

Gold-backed Digital Currency White Paper (Rev 5)

In regards to Texas HB4903 and SB2334

CC:



Gold-backed Digital Currency White Paper - 2023 Ver 5

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I'm a software developer with 30+ years of experience. There may soon be demand from State governments for R&D, prototyping and development of gold-backed digital currencies as described in [Texas bills S.B. No. 2334 and H.B. No. 4903](#).

Abstract:

This white paper is an overview of a **GOLD**-backed **DIG**ital currency (**GOLDDIGR**) using blockchain technology and backed by a State precious metals depository. It outlines economic forces, existing State legislation, proposes a multi-State commission to guide design, describes features and technical issues.

- Economic Forces (<https://broward.ghost.io/golddigr/forces/>)
- Legislation (<https://broward.ghost.io/golddigr/legal/>)
- Proposal (<https://broward.ghost.io/golddigr/proposal/>)
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- Author (<https://broward.ghost.io/golddigr/author/>)

Key Issues

Low Energy Use:

GOLDDIGR should consume the same energy as sending an email or editing a document. Most crypto-currencies refer to "mining", "Proof of work", etc, which are energy-intensive features to create artificial scarcity. GOLDDIGR's scarcity is the gold depository.

Low Complexity:

GOLDDIGR should be less complex than other crypto-currencies. It won't require complex schemes to generate scarcity, validation, etc.

State Depositories

In 2009, there were 50 State governments and a handful of crypto-currencies. In 2023, there are 23,000 crypto-currencies but still only 50 State governments. State depositories can be a significant option for **non-inflationary wealth preservation** of high-worth organizations and people.

Cost

In 2018, I wrote a similar crypto platform using Ethereum. I believe a production system could be ready within a year by a team of five people for under \$2 million.



Economic Forces Overview

The fiat US Dollar is already older than all fiats of the past several hundred years and contrary forces are building against it. Russia and China have planned for its end since 2009, it's aging as the world reserve currency, and the current Federal debt is unsustainable.

Gold Standard

The longest period in modern history without a gold standard is now; from 1971 to 2023. The last gold standard was the Bretton Woods which operated from 1944 to 1971. The United States has abandoned its gold standard in unusual situations (Civil war, World War 1) but only for a few years.

Russian Gold Reserves

Since 2009, Russia's central bank has steadily increased gold reserves to diversify away from the US dollar and foreign currencies. Russia's gold reserves more than tripled from 600 metric tons in 2009 to over 2,300 metric tons in early 2021.

Chinese Gold Reserves

China has consistently increased gold reserves since 2009 to diversify away from US dollars and foreign currencies, like Russia. Gold reserves grew from 1,054 metric tons to over 1,948 metric tons in 2021.

