

On the Building Countermeasures of Content Bank Based on Digital Content Industry

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Abstract

Digital content industry is the core of emerging cultural industry. If it wants to realize the transformation from “Platform is king” to “Content is king”, it needs the external technology’s support. Content and technology restrict each other and develop jointly. Both of them promote the development of the digital content industry fundamentally. This article makes an analysis of content and technology’s present situation that base on a new point of view, and analyzes digital content industry’s developing status quo and problems from the microscopic level, then it proposes the idea of “content bank”, and shows that content bank’s operating system to promote the digital content industry to develop rapidly and healthily.

Keywords: *Digital Content Industry, Content bank, Operating system*

1. Introduction

The rapid development of the Internet, information media, telecommunications, promotes the content integrity and cultural diversity, for the development of the digital content industry provides a broad development platform and space. The "Eleventh Five-Year Plan" and the "Twelfth Five-Year Plan" clearly put forward the digital content industry as the focus on the development of industry. The generation of digital content industry with modern economic globalization environment arises at the historic moment, have no chance, to keep pace with The Times embodies the trend of modern industrial revolution. The emergence of digital content industry, not only can satisfy the spiritual and cultural needs of our customers' changing, through modern media tools to continue to carry forward the fine traditional culture of our country. But also can reflect the integration of cultural industry and information communications industry, with our China's comprehensive national strength, information security has the close relation. It has a powerful influence on the content of the traditional industry, the theoretical study of the digital content industry, mainly in the relatively shallow interpretation, it is an urgent need to find the fundamental problem of development from the source and solve these problems.

2. Literature Review

Different scholars on the analysis and research of the digital content industry at home and abroad, mainly in the following three aspects:

Digital content industry development influence factor analysis, on behalf of the views are: Lai Mao-sheng, Ye Yuan-ling, Yan Hui (2009) argued that such as the problems existing in the digital content industry development, should be from both the cultural industry and information industry itself to explore, thought that there are factors that affect the development are barriers to entry, lack of industrial policy, imperfect legal environment, etc. [1]. Wang Jing-an, Xu Liang (2010) through the study of the American digital content industry development process, pointed out the main factors affecting the

development of digital content industry in China are market system, the protection of intellectual property rights, cultivating innovation ability, *etc.* [2]. Li Ai-qun (2010) based on the current digital content industry development present situation, put forward the factors affecting the development of the product are design, technical support, industry management, legal environment, *etc.* [3].

Digital content industry regulation countermeasure research, representative views are: McGovern (1995) and other scholars illustrates Australia's national model of common rules and measures taken to protect the healthy development of the digital content industry [4].

Armstrong Mark (2006) think should strengthen market supervision and the construction of standards system to regulate the market order, protect the digital content industry [5]. Mundorf & Bryant (2000) and other scholars listed the United States federal information resources management policy and other different legal system, think that these system provide space and the safeguard for digital content industry development [6]. Kong Cui-lian, Luo Si (2009) put forward that under the three networks convergence, it should by advancing network construction, strengthening technology research, establishing coordination department, building the good legal environment, cultivating professional talents and other measures to develop a better digital content industry [7]. Mu Guang-ju (2010) argue that charges will accelerate the standardization and rationalization of the development of digital content industry [8].

About the aspect of content bank, Huang Sheng-min, Zhou Yan, Wang Wei (2013) argue that In the era of new communication order, in order to adapt to content production, transmission and demand increasing large-scale and the features of the open , Standard content transmission market order, adjust the content dissemination of contradiction between supply and demand of the market , need to in line with the principles of open, cooperation and integration, establishing bank. Other claims are mainly focus on digital bank [9]. Chen Zeng-gui (2004) argue that China's banking sector is facing fierce competition from the foreign Banks, need to upgrade the IT infrastructure and financial enterprise grid, laying a solid foundation for the construction of digital bank [10]. Francisco Gonzalez (2013) argues that the financial services industry is turning into "BIT" industry (bank, information and technology), through technical transform information into knowledge, Banks should be transformed into "digital" bank, which is also a new type of information service company [11].

On the factors influencing the digital content industry and policy research, most scholars mainly aims at the external factors affecting the development of digital content industry, that is, from the perspective of macro or meso analysis, such as industry government policy, legal system, talent innovation, *etc.* Without starting from the problems existing in the digital content industry, while also has shortcomings on the research of the content bank, did not connect digital content bank with digital content industry? This article from the microscopic prospect of the development of digital content, including content and technology, think that in order to establish content bank, we should analyze the digital content industry, and put forward specific countermeasures to improve the present situation of the digital content industry.

