Safe Worlds

Monetization and the Ultimate e-Business System

"The virtualization of physical money into its digital counterpart and the comprehensive diffusion of on-line financial services are likely to trigger the adoption rate of business-to-business and business-to-consumer routines over the Internet considerably." (Hawaii International Conference on System Sciences – 2001)

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As we move the world economy into cyberspace, the key issue now is how to **monetize products and services in cyberspace on a global scale**? Safe Worlds is the answer. This paper explains monetization and the Safe Worlds solution.

Monetization

Monetization is happening on the Internet now, but only on a "silo"-basis. Apart from Safe Worlds, there is still no global solution and ubiquitous e-business will not happen until there is.

Monetization is the process of converting goods and services into money. Money is "currency"; an "IOU", a "promise to pay", or a "Promissory ***Note***". All money is a ***Note*** of some form that is backed by certain value that is trusted by the parties in a transaction.

In today's world, countries generally issue money and the bigger and more successful the Country is, the more its money is valued.

It also needs to be understood however that most businesses also issue a form of money that is critical to the working of the free enterprise economy. The "money" that businesses issue is what is called "Trade Credit". And, when we talk about monetizing products and services in cyberspace, we are really talking about how businesses can extend Trade Credit in cyberspace.

Without Trade Credit, business, as we know it in the free world today, cannot function and this needs to be understood as we strive to establish e-business and move the world economy into cyberspace, because e-business will not happen on any scale until trade credit can be monetized. This is another reason (maybe the most important) why we need a system like Safe Worlds that provides a universal way for businesses to monetize their goods and services in cyberspace, and thereby to extend global trade credit to their customers – even if the term of the credit is just for the life of the transaction.

Safe Worlds

Online business ("e-Business") involves buyers and sellers. However, before buyers and sellers can participate in e-business, there must be an online system that enables their interaction. This is what Safe Worlds is all about.

Safe Worlds is not a retrofit of the World Wide Web. It is not a fancy Web site. It is totally new Internet-based platform that exists and functions within the infrastructure of the Internet, in parallel to the World Wide Web.

Unlike the World Wide Web that was never designed for e-business and therefore is not private or secure (and never will be), Safe Worlds has been designed for e-business from the start. Safe Worlds therefore is private and secure and has everything that is needed to do e-business, including how to monetize products and services for e-business.

Understanding e-Business and e-Banking

Business is any activity conducted for gain – banking is a business. E-business and e-banking is simply the operation of these businesses online (in cyberspace = electronically).

Banking is the business of providing businesses and people who do business with the financial instruments (tools) and the services they need to make the payments that are essential to the operation of their business (i.e., money and its substitutes).

Banking is also about providing the fastest, safest and most secure method of processing payments, so that profits can be determined and gained by those participating in the business, as fast as possible – preferably in real time. This is why business and their banks are moving online – and processing payments electronically, as fast as they can.

When we talk about the monetization of products and services in cyberspace, most people believe that their bank will provide them with the solution that they need. The problem is that banks have so far not done this, or given any indication that they are about to solve this problem in the future – short or long term.

Trade Credit

Trade Credit is "money" (purchasing power) extended by a business to its trusted customers. This is why businesses and their customers are sometimes referred to as "circles of trust".

Businesses ("circles of trust") wanting to operate in cyberspace, not only need a way to interface with their banks, but they also must have a way:

1. To establish trust with new customers in distant places; and
2. To reduce the risk of bad debts?

To do this, they must have a standard way to digitally value (monetize) the products and the services they want to sell; and then they need a way of ensuring that they get paid for what they sell. Yes, on the customer side of the equation, there is also the issue of ensuring that the customer gets what they pay for; however, for the purpose of this exercise, I suggest that this is a secondary issue.

Payments Processors

In terms of the total solution for this requirement, Safe Worlds provides the way for businesses to monetize their products and services in cyberspace. Payments Processors (banks or specialist processors), when linked to Safe Worlds, provide the way for businesses to get paid for what they sell.

