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2017

# ETHEREUM CLASSIC



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31 January 2017



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# WHY WE'RE HERE

The screenshot shows the CoinDesk website interface. At the top, there's a navigation bar with 'CoinDesk' logo and a 'TRENDING' section. The main content area features a large article titled 'Ethereum Executes Blockchain Hard Fork to Return DAO Funds' by Michael del Castillo, published on July 20, 2016. Below the article title is a social media sharing bar with icons for Twitter (504), Facebook, Google+, LinkedIn (310), and Email. A table of recent news items is visible below the article. On the right side, there are promotional banners for 'DON'T MISS A SINGLE STORY' (newsletter subscription) and 'consensus 2017' (event registration).

**CoinDesk**  
TRENDING  
Join CoinDesk at our invite-only, developer conference, Construct, in January

BITCOIN PRICE INDEX (24H)  
USD \$768.61  
EUR €729.37  
CNY ¥5,304.07  
GBP £611.48

NEWS | PRICE & DATA | GUIDES | EVENTS | RESEARCH | PRESS RELEASES

ETHEREUM • TECHNOLOGY

## Ethereum Executes Blockchain Hard Fork to Return DAO Funds

Michael del Castillo (@Delirium) | Published on July 20, 2016 at 15:23 GMT

504 | f | g+ | in 310 | 1 | ✉

Time	Age	Source	Price	Volume	Market Cap
15:22:00	47 min ago	Blockchain	470284	92,140 TH	4,121.20 Q16
15:21:00	48 min ago	Blockchain	470786	92,140 TH	4,127.40 Q16
15:20:00	49 min ago	Blockchain	470286	92,201 TH	4,340.09 Q16
15:19:00	49 min ago	Blockchain	471286	92,323 TH	4,346.35 Q16
15:18:00	50 min ago	Blockchain	471284	92,412 TH	4,327.21 Q16
15:17:00	50 min ago	Blockchain	470786	92,380 TH	4,337.49 Q16
15:16:00	50 min ago	Blockchain	471286	92,352 TH	4,440.87 Q16

The much anticipated hard fork of the ethereum blockchain has been implemented, giving those building on the decentralized application-network at least the potential for stability after weeks of controversy and sometimes terse disagreements in the wider community.

At approximately 14:30 UTC today, China-based [ethereum](#) miner BW.com announced the blockchain's 192,000th block. Seconds later the mining pool split into two.

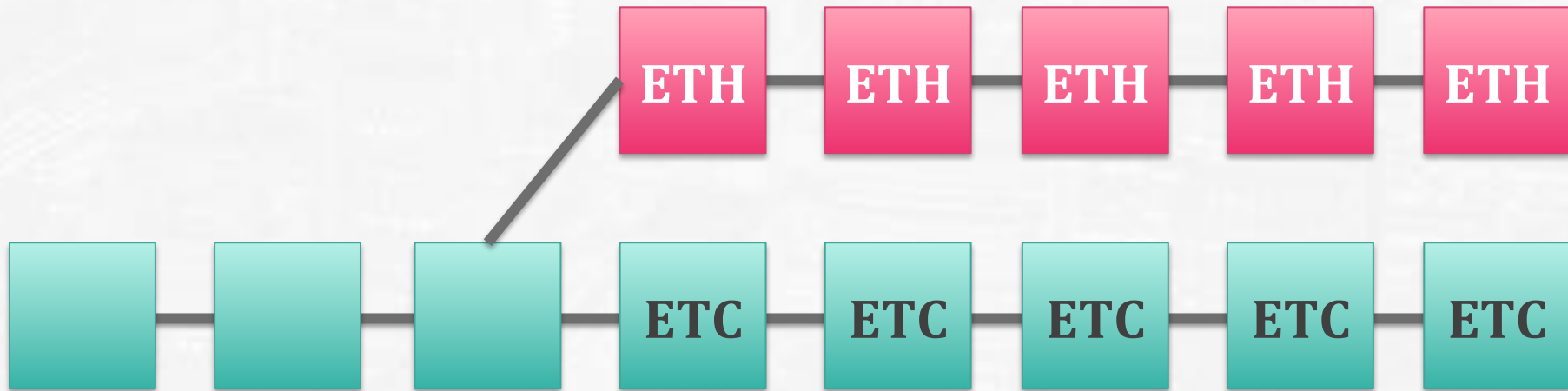
**DON'T MISS A SINGLE STORY**  
Subscribe to our free newsletter and follow us  
Email Address  **SUBSCRIBE**

