

I'm wondering if my line of thinking is correct. Construct an accumulator, which resembles a Merkle tree, but non-leaf nodes are XOR'ed, rather than hashed. Publish the root, and proofs of items are worst-case $O(\log N)$ long.

This is not an original idea, it's been specifically [brought up here](#) in the zcash repo and also referred to in general about [alternatives to Merkle accumulators](#).