pool the market energy which can be equal to the mainstream market. The internet provides a good ground for the application of the Long Tail theory, which has become a new type of economic mode and been applied in the network economy with success. The websites of Google including Adsense, Taobao and Amazon are successful and typical cases of Long Tail theory.

1.1.3 The form of the new thought of Blue Ocean Strategy

The Blue Ocean Strategy is 'innovation-centered', which emphasizes searching for, or innovating brand-new market space and business opportunities untainted by competition, that is, creating new changes through exploring new thoughts to discover particularities of the market and create

new market space without competitors. In practice, the so-called new market is new to us, but it may have existed since a long time ago. But we simply did not explore it.

1.1.4 The speed theory and the elevator theory

The internet is an economy of speed. As for middle and small-sized enterprises and individuals, they may have no powerful techniques, but they always can sniff out opportunities earlier for their small size and less links of decision making. Speed is not enough to get them success. They also have to launch their products at a suitable time. As we know, in a full elevator, the later person getting into the elevator possibly arrives earlier when the elevator is opened. The theories of speed and elevator show that, if you want to get a success, you must be fast; however, it is possible that the person who moves later arrives early. It is crucial that you have to arrive there at your speed before the elevator is closed.

1.1.5 The emergence of the concept of cloud computing

Cloud computing is the development result of distributed processing, parallel processing and grid computing or it can be regarded as business realization of these computer science concepts. The basic principle of cloud computing is to distribute the computing resources and storage resources into a large number of distributed computers instead of local computers or remote servers. Thus, users can obtain the needed resources (hardware, platform, software) through the network in the mode which is demanded and can be easy expanded. Cloud computing is characterized by the following aspects: its super large scale, for example, the "cloud" some enterprises established is as many as millions of servers; virtualization, the users do not have to care about the specific running location of applications; high reliability, it is more reliable to use cloud computing than local computers; high expansibility, it can meet the demand of application and the increase in the scale of users at any time; low price, the common users can enjoy the top IT technology even with less cost. Both cloud computing and web2.0 is user-centered. Cloud computing emphasizes the concept of service, while web2.0 focus on share, user driver and value creation of users. Cloud computing will provide better platform for the users, besides, the web2.0 applications based on the cloud computing will be driven by more users, boosting the development of cloud computing.

1.2 The improvement of internet infrastructure and the reduction of the technique and capital barriers

The broadband has been popularized. With the development of infrastructure, now in China the most popularized mode of ADSL broadband access has been upgraded to 8Mb from 512Kb. Besides, CNGI, the largest pure IPV6 network of the second generation, has been initially founded in China. If it is turned into civilian usages from scientific research, it can be imagined that the problem of broadband bottleneck in the existing network application will be settled. Based on the new broadband, the designers of internet products will not have to consider the broadband restriction when releasing new applications. What they only have to think about is market demand. Therefore, new killer-grade applications will come to the fore continuously.

The rapid development of infrastructure has reduced the charges of virtual hosting and surfing the internet. Besides, the fast increasing amount of registering domain names makes the register fee of single domain name go down in a continuous manner. Thus, netizens do not have to worry about high charges of surfing the internet. They can obtain their own web space and individualized domain names just as easily as eat foods and dress them. The most important is the reduction of technique barriers, for which common netizens can easily establish their own websites and blogs by the means of utilizing open source foundation programs.

1.3 The changes of user's behaviors

The behaviors of internet users change from curiosity and surfing to building their own websites and writing Blogs, from searching for information to sharing information. The Web1.0 with the representation of portal sites has created a large number of users. Among them, there exist new netizens with special demands and habits. Besides, the new type of internet emphasizing opening, share, participation and creation will attract and guide more senior internet users to join the team of constructing the internet and sharing information.

1.4 The popularity of the opening spirit and the emergence of copyright agreements like CC

Open source program helps many common internet users without technical background to easily set up their own websites and Blogs. the open content typical for MIT open course makes the user can easily access to resources, and numerous open API with the representation of Google Map

API not only enable the web to have a better connection, but also brings convenience to the creation of users. What's more, the emergence of the copyright agreements such as GPL, CC and Copyleft etc. has ensured the possibility of Web2.0 and accelerated the innovation and the transmission of knowledge.