**consensus 2017**  
Registration is Open!  
Only 60 tickets available at \$999  
**REGISTER NOW**

**FEATURES**  
The State of Global Blockchain Consolidation



# WHY WE'RE HERE



# 2017-2018 ROADMAP

- Update monetary policy and consensus mechanism
- Develop ETC wallet platform
- Scala Client
- Assess hybrid POW/POS solutions





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# CORE APPLICATIONS





# CLASSIC WALLET PLATFORM

- Open and modular architecture for app integration
  - *Node/RPC API*
  - *Connector - RPC wrapper for key and account management*
  - *User Interface*
  - *From desktop full node to mobile app*



# SCALA CLIENT

- Based on IOHK Scorex framework
  - <https://iohk.io/projects/scorex/>
  - *Modular network protocol, consensus protocol, transaction protocol, internal state*
- Rationale
  - *Compiles to Java bytecode, runs on JVM*
  - *Favors immutability*



# ADDITIONAL PROJECTS

- <https://github.com/ethereumproject>
- EtherHub.io block explorer
- [EtherJar](#)
- [EtherKube](#)
  - *tools to deploy/manage ETC nodes in a cloud*







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# DAPPS PLATFORM





# Fundonomy

Web Layer

Social Platform Layer provides an easy to use marketing and communication interface to attract and engage a wider non-technical audience

Blockchain Layer  
(Open Source)

Funding Smart Contracts  
for Project Bounty Escrows -  
Deployed per Project

Reputation Smart Contract  
for Project and Team Scores  
Public Reputation Utility for  
use off Platform







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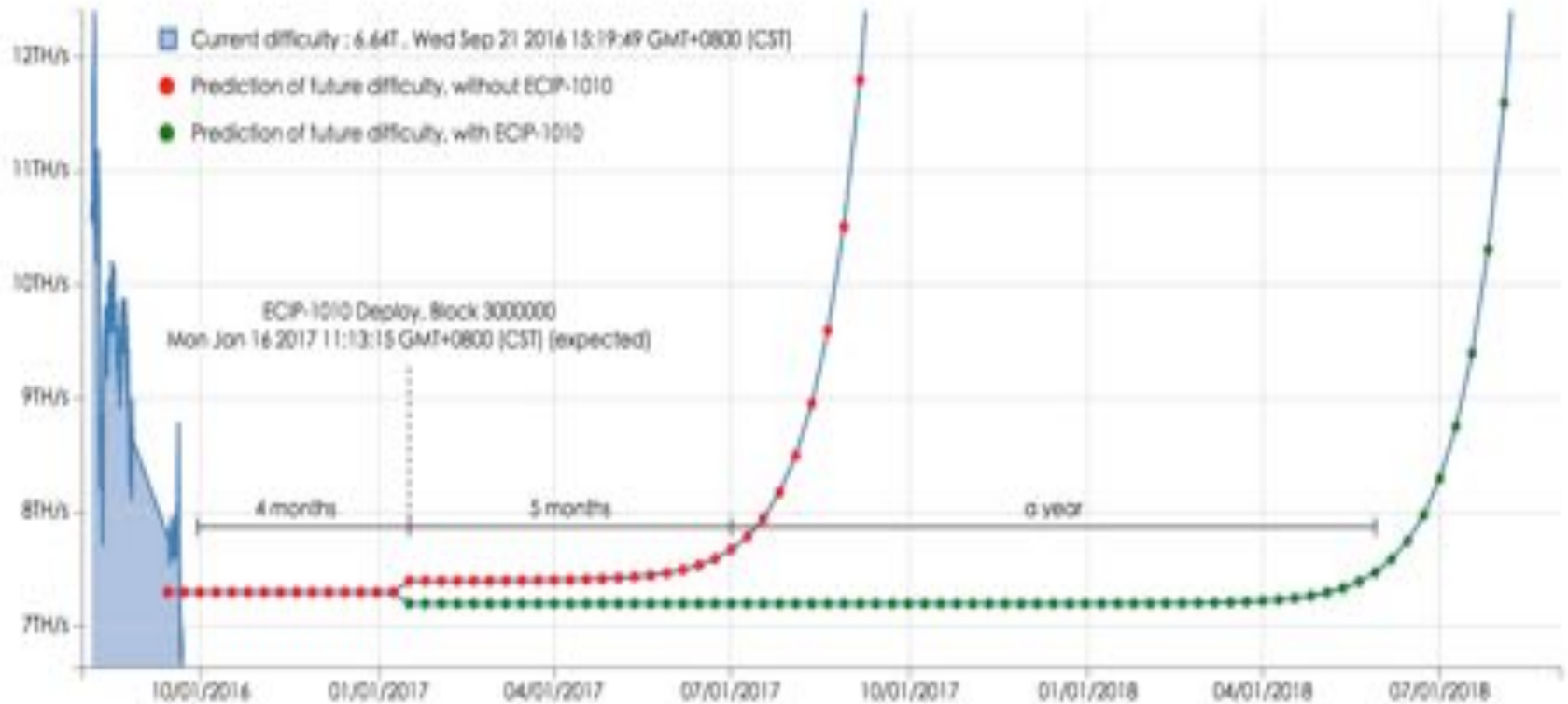
# PROTOCOL





