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# Research on News Media Event Report Propagation Based on Lattice Boltzmann Algorithm



**Abstract:** - The rise and rapid development of news media event report shows that it has the communication channel with the communication media and the communication media as the main body, and each user and individual can freely create their own thoughts and emotions. The huge influence and penetration ability of social network on the audience is far beyond their imagination. From occurrence to fermentation, and then to the final result, social network is happening at a very fast speed. How to spread, how to spread, under what circumstances, and what kind of desired results can be achieved by the spread is an important aspect that we must deeply understand and grasp at present. News media event report is not only a channel for advertising, but also a window to realize brand value. It has a strong internal motive force with the current media industry, so the selection of media communication methods and content will be more inclined to the government. Moreover, in the publicity of public media, the excessive formal way of news publicity, narrative perspective and expression mode make the audience lack of interest in the over-reaction and communication of information. Therefore, when state-owned enterprises vigorously explore the communication channels of new media, it is necessary to collect data based on lattice Boltzmann algorithm and evaluate it. From the external level, state-owned enterprises play the role of "cultural indoctrination" in the external advertising, and play a positive reaction and manipulation function in the social public and public opinion. On the internal level of the company, the lattice Boltzmann algorithm can make the news and public opinion work of state-owned enterprises have the ideological guarantee, public opinion support and psychological support of consolidating enterprise strength and stable development.

**Keywords:** Lattice Boltzmann algorithm; news media; event coverage; communication research.

## 1. The introduction

From the traditional point of view, the news and communication work of state-owned enterprises will be neglected by young people after a period of time. The traditional media, especially the print media, are restricted by external conditions and technical factors under the constraints of many factors such as communication, influence, guidance and credibility. Although new media and other media have great communication ability and influence, there are still some deficiencies in the direction of public opinion and credibility. Therefore, in the future media integration, we should take into account the advantages between the two.

In the application and popularization of new media products, there is a clear difference between state-owned and Internet companies. No matter from the content, channel, audience, environment and other aspects, state-owned enterprises have shown the leading position of the "first subject" in the socialist market economy. Therefore, how to effectively evaluate the effect of state-owned enterprises' news propaganda is a targeted method for the development of the current media. This paper synthesizes the relevant literatures about the evaluation of "lattice Boltzmann algorithm" of social media at home and abroad, and tries to establish a set of information dissemination effectiveness evaluation system based on the "lattice Boltzmann algorithm" [1-3].

By December 2020, the number of Internet users in China has reached 989 million, an increase of 854 million compared with the beginning of last year, and the use of the Internet has reached 70.4%, 5.9 percentage points higher than before. In the early stage of the outbreak of the epidemic, from the impact of media on the public to analyze, the official accounts of Doyin, Kaisha, Weibo and other operators have been the main epidemic prevention information platform during the COVID-19 epidemic period, and is an important information channel for the release of epidemic information. In April 2020, China Mobile, China Unicom and Chinese news media jointly published the "White Paper on 5 G Messages". During this period of time, the news media companies actively participated in the nationwide resumption of production and school, in-depth cooperation, through the 5G technology, education, commerce and other livelihood issues. Chinese news media launched the "Warm

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Spring Action". Lattice Boltzmann algorithm helped small and medium-sized enterprises to the cloud, provided reliable communication support for Wuhan reinforcements, unified subordinate resources, and provided convenient and stable consultation and patient information for front-line medical workers. China Mobile has established wired, wired, wired, real-time communication and other services in Fire Hospital. The emergency rescue headquarters of China Unicom has provided free cloud-based images for frontline epidemic prevention and control workers, enabling functions such as remote consultation and high-definition meetings. The three major news media companies all use their existing technologies and technologies to provide high-quality network hardware for the majority of medical institutions and college students, and realize the application of online courses and telemedicine [4-6].

