

QUANTUM DIGITAL NUMERICAL ALGORITHM BLOCKCHAIN

ADVANCE BIO-MIMICRY ENCRYPTION

10th October 2020



AGENDA

INTRODUCTION

INDUSTRY USE + SCENARIOS

BENEFITS

SMALL SCALE TESTS

WHAT'S NEXT – LARGER APPLICATION

CLOSING





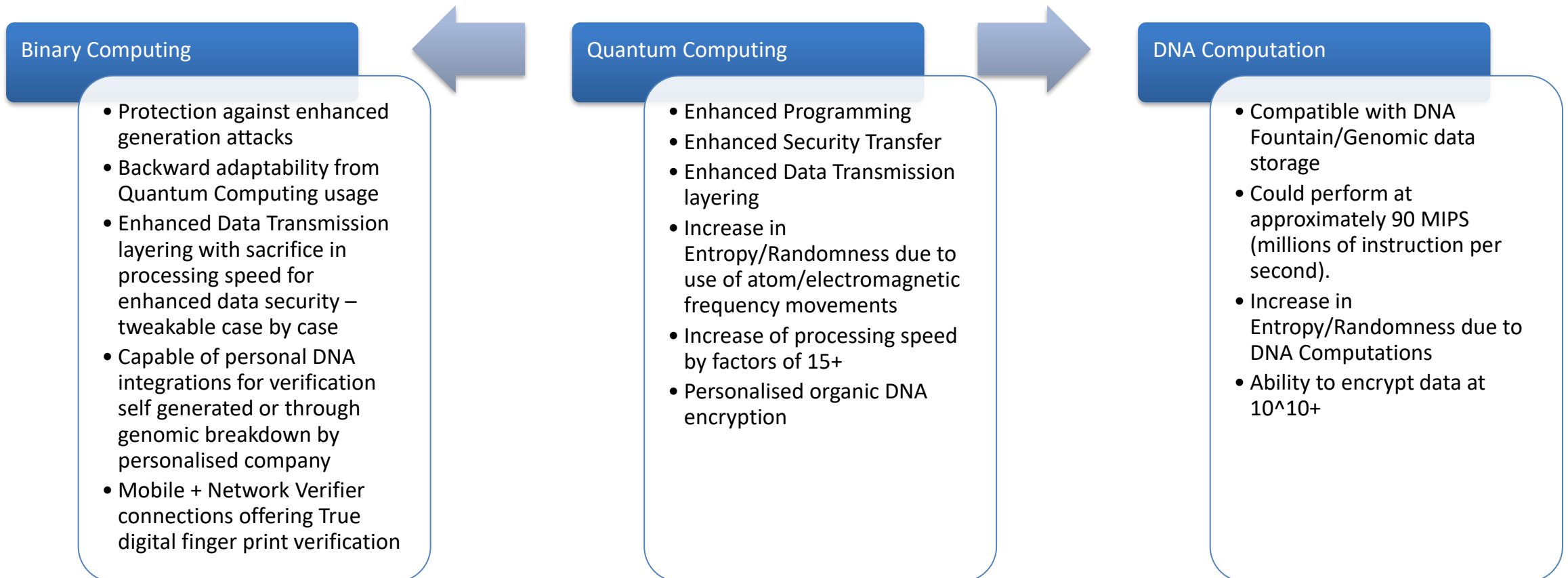
INTRODUCTION

WHAT QDNA IS

QDNA (quantum digital numerical algorithm) is a new encryption technology based on bio-mimicry and quantum computer sciences that looks at the ability to increase the data density vs data integrity, data complexities and applicable usages within Industry.

Encryption flexibility means users could have the Confidentiality (C) strength of a one-time pad encryption, the Integrity (I) of the Elliptic Curve Digital Signature and hold a unique flexibility and non-repudiation found only within biochemistry.

