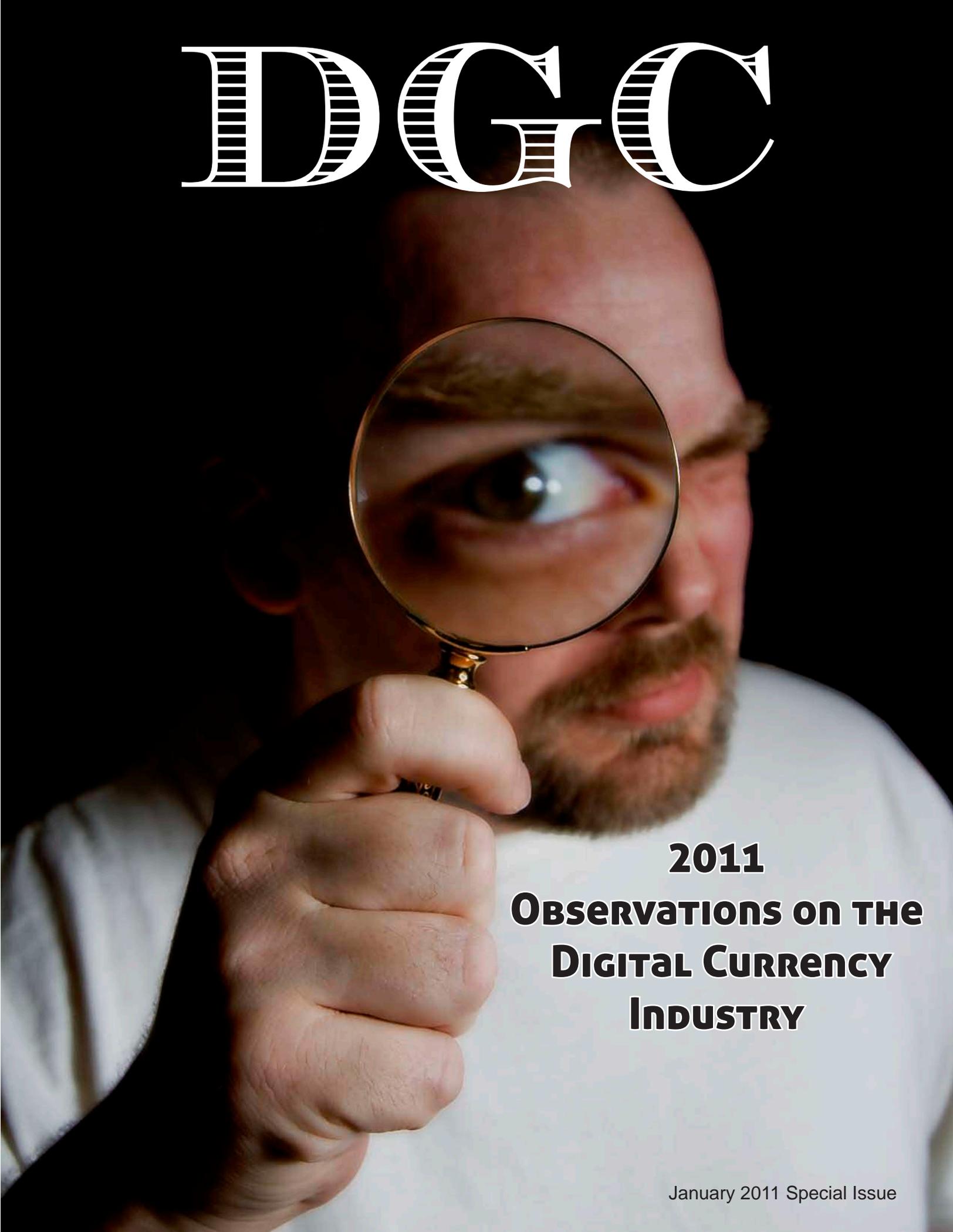


DDGC

A close-up photograph of a man with a beard and mustache, wearing a white shirt. He is holding a magnifying glass over his right eye, which is significantly enlarged and detailed within the lens. The background is dark, making the man's face and the magnifying glass stand out.

2011
OBSERVATIONS ON THE
DIGITAL CURRENCY
INDUSTRY

January 2011 Special Issue

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This special issue document takes an informal look at non-bank digital currency payment systems, online value transfer software and digital precious metals (DGC). Focus is placed on the evolution of these systems over the past decade along with the developments of new models including software, products and regulations.

- 1. Banks did not create the Internet and don't own or regulate it. Credit card companies don't have an online payment monopoly.**
- 2. Consumers & merchants around the world should have as payment options a selection of convenient online payment methods other than restrictive bank products such as credit cards.**
- 3. The global marketplace created by the World Wide Web provides an ideal commercial platform for privately issued digital currencies.**

In late 2009, the FDIC estimated that approximately 17 million Americans were living without a bank account¹. However, across America, personal bank accounts are still considered an essential part of everyday life. In addition to a bank account, virtually every U.S. consumer has several plastic credit or debit cards. At the end of 2009 Americans held the following cards which were circulating in the US.

- **270 Million Visa credit cards, 382 Million Visa debit cards²**
- **203 Million MasterCard credit cards, 125 Million MasterCard debit cards³**
- **48.9 Million American Express credit cards⁴**
- **54.4 Million Discover credit cards⁵**

In fact, according to the Federal Reserve Bank of Boston, in January of 2010, 80% of American consumers had a debit card and 78% of them also had a credit card.⁶

Shoppers with an existing bank account or plastic card, already have a convenient way to send an online payment. Consequently, bank account and credit card holders, particularly those in the U.S., are not active users of “digital currency”. The question

these shoppers always ask is “If you already have a credit card for shopping online why would you need anything other method?”

Currently, in the United States, there is almost no demand for digital currency products plus there exists an additional stigma attached to those people who do not have a U.S. bank account and credit card.

It is estimated that less than 1% of the U.S. population has ever used a digital currency account. In fact, the concept of privately issued digital currency is so strikingly different from conventional ideas of money that its everyday use may be difficult to comprehend.

Digital currency transcends outdated credit cards and offers a safe, inexpensive e-commerce option to all Internet users in every country around the world. Unlike high interest credit card shoppers, digital currency users are more likely to prefer cash. Research shows that in a digital currency network, cash is often the preferred way to pay. No bank account or credit card is ever required.

What is Digital Currency?

The term “digital currency” is not a phrase referencing or describing online banking. Unlike government issued money which moves through conventional banks and financial institutions, digital currency is issued by private parties and only circulates over the Internet. It has some similar features of bank transfers, however, unlike credit cards and bank accounts, digital currency transactions are not plagued with fraudulent charge backs, high fees or long wait times for cleared funds.

Private companies are the underwriters and issuers of digital currency not government agencies. Consequently, these accounts are not FDIC insured as you would find in a regulated U.S. bank. Thus, it is important to understand that digital currency accounts

are only as safe as the private company issuing the units and the governance of the assets backing those digital units.

In contrast to massive government agencies which issue national currencies on a grand scale, private digital currency companies are often extremely transparent. These online payment companies go through regular third party audits and publish all the information online. Most digital gold currency companies publish a list of the actual precious metal bars from the quarterly audited bar count. It is not unusual to find posted on the DGC company's web site a copy of the accountant's certification and a list of bar numbers.

Digital currency accounts offer global users convenience and freedom by permitting the electronic movement of funds from anywhere in the world using a personal computer or mobile device. No bank or bank account is ever required. From the convenience of home, anyone can establish a digital currency account without jurisdictional restrictions and without the expensive hassles of a personal bank visit. Accounts in one jurisdiction may be instantly created by a consumer who lives just a kilometer away in a nearby town or another one thousands of miles away in a far away country. No office visit required. The financial freedom and opportunity that digital currency offers to both individuals and global businesses far exceeds the utility of a conventional bank account.

Digital currency accounts are unlike conventional bank accounts. Digital currency accounts are free, easy to set up plus all the transactions clear instantly and are irreversible.

Unlike credit cards, digital currency offers an "ease of use" which encourages both local and global online commerce. A simple account set up process, paired with the easy access provided by personal computers & cell phones, plus the lower costs of account operation gives digital currency a large advantage over banks. Outdated bank products such as credit cards, which were first introduced in the 1950's and never intended to be used online, prevent entry for new online merchants, restrict online commerce to those lucky enough to "qualify for a card" and

widespread card industry fraud creates massive additional expenses.⁸

The operation of a digital gold currency system is completely different from the present day fractional reserve banking system. Today's banks only require a tiny fraction of the money represented by a bank account to be actually held by the institution. Digital bank deposits and bank loans are created from thin air in a "ponzi like" structure with no assets backing the paper. Modern banking is debt built on top of debt over decades and decades of time. In total contrast to modern day banking, there is no debt created when digital gold currency is issued.

Digital gold currency offers a clean break from conventional bank debt. In total contrast to the "ponzi like" structure of fiat national currencies, privately issued digital currency units are at all times 100% backed by precious metal. DGC accounts are denominated in gold by weight not dollars, yen or euros.

Digital gold currency units are a representation of the allocated physical gold held in the vault. Unlike a conventional dollar denominated bank account which remains constant with the value of a dollar bill, DGC accounts fluctuate in value with the daily price of metals. The value of a user's DGC account as priced in national currency will change each day because of the changing spot prices.

Unlike a bank wire or a credit card transaction, digital currency transactions clear instantly and 100% of the received funds are available for spending. Additionally, all transactions in digital currency are final and irreversible. There is no such thing as a digital currency "charge back".

Digital currency accounts are not subject to expensive foreign currency conversions as is often the case with cross border bank transfers or overseas card charges.

These privately issued electronic value transfer systems represent a huge leap forward in global financial services. Without traditional bank delays and high fees, digital currency account holders can transfer funds internationally in a manner that approximates traditional bank wires.

“Credit and debit card fraud is the No. 1 fear of Americans in the midst of the global financial crisis. Concern about fraud supersedes that of terrorism, computer and health viruses and personal safety.”

--UNISYS Security Index: United States 2009⁷

A cost savings is especially obvious when using digital gold currency accounts. Since digital gold is denominated into internationally recognized weights of precious metals, the inconveniences traditionally associated with international financial transactions, such as calculating exchange rates for another nation's currency, are eliminated.⁹

Payments between DGC accounts are measured by amount of gold by weight transferred between accounts. DGC users understand that a gram of gold in one country is equal to a gram of gold in any other country. No floating national currency conversion or exchange loss ever occurs on any DGC transaction as it would in a bank transfer. Pure gold holds the same value everywhere in the world and can effortlessly move between countries around the world.

The ability to conduct transactions in digital currency is constantly available 7 days a week. This feature makes digital currency more accessible and convenient than other methods of bank transfer which may be limited by normal business hours and international time zones. Unlike a bank customer, the digital currency account holder may send or receive funds from anywhere in the world at anytime secure in the knowledge that those funds will clear only moments later.

Additionally, digital currency transactions can be conducted from any location or device which permits Internet access. GoldMoney even offers an iPhone application providing customers convenient & secure mobile access.¹⁰ Webmoney offers Telepat phone access and Keeper Mobile software.¹¹ All of today's popular digital currency systems can be accessed by web enabled devices. Even as far back as the late 1990's e-gold was offering customers convenient mobile access.

Internet digital currency systems empower non-bank customers, encourage trade and advance business relationships around the world. Conventional bank accounts have the opposite effect. Because of jurisdictional restrictions and a selective application process which prevents many merchants from operating online-- bank accounts, credit cards and traditional credit products act to restrict trade and block access to global Internet markets. The ability to

provide an instantly clearing easily accessible method of transferring funds and conducting business on a global scale gives digital currency an extraordinary advantage over conventional bank products.

Several of the emerging countries around the world which presently lack accessible bank and credit card merchant services already contain large populations of new Internet users. These global territories are digital currency's present day emerging markets. Elements such as wide-spread cash use, distrust of local banks and low credit card penetration represent prime opportunities for expansion of the global digital currency business.

In the decades ahead, non bank populations of Internet users around the globe will increasingly rely on digital currency to assist them in local and global non bank financial transaction.

Properties of Digital Currency

Cash refers to money in the physical form of currency, such as banknotes and coins. Digital currency is a representation of cash born from the emerging technology of the Internet. Digital currency was originally created as a electronic mirror image of cash and is sometimes loosely referred to as money that circulates online but does not move through a bank or financial institution. Online digital currency user's are not required to have a bank account. This type of digital currency Internet account is often viewed as a bank alternative.

Digital currency is an electronic method of value transfer. Since digital currency was created in the "image" of cash it carries most of these same qualities:

- **readily acceptable**
- **transferable**
- **untraceable**
- **anonymous**
- **portable**

Digital currency enables standardized international financial transactions without the red tape or high fees required by traditional banks. The ability of an individual or businesses anywhere in the world to conduct complex, immediate, and irreversible

international financial transactions is of great benefit to modern day society.

During the 1990's, a majority of digital currencies held no distinction between a personal or merchant account. Whether the customer was a company, merchant or individual the "one-size-fits-all" account worked well for all users. The original model of a digital currency account was very quick and easy to open and this model is still in wide use today. The ability of a merchant to instantly open and use an online retail sales account is a huge advantage in favor of digital currency systems.

Privacy

For a few computer experts, such as digital cash pioneer David Chaum, online privacy means anonymity for the payer during payment and un-traceability of the payment such that the issuer or "bank" cannot tell whose money was used in a particular payment.

However, today's users and observers should understand that all of the present day widely used commercially successful online digital currency systems are closed account systems. This means that when one transaction occurs a permanent record is made of value in that account being debited from the sender and credited in the receiver's account. In the large retail commercial digital currency operations of today, there is no such thing as anonymity, all transactions, large or small, are identifiable and traceable.

While many new software programs for the anonymous transfer of value have been created over the past decade and are still being developed today, this kind of system is not yet in wide commercial use.

Designs for anonymous value transfer systems have only recently moved from the drawing board to working Open Source models. This type of software is still evolving and will definitely be a big part of future online commerce, however, from the functioning anonymous value transfer systems now available online none are yet commercially viable projects.

As compared to the online commerce giants of today,

large anonymous transfer systems might be viewed as "still in the development phase". Because of today's post 9-11 regulatory environment around the world, large commercial companies do not undertake the development of anonymous value transfer projects. These systems are created by individual software designers. Today there are many individual systems in development and beta release. These are discussed later in this document.

Complete privacy and commercial viability are two features which exist at opposite ends of the online payment spectrum.

History shows that as the smaller systems become commercially accepted by retail merchants and users, these systems also tend to evolve into highly regulated enterprises. Over the last decade, this has been the case with all of the large popular digital currency platforms now operating on the Internet.

Digital currency companies grow and evolve or they simply die. During this evolution, some the original privacy features which grew from David Chaum's model often get "lost in the shuffle".

Unfortunately, growth in the digital currency business means new products, innovation and more regulation.

Unlike physical cash transactions which leave no records and are "unconditionally untraceable", today's commercial digital currency transfers always leave a detailed transaction record. The entire path of value transfer from start to finish on every digital currency account for the last decade can be found on the operator's backup files.

In the early years of this industry and even during the past decade, account anonymity was touted by the government prosecutors and the press as a heavily marketed characteristic of digital currency. With the large successful digital currency companies of today, this is simply not the case. Based on years of experience, the popular digital currency issuers recognize that a high degree of user identification is needed to comply & compete in today's online e-commerce marketplace.

Why would anyone bother using digital currency



- VPN anonymous surfing
- Anonymous email
- CryptoRouters
- Closed-Group Networks
- Encrypted and distributed data storage
- Multi-hop routing
- Multi-jurisdictional structure
- New products in development

<http://www.cryptohippie.com>

Peace of Mind – Second to Nothing

when we have banks and credit cards?

When compared to ‘traditional’ online payment methods, such as credit cards or online payment services like PayPal, digital currency can sometimes seem cumbersome and risky. Why would anyone choose digital currency over a credit card? Fortunately, with a decade of market data now available, it is possible to examine a customer’s motivation for using digital currency products and digital gold currency.

As online commerce has generally required a bank account, credit cards and a merchant processing account, a primary reason today’s users are attracted to digital currency is a lack of basic access to these traditional banking products. Digital currency has emerged as an excellent alternative to conventional bank products.

In past decades before the Internet, regions of the world which did not offer local bank options were dominated by alternative value transfer systems such as hawalas or other payment products including Western Union money transfer. With the invention of the commercial Internet and the low cost of personal computers, alternative online payment products have been quickly becoming the dominant method of payment in global markets where:

- 1. local banks and traditional banking products are not available**
- 2. the average income of the local people is too low to afford expensive bank accounts**
- 3. there is a great distrust of banks causing the local population to seek out Internet alternatives**
- 4. the local government currency is not stable and subject to wide fluctuations in value thus driving businesses to seek online foreign alternatives**
- 5. historically a region follows a culture-of-cash where conventional banking products such as credit cards are not accepted because of social values or religious beliefs**

Today, the world’s most successful digital currency system is Webmoney Transfer (<http://www.wmtransfer.com>) . Webmoney’s system emerged after the 1998 collapse of the Russian banking sector.

The reasons behind the birth of Webmoney Transfer illustrate almost all of the above points.

Costs

A compelling reason to use digital currency instead of bank products is cost effectiveness. Compared to processing credit cards online or even using a card based service such as PayPal, digital currency transactions are on average about 1/3 of this cost. This same reasoning is used when choosing digital currency over a bank wire. On average a domestic wire transfer will cost \$20-\$25, However, sending the same amount through a digital currency system might cost less than five dollars. This is about 1/5 of the bank’s cost. By using digital currency, any online business can experience a significant savings over expensive bank card products and bank fees.

The second compelling reason to choose digital currency is efficiency. Digital currency transactions including digital gold currency, clear instantly and the funds received are immediately available to be withdrawn. A domestic bank wire transfer may require 2-7 days for the funds to clear into an account and international wire transfers are even longer. Bank delays can occur due to holidays, weekends or time zone differences. Digital currency companies are open for business 24/7.

A third reason digital currency trumps bank products is reliability. All digital currency transactions are final and there is no possibility of a reversal. Anyone who has done business using credit cards is aware of the massive fraud which occurs each day in stolen credit cards. It is a common event for merchants to have a fraudulent card transaction reversed and that amount removed from the company bank account. Credit card reversals or “charge backs” can happen anytime, even weeks after the transaction.

Comparing unreliable credit card “charge backs” with the finality of a digital currency transaction, the more reliable means of accepting payment is clearly digital currency. Online merchants can greatly benefit from using digital currency over a credit card merchant service.

Complex international bank transactions, which

might involve a client's local bank, the correspondent bank, the main office of a foreign bank and a local branch office of the recipient's foreign bank have the potential for mistakes. These type of business payments, large international transactions or foreign commercial transfers, have been known to get "lost in transit" for several weeks.

