

International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijirset.com

Vol. 7, Special Issue 3, March 2018

Value and Trust over IP

Syed Mohd Zaki

M.E., Department of Computer Science and Engineering, SAU.KGIET, Darapur, MS, India

ABSTRACT: Since the invent of IP and Internet Technology, it has gone through various faces of improvement and uses which are highly beneficial for the human kind. In today's era of Gigabits of internet and Exabyte of data processing power within a fraction of microseconds, not only internet is used for just communication of simple business or scientific data but it's very latest, astonishing, complicated and sophisticated use is exchange of "Value" in terms of "Electronic Money" called as "Crypto Currency" , "Expression of Loyalty" , "Expression of Affiliation" and Platform of trust called as "Blockchain", a distributed ledger Technology without any Centralized controlling authority and accountability. Crux is everything is distributed over internet, cannot be copied and near to impossible to intrude into Value Code.

KEYWORDS: IP, Crypto Currency, Blockchain, Electronic money, Expression of Affiliation, Expression of Loyalty, FIAT Currency, Miners, Ethereum, Litecoin, Deep Web, Dark web, Mariana Web

I.INTRODUCTION

There are five major revolution in the history of exchange of value and trust, that starts from Barter System, then abstraction of value in terms of stones and other valuable articles, then gold and silver coins, then paper currency in terms of certificates issued for the deposit of equivalent gold, then Plastic currency backed by sovereign guarantees given by Banks and governments around the world called as FIAT money. FIAT money is not tied with any physical commodity like gold but its value is determined by the governments on the basis of Supply and Demand. Examples are US Dollars, British Pounds, Euros. Now the 6th Revolution happened on 9th January 2009 by an anonymous Programmer "Satoshi Nakamoto"[1] in terms of Digital Currency called as Crypto Currency (Specially Bitcoin). Other major Crypto Currencies includes Ethereum, Litecoin, Ripple, Dash etc. Currently Over 500 different digital currencies occurs in the economic system of the current Real and Virtual world and contribute to world economy equivalent to 12 Billion US Dollars. The main Idea behind the crypto currency is peer-to-peer exchange of Values and Trust without any centralized authority on the network of distributed computer with distributed code and transaction information without any replication with strong hashing algorithms and at Blockchain Platform[2],[3]. The work in this paper is divided in to the following sections. I). To presents the new Idea of economic exchanges in terms of digital currency [4]. II). To present the idea of use of Blockchain Technology in other fields to curb on corruption in public governance in terms of value and Trust, Loyalty and Affiliation to be recognize a worth for communication between two peers without any centralized authority and intrusion for manipulation of facts and figures to gain an undue advantage. III). The Dark Side.

II. RELATED WORK

Blockchain Technology and Suggested New Ideas: Blockchain is a platform of Trust and maintained in the form of distributed Ledgers of Transactions over the internet. We can use this technology in public governance to curb on corruption in general government procedures of public interest like award of government tenders, appraisal of government employees for promotions and pay hike. In Blockchain technology the transactions are recorded in the blocks like a record in a page, and has a link with previous Block and each transaction is authenticated in the block by all the participants on distributed network of computers. So the idea behind this paper is to suggest the governments around the world especially in India where the corruption is rampant in every field. Governments can develop their own Blockchain and implement the idea of cryptography to authenticate and validate the performance parameters of Employees in case of official governance accordingly, Award of tenders to the bidders of various

International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijirset.com

Vol. 7, Special Issue 3, March 2018

fields: like Award of Contracts for Public Infrastructure Development, Award of Telecom Spectrum, Award of International defence Contracts. All these suggestions are based on Value and Trust, Affiliation and Loyalty where everything will be authenticated and Validated against any attempt to manipulate the current status of blocks and its recorded information and parameters without any central authority. Blockchain governance refers to the process of making decisions within the cryptocurrency protocol and which defines how rules are created, changed, agreed upon and implemented. The need for better and clearer governance systems in blockchain protocols has become clear amidst Bitcoin's near-decade of political firestorms, fierce debates, splits and competing interests. These have also been reported in systems like Ethereum causing splits in the community. Governance in cryptocurrencies is used to administer two things in particular: rules or the code of the protocol (which determines development and success of the project) and incentives or the economics. Therefore, governance, or rather, decision-making processes inside a cryptocurrency project affects how users reach a consensus, how transactions are confirmed, what project proposals get funded and therefore the development and survival of a project, the transaction fees and how participants are rewarded. To bring everything to a better focus, cryptocurrencies are virtual decentralized entities comprising of very large number of individual actors who do not know each other and who respond to various issues according to a set of rules and governance mechanisms. To maintain the idea of decentralization, cryptocurrencies seek for distributed consensus mechanisms and decentralized decision-making. In these systems, the rules and incentives help bring project stakeholders together for the best survival of the network, without need for a centralized organization or governance to reach consensus [10]. Although central governance can bring in faster execution of project proposals and code development, reduced conflict and countability, it might also have problems such as weak security, lesser trust by users, susceptible to power abuse and lack of transparency. Without appropriate governance mechanisms, for instance, large miners with more hash power might attempt to dominate the system by overwhelming smaller competitors by sheer power. In modern day smart legal contracts, the blockchain code is used to automatically store and enforce rules as well as implement proposals as agreed among the cryptocurrency participants.

