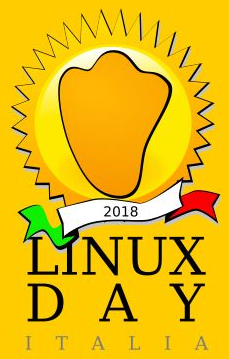
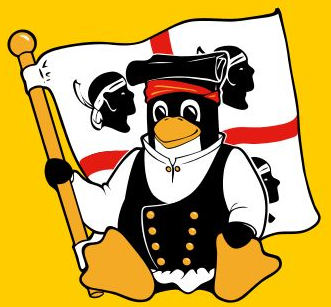
Associazione Bitcoin Sardegna

Libra la criptovaluta di Facebook

26 Ottobre 2019 Linux Day

Mauro Pili





June 18, 2019
Facebook announces Libra cryptocurrency

What's in a name?

libra ("*bilancia*")

lira

≈libra

peso

pound

Trump not a fan of cryptocurrencies

Donald J. Trump @realDonaldTrump · 12 lug

I am not a fan of Bitcoin and other Cryptocurrencies, which are not money, and whose value is highly volatile and based on thin air. Unregulated Crypto Assets can facilitate unlawful behavior, including drug trade and other illegal activity....

19.563 18.472 70.795

Donald J. Trump
@realDonaldTrump

....Similarly, Facebook Libra's "virtual currency" will have little standing or dependability. If Facebook and other companies want to become a bank, they must seek a new Banking Charter and become subject to all Banking Regulations, just like other Banks, both National...

2:15 AM · 12 lug 2019 ·

France and Germany agree to block Facebook's Libra

Bruno Le Maire
French Finance Minister

"no private entity can claim monetary power, which is inherent to the **sovereignty of nations**"

"*Facebook's new cryptocurrency should not be allowed to operate in Europe while concerns persist about sovereignty and persistent financial risks*"

https://www.reuters.com/article/us-facebook-cryptocurrency-france-german/france-and-germany-agree-to-block-facebooks-libra-idUSKCN1VY1XU

“expect a high level of scrutiny from regulators”

United States Senate
WASHINGTON, DC 20510

October 8, 2019

Mr. Patrick Collison
Co-Founder and Chief Executive Officer
Stripe Inc.
510 Townsend St.
San Francisco, CA 94103

Dear Mr. Collison,

We write to share our deep concerns about Facebook's Libra crypto-currency project and the formation of the Libra Association. We are concerned because key questions remain unanswered about the risks the project poses to consumers, regulated financial institutions, and the global financial system. We urge you to carefully consider how your companies will manage these risks before proceeding, given that Facebook has not yet demonstrated to Congress, financial regulators—and perhaps not even to your companies—that it is taking these risks seriously.

Public reporting suggests that potential Libra Association member companies have struggled to get sufficient details from Facebook about the management of the significant risks that Libra may pose. Even though Facebook is the driving force behind Libra and offers the largest user base for the new crypto-currency, the company has not provided a clear plan for how it will prevent Libra from facilitating criminal and terrorist financing, destabilizing the global financial system, interfering with monetary policy, or exposing consumers to risks currently limited to accredited investors. In fact, in response to questions from Congress about the potential risks posed by Libra, Facebook deflects the responsibility of addressing these risks on to potential Libra Association members, such as your companies, as well as other participants in the payments ecosystem.

Facebook is currently struggling to tackle massive issues, such as privacy violations, disinformation, election interference, discrimination, and fraud, and it has not demonstrated an ability to bring those failures under control. You should be concerned that any weaknesses in Facebook's risk management systems will become weaknesses in your systems that you may not be able to effectively mitigate.

These risks are not hypothetical. The New York Times recently reported a proliferation of online child sexual abuse, due in large part to tech platforms like Facebook. In fact, 12 million of the 18.4 million reports of child sexual abuse photos and videos around the world last year were attributed to Facebook Messenger. It is chilling to think what could happen if Facebook combines encrypted messaging with embedded anonymous global payments via Libra. Your companies should be extremely cautious about moving ahead with a project that will foreseeably fuel the growth in global criminal activity.

