

# Orcs Questionnaire

## Questionnaire

a. General

i. **Which blockchain / DLT are you building on top of?**

We are building it (ORCS) on top of our own realtime unforkable blockchain platform Orch.Network and its underlying blockchain federation known as Starcash. Orch mainnet will be launch in mid 2019.

ii. **How does the stablecoin work?**

EOrch stablecoin (ORCS) works as a non-collateralized coin via dynamic automated coin-split/reverse coin-split. It automatically stabilizes its purchasing power by monitoring four cardinal internal and external indicators/indices in real time: 1. average transaction fee of the underlying realtime federated blockchain, 2. Hashrate of the ORCS Subprotocol, 3. OECD CPI data and 4. Coinship decentralized exchange index.

iii. **What is the purpose of your coin? What does it aim to achieve and which problems does it solve?**

There are several use-cases and the problems ORCS solves:

1. Inflation-Protection
2. Mass adoption of permissionless cryptocurrencies and crypto-denominated digital assets
3. Settlement currency for crypto-derivatives and crypto-denominated tokens
4. A currency for macro and micro-payments with low transaction fees

5. A non-sovereign non-collateralized high-velocity reserve asset
6. ORC-denominated Tail-risk Insurance/reinsurance products to manage negative Black Swan events and an investment vehicle to expose one's portfolio of assets to positive black swans and earn exponential returns
7. A currency for asset-backed tokens and synthetic assets

**iv. When we say something is stable what do you think it means? And when it comes to monetary policy specifically?**

A stablecoin is a permissionless cryptocurrency that enables its users to retain their purchasing power in the short and long-term because of significantly reduced volatility and other factors such as privacy, infinite-divisibility and high-velocity of transaction capability(in terms of tps etc).

Monetary policy of ORCS is planning and implementing whatever it takes to preserve purchasing power of ORCS-holders/users at all times.

**v. What is your revenue model?**

The major revenue of ORCS is earned from perpetual Truth Game( based on Schelling Point Vector) for rebasing its price as a game management fee. Besides ORC coins held in Reserve Treasury of Orch Network (10% of the money supply at the time of genesis and never to be distributed) will be auctioned out to wholesale borrowers for short-term(361 days max) only at a floating rate to be decided by anonymous voting of ORCS-holders and demand-supply forces. The interest earned thru the lending mechanism will be another form of revenue apart from the truth game management fees.

**b. Launch & marketing**

**i. What does the market need to be confident in the stability of your token?**

Our ORCS coin will be a mainnet appcoin layered on top of our Orch Network realtime unforkable blockchain infrastructure. Being unforkable makes it hard for potential adversaries and the competition to replicate it. Orch Network unveils the era of true decentralization without compromising on integrity and performance of the platform including its dapps such as ORCS. Besides our own crypto-exchange Coinship will provide necessary liquidity to ORCS as well as ORC tokens.

**ii. How are you bootstrapping to that level of confidence?**

Simple, dedicated systematic efforts and reinvesting internal accruals earned from other Dapp projects.

**iii. What are your go-to-market strategies?**

We plan to enter into strategic partnerships with institutional investors, reinsurance companies, star developers, youtubers and digital marketers worldwide.

**c. Economics**

**i. What is your coin stable with respect to?**

OECD CPI and a basket of hard currencies comprising of USD, Euro and CHF.

**ii. How much volatility can this peg withstand? Is that the same for upwards and downwards pressure? How wide is the band of behavior it can support?**

There is no artificial peg. ORCS is not a pegged currency. It's a non-sovereign algorithmic high-velocity stablecoin which can double up as an alternative reserve asset. 100 basis points price up and down with respect to USD it can support.

**iii. How easy is it to analyze the band of behavior from which it can recover?**

Quite easy.

**iv. How expensive is it to maintain the peg/stability mechanism?**

**1. How transparently can traders observe the true market conditions?**

Not really expensive as the whole subprotocol of ORCS along with its meta protocol Orch Network is a self-planning self-learning goals-driven autonomous system.

**v. Which monetary theory (theoretical) assumptions do you think are not true and how does your protocol account for that?**

Applying Quantity Theory of Money and Seigniorage shares to a stablecoin is fallacious. Similarly Efficient Market Hypothesis is based on a falsehood. There's no need to auction bonds or seigniorage shares for expanding or contracting the money supply. We at ORCS implemented automated electronic coin split/reverse coin split in realtime to supersede such misleading theories in the 21<sup>st</sup> century. ORCS automatically expands and contracts coin supply in realtime as a tactical response to any drastic deviation in purchasing power.

**vi. Does your stablecoin supply scale in response to demand? If so, how?**

Supply of ORCS tokens automatically scale up or down in response to indicators/indices and market forces. ORCS subprotocol of Orch implements a coin split (like a stock split) as a mechanism of this dynamic money supply policy. For example, if John holds 1 ORCS and demand for the stablecoin rises, the system would electronically change John's balance to 1.03 ORCS in his ORCS Orch-powered mainnet wallet. For a contraction, a "reverse coin split" would change his balance from 1 ORCS to 0.97 ORCS.

