



Optimization of the News Dissemination Mode Under the Computer-Aided Environment of the Internet of Things

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Abstract. From digitization, networking and then to intelligence today, the establishment of the "Internet of Things" marks new progress in information dissemination technology and drives the transformation and upgrading of media. The widespread application of the Internet of Things technology will trigger the transformation and upgrading of communication intelligence, promote the explosive expansion of the communication platform, give birth to a high degree of integration of "content production" and emerging communication methods, and promote key changes in the effectiveness of media communication. The Internet of Things has communicative, modular, and systematic communication characteristics, and is considered to be the engine of the world's next wave of information technology and the new economy. Contains a huge space for the development of media. The Internet of Things will promote the intelligent upgrading of traditional media and trigger people's re-understanding of the nature of media. The Internet of Things will provide a multi-faceted information selection service. The media application of the Internet of Things can be expanded from three aspects: a brand-new media service system, a brand-new media content development, and a brand-new media life challenge. This article analyzes the deconstruction of the main body of news dissemination, dissemination materials, and dissemination objects of the Internet of Things, from five aspects including updating the dissemination structure, optimizing the structure of news dissemination platforms, deepening the structure of dissemination means, enriching the structure of dissemination content, and enhancing the function of news dissemination. Discuss the reconstruction and positive function of modern information technology to news dissemination. In addition, this article will also analyze the relationship between the social application of the Internet of Things technology and the news media, and explore the influence of the Internet of Things

on the news dissemination process and the media industry. It is hoped that this article can broaden the application space of the Internet of Things technology in the news dissemination industry, promote the transformation of traditional media to omnimedia, and explore ways and means to try to apply the Internet of Things technology to media.

Keywords: Internet of things; computer; news dissemination model

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1 INTRODUCTION

Regarding the definition of news communication, many experts, scholars and organizations have also put forward their own opinions. Maiorescu et al. [1] pointed out that the process of news dissemination is also news dissemination, which is the process by which people obtain news information from each other and communicate information with each other. After research, Gilbert [2] proposed that the process of news release and acceptance is news dissemination. Yeni et al. [3] proposes that in the process of news dissemination, the dissemination of information to the public forms a guidance that can have a corresponding impact on the inner beliefs of the public. Others believe that news dissemination is the behavior and process of people disseminating and receiving news information. News facts, dissemination media and news audiences have become the three most basic components of news dissemination. Scholar's research pointed out that news dissemination is one of the social activities of communicating information between people. It belongs to a relatively common social phenomenon and its function is becoming more and more important and prominent in modern society. In daily life, people obtain news through media such as newspapers, magazines, radio, television, and the Internet; with the development of new media, social media sites, video sites, Weibo, WeChat and other self-media are becoming important for people to pass news to each other way. The conventional media is shown in Figure 1.

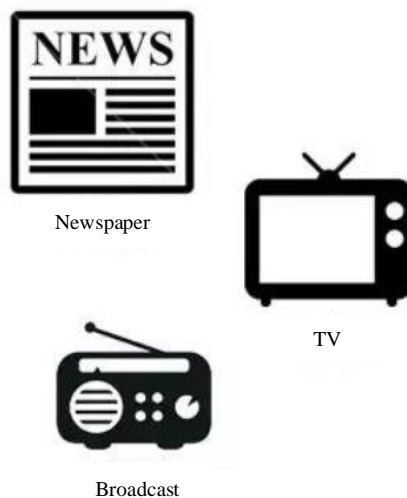


Figure 1: Conventional media.

Regarding the characteristics of news dissemination, many experts and scholars have also put forward their own opinions. It should be pointed out after research by Li [4] that multi-faceted, efficient, public, and timely are the characteristics of modern news dissemination. Yael et al. [5] pointed out that traditional news dissemination is in a rigid form, while at the same time it has defects such as single content, few transmission paths and insufficient interactivity. However, modern news dissemination has obviously developed completely in the opposite direction to the above-mentioned

defects. The research of scholar Ding Junjie and others pointed out that modern news dissemination has many characteristics such as seamless, multi-dimensional, and multi-point interaction.

