



kashcoin

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Blockwave

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● Summary

Nkash network is developed to create a solution that pursues the positive advancement of intellectual property by producing and sharing a ledger through a blockchain network. A Blockchain project consisting of 2 stages will launch Kashcoin and payment systems for network expansion and maintenance through Panthalassa, the stage 1. After the Panthalassa stage, Kashcoin will function as a means of exchanging asset values in the digital era. The stage 2, Pacific performs to develop an open network system for security, trading, and accumulation of intellectual property and content. After the Pacific stage, it effectively implements the desired positive functions of the blockchain by providing a transitional solution that will lead to the positive development of intellectual assets in the digital era.

This Kashcoin white paper is written to help users understand the Nkash network.



● Currency

Currency has three main functions: to exchange, to store value, and to measure value. As it can be seen from the origins of currency, the means of exchange is the basic function of currency that is most commonly accepted. However, as currency has changed and so does the trading system, the function of storing value and of measuring value have also become its important functions. Originally, currency could be the currency even if it performed only one function. However, in modern society, currency should perform all three functions in order to become the currency.

◆ History of currency

Historically, currency has changed in various forms according to the needs of the times. Early currencies such as rice, fish, and salt were replaced by metallic currency and a metallic coin such as gold, silver, and copper due to their high deterioration and endurance limits. Also, convertible paper money was used due to a matter of mobility and convenience. The United States, which has been unable to support the gold standard since the 20th century, has been at the centre of the system. As a result, it is changed to manage currencies by country and is still enforcing the system to control the money. This currency, which has been constantly changed, is turning into a new form, digital form. Not a physical money but cryptocurrency, which is made and used in the digital world, is replacing its role.

◆ Drawbacks of Traditional Currency

✓ Low in versatility

National currencies are low in versatility. Simply say, currencies issued by each country can't be used outside of that country. In modern society, where time, space, and travel restrictions are significantly reduced, this limitation of versatility makes it very inconvenient for people spending money. Therefore, a system or new currency is needed to address the limitations of versatility. In other words, currency has no choice but to be changed

according to the needs of the times.

- ✓ Losses due to currency exchange

All currencies can only be used in the country where they are issued. Therefore, the process of exchanging money is necessary to use in other countries. Such exchange generally results in a loss of financial value. Even if countries are well established for currency and banking infrastructure, the financial loss is unavoidable. Moreover, some places where banking infrastructure is lack sometimes have to suffer extreme losses. The geographic limitations of traditional currencies can be a huge burden on users.

- ✓ Inefficient international payments

The payment process through a broker for international payment is very complicated. This complex process naturally results in increased service costs. In addition, the loss of time can't be prevented because it requires several steps. This non-financial waste is also a drawback which is too difficult to overcome for traditional currencies'.

- ✓ An unjust price

In many markets around the world where transparency is difficult to secure, the prices of goods are traded on a case-by-case basis. The same things are often traded at a slightly lower price elsewhere and at a relatively higher price elsewhere. If you pay a different price to use the same goods and services, it breaks bounds of the original purpose of the currency, which is 'made for fair trade'. Underhanded trades have always resulted in making users a victim.

● Cryptocurrency

◆ The origin and advancement of cryptocurrency

Virtual currency first appeared around 2000. C company's Dottori and L game's Adena, which we are well aware of, are a representative virtual currency. These virtual currencies have shown remarkable growth rates since the development of the Internet. Then cryptocurrency emerged, which has been more sophisticated than the previous concept of 'cyber money = virtual currency'. The first cryptocurrency is Bitcoin and was made public by an anonymous person(people) named Nakamoto Satoshi. He/she experienced the limits of centralised legal tender after the global economic crisis in the late 2000s. Thus he/she claimed that the decentralised currency, which can't be changed by certain forces, is needed. And he/she finally announced the Bitcoin network, the first ever decentralised currency, on January 3rd, 2009. And now there are about 2,000 different cryptocurrencies.

◆ Advantages of cryptocurrency

Cryptocurrency has many advantages compared to traditional currencies. The most striking advantage is that all of the transactions are recorded in an immutable blockchain ledger. This is a system that is transparent to anyone. Through such transparency, both a buyer and a seller of goods or services using cryptocurrency will not be able to deceive.

