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# Secure Framework For Government Delicate Assignment

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Abstract: Block chain innovation is an representation of such innovation that has been attracting in the consideration of Legislatures throughout the globe. Upgraded security, further developed detectability, and most minimal expense foundation engage the block chain to enter different areas. By and large, legislatures discharge tenders to some outsider associations for various tasks. During this interaction, various contenders attempt to snoop the delicate upsides of others to win the delicate. Block chain strategy utilized under different security administration with various model. It is utilized as backend data set model that keeps up with. No. of clients can enlist and make the delicate citation under different division. Administrator will check and give the reaction from the citation result. Administrator or authority check the experience and interaction the executives level expertise for broadly useful.

Keywords: Blockchain, digital signatures, secure hash algorithm, edge computing, proof of work, smart contracts and smart tenders.

### REFERENCES

- V. Hassija, V. Chamola, V. Saxena, D. Jain, P. Goyal, and B. Sikdar, "A survey on IoT security: Application areas, security threats, and solution architectures," IEEE Access, vol. 7, pp. 82721–82743, 2019.
- [2]. A. Alketbi, Q. Nasir, and M. A. Talib, "Blockchain for government services—Use cases, security benefits and challenges," in Proc. IEEE 15th Learn. Technol. Conf. (L&T), 2018, pp. 112–119. 2418 IEEE INTERNET OF THINGS JOURNAL, VOL. 8, NO. 4, FEBRUARY 15, 2021
- [3]. coindesk. The Indian Government Is Preparing a National Framework to Support the Wider Deployment of Blockchain Use Cases. Accessed: Nov. 27, 2019. [Online]. Available: https://www.coindesk.com/indiaplans-to-issue-a-national-blockchain-framework
- [4]. H. Cho, "Correction to asic-resistance of multi-hash proof-of-work mechanisms for blockchain consensus protocols," IEEE Access, vol. 7, 2019, Art. no. 25086.
- [5]. V. Hassija, V. Chamola, S. Garg, N. G. K. Dara, G. Kaddoum, and D. N. K. Jayakody, "A blockchain-based framework for lightweight data sharing and energy trading in V2G network," IEEE Trans. Veh. Technol., vol. 60, no. 6, pp. 5799–5812, Jun. 2020.
- [6]. V. Hassija, V. Chamola, D. N. G. Krishna, and M. Guizani, "A distributed framework for energy trading between UAVs and charging stations for critical applications," IEEE Trans. Veh. Technol., vol. 69, no. 5, pp. 5391–5402, May 2020.
- [7]. E. Androulaki et al., "Hyperledger fabric: A distributed operating system for permissioned blockchains," in Proc. ACM 13th EuroSys Conf., 2018, p. 30.
- [8]. V. Hassija, V. Chamola, G. Han, J. J. Rodrigues, and M. Guizani, "DAGIoV: A framework for vehicle to vehicle communication using directed acyclic graph and game theory," IEEE Trans. Veh. Technol., vol. 69, no. 4, pp. 4182–4191, Jan. 2020.
- [9]. C. D. Clack, V. A. Bakshi, and L. Braine, "Smart contract templates: Essential requirements and design options," 2016. [Online]. Available: arXiv:1612.04496.
- [10]. C. Cachin, "Architecture of the hyperledger blockchain fabric," in Proc. Workshop Distrib. Cryptocurrencies Consensus Ledgers, 2016, p. 310.

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#### Volume 3, Issue 2, May 2023

