STRATUM

BASED ON QUANTUM TECHNOLOGY AND AI

Stellar

CRYPTO CAPITAL

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Introduction

The Second Quantum Revolution is under underway, taking advantage of huge advances in our capacity to detect and operate single quantum objects. This global transformation is being driven by the Stratum Quantum Technologies development.

A quantum technology is one that derives its functioning from manipulating the states of quantum systems. This distinguishes quantum technologies from other twentieth-century technologies (e.g., lasers, magnetic resonance imaging, semiconductor electronics) that use quantum phenomena (e.g., coherence, quantised energy, tunneling) but do not directly initialize, manipulate, or measure the states of individual quantum systems. Some elementary quantum physics is required for this concept and the subsequent parts to make sense.

Quantum physics is best defined as the bizarre physical rules of the microscopic realm of elementary particles (such as electrons, photons, and nuclei) that ultimately control everything. A quantum system is a collection of these particles. Measurements of a quantum system produce random values, the probabilities of which are defined by the state of the system at the moment of measurement. A quantum system is projected into a state that corresponds to the measurement process and value after it has been measured. The state of a quantum system at any given time may be defined as a superposition of the states associated with a measurement mechanism—the concurrent possession of several states with specified relative amplitudes and phases. Some states of the quantum system display entanglement of two or more sub-systems (i.e. sub-groups of particles).

Entanglement causes statistical relationships in the values of measurements taken by individual subsystems. Interactions between a quantum system and its surroundings can cause its state to become random. This is known as decoherence, and it eventually restricts the precision with which a quantum system's state may be designed. Each of these ideas will be shown in the next and subsequent blog postings.

How do they work?

The fundamental building block of quantum technology is the qubit—the simplest quantum system—which has two states |0> and |1>. The qubit is a useful, abstract concept that allows us to understand how different quantum technologies work and compare. In practice, different systems of particles or different variables of similar systems play the role of the qubit in different technologies.

Quantum technologies function by using normal ‘classical’ devices (e.g. lasers, microwave electronics and photodetectors) to initialise (e.g. by a laser pulse), manipulate (e.g. by a microwave pulse) and measure (e.g. by detecting emitted photons) the state of their qubit(s). A normal ‘classical’ computer is used to program and control these devices and record the measurement data. So, when you operate a quantum technology, you simply interface with a familiar classical computer. Despite the qubits being a relatively small component of the quantum technology, their different physical behaviour is what delivers advantage over classical technologies.

The performance of a quantum technology is determined by both its qubits and its classical control system and methods. Like other technologies, performance can be described in terms of precision, accuracy, speed and endurance.

Precision quantifies how reproducibly the qubit state(s) can be engineered and measured, whereas accuracy pertains to how close the actual qubit state(s) and measurement(s) are to the ideal state(s) and measurement(s). Speed is the rate at which the different processes (i.e. initialisation, manipulation and measurement) can be performed, and endurance is the lifetime of the qubit state(s) before decoherence, which sets the maximum time over which manipulation can be performed. In subsequent blog posts, I will detail how precision, accuracy, speed and endurance combine to form the key performance metrics of different types of quantum technology.

Performance is improved by engineering higher quality qubit systems, classical control hardware and methods, and shielding the qubits from the environment. The first three are pushing the limits of material growth, microfabrication, electrical, optical and mechanical engineering, and optimal control design. Environmental shielding requirements depend on the type of technology and qubit system. Some require cryogenics to achieve ultra-low temperatures and/ or vacuum systems to achieve ultra-high mechanical isolation. Others don't require either and can operate in ambient and extreme conditions. Nevertheless, high quality materials, fabrication and device engineering is the key to high performance quantum technology.

What do they do and why are they advantageous?

Thus far, quantum technologies can be categorised into three main types: quantum sensing and imaging, communications, and computing. Each category has different characteristics, capabilities, scopes of application and readiness.

Quantum sensing and imaging: new limits in precision.

Quantum sensors measure time, dynamics (i.e. forces, acceleration and rotation), and fields (i.e. gravitational, electromagnetic and mechanical) with unprecedented precision and stability. They primarily achieve this by exploiting quantum superposition to apply interferometry techniques to detect small changes in a qubit's state by the passage of time, dynamics or interactions with fields. Quantum entanglement between multiple qubits may be exploited to further enhance precision. Stability is achieved through the qubits having fixed and universal susceptibilities (e.g. electron gyromagnetic ratio and atomic mass). Imaging is an extension of quantum sensing where quantum sensors are combined with an imaging apparatus (e.g. that scans the position of the qubit).