3. Analysis of the Development Situation of the Digital Content Industry

In the digital content industry, the content is the main driving force and assets in our country which play a heart position of digital content industry. Meanwhile, the transmission of content and distribution rely on the support for platform technologies. Development of the digital content industry, not only need the content, also need technology [12]. Content and technology both supplement each other,

promote each other, the development of content will lead to technology updates, besides technical advances will also promote the development of content enrichment. In the new media age, that means under the background of three networks convergence, fundamental changes have taken place in the digital content industry, its development situation mainly reflected by the current situation and development of technology.

3.1. Content Development Status

1. Quantification content. The advantage of triple not only broadens the information content of the transmission pipeline, but also enriches the content of the production and integration under the background of the three networks convergence technical support. For example: the digital content integration is more open and the contents of a variety of file formats can be integrated. There are sound, pictures, video and other resources; content production is more convenient, in addition to professional production of reports and reviews, the representatives from non-media's of "grassroots" original content of homemade upload and commentary talk, are making digital content become diversified and quantified. UGC (User Generated Content) refers to the user's own content production, and can upload content or exchange interaction through the new media network. UGC makes a great expansion for the content, YouTube uploaded up to 100,000 content every day, Facebook is as high as 220 000 [13]. Massive amounts of digital content have become a trend.

2. The content of the bidirectional interaction. In the traditional media era, the user can only passively accept the contents due to technical limitations, only "I see you play", no content selection or result feedback. It is difficult to form interactive content. In the context of three networks convergence, a variety of interactive media services, enable users to select their favorite programs at any time. You can choose to pause, fast forward or rewind. Users can interact with the inter-content platform, through online message or voting on program content to receive the feedback. Also, user can communicate and share content with each other, users can share good video or music with their family or friends by the network, even different terminal users can also share these contents [14]. Meanwhile, UGC with different devices, such as cell phones, camera to upload the pictures and videos to the Internet. This not only make the content quantified, but also can facilitate the interaction between users and digital content platforms.

3. Free dissemination of content. In the era of traditional media, content production always rely on the existence of different types of media, different content attached to a different carrier. For example: text and pictures are relying on print media, video is relying on television media, music and voice are relying on broadcast and electronic storage medium, these are entirely different article carrier transmission channels. Under the background of three networks convergence, the progress of digital technology makes content can be out of the fixed carrier medium, the content of the vehicle can become diversification and can be integrated with each other, while content production can be freely spread through multiple channels. For example: the e-reader can not only read magazines, novels and other digital version of the content, but also has a music player, audio, video player and other functions; computers and mobile phones can transfer files, music, video, pictures, APP and other content. This will not only improve the efficiency of the spread of content, but also create more demand for the customers.

3.2. The Current Situation of the Development of Technology

1. Cross-platform and integration of the terminal. The advance of digital technology promotes the expansion of the terminal number and types of diversification, implements the cross-platform integration of different terminals, form mixed coal terminal, and become more intelligent. With video content, for example, tablet computers, mobile

phones, TV, PC machine, readers, game consoles, etc., these different terminals all can provide, but in the traditional terminal mode, watching TV is through television, listening to the radio is through radio, phone calls is using a mobile phone (Figure 1). In other words, whether it is video, sound, pictures or text, you can now simultaneously on a variety of different terminals like cell phones, computers or televisions to use them, it makes differences of content delivery between mixed coal terminal and traditional terminal after digital technology progress [15]. Cross-platform and integration of the terminal provides a diversified distribution platform and transmission channel for digital content industry development.

