A Study on the Operation and Management of Internet Multimedia

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ABSTRACT

In a society of knowledge economy, innovation becomes the determinant factor of the development of a country. A mechanism for better knowledge spreading will lead to a successful knowledge economy, within which internet multi-media plays an important role because of its convenience and cost effectiveness of information transference. Therefore, the emergence of internet multi-media determines the whole economic development of a country, thereby linking the concept of internet multi-media to that of knowledge economy. So, we claim that internet multi-media should convey valuably economical information to the public, to better the servicing for a society and the developmental opportunity of an electronic media.

Keywords: knowledge economy, information era, internet-multi media

INTRODUCTION

~~1. Foreword~~

Ever since Marconi had proven to a skeptical British crowd in 1899 that radio signals can cross the English Channel, several billions of people worldwide have relied on this invention to receive news, entertainment, and education for more than 100 years. After “Internet broadcasting” entered the international stage in the 1990s, various industries have viewed “Internet multimedia” as the primary media of broadcasting in the future. As a result, publishers, TV stations, radio stations, and film studios are competing to enter this business in hopes of leading the field. In order to stay competitive in the Internet environment, the media needs to effectively grasp and utilize the technology of Internet broadcasting. A more important key point, however, is whether the content of broadcasting can meet the public’s demands. By looking at the developmental process of human civilizations, the operation and management of Internet multimedia not only need to address the new technical challenges brought forth by the Internet, but must also be able to provide the public with valuable information or content in order to meet the demands in the current era and contribute to society.

~~2.~~ Knowledge-based Economy and Mass Media

In 1995, Amaze, a company founded by John Moores University in Liverpool, U.K., commercialized a set

of interactive film technologies that was originally designed for education and produced films which described the products and systems of retailers such as Littlewoods and computer companies such as IBM. The sales volume of these commercialized products was about 400,000 pounds in the first year; it doubled the following year. What this company actually did was simply repack a huge amount of complicated information into interactive programs that are more user-friendly. This is a typical example of creating new business through knowledge; however, the general public and companies are rarely able to create new knowledge, much less create new business through knowledge. Moreover, it is not guaranteed that the knowledge or techniques developed by academic organizations can indeed be commercialized or provide practical applications for businesses and society. Therefore, this example of how Amaze commercialized their film interactive technologies can only be viewed as a rare example.

As a matter of fact, fierce competition – especially when it comes from unexpected opponents, often means that the involved organizations need to rapidly learn and constantly improve themselves. In the 1990s, Nike, an American company, became the most popular brand because of the sports shoes they manufactured. The fact that their managerial emphasis was on the pre-production design and research of new styles and materials as well as post-production marketing and brand management; this is another typical example of a successful "transformation." The meaning of "transformation" is enhancing the application of "knowledge." In other words, a company that could fully grasp "knowledge" instead of focusing only on sales promotion or services would be able to generate better output.

In the society we live in, there is no telling how many valuable inventions have gone to waste because their inventors have failed to notify society of their inventions. One of the objectives in contemporary society should be about maximizing the use of "inventions" and "broadcasting" of knowledge to form an ideal integration of democracy and economy, allowing the invisible "knowledge-based economy" to enrich the content of information, culture, entertainment, and multimedia. Depending on our selections or decisions, new phases of social growth and economical development could thus be enabled. Future generations should no longer be restricted by the acquisition of material and energy and their future should depend on whether they are able to transform knowledge into capital. How can knowledge be transformed into capital? We can discuss this question from two directions:

First of all, we will look at the relationship between "knowledge-based economy" and "the Internet:"

1. In the future, businesses will gradually come to rely on the Internet to provide external knowledge that stimulates internal innovation. Because all businesses would need external knowledge to stimulate internal innovation, the transfer of information and competition become very important. In the knowledge-based economy, the basic unit of "innovation" or the "spirit" of starting an enterprise is no longer a company or an individual but "the Internet" that collects innovative information from different sources.

2. A company's best strategy will no longer be monopolization but innovation; this will require making knowledge available to the public. The monopolization of knowledge will be greatly reduced because of the Internet. The welfare society that we need should emphasize the provision of fundamental knowledge that allows the public to look after themselves. In other words, we should replace "social expenditures" with "social capital" that can be used to develop the public's ability to look after themselves.

3. The boundary between knowledge producers and consumers will become vague because of the communications allowed by the Internet. Except for extremely professional techniques that can only be utilized by experts, most of the information can be accessed by knowledge-consumers through new broadcasting technologies and databases. For example, one would no longer have to go see a doctor to get diagnosed or receive prescriptions for minor illnesses or discomfort. Comparatively, in the “Internet Era” where people can access knowledge independently, the tasks that originally required lawyers or accountants can now be done through home computers.

