

The Transformation and the Future Challenges of Content Distribution in Japan

by Tatsushiro SHUKUNAMI*

Introduction

Content business has been dramatically changing due to the diversification of consumer needs and technological innovations. This paper explores the possibility of future video distribution market, focusing on the distribution function of the digital network, with an example of the dramatic changes in the music industry.

Transformation of the Music Distribution

Changes in the music distribution has been taking place in various ways. The Development of computer technologies and the Internet forced the music industry to utilize digital network environment. Changes in the past several years include ample content stock, gradual shift to price competition, free from copy control, and illegal download. This paper will review how the music industry has adapted itself to such huge waves of environmental changes.

1.1 From the Packages Distribution to the Network Delivery

As the Internet's speed has become faster and it has spread widely, traditional disc media has become less preferable to consumers, because of higher price and less selection of goods.

At first, most of the network transaction of music via PC was considered illegal. P2P software, such as Winny and WinMX, was popular for exchanging music content. The music industry was unwilling to give up the traditional, highly-priced CD selling model. The industry reluctantly tried to use mobile network download, which was better controlled by mobile communications carriers.

However, an innovative business model was introduced by Apple Inc. in 2001. It combined the three important functions for music distribution: the huge stock of downloadable music, easy-to-use software for PC, and a user-friendly portable

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player with abundant disc space. Since iTunes Music Store and iPod portable player were very innovative, network downloading has become the standard way to obtain music. Its attractive features include less than one-dollar price, less rigid copyright protection, and no obligation for purchasing an entire album.

The success of Apple’s strategy led the music industry to the network distribution model. According to IFPI (International Federation of the Phonographic Industry), the online music distribution accounted for only 2 percent in 2004 in the market. In 2008, the world’s online music market has substantially increased to some 20 percent, or 37 billion dollars (IFPI 2009). According to the Nielsen, in the United States in 2008, the sales of CD album decreased by 14 percent, to 360 million copies. On the other hand, online music distribution increased by 27 percent to 1.7 billion songs (Nielsen 2008).

To catch up with the success of the United States and Europe, the music industry in Japan moved to strengthen the download sales. Au, a business unit of KDDI, led the market in Chaku-uta (song for ringtone) and Chaku-uta Full (complete song for ringtone). NTTdocomo and Vodafone (now Softbank) followed soon. In order to avoid the lower price strategy taken by Apple, the Japanese music industry focused on mobile music download¹.

Many Social networking services (SNS) provide the function of music distribution. Facebook.com in the U.S. and Japan, have been doubling the promotion and distribution. Mixi, the largest SNS provider in Japan, started a type of internet radio in July 2008, called mixi-Radio, which is characterized by the ability to learn users’ musical tastes. Favorite songs can be purchased for the subscribers themselves or as a gift for their friends.

1.2 Priority Shift From Best Sellers to Rich Selections

Changes described above were formulated as “The Long Tail Principle” by Chris Anderson, chief editor of Wired Magazine, in 2006. As shown in Table1, three types of content, such as music, video, and books, were analyzed based on the empirical relevance of sales in off-line stores and online stores.

Table 1: Long Tail Principle

Genre	Online		Real		Ratios	
	Companies	Number of items	Companies	Number of items	Ration of items	Ratio of Long Tail
Music	Rhapsody	1.5 million	Wal-Mart	55 thousand	27	40%
DVD	Netflix	55 thousand	Block-buster	3 thousand	18	21%
Books	Amazon	3.7 million	Borders	100 thousand	37	25%

Source: ANDERSON (2006) 35

A common sense in marketing in the real world is that the stores should focus on the best-selling products, due to limited shelf space. In the virtual world, however, it is possible to provide the widest selection of digital content on the server. Current technology offers almost infinite shelf space, particularly in case of music.

Anderson provides the fact that Rhapsody, an online music download site, provides 27 times of music selection than that of Wal-Mart, the world largest supermarket. As a result, the virtual store gets as much as 40% of revenue from the songs which are not displayed in the real stores.

