Litepaper

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Introduction

Welcome to BqETH—*the* first truly trustless solution for digital asset inheritance. BqETH holds the secrets to crypto assets securely while you are alive. When the time comes, your beneficiaries will receive your digital wealth without relying on anyone.

We will briefly touch upon the background of digital inheritance as well as BqETH customers, functions, and uniqueness. Nevertheless, this Litepaper only serves as the tip of the iceberg in fully understanding BqETH. For more information, check out the BqETH.com Learn page and FAQ (which includes the Manual).

What's Digital Inheritance?

The concept of leaving property, money, items, information or instructions behind for one's loved ones is not novel, as the practice of *wills* has been utilized for thousands of years. However, *digital inheritance* is a new idea that seeks to accommodate a world in which assets are held in a digital manner. They can be owned and—more to our point—transferred with just a passphrase or set of words. Responsible spouses, parents and benefactors need to ensure that their loved ones receive understandable instructions and the controlling secrets, even if they do not have a deep understanding of the world of digital assets.

Cryptocurrencies (e.g., Bitcoin, Ethereum), utility tokens, security tokens, governance tokens, and others (collectively, "**Digital Assets**") are a rapidly growing component of an estate's value. As of this writing, trillions of dollars are held in Digital Assets in almost every country. Notably, there have been countless nightmare scenarios involving Digital Assets (collectively worth billions today) being lost forever because there was no plan to pass them, or because their loved

ones did not have a sufficient understanding of the technology. Not to mention criminal actions of all sorts. Thus, it has become imperative to make sure Digital Assets and their controlling secrets are passed on effectively (and confidentially) between generations; else the damage is incalculable.

Digital Inheritance is an emerging sector. Security and complexity remain major obstacles, especially for those who do not handle Digital Assets on a regular basis. To fill this important need, we developed BqETH. Instead of using trust in people, physical vaults or corporations, we rely on automation, anonymity, math and unbreakable smart contracts. Yet, our Users experience a simple, easy-to-use interface, and their recipients receive the precious gifts in the form and manner of the User's choosing.

Who Can Use BqETH?

In short: everybody. You might think that inheritance and estate planning are only relevant for those in the later stages of their lives, but it's never too early to plan succession, as young crypto holders have experienced (and sometimes sadly lost) rapid wealth. Even though Digital Assets are emerging technology, it is not only the young who own them—anyone can now, at any age, especially since the approval of Bitcoin and Ethereum ETFs (exchange traded funds).

BqETH works for both end Users and trusted Professional advisors, such as estate planning attorneys, financial planners, life insurance agents, tax advisors, and others who work in succession planning. BqETH is flexible to any need or legal constraint. BqETH supports collaboration between Users and estate planning professionals. For example, an attorney crafts a set of detailed instructions with a User with all but the most sensitive secret, like a Bitcoin wallet passphrase. The User then takes the document home, adds the secret and uploads it to BqETH. There are countless ways of using BqETH to protect secrets.

How to Use BqETH?

Now that we explained the background of digital inheritance and who BqETH is for, it is time to describe how to use it.

The information and secrets you store on BqETH is called a "**Payload**." A Payload could be a

simple line of text (such as “The key is under the red rug”) and/or a file, like a PDF, containing a large amount of secrets and instructions on how to use them. Certainly, a document like a Will as well would work. BqETH helps Users and Professionals craft the ideal Payload via the course material on the BqETH.com website, webinars and consulting sessions. It is best to have that settled before ever starting up BqETH.

- You open the BqETH app in a web browser. At that point, it is disconnected from BqETH Inc. or any other human entity. You identify yourself with an Ethereum-compatible (also called "Web3") wallet (e.g., MetaMask, Coinbase, MEW). No other information is required.
- Next, you set up an Hourglass. This is a timer that will run out unless you renew it. You pick the number of days it will run, up to a year.
- You then provide a way for BqETH to remind you of the impending expiration of your Hourglass. This can a be an anonymous email address you can set up just for use with BqETH. Or gmail, etc. , it's up to you.
- You then provide the email address of your intended recipient, and a message to help them verify it is from you.
- Then you submit the Payload—your secret—as text and/or a file.
- Finally, you approve payment for our service (withdrawn from the Wallet you used) and the Hourglass starts.
- In the event you have passed away, or otherwise did not renew the Hourglass, the Payload will be decrypted and delivered to your Recipient.

As you might imagine, most people do not set up their Hourglass with the anticipation that they will pass away before the Hourglass expires. You can check the time remaining and renew or “flip” your Hourglass at at any time—for a new renewal length of your choice. As the Hourglass approaches its end, BqETH will send you multiple reminders.

While the Hourglass is running, you can replace your notification or delivery settings, and even replace your Payload with a new one. You can also cancel the Hourglass entirely, which will lock up the Payload forever.

How does BqETH work?

Although we developed a key technological component of the BqETH solution, we realized early on that a single technology would not be sufficient. Most everyone who has attempted this, have used a single (and oddly the same) technique to address this problem, We will discuss some of this in the next section. BqETH's design is a fusion of *several* entirely separate systems and technologies, ensuring the highest level of security we have yet found.

BqETH is centered on trustless cryptographic technology, utilizing a combination of math, blockchain, smart contracts and decentralized anonymous systems. Let's try to unpack all that.