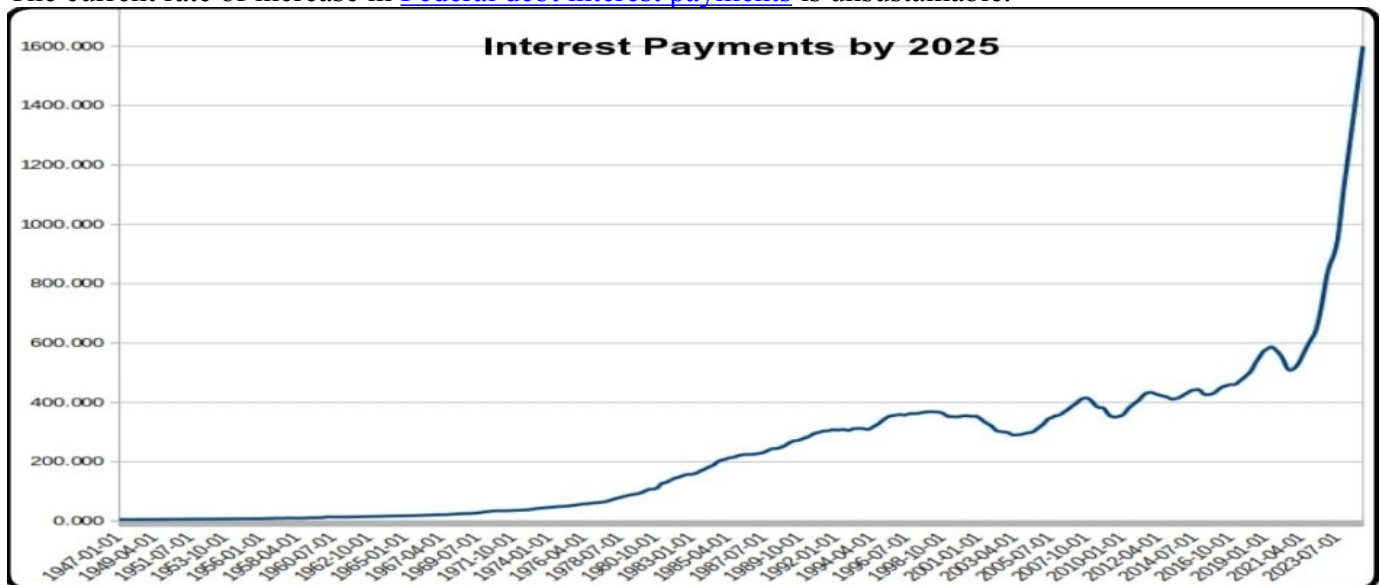
Hegemony

Western hegemonic empires have had an average lifespan of 95 years and the United States is at 103 years.

COUNTRY	DATES	DURATION	CURRENCY	
Portugal	1450 to 1530	80 years	Real	
Spain	1530 to 1640	110 years	Escudo	Gold influx from the New World
Netherlands	1640 to 1720	80 years	Guilder	
France	1720 to 1815	95 years	Franc	
Great Britain	1815 to 1920	105 years	Pound	
United States	1920 to 2023	103 years	Dollar	WW1 loans boosted US\$

Interest Payments

The current rate of increase in [Federal debt interest payments](#) is unsustainable.



Interest Rates

As debt increases, rates must fall to maintain equilibrium. Interest rates during the credit upcycle (1980 to 2020) have fallen as far as investors will tolerate. Rising rates will be disastrous for the current debt.



BRICS Strategy

De-dollarization. The BRICS financial system will use its oligopoly power to control commodity prices and bypass the US Dollar. BRIC countries control 1/2 of the world's food supply, 70% of the microchip supply (if China invades Taiwan) and enough energy to control pricing with a partner like Saudi Arabia.

	Oil	Natural Gas	Wheat	Rice	Fertilizer	Microchips	Titanium	Iron Ore	Aluminum	Nickel	Magnesium	Copper
Brazil	4			2				17		4	6	
Russia	11	23	8		15			4	6	9		4
India			13	28			2	10			4	
China	5	7	17	35	13	20	40	14	57	4	63	8
South Africa							10					
Ukraine			3				2					
Iran	4	9	2		1						1	
Taiwan						50						
Worldwide Percentage	24	39	43	65	29	70	54	45	63	17	74	12

Central Bank Digital Currencies (CBDC)

Interest and development in CBDCs accelerated in the past year. CBDCs centralize power and could lead to abuses and political interference in financial transactions.

The Debt Ceiling

The Federal debt ceiling was created in 1917. Its recent suspension is a huge warning sign. The interest payments on the debt are exploding.



USA Legislation

The **Sound Money Movement** is a [political and economic movement](#) which opposes central bank manipulation of currencies and believes that a gold or silver-based currency has greater stability. The movement supports precious metal legislation in the United States.

Three-Step Legislative Strategy

1. Establish gold and silver as legal tender
2. Create a State precious metals depository
3. Add a digital currency backed by depository

States where gold and silver are legal tender



States with pending legislation in 2023



Previous Depository Legislation

[Texas Bullion Depository Bill](#) - signed into law in 2015 to create a state bullion depository.

[2023: Tennessee Bullion Depository Act](#) - SB 150 to establish a precious metals depository.

[2023: Mississippi SB2966](#) - establish the Mississippi bullion depository

[2023: Missouri HB718](#) - create the "Missouri Bullion Depository."