In total contrast, global digital currency transactions occur online between just two parties, the sender and the receiver. No matter where customers are located around the globe, each digital currency transfer takes only moments. Furthermore, each party has instant verification of the completed transfer without the possibility of any funds being lost or reversed.

In countries with large non-bank populations, digital currency offers a key service by providing consumers with a means of completing cross border financial transactions to and from a user's home country. These digital currency systems provide an extremely cost effective global method of transferring money to family members and business associates.

This combination of cost effectiveness, efficiency and reliability makes digital currency the preferred alternative to conventional banking for many of the world's citizens.

How payment system innovations emerge is associated with a number of factors specific to each country, including the underlying economic environment, technology, preferences, actual and perceived costs, along with regulations, policies, and practices of government and private entities with significant influence on the payments system.¹²

Digital Currency Case Study: Webmoney Transfer™

- **PayPal's target market: Adults in some countries that shop & send online payments but already possess a bank account and/or credit card.**
- **Webmoney's target market: All person's shopping or doing business online that have**

a bank account and also all Internet users that don't have a bank account or plastic card

One observation about Webmoney Transfer™ is that each year the company continues to successfully emerge as a bigger & better organization than existed in previous years. New products, new markets and new customers all contribute to a spectacular annual growth record. Webmoney Transfer's total turnover in 2009 was \$7.52 Billion and this software platform executes more than 25 million transactions daily.¹³

Webmoney Transfer™ has millions of users around the world and offers multi-currency e-wallets, online financial services, P2P payment solutions, internet based trading platforms, merchant services and online billing systems. Webmoney is a powerful hardware and software system which enables Internet users to conduct safe transactions in real time using Webmoney units (WM-units). Special software known as WM Keeper helps manage online Webmoney funds and operate these accounts.

This is an extremely transparent system which provides transaction statistics on the Webmoney Transfer™ web site updated every three hours!

Webmoney was created right after the Russian banking collapse of 1998. At the height of this crisis many large Russian banks including Inkombank, Oneximbank and Tokobank closed. As a result, millions of Russians saw their saving disappear and lost money when the banks shut them out. After this collapse, local citizens and businesses turned to non-bank Internet alternatives.

The Webmoney Transfer™ platform went live in 1998 and since that time it has evolved & grown through many upgrades and dozens of new features. The changes have included security updates, new feature additions which attract new customers and changes that make the system more convenient for existing users. Because the marketplace for electronic payments is an ever-changing landscape, technical growth including constant software upgrades is critical for the success of any digital currency company.



WebMoney

www.metdeal.com, financial@metdeal.com

As one example of this continuing technical evolution, Webmoney Transfer™ has a remarkable history of developing improved customer access. From these software additions and accumulated technology upgrades, today's user has a variety of options for accessing a Webmoney purse.

- **WM Keeper Classic is a standalone software client installed onto a user's computer and offers access to the most features.**
- **WM Keeper Light offers web browser based access and does not require any software download or installation on a user's computer.**
- **WM Keeper Mobile is an application for managing WM-purses on mobile devices (mobile phones, smart phones, communicators, pocket computers).**
- **E-Num is an easy to use high security access application providing a simplified log in and even offers biometric fingerprint identification.**
- **WM Keeper Mini introduced in 2009 is not as powerful as Classic or Light, but very user-friendly & popular.**
- **Telepat - Permits access to E-purses via voice (Phone) or Mobile device**

Unlike the traditional model of an online payments company such as PayPal, which requires all customers to have existing bank relationships, Webmoney Transfer recognizes that not all Internet users have bank accounts. Webmoney Transfer™ has created products targeting customers from all levels of the online commerce world. No bank account or credit card is ever required to open or operate a Webmoney account.

Over the past decade, this growing company has been very successful at identifying markets which are saturated with non-bank Internet customers. Webmoney Transfer has built an empire creating products which cater to this often excluded group of Internet users.

To avoid expensive currency conversions, there are multiple Webmoney e-purses denominated in popular world currencies. Each currency has its own purse.

In 1998 the original Webmoney purse was the WMZ U.S. Dollar purse. The system now supports multiple purses, secured by various resources and tangibles.

- **WMR — equivalent to RUR(R-Purse),**
- **WMZ — equivalent to USD (Z-Purse),**
- **WME — equivalent to EUR (E-Purse),**
- **WMU — equivalent to UAH (U-Purse),**
- **WMB — equivalent to Belorussian Roubles (B-Purse),**
- **WMY — equivalent to Uzbek Sum (Y-Purse)**
- **WM-C and WM-D — WMZ equivalent for transactions on C- and D-purses (credit purses)**
- **WMG — equivalent of Gold (G-Purse) WebMoney Gold. Opened in mid 2007**

Webmoney Transfer™ operates the software platform responsible for transacting all digital payments. The various e-purses are formed as completely separate corporate entities from the software transaction platform. Each purse is organized as a stand alone legal entity in its own jurisdiction. Despite the massive number of transactions that take place each day, no funds from any one purse are ever commingled with the financial business of another currency purse. Since each purse is a closed loop system, it is impossible to exchange funds from one currency to another type of currency. The software platform will not perform any exchanges between purses. This is unlike PayPal or traditional bank credit cards which will automatically swap currencies as the payment requires and then charge the customer a non-negotiable extraordinary currency conversion fee.

WM-C is a fascinating Webmoney credit unit of currency. Any user can arrange a line of credit and loan funds to any other user through the WM-C and WM-D purses. This is a very popular and easy to use product which avoids all red tape a consumer might encounter obtaining loans through a conventional bank.

The WMG purse (gold backed) emerged in 2007 and targets a specific consumer demographic that uses the gold purse as an online saving tool and a hedge against inflation.

Webmoney also offers

- **Prepaid digital currency cards**
- **Integration with walk up cash-in payment terminals for deposits/funding a WM account¹⁴**
- **WM Notes, a digital surrogate of coins & banknotes. WM Notes are stored online & can be controlled by users via access codes. Notes are used for immediate transactions in small amounts.¹⁵**
- **Webmoney system supports the extension of credit from any user to any other user. (loan or borrow) Members can purchase goods & services or pay others with extended credit. The amount & terms of the extended payment are automatically registered in the system's transactions history. The Webmoney system offers controls for timely repayment of loan amounts.**
- **Convenient fingerprint account access using the E-num authorization system and a USB-equipped biometric fingerprint reader¹⁶**
E-num is an authorization system ensuring WebMoney services access with a secret key (a unique cypherpad) stored in a user's mobile phone/PDA or a biometric identifier.

Business cooperation with existing financial companies that offer non-bank products has also helped to propel Webmoney's growth. This cooperation includes:

- **Funding WME Purse with UKash vouchers in many cities. Vouchers are sold locally for cash¹⁷**
- **Integration with Paymer software & hardware system that manages payment obligations in the form of electronic checks payable to the bearer¹⁸**
- **International prepaid mobile operators now top-up in 35 countries using Webmoney including mobile operators in South-East Asia, Middle East, Africa, South and Central America**
- **Integration with DIRECTeBanking.com.**

Funding of WM accounts. Method allows customer to complete a direct credit transfer based on the high security standards of online banking & TÜV certified data privacy. Order is instantly confirmed & non refundable (no charge backs) Available in: United Kingdom, Germany, Austria, Switzerland & Belgium^{19, 20}

- **Direct exchange gateway with Yandex. Money (digital currency)**
- **Business cooperation with the Dinero MasterCard prepaid card**
- **Skype payments can be made directly from a WM-purse in many countries including Indonesia, Vietnam and Byelorussia**
- **Available PaySpark Mastercard, designed for withdrawal of funds via ATM machines (with Mastercard logo) Top up from WME purse**
- **Available gKard, ATM cards for cash withdrawals on Visa/Plus network machines**
- **Business cooperation with Ocean Bank, HandyBank, RBK Money**

Over the past decade Webmoney Transfer has received awards and a large amount of recognition for their popular and innovative online payment products.

- **WebMoney Transfer winner National Bank Award most popular online Payment System. A leading professional award for banking and payment industry in Russia 2007**
- **WebMoney Transfer winner of the National E-Finance Innovations Awards 2008. WebMoney Keeper Mobile application name Product of the Year 2008 as the best e-commerce software application.**
- **Runet-2009 Award winner in the "Business and Finance" category**

Partnership and cooperation with other industry businesses has been a strong feature of Webmoney for many years. In late 2009, Webmoney joined the Russian Electronic Money Association (REMA).



Sector 123

✓ Seamlessly Encrypted Offshore Internet Connection

✓ Keep your data yours

✓ Bottom low 7-day trial VPN prices.

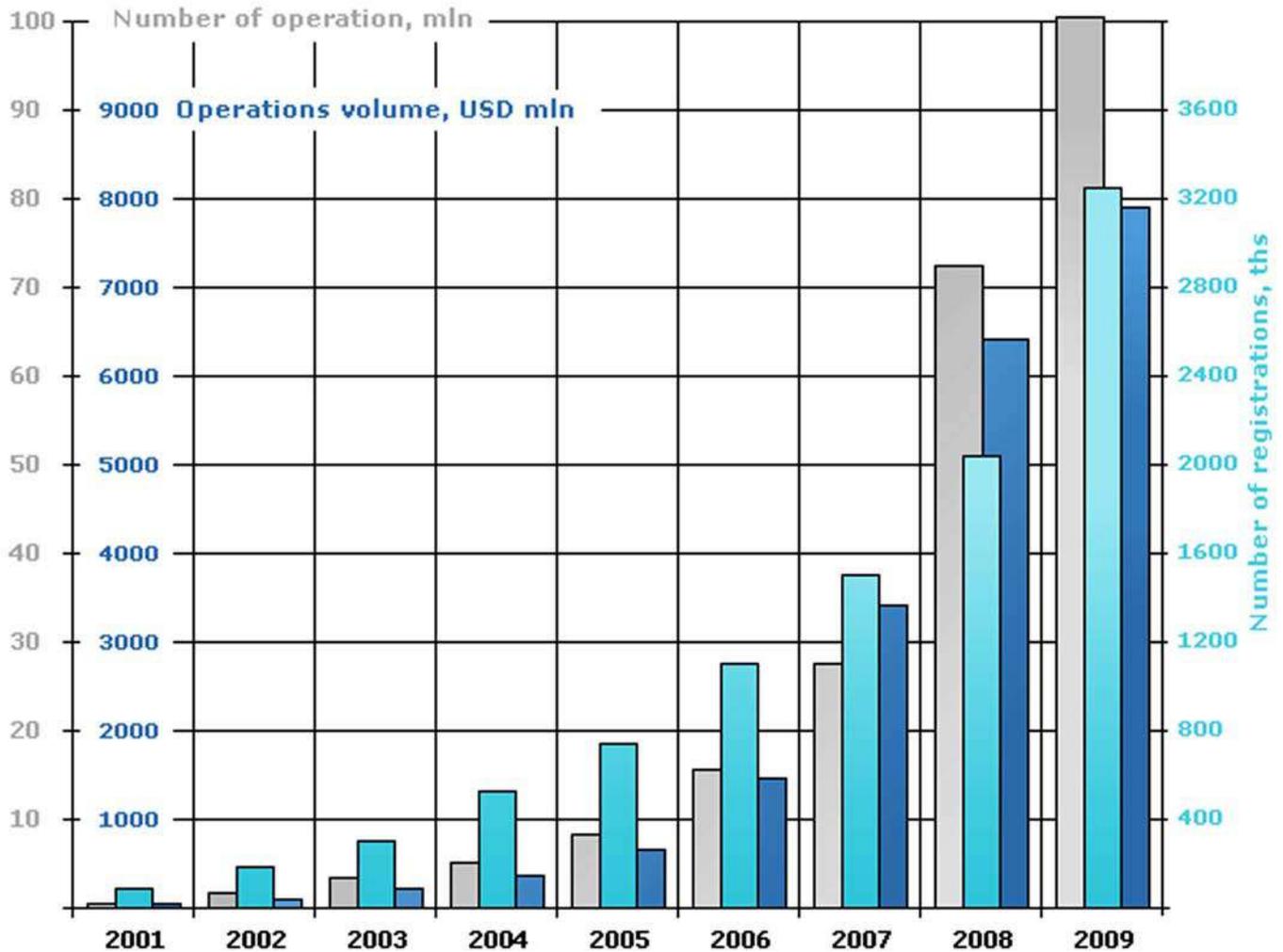


Consider protecting your private and business sensitive information from being intercepted by not-always-so-benevolent people. If you travel frequently, or maybe not so frequently, you are probably a Wi-Fi user.

Did you know that most Wi-Fi hot spots are non-encrypted Wi-Fi networks, which can be infiltrated by outside persons from a distance? Visit our website and learn about the ultimate solution you want to have.

<http://www.sector123.com/>

Statistics years 2001—2009



The major aim of the Electronic Money Association is to encourage the development of the e-money market to make it a popular financial facility in the interests of consumers, state and industry. The basic ways to achieve this aim is to work on legal aspects of the e-money market regulations, to widen cooperation between market participants and interactions with other business entities and government bodies, to increase market transparency, to work out best practice standards, to popularize e-money-based services and protect the rights of their consumers.²¹

Profiling the features of Webmoney Transfer™ uncovered these facts:

1. Online and offline technology is always being updated and upgraded
2. Additional features and new conveniences catering to customers are continually developed and added
3. New digital currency products targeting identifiable consumer markets are always being developed
4. Webmoney Transfer is constantly seeking expansion into new global marketplaces.

The graph shown below illustrates how Webmoney Transfer's global business development strategy has directly translated into more business, more customers and more assets.

As of October 2010, Webmoney Transfer had more than 12 million account registrations in the system, customers and agents in 8069 cities throughout 70 countries around the world along with 59,000 places

“Digital gold
currency (DGC)
is an important
achievement for
the development
and growth of
global ecommerce.”

--James Turk, CEO of GoldMoney

where customers could fund a Webmoney purse.

Digital Gold Currency

Digital gold currency (DGC) is actual gold ownership combined with the latest Internet technology. DGC is not a paper certificate or a promise of gold, DGC is allocated gold held in a vault on behalf of the customer.

Most people can't imagine life without a currency-issuing central bank, however, the Internet makes this life possible for every person on the planet. Given a lifetime of devotion to banks and credit cards, the concept that everyday money does not originate with some government agency is difficult to understand.

In just the past decade, digital gold currency has evolved into a dynamic financial solution to the problems created by decades of paper fiat money. Digital precious metal combines the sound money properties of gold and other precious metals with the worldwide reach of the Internet.

Digital gold currencies are defined as privately owned digital precious metal holdings & other Internet value transfer systems which allow domestic and international payments denominated in the standard weights for gold and precious metals.

Precious metals have been used as money and currency for thousands of years. Digital gold currency is an ideal mechanism for global trade and B2B transactions. Universal transactions in digital gold restore free trade and encourage both local and global commerce.

Historical trade problems, such as the constantly changing value of international paper currency, which works to block the flow of trade, can be entirely circumvented using digital gold currency. In today's commercial world, those opposed to using gold as money in everyday transactions complain that gold has a practical problem. The issue arises because gold is too valuable to represent the smallest required unit of currency for everyday transactions. Buying a bag of groceries may only require a gold payment the size of a grain of rice. Digital gold currency overcomes this issue by allowing division down to 1000th of an

ounce. By moving the decimal place, the payment of just a fraction of one cent can easily be transferred. Each digital gold currency, 100% backed by pure gold in an allocated stored precious metals account, acts as one transnational alternative currency.

Because digital currencies circulate over the Internet and not through existing bank networks, fees are considerably lower, transactions clear instantly and these systems are always open & available 365 days a year. The business day for digital gold currency never stops and never slows down for a weekend or holiday. It makes no difference from what time zone your business is operating, digital gold currency accounts are always open for payment.

Digital gold currency enables speed and precision in payments between transacting parties, regardless of location or time of day.

Just as mobile banking has provided an enormous business platform in countries where conventional banking has failed to serve the public, digital currency is now gaining market share with a similar non-bank demographic.

A convenient feature of all digital gold currency transactions is that no physical metal changes hands during the payment. The entire transfer is an accounting entry in a closed digital system. For DGC transactions, only the recorded ownership of the precious metal changes as one account is credited and another debited. Ownership is simply notation in a database. During an everyday payment, no additional funds or metal enter or exit this closed system.

Because digital gold currencies are denominated into internationally recognized weights of precious metals, inconveniences traditionally associated with international financial transactions, such as calculating international exchange rates for another nation's currency, are eliminated.²² Digital gold currency facilitates commercial transactions as it moves instantly from account to account without reference to the character or the credit of each user.

Today's private digital gold currency systems far more transparent than any government controlled paper money systems. All of the popular DGC companies

“The gold standard was neither conceived at a monetary conference, nor was it the brainchild of some genius. It was the result of centuries of experience.”

--Ferdinand Lips

THE GOLDMONEY GUARANTEE

*For every single goldgram and silver ounce recorded within GoldMoney, there exists an **identical quantity** of grams of pure gold and ounces of pure silver in allocated storage at insured Vaults.*

*All of the gold and silver bullion owned by our customers and recorded in their Holding is stored **free and clear** from any creditors' claims against GoldMoney or the operator of the Vault.*

*Title to the gold and silver bars in allocated storage at the Vault at all times **vests only** in the various GoldMoney users.*

*The operator of each and every Vault maintains **insurance coverage** at least equal to 100% of the value of the gold and silver owned by GoldMoney's customers.*

*All of the gold and silver bars meet in all respects the **standards and Chain of Integrity** requirements established by the London Bullion Market Association and by GoldMoney.*

GoldMoney

offer independently audited holdings and make this verified information available from their web sites.

Not only do DGC companies claim to use digital units 100% backed by precious metals these transparent companies prove it every day with audited public statements and documented reports. GoldMoney even offers a video tour of the vault holdings. Please note, it has been more than 50 years since the official gold reserves of the United States have been independently audited by a third party. (see <http://www.gata.org>)

“The actual full amount and quality of gold held in the [U.S.] Depository has not been confirmed by a third-party auditor since the Eisenhower administration.”²³

At any time, a new or existing DGC customer can verify the precious metal assets held by the private digital gold currency business. Precious metal inventory reports include, the amount of bars, the bar purity, the actual bar number along with the net and gross weight of each bar. Published third party independent audits are normal for most all large DGC companies.

Total value of a metal-backed digital currency account is based on the daily spot price of the commodity. Consequently, the daily balance in a digital gold currency account may fluctuate with the upward or downward price movement of the underlying precious metal.

