Ripple

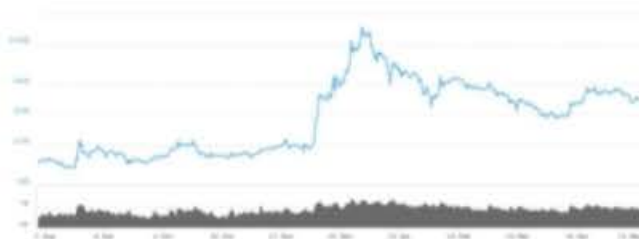**ripple**

Released in 2012

Payment protocol that enables **instant and direct** transfer of money.

Market cap: $28B USD

Santander
UBS
UniCredit

Big banks are adopting Ripple to reduce costs and improve transaction speed.

- Potential threat to Western Union (April 2015)
- Fined for violating anti-money laundering rules (May 2015)
- Companies are adopting it as a payment method (2018)

MITSUBISHI
LianLian Pay
MoneyGram
money transfer

Ripple

- The company building the Ripple protocol, OpenCoin, was co-founded by CEO Chris Larsen and CTO Jed McCaleb.

- Originally released in 2012

- Written in C++

- Network can operate without the Ripple company

- Uses XRP currency code

Ripple
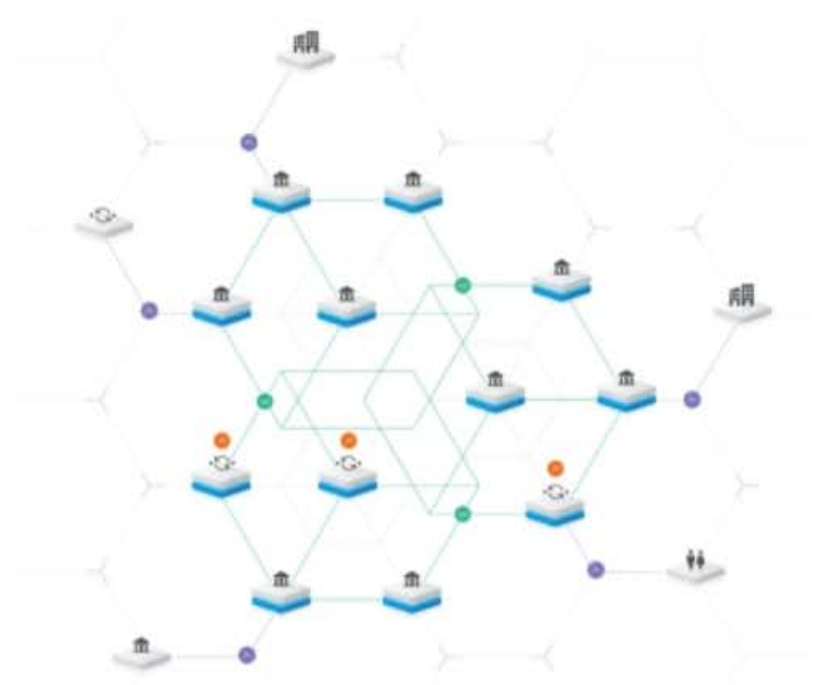
How it works

Access to an on-demand liquidity pool of digital assets that eliminates the need to hold nostro accounts in destination currencies.

Who uses it

Payment providers and banks looking to increase their payment volumes and global reach by sourcing on-demand liquidity.

https://ripple.com/files/ripplenet_brochure.pdf

Ripple

Benefits

- Speed - XRP is over 1000x faster than bitcoin in terms of confirmation time.

- Transaction cost much lower.

- Higher quality validators and processing.

- Ready for enterprise use.

- Enable people to break free of current institutions that restrict access with fees, charges for currency exchanges and processing delays.
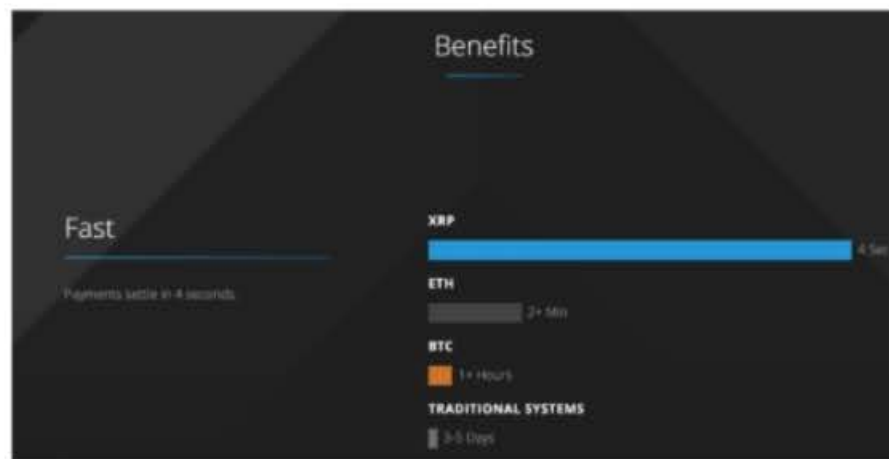
Ripple

