

BUIP175: Taking VotePeer from Prototype to Production

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Date: 29 September 2021

Background

Two years ago, BUIP129: Finish and Productize the BU Voting System was raised by Andrew Stone. His proposal is a high-level technical overview of a community electronic voting system which utilises the immutable blockchain of Bitcoin Cash, plus its immediate applicability to BU's own requirements. BU has a voting system, created by Awemany in early-2017 which works extremely well, however it is highly bespoke to BU's membership changes and BUIP voting. It has its own DAG database which needs to be centrally maintained. The advance called for in BUIP129 is a voting system utilizing blockchain technology available to organizations in all areas of business. BUIP129 was approved and the project has proceeded since through the efforts of Dagur and JØrgen.

VotePeer

The result is a working prototype, branded as *VotePeer*, a functional on-chain voting system using Electrum Cash servers within the BCH node network. This is a product which has significant future potential in the business and government sectors globally, whenever community voting is required.

VotePeer has reached prototype phase, although not yet the full productized stage first envisaged in BUIP129. The hard work is done. What remains is principally usability requirements to lift the project from prototype to a product and service available to many organizations. The more usage this product has, the more real-world transaction flow is generated through Bitcoin Cash. Delivering quality, value-added blockchain applications is the priority target for all serious cryptocurrency communities where it is recognized that the sophisticated 21st century global economy requires a lot more from blockchains than just p2p cash alone.

BU Website Integration

The VotePeer website is at <https://voter.cash> 2 and this is where votes are set up and conducted. It allows any external entity to register and manage a vote. It is open source on GitLab (votepeer-web) and can be re-used by other organizations. For BU's purposes we want to match or preferably go beyond what is already provided by the existing BU voting system. Our historical voting results and cryptographically verified membership list history needs to be maintained, requiring a smooth integration with VotePeer.

Mobile App

VotePeer is installable on Android phones and this app needs further UI/UX work and to be extended to iOS.

Parallel Run for the October 2021 BU vote

Volunteers from the BU membership are called for to vote on the October 2021 BUIP set using VotePeer, in addition to the existing voting system. Feedback will be welcomed. It is fitting that this BUIP to fund further development through the product phase will be part of the parallel-run, using the system which is the result of BUIP129. A complete switchover to VotePeer is intended for BU voting commencing with the January 2022 vote, but this target is dependent upon further support from the membership.

Ecosystem Activities

It is proposed that the following be undertaken, external to the development process, to explain and raise awareness, publicising VotePeer to a wider audience and initiating general usage of the voting system.

- A high level live presentation on the principle that are used to achieve the original objectiveness (justification for design choices)

- A demonstration of how it works with a summary of the relative risks and mitigation strategies used to to make it trust-worthy.
- A Q&A for BU members and those interested in the system.
- Producing a high-level animation video similar to the original What is Bitcoin? (v1) - YouTube but for vote.cash to explain the benefits of the voting system.

Budget

To properly complete this project, considering the competitive market conditions for blockchain engineers, this proposal requests up to \$125 per hour per developer through the period from September 2021 to the completion of the first two full BU votes conducted in 2022 using VotePeer only. The further budget of \$20k is proposed for the Ecosystem Activities (1-4 above) to be conducted during and after VotePeer development completion.

White Paper

As this project progresses, a draft white paper is being compiled using the LaTeX editor for the most professional result. It will be submitted to *Ledger* journal as a milestone work in the blockchain voting space.