The operators of these digital precious metal systems are responsible at all times for ensuring there is an amount of precious metal in the audited vault locations which is equal or greater in value to the amount of digital units represented in the system. As an example, if there are 100 kilos held in the vault, then only 100 kilos of digital units can be represented by that online system. Generally, if a retail customer buys one ounce of digital units, another account must sell and ounce worth of units. No digital units are either created or destroyed by this transaction. GoldMoney even posts this guarantee.

Regarding gold ownership, the account holder is the actual owner of record for that precious metal in the holdings account. Digital gold currency represents the allocated ownership of precious metal and is not a

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www.e-dinar.com

Digital currency company	Direct payments to company bank accounts.	Third party independent exchange transactions permitted
GoldMoney	YES	YES, The only 3rd party agent is Kitco
e-Dinar	YES	YES
Webmoney	NO	YES, only 3rd party agents
Pecunix	NO	YES, only 3rd party agents
iGolder	NO	YES, only 3rd party agents
gBullion	YES	YES

paper representation, a share of stock or a secondary claim on a pool of company assets.

A GoldMoney® DGC account is a “holdings” account and always represents allocated ownership of the underlying precious metal. This is different from a bank account. Banks will accept a deposit and register an amount owed to the customer and those funds may be loaned out again or used by the bank. GoldMoney® does not accept deposits and no deposit liability is created by the gold held in the vault. The DGC owner of the gold in storage retains ownership at all times. GoldMoney “holds” the gold on behalf of the customer and the precious metal is never loaned out or used for another purpose. This is also different from share ownership in most precious metal ETFs.

An ownership share of a precious metal ETF is often just a secondary claim to the company’s business assets. Regarding the popular SPDR GLD Gold Shares ETF (<http://www.spdrgoldshares.com/>), the following is discussion on the GLD prospectus from Mr. Trace Mayer, J.D.⁷⁴ Further on page ¹²

“Gold held in the Trust’s unallocated gold account and any Authorized Participant’s unallocated gold account will not be segregated from the Custodian’s assets. If the Custodian becomes insolvent, its assets may not be adequate to satisfy a claim by the Trust or any Authorized Participant.”

A digital gold currency account, plain and simple, is the digital representation of actual gold.

The GoldMoney® Registered 400oz Gold Bars facility enables any customer with enough gold holdings to register ownership of one or more

400oz. gold bars stored in the company vaults. After registering the bar it is then associated with the customer’s unique Registration ID and displayed publicly on the GoldMoney Gold Bar Lists.

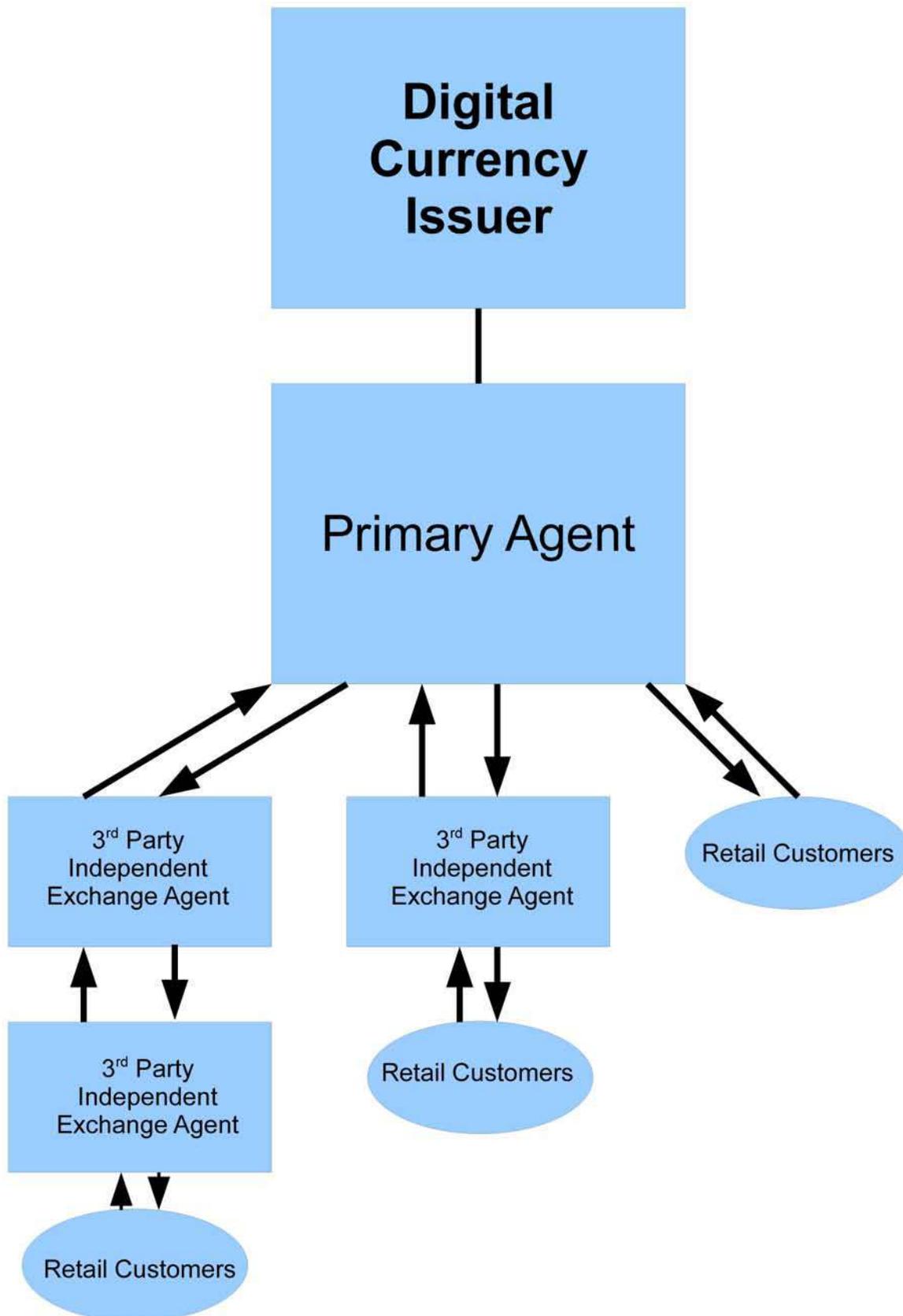
One classic model of a digital gold currency system from the past decade was composed of a corporate entity acting as the digital currency issuer, a primary agent working with the issuer and any number of third-party independent exchange agents. The primary agent maintains both cash and digital gold currency liquidity at all times.

The business entity responsible for circulation of the digital units is often linked to a foundation or trust which is often responsible for the accumulation and vaulting of the precious metal backing the digital units.

The third party agents in various countries around the world perform exchanges to and from national currency for retail customers. The “retail customer” group included private individuals and others acting as merchants accepting digital currency in exchange for goods and services.

The currency issuers are responsible for maintaining the digital system which includes customer account information, monitoring online activity, collecting transactions fees and maintaining all transaction records. However, since retail customer national currency transactions do not occur at the issuer’s level, in this classic model of a DGC, the issuer has no national currency financial transaction records such as where a wire originated or the date an outgoing payment was made. DGCs are closed accounting systems and one of the issuer’s main jobs was to track of the movement of the digital units from one account to another. Due to increased regulations in the United

Example of a classic digital currency system circa 1990's
Movement of Value.



States, the responsibility of the DGC issuers and operators has changed drastically over the past 5 years.

U.S. and global regulations regarding the transfer of funds has become more restricted over the past several years and this tightening of rules has caused changes to the original DGC model. Some DGC companies operate in a dual model requiring large transactions to originate with the company bank accounts. As an example, e-dinar permits third party independent exchange agents but also advises direct payment to and from the company bank accounts for larger transactions. Several other popular DGC companies also permit direct payments to the currency issuer's bank account.

In the case of digital currencies backed by national currency and not precious metal, those issuers manage pooled bank accounts in which users' funds are maintained until withdrawn.

There have been two growing trends in the digital gold currency marketplace. One is the very obvious move away from retail merchants accepting DGC for the sale of online products and services. The number of small online retail merchants using digital gold currency as a payment method has dropped significantly in just the last 5 years. At the same time there has been a tidal wave of new consumers buying digital gold bullion for asset protection. Over the past few years due to global economic uncertainty, consumer's have shown a big move towards using digital precious metal as a saving account, a hedge against inflation and a global banking alternative.

A contributing factor to the decline of digital gold currency's retail use can be linked to the rapid expansion of alternative online payment products. Prepaid products and local cash solutions for non-bank customers have emerged in many countries thus reducing the retail consumer's need for online digital gold currency payments. e-Wallet solutions backed by national currency have also been springing up like weeds in every country imaginable and replacing digital gold as a non-bank solution. In the late 1990's digital gold currency was the only online cross border non-bank solution for consumers. However, in the just the past 5 years entrepreneurs and financial companies have begun targeting this demographic

with new innovative national currency products.

Digital Gold Currency Case Study: GoldMoney®

GoldMoney® payments combine the world's oldest money, gold, with the world's newest Internet and mobile phone technology. This digital gold account provides a safe, easy and inexpensive way for anyone to buy, sell or hold precious metal.

From anywhere in the world an Internet connection enables GoldMoney® customers to buy & sell or store gold, silver & platinum. A further advantage of the patented GoldMoney® system is the ability to send and receive payments denominated in gold between other GoldMoney® accounts. While the book entry ownership of the metal changes during a payment, all of the vaulted precious metal stays fully insured and securely stored in London, Zurich and Hong Kong.

At the time of this company's launch in 2001, GoldMoney's stated objective was to offer a payment system of unequalled integrity. In less than a decade GoldMoney® has achieved this stated goal on a global scale.

Companies such as Webmoney Transfer™ and GoldMoney® actually listen to the feedback from their customers and work to offer catered retail solutions.

James Turk, founder and director of GoldMoney® said: "Most of the changes to the site were a direct result of customer inquiries and suggestions. We believe this redesign that we launched today successfully meets their requests."²⁴

GoldMoney is not a paper promise of gold. The precious metal in a GoldMoney allocated holdings account is identified as the customer's direct ownership of the metal.

Because GoldMoney is a digital gold currency, this type of Internet account offers 24/7 access which provides valuable liquidity for all users.

Today GoldMoney has about 15,000 customer

holdings accounts and a client base that is spread throughout more than a 100 countries. The total value of all metal and cash held for customers now exceeds \$1,400,000,000 (One billion four hundred million U.S. Dollars)

Anyone can set up an account at Goldmoney.com in as little as 10 minutes. GoldMoney's patented digital gold currency is called "goldgrams" and 1 gold-gram® = 1 gram of pure gold. The smallest payment possible in a GoldMoney account is one mil (0.001gg) GoldMoney is one of the original digital gold currency companies pioneered by Mr. James Turk. Precious metal can be purchased online from the safety of your own home and sending or receiving goldgram® payments from one account to another is permitted. GoldMoney offers competitive pricing, transparent rates and physical delivery of 100gram or kilo sized bars of pure gold.

GoldMoney's headquarters along with their database servers are located in Jersey, British Channel Islands, a British crown dependency in the English Channel near the north-western tip of France.

Important points:

- **All accounts offer customers the ability to pay and receive digital metal from another GoldMoney customer**
- **While third party agents are permitted, Kitco is currently the only agent and a majority of customer funds flow from the customers' bank directly to GoldMoney**
- **Extensive KYC and AML policies have always been in operation requiring prior identification and identity screening before using a GoldMoney account**
- **The Customer Acceptance Program (CAP) requires all customers to provide identification and source of funds just like a bank account**

GoldMoney has received four US patents for inventing digital gold currency.²⁵

The awarding of these patents acknowledges that GoldMoney is advancing the 'prior art' of global online

payments. Namely, we have created a more advanced, and therefore better currency than the currency that now exists. The patents illustrate why GoldMoney is a currency that is ideally suited for electronic commerce.

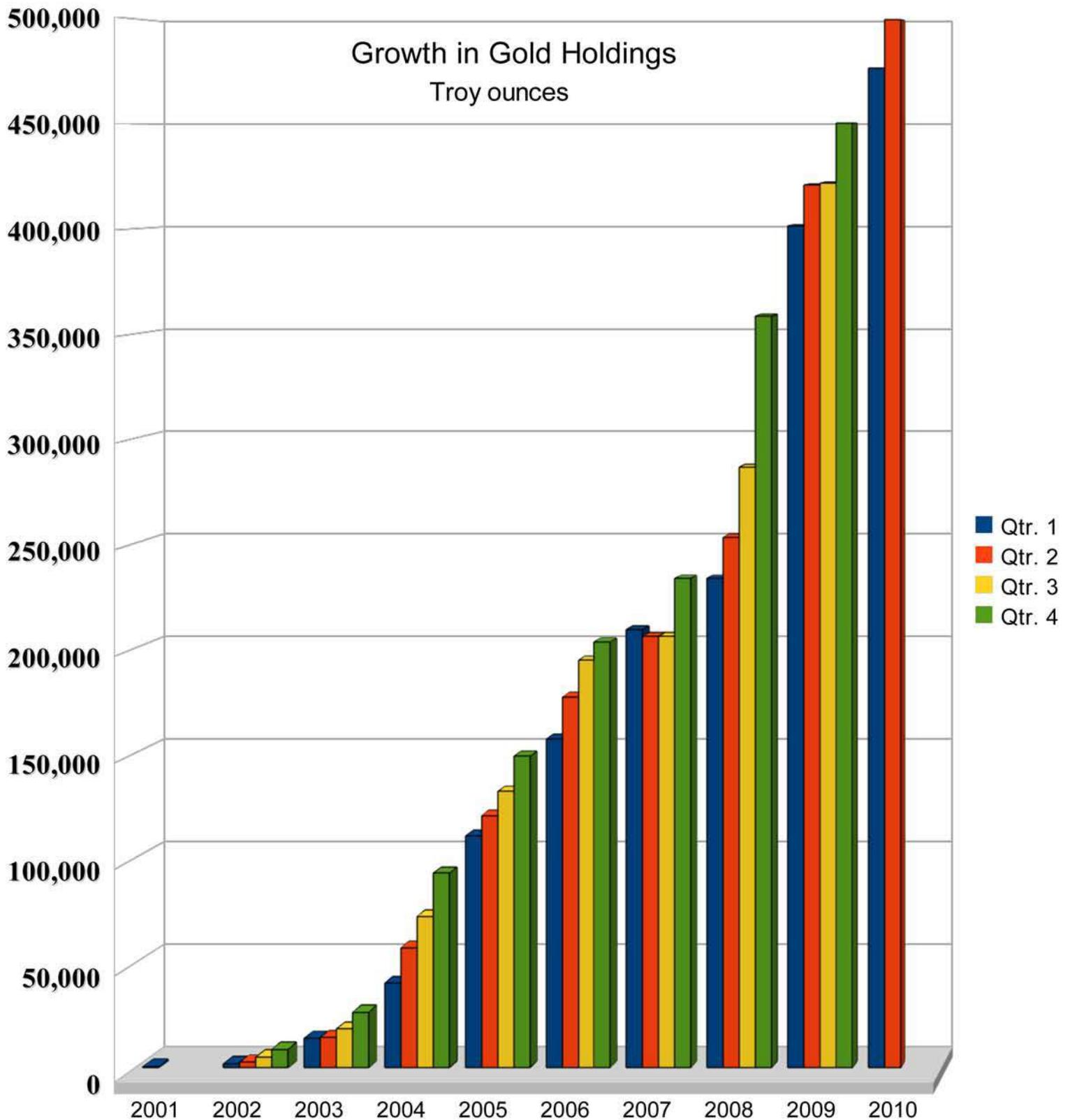
The first patent application was filed in February 1993, and US Patent No. 5,671,364 was awarded in September 1997. This patent provides for a system and method that enables gold or other commodities (tangible assets) to circulate through an electronic medium as currency in a book entry accounting system.

The second patent, US Patent No. 5,983,207, was awarded in November 1999. This patent provides for a system and method that enables gold or other commodities to circulate electronically as digital cash, ensuring privacy and facilitating micro-payments.

The third patent, US Patent No. 6,415,271, was awarded in July 2002. This patent provides for a system and method that enables gold or other commodities to circulate electronically as digital cash over wireless networks and by means of electronic devices such as smart cards.

The fourth patent, US Patent No. 7,143,062, was awarded in November 2006. This patent provides for a system and method that enables gold to circulate as digital cash through a global computer network such as the Internet and/or private communication networks, much like cash currently circulates in the physical world.

Similar to Webmoney's innovative business style, GoldMoney has become the leading digital gold currency in the world by introducing new technology along with convenient & innovative products, listening to customers, seeking partnerships with



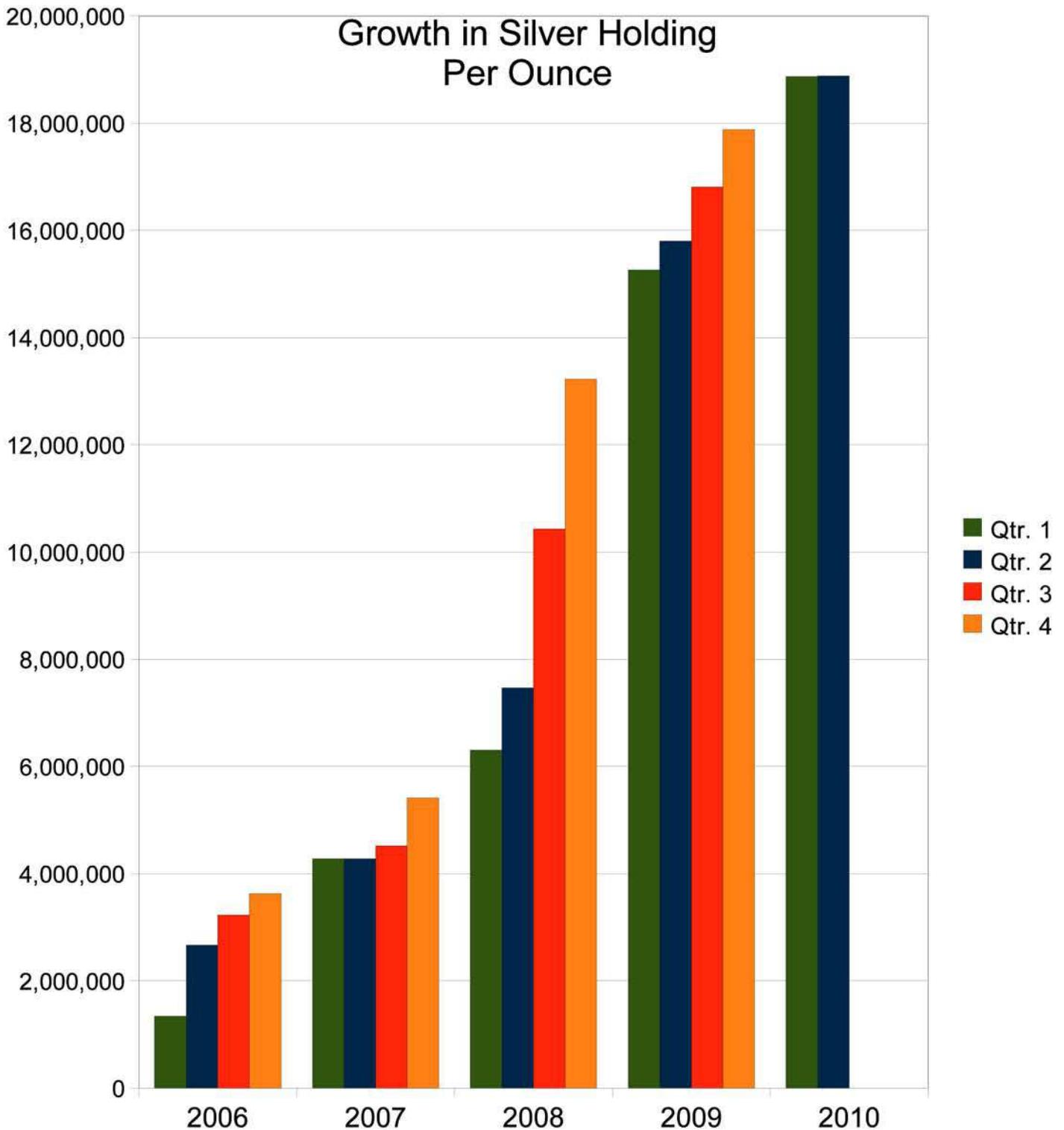
Shows the growth in Gold stored with GoldMoney since its inception(2001). Gold is now stored in London, Zurich and Hong Kong. Clients may vault their holdings in the location of their choice. <http://goldmoney.com/certificates-and-reports.html>

Note that GoldMoney only began offering silver purchases and storage to its customers as of January 2006, and platinum as of July 2009.

existing related businesses and seeking out new consumer markets.

