

## Efficient Delivery of Government Schemes Using BCT

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**Abstract:** Simple, convenient and effective interaction between the government and the citizen has become a common expectation in the modern information society. Electronic government solutions - based on automation of decision making processes on a nation-wide scale - are serving to meet these expectations, while generating efficiencies in government and social communications for each member of the society. Electronic government brings fundamental changes to the distributed governance system, and affects the entire range functions related to document management and processing. Belarus has made visible progress towards establishing an electronic government infrastructure and services. These achievements have been enabled primarily by accelerated development of information and communication technologies (ICTs). However, citizens' participation in e-governance in Belarus is still below the average for Eastern Europe, which is largely the result of limited penetration of interactive functions and online services available from the official web-sites of government bodies and institutions. The multiple technological solutions, varying in speed, and the degrees of reliability and data safety, several recent technological innovations stand out, based on radically new principles of compatibility and offering great promise for electronic government.

**Keywords:** Government schemes, cryptography, corruption, BCT, etc

### Introduction:

In essence, a blockchain is a transparent distributed data base that records details on all transactions performed by the system's participants. In the context of electronic government, this means a technology that stores data on the results of all interactions between citizens and government agencies. Importantly, the data are interlinked, coded and stored by all members of the system, and are automatically updated to reflect the changes made. Users act as a collective notary that certifies the accuracy of the data in the system and guards against abuses and scheming attempts. Blockchain technology acts as a control on the egoistic motives that cause some people to engage in corrupt practices to the detriment of society and state sovereignty. It also creates a powerful incentive to abide by the rules that apply to all participants equally, thus creating a spirit of collective responsibility.

Technically, blockchain is a technology that facilitates agreement among the participants on virtually any matter without the involvement of an intermediary; it thus creates a foundation for decentralised governance, promotes consensus-based social contracts and maintains a fair balance of interest beneficial to society. A registration system based on blockchain technology can enhance the safeguards normally offered by the traditional registries. The cost of transactions can be greatly reduced by eliminating the payment of state duties and intermediary fees, while the transactions themselves can become less time-consuming, and also more transparent and more secure. The development of Blockchain technology in e-government still needs discussion in different aspects; this technology offers a new method for delivering and managing public services, and there remains a need to establish standards, deploy solid management systems and ensure adequate security to make sure the services and platform are reliable, authoritative and supportive of long-term preservation. It has the potential to change Indian society in many aspects. Its development still has both opportunities and risks, however. There is still a need for Blockchain companies and market administrators to actively collaborate with each other, implement Blockchain operations, and introduce innovative solutions. Therefore, the experience of the government could be the first step in the development of Blockchain-based public services. However, this will not be an easy goal to achieve.

### Literature Survey:

Comparison and Analysis of Governance Mechanisms Employed by Blockchain-Based Distributed Autonomous Organizations

Stephen DiRose; Mo Mansouri

This paper evaluates the governance mechanisms of blockchain projects using the change in block size as an exemplar. Two prominent governance mechanisms are described, compared, and assessed based upon how effective they came to consensus and made the decision to change to support the disparate needs of stakeholders.

Published in: 2018 13th Annual Conference on System of Systems Engineering (SoSE)

1. A novel triple DES to enhance E-governance security.  
Raja SekharReddy ; G. Murali

Published in: 2017 International Conference on Energy, Communication, Data Analytics and Soft Computing (ICECDS)

E-Governance will result in enhanced rapid information, Governance transparency, higher organizational efficiency and improved public services in sectors including education, water, transportation, health, power, security, municipal services and the state administration. It is necessary to provide security while transmitting the information between the parties. Now a day's E-Governance uses Cryptography to provide security. Now a day's in E-Governance banking is one of the biggest area where lot of transactions can be carried out per hour. To encrypt the Unicode text a novel triple DES algorithm is used. In this algorithm pairing function and spiral scan path are used.

Limitation: Only use of cryptographic algorithms is not sufficient to provide security and overcome corruption issues.