Consumers of news media have a relatively fixed understanding of the brand of their products and the content of their advertisements. Chinese news media often receive complaints about Internet fees and other issues when they launch new or additional services. 5 G era, China Mobile communication enterprises in the weak position of the three major operators, through the new media and consumers close contact, in-depth excavation of consumer demand, improve its brand image in the three major operators, establish consumer confidence in its brand is a major topic. News media reported that the media in the official website and new media platform to build account matrix, open online business hall, mobile phone, broadband and other new value-added services. Each province has set up its own customer service accounts and new media accounts, each with its own business field and content. There are three aspects: strengthening the development of the media industry, improving users' experience and Internet connectivity; Second, we should strengthen the development of science and technology, constantly improve 5G technology and application fields, and realize the transformation of media digitalization. However, from the perspective of data collection and research, China's state-owned telecommunication news media is still dominated by traditional media, while the development of emerging media is slightly backward, the connotation of propaganda is not prominent enough, the publicity effect is not significant, the lack of new media talents, and the social and economic value of state-owned enterprises is not highlighted. In addition, news media report that a large number of new media have been built, but there is a lack of a set of scientific indexes to evaluate them. Only by evaluating the current media resources and work effectiveness of the news media reporting Group can the news media report grasp the advertising demand of the media in the diversified public opinion atmosphere [7-9].

## 2. Research methods

### 2.1 Application of Lattice Boltzmann algorithm in news media coverage

For viewers of current life scenarios and physical activities, the scheduling function is the perception and judgment of the importance of current events. In 1972, M.E. McCombs and D.L. Shaw published an investigation of the effect of media coverage on voter turnout in *Public Opinion Quarterly*, *The Agenda-Setting Function of Mass Media*. The central idea of this doctrine is to "transfer significant importance from the media to the public. "The idea of this program originated in Lippmann's *"The Science of Public Opinion"* (1922), which holds that the external society is very different from the image that exists in people's minds, and that individuals act in "the image of their own creation. "Bernard Cohen pointed out that "most media cannot convey their views on certain things to the audience, but they can realize their thinking on issues through the way the audience thinks. "Lippmann stands in the position of the audience and considers the changes of the public's understanding under various constraints from an upward perspective. He believes that in real society, the generation of public opinion is determined by the "real social and individual preconditions". It is difficult for the general public to grasp the real situation and make correct judgments. Cohen's speech was changed from "What to think" to "What to think about," not "What to think," but "What to think. "Both of these theories had a clear effect on McCombs and Shaw. The first level of the agenda is a comprehensive discussion of the theory of the whole agenda. American communication scholars M. E. McCombs and D. L. Xiao wrote an article in the *Journal of Public Opinion Quarterly* in 1972. They found that the use of "issues" by the media has a significant effect in different ways, thus having an impact on the positive meaning of "events" in the social environment. This paper takes "the salience of the theme" as the breakthrough point, and focuses on public topics, political topics, and brand consumption topics. However, the Internet connection was not established until 1982, and the scheduling theory at that time did not take it into account. However, with the rise of new media, its own digital, hypertext technical characteristics and interactive, diversified communication characteristics, make the communication show a "two-way" characteristic. Therefore, the legality and connotation of the current news communication have been challenged [10-13]. Perform column normalization for each index, that is, normalize each index by column, i.e.

$$b_{ij} = \frac{a_{ij}}{\sum a_{ij}}$$

$$i, j = 1, 2, \dots, n$$

$$A = \begin{bmatrix} 1 & 1/7 & 1/5 & 1/5 \\ 7 & 1 & 3 & 3 \\ 5 & 1/3 & 1 & 1 \\ 5 & 1/3 & 1 & 1 \end{bmatrix} \rightarrow \begin{bmatrix} 0.056 & 0.079 & 0.038 & 0.038 \\ 0.389 & 0.553 & 0.577 & 0.577 \\ 0.278 & 0.184 & 0.192 & 0.192 \\ 0.278 & 0.184 & 0.192 & 0.192 \end{bmatrix} \quad (1)$$

The matrix normalized by column is summed up by row to obtain the weight ratio, which is uniformly denoted as after calculation and processing.  $\omega$  The quantized value of is the weight value of each index at each level, namely:

$$\omega_i = \sum_{j=1}^n b_{ij} \text{ Calculation. } A\omega \quad (2)$$

$$A\omega_1 = 0.056 * 0.053 + 0.079 * 0.524 + 0.038 * 0.212 + 0.038 * 0.21 \approx 0.06 \quad (3)$$

