

GSM Based Transformer Healthcare Monitoring with Overload Alert and Protection

Prof. J. R. Rokde¹, Chavan Gayatri², Deokar Priti³, Gadhe Pratiksha⁴, Satpute Punam⁵

Department of Electrical Engineering
Amrutvahini College of Engineering, Sangamner, India

Abstract: The blockchain typically described as a decentralized system in which transactional or ancient statistics are recorded, stored, and maintained throughout a peer-to-peer community of personal computers referred to as nodes. Counterfeit drugs are one consequence of such limitations within existing supply chains, which not only has serious adverse impact on human health but also causes severe economic loss to the healthcare industry. Blockchain technology has gained tremendous attention, with an escalating hobby in a plethora of several applications like safe and relaxed healthcare records management. Similarly, blockchain is reforming the traditional healthcare practices to an extra reliable means, in phrases of powerful prognosis and treatment through safe and cosy facts sharing using SHA Hash Generation Algorithm. Within the future, blockchain will be an era that can probably assist in personalized, authentic, and at ease healthcare by means of merging the entire actual-time scientific information of a patient's fitness and offering it in an up-to-date cosy healthcare setup. In this paper, we evaluation each the present-and modern-day trends inside the subject of healthcare with the aid of imposing blockchain as a model. We also talk the packages of blockchain, at the side of the demanding situations confronted and destiny views. The proposed system executed blockchain implementation in distributed computing surroundings and it gives the automated restoration of invalid chain by using Consensus and Mining Algorithm. In this system, we present a Custom blockchain-based approach leveraging smart contracts and decentralized off-chain storage for efficient product traceability in the healthcare supply chain. The smart contract guarantees data provenance, eliminates the need for intermediaries and provides a secure, immutable history of transactions to all stakeholders. We present the system architecture and detailed algorithms that govern the working principles of our proposed solution. We perform testing and validation, and present cost and security analysis of the system to evaluate its effectiveness to enhance trace-ability within pharmaceutical supply chains.

Keywords: Blockchain Technology, Decentralization / Decentralized System, Distributed Computing, Peer-to-Peer Network, Healthcare, Supply chains, etc

REFERENCES

- [1]. Monika Agarwal and Akshaypandya, "GSM Based Condition Monitoring of Transformer", IJSRD - International Journal for Scientific Research & Development | Vol. 1, Issue 12, 2014 | ISSN (online): 2321- 0613
- [2]. Hongyan Mao, "Research of Wireless Monitoring System in Power Distribution Transformer Station Based on GPRS", Volume 5, C 2010 IEEE, 978-1-4244-5586-7/10/\$26.00
- [3]. Pathak A.K, Kolhe A.N, Gagare J.T and Khemnar SM, "GSM Based Distribution Transformer Monitoring And Controlling System", Vol-2 Issue2 2016, IJARIE-ISSN (O)-2395-4396.
- [4]. J. H. Estrada, S. Valencia Ramírez, C. L. Cortés, E. A. Cano Plata, "Magnetic Flux Entropy as a Tool to Predict Transformer's Failures", Magnetics IEEE Transactions on, vol. 49, pp. 4729-4732, 2013, ISSN 0018-9464
- [5]. Chan, W. L, So, A.T.P. and Lai, L., L.; "Interment Based Transmission Substation Monitoring", IEEE Transaction on Power Systems, Vol. 14, No. 1, February 2014, pp. 293-298.
- [6]. Zhang Xin, Huang Ronghui, Huang Weizhao, Yao Shenjing, Hou Dan & Zheng Min, "Real-time Temperature Monitoring System Using FBG Sensors on immersed Power Transformer", DOI:10.13336/j.10036520.hve.2014.S2.048, Vol.40, Supplement 2: 253-259v, August 31, 2014.
- [7]. Performance Monitoring of Transformer Parameters in (IJIREICE) Vol. 3, Issue 8, August 2015.

- [8]. GSM based Transformer Condition Monitoring System Ms.Swati R.Wandhare, Ms.Bhagyashree Shikkewal Special Issue-2 ISSN : 24541311 International Conference on Science and Engineering for Sustainable Development (ICSESD 2017)(www.jit.org.in)International Journal of Advanced Engineering, Management and Science (IJAEMS).
- [9]. Leibfried, T, “Online monitors keep transformers in service”, Computer Applications in Power, IEEE, Volume: 11 Issue: 3, July, 2017. International Journal of Pure and Applied Mathematics Special Issue 963
- [10]. Chan, W. L, So, A.T.P. and Lai, L., L.; “Interment Based Transmission Substation Monitoring”, IEEE Transaction on Power Systems, Vol. 14, No. 1, February 2014, pp. 293-298.
- [11]. Zhang Xin, Huang Ronghui, Huang Weizhao, Yao Shenjing,Hou Dan & Zheng Min,“Real-time Temperature Monitoring System Using FBG Sensors on immersed Power Transformer”, DOI:10.13336/j.10036520.hve.2014.S2.048, Vol.40, Supplement 2: 253-259v, August 31, 2014.
- [12]. Performance Monitoring of Transformer Parameters in (IJIREEICE) Vol. 3, Issue 8, August 2015