[2023: North Carolina H721](#) - State Precious Metals Depository Study

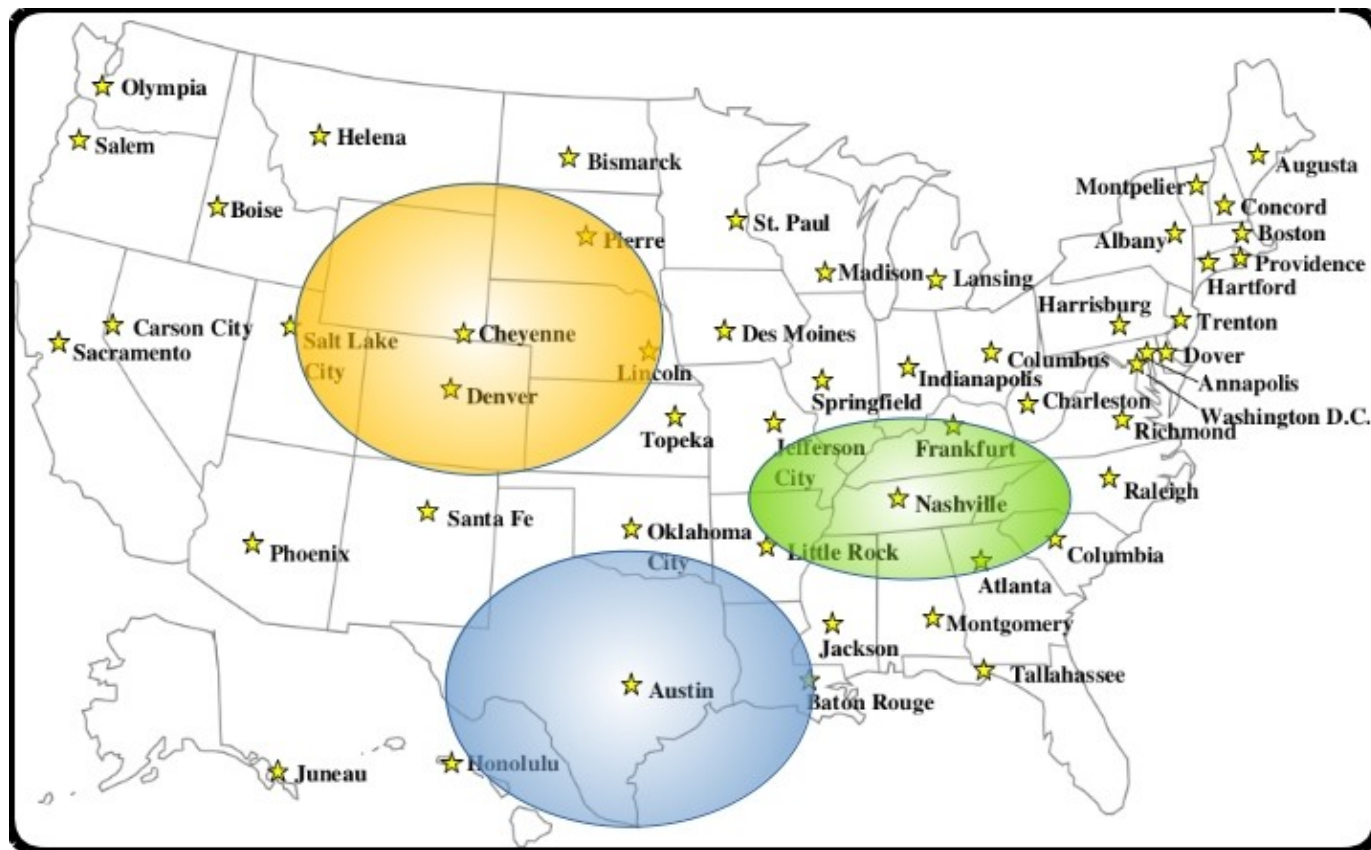
[2023: Idaho H0180](#) - invest in precious metals held in a secure depository

[2023: Oklahoma SB 816](#) - Establish a State Treasury Depository

[2023: Montana HB0884](#) - Department of Revenue authorizes a media of exchange using gold

