

Digital Coin in Brief - July 17 2009

by Paul Grignon

Digital Money

The first thing to make clear is the distinction between the general concept of “digital money” and my specific detailed proposal, “Digital Coin”.

Digital money is simply the idea that, thanks to technology, money can now be a digital object, a unique serial number that can be directly exchanged anonymously and without accounting, just as one person would hand a dollar bill to another person. You had it. Now they have it. Very simple.

Why should a piece of paper with a government-authorized unique serial number be accepted as money but not the serial number itself? The fancy printing job on the paper is to prevent copies being made. If copy-prevention can be achieved by other means, why can't we just dispense with the paper, and use a secure and unique serial number alone?

That is all that digital money need be. However, this is an evolutionary change because now, for the very first time in history, money as a unique object like a fiat bill or coin can be instantly transferred anywhere in the networked world, by anyone, from any computer.

For the first time in history, money itself becomes even more convenient and secure to move around than *promises to pay money*. No longer would we need the safekeeping, transfer and transaction clearing functions of banks in order to buy, sell invest or save.

For an extensive explanation of the promise-to-pay system and how promises have, until now, always been more convenient and secure than actual money, see:

Money as Debt and Money as Debt II, Promises Unleashed <http://www.moneyasdebt.net>

This technological leap of digital money could be used in a diversity of ways. Digital Coin is my idea of how to use it to create a steady-state completely liberated economy that can rise spontaneously from the ashes of the growth addicted Ponzi scheme we are in now.

I have been assured that the technology to do this has already been invented and proven functional in testing.

Digital Coin

Digital Coin is a specific design for a self-generating and liberated “trading medium” conceptually illustrated in the short animation:

The Essence of Money <http://www.digitalcoin.info>

It is strongly recommended that the reader watch this movie before reading further.

Digital Coin consists of 2 distinct types of trading media: Perpetual Coin which is analogous to the silver penny in the story, and Credit Coin which corresponds to the self-issued credit voucher.

Perpetual Coin is permanent, as gold and silver are conceived to be by monetary theorists, and is intended to be strictly determinate in supply. Precious metals are actually neither permanent nor determinate as supply is increased by mining, and decreased by consumptive use, yet many reformers still call for a return to precious metals to provide a “fixed” base to the money supply.

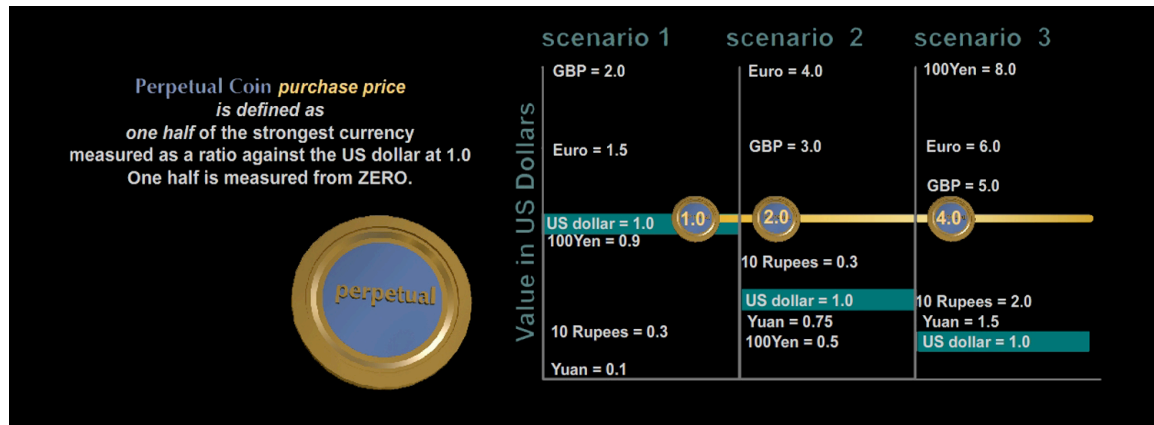
Perpetual Coin can go one better and provide a truly *fixed and permanent* quantity on which to base the comparative values of everything else. And, very unlike gold, Perpetual Coin is instantly transferable, and theft-proof. In this proposed system, Perpetual Coin is the unit of measure. *All values are expressed in Perpetual Coin (PC)*.

