Blockchain for Business

Research Report – February 2018

Author

Adriana Dincă

dinca.adriana2@gmail.com

Scientific Advisor

Prof. Dr. Ing. Gabriel Neagu

Summary

- Research Report Subject
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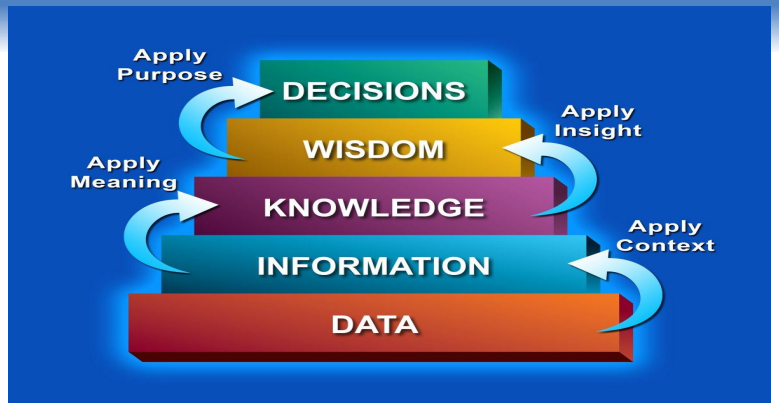
Research Report Subject



https://dssmis.wordpress.com/

https://www.digimarc.com/public_images/blockchain-1500x600.jpg

Motivation [1]

Motivation [2]

- Authorship and ownership
- Commodities
- Data management
- Diamonds
- Digital identity, identification and authentication
- Energy
- E-voting
- Gaming and gambling
- Government ans organizational governace
- IoT
- Market forecasting
- Job market
- Media and content distribution
- Network infrastructure
- Real estate
- Philantropy transparency and community services
- Reputation verification and ranking
- Ride-sharing services
- Social networks
- Supply chain certification in the food industry

Objectives

- Study Blockchain technology
- Explore Decision Support System
- Discover the unexplored potential of Blockchain
- Define the main elements of a successful Blockchain project
- Determine if a DSS for architectural solution involving Blockchain technology is feasible

Related Work - DSS Architecture [1]

DSS is an interactive, flexible and adaptable system, exclusively designed to offer support in solving unstructured or semi-structured managerial problems, aiming to improve the decisional process. The system uses data (internal and external) and models, providing a simple and easy-to-use interface, thus, allowing the decision maker control over the decision process. The DSS offers support in all decision process's stages. Turban

1. Bottom-tier - data management
2. Middle-tier - model management and analysis
3. Top-tier - interface or presentation
4. Telecommunication