For the last decade, Mr. James Turk of GoldMoney has paved the road for digital gold currency products and issuers. GoldMoney is the global leader and has built a digital gold global marketplace from the ground up. Mr. Turk's actions now make it possible for others to follow with complementary and competing digital gold products. Over the last decade here are some of the events and innovative products which have led the growth of GoldMoney.

- **2002 - Partnered with Kitco precious metals dealer**
- **2004 Enabled 'electronic check' payments for Canadian customers -Website linked with Canadian banking system, buying or selling- funds are seamlessly moved to & from customers' Canadian bank accounts**
- **January 2006 - Introduced digital silver bullion accounts**
- **May 2007 - Introduced multi-currency Customer Segregated Funds Accounts - Interest bearing pooled funds account in Jersey for parking of customer funds between transactions**
- **October 2007 - Partnered with Berkeley Burke & Co Ltd, to offer UK customers a Self Invested Personal Pension ("SIPP") which is designed especially for holding gold.**
- **March 2008 - GoldMoney partnered with Entrust Group. US customers can now hold digital gold & silver GoldMoney units in IRAs (individual retirement accounts)**
- **April 2008 - Expanded Customer Segregated Funds Accounts to include foreign exchange service between currencies. Customer options include US dollar, British pound, euro and Canadian dollar**
- **December 2008 - Implemented online identity verification service through Equifax. Enables US & UK residents to open an account entirely online and transfer funds within 20 minutes.**
- **July 2009 - Introduced digital platinum bullion accounts**
- **October 2009 - Appointed Inspectorate International Limited to perform independent audits of gold, silver and platinum held on behalf of GoldMoney customers. Certificates available online.**
- **November 2009 - Launched a German language version of the website and relationship management team.**
- **December 2009 - Simplified the online account opening process. Now available for residents in 28 countries, sign up is fast and entirely online. Includes USA, UK, Canada, Germany and Australia.**
- **December 2009 - Published a video tour of VIA MAT INTERNATIONAL AG, Switzerland's state-of-the-art high security precious metals vault. Permits customers from anywhere to take a virtual walk through the vaults.**
- **April 2009 - Launched Registered 400oz Gold Bar facility, which enables GoldMoney customers to record direct ownership of one or more large gold bars.**
- **March 2009 - Launched the world's first iPhone application designed specifically for mobile bullion exchange transactions.**
- **June 2009 - Partnered with Baird & Co. Customers can redeem and take physical delivery of their gold in convenient units of 100 gram or one kilo (1,000 gram) gold bars. UK pick up or delivery available to 16 countries.**
- **April 2010 - Expanded global storage facilities. Gold, silver and platinum can now be stored in VIA MAT's secure and insured Hong Kong vaults.**
- **September 2010 - Now offering residents of Canada online identity verification through Equifax Canada (Open an account entirely online, buy metal and transfer funds within 20 minutes)**



Shows the growth in silver stored with GoldMoney since 2006. The silver is stored in London and Zurich. Clients may choose to vault their holdings in either location. <http://goldmoney.com/certificates-and-reports.html>

Note that GoldMoney only began offering silver purchases and storage to its customers as of January 2006. Silver may not be used to make payments between GoldMoney accounts. Silver is strictly for purchase and sale (holding).

- **November 2010 - Developed the “GoldMoney Standard”. Using ultrasound technology, each bar in storage is now scanned for foreign material and defects**

GoldMoney Ownership & Partners

- **September 2002 formed a GoldMoney-Kitco alliance for sale of precious metal online.**
- **February 2003 Completed additional financing for future expansion with IAMGOLD Corporation, a major Canadian gold mining company that is publicly traded on the Toronto and American stock exchanges.**
- **January 2004 South African company Durban Roodepoort Deep, Limited [DRD] bought stake in GoldMoney.com, April increased that stake to a total of \$2 million USD or 14% of the company.**
- **July 2006 Sprott Asset Management Inc. increased their ownership stake to 9.9% -Sprott has been a shareholder since 2003**
- **Precious metal insured through a policy underwritten at Lloyd’s of London.**

In March of 2009, GoldMoney introduced a new iPhone application which allows customers to check balances, make payments, view transaction history and exchange units of digital gold and silver using an iPhone. The GoldMoney application for the iPhone provides an easy to use trading system that you can hold in the palm of your hand.²⁶

All payments completed in a GoldMoney account are non-repudiable meaning the funds are irrevocable and irreversible. GoldMoney is the Registered Business Name of Net Transactions Limited which is regulated by the Jersey Financial Services Commission.

As the digital gold currency industry leader, GoldMoney sets the standards for governance and customer protections. Digital GoldGrams are added to a holdings account only after grams of gold have been deposited to the vault. GoldMoney will never

extend credit nor engage in fractional reserve banking. All forms of physical bullion in a Vault must meet the London Good Delivery Standard established by the London Bullion Market Association, <http://www.lbma.org.uk>

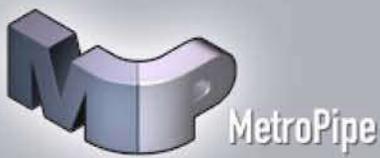
Governance is the procedure by which these DGC companies ensure that the value of precious metals held in the vault is always equal or great than the total value of outstanding digital units

GoldMoney works closely with its third-party service providers to complete all essential functions under carefully designed checks and balances that ensure customer protections and the safety of each customer’s gold. GoldMoney represents:

- **The quantity of goldgrams is always equal to the quantity of grams of gold in the vault. GoldMoney guarantees it.**
- **GoldGrams are added to a Holding only after grams of gold are entered into the vault.**
- **Gold will only be delivered from the vault to a user if the exact corresponding quantity of goldgrams is first removed from the user’s Holding.**
- **GoldMoney will never extend credit nor engage in fractional reserve banking.**
- **The gold in the vault always meets the Chain of Integrity standard established by GoldMoney.²⁷**

Digital Gold Currency is Honest Money

The United States Constitution declares, in Article I, Section 10, “No State shall... make any Thing but gold and silver Coin a Tender in Payment of Debts”. But, in fact, EVERY state in the United States of America DOES make some other “Thing” besides gold and silver coin a “Tender in Payment of Debts” -- some “Thing” called “Federal Reserve Notes.” Thus the need for a bill template that can be introduced



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in every state legislature in the nation, returning each of them to adherence to the United States Constitution’s actual legal tender provisions.²⁸

Many Americans and even some U.S. State governments may be preparing for the widespread use of digital gold currency. In just the past several years, gold & silver sound money legislation, often known as the “Constitutional Tender Act” or “Goldmoney Bill” and including the use of digital gold currency, has been introduced in Georgia, Idaho, Montana, Missouri, Colorado, Indiana, New Hampshire, Ohio, South Carolina and Washington State.²⁹

Several of these bills have been modeled after New Hampshire’s 2004 Gold Money bill which was originally crafted by Dr. Edwin Vieira Jr., Ph.D., J.D. That bill included language for the voluntary use of digital gold currency and precious metal in the State’s payment procedures. The digital gold currency model used in drafting the New Hampshire bill was GoldMoney.com

The current proposed sound money legislation would require State governments to accept digital gold currency and precious metal coins as payment for certain taxes and fees. Once legislation passed in a state, the government’s duties would include some of the following. These passages were taken from the Indiana Honest Money Act.³⁰

Duties of the Treasurer. In addition to other powers and duties granted and imposed by law, the Treasurer shall:

- 1. Designate as the State of Indiana’s Electronic Gold Currency Payment Providers one or more Electronic Gold Currency Payment Providers, as may be deemed necessary and proper for implementation of this Article. No fiscal officer shall employ any Electronic Gold Currency Payment Provider not so designated;**
- 2. Maintain one or more Electronic Gold Currency Accounts with such designated Electronic Gold Currency Payment Providers, as may be deemed necessary and proper for implementation of this Article;**

- 3. Conduct all monetary transactions of this State involving gold and silver in any form by the agency of such designated Electronic Gold Currency Payment Providers, and through such Electronic Gold Currency Accounts;**
- 4. Require all persons who deal with the State in monetary transactions involving gold and silver in any form to maintain at least one account with a designated Electronic Gold Currency Payment Providers:**

The digital gold currency industry is built on a rock solid foundation of sound money. There are no encumbrances on any clients’ metal holdings and there is no debt ever associated with ownership or issuance of the digital units.

DGC is not a paper promise like many of the very popular precious metal ETFs. Digital gold currency is allocated ownership of the underlying precious metal. The digital units issued and used to transfer value are always 100% backed by physical precious metals. Millions of Americans and other citizens around the world are firmly behind the idea of using sound money in everyday transactions.

Why are customers around the world flocking to digital gold currency?

Private digital gold currency systems are created for maximum security, extraordinary privacy and global financial convenience. These systems hold verified, tested and audited bars of precious metal backing each digital unit in circulation. Industry leaders that operate these companies pride themselves on full transparency, strong governance and safety.³³

The lynchpin of Pecunix security is the “one to one” rule: every unit of value present in the Pecunix database has, at all times, a corresponding value of gold stored in an internationally approved vault. Pecunix is not a paper currency backed by the vagaries of national interests; it is a currency with actual weight behind it - the weight of real, solid gold.³⁴

In today’s world where governments print up trillions of paper dollars backed only by empty promises, digital gold currency makes absolute perfect sense.

Anybody Seen Our Gold?



The gold reserves of the United States have not been fully and independently audited for half a century. Now there is proof that those gold reserves and those of other Western nations are being used for the surreptitious manipulation of the international currency, commodity, equity, and bond markets. The objective of this manipulation is to conceal the mismanagement of the U.S. dollar so that it might retain its function as the world's reserve currency. But to suppress the price of gold is to disable the barometer of the international financial system so that all markets may be more easily manipulated. This manipulation has been a primary cause of the catastrophic excesses in the markets that now threaten the whole world. Surreptitious market manipulation by government is leading the world to disaster. We want to expose it and stop it.

Who are we?

We're the Gold Anti-Trust Action Committee Inc., a non-profit, federally tax-exempt civil rights and educational organization formed by people who recognize the necessity of free markets in the monetary metals. For information about GATA, visit <http://www.GATA.org>

GOLD ANTI-TRUST ACTION COMMITTEE INC.

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GATA

GoldMoney offers the following statement regarding governance.

GoldMoney recognises the importance of following sound monetary principles in order to offer a payment system of unequivocal integrity, which is our foremost objective. We therefore represent to users that:

- 1. There will always be a one-to-one relationship between GoldGrams and grams of gold. Thus, the quantity of GoldGrams in circulation, which is the aggregate of GoldGrams in all user's Holdings, will never be greater than the weight of gold in the Vault.**
- 2. GoldGrams will be added to a Holding only after grams of gold are entered first into a Vault.**
- 3. Gold will only be delivered from the Vault to a user if the exact corresponding quantity of GoldGrams are first removed from the user's Holding.**
- 4. GoldMoney will never in any circumstances extend credit nor engage in any fractional reserve banking practices.**
- 5. The gold in the Vault will always meet the Chain of Integrity Standard established by GoldMoney.**

GoldMoney has also recently developed the "GoldMoney Standard". Using ultrasound technology each gold bar that is stored for customers is tested for foreign material and defects. GoldMoney has teamed up with GE Inspection Technologies to examine all the gold bars stored in its vaults in London, Zurich and Hong Kong to ensure that each bar meets the new 'GoldMoney Standard'. This latest security procedure is a response to customer concerns regarding the integrity of their gold.³⁵

Regulatory Changes

New and innovative online payment services are emerging globally in response to market demand from individuals and online merchants.³⁶

There has been a lot of confusion by regulators and government agencies during the past decade regarding how to clearly define new types of digital currency.

The government folks have had an especially hard time with "digital gold currency".

In 2006 both the FATF and the U.S. Treasury tried to place digital gold into one of several "bank product" or "existing payment system" categories. The great minds that create financial regulations for the United States and the world were hard at work trying to legally define the concept of a digital gold currency. Here were some examples.

FATF

The issuers of digital precious metals use the term "digital currency" to describe the barter arrangement they facilitate. Because of the potential confusion this common industry term would create with the term "e-purse" and "e-money", we have adopted the term "digital precious metals" for this report.³⁷

FATF

Digital precious metals are a relatively new online MVT system that involves the exchange of options or the right to purchase an amount of precious metals at a specific price. These derivatives can be exchanged, like traditional commodity or securities derivatives, between account holders in a digital precious metal service. Consumers purchase a quantity of virtual precious metal holdings based on the current price of the metal on the world commodity exchanges. Once a purchaser has acquired a quantity of the virtual precious metal, those holdings or a portion of them can be transferred either to another individual or a merchant in exchange for goods and services.³⁸

U.S. Treasury Department

According to the U.S. Department of the Treasury, currency is something

“Digital cash
will not develop
in a regulatory
vacuum, nor will
simple acts of
legislation stop it”

--Tim May⁴¹

monetized by a monetizing authority, generally a central bank. Rather than being used as currency, precious metals are used as a part of a barter exchange (one party agrees to exchange a quantity of gold for various goods or services).³⁹

In 2006, no government agency had been able to clearly define or even understand the future potential of this product. It would take 3 more years for a Federal Judge to broadly define digital gold currency as value transferred online.

The legal issues surrounding digital gold currency systems, at least those operating in the United States, were recently clarified in federal court by U.S. District Court Judge Rosemary Collyer (UNITED STATES OF AMERICA v. E-GOLD, LTD). All programs with components (servers, bank accounts, corporate offices, etc.) located in the U.S. are now subject existing federal and state regulatory structures. Consequently, today, there are no fully licensed or legally operational systems in the United States. (e-gold is lacking the proper licensing to operate)

The Outcome of U.S. Regulations

Over the past 5 years, a changing regulatory environment in the U.S. has forced the closure of virtually all U.S. based digital currency issuers and agents.

Companies which were operating outside the U.S. have not yet been effected by these regulatory changes. Here is a brief look back over the past few years and some details of U.S. legal situations which issuers and agents encountered.

In July of 2006, Arthur Budovsky and Vladimir Kats operators of GoldAge Inc., one of the largest independent exchange agents in the U.S. at that time, were indicted by the state of New York on charges of operating an illegal money transmittal business from their Brooklyn apartments. Eight subsidiary businesses operated by the defendants were also indicted including: GOLDAGE HOLDING INC., ECSN INC., EXECUTIVE COMMERCIAL SERVICES INC., INTERNETWORK MANAGEMENT INC., GGN INC., B TO B MARKETPLACE INC. and MGA INTERNATIONAL INC. It was reported that

around \$2 million in assets was seized.

In April of 2007, a US court order (seizure) forced e-gold to liquidate a large number of accounts with a total balance in the millions of dollars. During this action, all of 1MDC accounts backed by e-gold and held in pooled storage accounts under the 1MDC operator's control were seized. With all of the financial assets confiscated 1MDC became insolvent and closed. Also at this time, a majority of independent digital currency agents operating from the United States permanently closed down or moved their businesses outside of the U.S.

Several other currency issuers also operating in the U.S. at this time eventually closed due to the regulatory environment. Those included NetPay.tv and CrownGold.

In November of 2007, across multiple locations in several U.S. states, FBI agents raided the offices of the Liberty Dollar. Agents seized more than 2 tons of copper coins, 500 pounds of silver coins, more 3 pounds of gold and several ounces of platinum. The Liberty Dollar organization and the online e-LD system have both since been closed and the operators imprisoned on various charges stemming from this business.

In July 2008, the e-gold operators pleaded guilty to criminal charges relating to money laundering and the operation of an illegal money transmitting business. The company lost millions of dollars which was seized by the government during the legal action plus the owners were assessed a \$300,000 fine at sentencing (no jail). Additionally, in October of 2009 e-gold's related company Gold & Silver Reserve, Inc. of Melbourne, FL was fined \$2.95 million for OFAC violations of Iranian Transactions Regulations. These problems occurred between September 2003 and December 2006. While e-gold is technically still in business, there are no transactions occurring while the company continues to seek the proper U.S. regulatory licensing.

In August 2008 James Fayed of Goldfinger Coin & Bullion was arrested on felony charges of operating an unlicensed money transmitter business. The e-bullion.com web site went offline permanently and

more than \$24 million in gold bullion and cash was seized. His wife Pamela Fayed, who also operated the business, had been murdered in July of 2008 (the month earlier) and James is now facing charges relating to the “murder for hire” of his late wife. The money transmitting charges against James were dropped but remain against his Goldfinger Coin & Bullion/e-bullion business. No customer funds have ever been returned.