Decentralized

- Software is open source - anyone can run a server and validator - deterministic transaction rules.

- Ripple holds currently about 60 billion XRP (60% of XRP that will exist).

- 55 billion have been locked in escrow to be released over 55 months to provide supply predictability over a period of time.

- Transparency - ledgers are public.

- David Schwartz, Chief Cryptographer at Ripple - plans to add additional validators for decentralization in 2018-
https://www.youtube.com/watch?v=Y7fDEO15MGI

Ripple

Competitor to Bitcoin?

Ripple positions itself as a complement to bitcoins because the network is designed to allow the seamless transfer of any form of any currency.

Blockchain

- Ripple's payment network, RippleNet, uses blockchain technology.

- But unlike Bitcoin, ripple isn't created, or "mined," by users. The company has control.

- A blockchain is a public ledger containing transaction data from anyone who uses the service. Transactions are added to "blocks," or the links of code that make up the chain, and each transaction must be recorded on a block.

Ripple

Financial Institutions

"The liquidity needs of banks today is managed with literally ten trillion of float that sits in these nostro and vostro accounts. We believe very strong this is an inefficient model. You can use digital assets to fund liquidity, and Ripple is uniquely positioned to capitalize on that. Bitcoin takes four hours to settle a transaction. XRP takes 3.6 seconds," Ripple CEO Brad Garlinghouse.

http://fortune.com/2017/12/13/ripple-litecoin-bitcoin-price-2018/

Ripple

Meet RippleNet

Ripple connects banks, payment providers, digital asset exchanges and corporates via RippleNet to provide one frictionless experience to send money globally.

ACCESS
Connectivity across payments networks

SPEED
Instant, on-demand settlement

CERTAINTY
Real-time traceability of funds

COST
Low operational and liquidity costs

https://ripple.com/files/ripplenet_brochure.pdf

Key Benefits

New Revenue Opportunities

Provide on-demand and real-time payments products and services to retail and corporate customers

Lower Total Costs

Lower the total cost per transaction through efficient processing and lower liquidity requirements to send payments globally

Standardization

Offer a highly consistent payments experience to end users by utilizing Ripple's standardized technology, messaging and rules

Streamlined Legal Framework

Simplify transacting relationships via a single agreement across the fully decentralized network of banks – eliminating need to create inefficient bilateral agreements

NEO

企业级区块链解决方案

onchain
Blockchain Solutions

Released in 2014

Designed to build a scalable network of decentralized applications
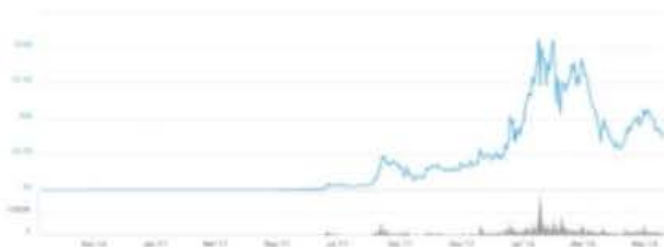
Market cap: $4.1B USD

„Chinese Ethereum"

- Rebranded from AntShares to NEO in June 2017
- Given green light by Chinese government in August 2017
- Distributed tokens to be used to vote on governance issues in March 2018

NEO

- NEO is a blockchain platform and cryptocurrency designed to build a scalable network of decentralized applications.

- The base asset of the NEO blockchain is the non divisible NEO token and the alternative GAS token.

- NEO supports a wide variety of commonly used programming languages such as Javascript and C++ by using a customized version of Docker called neoVM.

- March 2018, parent company Onchain distributed 1 ontology (ONT) token for every 5 NEO held in a users wallet which will be used to vote on system upgrades, identity verification, and other governance issues on the NEO platform.

NEO

- NEO is a non-profit community-based blockchain project

- Real-time open source on GitHub in June 2015.

