The Fight for MEV

Optimizing transactions through batch auctions

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Marketing @ CoW Protocol
MEV, the good the bad and the ugly

What is CoW Protocol

Maximization vs Minimization
Flashbots vs CoW Swap

Where are we heading?
Enter CoW-Builder
MEV, the good the bad and the ugly
Maximal extractable value (MEV) is a measure devised to study consensus security by modeling the profit a miner (or validator, sequencer, or other privileged protocol actor) can make through their ability to arbitrarily include, exclude, or re-order transactions from the blocks they produce.
Where does MEV come from?

Execution Layer
- Block Producers

Application Layer
- Trading Mechanisms
- Onchain vs Offchain (latency arbitrage)
- Are prices truly as atomic as the txs?
MEV meaning in DeFi

Front Running

Back Running

Sandwich Attack

Tx 1

Tx 2

Tx 3

Tx 4

Tx n

Tx 3'

Target

Tx 4

Tx 1

Tx 2

Tx 3

Tx 3'

Target

Tx 3''

Tx 4

Tx executed & unsuccessful

Tx executed & successful
People can argue that MEV is finding the market price efficiency but taking advantage of users to give them worse prices is no hunt for efficiency in the market at all.
Regulatory bodies around the world need to establish whether value extraction by miners constitutes illegal activity.

Will the world computer be regulated?

“Regulatory bodies around the world need to establish whether value extraction by miners constitutes illegal activity.”
What is CoW Protocol?
What is CoW Protocol?

- Protocol for swap.cow.fi (formerly coswap.exchange)

- Batching allows us to:
  - Structurally better prices due to CoWs
  - Meta DEX Aggregator
  - MEV Protection
  - Gasless Swaps
How can CoW Protocol reduce MEV onchain through batch auctions?

- Execute CoWs **“Coincidence of Wants”** (No need trade against a LP pool)
- Break ordering dependence by having a single price per asset per batch.
- **Multi-dimensionality** of the auction re-aggregates the fragmented liquidity space via ring trades.
Competition for MEV Minimization

- Single Order Solver (1 inch, 0x, Paraswap, Baseline)
- Batched (CoW) DEX Aggregator solver
- Mixed Integer Programming (MiP) Solver
- Quasi-Linear Solvers (Quasimodo)
Maximization vs Minimization
Flashbots vs CoW Protocol
Flashbots - Goals & Mission

- Distribute Benefits
- Democratize Extraction
- Illuminate the dark forest

Flashbots - MEV-Boost
CoW Protocol - Goals & Mission

Protection from the dark forest ✅

Avoid Extraction ✅

Distribute Benefits ✅

Selling USDC for ETH

Selling ETH for USDC

NO AMM
How are they different?

**Key Metric: Reduction of MEV**
- Democratize MEV Protection
- Reduce AMM interactions
- Rules → more money to user, less MEV, higher chances of winning

**Key Metric: Extraction of MEV**
- Democratize MEV Extraction
- Maximize Slippage Tolerance
- Rules → more money to validator, less money to user (more MEV), higher chances of winning
Where are we heading?
Enter the CoW - Batch Builder
What is the future of Dexes?

- Focusing on fairness & Cost improvement
- Offers MEV protection
- Users are at the center of it
- Abstract users from complicated tech
What does the future of finance look like? (I)

- **CoW Batch Builder** - the 1st tx of each block is CoW Protocol is the batch auction settlement.

- Focus on real market efficiency

- Combination of the utopian side of flashbots + CoW Protocol
If searchers focus on combining the utopian side of flashbots with CoW Protocols, they can shift their revenue stream from hurting users by arbitraging them to a revenue stream of maximizing value to the users.
Will the market fix MEV?

Help us build the future of finance

Github
@cowprotocol

Open positions
cow.fi/careers

Twitter
@CoWSwap
Thank you!

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