



STRATUM

BASED ON QUANTUM TECHNOLOGY AND AI



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Introduction

The Second Quantum Revolution is under happening, using enormous advancements in our ability to identify and operate single quantum objects. This global shift is being fueled by the advancement of Stratum Quantum Technologies.

Quantum technology is defined as one that operates by influencing the states of quantum phenomena. This distinguishes quantum technologies from other twentieth-century technologies (e.g., lasers, magnetic resonance imaging, and semiconductor electronics), which make use of quantum phenomena (e.g., coherence, quantized energy, and tunneling) but do not directly initialize, manipulate, or measure the states of individual quantum systems. For this concept and the accompanying sections to make sense, some elementary quantum physics is required.

Quantum physics is best defined as the strange physical laws that govern the microscopic world of elementary particles (such as electrons, photons, and nuclei), which ultimately control everything. A collection of these particles is referred to as a quantum system. Quantum system measurements generate random values, the probabilities of which are defined by the system's state at the time of measurement. After being measured, a quantum system is projected into a state that corresponds to the measurement procedure and value. At any point in time, the state of a quantum system can be characterized as a superposition of the states associated with a measurement mechanism—the simultaneous holding of several states with specified relative amplitudes and phases. Certain quantum states exhibit entanglement between two or more subsystems (i.e. sub-groups of particles).



Entanglement results in statistical correlations between the values of individual subsystems' measurements. Interactions between a quantum system and its environment can result in the quantum system's state being random. This is referred to as decoherence, and it eventually limits the accuracy with which the state of a quantum system may be constructed. Each of these concepts will be demonstrated in later blog posts.

How do they work?

With two states $|0\rangle$ and $|1\rangle$, the qubit is the fundamental building block of quantum technology. The qubit is a valuable abstract notion that aids in the comprehension and comparison of various quantum technologies. In reality, multiple methods employ discrete particle systems or distinct variables from related systems as qubits.

In quantum technologies, conventional equipment (e.g. lasers, microwave electronics, and photodetectors) are used to initialize (e.g. with a laser pulse), alter (e.g. with a microwave pulse), and test the state of their qubits (e.g. by detecting emitted photons) (s). A typical 'classical' computer is used to program and control these devices, as well as to record the measurement data. As a result, when interacting with quantum technology, you are simply interacting with a standard computer. Despite the fact that qubits are a minor component of quantum technology, their unique physical properties provide it a competitive edge over conventional technologies.

The performance of a quantum technology is determined by both the qubits and the classical control system and procedures. As with other technologies, performance can be quantified in terms of precision, accuracy, speed, and endurance.



Precision refers to the reproducibility with which the qubit state(s) can be manufactured and measured, whereas accuracy refers to the distance between the actual qubit state(s) and measurement(s) and the ideal state(s) and measurement(s) (s). Speed refers to the rate at which various processes (i.e. initialization, manipulation, and measurement) may be conducted, while endurance refers to the duration of the qubit state(s) before decoherence, which defines the greatest time span during which manipulation can occur. I will discuss how precision, accuracy, speed, and endurance combine to generate the essential performance characteristics for various types of quantum technology in later blog entries.

Performance is increased by designing higher-quality qubit systems, employing classical control hardware and methodologies, and isolating the qubits from their surroundings. The first three are concerned with pushing the boundaries of material growth, microfabrication, electrical, optical, and mechanical engineering, as well as optimal control design. Environmental shielding requirements vary according to the technology and qubit system being used. Some require cryogenics or vacuum systems to attain ultra-low temperatures and/or ultra-high mechanical isolation. Others do not require either and are capable of operating in both ambient and severe temperatures. Nonetheless, high-performance quantum technology requires high-quality materials, fabrication, and device engineering.

What do they do and why are they advantageous?

Quantum technologies can now be classified into three broad categories: quantum sensing and imaging, communications, and computation. Each category has distinct traits, capabilities, application domains, and levels of preparedness.



Quantum sensing and imaging: pushing the boundaries of precision.

Quantum sensors provide extraordinary precision and stability in measuring time, dynamics (i.e. forces, acceleration, and rotation), and fields (i.e. gravitational, electromagnetic, and mechanical). They accomplish this primarily through the use of quantum superposition and interferometry techniques to detect minute changes in a qubit's state caused by time, dynamics, or interactions with fields. Quantum entanglement between many qubits may be used to increase precision even further. Stability is obtained by assigning fixed and universal susceptibilities to qubits (e.g. electron gyromagnetic ratio and atomic mass). Imaging is a subset of quantum sensing that combines quantum sensors with an imaging equipment (e.g. that scans the position of the qubit).

Quantum communications: quantum device networking and physically-secure communication.

Quantum communications can be used to network quantum sensors in order to correlate and enhance sensitivity over broad regions (e.g., to synchronize clocks within a communication network), as well as to network quantum computers in order to communicate data effectively and amass computational capacity. Quantum communications can also be used to securely send data between classical devices (for example, to distribute encryption keys) or to remotely access quantum computers.