There have been many attempts to create standard measures of value using baskets of goods, or energy, or estimates of resources, or the idea of a “universal unskilled labor hour”. But everything is a variable. Value itself is subjective.

The approach I propose is to embrace the unavoidable relativity and justify the initial value of Perpetual Coin by nothing more than historical connection to existing currencies. This could be accomplished by selling PC for national cash or bank credit, which will be held in trust within the conventional banking system for future redemption. This is exactly analogous to chips issued in a casino except that the purpose of the chips is to facilitate trade.

I propose that the price of Perpetual Coin be *arbitrarily set* according to the formula:
PC = 1/2 x (highest currency in basket) US dollars
 Highest currency is expressed as a ratio to the US dollar defined as 1.0.

From this, the purchase price of one Perpetual Coin in any currency can be established according to the foreign exchange markets. The illustration below shows how this would tie the price of Perpetual Coin to the midpoint value of a select basket of the world's major currencies without being tied to any one of them.



Thus, Perpetual Coin would lose purchasing power at the same rate the *midpoint value of this basket of world currencies* loses purchasing power, until the creation and sale of PC is stopped. At this starting point price, Perpetual Coin is de-linked and allowed to find its own value.

Clearly, for those whose currencies are below the midpoint, Perpetual Coin would give them a lower rate of devaluation than if they were operating with their national currency. In the chart above, which is arbitrary and not meant to be prophetic, if I buy a PC in the first frame it costs me \$1 US. I can, at any time, redeem my PC for exactly \$1 US, not more or less.

In the second frame, the US dollar has sunk in value and someone buying a PC has to pay \$2 US. In the third frame a PC costs \$4 US. Thus for the buyer in the first frame, he has quadrupled his money, compared to holding the national cash, but only so long as he stays in PC. Because if he redeems his PC, he will only get the \$1 he paid for it, which now has only 1/4 the purchasing power it had when the PC was bought.

Another advantage of Perpetual Coin, during the time it is still for sale for national currencies, would be the smoothing out of currency fluctuations, making the outcome of transactions more predictable. If national cash/bank credit currencies hyper-inflate into worthlessness, Perpetual Coin, once de-linked, could be expected to rise in relative value.

Why? Because, the *real value of money is its usefulness* in getting us what we need and want.

Historically, salt and cattle, consumable and perishable items of real survival value, were replaced with metal coins, durable items of mostly artificial value. Metal coins were subsequently replaced with paper notes merely symbolic of value. And now paper notes have given way to digital data that flies around the world in an instant. In each case, trading media of lesser utility were replaced with trading media of greater utility.

Perpetual Coin represents a novel re-joining of the conceptual simplicity of anonymous physical cash with the huge advantages of digital technology and instant networking. As such its utility is unprecedented.

Perpetual Coin, being permanent, would be suitable for savings and, as such, carries with it the likelihood of hoarding, especially if its value in terms of real goods and services were to appreciate rapidly.

This brings forth the need for a complementary *demurrage* trading medium, one that loses purchasing power over time and eventually expires, and must therefore be spent rather than saved. There is also the need to be able to capitalize business and trade in the absence of Perpetual Coin or conventional money, just as the medieval traders had to do.

Accordingly, the second type of Digital Coin being proposed is Credit Coin, analogous to Anton's voucher.

Whereas Perpetual Coin is permanent and anonymous like metal coin, Credit Coin is temporary and identified by Issuer. It is a contract for redemption in goods and/or services (product) by the specific Issuer of the Coin. It is also, in default, a claim on the real assets of the Issuer.