- [11]. H. Cho, "Asic-resistance of multi-hash proof-of-work mechanisms for blockchain consensus protocols," IEEE Access, vol. 6, pp. 66210–66222, 2018.
- [12]. J. D. Groot. The History of Data Breaches. Accessed: Oct. 24, 2019. [Online]. Available: https://digitalguardian.com/blog/history-databreaches
- [13]. M. C. K. Khalilov and A. Levi, "A survey on anonymity and privacy in bitcoin-like digital cash systems," IEEE Commun. Surveys Tuts., vol. 20, no. 3, pp. 2543–2585, 3rd Quart., 2018.
- [14]. J. A. Jaoude and R. G. Saade, "Blockchain applications—Usage in different domains," IEEE Access, vol. 7, pp. 45360–45381, 2019.
- [15]. H. Hou, "The application of blockchain technology in e-government in china," in Proc. IEEE 26th Int. Conf. Comput. Commun. Netw. (ICCCN), 2017, pp. 1–4.
- [16]. S. Ølnes and A. Jansen, "Blockchain technology as S support infrastructure in e-government," in Proc. Int. Conf. Electron. Govt., 2017, pp. 215–227.
- [17]. S. Ølnes, "Beyond bitcoin enabling smart government using blockchain technology," in Proc. Int. Conf. Electron. Govt., 2016, pp. 253–264.
- [18]. S. Rama, S. V. Flowerday, and D. Boucher, "Information confidentiality and the chinese wall model in government tender fraud," in Proc. IEEE Inf. Security South Africa, 2012, pp. 1–8.
- [19]. A. Dello and C. Yoshida, "Online tendering and evaluation for public procurement in tanzania," in Proc. 18th IEEE/ACIS Int. Conf. Softw. Eng. Artif. Intell. Netw. Parallel Distrib. Comput. (SNPD), 2017, pp. 137–141.
- [20]. Z. Hui and J. Yang, "Research on application of e-Tender in China," in Proc. IEEE Int. Conf. Internet Technol. Appl., 2011, pp. 1–3.
- [21]. H. Fukui and K. Kobayashi, "Optimal comprehensive tendering models for project procurement," in Proc. IEEE Int. Conf. Syst. Man Cybern., 2010, pp. 3258–3264.
- [22]. P. Dunphy and F. A. P. Petitcolas, "A first look at identity management schemes on the blockchain," IEEE Security Privacy, vol. 16, no. 4, pp. 20–29, Aug. 2018.
- [23]. Q. Lin, H. Yan, Z. Huang, W. Chen, J. Shen, and Y. Tang, "An IDbased linearly homomorphic signature scheme and its application in blockchain," IEEE Access, vol. 6, pp. 20632–20640, 2018.
- [24]. C. Lin, D. He, X. Huang, M. K. Khan, and K.-K. R. Choo, "A new transitively closed undirected graph authentication scheme for blockchain-based identity management systems," IEEE Access, vol. 6, pp. 28203– 28212, 2018.
- [25]. P. Noizat, "Blockchain electronic vote," in Handbook of Digital Currency. Amsterdam, The Netherlands: Elsevier, 2015, pp. 453–461.
- [26]. Y. Zhang, S. Deng, Y. Zhang, and J. Kong, "Research on government information sharing model using blockchain technology," in Proc. IEEE 10th Int. Conf. Inf. Technol. Med. Educ. (ITME), 2019, pp. 726–729.
- [27]. S. Wang, L. Ouyang, Y. Yuan, X. Ni, X. Han, and F. Wang, "Blockchainenabled smart contracts: Architecture, applications, and future trends," IEEE Trans. Syst., Man, Cybern., Syst., vol. 49, no. 11, pp. 2266–2277, Nov. 2019.
- [28]. M. O'Neill and M. J. B. Robshaw, "Low-cost digital signature architecture suitable for radio frequency identification tags," IET Comput. Digit. Techn., vol. 4, no. 1, pp. 14–26, Jan. 2010.
- [29]. R. Rosa and C. E. Rothenberg, "Blockchain-based decentralized applications for multiple administrative domain networking," IEEE Commun. Stand. Mag., vol. 2, no. 3, pp. 29–37, Sep. 2018
- [30]. B. K. Mohanta, S. S. Panda, and D. Jena, "An overview of smart contract and use cases in blockchain technology," in Proc. 9th Int. Conf. Computi. Commun. Netw. Technol. (ICCCNT), Jul. 2018, pp. 1–4.
- [31]. J. Huang, L. Kong, G. Chen, M.-Y. Wu, X. Liu, and P. Zeng, "Towards secure industrial IoT: Blockchain system with credit-based consensus mechanism," IEEE Trans. Ind. Informat., vol. 15, no. 6, pp. 3680–3689, Jun. 2019.
- [32]. V. Hassija, V. Saxena, V. Chamola, and R. Yu, "A parking slot allocation framework based on virtual voting and adaptive pricing algorithm," IEEE Trans. Veh. Technol., vol. 60, no. 6, pp. 5945–5957, Jun. 2020.
- [33]. V. Hassija, V. Saxena, and V. Chamola, "A mobile data offloading framework based on a combination of blockchain and virtual voting," Softw. Pract. Exp., to be published.

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#### Volume 3, Issue 2, May 2023

- [34]. N. G. Saglam, A. Z. Yılmaz, C. Becchio, and S. P. Corgnati, "A compre- ` hensive cost-optimal approach for energy retrofit of existing multi-family buildings: Application to apartment blocks in Turkey," Energy Build., vol. 150, pp. 224–238, Sep. 2017.
- [35]. C. Yang, C. Liu, X. Zhang, S. Nepal, and J. Chen, "A time efficient approach for detecting errors in big sensor data on cloud," IEEE