1.3 The Shift From Controlled Price to Free Price

The manufacturers' control of retail price on a CD is permitted by the government authority in Japan, as one of the exceptions for anti-monopoly law. This regulation remains only in Japan among developed countries (Shukunami 2007). A Fair Trade Commission's study group, named "a study group on government regulations and competition policy" recommended that Japan should abolish such an old rule in 1991. However, this issue still remains unresolved to this date.

The music industry in Japan has been trying to fend off criticism, by slowly increasing free-priced items and making the fixed-price resale period shorter. In 2007, free-priced items accounts for 17 percent. Most of CD prices are not fixed after six months, which accounts for 81 percent of albums and 93 percent of singles.

The removal of tangible control does not guarantee the price competition, however. CD price in Japan still remains at the higher level than that of other countries, including the U.S., where CD price is 60% lower than that in Japan. If the music industry wants to recover business profits, it should give up controlling the price of CD at intentionally high level.

Table 2: International Comparison of CD albums, as of May 2008

	Japan	U.S.	U.K.	France	Germany
Original Price	¥2,541	\$10.56	£7.63	€13.17	€10.18
Converted Price	¥2,541	¥1,094	¥1,567	¥2,162	¥1,671

Source: FTC (2008), which is based on the average prices of 100 top selling CDs in each country
Exchange Rates are 1\$=¥103.53, 1£=¥205.48, 1€=¥164.16.

1.4 The Shift From Restriction, with DRM to Without DRM

DRM (Digital Rights Management) software is not preferable to consumers because of the limitation of content transfer, even it is legal to make copy for user's

private use. DRM also depends on the device manufacturers or distributors.

It is strange that the same songs must be treated differently, with and without disk media. If songs are downloaded from the network, songs may disappear in case of recorded device failures, or may be useless because of incompatibility of player software. Therefore, online music distributors are expected to choose either development of the standard DRM or DRM-free distribution.

Under these circumstances, negotiations were held between the music industry and music distribution companies. Apple decided that it would introduce DRM-free items in three steps. Initially, only one thousand songs were provided as DRM-free, in April 2009, it sold one million songs as DRM-free, and in the near future, it will sell all items by two formats, with DRM and without DRM.

Competitors followed this movement. Amazon already added 600 million songs as DRM-free, and Wal-Mart, Microsoft, and other competitors began to move in the same direction².

While this case is seen in the U. S., the DRM-free movement is not yet seen in Japan. Most of the download is made through mobile phones, and the freedom from DRM is expected particularly in the mobile industry.

1.5 Protection From Illegal Downloads (P2P in Particular)

Although the music and movie industries have been actively fighting against illegal P2P download, they are not successful to stop illegal activities yet. According to the IFPI (2009), more than 400 million files were shared on P2P network, and 95% of download music was acquired free of charge, among the 16 countries surveyed in 2008.

According to the Recording Industry Association of Japan (2008), it is estimated that about 4 billion songs were downloaded to mobile phones illegally. In 2007, some 1.8 billion complete songs for ringtone (Chaku-uta full), and 2.2 billion songs for ringtone (Chaku-uta), were illegally downloaded. In comparison to 2006, the number of illegally downloaded complete songs for ringtone increased by 60% from 1.1 billion units, while that of illegally downloaded songs for ringtone remains at the same level as in 2006.

Sixty percent of teens use illegal downloading sites, because of high price of legal sites, although they had some sense of guilt. RIAJ hopes that their anti-piracy campaign will improve the situation, because teens' moral was improved by the educational information the association delivered.

According to CNET Japan (2008), around 60% of P2P site users have desire to continue to use the sites via PCs, while P2P users are just more than 10%. 70% of illegal content is music and 50% of content is video³.

To summarize the changes above, the amount of music distribution on the Internet has shifted considerably to the legal ways, although illegal downloads does

not reach to an end. Reasonable price, less constraints, and more selection are the key factors of changes. The shift to online distribution has created huge demand. The music industry should realize the fact that the innovation of distribution is a business opportunity.