**vii. Who provides the capital to maintain exchange rate peg? How are they compensated / Why do you think they would continue to lock up capital, given other investment opps?**

This question is not applicable to ORCS as it's a non-collateralized autonomic stablecoin.

**viii. An eventuality plan in case of a "black swan" event.<sup>1,2</sup> The 1% case will happen eventually.**

ORCS is designed to withstand such Black Swan events, both positives and negatives. ORCS protocol can autonomously respond to any death spiral created by negative or positive feedback loops due to its 4 sensory feeds and read/write capabilities to internal and external real time data sources.

**d. Tech**

**i. Are any novel consensus mechanisms used, over and above the underlying blockchain?**

Yes, dynamic automated coin-split and reverse coin-split as the case may be.

**ii. What transaction throughput can the blockchain currently handle and how does it plan to scale? Do its plans coincide with your plans for your estimated demand?**

Underlying real time unforkable federated blockchain Starcash of Orch Network scales exponentially as number of P2P users-miners grow. So with 10,000 users-miners it can handle tens of millions of transactions per second, with 100000-miners it can handle close to a billion transactions per second(1 Billion tps).

**iii. What tradeoffs does your protocol make and why did you make those tradeoffs? (supply/demand, temporarily peg breaking) (censorship resistance) (privacy tradeoffs) (accuracy of present market data and ease of manipulation of the data feed protocol uses) (responsiveness of market and ease of manipulation)**

We have not made any such tradeoffs as we are leveraging the most advanced future-proof relative unforkable blockchain technology in the world. BTW ORCS leverages built-in homomorphic functional encryption and secure multiparty computation layers of Starcash blockchain for implementing payer-payee and balance privacy.

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<sup>1</sup> [https://en.wikipedia.org/wiki/Black\\_swan\\_theory](https://en.wikipedia.org/wiki/Black_swan_theory) 2

**iv. Are there any centralized components of your system? Would any of these be easy for govts to shut down?**

No. Absolutely not. ORCS is self-governed by its token holders as per Orch Network Self-governance protocol as a decentralized organization. Cohomology Labs is only of the developers of ORCS and Orch but having no legal ownership rights or control over Orch Network and ORCS. or any of its ecosystem such as Coinship. Cohomology labs is at par with other developers of Orch and ORCS. Once Orch mainnet goes live Cohomology Labs will be at part with other Orch/ORCS developers.

**v. Does your protocol require information outside the blockchain such as a feed of price data? If so, how does this oracle work? Who manages it, what are the incentives for managing it, and what happens if the data they provide has a glitch?**

Yes, but it does not require any honest/dishonest human oracles. The information is sourced via a Schelling Point vector of a perpetual truth game. Any gamer feeding wrong information gets punished and good gamers feeding correct information are rewarded.

**vi. Which participants can see which transactions? What is the data and metadata available, and to whom? How does this impact privacy?**

Only sender and receivers see the transaction details with their private keys and rest can explore fund/value transfers taking place without any clue of who is sending whom the payment and how much in real time. Double spending vector does not exist in ORCS as value transfers are transparent to all but not the parties involved and their identities. Even their individual wallet balance is not visible to all only the last transfers is visible. No it does not impact privacy.

**vii. Are you doing anything with formal verification? Smart contracts used?**

Yes, we will developer toolkit (SDK) for carrying out formal mathematical verification in real time time to track real value transfers.

**viii. What is the rebase period? (Length of time between currency adjustments.)**

Rebase period is a variable not fixed. It ranges between 15 seconds to 60 seconds depending on hashrate and volatility and other indices such as Coinship and OECD data. Rebasing period is also decided dynamically by Schelling Point vector and the AI Truth Game Manager. But usual rebase period is 40 seconds.

**ix. Can we make this automated?**

It's fully automated and controlled by AI manager of the Perpetual Truth Game.

**x. 1. Do we use a smart contract, or network rules of the blockchain operators?**

No smart contract, just the network rules of the underlying blockchain and by creating an additional application layer or dapp on top of it.

e. Regulation

**i. What are your perceptions of local and global regulation in supporting stable coin, asset backed token economies?**

No idea. We don't depend on the whims of corrupt un-evolvable bureaucrats and central bankers. In fact ORCS is a declaration of war against them.

**ii. What could be done to improve regulation in terms of speed, quality, value for your company?**

We are not a company as stated above. We are decentralized organization. Neither ORCS nor Orch is a company or any legal entity.

f. Testing

- i. **What kind of simulations have you done and what have they helped you learn? (simulating broad array of market conditions)**
1. **Mental models for simulations**
  2. **Econometric models**
  3. **Agent-based Modelling / Computer simulations**
  4. **Other (Please describe)**

We have done some Multi Agent-based Monte-Carlo simulations in our labs. More needs to be done once our mainnet goes live. We will publish the results in a paper asap.