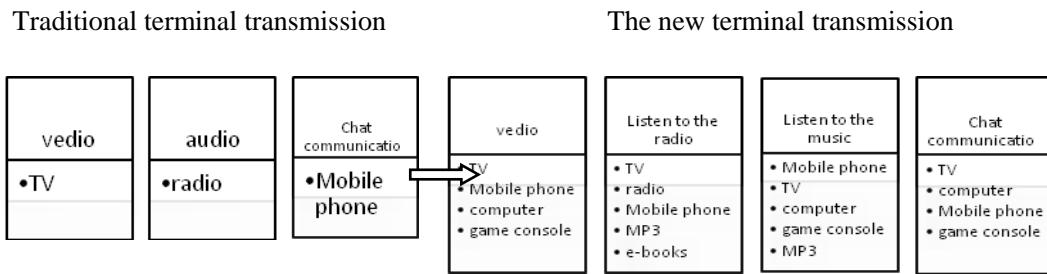


Chart 1. Terminal Transmission Analysis Chart

2. Processing ability enhancement. Under the new environment of three networks convergence, the development of digital technology, which greatly improve the processing capabilities of digital information? Digital content products, with the support of technology and equipment, all kinds of video materials, audio data, images, text and other forms of content can be easily collected, processed, modified, edited, stored, transmitted and send, such not only can reduce the threshold of the content production, reduce the cost of original content, improve the efficiency of the original content, but also provide the infrastructure assurance for the quantification content [16]. With video content, for example, "2013 China Media Development Report" The data show that during 2012, the production is complete and got the license for the issue of TV series reach a total of 437 units, 14,729 sets, compared with 2011 data, an increase of 20.8% over the same period. In addition to the series production, the production of other video total programs over 50 million minutes, compared with 2011 data, an increase of 13.2% over the same period [17]. Through these data, it is fully demonstrated that the progress of digital technology promotes digital information processing speed and greatly improve the efficiency.

3.3. Digital Content Industry Development Situation

1. Copyright protection issues. Copyright protection is the key point of the digital content industry can now whether progress smoothly or not, if copyright protection of digital content producers can not be guaranteed, then the value of the digital content itself is difficult to be recognized. So, to ensure the digital content producers can continuously increase investment in digital content, ensure the sustainable operation of the platform, and then we must pay attention to copyright protection of digital content. Since the end of 1994, the Internet came into China, has been nearly 20 years, is characterized by freedom and equality, everyone can search useful information through the INTERNET and share all kinds of content. But with the progress of digital technology and the development of all kinds of new media channels, people can easily through various media channels to get the latest content, piracy has overflowed, free content began to prevail, content producers cannot get due reward, their rights cannot be protected (Table 1). So under the new media environment of the three networks convergence, the copyright protection of digital

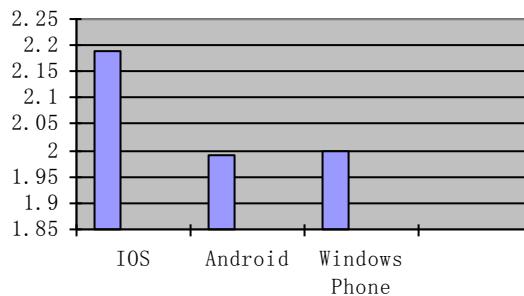
content industry problems become increasingly serious, which need to be on the agenda to improve and solve?

Table 1. Copyright Enforcement of Statistical Reports

Investigation of the case		Confiscate pirated goods	
project	the number of this year	project	the number of this year (Copies, box, zhang,piece)
Administrative penalty number (pcs)	10590	Figure book	8495176
Case is transferred for the number (pcs)	538	The journal	827137
Check the business units number (pcs)	963842	Software	545627
Clamp down on illegal business unit quantity (pcs)	61995	Audio and video products	23754110
Number of seized underground dens (pcs)	727	Electronic publications	1088552
The fines (RMB)	22143117	The other	411666

Data sources: National Copyright Administration of People's Republic of China 《2010 copyright enforcement statistics》

2. The Content value problem. The progress of digital technology makes everyone become content producers, massive amounts of content includes two parts: one is the quality content that was produced by the professional content production system; the other original content is from the folk "grassroots level" production system, forming a dualistic production system. In the mass and historical content market, content quality is unable to be safeguarded, illegal content overflow, the probability of fine content to be found is very low, it is easy to drown in a sea of historical content, and unable to realize the value of its contents. Apple, for example, apple's APP Store, the application production reached millions, but not all of the application software can realize its own value. According to a 2013 mobile marketing company Surikate and Gfk survey, the British visitors to the APP Store, 81% of British visitors won't browse after the top 50 applications, most of the application are not visible the favor of consumers, which has caused a large number of unwanted "zombie" APP, so the content value can't be truly achieved.



The data source: Internet consumer research center

Chart 2. The Three Main Operating System User Mobile APP Usage Scores

In chart 2, through the assignment, ZDC draw the three main operating system user mobile APP usage scores, including apple's IOS system user APP usage scored 2.19 points, compared with Android users 1.99 points and 2.00 points for Windows Phone system users, the Apple APP utilization rate is relatively high. But the data also exposed the problem of software APP low utilization rate, causing a lot of surplus software APPs so that the content value cannot be achieved.