Transformation of Video Distribution

A wave of change seen in the distribution of music content and that of video content is similar. This section focuses on movies and TV programs.

2.1 Movies

(1) Traditional Distribution Arena

The film industry adopts a multi-window system for maximizing revenues, by scheduling film releases in order, such as screened in theaters, DVD sales, DVD rentals, CATV and satellite pay per view of (PPV), sales to foreign box offices, sales to the terrestrial broadcasters on, and cheaper-priced DVD sales. (Sugaya and Nakamura 2002)

Comparing the United States to Japan in 2006, the number of the U.S. audiences is nine times larger than that of Japan, with 14.5 million people in the U.S. and 1.6 million people in Japan. That means the number of audience per capita in the U.S. is about four times larger than that of Japan. (METI 2008)

The average movie ticket in the in Japan costs 1,223 yen (about \$12), which is 40% higher than that of the U.S. Moreover, DVD sales price in Japan is about 4,000 yen (about \$40), which is more than twice higher than that of the U.S. As a result, the DVD sales volume in the U.S. is 16 times higher than that of Japan.

Therefore, total revenue of the movie industry in the U.S., combining the box office revenue and the DVD revenue, has reached 337 billion dollars, while Japan has remained steady at around 60 billion dollars. As far as those numbers go, Hollywood's multi-window business model, with cheaper admission fee for increasing the number of initial audiences, helps maximize the global revenue. (Dentsu 2008)

(2) New Distribution System

In addition to these traditional forms of distribution, the combination of the Internet search and request and mail delivery service has emerged.

(A) Request via Internet and Return by Mail

While Blockbuster is focusing on rental business in the real stores, Netflix introduced a new business model, combining the Internet rental request with mail return, without return deadline.

Netflix, as an Internet company, has an advantage of large selection of DVD titles—over 5.5 million titles, which is 18 times larger than that of its rival company. Netflix earns its 21% of revenue from the accumulation of its long tail section (See Table 1).

This business model was first imported by DMM in Japan. TSUTAYA, an equivalent of Blockbuster, introduced this business model next, although its main stream remains in its retail stores. DMM with DVD 12.5 million titles maintains the advantage as the first in the market, compared to TSUTAYA with 9.3 million DVD titles.

(B) Video on Demand (VOD)

Meanwhile, Video on Demand (VOD) is forming a market without transport media. In the U.S., Apple, Amazon, VUDU, and Microsoft play a central role in this market.

Apple's iTunes store provides many TV programs broadcast by major TV networks or CATV stations. In October 2008, a cumulative total of two hundred million episodes were downloaded. Apple priced at \$1.99 per story with regular image quality, and \$2.99 with high definition quality. (Apple 2008)

In Japan, some companies provide free video with advertisements. For instance, GyaO, established in 2005, claims that the number of registered subscribers is one of the largest, more than 20 million. The growth of popularity, however, has been diminishing since YouTube and NikoNiko Video appeared.

We can watch these Internet videos even through TVs, with special software embedded in TVs, so-called acTVila. Consumer electronic companies have been pushing this function. The advantage of this system is that no monthly fees or STB installation is necessary. However, limited models support this function.

TSUTAYA TV services by CCC (Culture Convenience Club) provides two types: a standard quality streaming at 6 Mbps and a HD quality download at 20 Mbps. Downloaded video can be either burned on DVD media to purchase or watched during the rental period.

(C) Pay-Per-View (PPV) Model Using DVD Media

In August 2008, Amazon began to provide PPV-DVD sales scheme. Each episode can be watched through a purchase of an unlocking code, among episodes recorded with an encryption on a DVD. This method has the advantage of no downloading time.

(3) Digital Cinema

Digital Cinema is gradually introduced in major box offices. It will replace film delivery around the world with the network distribution of movie content. The benefits of digital cinema include the reduction of copy cost, the reduction of

delivery cost, and the saving of distribution time. Theaters get more flexibility of movie schedule.