Facebook appears to want the benefits of engaging in financial activities without the responsibility of being regulated as a financial services company. Facebook is attempting to accomplish that objective by shifting the risks and the need to design new compliance regimes on to regulated members of the Libra Association like your companies. If you

Brian Schatz
United States Senator

Sherrod Brown
United States Senator

https://www.theverge.com/2019/10/9/20906348/libra-association-visa-mastercard-stripe-blockchain-us-lawmakers-schatz-sherrod-brown

21 founding members

Negative Reactions to Libra 'Puzzling'

MIKE ROUNDS
U.S. SENATOR
SOUTH DAKOTA
WWW.ROUNDS.SENATE.GOV

United States Senate
WASHINGTON, DC 20510

COMMITTEES:
ARMED SERVICES
BANKING, HOUSING, AND URBAN AFFAIRS
ENVIRONMENT AND PUBLIC WORKS
VETERANS' AFFAIRS

October 17, 2019

Nathan McCauley
President
Anchorage Trust Company
P.O. Box 89313
Sioux Falls, S.D. 57109

Dear Mr. McCauley:

I write regarding concerns recently expressed by a number of my colleagues about involvement in the Libra Association, which was formed to develop a new cryptocurrency known as the Libra. It is profoundly disappointing that my colleagues chose to address your peers in such an ominous tone, which I fear may put a chill on innovation in the long run.

I believe that there is promise in cryptocurrencies and digital payments, but regardless of how one views such technologies, it is clear that the United States is falling behind in this space. By 2022, digital wallets – the same kind of product through which consumers will transact Libra – will comprise less than 10 percent of U.S. consumer in-person point of sale payments. Contrast this with Africa, which in 2017 already had 100 million active mobile money accounts that were used by one in ten Africans. Recently the number of active mobile money users in Africa has been growing by more than 30 percent annually.