A federal grand jury brought a criminal indictment against von NotHaus and three others in May 2009 in United States District Court in Statesville, North Carolina, and von NotHaus was arrested on June 6, 2009. Bernard von NotHaus is charged with one count of conspiracy to possess and sell coins in resemblance and similitude of coins of a denomination higher than five cents, and silver coins in resemblance of genuine coins of the United States in denominations of five dollars and greater, in violation of 18 U.S.C. § 485, 18 U.S.C. § 486, and 18 U.S.C. § 371; one count of mail fraud in violation of 18 U.S.C. § 1341 and 18 U.S.C. § 2; one count of selling, and possessing with intent to defraud, coins of resemblance and similitude of United States coins in denominations of five cents and higher, in violation of 18 U.S.C. § 485 and 18 U.S.C. § 2; and one count of uttering, passing, and attempting to utter and pass, silver coins in resemblance of genuine U.S. coins in denominations of five dollars or greater, in violation of 18 U.S.C. § 486 and 18 U.S.C. On July 28, 2009, von NotHaus entered a plea of not guilty. Although he was released on bail, later in July 2010 he was jailed again for violating terms of the Appearance Bond. All Liberty Dollar web sites are now offline. Both Bernard von NotHaus and long time Liberty Dollar seller Kevin Innes are jailed awaiting trial.

As discussed, since 2006 the digital currency business in the United States has died. Fortunately, that is not the case outside of the U.S. For international digital currency companies such as Webmoney Transfer, GoldMoney, e-dinar, Pecunix and others. For these companies business has been growing.

Active Digital Gold Currency Companies

GoldMoney

Operating from the British Channel Islands (UK) GoldMoney as been previously been discussed in this document and identified as the originator of digital gold currency, the present industry leader and the largest digital gold currency company in the world.



E-dinar

Online since 2000, e-dinar Ltd. is incorporated in Labuan, Malaysia and in Dubai Internet City, UAE, as e-dinar FZ-LLC. e-dinar together with Emirates Gold (the largest gold and silver producer in the Middle East) offer the gold dinar and the silver dirham as the traditional currency of Muslims in accordance with the exact historical standards.⁴²

e-dinar is an internet based electronic payment and exchange system that facilitates online transactions 100% backed by physical gold and silver. e-dinar and e-dirham are the electronic units used within the e-dinar system. Each e-dinar digital currency unit corresponds to an exact, fixed weight of 4.25 grams of pure 24k gold. Each e-dirham corresponds to an exact, fixed weight of 3 grams of .999 silver. These units are widely divisible thus allowing large as well as very small transactions. The physical gold and silver bullion backing the digital currency units is always equivalent or larger than all electronic e-dinar and e-dirham in circulation. The physical gold and silver bullion is held securely in internationally renowned bullion repositories. e-Dinar is considered by some experts to be the first Islamic alternative to the banking system in 300 years.

Transactions completed using e-dinar’s digital units

generally do not result in any physical movement of gold or silver in the bullion repository. The exceptions are large transactions of at least \$150,000. where gold bars are physically moved between pallets. Account holders always have the option to exchange their digital units into any major national currency or redeem them and take physical delivery of an equivalent amount of gold dinar and silver dirham. The main option for funding an e-dinar account is to send a wire transfer directly to the Dubai e-dinar bank account. However, the company also permits and encourages the use of third party independent exchange agents. Retail customers may buy from the third party agent.

Regarding e-dinar's current customer base and sales, Dr Habib Dahinden, CEO of e-dinar stated:

“..[e-dinar] service today directly and indirectly[handles] well over 25’000 customers on a regular basis....we have redeemed some 650 kg of gold and almost 5 tons of silver in 2009 which is roughly twice the amount we redeemed in 2008.”⁴³

Beyond the transparent information published by industry leaders GoldMoney and Webmoney Transfer, there are no other comparable standard quarterly or annual reports, audits or transaction numbers that each digital currency company makes available to the public. DGC facts on customer data, growth,

sales, transactions and assets are often obtained from interviews or articles. The following important points, obtained from a recent DGC magazine interview, shed light on e-dinar's growth and the popularity of gold dinar and silver dirham within the Islamic community. These points referenced include the combined business of both e-dinar FZ LLC and Emirates Gold Europe GmbH.⁴⁴

- **e-dinar currently has a priority relationship with Emirates Gold and a large majority of minting is accomplished through Emirates Gold in Dubai**
- **To satisfy this growing demand for physical redemption, in the spring of 2009, incorporated a Swiss wholesale company for the marketing and distribution of Emirates Gold products <http://www.emiratesgoldeurope.com>**
- **While e-dinar retains the character of a retail company, Emirates Gold Europe works as a pure wholesaler**
- **In the past two years these companies have observed a steady broadening of the general customer base, particularly in Germany, Eastern Europe and Malaysia**
- **During the first 4 to 5 months of the crisis[2008], monthly gold production increased from 25 kg to 100 kg per month, a 400% increase as compared to the period preceding the bankruptcy of Lehman Brothers.**
- **During 2009, e-dinar and Emirates Gold Europe sold a combined quantity of 28,900 gold dinars and silver dirhams into the European market. This figure is broken down as follows: 6,800 x 1 gold dinar, 22,100 x 5 and 10 silver dirhams**
- **Overall, the companies have redeemed around 650 kg of gold & almost 5 tons of silver in 2009, roughly twice the amount redeemed in 2008. Successful growth at least partially attributed to the quality of products & low prices for small gold bars (1gm - 1oz)**



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Ikeja, Lagos, Nigeria

International Callers:
+234-803-348-1702 , +234-802-286-3054

<http://www.rawgoldnigeria.com>

- **Top selling items in 2009 were small gold bars (44,000 x 1 to 5 grams) and small silver products (62,500 x 10 grams to 1 oz excluding silver dirhams)**
- **For the year 2010 there is an expected to be an increase in turnover of physical redemption to 25 million USD.**
- **As of today, the majority of customers have been buying bullion for long-term storage as a means of savings or redeeming bullion in the form of investment bars or gold and silver medallions.**
- **During the last one and a half years, e-dinar has worked closely with the government of Kelantan to issue a new bi-metallic series of the Kelantan gold dinar and silver dirham. The Kelantan state emblem appears on the face of the new medallions. e-dinar has been awarded that minting contract and received funds for the first batch. Production begin in April 2010**



acceptability on the ground. Consequently E-Dinar has been changing the stock to meet demand. Since the introduction of the new WIM standard [World Islamic Mint] and the stickers, WIM demanded E-dinar to move to the next stage and from Jan 2011 E-Dinar will have “only coins” accounts and “only bullion” accounts. The new accounts will be in display by November this year and will be in full functionality during December, according to what I heard from E-dinar chairman, Dr Habib Dahinden. With the new accounts available in Jan 2011, all e-dinar units are exchangeable with dinar coins only, one to one. Fees are applicable depending on location of the repository (thus decentralization), but only in case of redemption and thus the logic of multiple repositories. It follows that the price of the e-dinar is identical to the dinar. And it follows that the use of e-dinar through a smart card or mobile telephony bears the same value as a physical dinar except the coin is safe kept in the nearest repository. There is a fee for the acceptance of the e-dinar unit which is beared by the shop under the terms and conditions of the agreement, but this fee is ridiculously

e-Dinar Growing & Evolving

What changes and growth are ahead for e-dinar? The following statements about e-dinar were made by Umar Ibrahim Vadillo who is the managing director of the Malaysian state-owned Kelantan Golden Trade, founder of the World Islamic Mint, founder of the Islamic World Trade Organization and founder of the payment savings of e-dinar. The statements were made in response to questions posed by Aliff Bin Basri during Q&A regarding the gold dinar and e-dinar. This information illustrates the changes being made at e-dinar in response to positive growth, customer requests and market demand.

The idea is that you progressively eliminate the bullion and transform it into coins as the demand for coins increases. When we started E-dinar, hardly anybody demanded the coins in redemption of their accounts. 99% percent of customers demanded redemption in bullion. This gradually changed as the physical coins gained

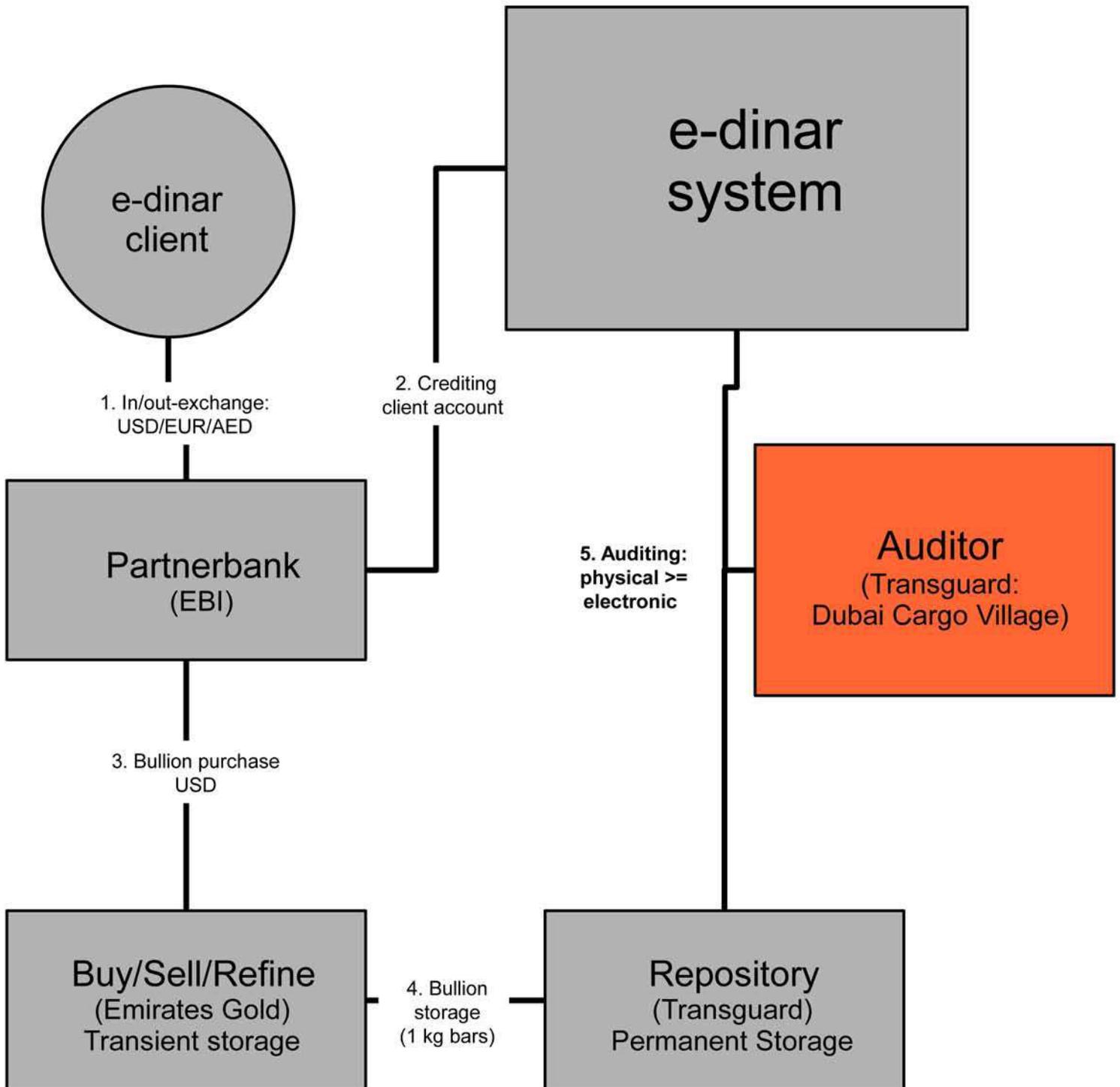
Repository: Transguard Security Services

E-dinar Governance

- Part of Emirates Group (Dubai Government)
- Member London Bullion Market Association (LBMA)
- DMCC approved vaults (1500 tons of gold per year)

Bullion Purchase/Sale/Refining: Emirates Gold DMCC

- Largest refiner in the Middle East (260 tons of gold per year)
- Only refiner in the Middle East with Dubai good delivery standard both for gold and silver (1 kg bars)



small: 1% or maximum 0.015 e-dinar (for e-dinar transactions), max. 0.5 e-dirham (for e-dirham transactions), whatever the lowest. At the moment e-dinar is an internet based electronic payment and exchange system that facilitates transactions which are 100% backed by physical gold and silver. From Jan 2011 you will see something like this: e-dinar is an internet based electronic payment and exchange system that facilitates transactions which are 100% backed by physical dinar and dirham. And you will also see a differentiation between bullion accounts and coin accounts. The issue has been explained earlier. WIM has responsibility to inspect E-dinar systems and to award them with being a WIM payment system. If you notice WIM has not yet given its WIM logo to E-Dinar, it will only happen after Jan 2011.⁴⁵

Regulations & Audits

According to Dr. Zeno Dahinden, CEO of e-dinar:

“e-dinar for example has been subject to regular audits by the UAE Central Bank and by government Compliance Departments regulating business activities in the Free Zones. In addition, Emirates Gold submits its e-dinar account statements each year for audits by the UAE Central Bank to ensure 100% compliance with UAE laws. To this date, e-dinar has passed all of its audits with flying colors – at last count, we have undergone 8 regulatory audits.”⁴⁶

Pecunix

“With integrity, security, transparency, governance and custodianship beyond reproach, the management of PECUNIX INC are proud to be a part of the organisation that offers this new

international digital currency that is 100% underwritten at all times by a corresponding amount of unencumbered physical fine gold.”³¹

Similar to GoldMoney, the Pecunix governance model is secure, transparent and strictly controlled. Pecunix gold bullion is held by The Anglo Far-East Company through vaults in Switzerland.³²

Understanding Pecunix

The Pecunix system (<http://www.pecunix.com>) opened for public use during December 2002

- **Pecunix payments are non-repudiable**
- **Offers a full developers interface which includes free automatic integration for accounting systems and websites**
- **Protection through unparalleled data encryption keeping all transactions private**
- **All payments clear instantly and all funds are immediately available for withdrawal or use**
- **Transaction fees are extremely low**
- **Cross border transactions are simple and avoid expensive currency conversions**
- **System allows for payments as small as 1/10,000th of a gram (in USD that equals around 4 tenths of one cent)**
- **Account access from anywhere in the world via Internet or mobile device**

When e-gold Ltd. began operating in the mid 1990's, the concept was to create a closed digital system backed by the value of gold and other precious metal. The e-gold operation was the classic DGC model as previously discussed in the document and did not accept any direct customer funds. The assets backing the digital units always remained safe and debt free. Retail financial transactions all flowed through a global network of third party independent exchange agents. This model became a sort of “defacto” DGC model for a number of years. This was also the original Pecunix model which is still in operation today.

Using this original DGC model, no identifying

“Pecunix is a
currency based
on gold - not on
paper value, not
on dollars or yen
or lira or pounds,
but on pure, solid,
real gold.”

-- <http://www.pecunix.com>

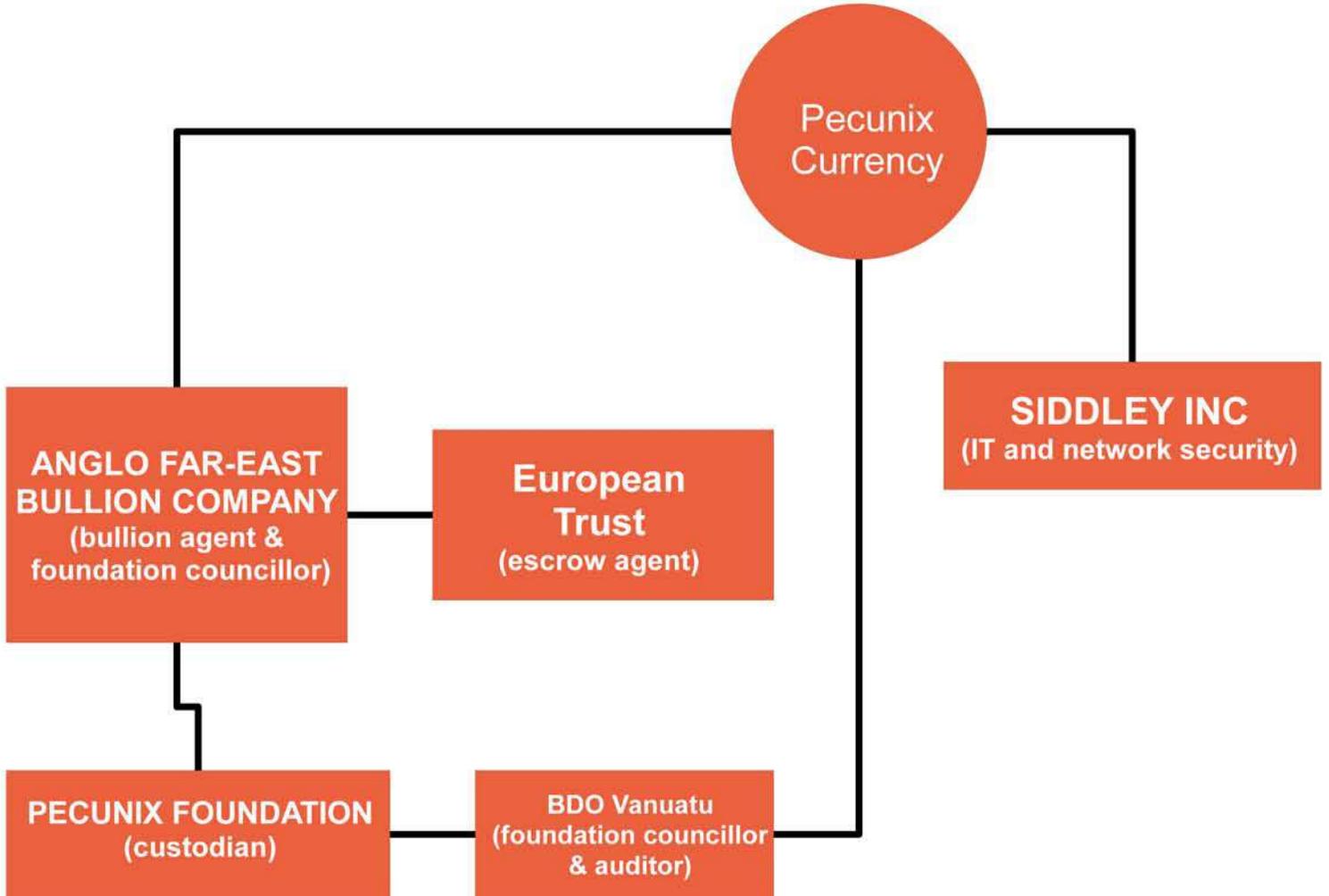
Pecunix Governance

As the Pecunix User Agreement and the Resolution of the Council indicate, The Pecunix Foundation holds the gold bullion that underwrites the Pecunix currency as patrimony.