In the relationship between businesses and their bank, the bottom line for the business (apart from all the other services that their bank may provide) is that their bank(s) facilitates and processes the payments for them that are critical for their survival and success. It is the processing of payments service that is the most important business service that banks provide; regardless of whether or not it is the most profitable of the wide range of services that banks provide.

In most cases, providing an online payments processing service is really a "loss leader" that banks provide to attract and hold their customers so that they can sell them other, more profitable services.

Banks know this and throughout the history of banking, bankers have been striving to perfect this part of their service. Their ultimate goal is a fully integrated, fully interoperable system that integrates and ties businesses electronically with their banks for the streamlined delivery of banking services. This cannot happen however, until businesses can connect with banks on the terms that businesses need to do e-business.

Difficulty Seeing the Big Picture

Although there is no doubt that banks are aware of the need from their perspective; it is clear that banks are having difficulty seeing the bigger picture of change that is happening in the business world today; particularly understanding where e-business technology is going. This is evidenced by the fact that PalPal has successfully established itself and captured a significant share of the small business payments processing market; and Google (Google Checkout), Amazon.com and others are now rushing to emulate what PayPal has done, because they see the opportunity that the banks obviously do not see.

It should also be noted that PayPay is already now a bank in Europe; and can be expected to continue to eventually expand into other areas of traditional banking.

If the banks clearly understood the current demand and where e-business is headed, it is doubtful that PayPal and these other systems would now exist.

PayPal's Limitation

PayPal's success is eye-catching. However, it needs to be understood that it is heavily reliant upon business flow from eBay, in the same way that Google Checkout is reliant on Google; and Amazon FPS is reliant upon Amazon.com. All of these services are really "silo" services.

Although they are Payment Processors, none of these services have anything unique that indicates that they will rise to the level of being the global standard for e-business payments processing, because they do not provide a way for their customers to ***globally*** monetize their products and services. They simply process online payments.

Banks have global systems like "Streamline" and 'SWIFT" that could be competitive with PayPal, but they have not, for some strange reason, seen the need to offer these services as general payment processing systems for the

public. There are also a host of smaller processors and the credit card companies (Amex, Visa, Mastercard) that all operate online, but none of these entities appear to see the PayPal opportunity and have yet come up with a global service that might be adopted for B2B e-business. Like PayPal et al, none of these banking or credit card processing system offers a ***global*** way to monetize products and services.

A Global Standard

A single, global standard like Safe Worlds, that interfaces with all these payments processing system is therefore needed that all-the-world can use for e-business. This is the only way that the world economy can move into cyberspace. And this service must come from a system like Safe Worlds, because the monetization of products and services has to occur before the product and/or service is even advertised for sale. Monetization is the ***first thing*** that must happen in the process of e-business.

A single standard is also needed because the standard must be secured. Businesses and banks will not use a system that is not private and secure. This is another major reason why online banking still hasn't taken off in a major way, because the existing systems are generally considered too risky. The current Web-based are insecure because they do not employ a single standard that can be enforced and protected. Contrary to the need for a single, secure standard, the current Web-based, online world of e-banking and e-business is a confused mess of thousands of different standards.

Safe Worlds claim to being the only suitable global standard is based on the fact that it incorporates ***Universal Logic***. Universal Logic is an irrefutable global standard based on the natural law of language and communication. This natural structure (Universal Logic) that is also the basis of all mathematics and science provides a common ***Note*** structure that enables the monetization of products and services on a ***global*** basis. Because it is Universal Logic, like binary code that is also based on Universal Logic, the standard cannot be refuted. This is the power of Universal Logic as a standard.

Towards a Standard Note

To understand monetization and what the Safe Worlds Universal Logic standard "***Note*** structure" means, it is essential to understand that all payments processing is about exchanging (conveying = communicating) ***notes***.

