

A Brief Analysis on IPTV and the Convergence of Three Networks

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Abstract. This paper uses panel data from 30 provinces and autonomous regions from 2004-2010 to theoretically analyze and empirically test the relationship between the real estate industry and the independent innovation activities of enterprises in China. This paper employs the amount of patent authorization and sales of new products as dependent variables, house price and investment in real estate as independent variables, R&D spending, FDI, average consumption, fixed investment as control variables. The research suggests that (1) there exist a negative relationship between house price and the independent innovation output of enterprises (the amount of patent authorization) in China. And at the same time for the upcoming increase of house price has a remarkable influence on the sales of new products. (2) The relationship between the real estate investment, independent innovation output of enterprises, and sales of innovative products is positive. However, this positive relationship is incredible. Therefore, controls of the excessive increase of house price and regulation of the real estate investment play a decisive role in the independent innovation activities of enterprises in China.

Keywords: IPTV, Mutual, Set-top box, the convergence of three networks, Broadband network.

1. IPTV

Recent year, doing with the development of broadband technology, A sharp rise in the number of broadband user. Among is given priority to with movie and television Service of broadband media services become important services in broadband value added services. In the case of broadband network coverage of the user ,at present the main is computer terminal users ,but my country's television general rate is much higher than PC, so that ,as family reception of the broadband network if we can expanded broadband media services to set-up boxes ,make television users can enjoy the benefit of broadband ,this will bring huge business opportunities to operators. IPTV was developed for the realization of this goal.

IPTV is also called network television. It is a new technology based on network. It's a kind of individuation, the new media form of interactive services. It does this by telecommunications channels, the use of ADSL on Ethernet or cable television network access broadband, etc, through the Internet protocol to transmit television signals. In television or computer as the main terminal household electrical appliances. Provide a variety of digital media, including television services Its key technology is the use of mobile phone, computer or "television set-top boxes "and complete the reception .Back into the original data so that in the PC software or television broadcast.

IPTV has a very distinctive features, it can realize the media server interact with the consumers, it can according to user selection provides extensive multimedia services. People use a set-up top box, the user press in front of the television remote control, User can pass broadband Video-on-demand, interactive television, listen to music, information query, etc .and then realize the family shopping remote medical treatment, education television, E-mail, tour guide, tickets booking, stock trading and other services, greatly enhance and improve the quality of life and the work efficiency.

IPTV and the Internet, multimedia, communication and other technology in one, has the following characteristics.

At first, business mainly based on the broadband IP network, and network need to have interaction two-way transformation compared with congenital advantage. The problems existing in the traditional television is a one-way broadcast mode, it greatly limits the television audience and the interaction between television service providers, also limits the program of personalized and real time.

But IPTV with this kind of point to multipoint one-way communication in a different way, can provide interactive video service based on communication network, allows the user to have a variety of options. For example Users can play at any time those who have been broadcast but very interested, can also be fast forward program in slow adjustment.

Then, besides can provide similar one-way television channels, use of the advantages of the Internet information resources, IPTV can also provide users with including digital television programs, videophone, VOD, Internet browsing on line games, online shopping and remote education. Such as interactive multimedia information services, provide a wealth of information.

Next, IPTV platform development is strong can change in momentum of the small support under the condition of different video coding standard. With the development of video compression technology. Now, video coding efficiency has been greatly improved, which makes under the condition of same broadband food quality rapidly improved, effectively save the network bandwidth.

2. The typical model of IPTV

The typical of television is television system in a typical business model, by the program, business platform, the business platform, the business of network platform and user.

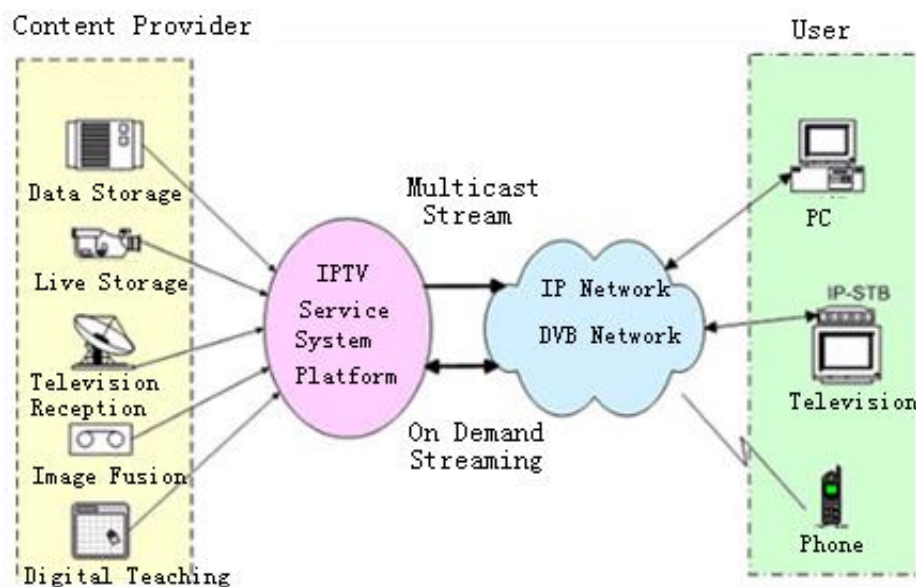


Fig.1 The typical model of IPTV

2.1 Program

Can be a source of various content of production units, such as television media, film and television production company, new media organizations, distance education institutions, game markers, etc.