- Since its inception, the NEO team has experienced the upsurge and boom of the blockchain industry and the frenzy and cooling of the digital money market. We believe technology drives progress and together we can create the future. Motivated by this, NEO has been created to shift our traditional economy into the new era of the "Smart Economy". https://neo.org/

NEO

Smart Contract

The NeoContract smart contract system is the biggest feature of the seamless integration of the existing developer ecosystem. Developers do not need to learn a new programming language, but can use C#, Java and other mainstream programming languages in their familiar IDE environments (Visual Studio, Eclipse, etc.) for smart contract development, debugging and compilation. NEO's Universal Lightweight Virtual Machine, NeoVM, has the advantages of high certainty, high concurrency, and high scalability. The NeoContract smart contract system will allow millions of developers around the world to quickly carry out the development of smart contracts. NeoContract will have a separate white paper describing the implementation details.

http://docs.neo.org/en-us/

NEO

Distribution

- A total of 100 million NEO were created in the Genesis Block.

- 50 million NEO were sold to early investors, with the remaining 50 million NEO locked into a smart contract.

- Each year 15 million NEO tokens are unlocked for the NEO development team to fund long term development goals.

- NEO tokens generate a slowly deflationary amount of GAS tokens which are used to pay for transactions on the network.

- Delegated Byzantine Fault Tolerance (dBFT) consensus mechanism and can support up to 10,000 transactions per second.

- Book keeping nodes are randomly selected to validate transactions on the network based overlapping networks of trust

- Systems employing dBFT for consensus cannot hard fork into two separate chains as the mechanism relies on 2/3 majority rule to operate

NEO

2018

JULY
JUNE
MAY
APRIL
MARCH
FEBRUARY
JANUARY

2017

NEO Entered the Era of Decentralization | NEO去中心化时代的开启

Author guihaifang@neo.org posted on 7/4/2018

On July 4, 2018 at 21:00 (GMT+8), NEO Foundation initiated the election of new consensus nodes, starting the era of decentralization of NEO. The candidate node run by City of Zion, after running smoothly on TestNet for over six months, got elected as the new consensus node. City of Zion (CoZ) is an independent, international group of open source developers working on NEO blockchain.

A webpage has been set up on NEO official website for monitoring NEO blockchain status as well as information of consensus node candidates and their votes. (Weblink: https://neo.org/consensus)
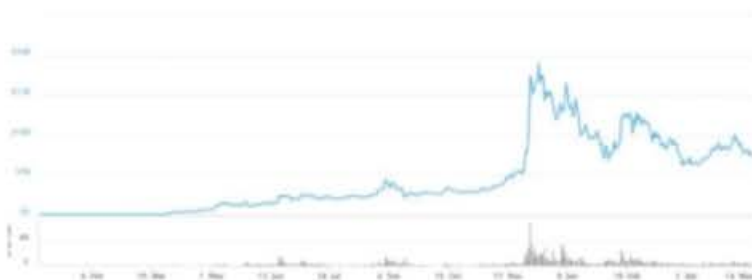
Litecoin

Released in 2011

P2P cryptocurrency, technically nearly identical to Bitcoin, except:

- faster transaction confirmation, larger number of coins
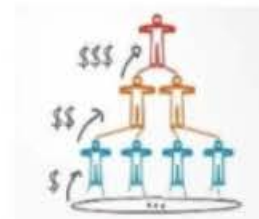- easier to mine with a GPU

Market cap: $7.5B USD

Meant to be the silver (or copper) to Bitcoin's gold.

- Second most popular digital currency after its launch in 2011
- Chinese Litecoin Ponzi scheme in 2015 undermined acceptance
- Compatible with Blocknet protocol since May 2018

Litecoin

Litecoin (LTC or Ł)

- Peer-to-peer cryptocurrency and open source software released under the MIT/X11 license.

- Not managed by any central authority.

- Nearly identical to Bitcoin.

- Litecoin network went live on October 13, 2011.

- It was a fork of the Bitcore client.

Litecoin

- Differing primarily by having a decreased block generation time (2.5 minutes) and increased maximum number of coins.

- In 2017, Litecoin became the first of the top 5 (by market cap) cryptocurrencies to adopt Segregated Witness.

- In 2017 it also became the first Lightning Network transaction was completed through Litecoin, transferring 0.00000001 LTC from Zürich to San Francisco in under one second.

Litecoin

- Cost of transactions, which are around 1/50th of the size.