Notes in this context communicate the issuer's intent (meaning). They are the messages/instructions exchanged between buyers and sellers (businesses = bank customers) that describe and convey the instructions for payment processing (e.g. the amount and what to do with it), so that the payment can be processed, by the Payment Processor, according to the requirements between the buyer and seller.

Banking systems process such ***notes*** in their various forms and, for the purpose of this document, it is important to understand that the process logic involves three parts (parties): (1) the issuer who creates the **note**; (2) the processor who processes the **note** according, and (3) the beneficiary(ies) or recipient(s) of the payment.

All bank **notes** (even coins) work this way, according to the same Universal Logic. In fact, all forms of communication work this way - financial **notes** are just another form of communication (Universal Logic). Even a **note** in the form of an email involves (1) the author (creator = issuer), (2) the recipient or reader (who in this instance is the processor), and (3) the benefit (payment = understanding) the recipient gains from reading the **note**.

Why is this so? Because: this is Universal Logic (1+2=3). Consequently, this is also how computers work that run the world's business and banking systems, because there is no other way to convey meaning (value).

In the financial system, **notes** (including coins, checks, etc) constitute what is generally called currency. Currency is the generic name given to bank **notes** or their equivalent that, because of the way the world economy works, is always current, to one degree or another. The bottom line however is that like all currents (even electricity), financial currency moves in this common or standard, three-part (1+2=3), logical way, which ought to tell us that there is such a thing as an ultimate standard (a ***Universal Logic***) that applies ***notes***. This is the Universal Logic that we have computerized in Safe Worlds.

Banking Technology and Standardization

Because communication occurs according to Universal Logic, we see therefore that all the important developments in banking technology throughout the past 200 years of what might be called the modern banking era, relate to ways and means of simplifying and thereby standardizing the process logic (1+2=3) of exchanging **notes** between buyers and sellers (the players in business).

It is also particularly relevant to the debate about e-business today that, from the very beginning, the debate over all new banking technology has always

been between those who favour standardization (a common process or logic) and those who do not.

Those who do not favour a single standard currency (**note**) want to protect the status quo, regardless of its efficiency, whereas those who favour a single standard (a common logic) are, generally speaking, trying the move the process towards optimum efficiency.

In terms of winners and losers, it is important to understand however, that, those who favour standardization always win in the end, regardless of how long it takes to fight to battle, because, as good old King Canute found, you can't stop the tide. Progress towards a single standard or answer (Universal Logic) is inevitable; it is a fundamental characteristic of life.

A History Lesson in Banking Standardization

The modern banking system was created in Europe but America has long been its driver.

- When modern banking was being established in America in the 18th Century, the fledgling colony then had literally hundreds of different currencies (ways of communicating a financial transaction or ***note***) – not unlike the situation in e-business today where we have thousands of different systems that are vying for acceptance. And, the dominant debate of the day was between those who realized that America needed a single currency (a single standard), headed by Alexander Hamilton (1757-1804), the first Secretary of the US Treasury and those who did not agree, who were lead by Thomas Jefferson (1743-1826), who later become the third President of the United States.

- Despite Hamilton's spirited support for a single currency (a standard ***note***), by 1848 when gold was discovered at Sutters Hill in California there were 700 banks in America, but still no common currency or unified banking system. To protect the currency and provide the fledgling nation with a national system, in much the same way that Safe Worlds is proposing to do today, the stagecoach company Wells Fargo stepped into the breach and gave the US its first national system of exchange – Wells Fargo provided a systematic link between all the different banks. In doing so, Wells Fargo laid the foundations, not only for one of America's largest modern days banks, but also the modern electronic banking system that now exists throughout the world. Wells Fargo, in a co-mediator role (2) in the three-part (1+2=3) process, took raw gold deposits from the miners [the creators of the wealth (1)] who

had won it from the earth in exchange for **notes** that Wells Fargo produced. The Wells Fargo "system" then converted the gold into coins and ingots, and transported (communicated) it in this more simplified and standardized form, across America, in their "safe and secure", heavily guarded coaches that were the forerunners of today's armoured cars and now the electronic systems that put virtual **notes** into information packets enclosed in artificial armour called encryption.

