1.Sharing the Original Vision of Libra

1.1 The Burden of the Current Banking System

The cost of opening and maintaining a bank account has rapidly increased due to expanding regulations and declining bank profit margins, in large part due to the rise in mobile applications that enable alternative payments systems to traditional banking. Consequently, the banking industry has aggressively shifted their cost of doing business to their customers as illustrated in the Libra White Paper.

1.2 "Unbanked" People

At the same time, there are still billions of people in developing countries that do not have access to their local banking system despite having access to mobile phones. This situation is similar to the landline phone system that was the standard before the invention of mobile phones. In these developing countries, many people skipped the landline phone system and went directly to mobile phones. This bypassing of legacy technology is set to happen again. This time, people in developing nations will skip the traditional banking system in favor of a blockchain based payment system using the mobile internet.

1.3 The Blockchain and Digital Currency Solution

As the mobile phone system becomes more widespread than the local banking system, mobile applications built on top of blockchain based payment systems will provide better and more efficient banking services than the traditional banking system. Mobile phone applications are already used for payments of everyday services such as transportation/ride-sharing, grocery delivery, micro loans, etc. In line with the

convenience and efficiency of mobile payments, blockchain technology provides the necessary safety, security, transparency and real-time transaction speed to support and improve these everyday transactions.

2. The Concerns and Challenges of Libra

Libra is an important project with wide-ranging global potential. As a single global currency and financial, it is no doubt attracting criticism, concern, and challenge. This reaction is to be expected as the project aims to create a new global currency and financial infrastructure meant to disrupt the existing financial establishment.

2.1 The Concerns of Libra

The primary concern regarding the Libra project is the involvement of Facebook- the largest social media company in the world. Facebook's reputation as a trusted entity has shifted over the years. Only recently, Facebook incurred a $5 billion fine for abusing their user data. Another concern regarding Libra is its backing by the US Dollar. This could enable the USD's dominance to extend even further than the current system, especially when considering that the US government uses dollar-based banking systems to enforce US government sanctions against other countries. Of course, on the other side, the US government may be concerned that Libra will weaken the current dominance of the US dollar. This determination of Libra's effect on the US dollar remains unknown for now.

2.2 The Challenges to Libra

As a single global currency and financial infrastructure, gaining approval from each local regulator, and satisfying local government regulations and laws, will be required. This may be a difficult and time consuming process. Libra will be backed through a basket of

selected fiat currencies or securities. The currencies will be selected based on their stability. The countries whose local fiat currency are not included in the basket therefore cannot use Libra. This is seemingly antithetical to Libra's mission statement which aims to target developing countries; however, the currency in developing countries tends to be the most unstable. There is no easy solution to this contradiction. Another issue that will need resolution is how Libra will peg its price with the basket of selected fiat currencies as the weight of each currency can change daily.

3. Introducing Violas

The idea for Violas originated from two influences. First, our vision expressed in, “BitTribe: A Peer-to-Peer Monetary System” (http://bittribe.io/) that was released to celebrate the tenth anniversary of the Bitcoin white paper, “Bitcoin: A Peer-to-Peer Electronic Cash System”. Secondly, Violas was influenced by the original vision of Libra, however, we address our concerns and the challenges of Libra above with a totally different approach. Violas is NOT a global currency nor does it issue any currency by itself. Violas is an ecosystem to issue local digital currencies and local financial applications to adapt blockchain technology thereby serving billions of people in their everyday transactions, no matter where they live. To put it simply, Violas is an ecosystem to issue a stablecoin to serve a specific demographic by pegging it 1:1 to that fiat currency. This is THE most important difference between Violas and Libra.

3.1 The Origin of Violas Name

From Wikipedia page for “viola” https://en.wikipedia.org/wiki/Viola, “The viola often plays the "inner voices" in string quartets and symphonic writing, and it is more likely than the first violin to play accompaniment parts.” These “inner voices” and “accompaniment parts” are the primary reason we chose Violas as the name for our vision of Libra. Furthermore,

the plural noun emphasizes the diversity of local fiat currencies that Violas supports and the local regulations and laws to which Violas adapts. We are not aiming to create one coin to be used everywhere, but many coins to be used in their respective jurisdictions. This collective of coins are the "inner voices" of a new digitized financial system.