Nowadays, in the self-media environment, the transmission path has changed from single linear to networked diffusion, and the agenda setting has changed from guidance to aggregation. After networked news organizations have higher management quality and efficiency, and the technical level of management has been improved. The Internet and traditional media continue to merge, and new forms of communication are emerging in endlessly. Its rapid and extensive means of dissemination has become a good publishing platform for the news source itself. Innovation through the integration of media has become a new business philosophy. This change can make media operations more diversified and enriched, and can promote the development of the property rights structure of media institutions in the direction of integration. There will also be many new changes and innovations in the information subject and receiving terminal. In terms of the influence of the dissemination effect, on the one hand, it can increase the speed of information dissemination and expand the scope of information dissemination. Information technology has made the content of communication more colorful, the amount of information has increased sharply, the information content will have more visual effects and three-dimensionality, the transmission speed will be greatly improved, and the effectiveness will be greatly enhanced, and the level of service capabilities will also be greatly improved. The improvement. The real-time broadcast of online news, rolling refresh at any time, and its interactive communication features can greatly improve the timeliness and interactivity of news [6,7]. The media based on IOT is shown in Figure 2.

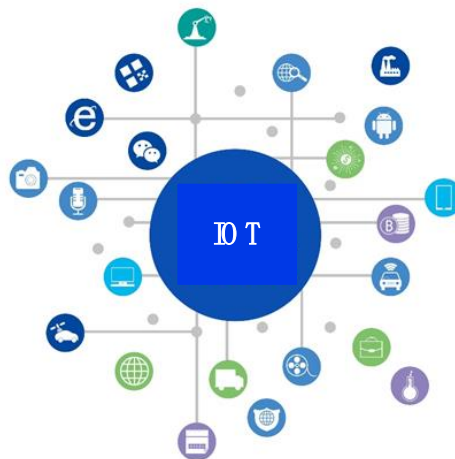


Figure 2: Media based on internet of things.

As the Internet of Things has a wide range of applications in the military industry, disaster warning, daily life and other fields, and has far-reaching prospects, in recent years, major countries have put forward informatization strategies related to the Internet of Things. In August 2009, Premier Wen Jiabao of the State Council proposed the establishment of a "Perceived China" center and decided to establish a National Sensor Network Innovation Demonstration Center in Wuxi. Recently, it has gradually entered the media field of vision. And became a hot word in the media. It is also the strategic fulcrum for the future development of my country's information industry [8,9].

The "Internet of Things" has the universal characteristics of the Internet. It is the extension and expansion of the Internet in form. In the era of the Internet of Things, everything is a media, and every object is a media terminal. The media has become media, and the media has exploded. The expansion of the media has materialized, and people have truly entered the era of "media-based survival". All this will have a significant impact on the development of modern media. For the media field, the extension and expansion of the "Internet of Things" will bring new challenges and

opportunities to the media field. Just as the Internet just started to rise back then. Do we exclaim that traditional media will become "bubbles", or should we embrace it with enthusiasm? History will prove that who has seized the opportunity of the development of new information technology, who first grasped the "Internet of Things" ", and use it appropriately. Who can gain a competitive advantage in the future development of media [10].

2 THE IMPACT OF THE INTERNET OF THINGS ON THE NEWS DISSEMINATION PROCESS

The "net" is still the key, but the "net" is no longer just connecting people, but also includes things. Such an expanded Internet can meet people's needs in more aspects, and can provide people with more information for choice and use. After all, the Internet of Things is still a network used to spread information. Radio frequency identification technology, sensor technology, etc. are like organs that collect information such as hands, feet, eyes, ears, nose and mouth. Communication technology is the meridian, then database technology is the brain. These technologies are like the various organs of the human body, connecting various parts of the body. The whole process is still collecting information, processing information, and disseminating information. The difference is that this process is constantly interacting. Interactivity is another attribute of the Internet of Things. Whether it is the Internet of Things or the Internet, there is no doubt that its main body is people. Even if things are incorporated into the network, things are also given to sensing devices created by human beings. Moreover, the functions of the object and the information provided are also set according to the needs of people. It can be seen that people can feel, know and participate in the Internet of Things created by themselves. Interactivity can also be understood as communication. Whether it is communication between people or things, or even communication between things, it is the research category of communication media. The Internet of Things also has system attributes. In the world of the Internet of Things, an object can be a source of information, or a terminal that receives information, and the system is indispensable for the object to do all this. Perhaps in the future, refrigerators can monitor their own temperature, time, current, consumption, etc., after installing an intelligent system, and at the same time can inquire about the nutritional content of vegetables, fruits, meats, and the shelf life of foods. It is precisely because of the system that mobile phones and computers have become powerful tools that promote the rapid development of new media. Therefore, implanting systems into other objects changes the information dissemination and receiving technology, which will also bring new ideas to the media industry. Change.