- By 1866, the Civil War had been fought and won in America, President Abraham Lincoln (1861-1865) had been assassinated, and in the absence of a real currency standard, the US banking system was unmanageable. At that point there were 1600 banks in America and more than 8000 different forms of currency in America – something had to be done. To unite the country and make it manageable, and thereby economically viable, the new federal government of Andrew Johnson (1865–1869) finally introduced a single US currency and imposed a 10% tax on all other forms of currency, to dissuade people from using them - so concerned were they with the problems of "system" ***disintegration***. Incidentally, Andrew Johnson was also the first US President to be impeached.

The Impact of Disintegration

Throughout the history of modern banking, the lack of a fully integrated and fully interoperable system (one banking system and currency that works on a global standard) that can be centrally managed and related to the whole of a diversified economy, as opposed to the narrow focus of disintegrated local banks, each with their own system, has been a cause of major problems and now it is a World problem, because globalization is now past the point of no-return.

- Supporters of disintegration say that it protects their independence. However, they either do not understand the issue here, or they are intentionally muddying the waters, because, independence, in this context, is just another word for privacy and security. This is important to understand, because privacy and security are the No 1 concerns of all businesses that are thinking about e-business, closely followed by cost. What needs to be understood however, and rarely is, is that privacy and security can only be protected in a fully integrated, fully interoperable system or society that works on a truly federated basis, where all the participants in the federation are involved on an equal rights basis. This is the secret of America's

success. This is what Safe Worlds delivers; Safe Worlds protects the privacy and security of the individual user.

- At the level of the individual, independence (privacy and security) is critical to free enterprise and should be protected at all costs. At the level of the system that individuals and individual businesses use to do e-business, the opposite is true: ***disintegration*** is disastrous at the system level and this is proven by the fact that e-business is not happening on a global scale, despite the billions that have been spent by governments and others, trying to entice business into the arena.

Central Banking and the US Federal Reserve

The importance of a standard system in this context is exemplified by the importance of Central Banks or what is called the Federal Reserve in the US – to the global banking system. The Central Banks and the US Federal Reserve, provide the essential common platform for the diversified and widely flung, global banking system.

The concept of Central Banks was born in Europe. The oldest central bank in the world is the Bank of Sweden, which was opened in 1668. This was followed in 1694 by the Bank of England, created at the request of the English government to help pay for a war. The US Federal Reserve was created by the U.S. Congress through the passing of the Glass-Owen Bill, signed by President Woodrow Wilson on December 23, 1913. The People's Bank of China ("PBoC") evolved its role as a central bank starting in about 1979 with the introduction of market reforms in that country, which accelerated in 1989 when the country took a generally capitalist approach to developing its export economy. By 2000 the PBoC was in all senses a modern Central Bank, being spurred on by the European Central Bank, the most modern bank model that was introduced with the Euro to coordinate the various European national banks, which continue to separately manage their respective economies.

The successful European banking model has evolved over hundreds of years. In Europe, by the 17th century most money was ***commodity money***, typically gold or silver. However, "promises to pay" **notes** were widely circulated and accepted at least five hundred years earlier in both Europe and throughout Asia. The medieval European Knights Templar operated the best known early prototype of today's central banking system, as their promises to pay ***notes*** were widely used and highly regarded. At about the same time, Kublai Khan introduced fiat currency (not linked to any fixed asset and not backed by any promise to redeem) into China, which was imposed by force, but it

was colonialism and the emergence of a global commodity market, mostly managed by the British Empire with its vast sea power – the Royal Navy – that emphasized and drove the need for Central Banks and a common, trustable, global currency.