Impedence-Matched Currency

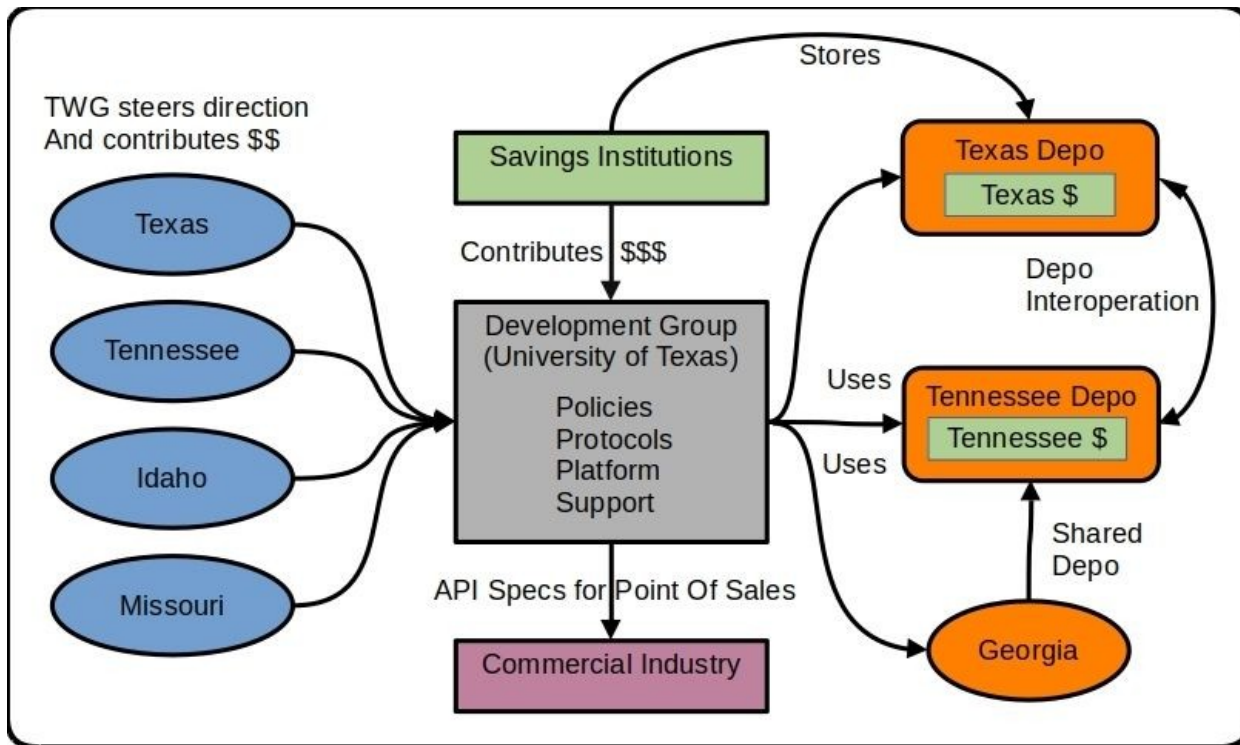
The Euro is like harnessing a horse, a mule, a dog and a turtle to pull a wagon. A "one size fits all" strategy creates stresses because regions (States) have different histories, resources, skill levels, goals. Most economic transactions are within a local sphere and a State currency would be controlled regionally.





Proposal

[Recent legislation](#) shows significant State interest in Texas-style precious metal depositories. This proposal is for a Technical Working Group (TWG) of interested parties to fund joint development of regional depositories with common procedures, protocols and digital currency platform. Here's an example.



We used this model at Federal Highway in 1994-1996 to develop ASPEN, CDLIS and ISS software with a permanent staff of five. Ten States contributed 1-2 members each quarter for a three-day design and feedback meeting (about 500 manhours annually).

5 Major Components

- 1) Development Group** - Independent organization which combines input to produce policies, protocols and platform for State depositories.
- 2) Technical Working Group (TWG)** - a steering committee of States which contribute funding, feedback and policies from part-time advisors in each State.
- 3) Regional Depositories** - State depositories which support digital currencies and interoperate with other depositories.
- 4) Savings Institutions** - contribute funding to use the State depositories and currencies as a mechanism of investment and wealth preservation.
- 5) Commercial Industry** - retail vendors, 3rd party developers to support digital currencies.

Digital Currency Platform

In 2018, I wrote a successful crypto-currency platform on Amazon AWS, [Sila stablecoin](#). This is an [improved design from 2020](#) which replaces Ethereum with a blockchain and Depository System.

Depository: stores gold deposits.