The media uses dominance in the cognitive level of features and goals to "bind an object to a feature" so that the object and feature exist in a particular place. It is generally believed that a basic role of the news media is to "change the association or association between issues". According to the conventional communication effects such as "cognition", "attitude" and "behavior", the following table is a preliminary measure of the communication effect. When cognition is elevated to a higher level, thinking will be transformed into emotions and attitudes. That is to say, after reading these materials, people will have opinions about the information, and then form their own understanding. At this time, the evaluation and thumbs up from netizens become a standard. Next, when emotions and emotions reach a critical point, thoughts are turned into actions, and at this point, message transmission plays a bigger role, that is, the content has an impact on the behavior of the audience. At this point, the audience is driven by the thought to take some action, such as retweeting or giving an opinion. This process is a manifestation of the message being conveyed [14-17].

**Table 1** Lattice Boltzmann algorithm for news media analysis

Level indicators	The secondary indicators	Indicators show
Cognitive	views	The number of end users viewing the information
Emotions and Attitudes	Opinion orientation	The user's favorable/neutral/unfavorable attitude
	Thumb up number	Number of likes by the user (times)
Behavior	Forwarding number	Number of retweets by the receiver
	Comment number	The number of comments received

As shown in Table 1 above, the lattice Boltzmann algorithm constitutes a set of evaluation systems from three levels of cognition, emotion, attitude and behavior, which reflects a different generation process of communication effects. From the initial stage of "cognition", listeners gradually become familiar with and understand the connotation of the agenda. At this point, the communicators grasp the information acquisition characteristics of the audience, and control the nature and frequency of communication from the source, that is, to convey relevant information according to "what the audience thinks and wants".

Aw and maximum feature vector.  $4 = 0.278 * 0.053 + 0.184 * 0.524 + 0.192 * 0.212 + 0.192 * 0.21 \approx 0.19$

$$\lambda_{\max} = \sum_{i=1}^n \frac{(A\omega)_i}{n\omega_i}$$

$$\lambda_m = 0.06/0.053 + 0.55/0.524 + 0.19/0.212 + 0.19/0.21 = 4.023884544 \approx 4.024 \quad (4)$$

Based on the above calculation results, the next step is to check the consistency. In the process of making the consistency suggestion, the research should calculate the questionnaire of each expert. The pairwise moment array can have inconsistent errors, and the consistency index is set as. CI Because the judgment matrix will receive machine deviation possibility, so the introduction of random consistency index. RI

$$CI = \frac{\lambda - n}{n - 1} \quad (5)$$

$$CI = (\lambda - n)/(n - 1) = (4.024 - 4)/(4 - 1) = 0.0080 \tag{6}$$

Lattice Boltzmann algorithm judgment logic: when the degree of inconsistency judgment matrix in a reasonable scope, through the test, the characteristic vector can be assumed to be weighted vector and weight value can be obtained;  $CR < 0.1$  When, the error of inconsistent degree is perfect, that is, the expert identified that the index setting is very reasonable;  $CR = 0$  When the judgment matrix inconsistent is not within a reasonable range, i.e. not through consistency check, the index weight ratio of failure.  $CR > 0.1$

$$RI = \frac{CI_1 + CI_2 + \dots + CI_n}{n} \tag{7}$$

RI and sentenced to lattice Boltzmann algorithm random consistency index matrix related to the order of, in general, the matrix order number, the greater the consistency in the possibility of random deviation. CI and RI comparison, it is concluded that consistency check ratio of CR.

$$CR = \frac{CI}{RI} \tag{8}$$

The second is "mood and mentality", which is the change in the value level of the audience and the effect of their "way of thinking" on the audience. The audience is actively engaged, getting information, and expressing approval of the spread of information. At this point, the scheduler will use this method to reinforce or revise their thoughts and tell them how to think. The final change is reflected in the behavior of the audience. In their cognition and emotion, the audience will make corresponding actions according to their own behavioral norms. This logical change will unknowingly deepen the understanding and opinion of the audience, thus producing a vicious circle. The lattice Boltzmann algorithm sets that the discussion in the context of new media focuses on the effectiveness of issue setting, which is manifested in the "new media setting issue". In the early stage of communication, communicators take part in the process of communication with a "high profile", and the transmission of information is determined by the inheritors' own information transmission. In the era of new media, both aspects of knowledge transmission have changed. The audience breaks away from the closed loop, actively obtains and transmits information, and opens the channel of information. The anonymity of listeners makes them be influenced by their own personalities, personalities and values when they convey information.

