

# DIGITAL MANAGEMENT SYSTEM ISSUES BLOCKCHAIN

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**Abstract :** There are many unsolved problems in the traditional digital rights management of network media. At present, with the advent of the mobile Internet era and the popularity of social video applications, China network media market is meeting a huge opportunity, and the development momentum is irresistible. A feature of the Internet era is the rapid development of network information. It may take only a few minutes or less to spread from a news event to the media with mass of information. For example, about the accident of Tianjin Binhai New Area explosion, the reports reached 44 thousand, the WeChat reached 60 thousand and the discussion reached 4.6 million in less than two days. Such a scale will easily catch the attention of the world. A feature of the Internet era is the rapid development of network information. It may take only a few minutes or less to spread from a news event to the media with mass of information. System it is hard to guarantee the quality of media works, to protect the copyrights, to find the effective profit model and so on. To solve these problems, a network media's digital rights management scheme based on block chain can work. Block chain is a technology that makes use of cryptographic algorithm, hash chains and consensus mechanism to implement consensus, irreversibility and traceability for online data. This can use these functionalities of block chain to implement the effective production management, copyright management, transaction management and users' behaviour management for network media. Furthermore, this scheme can predictively provide an important support for the network media platform to build a sustainable development of benign ecological environment.

**IndexTerms-**network media, copyright smart control, blockchain -

## I. INTRODUCTION

Following the three traditional media such as newspapers, radio and television, the Internet is called the "fourth media." According to data released by the Chinese Internet Network Information Center (CNNIC), in June 2016, Chinese netizens reached 710 million; Internet penetration was 51.7%; and Chinese mobile users reached 656 million; There are different devices used to link to the Internet. Currently, China's media network industry is meeting an enormous chance with the emergence of the mobile Internet era and the popularity of social video apps, and the momentum for growth is irresistible. The rapid development of network information is a feature of the Internet era. It may take just a couple of minutes or less to distribute mass data from a news case to the press. For example, the reports reached 44,000 about the

Tianjin Bandai New Area explosion accident, the We Chat reached 60,000, and the discussion reached 4.6 million in less than two days. Such a scale will readily attract the world's attention. The first messages in the into were published although these videos are not professional reports, they play significant roles for individuals making precise catastrophe judgments. The age is a fast-paced society, and individuals are more inclined towards the model of brief, adaptable and quickly media transmission. Microfilm, network songs, photographic works and network novels are young people's favorite network media and they spread and pass these media.

1.1) Different Types of Block chain Now, as we are clear about block chain technology, we must look into different types of block chains, which are categorized by the applications of block chain. • Public Block chain • Private Block chain • Consortium / Hybrid Block chain

1.1.1) Public Block chain Simply said, publicly accessible block chains are termed as Public Block chain. These block chains have no restrictions on the participatory and validator. The main advantage of this type of block chain is the uncontrollability of the block chain which means that nobody will have complete control over the network. Hence it ensures that the data is secure and helps in the immutability of the records. All the nodes connected to this public block chain will have equal authority, and hence, these

public block chain becomes fully distributed. Bit coin, Ethereum, and Lit coin are some of the examples of Public Block chain being used in real-world scenarios.

1.1.2) Private Block chain As the name suggests, this particular block chain requires the participants to be invited before they can be a part of the block chain. Here all the transactions are visible only to persons who are part of the block chain ecosystem. These types of block chains are centralized and much better controlled than public block chains. As these block chains are more centralized, they can be governed and regulated by someone who can make sure that the governors are guiding participants. These block chains can have a token, or may not have one based on the preference of the Block chain owner. Private block chains usually have a network administrator who can take care of the user permissions in case any particular user requires additional authority on the go. These are typically used in private organizations to store sensitive information about the organization.

1.1.3) Consortium / Hybrid Block chain This block chain is divided into two different types, where some nodes are private, while the other nodes are public. As a result, some of the nodes will be allowed to participate in the transactions. The other nodes are to control the consensus process. This is a hybrid block chain between private and public block chains. Here all the nodes can access the block chain, while the level of information that can be accessed will be based on the node accessing that particular data. In this block chain, there are usually two types of users. One is the user who has all the controls over the block chain and decides the level of security for a particular user, while rest others are the ones who just accesses the block chain. These are three different types of block chains that currently exists.

1.2) Different Kinds of Block chain All the different types of block chains are quite popular, let us have a look at the examples of different kinds of block chains: • Bit Coin • Multichip • Block chain in Banking Sector

1.2.1) Bit Coin Out of all, bit coin is the most popular crypto currency in the market. With Bit coin, we can make payments to anyone online without involving any third party. For example, you need to transfer x amount of money to your friend, and you can send some bit coins from your account to another using the Account ID of the recipient. Read more about Bit coin here. This particular transaction is then verified with the help of Block chain mining, which in turn helps to avoid frauds in the transactions. Once the transaction is verified and validated from both ends, then it is successfully added to the block chain, and the recipient gets the bit coin. Anyone can make a transaction on bit coin and can be a validator, as there is no restriction on who can access it. Although all the data is available on the internet, it is still secure, as all information is encrypted, and this makes it the most reliable form of currency possible.

1.2.2) Multichip This particular application of block chain is used for providing enhanced security to the users. With the help of multichip, one can prevent all the type of unauthorized access to sensitive data. This is a private type of block chain, which will only be available to authorized personnel of the organization. This application will be a Private type where your financial information will be shared only with the board members, financial members, and the management of your organization. This not only makes Banking easy and secure, but also reliable. In this type of application, there can be n number of nodes over the internet. But only a few nodes will have access to the data. The Network Administrator governs all the access. Even the Participant and Validator access are restricted to most of the data that is available in the block chain. Usually, a single Multichip is used by only a single organization. Until now, in mostcases, this particular type of block chain is quite different from the one which is used in the Public Banking sector.

