[HENPONG]

[THE USE OF BLOCKCHAIN TO PREVENT CORRUPTION & DATA FRAUD IN THE AGRICULTURAL SECTOR]

[AGRICULTURAL SECTOR DEVELOPMENT]

PROBLEM STATEMENT

- In light of the 2018 COCOBOD scandal amongst other allegations, the government and the Ghana Agricultural Workers' Association lack transparency and trust in the management and allocation of national resources in the agricultural sector.
- This has been characterized by fraud, corruption and embezzlement allegations made against individuals on both sides of the court.
- In summary the actors are the Government of Ghana and Ghana Agricultural Workers' Association(GAWU) and the problem is the lack of confidence of both parties in the current methods of accountability and transparency in the management of national resources.

CONCEPT

In programming a string is given set of characters. In mathematics there is a formula known as HASHING algorithms. They give an output of a FIXED set of characters from any given length of characters' input depending on the algorithm. These algorithms are unique because the probability of two strings producing the same output is so highly improbable that it might as well be considered as impossible.

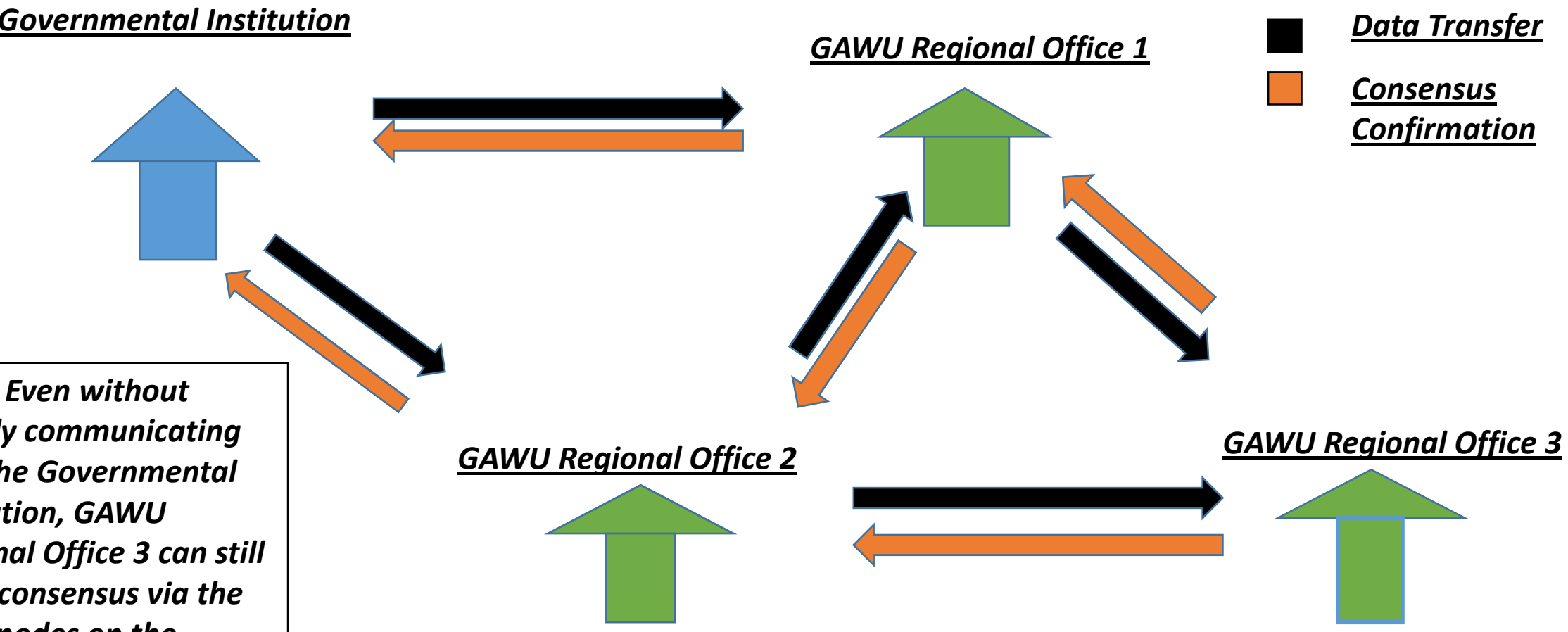
A blockchain is simply a distributed ledger technology which utilizes hashing algorithms to tag data and spread it simultaneously amongst all nodes or computers in a database network.

Since the output of hashing algorithms are so difficult to reverse-engineer(determine the input string from the output) without knowing the hashing algorithm used, any breach of data can easily be determined by consensus since all the data have been tagged with a 'UNIQUE' hash.

If the government and GAWU should implement the blockchain technology, both parties would be given accountability. If any party on either side or a third party should maliciously tamper with the blockchain, the lack of synchronism in the hash values would be made evident thus ensuring transparency and trust.

HOW THE SOLUTION WORKS

- Flow Diagram depicting how concensus is achieved in a blockchain



Even without
ly communicating
he Governmental
tion, GAWU
nal Office 3 can still
consensus via the
nodes on the
rk.

TECHNOLOGY APPLIED

- For front-end development: ***PHP,HTML,CSS,BOOTSTRAP, Modal***

- For back-end: ***MySQL, OOP (Object-Oriented Programming)***

TEAM MEMBERS

- ***HENRY NANABEYIN AGYAPONG***
- ***HAOMA AMOAH***
- ***AHMED MUSTAPHA***
- ***JOHN TANKO***

DEMO