With the continuous popularization and improvement of the social applications of the Internet of Things, sensor technology, one of the infrastructure and key technologies of the Internet of Things, has also been further developed. Under the opportunity of media fusion, the combination of sensors and news dissemination has resulted in "sensor news". This new concept, as shown in Figure 3.

(1) Enriching news source channels

Sensor news has broadened the information channels used by media workers in the past when planning news topics and making news products, enriched the information resources in news reports, and provided media workers with a broader space for report planning and product production. There have been many successful cases of using the information provided by sensors to obtain topics and plan. The work "Speeding Police", which won the Pulitzer Prize for Journalism in 2013, uses sensors in public facilities in Florida to find news clues and disclose the fact that the state police are speeding during non-official hours. The series of reports written are unacceptable. The rebutted data exposes the insecure factors in social life, thereby maintaining public safety. This series of reports calculates and analyzes the license plate records of police cars entering the high-speed automatic toll station, the time and distance between entering and exiting the highway, as well as the positioning information provided by GPS and the comparison of the jurisdiction. There were 5,100 high-speed speeding incidents during non-business hours. The conclusion that 96% of the speeds are between 145 kilometers and 177 kilometers, and more than half of the speeding incidents occurred outside the police jurisdiction, thus revealing the fact that the law enforcement officers themselves violated

traffic rules and caused harm to public safety. In addition to using sensors that are ubiquitous around users, there is also the use of smart wearable devices and built-in sensor functions on smartphones to collect sensor data through "crowdsourcing" methods to mobilize users to participate in surveys. New York Public Radio once used "Cicada Insect Tracking" as a project, inviting listeners to use temperature sensors to make a joint experimental report to observe the unearthed conditions of cicadas. The collected data was made into a timeline to let users understand the growth of cicadas. Law, gaining popular science knowledge through participation is also a classic case of sensor news.

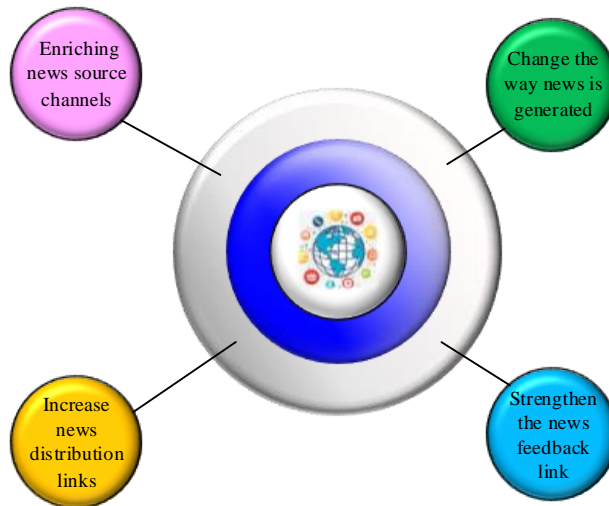


Figure 3: New concept of the media.

(2) Change the way news is generated

In the era of the Internet of Things, machines can not only become information collectors, but also intelligently process information. With the emergence of intelligent robots, robot writing has become an important part of intelligent news production. With the help of big data, more abundant materials have become the original materials for news writing. The speed of robot writing and publishing has greatly improved the timeliness of news release, grabbing valuable time for the media, and making predictive news possible. While improving writing efficiency, the machine can also free more journalists from mechanical data analysis work, so that they have more time and energy to engage in higher-level news activities. This is undoubtedly an excellent development opportunity for improving the overall level of the media industry. What the future journalism profession needs is no longer a single reporter who can only write news, but an expert reporter who can coordinate and dispatch various new equipment and all-round editors who understand the principles of news dissemination. In the Internet of Things era, due to more detailed data collection, more accurate data analysis, more diverse forms of information presentation, and richer content, the personalized needs of the audience will be further met.