Unlike traditional currencies, cryptocurrency is issued and transmitted according to certain policies and rules on the basis of a trustless system. Even if a country or bank goes bankrupt, a single cryptocurrency still has the same value. (1 Bitcoin is worth 1 Bitcoin even if the country or bank goes bankrupt.) Also, it is convenient to use without financial loss as there is no exchange process anywhere in the world.

◆ The reality of cryptocurrency

Currently, only buying or selling cryptocurrency is available in Korea. The reality is that cryptocurrency is not used as a means of payment or exchange of goods but as a tool

for games or gambling. This misguided direction to develop has distorted the market, such as speculation and illegal trade, and resulted in a variety of problems. However, the advantages and *intrinsic* value of cryptocurrency aren't harmed because of the rampant speculation and illegal trade. Therefore, it is urgently needed to review and change in the purpose of pursuing the original philosophy of cryptocurrency.

✓ Abnormal development of the market

On January 6, 2018, the price of Bitcoin exceeded 26.61 million won. It was traded at about 20 times more than the price of a 1-ounce gold bar, similar to a 5-carat diamond. It can be seen as a bit high price range to be called currency. It seems inappropriate to order a cup of coffee with Bitcoin because it has to pay a fee higher than the price of coffee. Historically, currency that could not be used for trading could only be used as investment goods or as a means of preserving assets. Will Bitcoin with this feature replace real money? Doesn't the pessimistic view of cryptocurrency from the abnormal development of the first cryptocurrency, Bitcoin?

◆ Bitcoin

• Attributes and features of Bitcoin

Bitcoin first appeared in January of 2009. Bitcoin, which uses a distributed ledger so that an individual can send and receive without going through a bank, allows anyone to open an account for Bitcoin and to trade if computer and internet are available. In other words, it is an intangible currency that is created and exists only in the network. Also, a blockchain technology introduced and then implemented the transfer and storage of values. Thus, the recorded data can't be modified, and its security is impossible for hacking. Since the blockchain is designed that modification is impossible, forgery and falsification are almost impossible. All the blocks are needed to be modified at the same time to be forged and falsified, which is practically impossible. In addition, without central control or brokers, cryptocurrency can be produced through the cooperation of voluntary miners. A

central server was essential to use a credit card which is the most popular form of payment in modern society or to make an international transaction. Also, trusted organisations such as a 'bank' or 'credit card company' was fundamental in order to prove that I had sent money. Bitcoin, however, enabled the transfer and storage of coins without a third party, which was a huge innovation that was previously unimaginable. Until now, despite no central manager, it has a robust security to such an extent as there has been no solid hacking on Bitcoin itself while about 500,000 blocks were created since the Genesis block was created on January 9, 2009.

- Limit of Bitcoin

As it is the first cryptocurrency to be developed, it has many limitations. It is a prominent problem with Bitcoin that transfer speed is very slow, the price is extremely high, and the process of development and advancement has been unable to keep the ideology due to its unorganised system.

- ✓ Slow transfer

Bitcoin takes a very long time to transfer. Since a cycle to generate a block is 10 minutes, approximately 10 minutes is required for transfer and recording. This is too clear a threshold for use as a means of payment.

- ✓ Extremely high price

Currently, the price of 1 Bitcoin is about \$10,000. It is too expensive to be called currency. As Bitcoin can be divided up to 8 decimal places, some argue that high price doesn't matter at all. However, high fees due to high prices are inevitable. Currently, the transfer fee for Bitcoin is about \$10. It causes users to hesitate to use Bitcoin as the actual payment as they had to pay too expensive fee instead of the existing currency. For example, if we try to make payments with Bitcoin in a convenience store or market, the fee may be much higher than the price of the item.