America came to appreciate the importance of having a Central Bank at the turn of the 20th century in the wake of the great earthquake in San Francisco. The destruction of local banks in the important financial center of San Francisco by the earthquake threatened to wipe out the entire US economy. So bad was the impact of this event on the US economy that in 1913 it led to the creation of the US Federal Reserve that today provides the US with its single banking system controlled by a Central Bank.

The Importance of Trust

The creation of the US Federal Reserve in 1913, in itself, or for that matter, the creation of any Central Bank, is never the final answer, because the banking system is more than just the system (machinery). Successful banking is ultimately the faith (belief = confidence = trust) that people have in the system.

We see therefore that even with the US Federal Reserve in place, in 1929 when the great New York stock market crash happened there were then 25,000 banks in America. By 1933, the Great Depression that followed the 1929 crash reduced this number to 14,000. Thousands of small banks failed. So great was the impact of the loss of confidence in the system – much greater than the San Francisco earthquake.

The Great Depression, as its name implies, was due entirely to the collapse of confidence (belief = trust) in the US economy, including its banking system.
The central feature of President Roosevelt's "New Deal" policy therefore, that revived the US economy, was the creation of the Federal Deposit Insurance Corporation (FDIC) that still today, provides US depositors with protection for their deposits up to $100,000. The entire purpose of creating the FDIC was to restore the people's trust in the US banking system, without which, the US economy was struggling to recover.

So successful has the FDIC and similar moves been that many believe that the US economy is now protected against any repetition of the Great Depression disaster, but the housing and loan disaster (the crash of the so-called local "thrifts") in the 1980s and the recent banking problems of 2008, showed that even now, the disintegrated US banking system is still vulnerable, even though it is obviously getting stronger as the government releases its

restrictions on bank mergers and national and international banks are fast becoming a reality in America.

While America moves lethargically towards national and international banking however, an even greater problem is arising: America's challenge is now the World's challenge as free enterprise and free markets are increasingly becoming the way of the world. Today the World needs a single, fully integrated, fully interoperable (common = universal) banking system that involves the people; their businesses; and their banks; and if America is to hold its place in the world to come, it needs to be at the forefront of providing this system that the world needs.

Process Automation

As the global economy has grown, so too has the number of banking transactions, intensifying the need to **standardize** and **simplify** the global system that handles all of these transactions. Standardization means simplification.

- By the end of the 20th Century, US banks were handling almost 100 billion, paper checks (**notes**) every year in addition to billions more other types of **notes**. And generally speaking, every country in the world is witnessing similar growth.

To handle such a huge volume of business, **automation** is essential. The advent of computers has significantly delivered automation to the banking system, but there is still a long way to go, as this paper shows.

- In 1950, a unified standard for check numbering was introduced to simplify and standardize the **note** handling process. This was accompanied by the invention of the Magnetic Ink Character Recognition (MICR) system that replaced the teller in the processing (2) phase with a computer that electronically reads the numbers on checks so that they can (3) be processed as required by the customer. To appreciate the technological breakthrough that MICR represented at the time, and to understand why standardization is so important to the World economy, it is important to know that, when Stanford University first introduced the ERMA computer system for electronically reading MICR code in 1959, banks using the ERMA system **processed more business in a single day than they had previously processed in a year**. Consider what this meant to the productivity of the US economy and therefore what ultimate standardization will mean to the World economy.

- With the advent of such mechanization, credit cards quickly became possible and were the next big technological advancement in the history of modern banking. Also introduced in 1959, the first credit card, then called BankAmeriCard, now called ***Visa***, created a revolution in banking that has now spread throughout the world and makes a massive contribution to the modern world economy. Where would the world economy be today without credit cards? Realizing their importance, it needs to be understood however, that credit cards are just another form of ***note***. With credit cards, the assets (creditworthiness) of the holder (1) are simply communicated in the form of a plastic card. The credit card reader (2) is therefore conceptually no different to the ERMA system that reads the numbers on checks. Swiping your credit card (1) through the credit card reader at an EFTPOS outlet (2) simply tells the banking "system" that stands behind the EFTPOS system, what to (3) do; it tells your bank how to process your ***note***. And, once again, it's as simple as 1+2=3.