# DIFFICULTY BOMB

How to prevent unwanted forks



# BITCOIN MONETARY POLICY



Started: Jan 3  
2009, 18:15:05



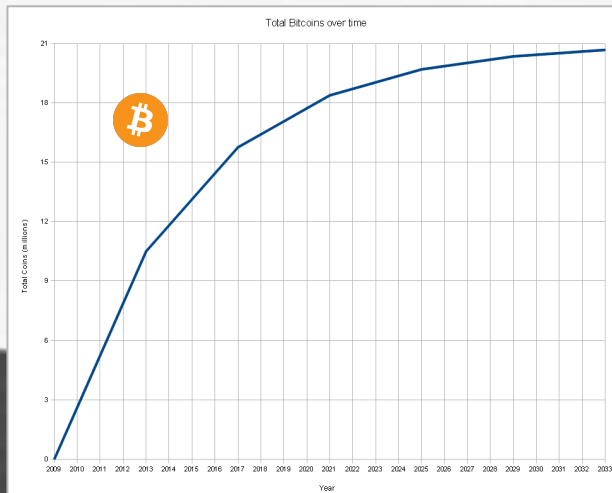
Through mining,  
50 BTC released  
every 10  
minutes



By October 2140  
all rewards are  
replaced by  
transaction fees

cap of 21million  
coins in 2140



Block reward  
reduced by  
50% every ~4  
years.  
Currently 12.5  
BTC per block



