

Open Internet Economy

Syntropy is an alternate connectivity system for the public Internet. It solves the issues prevalent in the current Internet framework: security, privacy, governance, performance, reliability, and ineffective resource utilization.

This enables a trustless, decentralized blockchain-based economy, secured through a staking mechanism that ensures fairness between those sharing and those using spare network bandwidth. Programmable token supply and smart contracts allow for the introduction of incentive mechanisms, such as rewards for nodes participating in consensus as well as a reward redistribution pool for the network infrastructure nodes.

This new open internet economy helps to align incentives of all system participants and create a new valuable interconnectivity layer over the public Internet.

SYNTROPY OVERVIEW

Within the Syntropy network, payments and validity of service delivered are confirmed and governed by NPoS consensus. Nodes, who contributed to governance, receive inflationary reward for their work. The financial staking is mandatory for these nodes to secure against possible security breaches. Syntropy extends Polkadot's tokenomics model to facilitate the bandwidth sharing economy.

It introduces an additional utility layer with a unique Relay node role. In order to support growth of the system, Syntropy also introduces an original value redistribution system within this utility layer, called Reward pool, which incentivizes nodes to perform and keeps the system stable at the same time.



NPOS CHAIN

Syntropy chain is being developed on Substrate framework with NPoS consensus model coming from Polkadot implementation.

NPoS consensus is introduced as a baseline governance layer and extended to sustain the economy of DARP network.

Syntropy uses what is known as hybrid consensus. There are two separate parts that comprise the consensus protocol, identical to Polkadot: GRANDPA and BABE. Hybrid consensus splits up the finality gadget from the block production mechanism.



DARP ECONOMY

Income from data relaying service is the main source of income for every Relay node running DARP.

Syntropy establishes the Reward pool (RP) as an incentive redistribution mechanism within the Syntropy network. RP:

-Pays fixed percentage returns to all nodes, based on their health.

-Fosters easier adoption of the Syntropy network through initial subsidies.

15% of all data relaying transaction value is transferred to RP. Relay nodes who cannot earn significant returns from data relaying are still getting rewards for their uptime.

VALIDATORS	NOMINATORS	RELAY NODES
CHAIN GOVERNANCE <ul style="list-style-type: none"> Stake tokens; Produce & finalize blocks; Earn interest rate on the tokens staked by Nominators and share part of these rewards with them; Collect transaction fees. 	<ul style="list-style-type: none"> Stake tokens; Bind staked tokens to Validators; Earn interest rate on the tokens bound to Validators. 	<ul style="list-style-type: none"> Run DARP to securely interconnect with other Relays and Clients; Find paths on Syntropy network; Relay data through the Syntropy network and earn data relaying income; Run Proof-of-Uptime (PoU) and earn uptime-based rewards from Reward pool; Run Proof-of-Bandwidth (PoB) to withdraw data relaying income; Stake tokens for additional benefits and security.
NETWORK GOVERNANCE <ul style="list-style-type: none"> Proof-of-Uptime validation Proof-of-Bandwidth validation Health-score and reward calculation for Relay nodes 		

NOIA TOKEN

The NOIA Token is the “gas” which facilitates the value-based economy.