- For many cryptocurrency traders and users Litecoin pricing acts more rationally than Bitcoin

- There can only ever be 84 million Litecoins, with 55.58 million have been released or mined

- The figure of 84 million was based on the 21 million limit of Bitcoin, and the fact that Litecoin was designed to be 4x faster than Bitcoin.

https://www.forbes.com/sites/quora/2018/02/08/what-is-litecoin/#44b55ed433f7

Litecoin

Blocknet

- Would enable cross-chain operations that would allow Litecoin to further interact with other digital assets

- Blocknet represents a massive platform, representing its potential as the internet of blockchain ecosystems.

- "Blocknet is a system that allows investors and cryptocurrency users, to exchange virtual currencies without the intervention of a third party. The process is completed via atomic swaps, meaning that anyone who has fiat or other cryptocurrency can easily exchange it for Litecoin without having to rely on third parties." https://ethereumworldnews.com/litecoin-becomes-compatible-with-the-blocknet-protocol-and-prepares-for-gemini-listing/

Integrating Litecoin

By maintaining full compatibility with the Bitcoin API, Litecoin is very easy to integrate into existing applications that already offer Bitcoin support. One of the main advantages offered by the Litecoin network is <u>faster transaction confirmation</u>, making it ideal for small-size purchases.

If you are a developer using Bitcoin, it is extremely easy to enable support for Litecoin transactions.

If you are a merchant, you can easily integrate Litecoin into your web site or application using existing 3rd party shopping cart plugins.

If your business already supports Litecoin, you can register it to be included in this site's index.

Register Your Site

Reap the benefits of additional traffic by being listed in our merchant index. Once you integrate, do not forget to place the Litecoin Accepted Here image in your site.
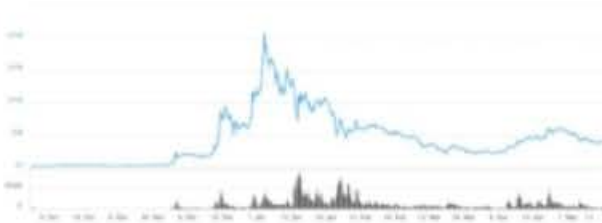
litecoin
ACCEPTED HERE

ASMONEY

GOCOIN

ALFA COINS

COINPAYMENTS.NET

COINTOPAY.COM

EDIGICASH

Cardano

Released in 2017

Fully open source smart contract platform.
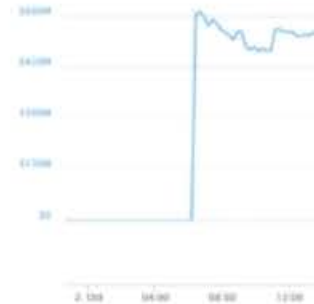
Market cap: $6.9B USD

Proof-of-stake mining

- Launched in September 2017, instant $600M market cap
- Wallet Daedalus released in April 2018

CSL
CCL

Multi-layer architecture

Cardano

- Cardano is a decentralized public blockchain and cryptocurrency project that is fully open source.

- Developing a smart contract platform.

- The first blockchain platform to evolve out of a scientific philosophy and a research-first approach.

- Ada cryptocurrency.

- Built in layers.

- Decentralized - operates on blockchain.

Cardano

Scientific Philosophy

This is the first blockchain project to be developed from a scientific philosophy, and the only one to be designed and built by a global team of leading academics and engineers. It is essential that the technology is secure, flexible and scalable for use by many millions of users. Consequently, considerable thought and care from some of the leading experts in their fields has been devoted to the project and informed design decisions. The scientific rigour applied to mission-critical systems such as aerospace and banking has been brought to the field of cryptocurrencies, with a high assurance implementation. We believe this is the first time that this has been done.

A major innovation of Cardano is that it will balance the needs of users with those of regulators, and in doing so combine privacy with regulation. The vision for Cardano is that its new style of regulated computing will bring greater financial inclusion by providing open access for all to fair financial services.

https://www.cardano.org/en/what-is-cardano/

Cardano

During the sale that occurred at the launch, 25,927,070,538 Ada were sold.

An amount equal to 20% of the total Ada vouchers were sold during the sale period, equating to 5,185,414,108 units. These Ada vouchers were generated and distributed to three entities of the Cardano community, each members of the Technical and Business Development Pool, namely: IOHK, Emurgo and the Cardano Foundation. The total amount of Ada that was made available at the launch is equal to 31,112,484,646 ADA.