- Debit Cards, Automated Teller Machines (ATM), and Smart Cards are just a natural extension of credit card technology. They simply require different types of readers to interpret the ***notes*** "written" in association with different types of plastic cards that represent the creditworthiness of the user and the processor that stands behind the card.

- Web-enabled EFTPOS sites and Cash Terminals are the latest developments in the evolution of this technology.

Note: Universal Logic is the ultimate form of standardization and automation.

Cards and Safe Worlds

The advent of credit and other stored value cards is important to understanding Safe Worlds' ultimate role and position in this evolving chain of events, because, beyond their monetary contribution, the evolution of payments processing technology emphasizes the connection between businesses (the users) and the processor (the system that supports the card) that has to exist for the system to work.

- If one side of an equation exists and the other doesn't (as it does now in e-business) – the system will not work. We see therefore that banks can develop the most sophisticated and secure electronic (automated) banking systems. However, if business cannot or will not use the technology, then the system cannot work. Consequently, the

productivity gains (benefits) that should be achieved will not be achieved. This is very basic logic, but it is also very often overlooked by those who develop technology. Which is the situation in the world today: because some big businesses and big governments can so e-business within their silos, the world assumed that everyone can. The truth is however, for most businesses in the world today, the benefits of e-business are still a long way beyond their grasp.

- It is true, that since 1998, banks have being moving aggressively to adopt the World Wide Web and offer their services on the Web. So-called Web-based banking turns a customer's computer terminal into a "virtual" branch of the bank. However, whereas my people do use online banking and many households pay their bills this way, businesses are not rushing to adopt this new technology, because of the lack of privacy and security associated with Web-based technology.

- It is also true that, reminiscent of the introduction of the US FDIC guarantee, credit card companies have rushed to remove the risk of stolen cards and fraudulent transactions from the user, but this is proving to be still not enough for businesses wanting to do e-business. Why? Because the requirements of e-business are simply different to those of individuals. Not only are credit card payment processing charges are too high for general B2B, but businesses are looking to make this move once and once only. The productivity gains of simply being able to pay their bills this way are not enough; they want to do total e-business in the same way that the big businesses do. They want to do fully integrated, fully interoperable e-business.

The World Wide Web – a Flawed System

We see therefore that, like many on Wall Street, in the lead-up to the 2000 Dotcom boom and bust, many banks heralded the advent of Web-based, online banking as the ultimate system. However, eight years later, we can see that their initial enthusiasm was clearly premature, because B2B e-business has not happened on the scale that they or Wall Street told us that it would. Today, lots of businesses have a Web site and many sell small ticket items via their Web sites and others sell used goods and trinkets on eBay, but it would be a big stretch to say that the World economy now has all that it needs to move into cyberspace.

And it will not happen so long as the world is reliant on the World Wide Web, because the Web will never be made private and secure as required for e-business. The World Wide Web was created to be the public sphere for

communication – it was not created to be the private and secure arena for business. And business and the world need to come to terms with this fact.

This is why "hackers" (modern day bank robbers), and their colleagues in cyber crime are able to roam the Web, just as Jesse James did in the 19th Century when he was robbing stagecoaches and trains with almost immunity. What trains and stagecoaches did was to make Jesse's job easier. Just as Web-based systems are doing for hackers and other cyber criminals today. What Jesse did, of course, is, he showed the bankers of the day, and those who used that system of trains and stagecoaches for communicating their ***notes***, that their system was flawed. Today, hackers and the host of other cyber criminals are telling bankers and, more importantly, business owners the same story; that the Web-based system now being used is flawed and unsafe for financial transactions.

The Safe Worlds Solution

This is why Safe Worlds is so important. This is why business and the banking system; and the world; needs Safe Worlds, because, unlike the World Wide Web, Safe Worlds was designed from the very beginning, for private and secure e-business. This is why Safe Worlds will be widely and enthusiastically embraced by business once they know what it is all about.