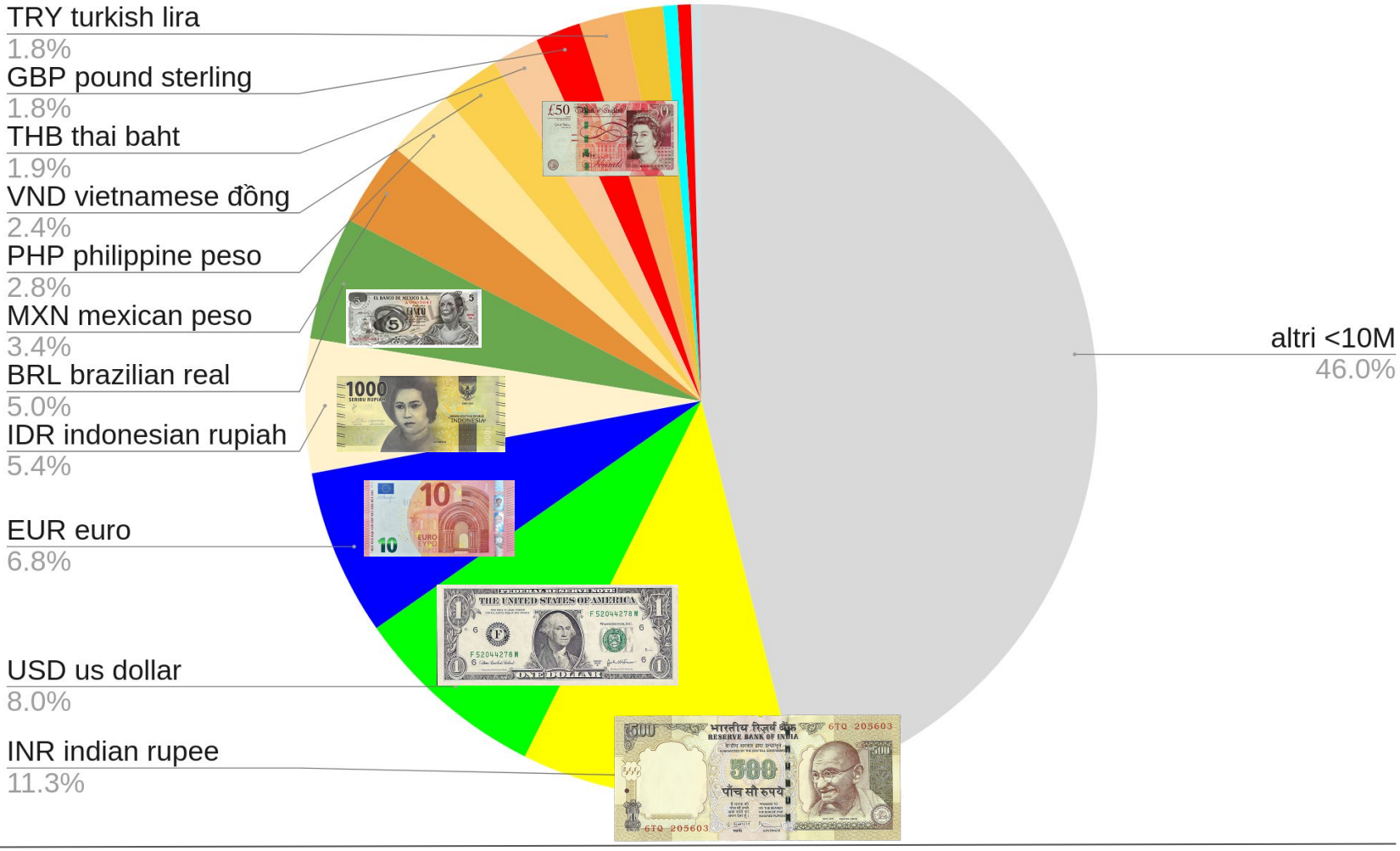
Other parts of the world are also dwarfing American innovation in payments technology. In the People's Republic of China, more than 80 percent of consumers used mobile payments last year compared to 10 percent in the U.S. Furthermore, over a 10 month period last year, the U.S. saw a dollar volume of mobile payments transactions that was less than 1 percent of the volume of similar transactions in China. With the payments industry still in its infancy in our country relative to the rest of the world, it puzzles me that my colleagues would react with such hostility to the creation of Libra.

Technologies like Libra also have the potential to help unbanked and underbanked consumers right here at home. According to the Federal Deposit Insurance Corporation's latest survey of unbanked and underbanked American consumers, 6.5 percent of households in the U.S. are totally unbanked and 18.7 percent of households are underbanked. Given the ubiquity of cell phones and internet connections, digital currencies and digital wallets have a role to play in reducing these numbers. Above all, it would be unfortunate to shun a new solution that could connect more of the most vulnerable Americans to our financial services system.

Mike Rounds
United States Senator

https://cointelegraph.com/news/us-senator-finds-negative-reactions-to-facebooks-libra-puzzling

Facebook users by currency



14 Ott 2019
Inaugural meeting of the Association members

- Ginevra, Svizzera
- **21** organizations had signed on as members
- board **5** members

$10 million each member

each founding members would be committed to backing the project with an amount of $10 million