Under the new media environment of three networks convergence, there is no doubt that it has brought opportunities and challenges to the digital content industry, at this point, you need to seek a breakthrough for the whole digital content industry to make a fundamental reform.

4. Construction countermeasures of China's Digital Content Bank

Digital content industry is undergoing fundamental change, the development of the three nets fusion trend, makes digital content diversity and enrichment, So at the same time, it is badly in need of a standardized and transparent, fair and just management content system, based on this requirement, learn the system and the basic principles related to the banking industry, puts forward the theoretical system of the building of "content bank".

4.1. The Concept of the Content Bank

Content bank is based on the new media environment, in order to adapt to the diversified and enrichment of digital content and mature technology, and set up an open, transparent and fair digital content trade and management operation system.

Proposed the concept of the content bank is mainly for reference of the management mode of the bank to its customer, from the bank unification deposit interest rate, the real-name management system to the personal finances can be controlled, etc. It belongs to a new structure system, it can protect content producers and content copyright belongs to the producers, Producers can be in a safe and healthy environment to control the content trading process, and really become their own content owners of wealth, so as to realize the value of content [9].

4.2. The Necessity of Building the Content Bank

Under the new media environment of three networks convergence, the copyright protection and content value of digital content industry are problematic. The content bank can not only fundamentally solve the digital content industry facing the present situation of the copyright and content value, but also provide a security platform for the development of the digital content industry in the future more enrichment and diversified.

1. User Real-name system. In the bank, everyone has his own real-name system account, used to store their money, everyone can inquire the circumstance of the money by their own account, and the account can be orderly management. Thus ensure the money in the bank can be controlled, others can only through illegal means to steal others' money in the account, that is also very easy to be find, and will have heavy penalties. Therefore, content Banks have adopted the real-name account management system, so all content producers and actors in the content bank have their own real-name accounts and can store content. In the process of trading, we can use the real-name system that the producers, production time, basic content and transaction records of content can be clearly saw. And content flow, flow line, *etc.*, will be via mobile devices timely tracking feedback producers, do transparency of the content, make content producers can take the initiative to protect their copyright content, which can effectively avoid piracy, and achieve the content trading transparency and fairness.

2. Unified trading standard system. For bank deposit, everyone accords to uniform rates. In the process of Capital circulation, the more and faster the liquidity are, the more faster the rate of capital appreciation will be, based on the content producers recognition, all the digital content are integrated on a single platform, after the introduction of the content, also need to make a contents careful arrangement and planning of the content, that the content will be more attractive, promote consumer sharing, downloading and trading the digital content; Promote the valuable content quickly find the accurate demand, make all digital content can be free flow, realize content value-added in the flow.

By the bank's management system, establish an open and fair trading platform system - "digital content bank", this system applies to all types of content, such as video, audio, images and text, and so on, After content integration and arrangements, in the same trade standard, technical support and copyright protection conditions, through the "content bank" trading platform to realize the flow of digital content, to realize the value of the content. It avoids the content of copyright piracy, also solves the problem of value cannot be achieved; this big content system can complement with quantitative content and mature technology each other. It fully mixes technology, realize the value of the content, and make a guarantee for the healthy development of the digital content industry under the trend of three networks convergence, so it is necessary to build the content bank.