The Pecunix Foundation exists solely for the purpose of holding the Pecunix bullion without encumbrance or lien for the exclusive benefit of Pecunix account holders. The councillors of the Pecunix Foundation are:

- The Anglo Far-East Bullion Company
- BDO Vanuatu
- Pecunix Incorporated

All 3 of the Councillors must be party to any decision regarding the movement of any gold into or out of the Pecunix system. Crucially, the bullion itself is - and must always be - free from any encumbrance and may not be attached to any liabilities held by any of the four companies directly involved in the Pecunix system.



customer information is ever requested or verified when opening & operating a Pecunix account. The Pecunix system still operates today just as e-gold did during its boom years. The checking of ID, the verification of a customer's real identity and requesting a source of funds on any transaction... these are all non-existent requirements within the this original DGC model.

Identical to the original "defacto" model, the Pecunix operator is only responsible for the day to day technical aspects of the online system and maintaining the assets backing the digital units. Since Pecunix does not have any direct financial dealings with any retail customer the company's perception is that Pecunix should not be required to 'know' any of the customers or ask how the funds circulating in this system are being used.

Physical cash such as notes and coins have certain anonymous properties and digital currency, in particular digital gold currency, was created to mimic those properties. Many people agree with this concept of private anonymous digital money and many people do not.

The Pecunix digital gold currency system continues to operate today exactly as it did in 2002. However, because of its jurisdiction and certain legal issues with the U.S. Government, e-gold Ltd. has been updating that operation to include strict verification of all account holders.

A summary of the legal structure of the entities operating Pecunix is as follows:

- **Pecunix Gold Foundation - is a Panamanian private interest foundation and will be the custodian of the Gold Bullion Backing the Pecunix currency. (holds title to the physical fine gold backing each Pecunix unit)**
- **Pecunix Incorporated - is a Panamanian International Business Corporation and will serve as the issuer and facilitator of the Pecunix Currency.**
- **Siddley Inc. - The corporation responsible for the development, architecture, maintenance and security of the Pecunix**

software and hardware as well as the implementation of the Pecunix network. Independent systems auditors to Pecunix are BDO International, (<http://www.bdo-international.com/>) Their job is to verify the integrity of the database.⁴⁷

Security

One critical factors behind the successful Pecunix model has been the software's powerful security. Security at the technical level has been critical for the integrity of this currency system. Because of the unique features present during account access and the encryption behind the software, Pecunix accounts have avoided all attempts to be hacked or gain access through malicious practices such as phishing. The Pecunix web site offers this description.

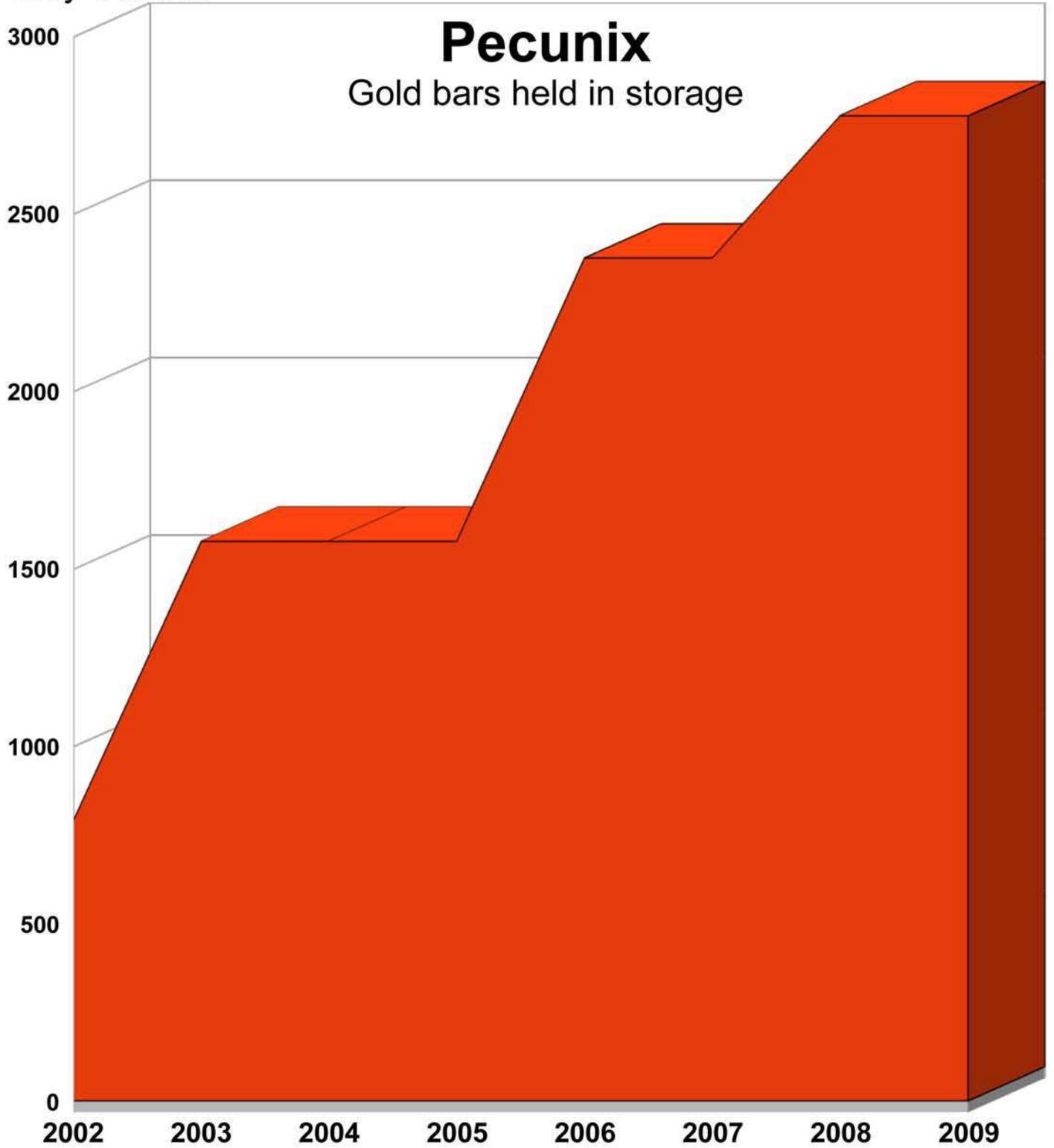
Pecunix combines leading-edge PGP encryption technology, advanced data encryption and common-sense data replication to ensure that the Pecunix system data is as heavily protected as the gold itself. Four levels of security are standard to the system:

- **the technology, even at the user level, is virus resistant and keyboard sniffer-resistant, ensuring that user access is secure by default**
- **advanced user access options including PGP verification and IP restrictions on account access ensure unsurpassed account-access security**
- **all data in the database is encrypted using AES (Advanced Encryption Standard)**
- **the data is stored on the production servers using hardware RAID technology, and is also replicated offsite in real time in at least two separate locations on hardware RAID devices**

Commerce Gold

Commerce Gold (<http://www.c-gold.com>) is a project of Private Gold Equities Exchange Limited, a Seychelles company established in 2005. The

Troy Ounces



Pecunix currency is calculated at a rate of 31.1034768 per ounce of fine gold. All gold bars are exclusively in the form of London Bullion Market Association (LBMA) certified "good delivery bars".

<http://www.pecunix.com/money.refined...ind.goldbars>

company specializes in development and operation of online marketplaces and e-commerce platforms. While Private Gold Equities Exchange Limited operates the c-gold.com business, customer support, as well as gold bailments, storage and redemption are outsourced to CyFro Associates Sdn. Bhd., of Penang, Malaysia. CyFro Associates Sdn. Bhd. is a joint subsidiary and corporate headquarters of the CyberFrontier Group of companies, which have been active in the fields of e-commerce, web application development and hosting, as well as management & consulting, since 1991.

C-gold's official launch was July 2007 and since that time the company has accumulated around 32,000 customer accounts of which around 7,500 are considered "active" accounts representing an actual balance of gold. The c-gold operation requires identification from all users and verifies that information.

The Commerce Gold online operation is extremely transparent offering up-to-date account, transaction and bullion information. All transactions conducted using the Commerce Gold system are final and irrevocable.

In the three years since opening the company has executed around 370,000 customer transactions. At present the system averages around 300 transactions per day and there are 40 kilos of gold in the vault. (Estimated Total Value \$1.8mil USD@ \$1,393oz)

Unlike some other digital gold operations, Commerce Gold has a local office location where customers may visit by appointment. In fact anyone with the proper identification for a verified account may bring in gold bullion for instant deposit and receive digital credits in a c-gold account. The walk in office bailment is a unique feature of Commerce Gold.

Future plans and goals include the launch of c-gold Africa as an independent franchise which will allow miners, diggers, washers, and traders to convert grains or nuggets of gold into digital c-gold. This would also be a very unique service not found anywhere else in the world.

Similar to Pecunix, Commerce Gold's operation is

patterned along the lines of the "defacto" digital gold currency model and no direct financial transactions are possible with the parent company. The C-gold FAQ's page offers this detail on the operation, "The c-gold system is a closed book-entry system and you can only fund your account by either bailing in a gold bar, or by buying c-gold from someone who already has some in his or her Holdings Account." All financial transactions dealing with national currency are executed by independent third party exchange agents just as occurs with Pecunix, however, c-gold takes the proactive approach and verifies customer's identities.

The Commerce Gold web site is available in English, French, German, Spanish, Farsi, Russian, Arabic and Bahasa Indonesian.

In a June 2009 interview with DGCmagazine the operator of Commerce Gold had these responses which provides some insight into this business.

(Q) Is c-gold considered a Digital Gold Currency? Are the digital units 100% backed by gold?

"No, I don't consider it a currency, as much as I see it as actual gold. That means that we don't consider it digital units for something backed by gold, but instead as a digital expression of the actual gold. Thus, the amount of gold in storage is at all times exactly the amount expressed digitally, if you will."

(Q) Why create Commerce Gold?

"...an oncoming crisis of epic proportions was drawing closer, and that millions of scared, unhappy people would run around in circles, searching for a way to preserve whatever wealth they had left - and have a way to use that wealth for commerce."

Webmoney Transfer WMG (*Gold Purse*)

As previously discussed in this document the Webmoney Transfer system already services millions of customer around the world with multiple currency

“c-gold is typically the most reliable (*and easiest to add*) alternative for merchants who want to go beyond the limits imposed by only using a local bank in their country.”⁴⁸

--CEO Commerce Gold

purses. Webmoney Gold (WMG) is a new type of purse that is backed by gold bullion and it was launched in July of 2007.

The precious metal backing for this digital purse is pure gold .995 purity. The company issuing this purse is WM Metals FZE a United Arab Emirates company and it also acts as the Guarantor for WMGold. In this case, the system's Guarantor (on the agreement with a certified storage company) also provides for the gold bullion's safety.

A direct purchase of WebMoney Gold digital units can be made by a bank wire either using the professional services of the primary independent exchange agent Metdeal.com or by using the WebMoney exchanger service (wm.exchanger.ru). On larger WMG purchases of \$1000 USD or more from Metdeal.com, all buyers need to obtain a WM-Passport no lower than the Personal level and sign sales agreements with Metdeal for buying/selling gold. Independent exchange agents are able to sell or exchange smaller amounts of WMG.

Redemption of digital WMG units into actual physical gold for delivery is possible with a minimum amount of one kilo. An audited inventory of current gold bars is published on the Metdeal web site. (current is 48 kilos)⁴⁹ Metdeal FZE goes through compulsive financial audit annually. The most recent chartered accountants' audit certificate is published on the web site.⁵⁰

As the price of gold in US dollars was around \$680 per ounce in July of 2007 and today that price exceeding \$1400, all digital gold currency accounts including WMG have been gaining a wider customer base, even in Russia.

Webmoney Gold digital units are only divisible out to a scale of 2 (00.12) which is different from other digital gold currencies that were developed 5-10 years earlier. Without a scale of at least 4 (00.1234) it can be said that the WMG system is impractical as a global payment method. However, WMG is a perfect non-bank online tool for any customer desiring to create a "gold savings" account.

As the industry trend over the past 3-4 years has

shown a decline in consumer retail payments using digital gold and a massive rush towards online gold savings accounts, it seems that the Webmoney company recognized this trend years ahead of the industry and crafted their online payment purse to meet future public demand.

Digital cash will of course take many forms. Some digital cash will be similar to small denomination coins. Some will be more similar to cashier's checks, certificates of deposit, wire transfers, etc. The "ecology of digital money" is yet to be evolved.⁵¹

New Digital Gold Currency Companies

gBullion

At any time user can exchange digital gold (gB) for real gold and obtain gold bars from a Vault located in UAE, or take delivery to specified address.

<http://gbullion.com>

gBullion is a brand new digital gold currency company which is now operating in beta test mode. The company web site went live on March 10, 2010 and at that time a gBullion representative interviewed with DGCmagazine.⁵²

National currency transactions including deposits and withdrawals are accomplished through third party independent exchange agents and direct wire transfers with gBullion company accounts.

Unverified customers that have not yet provided identity documentation are permitted to transfer small sums of money up to \$1000 each month before the account could become restricted. The web site is available in English, German, French, Russian and Italian. The company also offers a prepaid digital currency card which could be sold at local point-of-sale locations. The software platform contains a USD purse(D-purse), a Euro purse(E-purse) and a gold purse(G-purse). All transfers between customer accounts at gBullion occur in digital gold (gB) by weight and not national currency. This policy is outlined and restricted by the company's business

license. The smallest size of a transfer is 0.0001 gram.

The Issuer, the Guarantor, and the Operator is GBULLION DMCC, a company licensed to sell gold and registered in DMCC (Dubai Multi Commodities Center, UAE). The customer's gold is reportedly stored by vault operators Brinks and Transguard through high security vaults in Dubai. No public audits or bullion information is yet available or posted to the web site, but gBullion is brand new and according to company representatives that data will be published on the company web site very soon. GBULLION DMCC was registered in 2009. Company No 2143. Licence number: DMCC-31266 Regulated by the Dubai Multi Commodities Centre (DMCC). UAE

iGolder

At iGolder, you are welcome to redeem your electronic gold into physical gold bullion. -- <http://www.igolder.com>

iGolder is defined as a membership club and a private peer-to-peer exchange network for individuals. New accounts are free to set up and iGolder offers integration with shopping cart platform software.

This company clearly caters to anyone wishing to do business online but is unhappy with conventional payment options such as PayPal. The software package offers an exceptional list of features beneficial to retail consumers and merchants.

The software design for the iGolder platform began around January 2008 and the entire operation was created by Mr. Daniel Morin and his brother. Both gentlemen are software designers living in Canada. iGolder was born from a dissatisfaction with conventional online payment, credit and banking products. The web site went live for public use in April 2009 and at that time Daniel Morin interviewed with DGC Magazine.⁵³ Both bailment(metal deposit) and redemption(withdrawing physical metal) are described as possible by the iGolder website.

iGolder is an easy and convenient method to begin sending or receiving payments online. All transactions are final once the entire exchange is completed. iGolder offers are some unique and helpful software

tools that can slow down the payment process in order to help customers and merchants fight fraud & register satisfaction with the transaction before settling the payment. This is a new and welcome addition to the digital gold currency industry.

The iGolder platform is different from many other commercial digital gold currencies. There is no transparency in the day to day operations. While the web site states, "Every milligram of gold in your iGolder account has corresponding fine gold in our vaults" however, neither the custodian of the bullion nor the location of vault is identified. There are no audits or public information which would verify that any gold is being held on behalf of customers.

Unfortunately, the lack of these items is not unusual for a new entry-level digital currency or digital gold currency company. Since the prosecution of e-gold (2006-2008) some of the new digital currency operators prefer to withhold important details of the operation. Rather than posting the location of the precious metal or bank accounts used in the operation, the management keeps this information shielded to protect both customer and operator from possible seizure or legal action due to ever changing regulations for this new type of digital financial product.

iGolder follows a traditional DGC model, all exchanges of national currency are handled through independent third party agents. iGolder does not offer direct account funding or withdrawal options using national currencies. Several levels of account verification are permitted with iGolder. From an anonymous starting level which restricts transactions and amounts, up to a verified account offering much lower transaction fees and unlimited operation.

No further information is available on the number of customer, transactions or the value of assets.

Evolution of New Digital Currency Systems

Freedom to control what you own is fundamental to an innovative humanity. Freedom over your money is required to keep yourself free. We believe that freedom is a more valuable good than anything else.

“The root problem with conventional currency is all the trust that’s required to make it work. The central bank must be trusted not to debase the currency, but the history of fiat currencies is full of breaches of that trust. Banks must be trusted to hold our money and transfer it electronically, but they lend it out in waves of credit bubbles with barely a fraction in reserve. We have to trust them with our privacy, trust them not to let identity thieves drain our accounts.”

--Satoshi Nakamoto, Bitcoin Creator

More valuable than social control, welfare, criminal justice or anything else. One of the founding fathers of the United States once said: "I know not what course others may take; but as for me, give me liberty or give me death." -eCache Web Site

Today's new independent P2P digital currency systems are likely to have many, if not all, of these features.

- 1. Totally anonymous customer access and operation**
- 2. Completely decentralized with no central issuer of digital currency**
- 3. Open Source**
- 4. Anonymous Digital Bearer Certificates**
- 5. Private transactions with no third party information capture or record of transactions**
- 6. Systems are free to operate**
- 7. No ability for a user to identify another user or ownership of any user's account**
- 8. Multiple accounts for one user are possible**
- 9. No formal registration required to sign up**
- 10. Any user can design and issue his own currency**
- 11. Powerful security and encryption for anonymous users, issuers and operators**
- 12. Digital mints do not store transaction reports on currency creation or transactions**
- 13. Anonymous, Numbered Accounts secured by public key cryptography**

Untraceable Digital Cash

The focus here will be on the "margins." That is, the margins of legality, acceptability, and perhaps even morality. Not the mundane uses of digital money in ordinary transactions, but on the exciting--and possibly illegal--uses at the margins. These are the areas often pioneered by early adopters, by those

motivated by risk-reward trade-offs to adopt new technologies. These are the incentivized users. And this is where the law enforcement and national security communities are also focusing.⁵⁴

These new decentralized systems often offer any user the ability to create and use their own digital currency. These systems make it possible for each user to create and circulate one or more of their own digital currency units for whatever purpose they desire. The level of trust established for anyone to accept that digital unit depends on the issuer and the public's perception of that issuer. If a well known person with a good reputation issues one currency and asks others to accept those units, it's likely others may accept his digital currency. If an unknown person issues a dozen different currencies and continually asks others to accept new ones, it is unlikely anyone would participate.