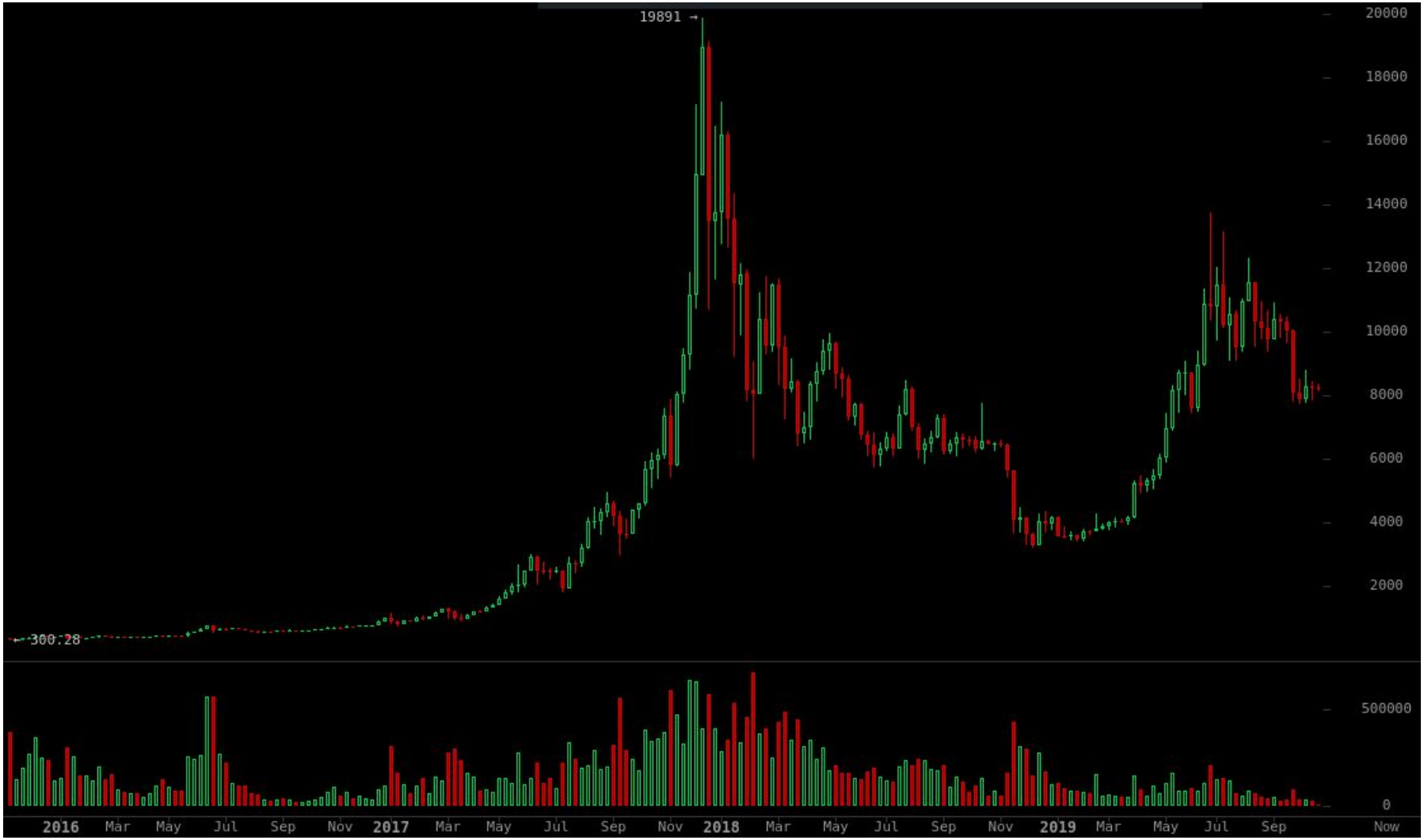
- over 1,500 entities have indicated interest in joining the Libra project effort
- approximately 180 entities have met the preliminary membership criteria

Bitcoin a way better idea

*Facebook adding **Bitcoin** (to its Calibra wallet would be a "way better idea" than creating its new currency Libra*

https://www.forbes.com/sites/ktorpey/2019/10/16/us-congressman-facebook-should-adopt-bitcoin-drop-libra-project/

Bitcoin price in $



Stable coin

we could have a series of stablecoins that represent national currencies in a tokenized digital form