3.2 The Violas Vision

The Violas vision is best illustrated by examining its contrasting approach to Libra and its ability to address Libra's above concerns and challenges:

1.Violas is not a single global currency. Instead, Violas offers communities the opportunity to issue their own local cryptocurrency and back it with their local fiat currency at a 1:1 ratio. This could result in having multiple offerings of the same local cryptocurrency from multiple local communities for different local applications. Each offering may have its own rules and purposes but use the same local digital currency with different applications. For example, each commercial bank may issue its own financial application but still use the same local fiat currency.

2.Violas offers 1:1 pegging of a local digital currency with the local fiat currency. This 1:1 pegging with the local fiat currency only requires permission from its local regulator. This will significantly simplify the application process for the required licenses and reduce the related application cost to the lowest level. Any local digital currency can be issued regardless of their pegged fiat currency's stability and exchangeability on the open market. Its primary use is for a person's everyday financial transactions. Of course, when someone wants to exchange their local digital currency with another local digital currency pegged with another local fiat currency, that person has to do it on the open market of exchange provided by the Violas Association or others.

3.Violas lets the open market determine the exchange rate between two different local

digital currencies. Violas Association will provide an on-chain exchange of different local digital currencies that provides authenticity, liquidity, transparency, real-time transaction, security, low fees, etc.

4.Each Validator Node in the Violas Association functions with its own bylaws like an individual state in the United States of America. All local digital currency issuers must submit an application to the "state" which may approve or reject their application according to their state's bylaws. The Violas Association is a federation of all states.

5.Calibra Wallet is designed to integrate Facebook applications such as Messenger, Instagram, and WhatsApp. Violas Wallet is designed to be integrated with any third party's app. The official Violas Wallet can be provided as OEM for third parties.

4.The Violas Blockchain

The Violas Association is an ensemble of Bitcoin enthusiasts and followers of Satoshi Nakamoto's vision as outlined in the Bitcoin white paper. Violas' mission is to bring Bitcoin into the electronic cash system.

4.1 Bitcoin

The Violas blockchain will inherit the Bitcoin consensus built over the last eleven years by using bitcoin (BTC) as its native coin and create Proof-of-Proof of Violas Database and Proof-of-Reserve of Violas Reserve on the Bitcoin blockchain. Therefore, Violas is a natural extension of Bitcoin. Currently, Proof-of-Proof has reached over 25% of total transactions on the Bitcoin blockchain. Bitcoin is becoming the foundation for many other blockchain systems. Similar to Bitcoin and Libra, Violas will use its native coin to manage the usage of its computer capacity, i.e. its gas fee. This system is designed to have a very

low fee under normal conditions but will increase the fee when the system is experiencing high usage to reduce the demand on the system. This is similar to Ethereum and Libra but at the lowest cost possible.

4.2 Move Contract

Because Bitcoin lacks a smart contract capability, Violas will use Move to build Local Cryptocurrency Contracts deployable on the Violas blockchain. Compared to EVM and WASM, Move provides the highest safety available for issuing Local Cryptocurrency Contracts from the Violas blockchain. Violas is not for any general purpose smart contract but is primarily for issuing local cryptocurrency contracts, i.e. stablecoin contracts that are pegged to a local fiat currency at a 1:1 ratio and backed with the equal amount of local fiat currency from Violas blockchain.

4.3 BFT Consensus

Violas will start with permissioned validator nodes and the LibraBFT consensus protocol. As the Violas blockchain evolves, Violas may modify LibraBFT consensus protocol for the future needs of the Violas blockchain. In the future, Violas will develop its own ViolasBFT consensus protocol.

4.4 Violas Data Structure

Violas will start with the Libra Data Structure and its codebase written in Rust. In the near-term, Violas blockchain will add necessary extra features on top of Libra Data Structure while maintaining full compatibility with the latest release version of Libra. In the long-term, Violas Data Structure will branch out of Libra Data Structure and its codebase, in particular, in the area of Sharding based on the “State” and Layer 2 direct payment

channel. This will bring the TPS of the Violas blockchain to one million while keeping the transaction time at 1 second.

5. The Violas Wallet, SDK and API

Since Violas does not have native apps except for the official Violas Wallet, it will focus on the development of the Violas SDK for third party apps and providing API's for the third party developers.

5.1 Violas Wallet

Violas Wallet will start with the basic Calibra Wallet elements in the codebase. Since Calibra is designed for integration with Facebook's apps such as Messenger, Instagram, and WhatsApp, it is inevitable that the Violas Wallet has started developing its own version of Violas Wallet from the beginning. The Violas Association will partner with other open source communities to continuously develop Violas Wallet.