1.5 The popularity of the safe and operational online payment

The characteristic of the internet is that users can complete much work without going out just through clicking the mouse. However, the benign development of the internet can not be separated from the support of funds, because the internet community is just the same as the realistic society， where both transaction and capital circulation occur. The popularity of safe and operational online payment represented by the online payment brands, such as Paypal, Alipay， 99Bill etc., has strongly supported the development of personal e-commerce, which really activates the internet.

2. ANALYSIS AND FORECAST ON THE FUTURE DEVELOPMENT TREND.

2.1 The electronic magazines imitating paper-based journal format will disappear, and the plane medium will transfer to the internet in a comprehensive manner.

Actually, The existing products of electronic journal is immature and unscientific, because they only change the existing format of printing medium into an electronic one, applying sound and animation to enhance the sensory manifestation. In order to indulge the realistic browsing mode, the existing electronic journals intent to imitate the reading custom of the current plane magazines， which not only makes no practical sense but also restricts the development of electronic magazines. Besides, It ignores the diversified expression skills that computer is born with and the desire of readers for fresher and more exciting representing modes. As for common electronic journals, users often have to download exe files to the local, and then they can view them. However, as the users increasingly show less trust in the .exe files in the internet, they will be more and more cautious to download. It can be forecasted that in the near future, the existing electronic magazines

imitating paper-based journal format will disappear. The internet, as a new type of media replacing paper, demands a new media form which adapts to its characteristics of opening and share.

The existing plane magazine and newspaper will transfer to the main war field of the internet in a comprehensive manner. A new type of media will come out, and the network magazine and newspaper will become more lifelike through the diversified representing skills of computers. With the popularization of online payment and the browsing techniques on controllable content being really mature, it can be forecasted that, in the near future, common users will possibly subscribe web newspaper and magazine. The possible problem is that, as more and more users themselves function as medium contributing their information and knowledge, users will not be willing to purchase the web newspaper and magazine with so much available internet information. Therefore, the plane medium used to mutual-way benefits (purchase fees of users and the advertising fees from enterprises) may possibly return to the old way of only charging ad fees.

2.2 Instant Message software will integrate the functions of voice telephone and E-mail and virtual reality technology is applied in the Instant Message software. Meanwhile, the status of E-mail and common fixed telephone will be weakened and finally they will vanish.

The function of video chat in Instant Message software will be developed in great progress. With the application of virtual reality, the chatting two parties even can feel touching the other. In addition, as more cities have paved WIFI hotspots, smart phones with WIFI functions can realize free voice communication through installing Instant Message software for phones. The Instant Message software which integrates better offline message and voice functions will drive E-mail and common fixed telephone to the margin. Users will be willing to use less software and account number to accomplish more communication tasks. At present, Google Wave which has not been formally released is doing available exploration in this aspect.

2.3 The boundary between browsing software and client software will vanish.

As a matter of fact, Microsoft is undertaking an exploration in this aspect at the operating system level. Although it is still distant from the

formal application of XAML, under the existing technical conditions, now much browser application software has come into being, for example, the Thunder has released website download software. Besides, various manufactures of anti-virus software have released their own online anti-virus products for browsers. Google has integrated online Gtalk in Gmail and released Google Docs through purchasing writely. In fact, this paper is written in the online office. The realistic significance of the online office is that we can conduct online writing anywhere and anytime without taking with mobile storage equipment. What's more, the online office supports multi-people online cooperative writing, which is very convenient. What is more important is that HTML5 standard is more and more close to its release, which will provide faster response time of JAVAScript, more perfect semantic labels, stronger chart disposal and webpage interaction based on HMTL. Furthermore, it also can provide API for the development of the third party. With the foresaid strong webpage standards, the development of the application software based on browsers will become easier. We have reason to believe that more and more software will come into being in the form of browser.

2.4 The existing news portals will disappear and the search engines will shoulder more functions.

In the future, nobody will be wiling to pick and read news from the ads on the distributing centers like Sina. More users will be distributed to pages of search engines where the engines select news automatically and news aggregation websites like Digg.com(Digg differs from the traditional news websites where editors select the most attracting news information on the day, while the news on Digg.com are completely dug from each corner of the internet). It can be forecasted that search engine possibly will release a mode of users digging news (it is learned from Digg) on engines selecting news automatically. Certainly, products like the existing Quick News of Google and the products of e-mail news subscription of Baidu will be popularized widely. And the subscription mode of RSS news will possess certain market.