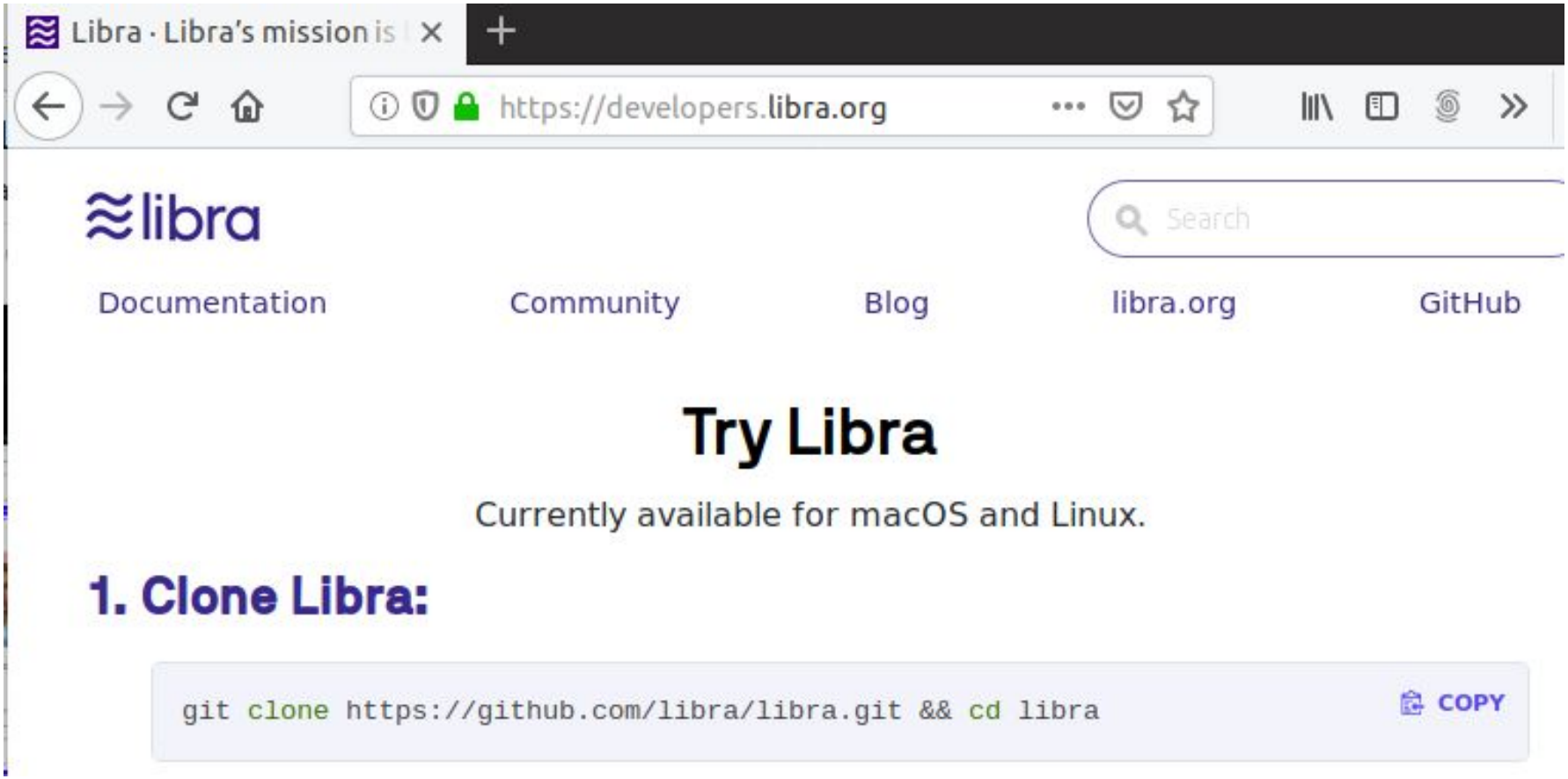
https://www.reuters.com/article/us-imf-worldbank-facebook/facebook-open-to-currency-pegged-stablecoins-for-libra-project-idUSKBN1WZ0NX

October 23, 2019 Zuckerberg hearing

hearing before
The United States House of Representatives Committee on Financial Services
An Examination of Facebook and Its Impact on the Financial Services and Housing Sectors

"*Facebook **will not be part of launching** the Libra payments system anywhere in the world **until** US regulators approve*"

Libra è open source



why Rust?

