SYMBIOSES

Symbioses seeks to create the largest peer-to-peer network to **monetize computing resources** throughout the world, connecting **non-interoperable networks** utilizing its own **off-chain protocol**, and overcoming current scalability issues of blockchains to directly challenge the entrenched oligopoly dominating **cloud computing**.

THE PROBLEM

The continuous digitalization of our daily lives is creating greater demand for computing capacity.
Fifty percent of the data in the world today has been created in the last two years alone.
The introduction and proliferation of new technologies and devices will accelerate the data growth rate into the foreseeable future. Centralized cloud-based solutions are leveraging dominate positions to control greater amounts of computing capacity with minimal price competition.
Existing decentralized solutions are limited by issues derived from scalability, latency and robustness.

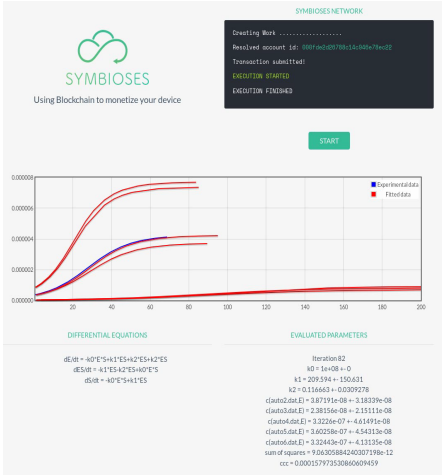
MARKET SIZE & END USE

The global cloud computing market reached $180 billion USD in vendor revenues with the market still growing 24% annually, according to Synergy Research. Overall demand is derived from intensive computing workloads like video rendering, 3D graphic generation, scientific simulations, artificial intelligence, machine learning, and big data analytics originated by enterprise, academic and start-up customers.

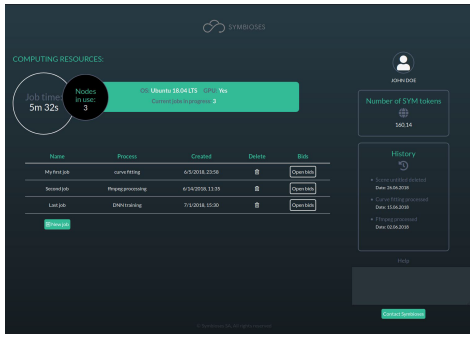
THE SOLUTION

By providing a free and automated client application, Symbioses aims at lowering the entry point barriers of state-of-the-art blockchain technologies, thus creating a platform to empower, connect, and benefit both producers and consumers of computing resources within our network.

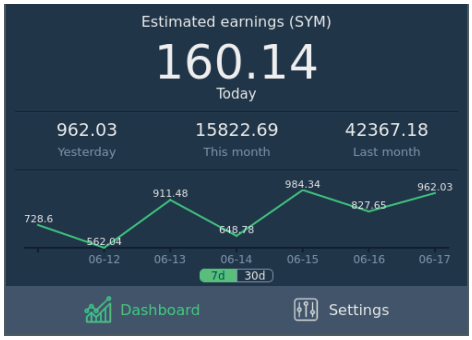
TECHNOLOGY IMPLEMENTED, TESTED & WORKING



Molecular Dinamics (MD) simulation running on test network



Consumer Dashboard



Producer Application

POINTS OF DIFFERENTIATION

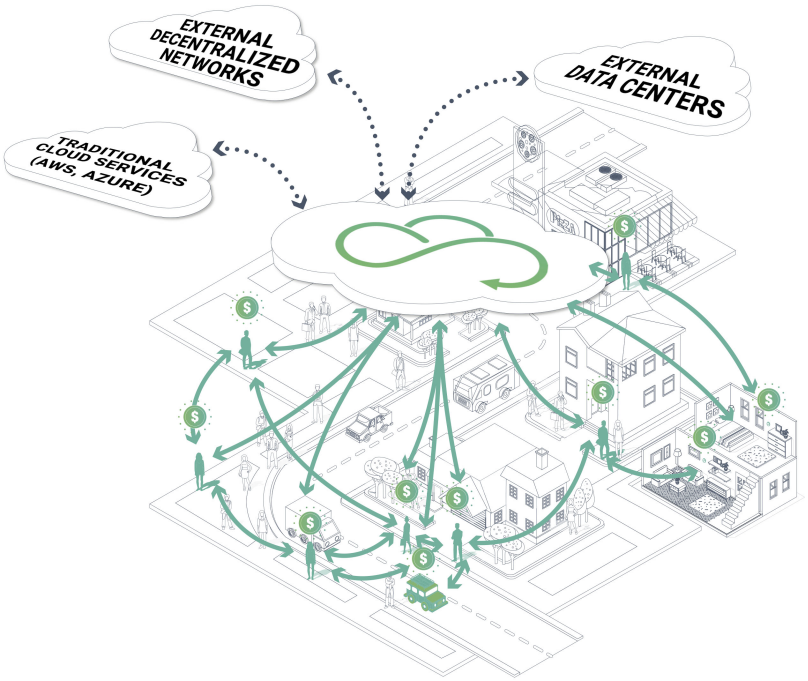
SCALABILITY / SPEED

Decentralized competitors directly linked to Ethereum suffer delays from a high latency protocol and restrictions on the amount of verifiable transactions within a set time period. We developed an abstraction layer within our SYMIO protocol that aggregates transactions and places them onto the blockchain once Proof of Work Resources (PoWR) has been verified. This improves scalability, speed, and computing power efficiency all while minimizing verification expense.

ROBUST NETWORK

Interoperability with existing cloud solutions and advanced distributed computing technologies provides elasticity to our network, i.e., to offload to others or present our network as a producer onto other networks. This approach creates a single point of access for client computational needs. The multi-platform, multi-OS application enables a more expansive network that implements SaaS execution based on the availability of the device.

Third party arbitration option allows for verification of the correctness of the calculations utilizing the benefits of consensus on a decentralized network. Conflicts are resolved within the network eliminating additional reviews. This feature allows for rapid scale of our network.



IMPROVED PROFITABILITY (Producers)

Based on a novel auction system, Symbioses constantly adapts pricing to the market, enabling Producers to maximize profitability at all times (e.g., SaaS applications improve profitability up to 10x over a block-mining baseline). Auction-driven bidding allows producers to remain profitable since it considers their electricity and network expenses.

REDUCED EXPENSES (Consumers)

Substantially lowering the consumers' cost of compute resources (up to 90% lower than existing cloud-based solutions). The ability to employ legacy software reduces both adaption and frictional costs incurred by consumers to implement solutions. Our adaptive pricing permits tailored search based on budget and requirements of facility type, connectivity, availability and producer reputation.

GO TO MARKET STRATEGY

Phase 1
Block Mining / Network Build

- Block Mining
- Build internal capacity
- Gaming partnerships
- Target Gamers GPUs

GPU ROI: 60-80% Net
CPU ROI: 0-5% Net
Cons. Savings: N/A

Phase 2
SaaS Integration

- Enable Auction Mechanism
- SaaS deployments
- Rendering & DNN training
- Optimized Block Mining

150-300% Net
40-70% Net
40-80%

Phase 3
Maximize Network

- Minimize Latency
- Third Party Arbitration
- Optimized Pricing

200-600% Net
50-100% Net
50-90%