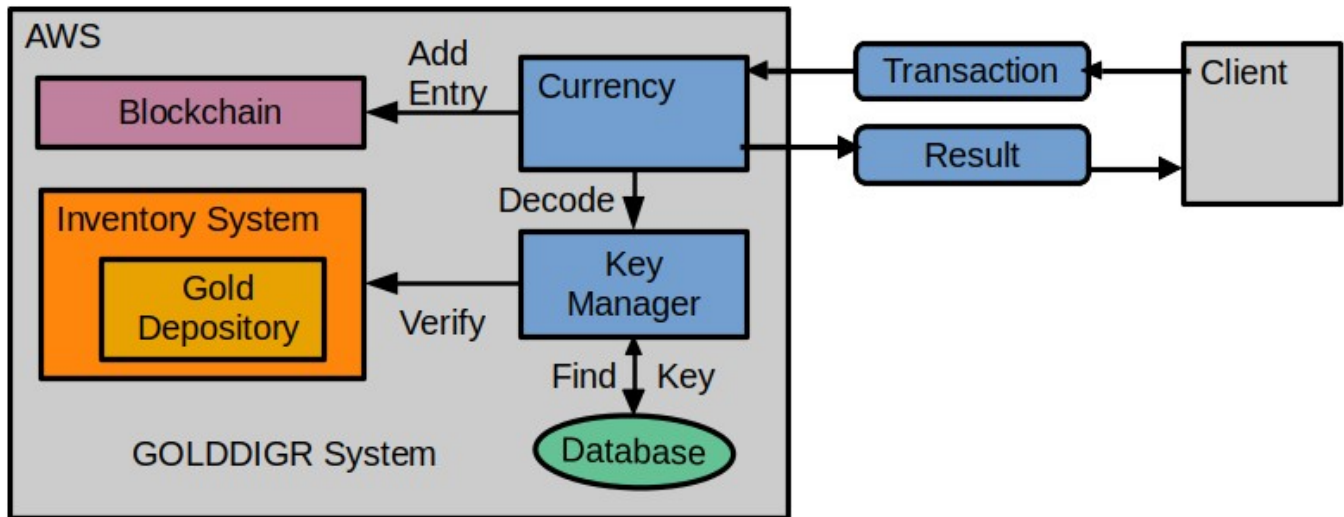
Inventory System: manages gold deposits

Currency: manages cash transactions

Blockchain: equivalent to accounting ledger

Key Manager: equivalent to safety deposit box keys

Client: Customer with gold in depository



Simple use case of transferring money:

1. Client sends a transaction message to Currency API
2. Currency forwards message to Key Manager.
3. Key Manager verifies the payer, payee and payer's balance.
4. Currency creates blockchain entry.
5. Currency sends result to client.



Conclusion

A set of co-operative State depositories can provide a parallel financial system as a safeguard against the systemic failure or political abuse of the Federal Reserve. A State-based currency could allow a State or region to continue trading global goods in the case of a US dollar failure.

Private currencies show **Ethereum is an adequate but not optimum choice**. It establishes credibility but a State depository is already credible and most clients probably prefer private transactions.

Estimate project timeline. I'm pretty sure a prototype can be built in four months by a team of five professionals and be production ready in a year.

Author: Broward Horne

Thirty-four years of eclectic software development. Thirty+ projects, seven startups, staff at a major university, four USDOT grants and corporate consulting. DEFCON presentations on predictive analytics.

State governments

From 1991-1996, I was the original architect for several Federal Highway Administration grants developing the [first handheld and wireless systems \(ASPEN, CDLIS, ISS\)](#) for motor carrier inspections. I led a quarterly design conference with representatives from ten States to define features and we achieved adoption by 40 States..

I was [Boise State University employee of the year](#) in 1994 and received a commendation from the US Secretary of Transportation in 1996.

Digital Currencies

Hands-on work on three currencies - the Digital Money Trust (1994), Jing, an IoT token prototype (2014) and [Sila stablecoin](#) (2018). I developed a minimum viable product for Sila in 100 days which was used in 50 funding demonstrations. I designed and wrote 75% of the original beta release which led to \$21 million in venture capital funding.

Contracting

Projects at Boeing (call center), Avnet (e-commerce), Aetna (insurance), DLVR.com (video analytics), Verizon (ring tone sales), Staples (e-commerce). Many with million+ transactions per day and requirements for integrations, legacy limitations, etc.

Related Material By Me

GOLDDIGR White Paper, 2023	(https://broward.ghost.io/golddigr/)
How Bitcoin Will Fail, 2022	 (https://broward.ghost.io/golddigr/bitcoin_fail)
Texas Depository, 2023	 (https://broward.ghost.io/texas_depo)
Stablecoin Hack, 2022	 (https://broward.ghost.io/stablecoin_hack)
Bitcoin Miner Bankruptcy, 2022	 (https://broward.ghost.io/miner_bankruptcy)
Polymorphic API, 2022	 (https://broward.ghost.io/polymorphic_api/)
Crypto Platform, 2020	 (https://broward.ghost.io/crypto_platform)
Pandemic and Gold, 2020	 (https://broward.ghost.io/pandemic_and_gold)
Bitcoin Scalability, 2015	 (https://broward.ghost.io/bitcoin_scalability)
Digital Money Trust, 2015	 (https://broward.ghost.io/digital_money_trust)