*"It looks like Libra was built on the nightly build of the **Rust** programming language*

That's not how we did releases at the DoD"

July 16, 2019 Testimony of David Marcus Head of Calibra

https://hub.packtpub.com/why-was-rust-chosen-for-libra-us-congressman-questions-facebook-on-libra-security-design-choices/

The Libra blockchain

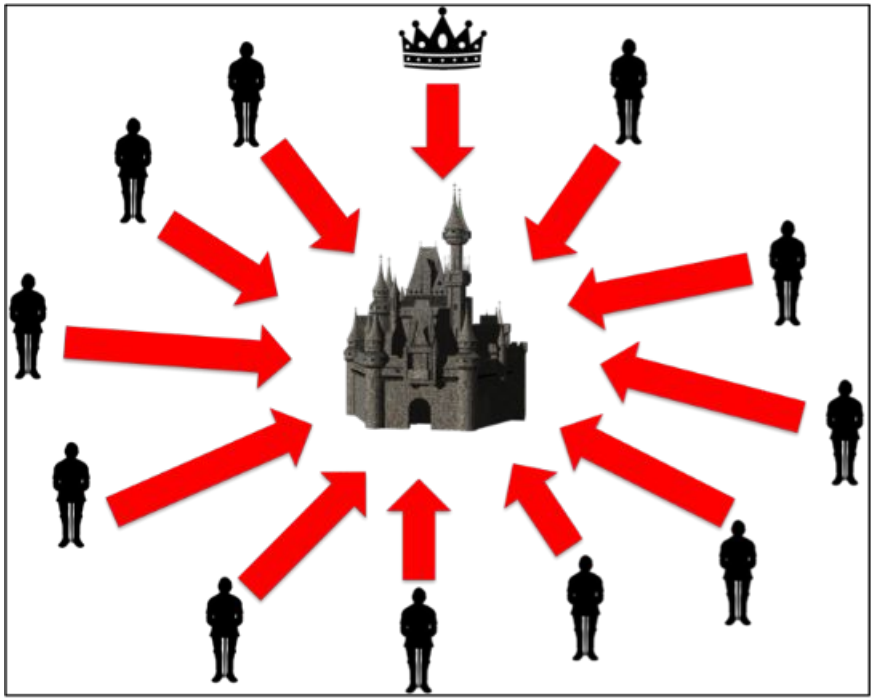
Able to scale to billions of accounts, which requires

- high transaction throughput
- low latency
- an efficient, high-capacity storage system