In Japan, Toho, and Kadokawa started the deployment of digital cinema with the affiliation of NTT. A full-scale deployment is scheduled to be completed in 2012, though the current introduction rate is still as low as 3.5%.

In summary, the utilization of digital networks has become one of the major trends in the field of the movie distribution. The combination of traditional distribution and network distribution may create opportunities in the movie market.

2.2 Broadcast

The original way of TV viewing is limited to the real-time watching. However, the technological development of recording equipments, particularly hard disk recorders with the function of burning DVD's, brought significant changes. In addition, other technologies, such as TV tuners for mobile phones, change the habits of TV viewers.

(1) Time-Shift Viewing

The decline in the habit of live viewing is caused by the spread of HDD recorder (HDR). This change is usually called "time shifting." Since HDR has a large capacity of recording, programs for hundreds of hours can be reserved with an automatic pickup function from digital program tables by simply assigning key words.

While consumers are happy with the HDR, broadcasters, advertising agencies, and sponsor companies are not satisfied with the growing consumers' behavior of skipping TV commercials. The decline in viewers of TV commercials may destroy the current broadcasters business model of no consumer contracts.

In 2005, Nomura Research Institute (NRI) and Dentsu released two surveys with different conclusions. NRI's survey was published earlier, and it estimated the opportunity cost of lost commercial views to be 5.4 billion yen. This calculation was based on the following assumptions: The percentage of watching recorded programs is 34.2%, the percentage of skipping commercials is 64.3%, and household penetration rate of HDR was still 2.6 percent in 2005.

In contrast, according to the report published by Dentsu, the largest advertising agency in Japan, HDR may have positive effects, because the viewing time of HDR holders have increased. Commercial recognition rate was higher in HDR holders than that of non-HDR holders.

Video Research, the sole TV rating agency in Japan, is planning to introduce a new method of viewing rate, which includes the replay of recorded programs.

(2) Place Shift of TV Program Watching

The second trend is that more viewing locations have become available, which is called “place shift.”

A. Portable Devices

The placement of watching a video has shifted from indoor to outdoor via mobile phones. Retransmission of terrestrial TV programs has been already offered by using one-segment of digital broadcasting channel. Another way of mobile multi-channel broadcasting will be offered in 2011, after the bandwidth which is currently used for analogue broadcasting is released and available for the multi-channel broadcasting.

Most of new mobile phones have one segment broadcast tuners, and original program has been allowed to show since the spring of 2008.

New mobile multi-channel broadcasting will be deployed by two technical methods: ISDB and MediaFLO. Some 30 channels of video or music programs can be offered through this system. Cross ownership of content production and communication carriers will be banned by the Ministry of Internal Affairs and Communications in order to maintain a competitive environment.

B. Content Transfer Around the World

Due to copyright protection, recorded programs cannot be distributed to the public without permission. Some companies, including Nagano Shoten and Nippon Digital Kaden has offered the service of remote video watching.

Most customers have their recording devices installed in companies building. The devices have a function, called “location free,” which allows overseas residents to record or replay programs.

Major TV broadcasters sued these small companies for copyright infringement charge. These services seem to be too small to affect the broadcasters business. But they are still fighting in the supreme courts, after the lost cases in the Intellectual Property Upper Court.

(3) On-Demand Viewing

On-demand viewing can be classified as “time shift” in a broader sense. In this paper, this latest trend is discussed in this section.

A. Catch-Up Viewing

The U.S. Broadcasters NBC and News Corp., have jointly supported a new venture HULU, established in 2008, that provides TV programs after seven days of live broadcast for those who need to catch up with them. The site has become one of the most popular video sites, following YouTube and Yahoo! Video. The site gained more than 9 million subscribers in 6 months after it launch.

The main reasons HULU succeeded include the availability of the most popular shows, a quarter lengths of commercial films, a user-friendly interface, and a large collection of TV programs and movies.