4. The public’s life skills are definitely greatly improved due to the emergence of the Internet. Computers' binary digits, digital information, sound, and images do not need to be shipped by containers or examined by customs – all they require are a telephone line or a satellite signal that connects them to a home computer. In the future, households will be filled with duplicated software and books, downloaded films, and media disks. As the functions of computers and communication systems grow stronger, there is no reason that they cannot be expanded from the financial market to companies and consumers. Therefore, there will be more convenience in people's lives.

We now look at the relationship between “knowledge-based economy” and “mass media”:

1. The purpose of the mass media is to clearly describe societal demands and urge the government and businesses to provide sufficient information and solve problems. Therefore, the mass media are also responsible for the audience’s problems that need to be addressed, not just to gather or fabricate debates, much less for making commercial revenue. Relatively, politicians and entrepreneurs should not just ask voters or consumers to believe them without giving them the reasons to do so. They must clearly explain their political policies and the product information before placing them under the public’s scrutiny.

2. The public needs the mass media to gather, transfer, and even analyze and decipher information for them. When people have received the information that has already been converted into something that can be accurately broadcasted, they will then need to internalize the knowledge that has been converted into information as a part of their own personal knowledge before they can make life applications. These tasks, however, are very time consuming.

3. New technologies, especially new concepts, definitely need to be promoted by the mass media. For example, in the knowledge-based economy, the method of calculating market price and traditional accounting are losing their ability to tell us how to evaluate the value of the merchandise that is produced by companies and consumed by the public since the invisible value of knowledge cannot be seen from the financial perspective. The hypothesis that accounting is based on is to evaluate a company’s wealth and value by looking at the number of loans; this method cannot determine the invisible value of knowledge either. However, the asset of “knowledge” is the lifeline of market competition as well as the source of innovation or competition enhancement. By emphasizing the report of new concepts and technologies, the mass media should be able to help transform the public’s concepts.

4. The establishment of databases still requires the active participation of the mass media. Different from the experts in law or accounting firms that have received serious training, databases need to accommodate a greater number and types of people who know how to analyze, utilize information, innovate, and develop new

knowledge. Moreover, some of the most serious problems that many companies face include having an inadequate learning capacity and not being able to adapt to social changes. The mass media usually possesses different kinds of professionals and are good at absorbing the latest knowledge. With the participation of the mass media in the establishment of databases, acquisition of the latest information is made possible.

The above analyses from two directions demonstrate that in the era of the knowledge-based economy, it seems rather certain that the differences between a person who has rich knowledge and can acquire knowledge with ease and a person who lacks knowledge and cannot acquire knowledge with ease will result in two distinctly different lifestyles. The fact that the former will be rich and the latter will be poor is the exact reason why the "digital divide" is a haunting issue. Therefore, whether individuals and society have enough facilities and capabilities to gather and utilize information will significantly determine the economical development in the era of the knowledge-based economy. In other words, if information circulates freely in society and can be accessed by anyone, not only can the poverty gap be reduced, but the overall economy will also develop significantly. The above analyses also demonstrate the close relationships between the knowledge-based economy, the Internet, and mass media. The combination of the "Internet" and "mass media" is what we understand as "Internet multimedia."

~~3.~~ The Challenges Faced by the Traditional Electronic Media Market

Traditionally, mass media mostly relied on paper or airwave channels to broadcast news or information. Due to limited print size or time slots and the demands of attracting a larger audience, the managerial model is basically focused on "reporting something to the public." As a result, the content is usually easy to read and understand. However, as electronic technologies such as computers and the Internet advance rapidly, the traditional managerial model of mass media has now clearly been challenged. The most significant challenge is that mass media is no longer restricted by print size or time slots and are now able to fully provide different types of information – even those that have not been processed. The audience can also browse and acquire needed information or data on the Internet. In other words, if traditional mass media still wishes to stay on top of the information market, they would not only have to provide a large "quantity" of information or data, but also need to drastically enhance their "quality."

Since the key to survival and competition of the mass media still depends on whether they are able to provide the information or content needed by the public, the question now is how exactly the mass media should operate from now on.

(1). The Internet is able to provide a large amount of information or content. In other words, the mass media should not only know how to use the Internet to transfer information, but it also need to fully utilize the Internet to gather information. The former is about letting the audience and the public to be able to acquire the needed information at any time, while the latter is about allowing the media to transfer the meaningful or valuable information to ensure that the information shared with the audience indeed meets their needs.