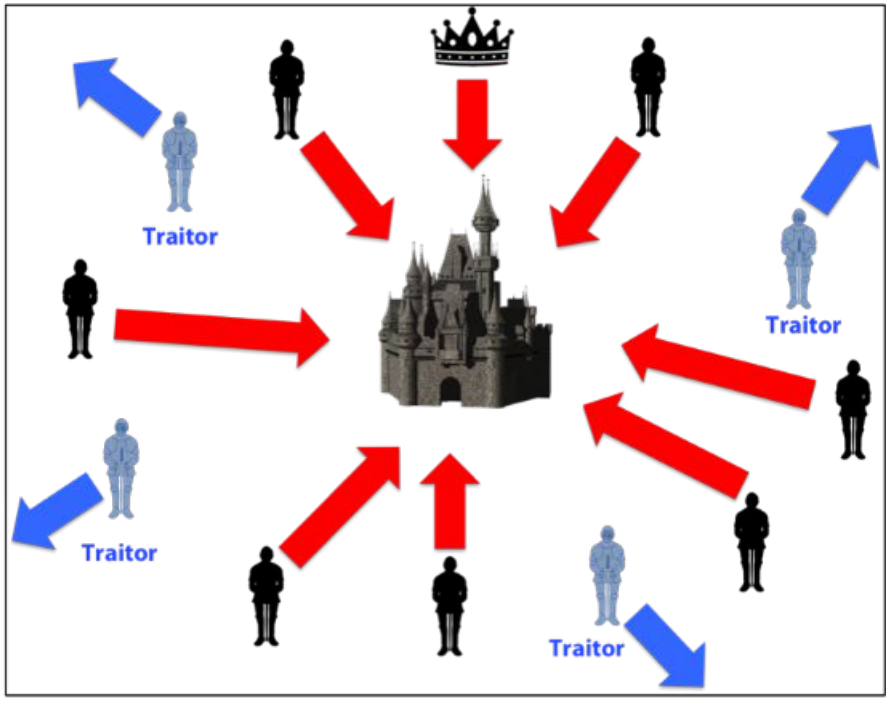
but … is a **PERMISSIONED** blockchain

LibraBFT consensus protocol

Byzantine Fault Tolerant (BFT) consensus approach

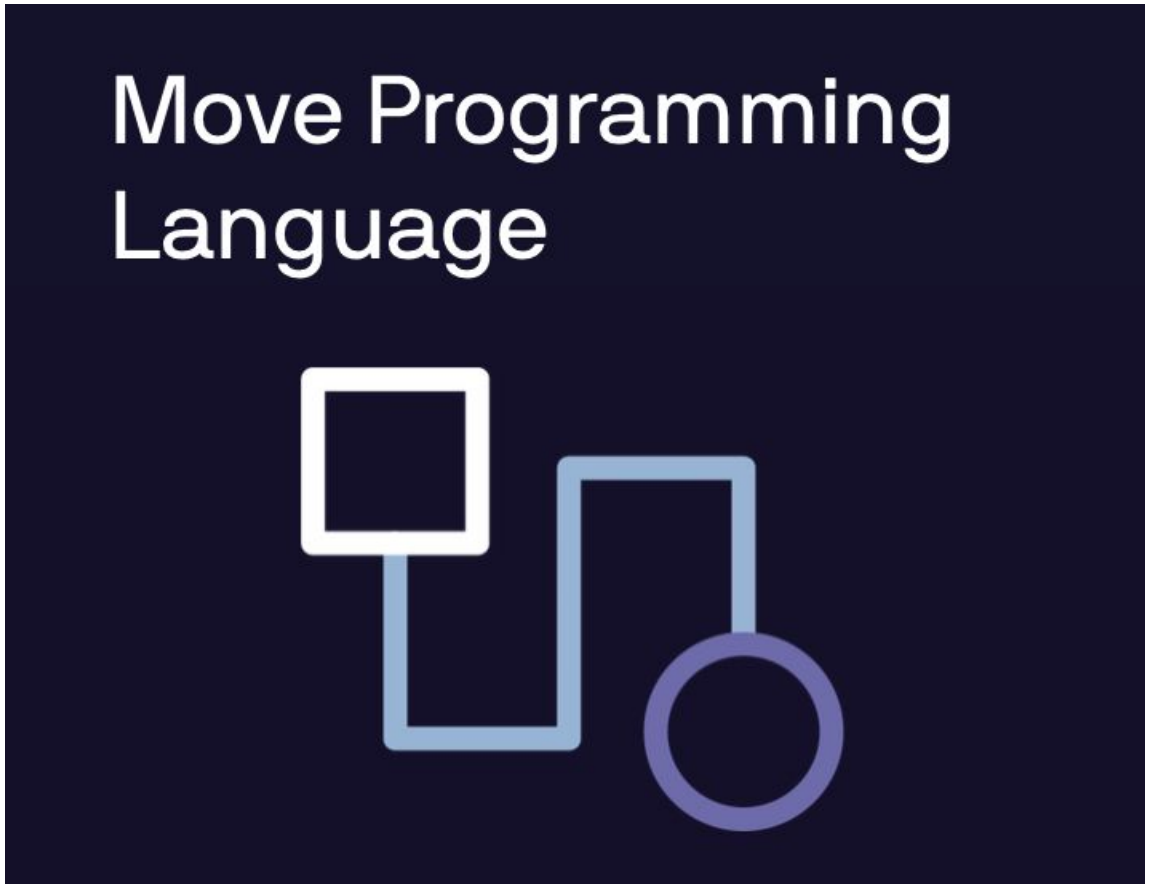


Coordinated Attack Leading to Victory



Uncoordinated Attack Leading to Defeat

Move

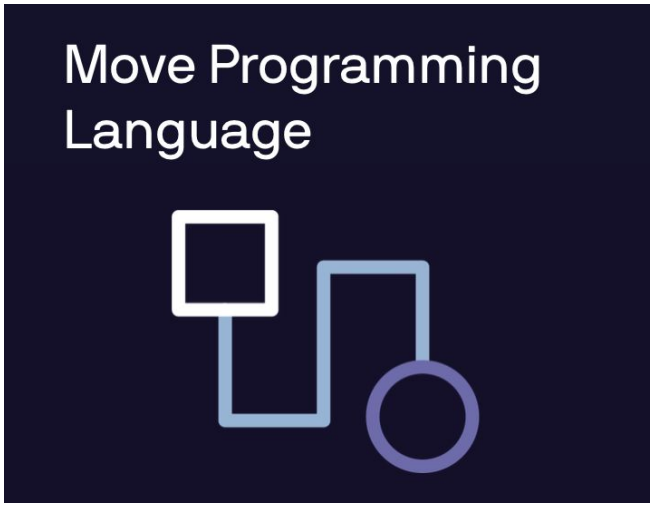


executable bytecode language used to implement custom transactions and smart contracts

https://developers.libra.org/docs/assets/papers/libra-move-a-language-with-programmable-resources.pdf

Move

a typed **bytecode** that is higher-level than assembly yet lower-level than a source language




```
// Simple peer-peer payment example.

main(payee: address, amount: u64) {
  let coin: LibraCoin.T;

  coin =
LibraAccount.withdraw_from_sender(move(amount));
  LibraAccount.deposit(move(payee), move(coin));
  return;
}
```

The bytecode is **checked on-chain** for resource, type, and memory safety by a bytecode verifier and then executed directly by a bytecode interpreter