Credit Coin is a form of stock in the Issuer, in which the Issuer guarantees to buy back the stock with product. Dividends are paid in additional product or service. Or, put another way, the Issuer honours its own Credit Coin at a higher value than Perpetual Coin or any other Issuer's Credit Coin.

This is adapted from the principle governing consumer-producer cooperatives in existence today. The essence of the idea is that, if a customer gives a farmer money for carrots in April, that customer gets more carrots than someone who just shows up to pay for the farmer's carrots in September. This is deserved because the April customer has made a commitment and taken a risk on that particular farmer, as the price and quality of the carrots is not guaranteed, only the "share of the harvest" represented by a lower price. Thus the April customer is clearly an investor not a lender.

This seems to be, simultaneously, the most **rational** and most **idealistic** way to back a trading medium. Instead of backing currency with artificially valued gold, or with nebulous concepts of limited resource bases as has been proposed elsewhere, this system very rationally backs the trading medium with the **actual goods and services that produce the need for the trading medium**. In addition, from an idealistic standpoint, the trading medium itself directly embodies the **people's faith in and support of each other**.

However, the consumer-producer cooperative as currently practiced is very cumbersome. The first problem is that it is a regression to the frustrating limitations of direct barter. The second problem is that the money used is conventional fiat or bank credit money, the availability of which is beyond the control of the parties to the agreement.

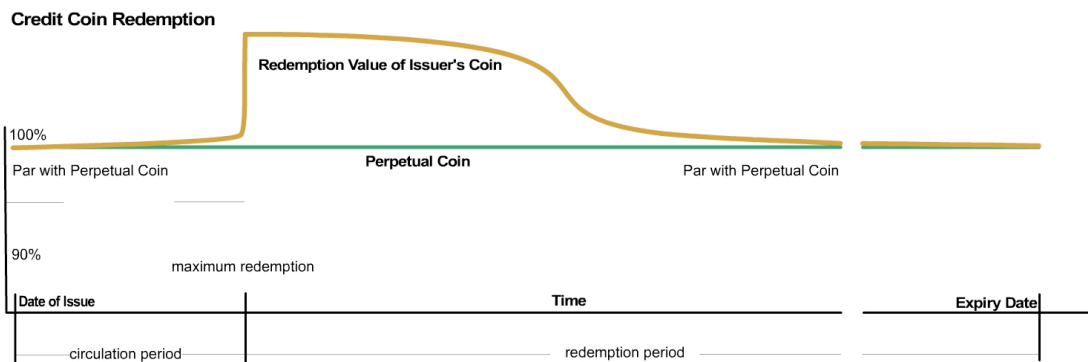
With Credit Coin we can solve both of these problems and make this principle work autonomously, fluidly, universally and automatically as the very basis of the system.

Credit Coin, like Perpetual Coin, is a digital object, basically a unique serial number. However, **Credit Coin is not permanent**. The Issuer programs the Coin for maximum yield at a time of the Issuer's choosing. The Coin may initially offer little or no dividend, then a maximum dividend that falls off with time, ultimately leading to the final stage when it becomes void except for redemption by the Issuer. Ultimately, the Coin expires and erases itself.

Credit Coin is a contract backed by promises of future productivity, and in that sense, is no different than conventional bank credit, time-dollars or LETS systems.

As in LETS systems, Credit Coin is spent directly into circulation by its Issuer. All Credit Coin is issued at nominal par with Perpetual Coin. And, each Coin is programmed with a redemption curve that defines how much of a dividend will apply at a certain time of the Issuer's choosing.

For example, a Coin could yield no dividend until the product it finances is ready. It then matures with maximum dividend on a specific date with the dividend falling off over time and eventually the entire Coin expiring if not redeemed. This type of redemption curve is illustrated below.



