Open Consensus for 10 Billion

Harmony

Harmony: Blockchain **for Humans**

To scale trust for billions of people and create a radically fair economy

Harmony

Harmony: Blockchain **for Humans**

Who we are

John Whitton
Harmony Ecosystem Architect

Gizem Cakil
Product
(aka. Mother of Pangaea)

Harmony

Culture & Team

Still hungry. Still foolish.

September 2019

Google amazon Penn HARVARD UNIVERSITY Stanford University UNIVERSITY OF OXFORD

harmony.one/culture

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Our Community

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Mainnet stats

Strength in **Numbers**

320 foundational nodes

15 top most decentralized blockchains

32% external participation

99% average node uptime

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Run a node on your laptop...

Low barrier of entry increases decentralization

2GB RAM

64GB storage

$25 monthly cloud cost

Incentivised
Pangaea

Pangaea game onboards **thousands** to run a network node **for the first time**.

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pangaea

3,500 sign-ups

96 different countries

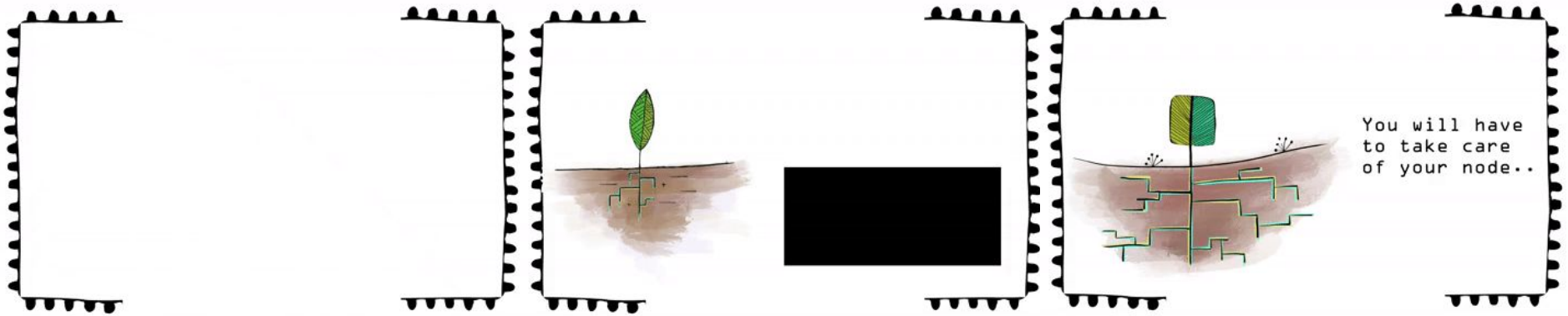
56% first-time running a node

90% external participation

5min **1**-click set-up time

harmony.one/origin

Education is key for decentralization



If we individual people to govern their internet, we

need to teach them

pangaea

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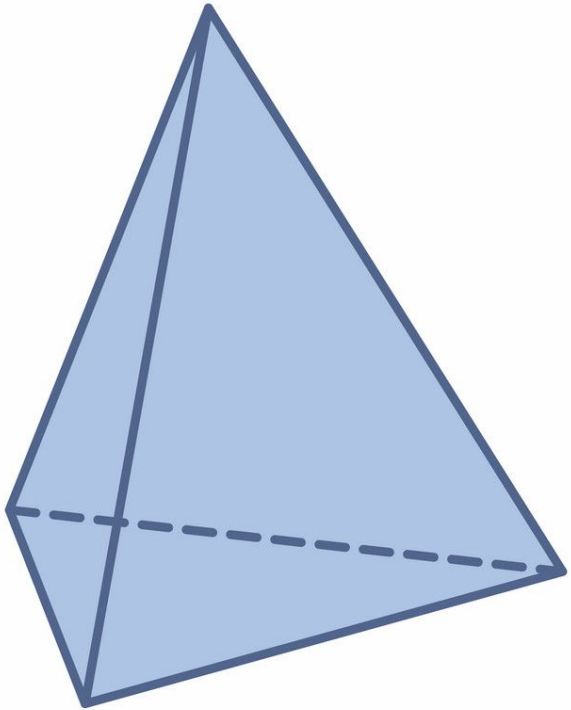
Harmony Technology

Scalability



Security

Decentralization

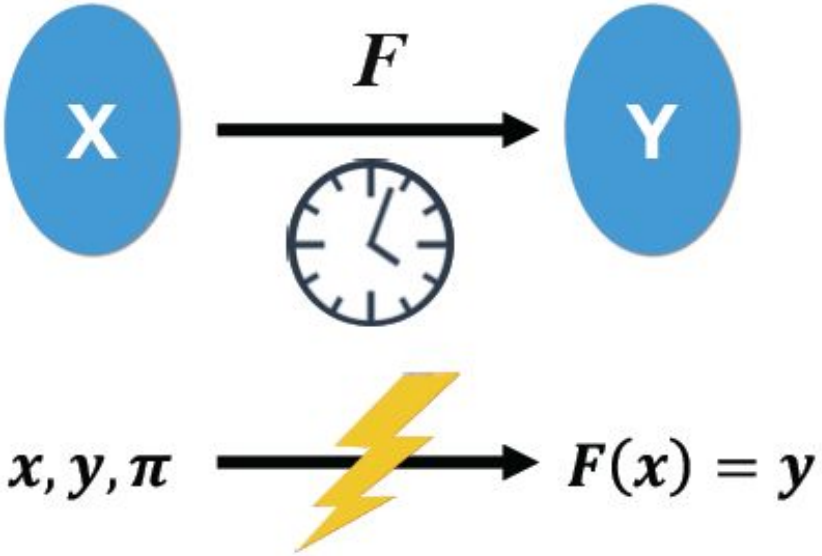
Privacy

Deep Sharding

Parallelize our blockchain through state sharding
Optimize consensus and networking layers to maximize performance