(3) Increase news distribution links

The trend of media convergence development requires media to provide different forms of content through different media and terminals to meet the information needs of users for different media. The emergence of more intelligent terminals provides more soil for media integration. The Internet of Things era is an era of "everything is media". New smart terminals beyond imagination are changing the way people receive information, and also affecting news gathering, editing and distribution. With the development of sensor technology and the popularization of smart wear and smart home, more user information is obtained. The algorithm push based on user needs, combined with the characteristics of the scene and the terminal medium is more accurate. For example, push

news about the local real-time weather to users before going out; push road condition information to work when the smart car starts. It can be seen that in the future intelligent terminals, personalization and initiative will be the "place of contention" for the media.

(4) Strengthen the news feedback link

From obtaining the length of time the user browses in a certain APP to the time the user clicks to open an article, this series of data are the results of the sensor collected in the background. Sensors are an important basis for measuring the effect of dissemination, and dissemination feedback will further affect content production. Today's smart phones and smart wearables can already share and transmit data wirelessly through Bluetooth or the network. Through the sensing function of smart wearables, the time that the user stays on a certain interface on the phone and the user's heart rate, The combination of mood swings can more closely reflect the attractiveness and stimulation of the interface to users. User data will become an important basis for judging user needs, provide a reliable guarantee for personalized news customization and differentiated news dissemination, strengthen the feedback link of dissemination, and improve the actual effectiveness of dissemination. The predicted result is shown in Figure 4.

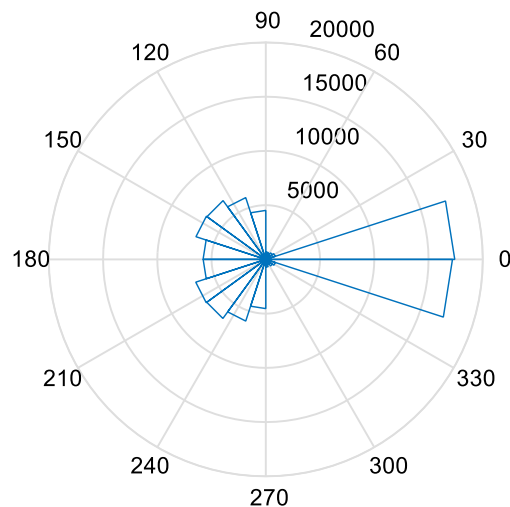


Figure 4: Predicted result.

3 THE IMPACT OF THE INTERNET OF THINGS ON THE NEWS MEDIA

In the original news dissemination activities, the audience and the disseminator are two completely different subjects. The disseminator is the collector, publisher, and disseminator of news materials. In addition, they are also responsible for checking news materials; and through TV, The broad masses who understand news through broadcasting, newspapers, etc. are called news audiences. The traditional news dissemination path is carried out along the single linear mode of disseminator, dissemination medium, dissemination audience and feedback. Distributors collect information, report news events, and use radio, television, newspapers and other tools to deliver news to audiences. Release, and then the receiver will understand and analyze the news, and provide timely feedback. The traditional feedback channels are letters, phone calls, short messages, etc. The feedback channels are narrow and have a certain lag, which greatly reduces the interactivity of traditional news dissemination. The development of modern information technology has enabled more platforms for news dissemination and faster dissemination. This phenomenon has been fundamentally subverted. This has greatly improved the original single linear mode of news dissemination. News audiences use the Internet to obtain news through mobile phones, tablets and

other terminals, and relay and disseminate information through their personal network of relationships. This network is a network of continuous and extended interpersonal relationships, based on the "Six Degrees of Separation Theory": the distance between you and anyone in the world is no more than six people. Therefore, theoretically speaking, the interpersonal communication system composed of global news audiences can basically involve all news end users. In this interpersonal network with infinite coverage, the dissemination of news is calculated in seconds, with instant dissemination and instant interaction, creating and publishing news anytime and anywhere, quickly gathering public opinion and forming hot spots. Figure 5 compares the prediction.