https://developers.libra.org/docs/assets/papers/libra-move-a-language-with-programmable-resources.pdf

Testnet

libra
Testnet Explorer

Version	1
Expiration Time	2019-10-16 22:34:50
Source	0000000000000000000000000000000000000000000000000000000000000a550c18
Destination	2fbb32f551e8d152b761a4f9ffc0f2793c1e68d36227dd5ed602234cc627dfe6
Type	mint_transaction
Amount Transferred	100.0 Libra
Gas Used	0.0 Libra
Gas Price	0.0
Max Gas	0.14
Sequence Number	1
Public Key	0x664f6e8f36eacb1770fa879d86c2c1d0fafea145e84fa7d671ab7a011a54d509
Signed Transaction Hash	1a1744448cf3be2d28667248 2fe18b81195fc50e53fb97c5737b1c853f5fb48d
State Root Hash	1388140e16c98b7d8ffdd78ba752620731 9f9ecb79eb7424a53acce266fa0ac8
Event Root Hash	2d87fce1c095801232745841cb7526773d2b12dbf8a0c22edb96b5d1dab30296
Program Hex	4c49425241564d0a010007014a0000000600000003500000000600000000d5600000006000000 0e5c0000000600000005620000003300000004

https://librabrowser.io/version/1

fork!

https://github.com/open-libra