INTERNET COMPUTER? ICP Crypto

0:00

internet computer is a blockchain-based

0:02

decentralized network intended to

0:04

provide a limitless environment for

0:06

smart contracts and other decentralized

0:08

applications to run at web speed

0:11

launched by swiss-based cryptography

0:13

foundation dfinity internet computer

0:16

provides key infrastructure upgrades

0:18

that may potentially solve the scaling

0:20

issues of other blockchain networks such

0:22

as ethereum by using internet computer

0:25

dfinity's site advocates developers can

0:27

build everything from mass-market

0:29

tokenized social media platforms that

0:31

seamlessly run on chain entire defy

0:34

ecosystems and even extended

0:36

ethereum-based d-apps

0:38

all of which would be done at web speed

0:40

and at a fraction a reduction by a

0:42

million times or more of current

0:44

computing costs part of internet

0:46

computers toolbox is the delegation of

0:48

merchants to nodes or supernodes where

0:50

the system experiences a slight bend of

0:52

centralization it removes environment

0:55

related limitations for developers such

0:57

as physical or virtual network

0:58

configuration requirements alongside

1:00

firewalls network topology and port

1:03

management developers don't even have to

1:05

worry about database configuration and

1:07

maintenance internet computers bold

1:09

mission should rightfully be critically

1:11

examined by proponents of blockchain

1:13

because if it does work at the promise

1:15

scale it could change the blockchain

1:17

industry let's explore how internet

1:19

computer ticks internet computer is an

1:21

innovation in blockchain technology that

1:23

essentially enables it to run web speed

1:25

with an unbounded capacity this claim as

1:28

of writing is purely conceptual founded

1:31

in october 2017 by dominic williams

1:33

internet computer quickly rose to

1:35

prominence in the market cap rankings

1:37

williams invented threshold relay and

1:40

probabilistic slot consensus and is an

1:42

active member of bitcoin and ethereum

1:44

technical communities prior to icpo he

1:47

worked as the cto of string labs and was

1:50

the founder and ceo of fight my monster

1:52

a massive multiplayer online mmo game

1:55

and fun social media network for kids

1:57

icp is designed to scale smart contract

2:00

and data computation run them at web

2:02

speed and process and store data safely

2:04

and efficiently it has created software

2:06

frameworks to make it easier for

2:08

developers to use as well internet

2:10

computer aims to revolutionize tokenized

2:12

internet services underpinning

2:14

decentralized financial systems and

2:16

perhaps even traditional enterprise

2:18

systems and websites however becoming

2:20

the world's computing platform by

2:21

extending the public internet to

2:23

blockchain isn't a simple feat internet

2:25

computer utilizes several technologies

2:27

in its attempt chain key technology

2:30

chain key technology utilizes multiple

2:32

cryptographic protocols to orchestrate

2:34

the nodes that make up the internet

2:36

computer it has a single public key ckt

2:38

allows any device such as smartphone or

2:41

smartwatch to verify the authenticity of

2:43

artifacts from the internet

2:44

non-interactive distributed key

2:46

generation or nidkg this is

2:48

non-interactive publicly verifiable

2:51

secret sharing scheme consists of a

2:52

dealer constructing a shammer secret

2:54

sharing of field elements then these

2:56

dealers confidently and verifiably

2:58

distribute shares to multiple receivers

3:01

shammer's secret sharing was formulated

3:03

by adi shammer and is one of the first

3:05

secret sharing schemes in cryptography

3:08

based on polynomial interpolation over

3:11

finite fields network nervous systems

3:13

nns the tokenized open governance system

3:16

is responsible for managing the internet

3:18

computer it stores information about

3:19

which nodes belong to which subnet and

3:22

handles the updating of the information

3:24

internet identity an online identity

3:26

that an internet user establishes in

3:28

online communities and websites chain

3:30

key technology is the engine that drives

3:31

internet computer it allows new nodes to

3:34

be added and to form new subnets that

3:36

can in theory scale the network

3:38

infinitely faulty or crash nodes can be

3:41

replaced with new ones without

3:42

compromising the system chain key

3:44

technology allows the internet computer

3:46

to run at web speed where the calls are

3:48

executed in milliseconds and update

3:50

calls take between one to two seconds to

3:52

finalize at genesis the internet

3:54

computer has a block rate of 2.5 blocks

3:56

per second or bps and it is anticipated

3:59

to gradually reach 10.3 bps with a reach

4:02

goal of over 1000 bps each of the old

4:05

signers needs to broadcast one message

4:06

to the new signers on the

4:08

non-interactive key resharing protocol

4:10

this is done securely through encrypted

4:11

forwarding secrecy as well as

4:13

non-interactive zero-knowledge proofs

4:15

since the re-sharing protocol is

4:17

non-interactive it's highly adaptable to

4:18

an asynchronous environment the internet

4:20

computer token icp is responsible for

4:23

facilitating network governance icp

4:26

tokens are locked to create neurons that

4:28

participate in network governance

4:29

through voting users receive economic

4:31

rewards for doing so production of

4:34

cycles for the computer the icp token

4:37

acts as a source store of value that can

4:39

be converted into cycles cycles power

4:41

computation sort of like fuel the fuel

4:44

is burned as used the nns converts icp

4:48

to cycles at a variable rate which is

4:50

constantly configured by the nns in

4:52

response to external markets rewarding

4:55

the participants the network mints a new

4:57

icp to reward and incentivize network

4:59

participants users can participate in

5:02

several roles in order to get rewarded