The attractiveness from the sponsors seems to be able to obtain information about viewer demographics, and to catch the reaction on the showing commercials. Therefore, more than 100 sponsors now sign up, while only ten sponsors existed at first.

In U.K., BBC's iPlayer has been very popular. BBC has been supporting many platforms, from PCs to video game devices. It provides not only streaming type but also downloading type with a certain time limit.

In France, state-owned broadcast stations initially provided those services with fees, but they switched to services free of charge.

While it is clear that charged content couldn't attract the mainstream viewers in other countries, NHK, a public channel in Japan, chose to provide the on-demand video streaming for a fee in December 2008. It provides two types of charges: A fixed monthly fee for 1,470 yen, and program-by-program fee between 105 yen and 305 yen, both of which are streaming type. As anticipated, the service had a sluggish start.

On the other hand, Tokyo Broadcasting System (TBS), a private channel in Tokyo, made an experimental offer free of charge, with the same concept as BBC and HULU, in February 2009 until the end of the shows. It will announce later whether it will continue free system or not, after examining the audience response.

Table 3: Video Distribution Services in the U.S.

	TV Stations	Others
Companies	ABC, CBS, NBC, FOX	AOL, Amazon, Apple
Main Genres	Drama, Animation, New, and Variety	Drama, Music, Animation, Comedy, Movie
Programs	PRISON BREAK, 24, CSI, Survivor, ER, Smith	LOST, MTV, Sleeper Cell, the NINE
Price	Free	\$1.99 per story
Delivery Format	Streaming	Download

Source: MIC (2008) 24

B. Watching Past Shows and Original Programs

(i) Free Type

Nippon TV (NTV) launched an Internet TV channel as “the second NTV,” in January 2005. Initially, it was a combination of paid and free content, but in October 2008, all shows can be watched free of charge without registration.

By decreasing the role of original content and focusing more terrestrial TV programs transmission, it became a profitable business in January 2009. One of the remaining issues is that it depends heavily on several sponsors.

Sony brought a bad news, which ended “branco” service in just 10 months after its opening. It maintained the shortcomings of the existing TV “programming” without time-shift function to provide for the customers.

(ii) Pay Type

The commercial TV stations have offered some popular shows and other programs with fees by streaming on the PCs or mobile phones. However, it was not successful yet. NHK with the large archives of old video programs began to provide them with fees.

Fuji TV announced that it would establish a partnership with communications carriers, including KDDI, NTT Plala, JCOM, NEC BIGLOBE, BB Cable, and NTT Communications. This will make a multi-platform delivery channels, including as mobile phones, CATVs, and network connection TVs.

In summary, broadcasters abroad are trying to recoup missing viewers with catch-up videos as well as VOD. BBC in U.K. and HULU in the U.S. have been growing very rapidly, competing against YouTube and other video services.

In Japan, on the other hand, the free video model is not yet fully deployed by private broadcasters. NHK has been trying to get the customers with fee system.

Future Challenges of Content Distribution

In this paper, the applicability of the long tail principle and the necessity of copyright law revision will also be discussed.

3.1 Applicability of Long Tail Principle to Video Content

As already discussed in the beginning, as far as the music market is concerned, Amazon and iTunes established a successful business model utilizing the long tail principle. While the revenue growth has declined, the number of music download has soared dramatically. It is an interesting issue whether the video content market will be able to follow the long tail business model.

Firstly, one of the challenges for video content is that its storage cost and delivery cost are large due to its file size.

The average file size of video is several Giga Bytes, which is thousand times bigger than that of music files. Therefore, in the short run, it can be considered that the long tail type of business model will be difficult to sustain for video content. However, short video clips shown on mobile phones may be able to store and sell in

the long tail form.

Secondly, a long tail business needs the finest search engine function. Existing video content search engine is not as good as text search engine yet. Meta-files, including the title, actors, name of directors, name of producers, and scenario, may suggest what users want. However, they expect a better way to find the content they are looking for.