- Trustless: No person or organization can access your secret or stop it from becoming available. Even us.
- Cryptographic technology: The math and software that hides (encrypts) data from being known unless provided with a secret "key" to unlock it.
- Blockchain: A list of transactions that have been verified for conformance to a set of formal rules and forever written into a public ledger that cannot be hidden or erased. We use the Polygon network, an Ethereum "Level 2" blockchain.
- Smart Contracts: Set of rules for transactions, that are processed by Blockchains
- Decentralized autonomous systems: A set of computers and networks that can run some or all of a process without permission from anyone. They can be owned by anyone in the world.
- Math: A whole lot of complicated and seemingly magical equations. It's serious stuff, just not appropriate for this lite paper.

Here are the components of BqETH that use these technologies:

Web3 (Ethereum-compatible) Wallets: There are several hundreds of these to choose from. They hold a signature that uniquely and anonymously identifies you as the owner of your BqETH Hourglass. The BqETH app passes this signature to the Smart Contract for setup, renewal, and payments.

BqETH App: The app uses our algorithm to develop a unique set of Verifiable Delay Functions, "puzzles" for your Hourglass. Each puzzle requires a known amount of time to solve--impossible to cheat with parallel computing or AI. Once launched into a web browser, it

communicates only with our Smart Contract

Smart Contract on the Polygon Blockchain (Contract): Our Contract 1) stores the encrypted Secret, 2) puzzles and 3) forwards large files to the File network. It listens for Solvers to offer puzzle solutions and verifies the solutions. If correct, it pays the Solvers. It then indelibly publishes the Secret to the blockchain.

Global File Network: The File network is a worldwide collection of anonymous servers and storage systems. It holds the files we forward to it forever and provides an anonymous link to them.

Solvers: The Solvers are anyone in the world with a basic computer. They listen for new puzzles from our Contract and dedicate their processors to solving puzzles. If they are successful, and the first to claim a solution, they are paid from a reward budget provided by the User (the Hourglass owner).

Key Generation Network: The Threshold Distributed Key Generation network autonomously creates and divides up the private key that locks access to your Payload. This is another smart contract and anonymous servers, not controlled by BqETH, that will only reassemble the private key and decrypt the Payload if the all the Hourgass puzzles are solved.

BqETH Systems: Our own systems monitor the puzzle solutions and time remaining on the Hourglass, then notifies the User (Hourglass owner) when the expiration approaches, and delivers the decrypted Secret to the recipients.

<u>What Makes BqETH Unique?</u>

We developed BqETH starting from principles, and then with technology.. Our combination of technologies combined with rigorous allegiance to our security principles makes us unique and the best. Here's why:

- BqETH is *Trustless*. Trust is generally considered to be a good thing, so why should something be “trustless?” In short: because any human may betray you, either willfully, negligently, or through fraud or coercion. Whether you save information through another person physically or digitally, that person may lose control over the information themselves. By contrast, in BqETH, you cannot be undermined or overruled. There are no humans involved in setting or running an Hourglass or transmitting a Secret when the time comes. No human ever has custody of the Secret in our file network. It’s all self-executing smart contract technology. From other offerings we’ve reviewed thus far, each

either requires at least one class of persons to set up or maintain their equivalent of the Hourglass, are altogether not trustless (instead relying on mechanisms like multi-signatures), or do not even disclose how their systems work. For obvious reasons, these are significant concerns, each of which BqETH completely avoids.

- *BqETH is Impenetrable*. Information stored through BqETH is distributed to numerous computers. Neither we, nor third parties know where the information is actually stored, making it impossible to find and undermine. Each Secret is stored in many pieces worldwide! Not even the people operating the nodes know the information they are storing and so cannot intercept or manipulate it—such is the wonder of blockchain technology! By comparison, since other products are centralized in one form or another, the overseers of their stored information could collude and undermine your security.
- BqETH is *Unbreakable*. A Secret stored on BqETH cannot be prematurely delivered or otherwise revealed. Hourglass timer length is not based on any external clock or standard, but rather a known quantity of processing need to solve a puzzle. In BqETH, this processing cannot be completed in any time less than as selected by the user, and this cannot be maliciously manipulated or fooled, and cannot be sped-up with multiprocessing.
- BqETH is *Unstoppable*. In BqETH, nothing can prevent a Recipient from receiving the Secret upon an Hourglass' expiration. In other words, BqETH is *censorship resistant*. When decrypted, your Secrets are written onto an immutable blockchain, making them permanent. Even in the event BqETH Inc. were to cease, the protocol will continue its operation, and Secrets will still be delivered. Since most other products involve one or more humans in the transmission process, it could be delayed, corrupted or canceled without you or your Recipient's knowledge.
- BqETH is *Safe*. BqETH uses only the absolute minimal information to set up an Hourglass, including the information about you and your Recipients. This information is encrypted, hidden until the Hourglass expires. More importantly, BqETH is not a cryptocurrency wallet or storage service. By contrast, other products engage in invasive "know-your-customer" processes and manually approve or reject beneficiaries on an individual basis. They also often require custody or handling (even skimming a percentage) of the Digital Assets themselves, which is a big red flag.
- BqETH is *Flexible*. Digital Assets, wallets, password methods, and supporting

technologies are dynamic. What works today might not necessarily work tomorrow. The decision as to what will work for you and your loved ones is up to you. By contrast, other products often force you to follow their rules as to what content you store and how.

As we have shown, BqETH incorporates all of the key characteristics necessary to fulfill its role as an unbeatable system for digital inheritance. It is the only product in this sector that meets them all.

Conclusion

BqETH serves as the ideal service for the purpose of securely storing and delivering digital inheritance information. Even with all this said, this Litepaper only scratches the surface of what BqETH is all about. To get a deeper understanding of what work goes into ensuring BqETH's success, check out the BqETH Learn page and the FAQ.