1.3.3) Block chain in Banking Sector When it comes to block chain in the banking sector, where it will be of the hybrid type. As here, the data of the people must be public, so all the information can be shareable, but the access to the banking of block chain must be available only to a single bank, and also to all the branches of the same bank.

## II. LITERATURE SURVEY

1] A block chain for media: Survey by Sunghyun Cho Electrical and Computer Engineering, Division of Software UC San Diego, Hanyang University Ansan, Korea chopro@hanyang.ac.k Block chain technology can have the ability to solve these problems. This technology does not need the central server and the reliability of the participant in the network. A shared and distributed database called block chain stores transactions referred to as data in the block chain. Blocks are chained to each previous block that contains one or more transactions in the block chain. To add a new block, a consensus among the participants is needed. There are many algorithms for consensus. This structure has many properties:

transparency, security, safety, decentralization, and so on. The block chain technology with these features and properties is required to protect the media.

2]A Survey of Block chain: Techniques, Applications, and Challenges by Weichao Gao, William G. Hatcher, and Wei Yu Department of Computer and Information Sciences Towson University, Maryland, USA 21252, USA. Emails: {wgao3, whatch2}@students.towson.edu, wyu@towson.edu Despite the potential that block chain raises, it is clearly balanced in favor of securing user privacy, and leaves unresolved many issues regarding platform utilization from the perspective of a service provider, as well as the intrinsic computational overhead of consensus and scalability, which remains a critical challenge for wide adoption. In addition, despite the potential for block chains to revolutionize distributed and decentralized architectures, in practice there have been some troubling results [7], [8], [9], [10], which need resolution. Just like any software system, vulnerabilities in the encoded implementation or an underlying operating system may create the potential for malicious subversion of users or the entire system. What's more, certain theoretical aspects of the system itself may afford malicious use. From this perspective, it is imperative that a thorough evaluation be conducted to fully consider the implications of the technology.

3]Block chain the new era of Technology BY Riya Sapra Department of Computer Science and Technology Manav Rachna University Faridabad, Haryana, India riya@mru.edu.in .Block chain has become a buzzword in IT sector. The technology behind block chain has become so powerful that applications are being built on top of them which will automatically make them decentralized, block based and resistant to censorship. Various new initiatives are being launched that are based on block chain principle. The popularity of Bit coin has resulted in all these initiatives. Bitcoin [12] is a digital money ecosystem where users transfer bit coin for buying/selling of goods. Unlike traditional currencies, bitcoins are entirely virtual i.e. no physical coins. The coins [5] only signify the transfer value from sender to receiver

4]Design scheme of copyright management system based on digital watermarking and block chain by MENG Hoaxing Faculty of Engineering Kanagawa University Yokohama 221-8686, Japanmengzhaoxiong1899@gmail.com .In addition to digital currency, block chain technology has begun to expand in other areas in recent years, including digital copyright protection [4][5][6]. For traditional copyright protection, copyright owners need to provide digital works and some personal information as copyright information to the copyright registration agency. The centralized agency will manually review the submitted information and store it in the centralized server. This not only results in inefficiencies and cost increases, but also has the risk of information being tampered with and leaked. At the same time, it also brings a lot of trouble to copyright verifiers for doing digital forensics, because it is necessary to prove that this information is indeed the original information, not to be altered. For this scheme, use block chain to store copyright information, and once this information is written into the block chain, it will be hard to be changed. This will greatly facilitate digital forensics of copyright verifiers. In practical applications, block chain can also help confirm multiple watermarks (multiple copyrights), because each block contains an unchangeable timestamp. If all watermark information is obtained, search for the corresponding blocks in the block chain and check the timestamps. The embedding order of the multiple watermarks can be known, in other words, the order of creation of digital images can be known. In Existing system the copyright owner does not have any secure computerizes system. To maintain his own copyright security. So his hard work and money can be loss if someone can stole his copyrights. So Copyright owner has huge loos of money. In market lot of compaction in between products but every brand need to maintain his copyrights rights.

5] The Relevance of Freeman Chain Code for Copying Activities by Nurul Husnina Husain, Norizan Mat Diah, Haslizatul Mohamed Hanum nienahusain@gmail.com, norizan@tmsk.uitm.edu.my, haslizatul@salam.uitm.edu.my. Many children use digital instruments such as a tablet, PDA, and stylus pen in their learning activities, including reading and writing, due to the rapid proliferation of digital technology. Pre-writing is one of the activities that makes use of interactive tools in the learning process which can help children develop fine motor skills at a young age.

### III. CONCLUSION

Block chain is a technology that synthesizes cryptographic algorithms, hash chains, and consensus mechanism and can be used to deliver internet information services such as consensus, traceability of irreversibility. We suggested a digital rights management system for network media based on these services in this article. We used consensus mechanism in the system to finish real-time copyright confirmation, used block chain-based smart contracts to enforce real-time transactions, and used digital signature and hash chains to ensure transaction accuracy. Furthermore, based on these services we can also

implement the innovation of profits model and supervision model, which will greatly promote the development of network media. We predicted that our proposed digital rights management scheme for network media would open a new era for network media business

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3. Manav Rachna University Faridabad, Haryana, India [riya@mru.edu](mailto:riya@mru.edu). "Block chain the new era of Technology BY Riya Sapra Department of Computer Science and Technology"
- 4 MENG Hoaxing Faculty of Engineering Kanagawa University Yokohama 221-8686, Japan [mengzhaoxiong1899@gmail.com](mailto:mengzhaoxiong1899@gmail.com). "Design scheme of copyright management system based on digital watermarking and block chain",
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