-50%

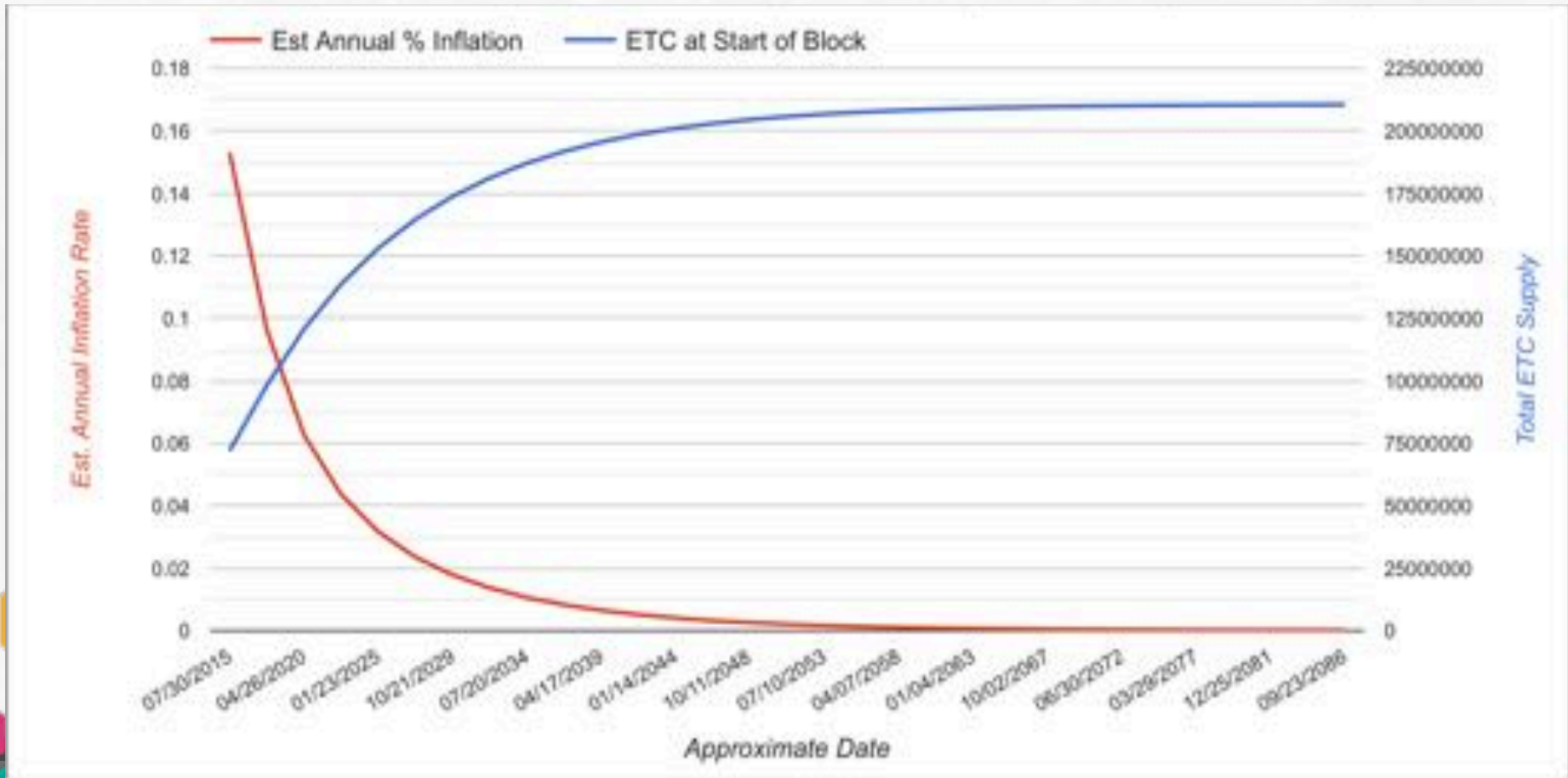


# BITCOIN VS ETC MONETARY POLICY

	Start +UTC	Starting Money Supply	Supply Cap	Average Block Time	Start Block Reward	Supply Schedule	Current Block Reward	Monetary Base Model
	Jan 3 <sup>rd</sup> 2009 18:15:05	0 BTC	21million BTC	10 minutes	50 BTC	50% Reduction every 210,000 blocks (~4years)	12.5BTC	Deflationary
	Jul 30 <sup>th</sup> 2015 15:26:13	60 million ETC	Currently No Cap	12 seconds	5ETC (4.375 ETC for max 2 Uncles	Perpetual Release	5ETC (4.375 ETC for max 2 Uncles	Inflationary