2. An approach to increase the awareness of e-governance initiatives based on cloud computing

SiniShibu ; ArchanaNaik

Published in: 2017 International Conference on Information, Communication, Instrumentation and Control (ICICIC)

This paper analyses the cloud based model of e-governance and suggests measures to increase awareness among people regarding the various e-governance initiatives taken by the Government of Madhya Pradesh.

Limitation: No any security parameter is highly concerned.

3. A framework for the monitoring and evaluation of e-governance projects in developing countries

Sylvester Hatsu ; Ernest KetchaNgassam

Published in: 2016 IST-Africa Week Conference

This paper proposes a framework for monitoring and evaluating e-Gov projects. The framework is premised by the identification of critical success factors peculiar to the effective and efficient implementation of e-governance projects based on an improved contextual project lifecycle.

Limitation: Concentrated on life cycle but not on any transparency concern.

4. Implementation of e-governance: Only way to build a corruption-free Bangladesh

S. A. AhsanRajon ; Sk. Ali Zaman

Published in: 2008 11th International Conference on Computer and Information Technology

This paper, we present a comparative analysis of present government architecture and the prospects and problems of implementing e-governance in Bangladesh emphasizing on the usage and effectiveness of e-governance to eradicate corruption from various sectors of governance. We especially present the adaptability of e-governance in the prime sectors of government and provide a methodical study on the strategies of involving mass people in the governance process improving information and service delivery with their participation in overall decision-making. The potential to ensure highest level of transparency in all the sectors of government with the implementation of e-governance is also presented in this paper.

5. On SHEL model analysis and constitution — The research on Chinese government's E-governance system based on the concept of good governance

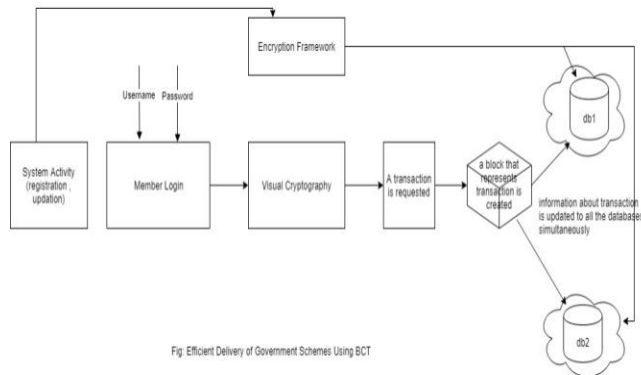
Liu Liu ; Xiao-ming Liao

Published in: Proceedings of 2011 Cross Strait Quad-Regional Radio Science and Wireless Technology Conference

In this paper, we use SHEL model which includes Software, Hardware, Environment, Liveware (S, H, E, L) these four factors to build and innovate our government's e-governance.

Limitation: It is trust based model where citizens have to trust on Government authorities which can lead to corruption.

Proposed System:



**Algorithm:**

**MD5:**

Step 1. Append Padding Bits. The message is "padded" (extended) so that its length (in bits) is congruent to 448, modulo 512. ...

Step 2. Append Length. ...

Step 3. Initialize MD Buffer. ...

Step 4. Process Message in 16-Word Blocks. ...

Step 5. Output.

In cryptography, MD5 (Message-Digest algorithm 5) is a widely used cryptographic hash function with a 128-bit hash value.

As an Internet standard (RFC 1321), MD5 has been employed in a wide variety of security applications, and is also commonly used to check the integrity of files.

An MD5 hash is typically expressed as a 32 digit hexadecimal number

**AES:**

AES is used to encrypt the database.

The encryption process uses a set of specially derived keys called round keys.

These are applied, along with other operations, on an array of data that holds exactly one block of data, the data to be encrypted.

This array we call the state array.