ADA SUPPLY CAP
Ada is capped at an arbitrary 45,000,000,000, or forty-five billion Ada.

ADA TO BE ISSUED DURING THE OPERATION OF THE CARDANO PROTOCOL
The remaining Ada, 13,887,515,354, will be issued after the launch through minting.

Note: There will never be more than 45,000,000,000 Ada in circulation.

https://cardanodocs.com/cardano/monetary-policy/

Cardano

Overview

PROOF OF STAKE AND MINTING

Proof of stake is a novel approach to block generation. IOHK scientists led by Prof. Aggelos Kiayias have designed the first provably secure proof of stake algorithm called Ouroboros. Ouroboros lies at the heart of Cardano SL. Research team has published a white paper that is a worthy read for anyone with a background in cryptocurrency theory. The core idea of proof of stake is that instead of wasting electricity on cracking computationally heavy problems, a node is selected to mint a new block, with a probability proportional to the amount of coins this node has. If a node has positive (> 0) stake, it is called *a stakeholder*. If a node eventually becomes chosen to mint a block, it is called *a slot leader*. You can read more about this process in Proof of Stake in Cardano SL.

https://cardanodocs.com/introduction/#what-makes-cardano-sl-special

Cardano

> **Charles Hoskinson**
> @IOHK_Charles
>
> What's often missed by the cryptocurrency is going to die broken record media is that after the next wave of regulation, wall street is showing up to the party with all their locked up capital. That's tens of trillions of dollars entering the space eventually. Future is bright
>
> 8:48 AM - Jun 21, 2018 · Edinburgh, Scotland
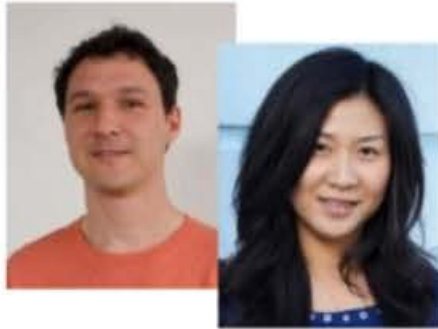>
> ♡ 2,594   ○ 938 people are talking about this

Charles Hoskinson, co-founder of altcoin Cardano (ADA), tweeted June 20 that the entry of Wall Street into the crypto sector will bring in "tens of trillions of dollars:"
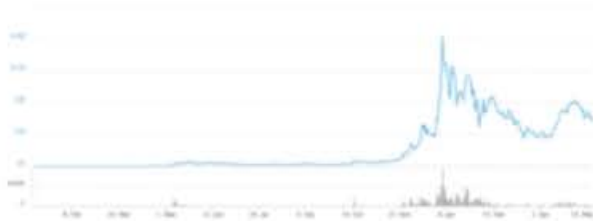
Stellar

STELLAR

Released in 2014 by NPO Stellar.org

Open-source (hosted on GitHub) protocol for value exchange.

Market cap: $5.8B USD

It allows multi-currency transactions

- NPOs in developing countries have been implementing it since February 2015
- Announced cooperation with IBM in May 2018, which could challenge Ripple

IBM

Stellar

- Stellar was released as a decentralized payment network and protocol.

- Originally known as stellar it was later referred to as Lumens or XLM.

- In August 2014, Mercado Bitcoin, the first Brazilian bitcoin exchange, announced it would be using the Stellar network

- In other words, Stellar is the payment network (Horizon API and Stellar Core) and Lumens (XLM) is the cryptocurrency. Those are both overseen by a non-profit called Stellar.org.

FINANCE WITH A MISSION

With a team of top technology and finance professionals, the
nonprofit Stellar.org expands access to low-cost financial services
to fight poverty and maximize individual potential.

Stellar

Transparency

To build trust within the community and within our team, SDF is committed to transparency and other safeguards. Therefore, as part of our governance practices, the following will be made permanently and publicly available:

- Details/mechanism of the various lumen distribution programs

- Aggregate number of individuals who have participated in the Direct Sign-up Program and number of lumens distributed

- Details and progress of the Partnerships Program and Stellar Build Challenge, including number of applications received, grants granted, and distribution schedule

- Details and progress of the bitcoin program

- Total lumens held by the Foundation

https://www.stellar.org/about/governance/#Transparency

Stellar

Overview

- https://github.com/stellar/stellar-core

- It can an handle exchanges between fiat-based currencies and between cryptocurrencies.

- Lumens have low fees (each transaction has a minor fee—0.00001 lumens—associated with it).