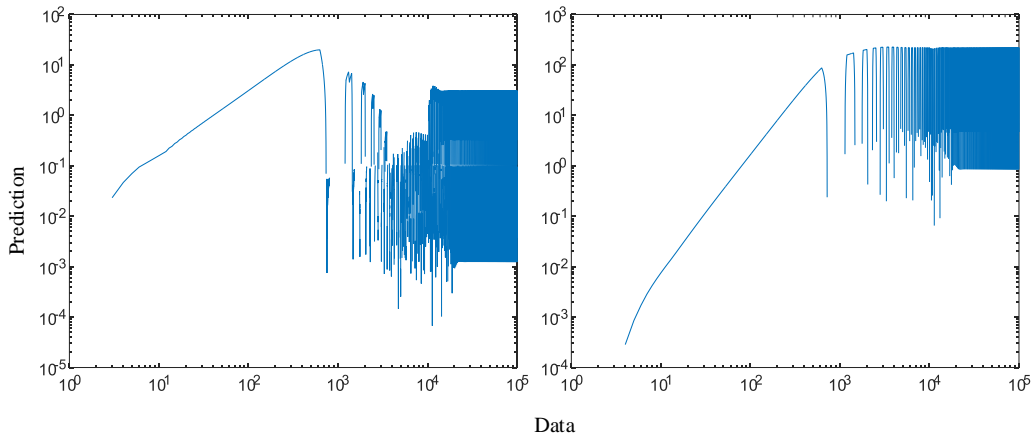


Figure 5: Prediction comparison.

Every change in the new media will arouse great attention from the traditional media. As the Internet of Things with the nature and characteristics of media, what does it mean to traditional media? The rise of the Internet of Things is an opportunity or a challenge. Is it competition or integration? These have become issues of concern and research for the media.

1. The Internet of Things will promote the intelligent upgrade of traditional media.

A breakthrough in the spread of the "Internet of Things". It's much more than just connecting and manipulating objects. The "Internet of Things" expands the meaning and value of the network through information technology. Realize the communication and dialogue between people and things. Form a ubiquitous and ubiquitous network environment. The ubiquitous network makes information contact more readily available. It will set off a new upsurge in the development and application of media, and promote the intelligent upgrade of traditional media. In terms of the extensiveness, immediacy, and empirical nature of information collection, it will far exceed the capabilities of traditional media. Even in the spread of social and natural crises, it will play an effective early warning role. This is beyond the reach of modern media. The Internet of Things heralds a new trend in the development of traditional media. Due to the rise of the Internet of Things. A profound revolution in reading and audiovisual is inevitable. Future media content production. Will be more in line with the requirements of new types of reading and audiovisual. The media industry closely related to the Internet of Things should pay close attention to the latest developments in the Internet of Things, respond in a timely manner, and seize development opportunities. The analysis is shown in Figure 6.

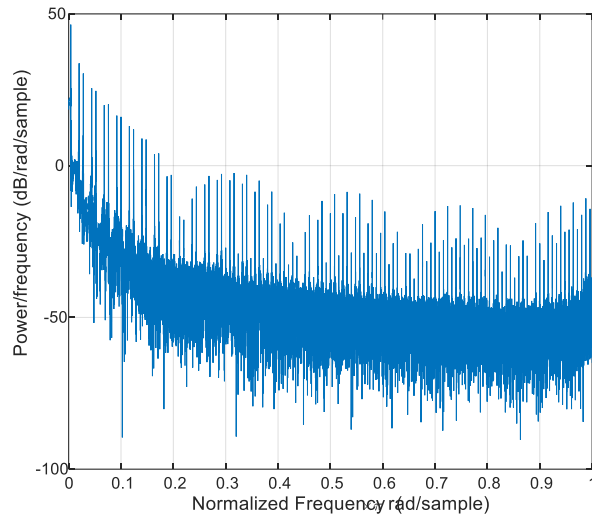


Figure 6: Power analysis.

2. The Internet of Things will trigger people's re-understanding of the nature of media. Figure 7 and Figure 8 show y versus x .

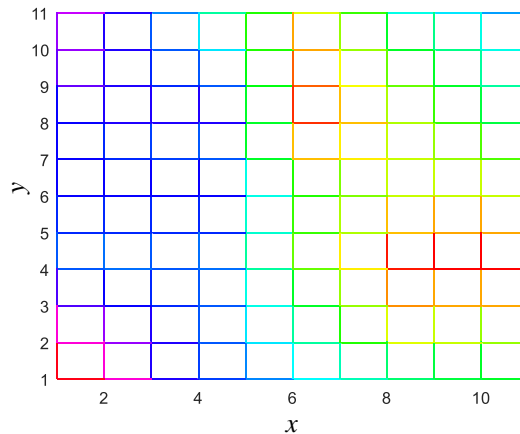


Figure 7: Different x and y .

