Case study on PPTV

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Abstract: With the development of scientific and technology, peer to peer network television is popular. PPTV is the respective of P2P network television. In order to learn P2P, I will research PPTV in details. This report will be divided into six parts: introduction, background, development path, technology analysis, disadvantage, conclusion.

Keywords: P2P, IPTV, network television

1. Introduction

The topic of my project is PPTV. PPTV is familiar to us. It changes the way people watch TV and brings many benefits to us. PPTV is an online TV software. The creator of it is YAO Xin. It was created in WUHAN in 2004. PPTV combines P2P with IPTV to be the newest P2P program. Next, I will introduce PPTV in detail.

2. Background

2002 FIFA World cup Korea or Japan is familiar to us. The creator is the fan of world cup and he was an undergraduate of Huazhong University of technology and science. Because of limited carrying capacity of school network, school network always broke down. YAO can't watch match in school. This made he feel worried. In order to watch the match, he produced an idea to make a television sharing software. The happening of SARA caused many students stopping classes in 2003. So YAO had many space time and he began to try to integrate P2P technology with streaming media technology. He wanted to solve the problem about watching TV online by technological way.

3. Development path

There are about nine parts of the whole development path. They are following:

In 2004, when YAO went back to school after summer vacation, he applied for leaving school to start a business. To be start, although YAO looked for about one hundred investors, he suffered much refuse. However, he got the refund support from a technological company. Because of this company's support, PPLive program was able to start. PPTV's office was located in the dormitory building of his university. And he used his university's computer center as server hosting. Then he started to develop program with his teammates without any interpret. PPLive 1.0 was born at the end of 2004.

In the beginning of 2005, PPTV got the refund support from Softbank China Venture Capital. PPTV software launched to us formally in February and did small tests only in his university. After that, PPTV had been popular. According to the survey, the number of PPTV users had been 1700 in his university. In May, YAO created the company named PPLive in Shanghai. But main operation activities still concentrated   in Wuhan. At the end of 2005, PPTV started to raise money formally.

In March of 2006, Bluerun invested money to PPTV. At the same time, PPTV transformed from technology to media. In September, PPTV moved all the offices to the park of technology in Shanghai. It came true integration of registration place and operation place. PPTV began to try advertising in small scope. In October of the same year, PPTV cooperated with network advertising company formally and began to try advertising task of videos in system.

In June of 2007, PPTV got more than 2100 ten thousand dollars' second investment. After getting investment, PPTV started to speed the process of integrate video industry chain resources.

In 2008, PPTV got information internet media program's license from Administration of radio, film

and television in China. And PPTV cooperated with 300 television stations and media companies.

In the initial stage of 2010, PPTV spent 180 ten thousand to buy new realm name and logo. The name of its network television had changed from PPLive to PPTV.

In 2011, PPTV ranked firstly in the network television industry in China. Besides, YAO developed the company to other countries. In February, PPTV got huge investment to develop the platform of network television media.

In October of 2013, Su Ning cooperated with Lenovo to become shareholders of PPTV. And Su Ning became the biggest stockholder and had 44 percentage stock rights.
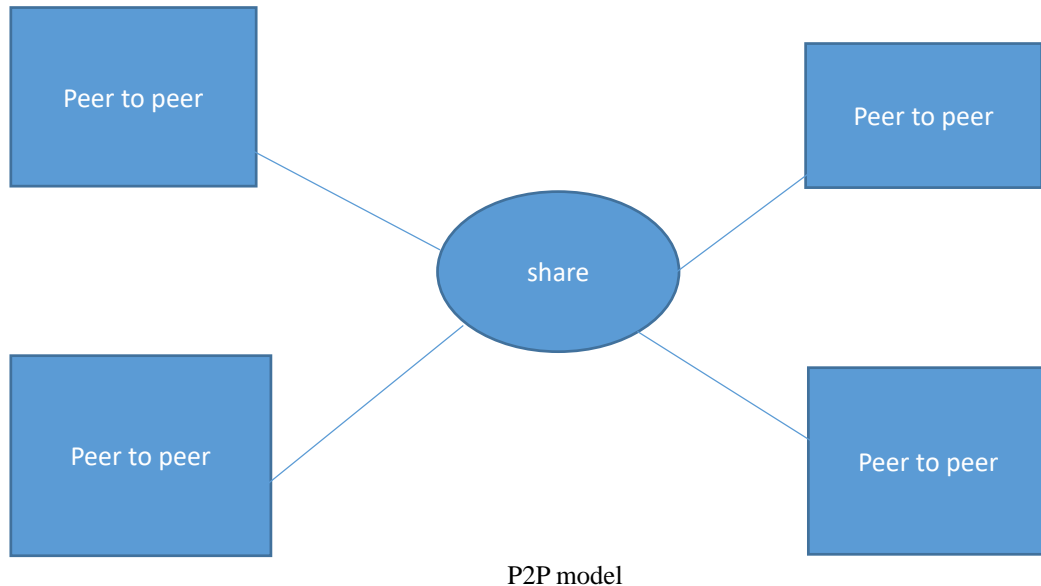
4. Technology analysis

PPTV network television is the representative of P2P model. And it also integrates IPTV. Next, I will introduce these technology in detail.

4.1 P2P

Peer to peer, can be also called P2P. It is network system that has no central serve and depends on peers to exchange information. It can decrease panel points in network transmission and decrease the risk of data loss. Different from central network system that has central serve, P2P's user side is not only a panel point, but also a serve. Any panel point can't find other panel point and must depend on its user group to exchange information.