STEPS:

- ❑ Derive the set of round keys from the cipher key.
- ❑ Initialize the state array with the block data (plaintext).
- ❑ Add the initial round key to the starting state array.
- ❑ Perform nine rounds of state manipulation.
- ❑ Perform the tenth and final round of state manipulation
- ❑ Copy the final state array out as the encrypted data (ciphertext)

**Result:**

Transparent supply chain due to use of BCT, block chain of every transaction is maintained and can be tracked in future

Login page:

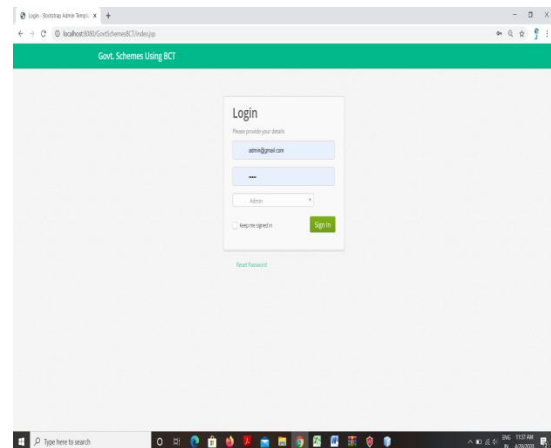


Figure of Login Page

Admin(central government) Login Success:

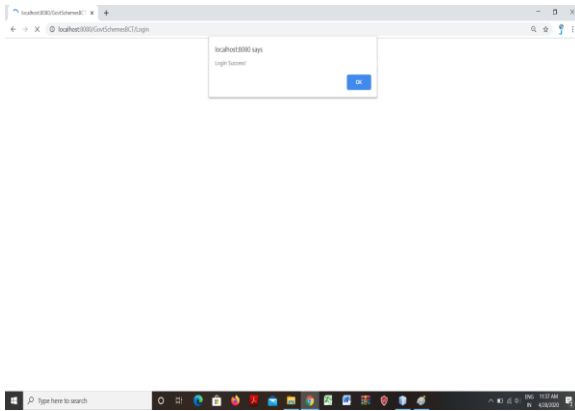


Figure of Admin Login Success

Add New Schemas:

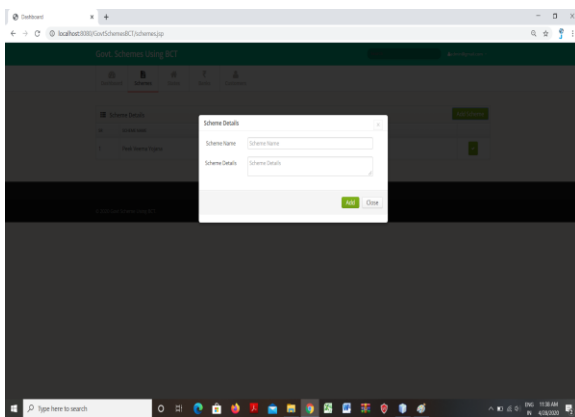


Figure of Add New Schemas

Added Schemes Details:

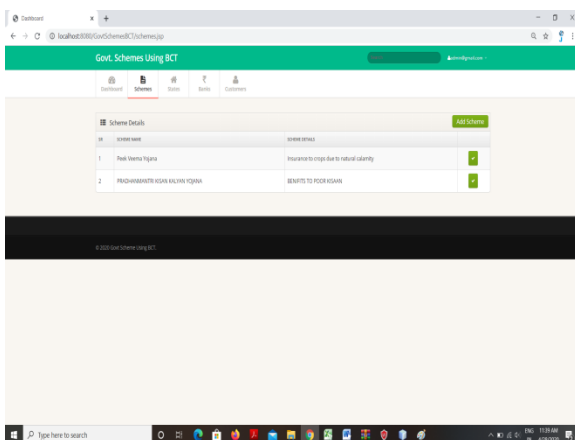


Figure of Added schemes details

Share Uploaded:

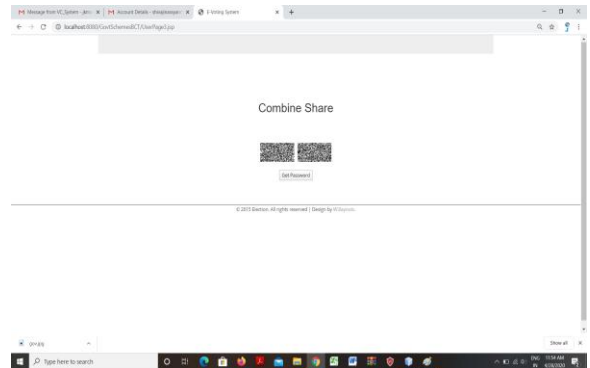


Figure of share Uploaded

Transaction Details

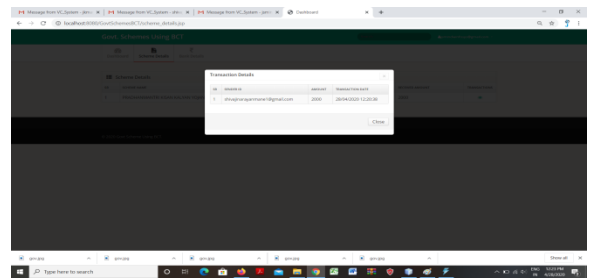


Figure of Transaction Details

Block chain generated Mysql database:

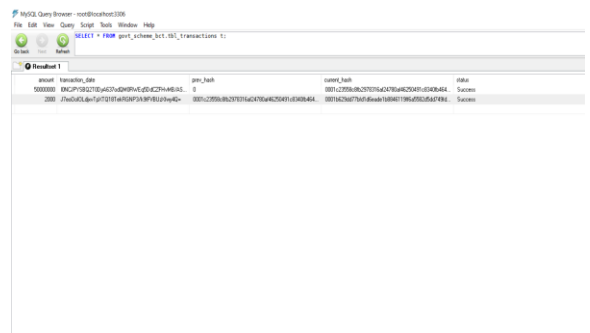


Figure of Block chain database

Conclusion:

Thus we are going to implement a system for efficient delivery of government schemes using BCT. The proposed system under e governance will be the most secure, transparent, user friendly and corruption free system. We believe that with the help of this proposed system, every activity in government scheme delivery can be tracked and corruption of intermediates can be totally stopped.

**References:**

- [1] F. Lv and S. Chen, "Research on Establishing a Traceability System of Quality and Safety of Agricultural Products Based on Blockchain Technology," *Rural Finance Research*, vol. 12, pp. 22-26, 2016.
- [2] Y. Yang and Z. Jia, "Application and Challenge of Blockchain Technology in the Field of Agricultural Internet of Things," *Information Technology*, vol. 258, pp. 24-26, 2017.
- [3] S. Nakamoto, "Bitcoin: A peer-to-peer electronic cash system," Consulted, 2008.
- [4] Y. Yuan and F. Y. Wang, "Blockchain: The State of the Art and Future Trends," *ActaAutomaticaSinica*, 2016.
- [5] Y. Yuan, T. Zhou, A. Y. Zhou, Y. C. Duan, and F. Y. Wang, "Blockchain Technology: From Data Intelligence to Knowledge Automation," *ZidonghuaXuebao/actaAutomaticaSinica*, vol. 43, pp 1485-1490, 2017.
- [6] Y.-b. Zhang, "The New Ecosystem of Cross-border E-commerce between EU and China based on Blockchain," *China Business And Market*, vol. 32, pp. 66-72, 2018.
- [7] T. Hong, "Accelerating the Application of Blockchain in the Field of Agricultural Products E - commerce in China," *Journal of Agricultural Information*, pp. 18-20, 2016.
- [8] Y. Yuan and F.-Y. Wang, "Parallel Blockchain: Concept, Methods and Issues," *IEEE ActaAutomaticaSinica*, vol. 43, pp. 1703-1712, 2017.
- [9] Andreas M A. *Mastering Bitcoin: Unlocking Digital Cryptocurrencies*. O'Reilly Media, 2014.
- [10] Jerry B, Andrea C. *Bitcoin: A Primer for Policymakers*. Mercatus Center, George Mason University, 2013.