The "content" production of media has always been the advantage of traditional media, and it is also an important foundation for the survival and development of traditional media. When the reform of new media comes, if the "content" of traditional media can be integrated and adapted to the emerging communication methods, the media will achieve greater development. From the aspect of the extension and expansion of the development of the Internet to the media, many realistic successful cases can be found. At least the new forms of traditional media have dazzled us. Such as Internet radio, Internet TV, Internet newspaper, mobile newspaper, mobile TV, etc. The spread of the Internet of Things enables objects to be given "content". And it produces "content" in the continuous advancement of the communication between people and things, and the exchange between things and things. As early as 1964, McLuhan published a strange book "Understanding the

Media", although it is difficult to understand. But it is so mesmerizing. It is entirely because he put forward many peculiar and inexplicable warnings: "The medium is an extension of man", "The medium is information" and so on. McLuhan as the prophet of the information society and electronic world. His prediction has become a reality in the Internet age. We seem to have just read his "media information theory". And when the new type of communication form of the Internet of Things appears. To make it have a greater breakthrough in the sense of communication, can we say that "objects are information"? So to speak. We will redefine our understanding, whether it is for traditional media or the new communication form of the Internet of Things. In the spread of the Internet of Things, it is just like the physical properties of the object itself. Information is inherent, diffuse, and decentralized. Objects will "produce" and "reproduce" information cyclically. This eliminates the understanding of the nature of media to a greater extent, and it can even be considered that "objects are media".

3. The Internet of Things will provide a multi-faceted information selection service.

The Internet of Things is a new platform for media integration. Break through the restrictions of the Internet and connect objects to the information network. Apply information dissemination technology to various fields on the basis of network ubiquity. Including traditional media fields such as newspapers, radio, and television. The Internet of Things can further expand the tentacles of traditional media, achieve "infinite levels" of spread and deepen, and break through the constraints of time and space on traditional media. With the help of the Internet of Things. Traditional media will penetrate more deeply into human life. Even the transformation of "life circle media" can be achieved. The traditional media under the platform of the Internet of Things will realize the daily life, mobile and perceptual use of media, and present us the picture of "perceiving China" described by Premier Wen Jiabao. In the context of "perceiving China". The Internet of Things makes traditional media information greatly spread to every corner. Break through the channel restriction of a single medium and provide multi-faceted services for the media audience's information selection. The evolution of this platform will also accelerate the channel integration and platform aggregation of traditional media. Under the influence of the Internet of Things, we can use platform innovation, multi-functional links and other methods to achieve new growth points in traditional media. By then, we can also perceive the richness of traditional media content anytime and anywhere. Even subtle changes in the media itself. It really greatly expands the extensibility of the media.

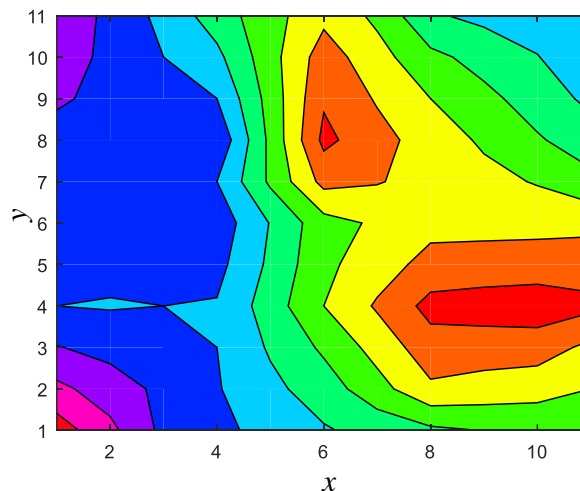


Figure 8: y versus x.

4 CONCLUSION

This article analyzes the deconstruction of the main body of news dissemination, dissemination materials, and dissemination objects of the Internet of Things, from five aspects including updating the dissemination structure, optimizing the structure of news dissemination platforms, deepening the structure of dissemination means, enriching the structure of dissemination content, and enhancing the function of news dissemination. Discuss the reconstruction and positive function of modern information technology to news dissemination. In addition, this article will also analyze the relationship between the social application of the Internet of Things technology and the news media, and explore the influence of the Internet of Things on the news dissemination process and the media industry. It is hoped that this article can broaden the application space of the Internet of Things technology in the news dissemination industry, promote the transformation of traditional media to omnimedia, and explore ways and means to try to apply the Internet of Things technology to media.

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