Safe Worlds is designed to provide businesses and their bankers (Payments Processors) with a single, private and secure, fully integrated, fully interoperable system for communicating valuable ***notes***. The single, intelligent note "packet" used throughout Safe Worlds (the equivalent of an armoured car moving in cyberspace) provides a common data (***note***) structure for the private and secure transportation of every form of information (***note***), including the critical monetization of products and services and the financial ***notes*** that are essential for payments processing.

Because every Safe Worlds ***note*** is also an intelligent data object, it can be individually valued, traded, processed, and accounted for in real time. And, Safe Worlds ***notes*** cannot be replicated, because the data structure based on Universal Logic is natural law (like binary code) and is therefore unique.

Because the structure of Safe Worlds **notes** is according to Universal or Logic, it is amazingly also best business practice – the way data is structured in Safe Worlds is also the way business is transacted; meaning that **only one standard** is required in the design and operation of Safe Worlds.

This not only makes Safe Worlds very inexpensive by comparison with other e-business systems (Oracle has reported already invested more than $30 billion trying to create "Fusion"); it also means that Safe Worlds is applicable to every e-business activity. By being applicable to both business and banking, Safe Worlds provides a fully integrated, fully interoperable (universal) solution. This is possible, because, unlike checks, credit cards, or any other form of financial ***note*** that has ever previously been used, because it delivers Universal Logics, the Safe Worlds **note** is synonymous with the business process.

This is what makes Safe Worlds a single entry, straight through processing (STP) system that can monetize products and service; seamlessly integrate businesses so that they can be interoperable as required; and report in real time.

To facilitate this, the database unpinning the Safe Worlds system is truly semantic. The common input/output layer that controls access to the Safe Worlds semantic database functions as an "intelligent reader" (interpreter) that uses the reasoning capabilities of Universal Logic to accurately interpret/reason any **note** issued by any business, including any bank, that uses Safe Worlds. In this way, transactions can be processed almost instantaneously and virtually real time reporting can be achieved.

Safe Worlds Privacy and Security

What is actually happening within Safe Worlds is that we are "atomising" information; the Safe Worlds system provides a way to reduce information to "atomic data structures" that work like energy atoms inasmuch that, even though they describe different things, they are able to fit together and work together, because they all have the same intelligent structure.

This enables business information to be semantically (meaningfully) structured so that it can work as required and be accountable on an individual item basis. It also enables unprecedented levels of privacy and security to be applied to such data atoms to create what we call "safe worlds" for business.

Generally speaking, the entire Safe Worlds system exists within one of these atomic structures. Consequently, although, like the World Wide Web, Safe Worlds exists and functions within the low cost global infrastructure of the Internet, instead of being an "open highway" where anyone can go (including cyber criminals), Safe Worlds is able to control user access and activity within Safe Worlds.

To protect User's Safe Worlds applications, we are able to employ a single sign-on (SSO), encrypted, form of virtual private network (VPN) technology to deliver the privacy and security that users need.

Because this system does not involve published domain names, hackers and other cyber criminals have no way to even know where you are inside Safe Worlds, or that you are transacting business. The unique Safe Worlds ***note*** is therefore like an invisible armoured vehicle, dashing for a split second through cyberspace. More than this however, even if one could somehow "see" the transaction happening, the packet itself has its own layers of security, making it safer than any heavily guarded stagecoach or armoured car could ever be. Fort Knox is not more heavily guarded.

With Safe Worlds, the world economy will grow exponentially the same way that it did when MICR code and the ERMA computer system were introduced into banking in the 1950s and 60s. Imagine the whole world being able to process more business in a single day than they had previously processed in a year. This is the impact that Safe Worlds will one day have on the world economy.

When will it happen? As French author Victor Hugo once said: "*Nothing is more powerful than an idea whose time has come.*" Safe Worlds is an idea whose time has come, just when it is needed the most.

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