Quantum communications execute these distinct functionalities by transferring overlaid or entangled qubits between the devices. Security is assured by the projective nature of quantum measurements, which implies that it is not physically possible to copy the qubit encoded information without altering it. Thus, security is assured in the sense that interference by eavesdroppers may be detected and quantified.

Quantum computing represents a quantum boost in computing capacity.

Quantum computers significantly improve the speed with which certain computing tasks may be solved. While the complete breadth of such issues is still unknown, well-known examples include signal processing, optimization, modeling, searching, and factoring. They accomplish this by utilizing quantum superposition and entanglement to represent and manipulate data in a fundamentally more dense and efficient manner than is possible with classical computers. Thus, quantum computers require less physical resources and processes than classical computers to tackle the same task. After introducing the essential concepts and principles, the next three blog posts will discuss each category of quantum technology in further detail. I will discuss their primary traits, capabilities, and preparedness, as well as present examples of their use and analyze their defense implications.



Why we use Quantum Technology?

It is a new discipline of physics and engineering that is founded on quantum physics concepts and is referred to as Quantum Technology. Because of its algorithms, which outperform simple computing techniques, we believe that this technology represents the future of artificial intelligence. It will assist a large number of people in incorporating safe ideals into their lives in order to have a brighter future. Developers are enthralled by this new Technology since it is something they have never seen before and because it has a great deal of possibilities to explore as well as faster executions for testing the final product.

Our products will be of considerable interest to large corporations such as General Electric (Lufthansa, KLM, British Airways, Wizz and etc.). We are concerned about the environment, which is one of the primary reasons why our Team devotes more time and effort to code optimization than other teams. As a result, we achieve the highest level of efficiency – energy consumption – and interest in the outcome of the team's growth.

Why we choose Aviation Industry?

Because of corruption and dishonesty, the aviation industry is one of the most susceptible sectors. The Plan produced by Stratum Dev will aid in the fight against terrorism, hijacking, assassinations, and drug trafficking, among other things. Software built with artificial intelligence and quantum algorithms will assist in identifying criminals more quickly by understanding their tendencies till they get at the airport. If they appear to be engaging in some form of suspicious behavior, the system will notify supervisors of the situation.



The mechanics of this approach are built on algorithms that are always learning. In general, this technology will be able to perform the following functions:

- Recognize visitors based on their actions rather than facial characteristics that can be altered. (As a result of the integration of Machine Learning into our software, we will be able to understand and recognize a person's unique character the next time they appear; criminals frequently alter their facial features in order to avoid being recognized by city cameras, but this technology will render this practice obsolete.)
- Analyze in real time the visitors' backgrounds and report any suspicious changes in the behavior of individuals depending on their backgrounds. For example, if a visitor flew once a month last year and had over four personal flights per month this year, our software will record this information. Drug smugglers are frequently apprehended via suspicious flight activities.)
- Detect offenders in less than 20 milliseconds when evaluating 8300 individual faces from the last 20 minutes. (Take, for example, the situation in which a person is within the airport and information is being given to the border office; if the border officers are able to locate and immobilize the criminal, no one will be harmed.)

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 increase the confidence of the Final User in the Crypto Asset..

Biometrical Identifier

A unique identification will be assigned to this token by the holders to ensure that real tokens are being issued and that phishing, scamming, and clones are being avoided.

On Chain Payments

All of the payments made with this token will be available on different DEXes and eventually kept in the Stratum internal database.

Travel Grant

It may be used as a local currency in the stores located inside the AirPorts region. This feature would help to limit the number of occurrences of pocket theft among immigrants.

Stacking Feature

We want to develop a Stacking function that will provide an annual percentage yield of 7 percent with monthly withdrawals. The more time you spend stacking, the better you get.

Digital Asset

Because of the Economical Backing strategy, SUM is an asset that will retain its worth indefinitely. In the future, crypto connections with the company's own NFTs collection and Metaverse games are planned (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 organization began researching artificial intelligence (Artificial Intelligence). By collaborating on this initiative, we were able to successfully teach individuals in achieving our mutual goals.

In 2021,

The team achieved our initial development targets and began testing and integrating our solutions into the commercial operations of numerous enterprises worldwide. We continue to test Quantum Technology at Stratum as a result of our partnership with Quantum Brilliance. As a result of a collaboration between two fantastic businesses, they supply us with unique solutions for our development requirements.

In 2022,

Our objectives are greater than those of other projects viewed by the Stellar Network. The crypto currency revolution is imminent, which is why we chose this fantastic and eco-friendly block chain. The major error we made was delving into offline development, but this worked to our favor. We stayed focused on the primary objective of building AI source code and now have a functioning Beta testing version of the product. This technology was developed for the benefit of the general public, not for the benefit of governments.

Conclusion of customers

This project appears to be promising based on client comments. Our team will continue to work on it due to various glitches and imperfections till it contributes to society's brighter future.



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.

Source: stellar.org



Tokenomics Plan:

1 % - BlockChain Fees

3 % - Development

5 % - Marketing

6 % - EcoSystem

8 % - Charity for victims of Terrorism

12 % - Burn

65 % - Public Sale



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Ready for entering our Journey?