Even if nations attempt to control digital cash (and control crypto in general, which will be needed if digital cash is to be controlled), those on the margins are strongly motivated to use crypto and digital cash systems, and are not much scared off by the penalties which might be imposed, especially when the protection against getting caught is basically as strong as the rules of mathematics, not the rules of men.⁵⁵

The Internet has given birth to new methods of private value transfer and the past decade of general use has allowed professionals to fine tune the privacy and performance features of these advanced Internet exchange systems.

Since the prosecution of e-gold and the extensive forfeiture of customer and company assets, along with the \$24 million dollars in assets seized from e-bullion in 2008, software designers have recognized that the government is racing to develop tools and tactics which will help to retrieve and preserve evidence created by currency payment transaction systems.

These independent software designers are working

“Loom facilitates the creation of digital money by providing an easy way to monetize digital assets.”

-- Sandy Sandfort

to shed any requirement for identifying information being present before, during and after a transaction. Legal names, email address, phone numbers, IPs, postal addresses and even nicknames are all now being replaced hex numbers and numerical folders.

“In a free economy, the market rather than the law dictates which form of money is used in commercial transactions. ...rarely has the development of money been the pure artifact of governmental policy or political decision. Money is a living creature of the market and its form changes to facilitate commercial transactions in an ever more efficient, convenient, and safe manner. As such, most innovations in monetary practices are attributable to the decisions of the market.”⁵⁶

Often by design, these new systems block even the operator from knowing what digital units have been minted, who is using the system and the purpose of the payment.....it's pure digital money(cash).

These systems are often the very mirror image of cash in a digital format. Additionally many of these new systems are open source and almost anyone can set one up on a server or local PC.

Perhaps the most important feature of this trend is that essentially anyone can become the “Mint”. Anyone can create their own version of digital money and use it how they please.

New independent versions of digital currency software are all trending in this direction. It is the outcome from the last 5 years of tighter regulation.

Bitcoin

A new P2P anonymous digital currency.

Bitcoin is a free, open-source, peer-to-peer, anonymous, network-based digital currency. All transactions are non-recourse. Its creator Satoshi Nakamoto calls it a “cryptocurrency”. Bitcoin is currently in the beta development stage and its popularity grows each week. Bitcoin development is hosted at Source-



Forge⁵⁷ and nowhere on the Internet will you find a better model of an emerging digital currency system than at <http://www.Bitcoin.org>

Bitcoin relies on cryptographic principles to create unique, unreproducible, and divisible tokens of value. Bitcoin utilizes public/private key cryptography and the currency backing cannot be counterfeited. Each coin has its owner's public key on it.

Unlike conventional government issued fiat currency, Nakamoto says, “everything is based on crypto proof instead of trust.” In this respect, Bitcoin has similarities to gold as it is perfectly fungible, evenly divisible, stores value in some esoteric way and cannot be copied.

Bitcoins are divisible digital tokens that can be exchanged over a network or stored on a removable device. In Bitcoin's P2P computer network there are no central servers and the entire network is composed of end users running instances of the application on their personal computers.

Bitcoin encompasses almost all of the features that define the next generation of value transfer software as previously discussed in this document.

The structural changes in these payment networks seem to be a knee jerk reaction to the recent U.S. prosecution of digital currency companies.

The unfortunate fate of both E-Gold and the Liberty Dollar is evidence of the fact that any centralization

““Anonymity” means that the real world identity of the parties of a transaction can be kept hidden from the public or even from the parties themselves.”

--Bitcoin.org

of a currency system is vulnerable to outside monitoring, tampering or outright confiscation. With Bitcoin “there is no central database for police to raid and no way for your Bitcoins to be stolen” at the institutional level.⁵⁸

Bitcoin is fully distributed & completely decentralized. It is anonymous, electronic currency and a model for “things to come”.

Older models of digital currency systems such as e-gold, e-bullion and Pecunix all operated with a central authority that minted new currency and kept a careful track of all transactions. In total contrast to these original pioneering systems, Bitcoin has evolved and those most important privacy tasks are now managed collectively by nodes on the network.

The advantages of such as a decentralized system include:⁵⁹

- **Compared to credit card and merchant processing Bitcoin transactions are extremely low cost or free. This is a feature present in almost all modern Open Source digital currency systems**
- **The transfer process does not involve any middlemen and is absent the risk of having to trust a central party during each transaction**
- **Third parties do not have the ability to block a transaction, control the frequency of transactions or size of transactions, users are free to send and receive without limits**

The Bitcoin network is designed to offer privacy, verification, authentication, currency creation and effortless transfer of ownership. Bitcoin is not brand new, but the commercial economy created from its use has only recently been gaining retail momentum. As of August 2010, the entire Bitcoin economy, was valued at just over a quarter of a million US dollars.⁶⁰ At the time of publishing (Dec. 2010), it is believed that the total Bitcoin economy is now valued at around \$1 million dollars.

There is a marketplace at the site in

which I’ve found ideas for a lottery, an operational casino, quite a few ads for electronics, and apparently some guy was able to get a Papa John’s pizza.⁶¹

There are several ways to accumulate Bitcoins currency. The most obvious is of course to get paid by anyone else using Bitcoins and the second method is to be paid helping to support the network. Bitcoins currency can be “earned” by permitting your CPU clock to be used for Bitcoin’s resolution of complex transactions. (Once the client is installed and operating, a user can click on ‘Generate Coins’. This will begin the process of being paid in exchange for validating Bitcoin transactions.)

Advantages:

- **Ease of use (convenience) Bitcoin offers an easy-to-download software client. Once the client is open, transactions are simple. Additionally, the software client is not necessary for all end-users. There is a free service called <http://mybitcoin.com> which operates a very simple web interface. allowing users to log on with a browser and skip the download.**
- **Shopping Cart Interface (SCI) and HTML button code generator---**Like many other popular payment systems; you can easily generate and paste HTML code onto your website to accept Bitcoin payments!
- **Across the Internet, there is a small army of very happy and very smart talkative users willing to discuss Bitcoin and support expansion of the project.**

What drives the commercial success of a project like Bitcoin? Word of mouth. Bitcoin users are excited, social and “would, ...really appreciate it if you can ask your favorite online merchant if they’d like to accept Bitcoin as payment!”⁶² There is a chorus of users around the globe propelling other new users to advance this useful project....this is how powerful new P2P systems are born.



“A Loom transaction can be completed without complicated equations or multiple steps, it can be described as beauty & elegance.”

-- Unknown

“ A bearer instrument is a document that indicates that the bearer of the document has title to property. Bearer instruments differ from normal registered instruments, in that no records are kept of who owns the underlying property, or of the transactions involving transfer of ownership. Whoever physically holds the bearer bond papers owns the property.”

--eCache

I want Bitcoin to be successful, so I created this little service to give you a few coins to start with.⁶³

Loom

Loom.cc has been labeled as both general-purpose digital accounting software and informal online value transfer software. The system offers users the ability to create, send and receive digital units (assets). The Loom was designed by Patrick Chkoreff and is Open Source software. The files are available at <https://loom.cc/news>

[Loom]Security is through secrecy of the locations.⁶⁴

The Loom software's design can be visualized as a massive grid. The grid is essentially a sparsely-populated spreadsheet with 2^{128} rows and 2^{128} columns.

During a conventional bank product payment, a transaction is completed by sending funds to another account. The funds then automatically register in the receiver's account and the transaction is complete.

Unlike conventional bank payments, a Loom transaction always has two parts. In a Loom payment, the user (sender) places an asset on a specific point in the grid and records that location. The coordinates are then delivered to another user (receiver). Private delivery of this number can be accomplished by any method including but not limited to email, phone, fax, SMS or written on an old bar napkin.

By placing this asset on a private location and sharing that location, the Loom user is creating a "shared asset" which can be accessed by both sender and receiver. To complete the transaction, the receiver then visits the location and picks up the shared asset. In reality transactions are quick, easy and efficient... no actual travel required. Once the asset is picked up by the receiver, the transaction is final and cannot be reversed. (An "account" at any standard online payment system is comparable to "a folder" in the Loom system.) Each user has at least one folder where assets are held. The folder is considered the user's account.

Loom's security is based on three elements, the mathematics of really large numbers, Open Source software and server operator honesty.

The process of creating and operating a Loom folder, requires no identifying customer information.

Loom assets are not created by the centralized system. In fact, each user may create their own assets or do business using assets created by another user. Every person in the Loom system may have their own currency or simply choose to transact business using currency already created by others. For this description the term "assets" and "currency are interchangeable. There is no central depository for all Loom assets, essentially the idea is to disperse the private assets and avoid central repositories as much as possible.

The Loom asset can be described as the digital representation of ownership. In the Loom system users are moving a digital "right of title" for a asset. The underlying asset may be a physical commodity or a virtual device with no real world value.

Any user can issue new assets (digital currency units) at anytime, these new assets may be identified in any way the issuer permits. If a Loom user would like the world to learn about their privately created assets that user would publish the information and invite participation from other users. If the user desires complete privacy, then no information would be available to the public that the asset even exists. In this case, even the Loom operator is unaware of the existence of the assets. Creating an asset is a simple but very private operation.

After an asset (digital unit) has been created, parts of that digital unit or the whole unit can then be transferred between users. The entire Loom system, including the folder interface is built on top of a very solid and highly tested API (Application Programming Interface). Other software is also available along with API add-ons that can automate this payment process, simplify the acceptance of an asset (payment) or incorporate the Loom activities into an existing shopping cart application.

**“The first truly
anonymous
useable and
backed anonymous
payment system in
Torland.”**

--eCache

On the Loom system a specific type of real world asset could be represented by a unique identifier known as the ID. For example, the asset ID a11590550d42888981be659b0451dba2 might represent bushels of wheat stored in silos managed by a reputable storage company, available for delivery on demand. The asset ID 5690a4d3a527ff18d3c168884e8a2d63 might represent kilowatt-hours of electricity produced by a specific power company. The asset ID 2fcb2b81bb96bb51cec88edcb4b9a480 might represent shares of ownership in that power company. Any Loom user can create a new asset type and ascribe any desired meaning to it.

Because of the compartmentalized features of the software, the Loom system operator is never aware of what assets have been privately created or are being used on the system. Even to the server operator, a user's activity is 100% private. The Loom software also provides a transaction history feature which can be toggled on or off at the account owner's preference. The digital units are divisible out to any scale desired but a 7 is typical for gold. (00.1234567)

The Loom system is built on reputation, integrity, reliability, productivity, and service. Those assets not perceived as valuable because the issuer is not reputable will not be recognized by other users as having worth in the Loom system.

Bill St. Clair has even created an excellent iPhone app to interface with Loom.

Loom is a system which enables people to create, move, and trade assets however they like.⁶⁵

The process of opening and operating a Loom folder is completely anonymous. There are no formal accounts in a Loom system as you may find in conventional online payment systems like PayPal. Those type of conventional accounts may require some or all of these items:

- **Name**
- **Address**
- **Phone Number**
- **Email**

- **Credit Card Information**
- **Local Banking Information**
- **Utility Bill**
- **Telephone Call Verification**
- **ID Copy**

The Loom folder does not require any identifying information (not even a name) and the only activity required to create a Loom folder is to choose a passphrase. A passphrase is the single identifying item required to open & operate a Loom folder. Transactions between national currency and Loom assets are all handled by independent third party exchange agents. Anyone can be an exchange agent.

In the Loom system, no physical assets ever change hands. While Loom digital units can represent items of value, not all assets may have real world value. Some digital units may have precious metal or commodity assets backing them and pledged by the issuer. However, other assets may represent something with no real world value, such as a "Thank You", an "IOU" or just "Hugs and Kisses".

<http://loom.cc>

WMNotes

WMnotes are e-cash - an electronic surrogate of cash (coins and banknotes) and a single solution for e-cash payments across Europe.⁶⁶

WMnotes are e-money (*e-cash*) described as a digital surrogate of cash which is stored on an electronic device. This is a commercially successful project in use today. WMnotes allow for anonymous cashless payments in small amounts using diverse methods such as points of sale, mobile transactions or the Internet. WMnotes are extremely simple to use, cost-effective, and reliable. This new product allows instantaneous and secure electronic money transactions without the need for a bank account or credit card. WMnotes are a payment product currently used in several regions across Europe.

With WMnotes, anyone can shop online, instantly send funds to friends or family members and even transfer e-money offline. No credit card or bank

account required. The stated goals from WebMoney.EU, one of the web sites responsible for WMNotes, is threefold.

- 1. allow all electronic money institutions, regardless of size or capital, operating across the European Union to issue and service e-money - an electronic surrogate of cash:**
- 2. ensure that all bearers of e-money can readily verify its validity and carry out secure cashless payments of small amounts in various spheres of commerce, including mobile and Internet communications;**
- 3. enable all merchants and businesses, regardless of industry or market share, to accept electronic money as a form of payment.**

Unlike other new payment methods that only provide an Open Source software package, WebMoney.EU offers logistics, accounting, and processing support for all members of the network. Transactions using WMnotes including verification, transfer, code change, split, merge and redeem can be accessed through a stand alone web site. No additional software client is required.

Using WebMoney Transfer™ technology, WebMoney.EU ensures that consumers, merchants, and issuers are supplied with advance tools to expand their businesses. The Webmoney platform provides software, information and legal tools for instantaneous e-money transactions. WebMoney.EU also employs a sophisticated encryption technology to provide its users with a safe environment for shopping and business.

At WebMoney.EU, our mission is to create a single e-money system across the European Union that answers current demands of businesses and consumers for convenience and security.⁶⁷

The small amounts represented on a voucher can be anonymously transferred from any one person to another. Anyone can email the codes, write it on a

card, send it snail mail it or pass the code during a telephone conversation.

WMnotes are created and redeemed by independent European credit institutions. There are currently several issuers located in Latvia and Estonia. WMnotes can be purchased and redeemed at the Issuer's point of sale. Issuers are obligated to redeem WMnotes at par value.

Wmnotes in European Union (www.webmoney.eu) - EURO

Wmnotes in Latvia
(www.webmoney.lv) - LVL.LV1

Wmnotes in Estonia
(www.webmoney.ee) - EEK.EE2

Wmnotes in Ukraine
(www.wmnote.ua) - UAH.UA1 -coming

Voucher-Safe: Open Source Voucher Payment Project

This system is brand new(December 2010) and presently in beta testing. Voucher-Safe is one of the most promising next generation cutting edge products available online. The software was developed and created by the Pecunix team. (Siddley Inc.)

Voucher-Safe is an online mechanism for the secure, anonymous exchange of digital vouchers peer-to-peer between users, implemented as an extension to XMPP (aka Jabber), an instant messaging service. Because the P2P Voucher System is designed to emulate the model of circulating cash in the digital world, it works similarly. The voucher payment system itself is transaction agnostic, just as it is agnostic as to the nature of the backing asset.

This new system is extremely secure and easy to use. The customer's operation of a "safe" begins with a simple software client download and takes about one minute to set up. Multiple safes are possible and anyone may have as many "safes" as they desire. No customer identifying information is ever required or requested to operate this product. All national currency transactions occur through third party independent exchange agents. No funds flow to the Voucher-Safe operator and it is not possible to execute any financial

“Trubanc[Truledger] spends are essentially digital notes, signed by you and countersigned by the bank. Assets are moved between and within accounts by generating and accepting spends.”

-- Bill St. Clair

transactions with the operator.

The design of the P2P Voucher Payment System actually anticipates the needs of regulatory authorities, and complies with their stated design goals for implementing “AML” (anti-money laundering) strategies in virtual worlds and online payment systems. Every component of Vouchers-Safe is open source and standards-based.

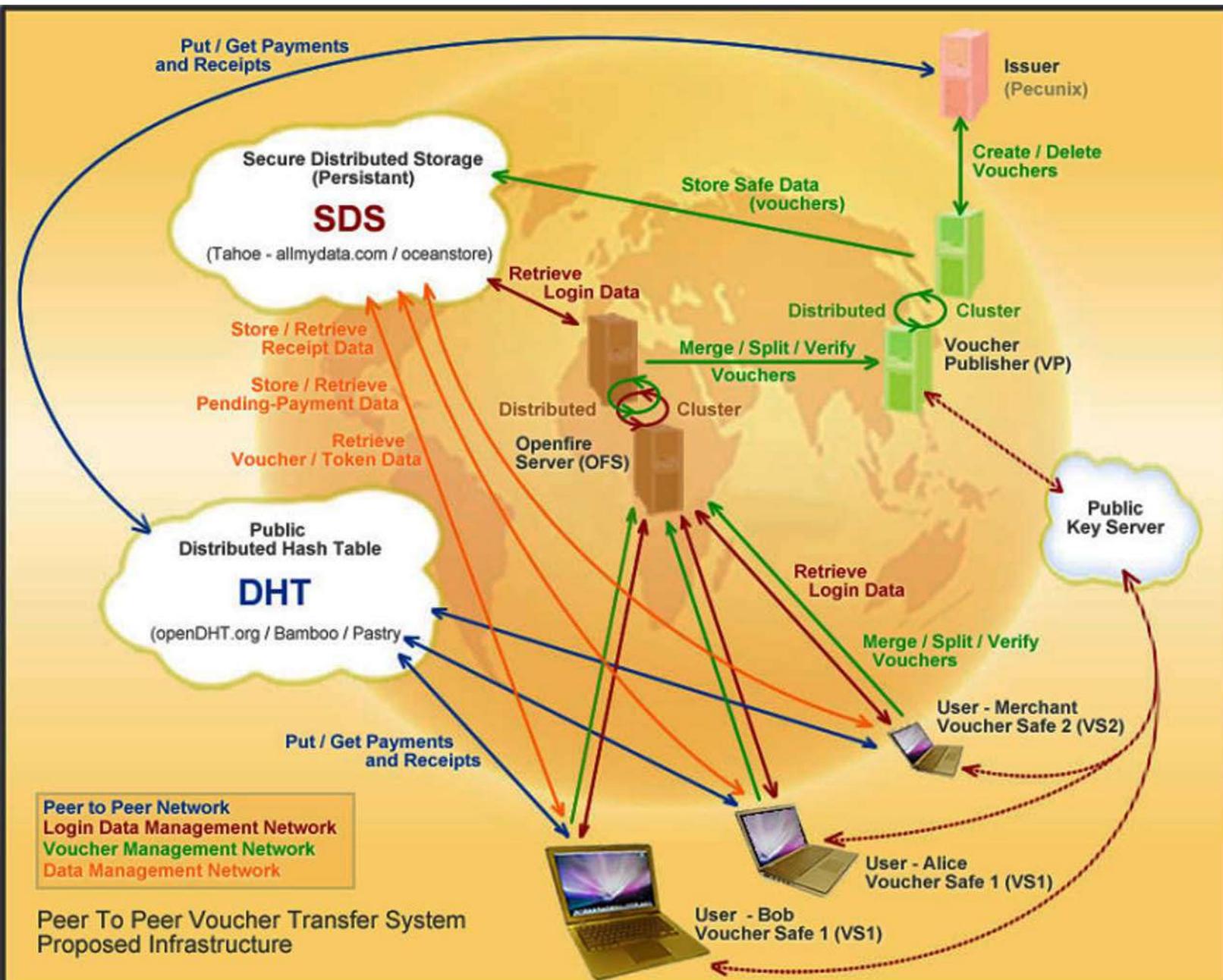
Inexpensive Secure P2P Digital Bearer Payments

The payments are P2P, person-to-person or “peer-to-peer” in network parlance. There are no accounts, merely electronic wallets containing digital objects signed and validated by a publisher/mint.