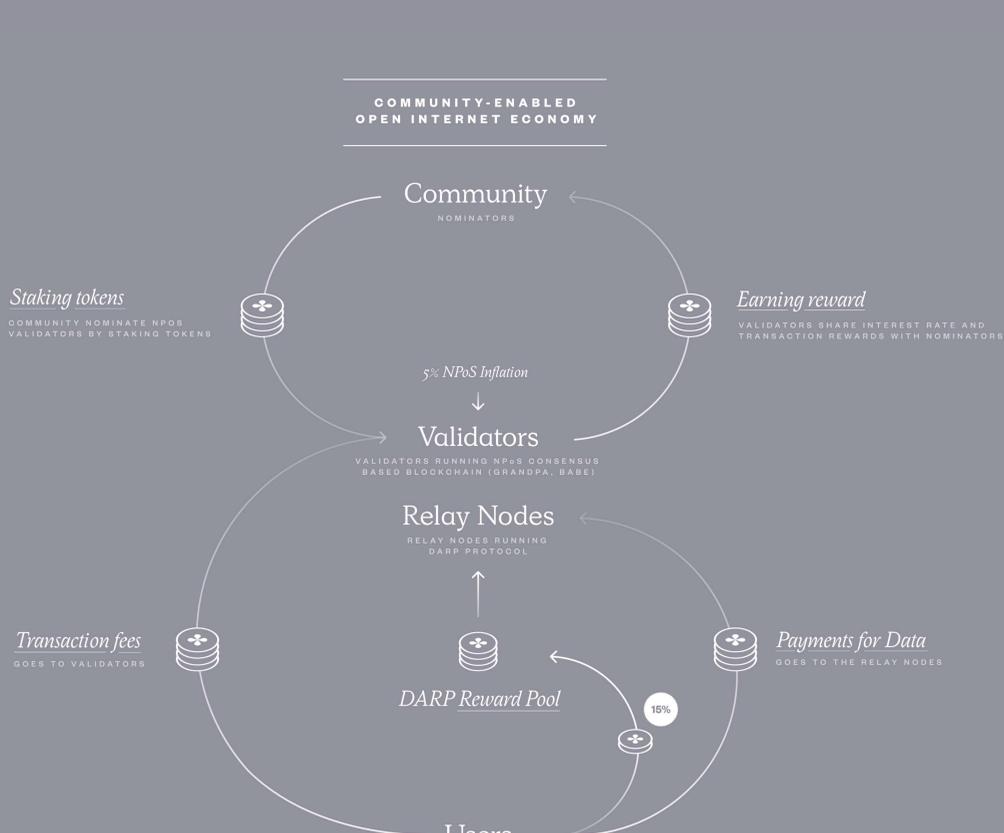
It creates the initial financial incentives for this network to be created and then operated by and for the user community.

All connections and data sent through any device are accounted in tokens. Hence, the token represents the unit of value derived from an Internet relay and its intrinsic value within the economy.

NOIA token is used for:

- Transaction fees for using Syntropy chain:**
 - Establishing end-to-end encrypted connections through trustless execution
 - Storing and changing network configuration
 - Buying and selling bandwidth contracts
 - API commands (gas fee for compute)
- Data routing through Syntropy network**
 - The direct means of crediting bandwidth suppliers with tokens from bandwidth users;

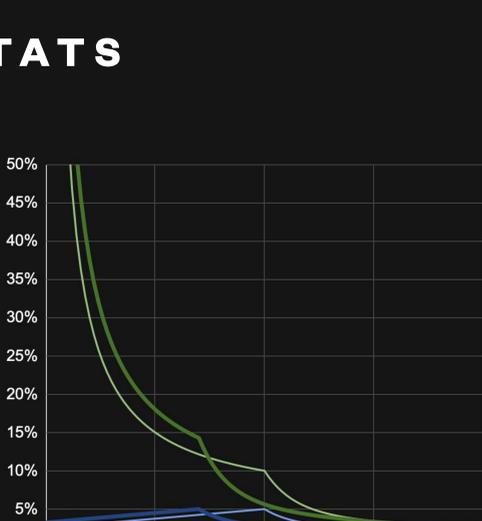
ECONOMIC VALUE DISTRIBUTION MODEL:



KEY ECONOMY STATS

Targets at network launch:

- NPoS inflation - 5%
- Optimal Yield - 14%
- Stake rate - 35%
- Reward pool (RP) - 15%
- Total Staked (+RP) - 50%



Partial transaction fee burning can be introduced to balance the economy if needed through a proposal to chain governance DAO.

DISCLAIMER

The details of the tokenomics, consensus protocol, blockchain implementation, etc. may change depending upon conditions in the current regulatory, financial, legal environment and other technical considerations. See full disclaimer in the Open Internet Economy Tokenomics paper.