

Maximal Extractable Validator (MEV) Protocol is a system of products built to maximize value creation across the validator value chain. Today, we're introducing mevAuction

, a new system to auction blockspace that allows, for the first time, multiple-winners in the same block. This means proposers can continue to enjoy benefits of mev-boost while earning additional rewards with mevAuction.

MEV Protocol has partnered with the based crypto research group [20sqares](#) (20 [ ]'s) in the modeling and development of mevAuction

. They released a [new blog post about it](#) in full technical detail. The following post is a simplified version designed to help understand how we've collectively turned cutting edge theory into practice.

## The Idea: Splitting a Block into Two Parts

Imagine a blockchain like a train made of many cars (blocks) that only allows a single class of passengers, where the highest single bidding group of passengers will gain access to the train. This new design enables a multiple class system, providing the inclusion of multiple winning groups.

The current blockspace auction standard is mev-boost from Flashbots, where only one winner is selected per block. The mevAuction design enables a multiple class system, providing the inclusion of multiple winning groups by dividing each block into two sections. This is done while still maintaining compatibility with mev-boost.

Top Section (Alpha,  $\alpha$ ):

This is like the VIP section of the block. It's reserved for special transactions that pay more to be there. It's like getting a first-class ticket on a train.

Bottom Section (Beta,  $\beta$ ):

This is more like the economy class. Here, transactions can book their spot in advance, ensuring they get in the block without competing for the VIP section.

Splitting the block is not a new concept. Vitalik suggested splitting the block in [this post](#).

## Why Split the Block?

Currently, everyone is competing for space in the same block, like a crowded train where everyone wants a seat. By splitting the block:

The top section ( $\alpha$ ) is for those who need high-priority transactions, like traders realizing arbitrage opportunities, e.g., arbitraging between CEX's and DEX's prices. The bottom section ( $\beta$ ) is for regular transactions, like someone sending money to a friend. They can reserve their spot in advance, avoiding the rush.

## How It Works

The Alpha part basically stays the same as it is currently handled under PBS in Ethereum, and remains compatible with mev-boost. So what is new?

Beta ( $\beta$ ) Section Sales: You can book your transaction's spot in this section in advance, almost like buying a train ticket for a future journey. This booking is done through a newly developed Layer 2 chain.

Combining Alpha ( $\alpha$ ) and Beta ( $\beta$ ): Once the top section is filled with VIP transactions, it's combined with the pre-booked transactions from the bottom section to form a complete block.

## Why It's Useful

There are three reasons why this construction can be useful:

Efficiency:

Just like a train with different classes, this method uses blockspace more efficiently.

Fairness:

It creates different 'marketplaces' for different needs, making the whole process smoother and more predictable.

Flexibility:

This approach can adapt to different needs and could lead to more innovative ways of using blockspace.

## Execution Steps

Several technical steps are needed to make this work, involving special a dedicated set of validators, a new Layer 2, and an adapted relay. Think of it like setting up a new, more efficient train system with advanced booking and reservation capabilities.

## Where Do We Stand

The first version of the system is live on Holesky testnet. Learn more about mevAuction and how to participate in our [docs](#).

## In Conclusion

By splitting the block into two parts, it now creates innovation in making blockspace more accessible than before. This gives more parties with different needs, the ability to pay to access something they couldn't before mevAuction.

Stay tuned for further updates, and be sure to follow along on all the MEV Protocol socials!

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Website:

<https://mev.io>

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<https://x.com/mevdotio>

Discord:

<https://discord.gg/mevprotocol>

Telegram:

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Manifold Finance:

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