# PROPOSED MONETARY POLICY





# NEW ETC MONETARY POLICY



Started: Jul 30  
2015, 15:26:13



cap of 200M etc  
in 2252



Through mining,  
between 5 ETC  
released every  
12 seconds

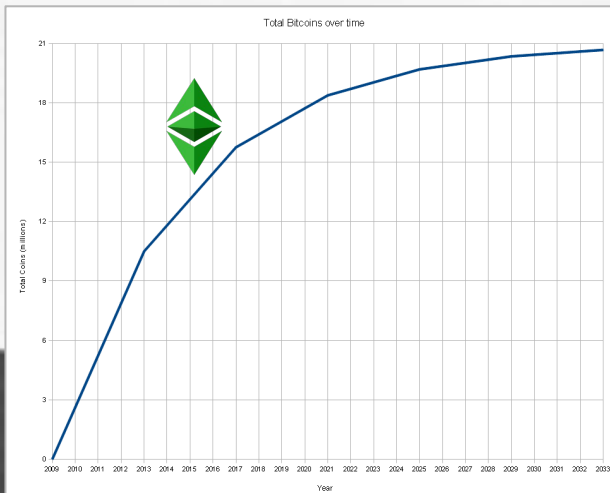


Block reward  
reduced by  
20% every  
~2.5 years.



210 million

By October 2252  
all rewards are  
replaced by  
transaction fees





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# CONSENSUS ALGORITHMS

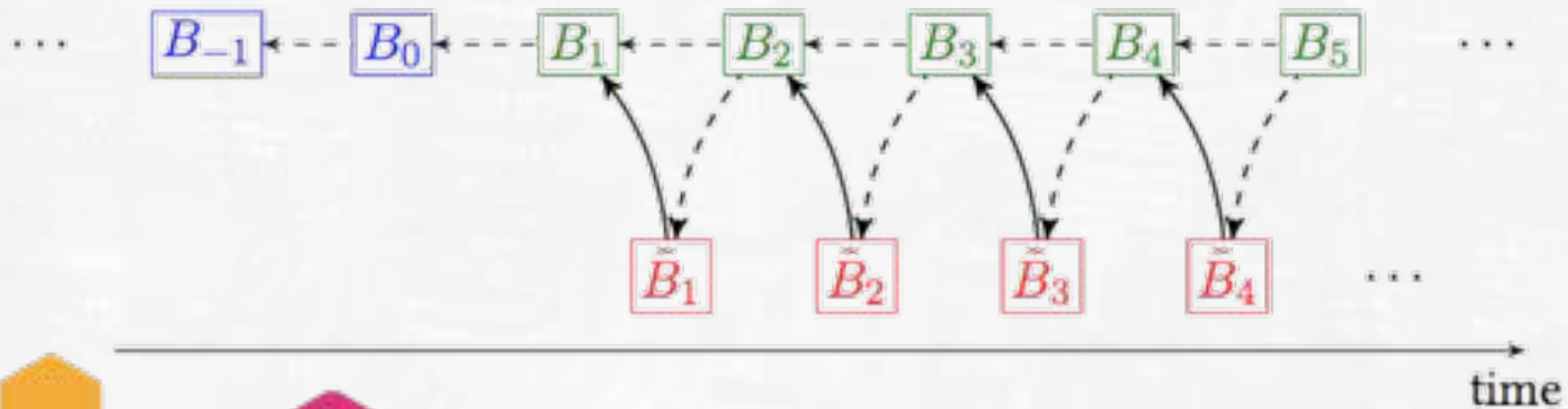
- Replace GHOST
  - *Introduced because fast block times lead to high stale rate*
  - *Block reward of 5ETC + tx fees*
    - 4.375 per uncle
  - *Flawed: Miners can maximize rewards by intentionally mining uncles every X blocks*
- Modified DECOR+
  - *Share block rewards between blocks of same height and publisher*
  - *<https://bitslog.wordpress.com/2014/05/07/decor-2/>*





# TWINSCHAIN: HYBRID POW/POS

- Two-hop protocol



# SCALABILITY

- Sharding
  - *Split the space of accounts/contracts into subspaces*
  - *Each shard has a set of validators (requires PoS)*
  - *Transaction receipts for cross-shard communication*
- Alternatives?
  - *State channels*
  - *Overlay services*
  - *IODB storage engine*



# ETHEREUM CLASSIC IS HIRING!

## Rust

- ETC Wallet Platform

## Golang

- geth client

## Javascript

- ETC Wallet Platform
- React+Redux
- MaterialUI

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