III. SCALABILITY OF BLOCKCHAIN GOVERNANCE

For instance, in Bitcoin, changes to the code and economics need participation of the developers, miners and users. While developers write the code, miners and users must vote. But there have been some problems reported. For instance, even after developers came up with the Segwit -- which was a solution that would help improve Bitcoin scalability, miners have had no strong willingness to approve this change to date. It needs a vote of 95 percent of nodes to pass. There have been disagreements in the last one and half years. Bitcoin governance is viewed as weak because it does not give users much power about decisions. Also, the network has seen increase in confirmation times and transaction fees. Therefore, the proposals are slow to adapt and it becomes hard to improve budgets. In Bitcoin, all miners have a voting power proportional to the amount of computational power they add to the network. They exert the most influence. If majority of miners vote for a particular upgrade, for instance, then that becomes the new version. Miners earn a lucrative income from block rewards and transaction fees and so they probably won't vote in anything that decreases their earnings in the short term or long term. As the Blockchain technology is increasing, the computing power requires in exponentiation and new hardware and datacentres are coming into existence. Today's super computers are even not enough to run the Blockchain platform and Cryptocurrency generating codes which requires huge Hashing powers. In future governments around the world are required to invest highly in this emerging technology.

IV. THE DARK SIDE

The readers of this paper are informed that the use of Cryptocurrency and Blockchain is highly used by the Criminals for illegal activities all around the world. In today's world of Internet where 96% of web pages are hidden from the common user of internet and called as Deep web and especially called as Dark web or Mariana Web for crimes. Anybody on internet can be a target of criminals who can use an innocent person for the fulfilment of their criminal intention [8]. Deep web contains the following type of web pages which are difficult to Index by common search engines like Google.

International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijirset.com

Vol. 7, Special Issue 3, March 2018

- a) Private web: Private Websites, such as intranets with public-facing webpages, typically require registration and login
- b). Dynamic Contents: A dynamic page appears as a hidden response to a specific query or through submission of a specific element or set of elements on a form. In either case, the resulting text fields are hard links to discover, much less navigate, without direct reference to a domain [11].
- c). Limited access content: Many websites use a mechanism to limit access to or prevent duplication of their content. A no-store directive serves to prohibit creating cached copies [11].
- d). Non-HTML content: The World Wide Web depends on Hypertext Markup Language (HTML) to perpetuate linkages. Non-HTML pages are hard to discover and access, as the accepted links are absent. Textual content encoded as images, video files, or similar visual file formats, not discoverable via search engines, are also difficult to isolate by other means. Specialized software, such as The Onion Router (TOR) or the Invisible Internet Project (I2P) anonymous peer-to-peer distributed communication network, are required to access content not otherwise discoverable on the WWW or Internet [12].
- e). Unlinked content: Not all HTML pages contain external links. Websites typically contain links from other websites, known as backlinks or in(bound) links. The number and quality of backlinks are a major factor in determining a website's ranking in search engine results. However, search engines don't usually detect all backlinks. In addition, not including backlinks can prevent search engines and web crawling programs from discovering and indexing website content [12].

V. CONCLUSION

To conclude, there is a tremendous and wide spectrum of opportunities of using Blockchain Technology in the field of Public governance, tax collection, benefits distribution and passport issuance. As the risk involved in the implementation of Blockchain technology for the sensitive areas of public governance, it will take its time and adaption will go in a slow pace but continuous and sincere efforts are required by the governments and other stakeholders.

REFERENCES

- [1]. A. Narayanan et al., Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction, Princeton Univ.Press, 2016.
- [2]. Hassell, Jonathan. "What Is Blockchain And How Does It Work?". CIO. N.p., 2016. Web. 12 Nov. 2016. [3]. "A Gentle Introduction To Blockchain Technology". Bits on blocks. N.p., 2016. Web. 30 Oct. 2016.
- [4]. M. Swan, Blockchain: Blueprint for a New Economy, O'Reilly, 2015.
- [5]. "Blockchain Technology: 9 Benefits & 7 Challenges | Deloitte". Deloitte Nederland. N.p., 2016. Web. 14 Nov.2016.
- [6]. "Block Chain - Bitcoin Wiki". En.bitcoin.it. N.p., 2016. Web. 12 Nov. 2016.
- [7]. An Overview of Blockchain Architecture and its Applications, IJRSET, Vol.5, Issue 11, Nov 2016.
- [8]. Dark Web: Exploring and Mining the Dark Side of the Web. Intelligence and Security Informatics Conference (EISIC), 2011
- [9]. Christopher C. Yang, John Yen, Jiming Liu, "Social Intelligence and Technology", Intelligent Systems IEEE, vol. 29, pp. 5-8, 2014, ISSN 1541-1672.
- [10].Ericsson Marin, Ahmad Diab, Paulo Shakarian, "Product offerings in malicious hacker markets", Intelligence and Security Informatics (ISI) 2016 IEEE Conference on, pp. 187-189, 2016.
- [11]. "Cyber security Experts Uncover Dormant Botnet of 350000 Twitter Accounts", *MIT Technology Rev.*, Jan. 2017. [12]. M. Chertoff, T. Simon, The Impact of the Dark Web on Internet Governance and Cyber Security, Centre for Int'l Governance Innovation and Chatham House, Feb. 2015