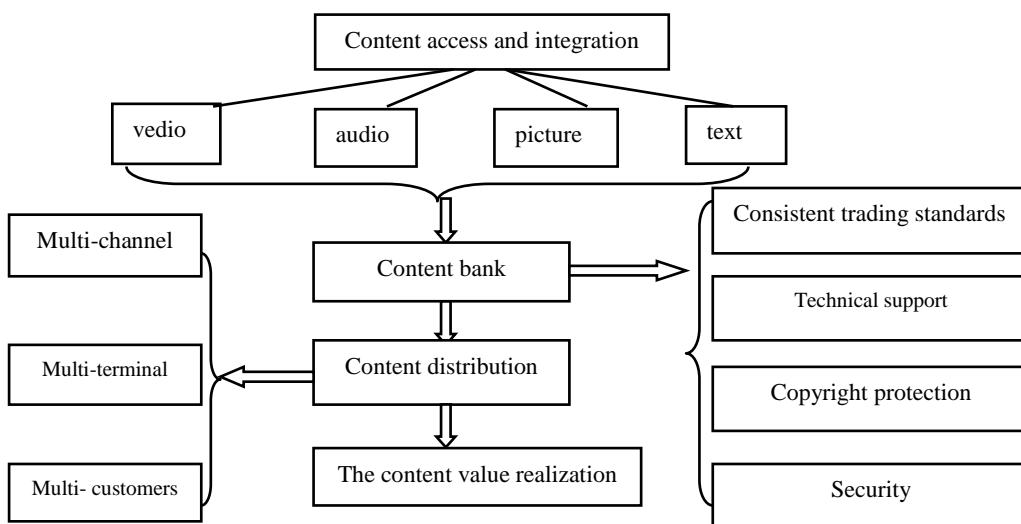


Chart 2. Digital Content Structure of the Banking System

5. Digital Content Bank Operation Framework

Then the content bank should be how to effectively operate, how to become a "right-hand man" of the development of the digital content industry, you need to build a system of standard operation, mainly from the following three aspects to build the framework.

1. Basic operation system. Content bank operation first needs a technical support to ensure other businesses normally operate; basic operation system is concentrated embodied in the underlying supporting technology, also known as the network layer. Internet, network and communication network, three networks convergence is still in development, content Bank needs to make full use of the three nets fusion trend, develop the underlying technical support. Content bank through technical support, after the integration phase of the collected content material, it realizes digital and transition of the content material, and can provide the standardization of digital content products to the users. So, with advanced and perfect digital technology foundation, can better promote platform transactions and digital content value realization.

2. The internal operation system. With a technical support, we should make full use of the advanced technical features to build an operation support system for development present situation of digital content industry, also known as the platform layer. It is a national content trade system, not only including audio, but also covers the picture, text and other digital content types. In view of all digital content products of the content bank, they have a set of unified product trading standards system that all the content participants agree to trading standards. It can determine the price standard for different types of digital products, make the original no price content "monetization", and make the trading information public and transparent, so it is convenient for content producers and consumers to do property right transaction of digital content products more convenient.

3. External operation system. By the internal platform layer, to become the user service system, also known as the business layer, which can regulate and manage the content trade between the content producers and consumers, and can also realize trade of property rights? Transaction object is different users in the system, which is very extensive, these users include the cross-media, cross-regional and the content deals between individuals and institutions. There are content trade barriers between different media and different regions, construction of the content bank can reduce barriers and difficulties in the content trade, and it plays an important role in promotion. Content bank also provide services for person to person (C2C), individual-oriented institutions (C2B), institutions for individuals (B2C) which have the intention to trade. Content banks will excavate the different needs of users and feedback, through the technical level to better meet the demand of terminal customers.

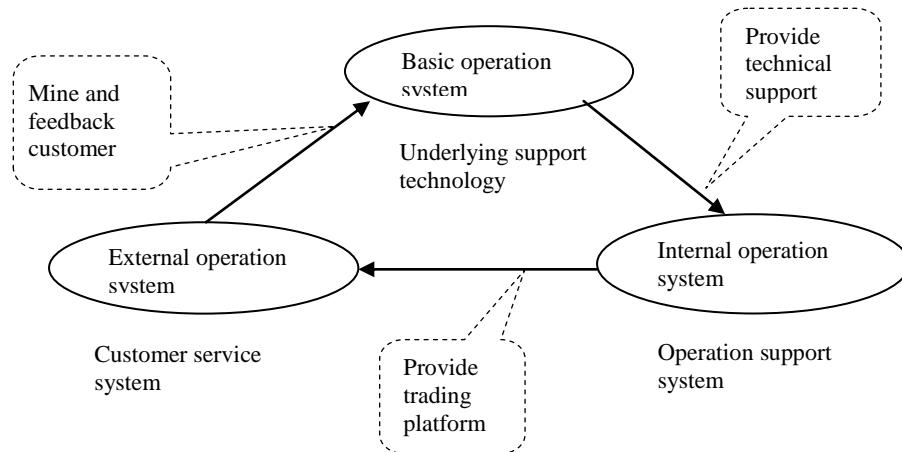


Chart 3. Digital Content Bank Operation Frameworks

The operation of the three systems, realizing the content digitization, digital content property, and content property rights can trade. With the construction of the foundation system, content bank has the underlying support technology to develop internal operation system, after the platform matures, the whole operation system provide services for transaction object. At the same time, the transaction object information feedback and the consumer demand will accelerate the improvement of the platform and technology progress.

6. Conclusion

Based on the micro level, by building "Content bank" to solve the digital content industry internal problems in the digital content industry is a business model innovation. But who will monitor the "Content bank", the article has not been involved, content bank needs the content of both the government and the market to co-ordinate with each other in order to promote its successful development.

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