Traditionally, the mass media used to think like a “seller” that only thinks about what the audience wants or likes. The selling point of a certain material that is popular would direct their efforts. With the constant introduction of new broadcasting technologies, however, the audience now has a lot more choices. The “seller” now becomes the “buyer.” The managerial style of traditional mass media is no longer helpful; in fact, it now results in more financial losses. It is just a matter of time before companies that do not adjust their managerial strategies get eliminated.

Humans were originally equipped with the capacities to allocate, store, and access information. These capacities are what humans depend on to increase their wisdom and enrich their life or vocational skills. However, today’s mass media managers seem to have forgotten these human instincts and they focus entirely on creating or identifying the programs that will be enjoyed by the audience. In the end, these managers will find themselves being further away from the audience. In fact, what the audience needs is not just to receive information passively when they now have more ideas and insights that they wish to share with governments or other people. In order to reduce this gap, the Internet has come just in time to serve as a convenient tool that connects the media managers with the audience. The key question in this effort is what the media managers should do in order to attract a larger audience to become “community members.”

Today’s mass media has unknowingly become commercial organizations. Not only do the bosses decide managerial strategies, but the reporters, editors, directors, and producers have also truly become the employees that work for their employers. Some forms of media have even put “money making” as their number one objective. This kind of trend would cause problems in seeking public support, not to mention asking the audience to cooperate in or actively provide different types of information.

The mass media is a public asset; therefore, it should be jointly owned and managed by the public. The ways of achieving this goal include collecting funds from all the individuals in society and treating the workers in this industry as “partners” – instead of having owners to order their employees to carry out orders. When everyone contributes back to society, the media can thus become public, open, reputable, and the true “mass” media. This is a very important concept in the management of mass media, and it is foreseeable in the Internet era even when it requires a lot of hard work.

Some say that under the concept of “scientific management” proposed by Taylor, people are used to obeying rules and have worked in environments that are full of “signs” since the Industrial Revolution. This phenomenon is more significant in an organization that has a higher level of scientific management. However, when the environment suddenly changes (new competitors, loss of customers, changes in the sizes and shapes of products), the members in the organization will quickly realize that their rules have become meaningless. They are forced to come up with new ways of doing things, but this is difficult for them since the environment changes too quickly. This type of situation has been observed in many traditional mass media outlets that are facing new technological impacts. Some traditional mass media managers often complain that the overly fierce competition is the reason why their profit drops drastically without understanding that the mass media is just like other organizations: it only takes a matter of time before elimination is faced by a business that cannot adapt to new technological advancements and adjust its old concepts to win more public acknowledgement.

Today, we have actually left the “mass media” era and entered the “segmented media” era. Instead of

opposing each other, however, these two are actually complementary toward each other. In other words, the mass media of the future does not only need to continue to provide the public with the information they commonly care about, but also the different types of information needed by the audiences of different backgrounds. The contribution made by new broadcasting technologies is evident here.

(2). In terms of enhancing the quality of information or program content, the mass media needs to develop with society and provide the audience with meaningful or knowledgeable information. Only in doing so would the media be provided with a purpose to exist. The managers who wish to enhance this kind of service would also need to gather more professionals in this industry.

The rise of the "knowledge-based economy" will challenge and change our past understanding of the mass media. With the economy becoming increasingly knowledge-intensive, more businesses will be based on information and be rewarded for their information services provided to society. As mentioned earlier, the media should be owned jointly by society; not only should they be funded jointly by the public, but their employees should also be business partners. In fact, because the mass media needs to gather and provide the most accurate and valuable information for the public, it should also recruit knowledgeable individuals or experts to jointly manage and own this industry through social contracts, rather than being owned by owners or stockholders in the traditional sense. This kind of philosophy is the only way to attract elites and increase the "quality" of mass media.

Lastly, it needs to be noted that although the enhancement of "quality" and "quantity" is necessary in the operation and management of mass media, what is even more important is the enhancement of "reputability." The media must win the public's trust before they can persuade them that the invisible asset created by the media is an innovation that deserves to be considered or referenced. Only in doing so would the media be trusted and given validity. On the other hand, if the media only focuses on short-term profits generated by providing shallow news or entertainment, it could cause the entire broadcasting industry to suffer from irreversible damage. The reason that today's mass media needs to constantly renew its business licenses means that they have to constantly be tested by the public to see whether they are still reputable and valid.