During the early development stage of news portals, people of Sina cooperated with various traditional medium to search for news, but up to the later stage, because of its predominance of scale and the form of user monopolization, more large and small medium initially turn to Sina for cooperation on news. With the alteration of the user's behavior mode, the influential force of portals will decline; then, more and more traditional medium will gradually come to their sense and will no longer leach on to the channels of news supermarket like Sina. They turned to cooperating with

search engines like Baidu. As a matter of fact, the news channel of search engines will serve as a transfer, which guides users in entering the pages of news providers while helping users obtain news. Besides, it helps traditional medium websites increase their flow, which is a win-win mode.

2.5 More powerful application of P2P will appear in the next generation of internet based on IPv6.

The basic characteristic of P2P technology is distributed and decentralized. Each node of P2P functions as both client end and server. The technical characteristics of P2P technology happen to have the same view with the developing internet spirit, which is now an extremely powerful and arrogant technology on the internet. P2P flow which MP3 and video documents share and download has become the main body of the flowof broadband users. Instant Message software and internet phone based on P2P (like Skype) develop fast and P2Pflow medium (like pplive, QQ live, etc.) are springing up. P2P cooperative computing and grid are in the ascendant. Besides the mode of client/server, P2P will become another main mode of the internet. The emergence of Thunder, a kind of download software applied with P2P technology, has rapidly triumphed over various existing download software and become the most popular download software now. It is believed that, with the popularization of IPV6 in the future, the problem of honesty and security stopping the development of P2P will get solved. In the future, new top-grade internet applications will come into being in the field of P2P.

2.6 New internet products will be applied in the area of enterprises, because cloud computing helps each enterprise contact the top IT technology at a very low cost.

Many manufactures have observed the new development trend of the internet. Lots of enterprises have started to try to communicate better with users through establishing enterprise blog, which covers the release and popularization of products, clarifying the market information, exposing the process of research and development, and the publication of enterprise culture. Besides, more enterprises get closer to consumers through establishing enterprise blog, building up an new marketing image with an easy-going characteristic. The new enterprise network marketing mode will continuously get rid of the stale and bring forth the fresh. It can be forecasted that, with the persistent expansion of the development momentum of individual blog, enterprises will increasingly purchase and apply the soft ads

in the content of individual Blogs. The devolution of public praise based on the internet will bring enterprises the most effective growth in payoff. In addition, the development of cloud computing is attracting some attention of enterprises. The novelty of cloud computing lies in that it almost can provide infinite cheap memory and computing ability. The technology of cloud computing will help middle and-small-sized enterprises greatly lower their cost. The newest and most powerful IT technology will no longer be only possessed by large-sized enterprises. Cloud computing helps each enterprise contact top IT technology at a very low cost.

2.7 SNS websites have become the internet sites with the largest amount of browse.

At present, great progress has been made in the new type of SNS websites. At abroad, Facebook has been a widely known social website, while at home Kaixin0001.com has become the website which is most regularly used by the white collar through viral marketing. As more people register on SNS websites, the potential application lurking for years finally burst violently. According to the theory of elevator, when timing is mature, the later comers always surpass the formers. The theory is verified again in the field of SNS. Orkut and wealink of the early stage are fading out people's eyeshot, while Facebook and kaixin110.com are leading in the field. By adding more applications, the new type of SNS websites have integrated many functions of blog, instant message software, BtoC, CtoC, online office and game. Therefore, users will spend more time on these websites, which will become the internet sites with the largest amount of browse. It can be forecasted that a large merger among portal websites, instant message, SNS sites and CtoC about SNS application will put on anytime.

2.8 Semantic search engines will be applied on a large scale.

Semantic search engine is the future development trend of search engines. At present, semantic search system has attracted extensive attention. However, the development of semantic search engines is mainly limited by the development of semantic web and the technology dealing with natural languages. With the development of technology, semantic search engines will finally enter the stage of practical application, when computers will be equipped with artificial intelligence. The final design target of semantic search engines is to return to what the users want. At present, Microsoft has purchased Powerset, a semantic search engine, and released a brand-new search brand of Bing after integrating it.

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