HOMESTEAD
ethereum.org

WHAT IS
ETHEREUM?

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OPEN SOURCE

Like Bitcoin, Ethereum is a public blockchain no one controls or owns.

PROOF OF WORK CONSENSUS

The Ethereum Whitepaper specifies the PoW rules and 4+ major clients exist and run the "nodes".

ETHEREUM VIRTUAL MACHINE (EVM)

Transactions are *more than just values*, but "Turing" complete programs that run when blocks are processed by nodes.

ETHEREUM VIRTUAL MACHINE

General Purpose

Supports Bitcoin-like value transactions (e.g. send 10 ETH from account A to B) or more complex applications.

Smart Contracts

Turing complete languages (e.g. *Solidity*) allow the Ethereum transactions to be programmed to do different operations.

Decentralized Apps (DApps)

GUIs for smart contracts allow users to interact in ways similar to web 2.0 (HTML/JS/CSS).

THINK:

WORLD COMPUTER

The Ethereum blockchain is the first "decentralized world computer" to ever exist!

DAPPS

USE CASES FOR **DAPPS** AND PROJECTS IN DEVELOPMENT

Decentralized Exchange

Convert between crypto-currencies and tokens

EtherDelta, EtherEx

Prediction Market

Utilize the wisdom of the crowd to predict future events

Augur, Gnosis

Distributed Computing

Enable users to lease out spare compute cycles (think: uber for your computer, dAWS)

Golem

Identity Management

Retain ownership of your online identity, metadata, and relationships.

uPort

Crowd Sale Platform

Create a custom token for trade, payment, customer loyalty, etc. and take it to market.

Ethereum, Firstblood

Digital Asset Management

Manage, buy, sell physical objects cryptographically tied to digital tokens.

Digix

USE CASES FOR **DAPPS** AND PROJECTS IN DEVELOPMENT

Internet of Things

Enable IoT devices to interact and exchange value with each other

Slock.it

Digital Governance

Blockchain-chartered companies, voting / election monitoring and transparency

Otonomos, Colony

Energy Management

Buy and sell energy to the grid or neighbors directly from your solar panels

Transactive Grid

And many more to come...

ETHEREUM **ROADMAP**

Past

Olympic Testnet

Launched May 2015

Frontier

Launched July 2015

Present

Homestead

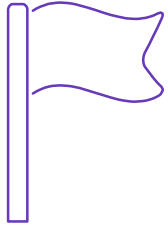Launched Pi Day 2016

Future

Metropolis

TBA (2017/2018)
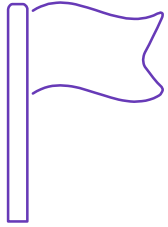
Serenity

TBA

Each Ethereum release is a hard fork.

Ethereum has forked 5 times. It will fork again for EIPs with consensus.
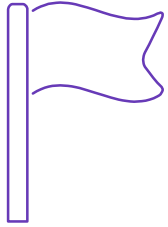
CASPER
PROOF OF STAKE

No more need for mining.

Waste less electricity!
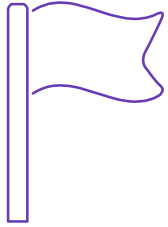
RAIDEN
STATE CHANNELS

Supports off-chain transactions, with on-chain reconciliation.
(For all ERC-20 compatible tokens, too!)

SHARDING
TRANSACTION GROUPS
Increase simultaneous transaction handling exponentially.

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TRANSACTION GROUPS

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Advantages of Ethereum

Massive community

350000 on r/ethereum

Amazing development resources

The documentation is one of the best compared to any open source project

Network effects

First Mover

Clear roadmap and leadership

They have stuck to their initial roadmap and have delivered consistently.

Fat Protocol

All the projects being built over it makes the base protocol more valuable