~~4.~~ Operation and Management of Internet Multimedia

David C. Moschella (1999) has provided the following definition for the application of the knowledge-based economy to the Internet: "Due to the emphasis on texts and graphics, most of the websites constructed by Internet media outlets such as publishers, TV stations, radio stations, or film studios all look quite similar. As the Internet begins to support integrative sound and video, this kind of similarity is likely to continue. In other words, many content-providers will take advantage of the fact that the Internet is now able to support multimedia application systems and thus transform into real multimedia companies." This statement explains that in terms of the introduction and application of Internet hardware, most of the media is able to keep up with the development of new broadcasting technologies and the differences between them are limited. However, the situation becomes drastically different in terms of how these broadcasting technologies are used to enrich or enhance the service content of the media. Sydney W. Head (1996) has stated: "The analogy of

‘information super highway’ is extremely appropriate to describe the transfer network that is formed by several different types of technology. This analogy, however, is not very useful for us to discuss the source of the provided content, namely program producers and information providers. Cable television stations, telephone companies, and computer software or hardware manufacturers all intend to get involved in this information super highway and control the information that travels on it. When we get to the bottom of the matter, however, the key to any contender’s success in this knowledge-oriented age is not the method of broadcasting but the very content of broadcasting. The fact is that most people don’t really care whether they receive information or entertainment or see images on their televisions or computers through a cable (perhaps two: one telephone cable and one television cable) or through the air (wireless TV or satellite). What they care about are the types and quality of programs and services, convenience of reception, and how much they need to pay.” These words have expressed precisely how the public and various news media outlets should view the development of Internet multimedia with the emergence of new broadcasting technologies.

In “Toward Competition in Cable Television,” Leland L. Johnson (1994) has discussed what kind of situations would emerge once telephone companies have to compete with the existing cable TV companies and what would happen if direct satellite, cable TV systems, and broadcasting stations have been transformed into “multi channel businesses” that are under advanced management. Johnson’s conclusion is that although a more fierce and direct competition would be seen among these media outlets because of the impact brought by the new broadcasting technologies; the key to success, however, depends on the kind of stance or the operational and managerial strategies they use to meet the public’s diversifying demands. In other words, the victors of the next wave of media managers must be the individuals or groups that are most capable of meeting the demands of a diverse audience.

In the knowledge-based economy, the most successful businesses will be hybrid businesses that have combined different types of knowledge. Whether it is the software industry, the communication industry, or the media industry, they all need to constantly improve in order to survive. Usually, older organizations emphasize more on planning the future, whereas newer ones believe that the future is uncertain and always changing. Therefore, strategies should be built on flexibility. In the new knowledge-intensive industries where there is rapid circulation, a company needs to first stay on top of the next wave of trends and technologies, followed by knowing how to transform its knowledge or technologies into products or services in order to win customers. Therefore, managing new media is the same as managing the networks of the above mentioned relationships. “Internet multimedia” providers are thus the vanguards in the “knowledge-based economy:” the abovementioned tasks can only be completed when a path has been cleared.

Considering the abovementioned factors, the following objectives need to be met in order to facilitate the management of “Internet multimedia”:

1. In the knowledge-based economy, the smartest person is the one who can combine his or her knowledge with that of others. All people have knowledge; the knowledge put together by different individuals is much more flexible and diverse than that of a single, central authority. The desire of high-level managers to control employees’ thoughts have often resulted in the decline of a company’s intelligence. Therefore, the first objective in “Internet multimedia” is to fully publicize the information of management. A rigid company would lack

sufficient flexibility to face a complicated environment; the goal of “employee self-management” can only be achieved in a company in which information is circulated freely, allowing its employees to express their strengths and jointly help the company grow.

One thing that needs to be noted, however, is that companies are still the integrators of knowledge since Internet multimedia which is not tangible enough and lacks a strong and powerful strategy center or corporate culture will not be able to expand its market. Moreover, although the consumers who are allowed to participate in a company’s operation would feel more active and show a higher level of customer satisfaction since they are both the producers and the consumers, the quality of information provided by the company, however, could be erroneous due to the consumers’ different levels of knowledge, thus resulting in irreversible results. Therefore, media managers need to be careful with this issue.

2. In order to face new technological challenges, the older organizations need to develop more a complicated class system. However, a difficult transition phase is unavoidable as the older tasks, techniques, and cultures are being replaced by newer ones. Different from older organizations, the managers who are in charge of the newer generations grew up in the 1960s during which “liberalism” was awakened. These managers place more value on creativity and self-management in their jobs; the organizations they work for no longer emphasize stratification or authoritarian rule. Due to the fact that they are more tolerant towards different life styles, they are better able to gather people from different places, thus allowing their companies to become more competitive. “Internet multimedia” is a new organization, and it naturally should avoid the kind of burdens carried by older organizations and should instead acquire the good qualities of newer organizations.