5:04

with icp including governance voting and

5:06

operating the node machines that host

5:08

the network in may 2018 dfinity

5:10

announced plans to distribute 35 million

5:13

swiss francs worth of dfinity tokens and

5:15

an airdrop to promote cloud 3.0 to

5:18

community members to help them become

5:20

early users dfinity launched the alpha

5:22

main net on december 18 2018. internet

5:25

computer is currently supported by 48

5:27

independent data centers in north

5:28

america europe and asia running a total

5:31

of 1300 nodes the network is estimated

5:33

to grow exponentially to support the

5:35

next generation of large-scale d-apps

5:38

there is a maximum of 469

5:40

213-710 icp tokens at genesis and the

5:43

circulating supply depends on market

5:45

dynamics at the time of genesis an

5:47

estimated 23.86 percent of the tokens

5:49

were held by the dfinity foundation 18

5:52

by internet computer team members 24.72

5:55

by seed donors 9.5 by early contributors

5:58

and the remainder distributed to other

6:00

tiers of investors and strategic

6:02

partnerships the dfinity foundation is a

6:04

non-profit based in zurich switzerland

6:06

the foundation consists of some of the

6:08

world's most highly accomplished and

6:10

regarded cryptographers the team

6:12

includes timo hanke as head of

6:14

engineering hanke is a renowned

6:16

mathematician and cryptography professor

6:18

he created asic boost to increase the

6:20

efficiency of bitcoin mining manush

6:22

movaheddi joined as a senior researcher

6:24

from yale where she worked on scalable

6:26

and fault tolerant distributed

6:28

algorithms for consensus and secure

6:30

multi-party computation

6:32

ben lin who previously worked at bls

6:34

cryptography which is used in the

6:36

threshold relay to generate randomness

6:38

and achieve security alongside speed and

6:40

scale in public networks andreas rosberg

6:43

co-designed the webassembly virtual

6:45

machine that is used at dfinity

6:47

dfinity's members have contributed to

6:49

over 100 000 academic citations and 200

6:52

patents with a 61 million dollar raise

6:54

from andreessen horowitz and polychain

6:56

capital in a february 2018 race dfinity

7:00

jumped onto the radar as one of the most

7:02

notable projects being built in a

7:03

cryptocurrency bear market the dfinity

7:05

foundation raised another 102 million in

7:08

august of 2018 from sv angel andreessen

7:11

horowitz village global aspect ventures

7:14

amino capital and others bringing its

7:16

total funding to

7:18

166.9 million during this time period

7:20

dfinity wanted to create an internet

7:22

computer to cut down the cost of running

7:24

cloud-based business applications

7:26

directly competing with amazon's amazon

7:28

web services icp publicly launched on

7:31

may 10 2021. many people have dedicated

7:34

their lives to blockchain technology

7:36

evolution an internet computer showcases

7:38

the intersection between academia and

7:40

reality from its native innovations and

7:43

applications such as chain key

7:44

technology non-interactive distributed

7:46

key generation nidk network nervous

7:49

systems nns icp token the project has

7:52

showcased creativity worth noting if the

7:55

dfinity and internet computer team can

7:57

create a sustainable blockchain capable

7:58

of solving the current limitations of

8:00

blockchain it will be sitting on top of

8:01

an opportunity to change the world think

8:04

of an internet computer like an open

8:05

source software that updates itself

8:07

using internal governance think of it as

8:09

an open source software that updates

8:11

itself using inbuilt governance and can

8:13

provide guarantees to the users in the

8:15

form of smart contracts these cover how

8:17

the data could be used or providing

8:19

guarantees to startups that would want

8:20

to build functionality without worry

8:23

about their access being removed from

8:25

the platform internet computer will

8:27

drive a wave of innovation growth

8:29

opportunity and productive ways of doing

8:31

things in a new and intriguing way one

8:34

of the biggest questions about any

8:35

cryptocurrency is how it differs from

8:37

any other crypto here are the three ways

8:39

the internet computer stands out from

8:41

the other players it allows anyone to

8:43

create software on the internet the

8:44

technology allows anyone to use its

8:46

blockchain technology to create apps and

8:48

let them do an end run around the big

8:50

tech companies it runs on a

8:51

decentralized network not the cloud in

8:54

contrast to many other blockchains that

8:55

run on the cloud internet computer runs

8:57

on a dedicated hardware set up by

8:59

independent parties according to dominic

9:02

williams founder of dfinity it's fast

9:05

while completing transactions using some

9:06

cryptocurrencies may take 30 minutes or

9:08

more dfinity boasts that its crypto

9:10

operates at web speed again it may be

9:12

useful to think of internet computer as

9:14

something different from currency in the

9:16

sense that the term is generally used

9:18

despite its popularity you may not be

9:19

able to trade in a computer crypto at

9:21

just any broker or exchange but at least

9:24

two of the largest exchanges do offer it

9:26

coinbase which recently conducted its

9:28

ipo allows users to buy sell convert

9:31

transfer or store the crypto and binance

9:34

also offers the ability to trade the

9:35

coin this video isn't financial advice

9:38

but internet computer promises some huge

9:40

benefits but those trading the

9:41

cryptocurrency would be wise to

9:43

understand what exactly they're buying

9:45

that's all part of risk management when

9:47

dealing with cryptocurrencies which

9:48

exhibits volatile price swings and can

9:50

easily shake out less experienced

9:52

traders so it can be easy for

9:54

individuals to become caught up and make

9:55

emotional decisions without considering

9:57

their long-term objectives