Quantum communications: networking quantum devices and physically-assured communication security.

Quantum communications can be used to network quantum sensors to correlate and enhance sensitivity over large areas (e.g synchronise clocks within a communication network) and networking quantum computers to efficiently exchange data and amass computational power. Quantum communications may also be used to securely transmit data between classical devices (e.g. distribute encryption keys) or securely access remote quantum computers.

Quantum communications implement these different functions by sending superimposed or entangled qubits between the devices. Security is assured by the projective nature of quantum measurements, which means that it is not physically possible to copy the qubit encoded information without modifying it. Thus, security is assured in the sense that interference by eavesdroppers can be detected and quantified.

Quantum computing: a leap in computational power.

Quantum computers dramatically speed-up the solution of particular computational problems. Whilst the full range of such problems is still being discovered, established examples are related to signal processing, optimisation, simulation, searching and factoring. They achieve this by exploiting quantum superposition and entanglement to represent and manipulate information in a fundamentally more dense and efficient way than classical computers. Thus, quantum computers require fewer physical resources and operations to solve the same problem as a classical computer. Having introduced the key fundamental concepts and principles, the next three blog posts will delve into each category of quantum technology. I will outline their key characteristics, capabilities and readiness, as well as provide example applications and assess their implications for defence.

Why we use Quantum Technology?

Quantum Technology is a new branch of physics and engineering that is based on quantum physics concepts. For us this technology is the future of Artificial intelligence, because of its algorithms that beat the rudimentary computing algorithms. It will help a lot of people in integrating safe concepts for a brighter future. Developers love this new Technology, it is something that they have never seen before and with a lot of potential to explore and faster executions for testing the final product.

Our products will represent high interest work for big companies such as (Lufthansa, KLM, British Airways, Wizz and etc.). We care about the environment this is the main reason why our Team works on code optimization more than others. As a result, we get the best efficiency – energy consumption interest in the result of the team development.

Why we choose Aviation Industry?

Aviation segment is one of the most vulnerable, because of corruption and dishonesty.The Plan developed by Stratum Dev will help in combat with terrorism, hijacking, assaults and drug trafficking. Software developed with AI and Quantum Algorithms will help to identify criminals faster by understanding their habits till they are in AirPort. If they seem to show some suspicious behaviour the system will alert supervisors of this incident.

The mechanics of this concept are based on self learning algorithms. In general this technology will be able to:

• Recognise visitors by behaviour instead of facial aspects that can be modified. (Machine Learning integration with our software will have the future of understanding and recognising persons unique character next time, often criminals tend to change facial aspects in order to not get recognised by city cameras, but with this technology it will be useless.)

• Analyze in real time visitors background and report suspicious changes of persons based by background. (If a visitor has been flying last year 1 time a month, and this year has over 4 personal flights per month our software will report this information. Often drug smugglers get caught by dubious flights activity.)

• Find criminals in less than 20 ms in case of 8300 distinct faces reviewing last 20 minutes. (Imagine the case when a person is being inside the AirPort and information is being sent to the border office, as soon as they can find and immobilize the criminal no one will suffer.)

Based on Policy of Privacy sharing more information about our product features is denied, because of Terms mentioned in our Partnership contracts.

Utility Use

Chain Linking

SUM will offer chain linking for the Crypto Asset in order to confer more confidence to the Final User.

Biometrical Identifier

This token will be used as an identifier within Holders in order to validate the Real Tokens and avoid Phishing, Scam and Clones.

On Chain Payments

All the payments of this token will be available within multiple DEX and stored eventually in Internal Database of Stratum.

Travel Grant

It could serve as a local currency in AirPorts territory shops. This feature would reduce the pocket theft cases within foreigners.

Stacking Feature

We aim to create a Stacking feature with a 7% APY with Monthly withdrawals. Longer you Stack, better you get.

Digital Asset

SUM is an asset that will remain in value, because of the Economical Backing plan. It is planned to develop Crypto integrations with own NFTs Collection and Metaverse Games (iOS).