3. The knowledge possessed by an individual can only manifest its market potential when it is being duplicated and assimilated by the individual’s organization. Newer organizations are usually better at accepting different individuals’ opinions and allowing more potential for creating new business. In the knowledge-based economy, knowledge has often surpassed real-life experiences and many scientific inventions have thus become the most important sources of new technologies and products. However, these inventions or new knowledge are invisible and their values are difficult to determine. Consequently, older organizations often do not wish to invest in them or produce them. The market’s actual reactions, however, have shown that the best-selling products are often based on fashionable concepts. Therefore, companies that place too much emphasis on material production could one day face a withering market or be unable to acquire capital. In other words, businesses' future values will gradually be based on the foundations of concept, brand name, and fashion. Therefore, being able to have insight and transform a personal invention or a creation into a marketable business as early as possible becomes very important. The nature of Internet media is to collect and create information and knowledge; more emphasis should be placed on the collecting and broadcasting of information or knowledge that belongs to an individual but benefits the entire society. By changing the traditions of only reporting news regarding governmental organizations or large corporations, Internet multimedia would be better able to benefit society.

4. Information can be transferred in great quantities without any comprehension involved. Knowledge, however, is different. It has to be understood by people outside the transfer process. Therefore, the relationship between knowledge and broadcasting is that through data transfer, interpretation, and evaluation, knowledge is

then understood and applied by people. The fact is that instead of more information, what the public needs is more comprehension. Knowledge is created and used by humans, and this process cannot be replaced by broadcasting technologies. The most successful companies in the future will be the ones that use a minimum amount of information in the most appropriate way; the smartest companies only need a few pieces of knowledge to determine how to develop new products and create a market. Businesses that want to actively reform themselves may need to introduce the human resources and concepts from external domains with which they are unfamiliar and integrate them into their own existing resources. These tasks can easily be accomplished by the Internet media, which can provide optimal services to businesses as well as individuals.

5. Knowledge can often be put into two categories: the type that can be broadcasted outward and the type that requires introspection and cannot be explained in words. Since the former can be broadcasted, its effects amplifies as the range and audience of the broadcasting expand. The latter, however, can only show a greatest value when it can be broadcasted to the public because it must be first be converted into a format that is clear and can be broadcasted. Many important details could be overlooked when the knowledge that cannot be described in words is being converted into a format that can be broadcasted; this issue certainly deserves a remedy. Because of the limited print size or broadcast time, the traditional mass media outlets often had to simplify the information they print or broadcast in order to meet their duty as reporters. This problem can be addressed by the above mentioned Internet media since it has no problem in terms of storage capacity and it can provide unlimited amounts of information or knowledge that can be accessed by the public based on their own needs. Moreover, because of the interactivity of Internet multimedia, it allows service providers to accept the public's feedback and comments, including questions and criticisms, thus allowing even better results.

6. The knowledge broadcasted through the Internet multimedia also helps generate more knowledge. During the process of a concept being transferred to different places and people, the initial concept undergoes constant adjustments. It also grows and develops, resulting in the endless process of knowledge-creation. The broadcasting capacity of Internet multimedia is thus better than that of other media and helps create more knowledge.

CONCLUSIONS

~~5. Conclusion~~

It took electronic broadcasting less than 100 years to develop into a mass medium; its influence, however, keeps getting stronger as the technologies continue to advance. "Internet multimedia" is the latest major media that is generally favored by the industry. In the past, radio, movies, and television have mostly become entertainment-oriented in their process of becoming the preferred form of mass media or they have even simply been viewed only as entertainment tools. This kind of development is the result of commercialization and not even news programs are exempt. As for how Internet multimedia should be operated and managed, in this dissertation it is proposed that it needs to distinguish itself from the traditional electronic media and should focus on providing information in the era of the knowledge-based economy. Only in doing so would it meet the

demands of this era and increase the competitiveness of businesses.

A knowledge-based economy is the same as an “Internet economy” since most of the economic behaviors in a knowledge-based economy can be conducted through the Internet and all the so-called rich information in the “Information Age” can be transferred most efficiently through the Internet. As a result, whether the Internet can be fully utilized as the channel for spreading knowledge or information in a knowledge-based economy naturally determines the overall economic development. However, knowledge or information needs to be gathered, analyzed, and reported by “humans” in order for them to be shared by the public; Internet multimedia plays a very important role in this process. Therefore, we need to explore deeper into the operation and management of Internet multimedia; in other words, we need to work diligently to provide the public with meaningful and knowledgeable information. On one hand, we need to carry out our social responsibility of using the mass media to enhance our national competitiveness and benefit the public; on the other, we need to gain a competitive edge by providing more products and services, thus creating more opportunities for the sustainable development of electronic media.

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