5.2 Violas Wallet SDK for Third Party Apps

Since Violas Wallet is designed to be integrated within third party apps, it is more important to design Violas Wallet as an SDK to be portable to Android, iOS, Web, Windows, Mac and Linux systems. Violas Wallet will start development with a strategy partner's app to test out the integration with a third party app. Of course, all third party apps are welcome to join the integration test with the Violas Wallet SDK. The Violas Wallet SDK will provide two interfaces for third party apps to interact with its Local Currency Contract. One is a native interface that will process data and directly call its Move Contract to execute user transactions. Another is a light-weight interface to transfer user data to a more centralized service provider that will process the user transaction.

5.3 Violas Wallet Development API for Third Party Developers

Violas Wallet will start with joint-development for its design and make it as easy as possible for other open source communities to join the development process. Consequently, each module in the Violas Wallet will be as isolated as possible and communicate only through published API. Violas Association will adapt a code submission system similar to bitcoin_core and establish three levels of testing environments: local test chain, integration test of master branch and latest release version.

6. Bitcoin, local digital currencies and Reserves

Violas will issue its native coin, vtoken, fully backed by bitcoin (BTC) through its 1:1 mapping vbtc on the Violas blockchain and exchangeable from Violas Association. This mapping is necessary because end-users will only need deal with vtoken as a stablecoin. The primary purpose of vtoken is to function as a gas fee to run Move Contracts and their transactions, yet at a very low fee designed to encourage the spread of Move Contracts and the usage of local digital currency transactions. For every single vtoken issued from Violas, one bitcoin (BTC) will be locked into the Violas Reserve either through the Violas Investment Token from investors of a given Validator Node (the stakeholders of a given node) or through the purchase from the on-chain open exchange. Users of Violas can use their bitcoin (BTC) to purchase vtoken from Violas' on-chain open exchange. All investments and purchases of vtoken can be found in the Bitcoin transactions. Bitcoin serves as the official auditor of vtoken issued on Violas blockchain. The Proof-of-Reserve of local digital currency contracts will be provided by well-known local licensed agencies. Their standard and regular audit reports will be recorded on the Bitcoin blockchain with their digital signatures. It is important to note that Violas only supports local digital currency contracts backed with equal amounts of local fiat currency. Furthermore, all

transaction data on Violas will be digitally signed by over two third majority of Validator Nodes and its hash value will be stored on the Bitcoin blockchain everyday, i.e. Proof-of-Proof.

7. The Violas Association

The Violas Association will begin with 3-4 Initial Founding Members and expand to 27 Founding Members before the official launch and reach 100 founding members within a year. Each founding member will own and operate an independent Validator Node through an investment of 100 bitcoin (BTC) into the Violas Reserve. All financial return from the Violas Blockchain will be evenly distributed among the members. New member applications will be reviewed and approved by the majority of Violas Association members. All by-laws of Violas Association will need approval from its majority of members. The Violas Association will initially use DECENTRALIZED CYBERSPACE FOUNDATION LIMITED registered in Singapore and will register its official name as Violas Association in Switzerland before expanding to 27 Founding Members. The Violas Association will manage the Violas Reserve, outline the technical roadmap and development goals while the “state” will authorize issuers of local digital currency, etc. The standard and regular audits of Violas Association from a well-known licensed agent will be stored on the Bitcoin blockchain and digitally signed by both agent and Association as Proof-of-Proof.

8. Get Involved

Since Violas blockchain and Violas Wallet are designed to be jointly developed with other open source communities, Violas Association welcomes all open source developers and contributors to join the development of Violas blockchain and Violas Wallet. The

Association may financially reward open source developers and contributors for their contributions. The Violas blockchain and Violas Wallet will be open sourced under the Apache 2.0 Open Source License.

The Association also encourages all organizations to apply to become a Founding Member. Organizations may issue their own local digital currency on Violas.

9. Conclusion

This is the goal of Violas: to create a global ecosystem of stablecoins that enable local fiat currency and local financial applications to adapt Libra's blockchain technology in an effort to serve billions of people in everyday transactions. All local digital currency issued from Violas are backed by an equal amount of its corresponding local fiat currency. Consequently, a local digital currency can be used equally to its local fiat currency without any additional reference. This is fiat currency in the form of cryptocurrency with the modern advancements of safety, security, transparency, real-time transaction speed, audited reserve, and low cost of use built in.

Violas also encourages competition among local digital currencies. We believe more advanced local digital currencies will emerge from competition through the process of natural selection in accordance with Friedrich A. Hayek's competing currency theory.