2.2 Business platform

Continue editing the content integration, facing the users with the television business platform. The platform work includes coding content, arrangement, storage, distribution and management, etc.

2.3 Content delivery network

Responsible for the IPTV information from business platform is passed to the client. This part can be subdivided into "contents" and "related content" two parks. "contents" part including the metropolitan area network, broadband access network ,etc. "Relevant content" section includes content distribution network (CDN), peer-to-peer (P2P) technology, etc.

2.4 Client

Is the function of client devices: accepting and dealing with the media stream, present media stream to the user .Media cab receive processing equipment and equipment independently, such as like a set-top box with IP reception.

3. The Convergence of Three Networks

With the constant improvement of the people demand for information technology, the existing decentralized information network infrastructure can't meet the needs of the national Informatization construction. Serve the society mainly original information communication, is a business website. The communication network is a phone network, packet network, the network of digital data network overlay. But after entering the information society, people not only need the original voice communication, data communication also needs a variety of rich information and communication, such as network television, network game, network education, e-commerce, etc. But not all these applications can be set up independent network, which requires we provide better openness, flexibility and stronger multimedia communication network, we need the original network integration based on specific business .Especially in the communication network, computer network, broadcasting television network is basically based on certain specific business tailored specialized network, has been unable to meet the growing information needs .This raises the concept of the convergence of three networks. The convergence of three networks refers to the existing telecommunications network, computer network and broadcast television network, gradually formed a unified network system consists of a fully digital network infrastructure to support including data, voice and video, all the business communication.

3.1 The convergence of three networks integrated service platform

The convergence of three networks will be a global coverage of communication network, powerful, complete business services network, which is a comprehensive broadband multimedia communication network of global integration. And the network structure should be the combination of a unified integrated system, to anywhere in the world ,using any terminal users to provide comprehensive voice, numbers images, and other services .It is based on IP agreement, all network to IP based protocol packet network and unified. Business the spread of the Internet, such as E-mail, file transfer ,remote login, www browse around the world ,in order to make the Internet become the widely use of network technology. And the future of network language is set m the data of text ,image video in a body's comprehensive network, the Internet is the foundation of the network integrated, also is the integrated service platform for the realization of the convergence of three networks.

3.2 The convergence of three networks of access network technologies

In recent years, high speed large capacity synchronous digital series (SDH). Optical fiber communication and dense wavelength division multiplexing technology mature, has been able to meet the requirements of the current high speed broadband communications. And gradually mature ATM switching technology and laid a good foundation for broadband integrated services exchange .Broadband access network in fiber optics or coaxial cable hybrid topology network is adopted, technology has made great development, he can access network through a television, at the same time to provide customers with HFC, at the same time to provide customers with telephone data and video images and other integrated services. At the same time, HFC is not merely fiber to replace the coaxial cable, and introduced a new topology–node structure, this structure make it easy to each network to provide exchange service to the community. The fusion of three networks is not a simple extension of the original ,but rather will carve out an IP based new generation telecommunication network provide IP telephone, video on demand, interactive games, remote education, electronic commerce, remote medical and other applications .

3.3 IPTV is the best starting point for the convergence of three networks

People can be seen from the above analysis, the IPTV is the best starting point for the convergence of three networks, because the IPTV find breakthrough for the convergence of three networks in business level. IPTV itself is the internet, network and telecommunications network is the product of the “the convergence of three networks ”the basic IP Internet protocol in the transmission of digital television, broadband data network, to provide high-speed Internet access and traditional voice services. IPTV is the traditional television interactive extension of the business, and is also a new form of traditional telecom services .Secondly because IPTV for the convergence of three networks provides the best business model. In order to in the shortest possible time, make full use of existing

resources at the lowest cost to provide the IPTV business, IPTV content should come from the rich network resource, infrastructure network should rely mainly on higher data transfer rate, coverage is wider, with high QOS guarantee ,running in good condition of broadband communication network. This shows IPTV is fully embodies three complementary business network advantage, its large area promotion will help to promote the process of the convergence of three networks.

4. Conclusion

IPTV as a new application across the telecommunications industry and radio and television industry, has a broad market prospect, on the other side, China's telecom industry has been rapidly into the broadband era, the IPTV is in the existing telecom broadband network video media will be merged into the field of telecommunication business the best technology. The large-scale application of the IPTV, can produce a great boost to the regional economy. Rich media content and application, on the other hand, to some extent, reflects the quality of the regional social life, and the IPTV is a way to transform traditional media made new interactive experience of the personalized demand of technology. In conclusion, based on the convergence of three networks industry and media industry, will surely give rise to a huge network television industry.

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