Payments are secure: encryption is used everywhere, and all data representing value or transaction details is always stored encrypted and digitally signed so it cannot be tampered with.

Payments are in bearer form, meaning cash-like: anonymous, irrevocable, and untraceable.

Payments are extremely inexpensive. In the demonstration system[12-1-2010], making a payment costs 13 tokens, with the value of a token set at 0.0005 grams of fine gold (approximately US \$0.015 per token). Thus sending a payment costs less than twenty cents. Compare sending a Western Union or paying with a credit/debit card. Receiving and validating a payment costs 5 tokens, or about eight cents.



When creating this system, here were a number of design goals which guided the project designers:

- 1. The system must not be account-based, but constitute a true digital bearer certificate exchange system, where digital wallets exist but accounts do not.**
- 2. To engender user trust in the system, it must be 100% open source, not only for our code but for any code packages or libraries which are utilized.**
- 3. The system must be distributed so that it cannot be shut down by highly organized crime.**
- 4. All data must be encrypted, and handled in such a way that the user does not need to trust any of the system operators. (The sole exception being the Issuer, which must be trusted to store bona fide backing assets.)**
- 5. Payments must be irrevocable, and untraceable. It must be physically impossible for any component, even the VP, to provide a transaction history for any user. That which is impossible cannot be compelled. (See goals 1 and 3.)**
- 6. The system architecture must provide inherent economic benefits to its operators, while minimizing costs to users.**
- 7. To mitigate the threats of DDoS, spam, and easy traffic analysis, HTTP browser and email traffic should be avoided.**
- 8. Given the increasing ubiquity of wireless hand-held devices such as web-enabled cell phones, it is desirable not to restrict users needlessly to the desktop environment.**

The Issuer holds the stored value and creates vouchers up to but not exceeding the available backing. The Issuer has no knowledge of anything beyond the amounts and serial numbers of the vouchers currently in circulation.

The Issuer: this is the party who stores the assets backing the vouchers. The Issuer is responsible for keeping track of all vouchers in circulation, assigning

their serial numbers, and ensuring that the aggregate weight or value of all vouchers does not exceed the backing. The Issuer knows nothing about users or owners, only voucher amounts and serial numbers.

The Publisher (VP) is merely the mechanism through which vouchers are introduced or withdrawn from circulation.

The Voucher Publisher (VP): the VP processes all voucher transactions, signs all vouchers with its private key, and encrypts each with the public key of the owning voucher safe (VS). It also issues signed usage tokens (bought with vouchers) and permits other system components to redeem accumulated tokens for vouchers.

The Publisher also has no idea which voucher safes (wallets) contain which vouchers, except within the context of a particular transaction at the moment it is performed. Once vouchers are minted, their value circulates in the wild, just like with paper money. This is extremely important for the operational safety of the system operators. Their accountability ends with running an honest warehouse that does not indulge in fractional reserve accounting. They bear no responsibility for the actions of individual voucher users, and can bear none, because it is physically impossible for them to track those actions, even as a national mint cannot. The Issuer and VP together constitute a digital mint. They are not a bank, and they are not a payment system. The open source software and the users are the payment system.

What is a Voucher?

A voucher is an encrypted digital representation which stands for or represents something else. A voucher is said to be “backed” by whatever underlies it, such as gold or silver. Vouchers are digital bearer certificates circulated and validated by a Publisher. A voucher payment system makes it possible for any value located in one place to be spent somewhere quite different. Vouchers are minted based on a quantity of the backing asset lodged with the Issuer/custodian, and the total value of all vouchers circulating cannot exceed the amount in custody. Vouchers expire after six months. This is meant to be a transactional system, not a savings account.

Digital vouchers represent their backing asset, and as such constitute another level of indirection which allows an abstraction of value to circulate, rather than the value itself. This turns out to solve a number of thorny problems with online payment systems generally.

Voucher Operations

Once a client is logged into a Voucher-Safe that customer has access to the contents of the safe and can then perform operations with the vouchers and tokens in its safe. These operations include: Validation, Split, Merge, Payment (to another VS), Token Purchase, and Reclamation (of an outbound payment which was never picked up by its payee before it expired).

A P2P voucher system does not inherently violate accepted principles for preventing money laundering, and would not do so unless an Issuer or Exchange broker failed to implement required AML policies. In which case the responsibility would belong to that party. <http://www.voucher-safe.org>

eCache: Anonymous Digital Bearer Certificates

**Freedom to control what you own is
fundamental to an innovative humanity.
Freedom over your money is required to
keep yourself free. We believe that freedom
is a more valuable good than anything else.**

-eCache

eCache is a completely anonymous digital cash product. It is in retail use today across the Internet and has been for a few years. This is one of the most unusual and effective anonymous digital currency products in use today. eCache was designed & created to mirror cash banknotes. This systems can be used for payment between friends or associates, bill pay, P2P and P2B transactions. Payments can be sent or received using email, instant messaging or SMS.

Digital Bearer Certificates are cryptographically secured data pieces that entitle the owner to a defined

portion of assets backing the certificate. An eCache payment is a Digital Bearer Certificates (DBC).

The current assets backing eCache certificates are pure gold coins and the currency certificates are labeled GG for "Gram of Gold". A digital bearer certificate in the amount of 10GGs would have a value of 10 grams of gold.

These DBCs issued are backed by grams of gold held in the unpublished/unknown eCache vault location. Each DBC is similar to a unique physical banknote. In fact, early in America's history physical banknotes were also issued in a similar fashion and redeemable for precious metal. It might be concluded that an eCache digital certificate is a modern form of a "gold certificate".

eCache is completely anonymous just like physical cash. The eCache mint which issues the certificates does not store any transaction details and no personal identifying information is ever requested from the mint or any other user. eCache can only be reached online by fully anonymous means like Tor.⁶⁸

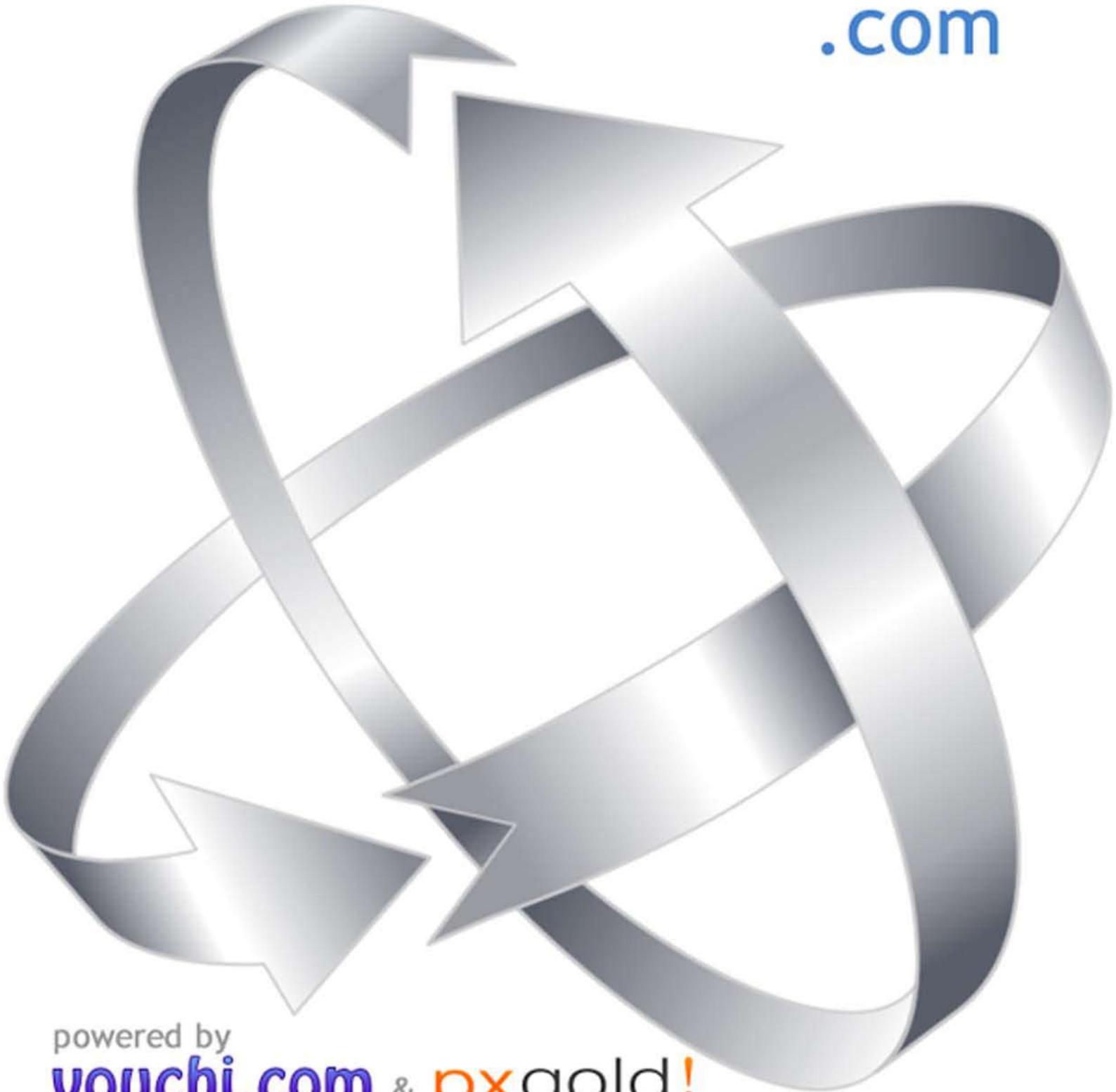
Since each digital bearer certificate issued by eCache is registered within the eCache system at any time those DBCs can be exchanged for new ones with different identification. The eCache Interface will instantly and easily reissue a new DBC. The software destroys the old DBC and issues a new one with the same currency and face value. After an exchange that old DBC becomes invalid and worthless. Once reissued, just like cash, the ownership trail for that certificate disappears making it impossible to trace.

While untraceable cash is desired by some, the eCache commitment to anonymity may become one of the main stumbling block to this system gaining a wide public acceptance.

eCache certificates can be obtained from a third party independent exchange agent, received in payment from another user or purchased directly from eCache. An out-exchange or conversion from certificate to national currency can be accomplished using the same methods

Daily audit reports are published on the eCache web

voucher-safe .com



powered by
vouchi.com & **pxgold!**

site and a photo of metal that is alleged to be backing the certificates is also available from the web site. No account documentation or special business fees are needed to become an eCache merchant accepting payment for good and services. The software also offers an automated payment interface for customer websites. The eCache servers and databases utilize full disk encryption and all keys are stored offline.

Truledger (Formerly Trubanc)

The Open Source Truledger software is available today but not yet in wide commercial use. Similar to the Loom software, Trueledger is a powerful example of these new decentralized Open Source systems. Trueledger is an excellent illustration of today's digital currency trends.

Truledger is an anonymous, digitally-signed accounting and trading system. This software package is the next generation of Bill St. Clair's Trubanc. Truledger allows anyone to issue assets (digital currencies). Unlike Loom, which relies entirely on obscurity for security, Truledger's digital signatures provide proof for the bank and the customer that each had agreed on their stated balances at a particular point in time.

Every message between client and server is PGP-signed, making for much better authentication than a conventional username/password. The client runs on a user's PC and the private key never leaves their possession, making it difficult to steal. Every balance is time stamped, signed by the client, and countersigned by the bank. Truledger uses OpenSSL for its public key cryptography and the combination of a passphrase and a private key makes up a user's identity. Like the Loom system, no identifying user information is ever required to open or operate Truledger.

There are three main parts of a Truledger account: the balances, the outbox, and the inbox. Value is stored in all three places. Both client and server are web-based and multi-user. The client/server package ships as a single executable file for Windows, Linux, Mac OS X, and FreeBSD. Source code is provided, under the Apache license.

It is anticipated that a majority of people will use the client software, but those who wish to set up a server can easily do so. Truledger is similar in many ways to Open Transactions (OT) and OT was inspired by some of the ideas in the original Trubanc. Truledger is closer to industrial strength than Open Transactions, but not as full featured. <http://truledger.com/>

Open Transactions

A statement from the Open Transactions software designer.

I wrote OT because I saw it clearly, and I knew that it needed to exist--and because of how disgusted I felt, knowing that TWELVE LONG YEARS had slipped by since I last looked into it, yet there STILL was not a real open-source transaction server available, where people could issue currency contracts, use untraceable cash (chaumian blinded tokens), write cheques, trade on markets -- in short, where they could have real financial privacy, the same way that PGP provided communication privacy.

Available to the public but not yet in retail or commercial operation, this Open Source software is built on the concept of supporting multiple cash algorithms. Similar to popular PGP software, Open Transactions should support as many of the top algorithms as possible. Open Transactions is a catch-all phrase for a library that appears in many forms. It can be built it as a class library and the classes used in any other software similar to OpenSSL.

The files are located here.

<https://github.com/FellowTraveler/Open-Transactions/>

Similar to Loom, or Truledger, the Open Transactions server is entirely agnostic to the asset types that are issued and traded there by users. There could be hundreds of such asset types but to the server, each asset type is merely a different ID. Similar to Ricardo (*Ian Grigg / Systemics*) the asset types on OT are each defined via Ricardian-style contracts, which are basically PGP-signed XML files.

Software Details

Untraceable Digital Cash. Cash withdrawals of any asset type, using Lucre.⁶⁹

“When you withdraw cash from the bank, and then later someone else deposits it, the bank has a record of a withdrawal and a deposit, but they don’t know that it’s the SAME cash, and they don’t know who had it in between, or how many hands it passed through along the way. They simply can’t trace it. These traits are also true of digital cash.”⁷⁰

This project is Lucre wrapped up in C++ classes, XML contracts and all the rest of the protocol. Open Transactions provides a full and working implementation of Chaumian blinded tokens. Specifically, the Wagner variant as implemented by Ben Laurie in his Lucre project.

“When the client withdraws cash, he constructs blinded prototokens and sends them to the server. The server signs the prototokens, removes the withdrawal amount from the asset account, and then sends them back to the client, who then unblinds the tokens, and they are now ready to spend. Later, when the token is spent, the payee deposits it into his own account at the server. When he does, the server sees the Token ID for the first time; it has no way of tracing it back to the withdrawal. The server then stores the token ID into a spent token database, in order to prevent double-spending of the token.”⁷¹

Anonymous, Numbered Accounts secured by public key cryptography. Any user may create as many User IDs as desired using the wallet software to manage all Pseudonyms and Asset Accounts across multiple transaction servers utilizing multiple asset types. An “account” on an Open Transactions server is just a communication key. The accounts are numbered (they

are PGP keys) in this respect, they are pseudonymous. Further the act of key creation can be accomplished over an anonymous VPN or Tor network connection completely obscuring the creator’s identity.

Powerful security uses Triple-Signed Receipts for all account-to-account transfers. This allows the client and server to agree on balances while simultaneously not storing any transaction history. It is impossible to transfer or withdraw any funds without an authorizing signature from the account owner.

Everyone is a Potential Issuer. Any user can design and issue their own currency and simply upload the currency contract to any server. Digital currencies such as Pecunix, iGolder (or Bitcoin) could all be used as backing for currencies issued on Open Transactions.

Basket Currencies allows a user to distribute the risk of a single currency across multiple issuers. Basket currencies are already fully operational and do not require any additional system resources compared to normal currencies. Baskets are an important example of the distribution of risk that is necessary to make digital cash unstoppable online.

“Open Transactions is designed as best possible to distribute risk across multiple issuers (through basket currencies) as well as distributing risk in other ways (across multiple transaction servers, across a diversity of jurisdictions, etc)...Users will take advantage of baskets in order to distribute risk across their favorite issuers.”⁷²

Distribution of risk across multiple transaction servers in multiple jurisdictions is possible. The wallet software can store an entire list of transaction servers. Every new server contract that you import to the wallet puts a new server on the list. There will be many such servers, run by multiple entities and run in multiple jurisdictions. Many will run openly and with full access to their local court system. Others will run on anonymous networks. Users will be able to individually choose a server for a certain transaction — or even distribute their assets transparently across

a list of different servers.

Open Transactions offers “Payment Plans”. A payment plan is similar to a normal account transfer, except it processes multiple times. As long as both users have signed the payment plan, then the server will dutifully process it according to its terms, each time dropping the receipt into the respective users’ inboxes. I like payment plans because they were the first contract requiring multiple signers.

Open Transactions now also supports markets with trades. (Meaning that users are able to trade one asset type for a different asset type.) These markets are full-featured and support limit orders, stop orders, stop limits, day orders (date ranges), and market granularity. (Granularity means that different markets are available for the same asset type, based on minimum purchase requirements. For example, there may be a 1oz minimum gold market, and separately, a 10,000oz minimum gold market, and the price per ounce may be different on each market. Opportunities will thus exist for a buyer to purchase in bulk on one market, split it up, and sell the pieces on the smaller market.)

Just like with paper cash, Open Transactions digital version of cash is merely a transfer mechanism. The currency is only a representation of value and not the actual value itself. Each user must decide if they trust the issuer of any given currency and if promises regarding the value backing that digital unit can be trusted.

Open Transactions has a working server and a TEST client. The designer of Open Transactions has shared a belief that many of the killer apps that are coming up are integrations, not straight clients. A test client is provided for Open Transactions, but it is command-line only just like an OpenSSL command line. The Open Transactions client runs in a terminal window it’s not graphical.

This product includes software developed by Ben Laurie for use in the Lucre project. The Open Transactions protocol for account-to-account transfers (*instead of cheques, or cash*) is very similar to the one in Trubanc.

“Untraceable digital cash is here. It will become easier to use and more established in the next several years. It is indistinguishable from speech, so any laws intended to control it will almost certainly impinge on speech in general. While scare tactics may work to drive average users away from using digital cash, those operating on the margins have the most to gain and lose and will likely not be dissuaded by such laws. Not only have criminals rarely been dissuaded by tax and banking laws, but here the chances of getting caught are nearly zero. Boom markets in information of all kinds can be expected. Crypto anarchy has its benefits as well as its problems. It’s going to be an exciting world.”

--Tim May⁷³

Notes

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