Roadmap

AUGUST 2021

Offline Project Development Start

OCTOBER 2021

Signing Agreements with Investors and Reasearching in Global Legal Terms of Our Product

NOVEMBER 2021

Beta Testing of AI in Small Stores around the world (United Kingdom, Germany, Asia, India and Mexico)

JANUARY 2022

Integration with Social Media Space and Stellar BlockChain for first Public Sale

FEBRUARY 2022

Marketing and Fundraising for continuing Development and integration of more Features

MARCH 2022

Hard-Debugging of AI errors and features to initiate Second Phase of The Project

APRIL 2022

Liquidity Pools creation for SUM Token and Chainlinking Development

To be continued

We will reveal our Goals gradually in order to mentain project unique.

A brief history of our project

In early 2019,

Our group began studying on AI (Artificial Intelligence). We successfully trained people in reaching our common objectives by working together in this project.

In 2021,

Team have met our initial development objectives and had begun testing and involving our products in commercial use of various businesses all over the world. At Stratum, we keep testing Quantum Technology, because of our partner Quantum Brilliance. They provide us innovative solutions for our development requirements as a result of collaboration between two great startups.

In 2022,

Our goals are higher than other projects seen by the Stellar Network. The revolution of Crypto currency is near this is why we chosen this great and Eco block chain. The big mistake we made was that went into offline developing, but that went into our advantage. We kept focusing on the main goal of developing source code for AI and now have a working Beta testing version of the product. This technology is made for the people not for the GOVs.

Conclusion of customers

According to customers' feedback, this project is promising. Our team still need to work on it because of some bugs and imperfections until it creates a brighter future for society.

What is Stellar Network?

Stellar is an open-source network for currencies and payments. Stellar makes it possible to create, send and trade digital representations of all forms of money—dollars, pesos, bitcoin, pretty much anything. It's designed so all the world's financial systems can work together on a single network.

Stellar has no owner; if anything it's owned by the public. The software runs across a decentralized, open network and handles millions of transactions each day. Like Bitcoin and Ethereum, Stellar relies on blockchain to keep the network in sync, but the end-user experience is more like cash—Stellar is much faster, cheaper, and more energy-efficient than typical blockchain-based systems.

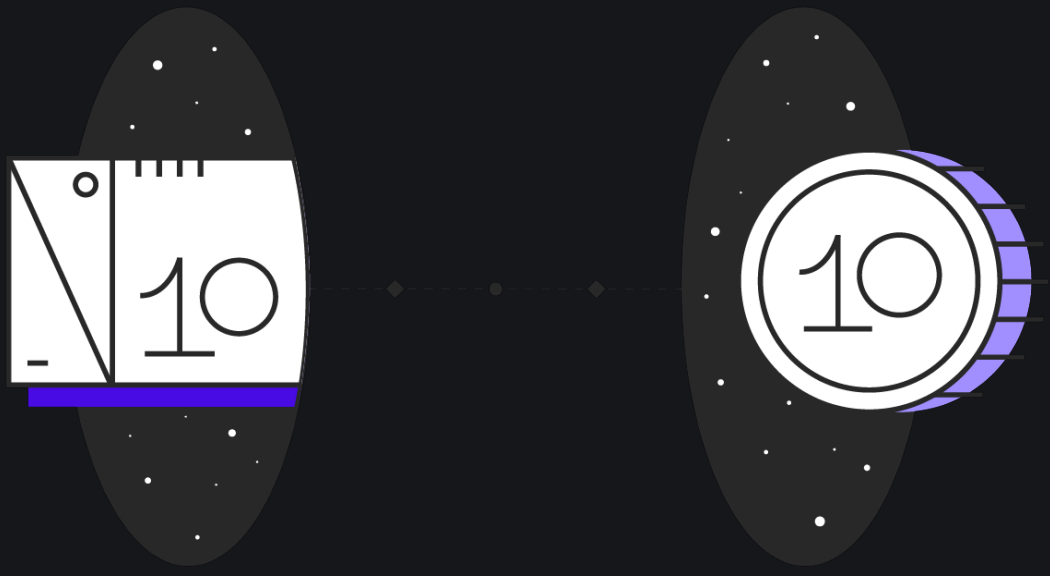
What is Stellar for?

The Stellar network launched in 2014. Since then it's processed more than 450 million operations made by over 4 million individual accounts. Large enterprise companies and companies as small as single-dev startups have chosen Stellar to move money and access new markets.

From the beginning, Stellar has been cryptocurrency-adjacent, but the software has always been intended to enhance rather than undermine or replace the existing financial system. Whereas, say, the Bitcoin network was made for trading only bitcoins, Stellar is a decentralized system that's great for trading any kind of money in a transparent and efficient way.