Videosurf, which was developed recently, shows an example of future video search engine. It provides the search results in an intuitive way like a form of negative of photographs. It accepts a specification of a genre and sites (Boehret 2008).

Thirdly, the selection available for videos is still limited. Even Apple's iTunes offers only 20,000 TV shows and 1,000 videos. The procedure for an approval from copyright holders is very time consuming. An introduction of DRM-free video may be realized only after the expiration of copyright.

3.2 Necessity to Revise the Copyright Law

(1) Japanese Government Policy

The Ministry of Internal Affairs and Communications and the Intellectual Property Strategy Headquarters have been examining how to revise the copyright law.

The expert panel has been held in the Intellectual Property Strategy Headquarters to examine the distribution of broadcast promotion measures, and the summary report⁴ in December 2008, the following three recommendations were made:

- a. Promote multi-use agreement for programs during a production phases for lowering the cost of rights;
- b. Not to impede the development of services for search engine, and to introduce a Japanese version of the fair use provisions; and
- c. Set Measurements to penalize any destructive activity for copyright protection, and mandate the introduction of automatic copyright infringement detection to Internet service providers.

In addition, the study committee on the promotion and distribution of digital content by the Ministry of Internal Affairs and Communications compiled in June 2008, as follows:

- a. Build a database for content trade by the producers, and provide the contents in an equal manner;
- b. Hold a trade fair of TV programs and support the international trade of TV programs made by local broadcasters; and
- c. To support the trial program for producers who are willing to take the risk to tackle the multiple-use production.

(2) New Copyright Law or Revising the Current Copyright Law

In March 2008, bold proposals on Internet legislations made by the “Law experts Digital Content Forum”⁵ brought a controversy. Some critics say the proposals benefit mainly communications carriers, but others advocates that it is desirable that the past bonds of copyright law be untied.

In January 2009, a new proposal was issued by the “Council for Promotion of Digital Content”⁶ in the form of a slight different method from the proposals described above. Three vice presidents are assigned from the fields of business and politics—president of Kadokawa group, president of Square Enix, and one of the House of Councilors. They plan to hold the public debates and re-examine their proposals in the future.

Meanwhile, the “Council of network distribution systems and copyright”⁷, established in November 2008, insisted that making a new computer system should solve those problems and that it is not necessary to revise the current copyright law. This group appears to be a neutral group, but the members are the personal legal councils⁸ of some copyright holders, the copyright management organizations, and some broadcasters, which indicates some bias.

Conclusion

New ways of content distribution is emerging due to innovative technologies. This change will be likely to continue to spread to other areas as well as video and music areas. The speed of change and conditions of each area are different, but the global trend should be considered, while some characteristics of the Japanese legal system and market should be taken into account.

The backlash against the recent trend of deregulation illustrates the hope of the people who want to live rich in healthy culture. Any necessary measure should be discussed from a balanced long-term perspective and implemented as quickly as possible.

NOTES

1. According to IFPI (2008), the ratios of mobile music distribution in the major countries are as follows: 91% in Japan, 73% in China, 33% in the U.S., and 29% in the U.K.
2. Users of iTunes and users of Amazon are overlapped by about 10 percent. At the Amazon store, downloading music is more popular than CD album.
3. According to CNET Japan (2008), active P2P software includes 180 thousand units of Wiiny and 200 thousand units of SHAREP.
4. The Intellectual Property Strategy Headquarters published a report on the revision of copyright law titled “Regarding the intellectual property system in the Era of Digital Networks” on December 24 of 2008.
5. Chairman was Mr. Tatsuo Hatta, a professor at National Graduate Institute for Policy Studies.
6. Chairman was Mr. Nobuhiro Nakayama, a professor emeritus at University of Tokyo.
7. Chairman is Mr. Hiroshi Saito, a professor emeritus at Niigata University.
8. Mr. Matsuda Masayuki was an acting president, alongside the founders and the copyright holder and copyright management organizations. Mr. Matsuda was a key member of the defense action for the main broadcasting stations in Tokyo.

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