GENERATIONAL COMPUTE APPLICATION





INDUSTRY USE & SCENARIOS

LET'S DIVE IN



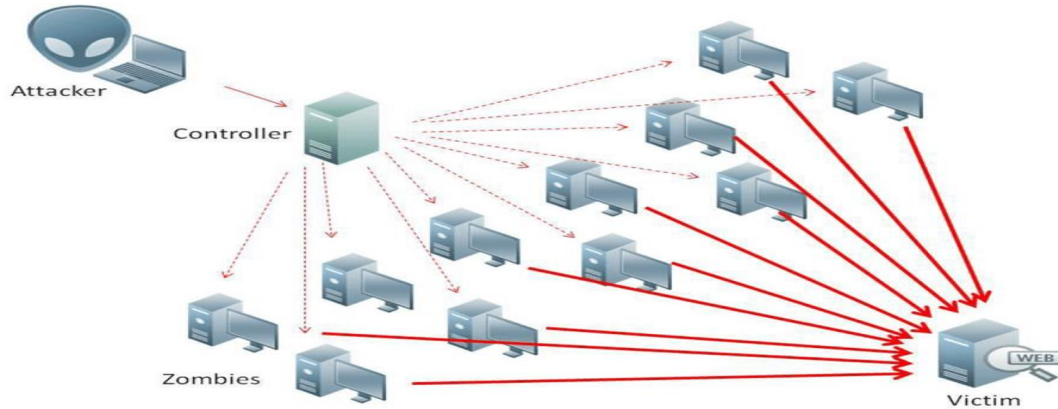
MILITARY / CYBER WAREFARE

Secure by design approach

The development of the militarised QDNA encryption method combines human genomic structures and with next generation quantum or biological programming. The foundation enables:

- 1) Bio-mimicry encryption
- 2) Trusted device non-repudiation & signature
- 3) Next Generation Biological DNA storage (compatibility with DNA Fountain storage processes)
- 4) Data Structuring embodied for Double Helix offering corruption protection & block based reassembly for smaller condensed message delivery over communication channels

MILITARY SCENARIOS



CYBER ATTACK (Example – DDoS)

Due to the way in which the QDNA method has been fundamentally designed the ability to automatically allow a “Trusted Device” helps to do a Bi-Directional authentication with either public or private web servers disconnecting if either system conditions are unmet. Thus, due to verification process condition changes will automatically detect environment changes and disconnect from secure network helping to circumvent DDoS and enslavement attacks on network

BATTLEFIELD COMMUNICATION

The ability for this encryption will allow for secure communication between battlefield tactical network based mobile devices. Communication devices can be used but without verification methods and network conditions met message will be unencryptable (per device **not** 1 device is able to unencrypt all messages).

Could be used in targeting systems;, communications systems (Radio, Satellite etc);



FINANCIAL SERVICES

Secure by design approach

Adaptation into a highly secure and centralised digital capability to enable financial institutions locally and worldwide to send and receive information about financial transactions in a secure, standardized and reliable format; ensure Anti-money laundering and also money laundering / blood money kill chains

FINANCIAL SCENARIOS



Digital Currency / Block chain

The approach would allow for banking to centralise digital currency backing to compete with decentralised currency or competing exchanges.

Due to the nature of the algorithm / trust verification and the capability of enforcing banking requirements around Anti-terror or money laundering. The transactions can be tracked back over generations for pattern discovery, and interactions, and due to traceability kill chain capabilities can be applied if used in illegal transactions while not disrupting other holders.

(Like taking old money back to the mint to destroying old notes)



Trusted Device Network

Due to the way in which the QDNA method has been fundamentally designed the ability to automatically allow a “Trusted Device” helps to do a Bi-Directional authentication meaning that transactions could be authenticated, tracked back to card, terminal, geographical era etc all in a single blockchain transaction. This also works as it would disallow any non network card or terminal helping to eliminate or inhibit credit card fraud either online or offline.



BIO-TECHNOLOGY & IDENTITY

Secure by design for Healthcare,
Identity,

The use of this technology help with the ability to secure bio technologies and even biometric information. The algorithm gives the capability for bio-storage technologies, could be used to simulate infection capabilities against randomly generated DNA or human DNA substituted in. Individuals could use their own DNA as both encryption and verification method.



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BENEFITS

LOOKING AT WHAT MAKES THIS UNIQUE



BENEFITS OF THE ALGORITHM

- Bio-mimicry is an established and successful practice in science and innovation. Some of the most famous and successful innovations were produced through bio-mimicry (e.g. Velcro).
- The use of nature to catalyse randomness and entropy represents one of the exciting frontiers of encryption technology
- The foundation of nature has been studied through genetic science and profound randomness/entropy observed
- QDNA harnesses this powerful concept to apply to encryption and ultimately information/data security
- The advent of a post-quantum computing world will present enormous challenges for information security, data security and encryption – QDNA seeks to address this huge challenge and opportunity with this novel enterprise solution that is scalable





SMALL SCALE

LOOKING AT WHAT MAKES THIS UNIQUE



SMALL SCALE MANUAL TESTING

- 1) On a small scale the QDNA system is able to encrypt digital information in 3 separate methods either DNA, Quantum or Binary layering.
- 2) The system foundation can be built around hardware, predetermined requirements figures for encrypting and decrypting
- 3) We are able to use DNA basis as an encryption input and are able to generate an artificial dna stain from computers.





WHAT'S NEXT

LOOKING AHEAD TO LARGER APPLICATION TESTING



WHAT ARE WE

- Looking for partnership opportunities or investors
- Looking to demonstrate applicability for Critical Infrastructure/SCADA, Banking, Military, Communications and healthcare sectors

THANK YOU



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