Combine VRF & VDF for secure and scalable random sharding
1.3s block propagation
2 round trips in our FBFT consensus using BLS signatures

O(1) Secure Resharding



~1000 tx/sec per **400-node shard**

Verifiable Delay Function from scratch

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Harmony Developer Tools

Harmony Protocol harmony.one/github

API's harmony.one/api

SDK harmony.one/sdk

Testnet harmony.one/testnet

Smart Contracts harmony.one/h2o

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What's Next

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Speed of Execution

Q2

- Binance IEO
- Mainnet launch

Q3

- Quidd acquisition
- Pangaea
- Testnet Tooling

Q4

- Staking/Utilization
- EPOS
- Developer Tools
- Smart Contract Protocols

Q1

- Privacy
- Confidential Assets
- Vertical Toolkits
- More Bridges

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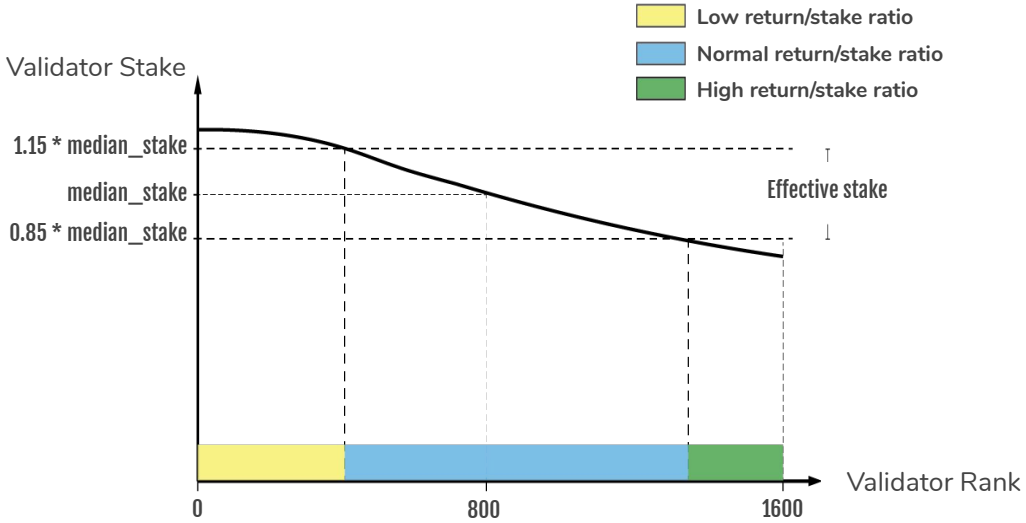
Effective Proof-of-Stake



Staking **without** centralization

Allows **compounding** returns

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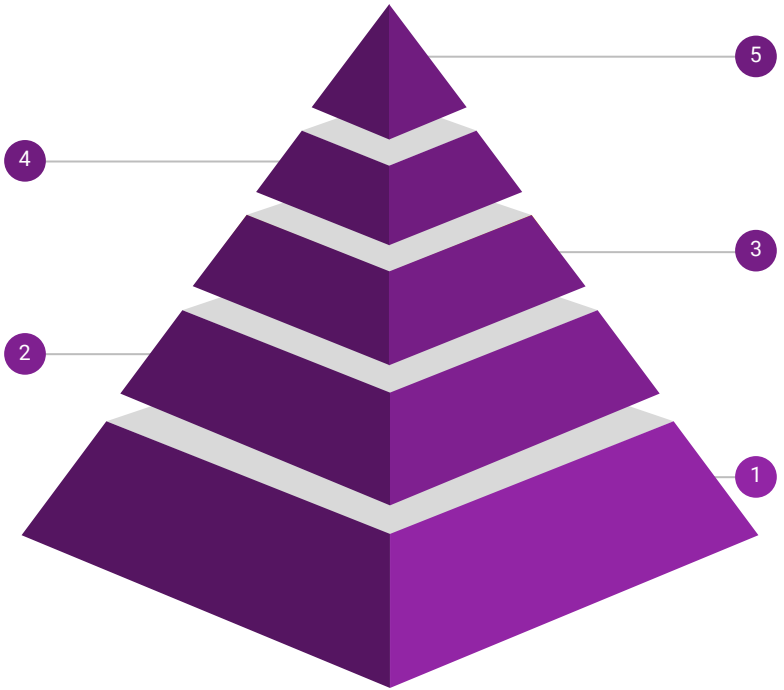
Utilization - Harmony Ecosystem



5 **Users**

Applications
Cross Border Payments, Lending, DEX, Gaming
4

3 **Smart Contract Protocols**
Stable Coins, Trading, Identity, Lending

Standards
HRC-20, HRC721
2

1 **Harmony Blockchain Protocol**

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How you can help

Join our community @ harmony.one/dev

Tooling Gurus

Smart Contract Protocols

Dapp Developers

Join Harmony Community

harmony.one/dev

Learn about Harmony

docs.harmony.one

Build on Harmony

harmony.one/github

Partner with Harmony

harmony.one/

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