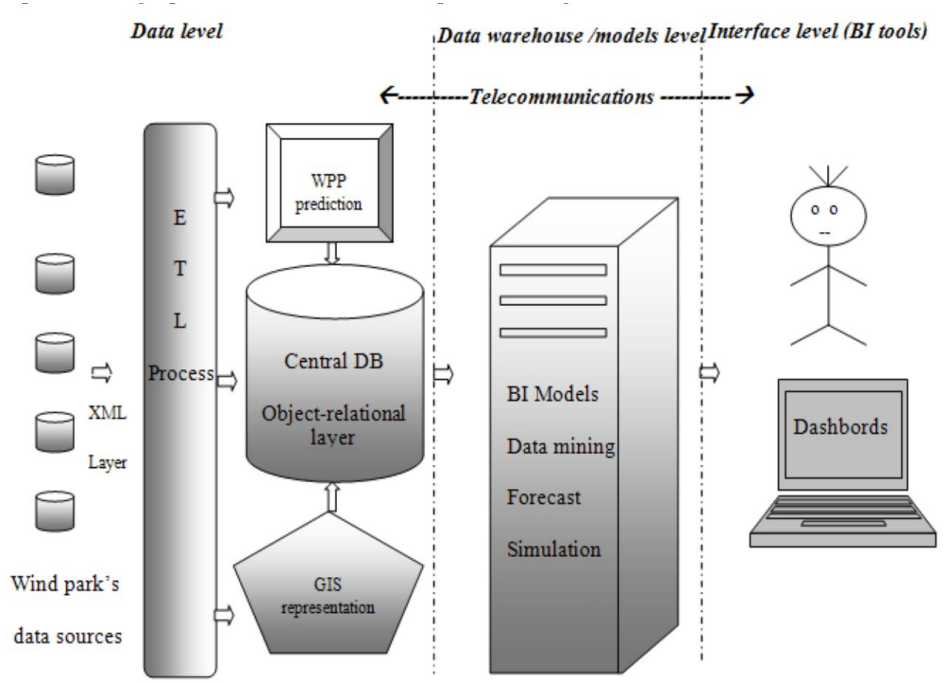
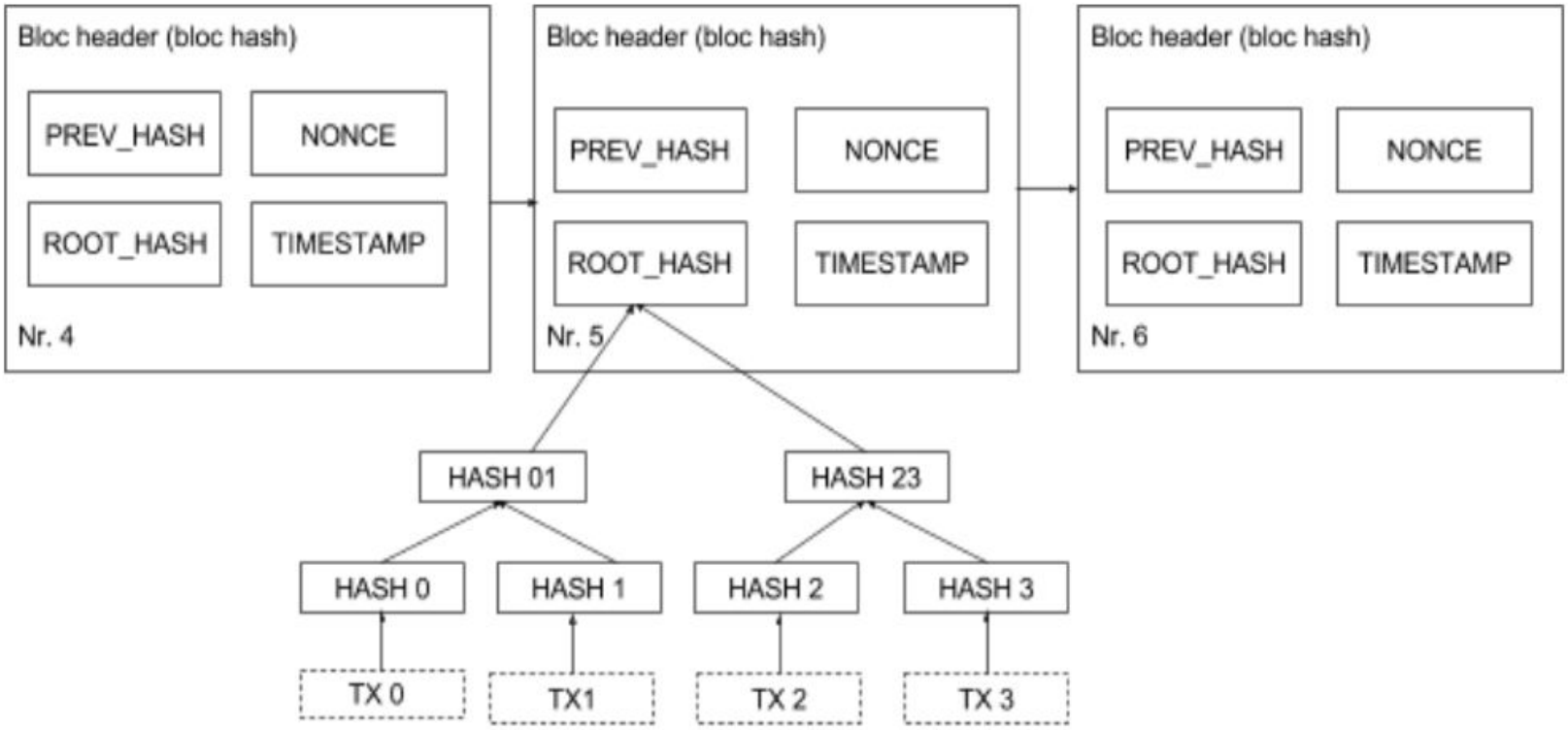


Figure 1. The DSS architecture used for WPP systems

https://www.intechopen.com/books/advances-in-data-mining-knowledge-discovery-and-applications

Related Work [2] - Blockchain Technology



Blockchain Based Projects [1]

- Currencies
  - store of value, medium of exchange or unit of account
  - Bitcoin, Ethereum, Litecoin, Ripple, Interledger, Monero, ZCash
- Developer Tools
  - fully decentralized autonomous organization, social network alternative
  - Ethereum for smart contracts, ZeppelinOS for security, Truebit for faster computation, Mattereum for legal contract execution
- Fintech
  - allowing people to be priced in larger pools or on a individual basis looking at their risk profile
  - Trading/DEX, InsureX, ETHLend, Blockchain Capital

Blockchain Based Projects [2]

- Sovereignty
  - solving the issue of trusting a third party
  - Internet Blockstack(user controlled), Aragon(governance), KIN(communication), Civic(identity), StableCoin(stable coins)
- Value Exchange
  - fungible(storage, computation, energy, bandwidth) and non-fungible(earn what their services/goods are worth without paying fees to a thrid party)
- Shared Data
  - the value will go to individuals and companies that provide data not to aggregator businesses
  - FOAM IOTA(IoT), TMINING(supply chain/logistics), ujo(attribution)
- Authenticity
  - data hasn't been tampered or changed during transfer and it will available far in the future
  - Data FACTOM Tierion, GUTS, Ticket Chain

Conclusion

- Building a DSS that offers architectural solutions involving Blockchain is feasible due to the following arguments
    - Unexplored Blockchain possibilies
    - No DSS that assists managers make innovation by the adoption of Blockchain
    - Muliple successful Blockchain products
    - Huge community involved in discovering and innovating fields that still use old and complicated procedures

Future Work

- Defining the specification of the DSS
- Designing the DSS architecture
- Implement the DSS
- Test the DSS with existing products that were innovated with Blockchain
- Publish a scientific report on the subject
- Make the DSS application available to the large public