Only the Issuer's Coin is eligible for a dividend. This dividend provides the motivation for the Issuer's customers to obtain the Issuer's Coin in order to buy the Issuer's product and/or service. By adding this elementary programming to Credit Coin and combining it with a free global market in Credit Coin several things would be accomplished:

1. The Issuer's Coin would be physically returned to the Issuer for re-programming and re-spending, and usually when the Issuer has timed it to do so.
2. A computerized marketplace could automatically determine, at any moment, the PC value of the Issuer's Credit Coin (CC) based on demand for the Coin as expressed by $CC = (\text{buy/sell}) PC$. With the application of smoothing algorithms to iron out short-term variations, this simple equation could be used by the software to determine the ever-changing market values of all CC in terms of PC. Careful use of this algorithm would balance the ability to dampen market volatility with the need for accuracy and responsiveness.
3. Anyone with productive capacity and trustworthiness could create new purchasing power with no money in hand, no loans of money and no interest to pay in money. No entity with productive potential would ever be forced to be unproductive due to a lack of "money".
4. Issuers would not only be made capable of creating enough purchasing power to absorb their own product they would clearly be responsible for doing so and would be automatically corrected by the system if they did not. Over-issue and under-issue of Credit Coin automatically results in self-correction by means of the $CC = (\text{buy/sell}) PC$ formula because all pricing is in Perpetual Coin.
5. It is (probably) impossible to become financially rich on Credit Coin as all Credit Coin must be spent on something (ultimately on the Issuer's product) or become worthless. Wealth could only be stored long term in Perpetual Coin, real goods, and equity investments.

And... there would be little need for loans at interest, even though any Issuer could lend Credit Coin backed by their product. Defaults on such loans would devalue the Issuer's Coin automatically, and would therefore usually be made to those whose best interests were served by keeping the Issuer's Credit Coin valuable (like employees). Given that the whole system functions on the principle of 100% recycling, interest earned from such lending would have to be 100% spent and thus would not cause any arithmetic problems. (See [Money as Debt II, Promises Unleashed](#))

6. It would be possible to create Credit Coins that could only be traded among defined partners in trade, enabling both geographically local as well as industry-specific currencies using the exact same technology and value unit.
7. It would be possible for anyone to refuse to accept payment in any particular Issuer's Credit Coin, providing the general populace with a powerful means of boycotting Issuers by refusing to let the Issuer's money flow through them.
8. Management of the "money supply" in Perpetual and Credit Coin would be completely liberated from monopoly. As well, economic managers would have unprecedented tools for dealing with seasonal and other variations in sales.
9. With no interest charged anywhere in the system, and no debt owed in anything but product, there is no structural imperative to continually expand the supply of trading medium and no need to go bankrupt in contraction. Although expansion is always more enjoyable than contraction, structurally the supply of Credit Coin could just as gracefully contract as expand. There is no debt-built-on-debt house of cards set up for deflationary collapse, as with the bank credit system.
10. Solidly based in real production, and undoubtedly enjoying greater customer acceptance if the Issuer's prices don't change between time of issue and redemption, Credit Coins would be inherently resistant to inflation. This is because the Coin's value is NOT determined by the amount of Coin in circulation. It's value would be dictated entirely by what the Issuer is offering the bearer in exchange for it's Coin. In other words, ***the Issuer's prices determine the value of their Coins***. If one Coin buys a loaf of Anton's bakery bread, it's value is one loaf of Anton's bakery bread. No more no less.

Now imagine an abundance of Coin in general. There is more than enough money around to satisfy demand. What doesn't need to be spent is saved or invested in equity. Savings are like coins buried in the backyard, not deposits from which loans are made. Therefore, the quantity of savings has no effect on the value of the Coins either.

People operate from a reservoir of savings and Issuers are never in debt monetarily. That is because all Credit Coins are contracts for redemption in goods and services only, never money in any form. Each Issuer is responsible for their own Coin and clearly must spend 100% of it back to their customers to succeed. Very different? Yes! More to come.

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