- Fast transaction speeds that rival Ripple.

- Stellar.org is non-profit and their platform itself is open source and decentralized
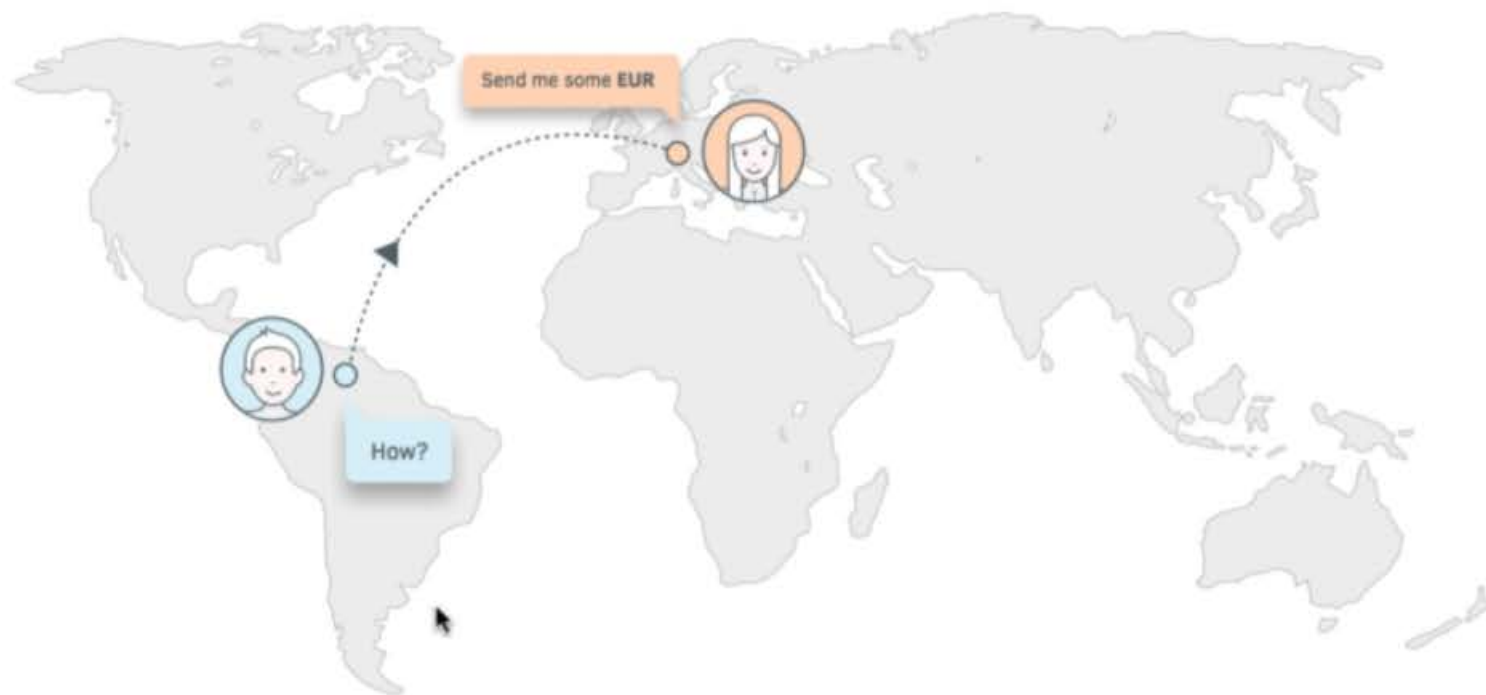
Stellar

Who governs lumen creation?

Lumen supply is determined by fixed, protocol-level rules. The number of lumens created at genesis was 100 billion. Every year, there is a 1% inflation rate. New lumens cannot be generated arbitrarily by anyone.

While somebody could theoretically push a proposal to change the protocol to change the rule around lumen creation, validators on our network are very unlikely to accept and ratify it. The decentralization of the protocol prevents us from unilaterally controlling any changes — if we tried to force a change, people would lose trust in Stellar.org, refuse to accept the changes, and keep using the original protocol with the original rules. Therefore, we will never do it.

https://www.stellar.org/lumens

How the Stellar Network Operates

How do you send EUR to your friend using USD on the Stellar network?

Let's start by explaining what exactly is the Stellar network and how it works.

Centralized

Decentralized

Like the Internet, Stellar is a network of decentralized servers
in many locations that power a distributed ledger.