P2P is successful extension of dispersed concept. It distributes serve's load to panel points of network and every panel point will undertake limited compute and storage capacity. More panel points mean more resources and its service quality is high. On the contrary, for traditional file download way through FTP, when download users increase, download speed will decrease.

Each panel point in P2P is not only serve, but also client. So it can decrease the demand to traditional c/s structure serve's compute ability and storage ability. At the same time, because resource is distributed in many panel points, P2P can come true the whole network load's balance.
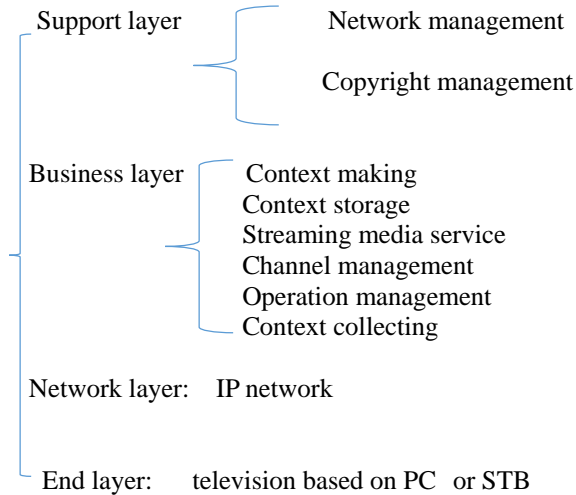

P2P model

4.2 IPTV

Internet protocol television belongs to wide-band television. It sends digital television to users through network protocol. Because IPTV usually provides services of connecting network and IP phone. It can also be called triple play. Because IPTV belongs to digital television, common television needs to match up STB Set Top Box to receive signal. Providers usually provide video selection service. Although it sends digital signal through wide-band network, it is not always sending digital signal through network. It will send digital signal through intranet sometimes. IPTV has many functions: video chatting, IM

chatting, online shopping, online maps, send messages, receive messages and so on. The biggest advantage of IPTV is interaction and extension of internet business. IPTV also can combine television service with network look up, online mails, online information advisory, entertainment, education and business. These make IPTV rank top.

From the perspective of systems' structure, IPTV can be divided into four layer: support layer, business layer, network layer, end layer. The details are as following:

Support layer   Network management

         Copyright management

Business layer   Context making
         Context storage
         Streaming media service
         Channel management
         Operation management
         Context collecting

Network layer: IP network

End layer: television based on PC   or STB

4.3 PPTV

As mentioned above, we have known P2P and IPTV fully. It's useful to help us know PPTV. PPTV's technology development is very excellent. Its development principle is processing creation depend on users' need.

Nowadays, PPTV has completed the whole cover of main end platform in technology application field and produced the pattern named "one cloud with many ports". It develops mobile phone client and pc client. Besides, it also develops mobile video client. PPTV can be installed in the environment of Windows XP, Windows Vista, Windows 7. PPTV uses Media player and Real player to broadcast programs. PPTV provides all kinds of versions for users to download such as iPad, iPhone, Android, Windows Phone and MAC.

PPTV pays more attention to the application of new technology. There are two examples to show it. Firstly, PPTV developed dual-frequency live model to broadcast the World Cup in South Africa in 2010. This model can make users watch other program in the process of watching matches at the same time. PPTV also developed special topic about 3D world cup. Moreover, PPTV developed interaction program to make users send flowers to own fond teams and send eggs to own disliked teams. This behavior can strengthen entertainment of users watching videos and satisfy users' mental demand.

Traditional television media can't satisfy users' interaction ability. Secondly, PPTV made a new program named "happy girls reality show". PPTV used the second generation live technology to broadcast the program. This technology improved definition and fluency. Besides, users can change scroll bar to go back to watch missed parts. This is also the advantage of network television compared to traditional television.

5. Disadvantage

Although PPTV develops fast, there are some problems. These problems are as following:

First, PPTV lacks resources and has high cost. PPTV gets many film and television resources through copyright cooperation. But these resources are same as other network television and have no innovation. The phenomenon of network is users can't watch own fond resources and undemand resources is too many. Moreover, PPTV belongs to private enterprise. It has no advantage in the channel of resources and will pay more money to buy copyright.

Secondly, PPTV is influenced by network connect and users' number, it always appears the phenomenon of pause. Sometimes, it will appear the phenomenon of stop penalty. And the speed of

programs' update is slow.

Thirdly, PPTV as P2P media network television needs users' favor to improve development. So PPTV broadcasts many piratic video to win users' attention. This will cause the problem of copyright.

Lastly, program's management is lack of scientific. For example, it usually dose false introduction and do pornographic advertising. This causes bad influence.

6. Conclusion

PPTV's advantage and disadvantage can find network television has more space to develop. Nowadays, PPTV is on the stage of bottleneck. Su Ning has purchased PPTV, but there are many problems for Su Ning to integrate resources of PPTV and develops PPTV. PPTV faces the biggest challenge since the beginning of history.

In order to better development, PPTV must solve own problems and innovate constantly. On the one hand, PPTV should try its best to make use of Su Ning's enough resources to improve technology constantly. On the other hand, it should look for new opportunities constantly. It can develop three-dimensional platform to broadcast videos. In a word, in order to develop better, PPTV must be a new media which not only provides context service to users, but also brings entertainment and convenience to users.

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