From the results of lattice Boltzmann algorithm, it can be seen that most of the current related studies on the communication effect are "new media", "WeChat public", "communication" and so on. In this paper, we believe that the study of news report effect in China follows the trend of The Times and takes the continuous innovation of various platforms and theories of news media as its main research field. 555 papers were input into Cite space, and a keyword cluster was established. A combination of data analysis and quantitative statistics was used to obtain the most influential keyword clusters in time order (see the following table). As can be seen from the chart, the research on the communication effect in China is a concentrated and extensive field, which indicates that this field is emerging. In these aspects, the influence of new media and mass media has been intensively discussed. In People's Daily, CCTV, Xinhua News Agency and other new media as a representative of the media's influence on news impact was analyzed, and the coverage of the news media, WeChat number, web, and many other public platforms, the research content includes pictures, (short) video, graphic and other communication way, relationship to the participants include journalists, media and public identity. Therefore, the connotation of communication effect covers the content of different levels, different directions and different fields, and has a very broad comprehensive significance.

### 3. Results analysis

#### 3.1 Lattice Boltzmann algorithm promotes the spread of news media event reports

In recent years, many different evaluation methods have appeared in our country, but they are all the same, the principle of which is to take a specific medium, a specific medium as the target, through quantitative measurement and measurement of the specific medium. Professor Yu Gumming pointed out that there are two ways to construct the all-media index: the first is to explore users' data from different channels, namely consumers' activity trajectories, including social data, search data, video data and short video data. Two is medium of "build your own database", that is to say, in this case, the media through their information acquisition, storage, sorting, reorganization, sorting, summary, and users of "dimension" more efficient, accurate, complete, accurate, comprehensive, deep, deep, deep.

**Table 2** lattice Boltzmann algorithm of the news media

n	1	2	3	4	5	6	7	8	9	10	11
RI	0	0	0.52	0.89	1.12	1.26	1.36	1.41	1.46	1.49	1.52

It is concluded that:  $CR = CI/CR = 0.008/0.9 = 0.0088 < 0.1$

As shown in Table 2 above, according to the judgment matrix of transfer effect evaluation of lattice Boltzmann algorithm, the consistent test has passed the consistency verification, which proves the correctness of A. Using the above research steps, this paper selected 90 evaluation equations scored by 5 professionals, and compared them with AHP method as the data in the table below.

Foreign scholars have carried out in-depth research on the quantitative assessment of the influence of lattice Boltzmann algorithm on communication. In the 1920s, the media industry evaluated two main metrics: distribution and sales. In the stage of media channel expansion, it was evaluated from three aspects: content, channel and audience. From the perspective of media evaluation, the evaluation of media is comprehensively evaluated from the aspects of audience, advertising turnover, daily activity, click volume, rate of return and media IP. Media Application and Evaluation (2010) published by Gallup proposed four indicators: "News media stance", "freedom and conservatism of news media", "news access channels", and "traditional media/news reports". Hasan S and Sirajuddin N (2012) quantified the communication ability of blog from three aspects: identification, activity generation and novelty, and took "like, follow and share" (2013) as the main communication ability evaluation dimension of main social media. 135 Robin Withal (2013) established the communication ability model of social media, namely user contribution rate, participation rate, interaction degree and word-of-mouth degree. The communication effect evaluation system of the "Ipsos Media Evaluation System Media cell" platform is a typical digital media consumption behavior evaluation system. Through the analysis of users' behavior on the platform, this paper analyzes the significant media preference generated by viewers with different emotional characteristics from three levels of cognition, attitude and behavior. In general, domestic and foreign scholars pay more attention to quantitative evaluation and evaluation, and pay more attention to the benefits and benefits brought by marketized media in the market competition. In the past decade, the evaluation of media impact has mainly focused on social media such as Instagram and Twitter, as well as the quantitative evaluation of advertising campaigns. When referencing and applying the foreign media evaluation index, lessons should be learned from foreign experience. This paper puts forward a set of index evaluation system suitable for the development of Chinese media.

