

Thank you Justin for the great write-up! I've got a few questions to hopefully help my understanding of the proposal. Please feel free to correct me if I'm missing something critical with these questions, it happens often enough.

What incentives and/or design constraints discourage an upcoming proposer from publicly broadcasting that they are open to receiving private bids during their slot, where all bidders can privately collude with the proposer to minimize the base fee floor in favor of maximizing their returns?

In this case, any bidder that believes they have a chance of being selected for a slot is incentivized to privately collude and not make an honest public bid. They can submit timely private bids to the proposer and still trust that the proposer will select the bid which that minimizes base fee floor and maximizes the payload tip.

Yes, a party who is an honest minority bidder and doesn't believe they are likely to be selected (call them the "unconfident honest bidder") could still make a public bid — thus smoothing at least some of the spiked profits that private collusion would have captured. However, this assumes that the unconfident honest bidder has block building/MEV skills that are at all comparable to the confident private bidders. If a lucrative MEV opportunity requires high skill to identify and execute, it's much less likely to be caught by the unconfident honest bidder and remain un-smoothed.

Additionally, the incentives of running, maintaining, and improving an unconfident honest bidder primarily for the purposes of smoothing (rather than successful selection of their block) are very low, as the reward is socialized redistribution through burn. This is far less than the incentives of running, maintaining, and improving a confident private bidder, who is capable of capturing a large portion of the extractable returns for themselves.

During non-MEV-spike events, what incentives and/or design constraints enforce attestors to set an honest payload base fee floor?

(Is this question too far out-of-scope from the desirable outcomes of the proposal? If redistribution is just the "means" to the "end" where smoothing is accomplished, then this question doesn't seem too important.)

I'm left wondering how the incentives for honest payload base fee floor could change based upon the % of ETH staked in the network. Intuitively, ETH stakers are a smaller subset of all ETH holders. Therefore stakers are jointly interested in resisting the redistribution of their base MEV returns to the larger set of all ETH holders.

To illustrate with an example, consider an extreme case where the network has 10% of ETH staked. If payload base fees are relatively efficient and close to total extractable MEV on a "typical" block, then the staker subset is missing out on ~90% of their capturable returns that are getting redistributed to the ETH holders. In this case, each attester (being a part of the staker subset) is highly incentivized to establish a culture of low payload base fee floors on each slot. This way when it becomes their turn to propose, they can capture a much larger MEV return for themselves as well (vs what would've been redistributed to them during attestations). The culture change seems plausible given that this is an infinite game. Unless there is some punishment for doing so, attestors could continuously signal they are willing to attest to very low payload base fee floors (on typical blocks) and slowly erode away the higher standard. This does not apply to MEV spikes, as if they're sufficiently large enough the incentives for attestors could still be to redistribute.

Clearly the above example is extreme and not representative of the magnitude of incentives as if this proposal were to be implemented tomorrow. However, I do wonder if this is a desirable or acceptable outcome and if it should be explored further.