The Stellar network has a native digital currency, the lumen, that's required in small amounts for initializing accounts and making transactions but, beyond those requirements, Stellar doesn't privilege any particular currency. It's specifically designed to make traditional forms of money—the money people have been spending and saving for centuries—more useful and accessible.

For example, here's what you can do with Stellar. You can create a digital representation of a U.S. dollar—on Stellar you'd call this a "dollar token"—and you can tell the world that whenever someone deposits a traditional dollar with you, you'll issue them one of your new tokens. When someone brings that "dollar token" back to you, you promise to redeem it in turn for one of the regular dollars in that deposit account. Essentially, you set up a 1:1 relationship between your digital token and a traditional dollar. Every one of your tokens out in the world is backed by an equivalent deposit. So while people hold the tokens, they can treat them just like traditional money, because they know that they're exchangeable for traditional money in the end.



Traditional Dollar *"Dollar Token"*

This might seem unexceptional—issuing electronic credits for dollars is basically what any local American bank does thousands of times a day. But in a global system this 1:1 promise of a token for a currency has important implications. For instance, no matter how a token moves through the economy, the underlying dollars never leave that bank account in the United States. So suppose someone loans their tokens to someone else, who then uses them to buy a car. No bank has to settle the purchase or approve the loan. And furthermore, it doesn't matter if the seller of the car lives in Mexico or Singapore or anywhere, they can still own the tokens and can trade them however they please. The Stellar network makes money borderless.

Digital dollar tokens also mean people all over the world can own, buy, and sell the value of a dollar without themselves having a U.S. bank account. A Venezuelan can hold some of his family's net worth in dollars. A Filipino expat can send dollars back home, and the recipient can hold them, safely and digitally, until she's ready to exchange. An American company can pay a Mexican vendor in dollars, and the vendor can pay its suppliers in turn, with a five-second, rather than a five-day, wait to settle. Because the dollars represented by the digital token never actually move as the value changes hands, these transactions sidestep the friction and expense of the current banking system.

This exact dollar token example is in fact live on Stellar right now, through USD stablecoins like USDC — thousands of dollars of value moves quickly and cheaply through their token each day. Of course, Stellar works for any currency, not just dollars. And when you add peso tokens, naira tokens, yuan tokens, pound tokens, bitcoin tokens, euro tokens and everything else, you have a truly unified monetary system that keeps the best parts of what exists today.

How does Stellar work?

At the lowest level, Stellar is a system for tracking ownership. Like accountants have for centuries, it uses a ledger to do so, but Stellar's innovation is that there is no actual accountant. Instead there's a network of independent computers each checking and rechecking the work of the others. Stellar is a system without a central authority—meaning no one can stop the network or secretly adjust the numbers to his liking—yet even without a central authority the ledgers are verified and updated, every five seconds.

A unique algorithm, called the Stellar Consensus Protocol (SCP), keeps everything in sync. There are many ways to get agreement across a decentralized system—Bitcoin's visionary proof-of-work method was the first and is still the most famous. But, like many first drafts, proof-of-work left room for improvement. SCP strives to be better by being configurable, fast, and highly energy efficient. If you're interested in the deep details, you can read the peer-reviewed paper, published by SOSP, the oldest and most prestigious systems conference, for complete technical details.

For every account holder, Stellar's ledger stores two important things: what they own (account balances, like "100 pesos tokens" or "5000 lumens") and what they want to do with what they own (operations, like "sell 10 dollar tokens for 50 lumens" or "send 100 peso tokens to such-and-such account".) Every five seconds, all the balances and all the operations are broadcast to the entire network and resolved.

The computers that run the core Stellar software and therefore publish and check the ledger are called nodes. So, when you send someone a euro token on a Stellar-built app, the nodes check that the correct balances were debited and credited, and each node makes sure every other node sees and agrees to the transaction. The current Stellar network is verified by hundreds of nodes across the globe; the nodes and how they communicate is public information, and anyone can install the Stellar software and join the consensus process. This is different than how accounting works at, say, a bank, where a single corporation unilaterally decides what happens, more or less in secret.

Right above this core layer sits a powerful API so that to build on Stellar you don't have to understand the particulars of distributed consensus. Simple, well-documented functions allow you to move new digital money using models that you're used to. It's very easy to trade tokens between accounts, make markets, and issue assets.

Tokenomics Plan:

1 % - BlockChain Fees

3 % - Development

5 % - Marketing

6 % - EcoSystem

8 % - Charity for victims of Terrorism

12 % - Private Sale

65 % - Public Sale

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Ready for entering our Journey?