### 3.2 Propagation analysis of Lattice Boltzmann algorithm in news media reports

Chinese scholars have many studies on the evaluation of communication effectiveness, and there are many research results. However, China has paid attention to the role of audience in communication activities since 2013. For the communication effect of media, it can be divided into two parts:

First, the "lattice Boltzmann algorithm", which is an important research content, is included in the measurement of media effect. Yang Mei and Lu Zhidong (2020) carried out the effect of "Lattice Boltzmann algorithm" communication on the core competence of enterprises, established the communication effect mode of "Lattice Boltzmann algorithm" at four levels, and used the linear regression method to test the related factors of enterprise competitiveness. Zhang Ruining (2019) used the "Lattice Boltzmann algorithm", a new media communication effect index, to measure the communication power, influence, guidance power and credibility in detail, and took "coverage, timeliness, page views and search volume" as the main second indicators, emphasizing that users/audiences should be fully considered. New strong month, [garbage (2017) through the "demographic variables, cognitive features, new media, media use" data in four aspects, such as empirical analysis, it is concluded that the major media to the influence of the media (including the use of a variety of media) and the influence of media (that is, the cognitive features of new media, new media). Li Xingang and Guo Awoke (2012) took "agenda-setting level", "media credibility", "information channel" and "audience source" as the main research contents, and discussed the "soft power" of Chinese media and the promotion of information source authority. Luo Xu (2016) conducted empirical analysis with the media of "market competitiveness, social influence and value orientation", and also played an important role in the quantification of the media index by audience.

Second, quantitative methods are used to measure the influence of social media. Feng Rui and Li Wen (2017) used AHP method to select and weight the indicators based on "coverage, interactivity, awareness, satisfaction and loyalty". Hao Yonghua and Chen Rubye (2016) analyzed the characteristics of news information, news expression, reading and forwarding rate, in order to find the influence of news information characteristics and news expression forms on news dissemination. Kuang WeMo (2019) analyzed the effect through the method of "breadth and depth of communication", and concluded that the greatest influence came from friends' social networks and original news reports. Luo Qian and Shenyang (2015) conducted a survey on the "explosive laughter" characteristics of Jinxing, and adopted the "S burst news" index to measure the publicity effect of the company through "S news theme and emotion". Cao Qingyuan (2018) took the WeChat public accounts of 94 universities as the research objects, and took "activity, topic discussion, discourse expression attribute, public trust and authority" as the main research dimensions, and made a comparative analysis between them and the needs of college students. Through the analysis of Chinese scholars on the media effect, a conclusion was drawn on the

information transmission effect based on the cognition, behavior and emotion of the audience. The impact assessment of the media is not only the self-evaluation of the media on its own information production and technical methods, but also the external evaluation from the perspective of the audience.

#### 4. Conclusion

The publicity work of news media is very important, it can not only establish a good brand image of customers, but also improve the visibility of enterprises. In the important stage of the application of "Lattice Boltzmann algorithm", how to give full play to the huge influence and driving force of new media, discover and retain the audience is what major media and businesses expect. On the whole, official media can better meet the specific needs of the four aspects. In the survey and field investigation, we also saw some problems, such as: lack of specialized technical personnel, technical means, user access is not in place, platform construction is not enough. Under the guidance of the "lattice Boltzmann algorithm", more attention is paid to public opinion orientation, value orientation and public opinion guidance, while profit-oriented companies pay more attention to the shaping of brand image to achieve the conversion of audience to users and economic benefits. The public media of state-owned enterprises are evaluated. Selecting state-owned enterprises as the main body can find the differences with the current mainstream and network media from different perspectives, find the problems, and put forward the corresponding countermeasures, so as to provide reference for future news media reports and news promotion of other state-owned enterprises.

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