- ✓ The Failure of Bitcoin's Basic Philosophy and Ideology

Bitcoin has failed to implement its basic ideology. It aimed at a distributed network

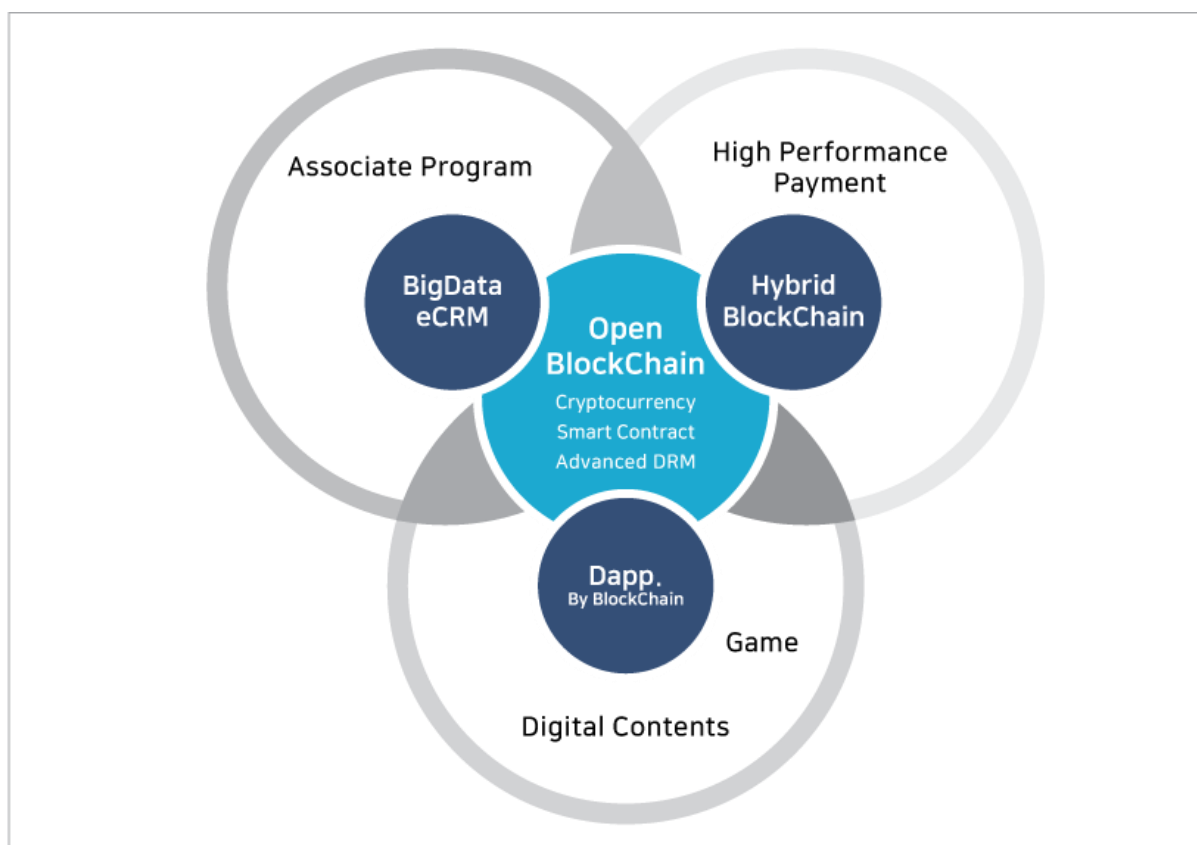
that could freely trade from third party's intervention or central power, but this was not the case in reality. Especially in the summer of 2017, due to the opposition of only 6 developers without a vote, a sudden halt in the development of SegWit2x showed in extreme terms as to how powerful the developers or central power is. This is to decide on the future of Bitcoin by a small number of people and is out of mark from the decentralisation originally pursued by Bitcoin. This can be a direct example of a failure to pull itself out of centralisation. The current Bitcoin, which broke the basic philosophy of the blockchain that Satoshi Nakamoto suggested, can't be regarded as a 'blockchain network' that serves as the basis for all blockchain cryptocurrency.

Like the above, Bitcoin is not enough to become the standard for cryptocurrency and be used in everyday life. It has revolutionary potential, but it is not a crypto 'currency' with features and qualities to attract users. Bitcoin, which was created for the purpose of P2P trading, has lost its value as currency and is now turned into a speculation method to hold existing assets. Bitcoin's philosophy is almost a failure in the real economy.

kashcoin

● Kashcoin - cryptocurrency that can be used anytime, anywhere

Kashcoin is a project that was started to combine cryptocurrency with economic life. By focusing on the currency's main function, along with advanced technology to be used as a real-life payment method, the first step of Kashcoin network is to establish the right cryptocurrency ecosystem and to complete the standard model for cryptocurrency market.

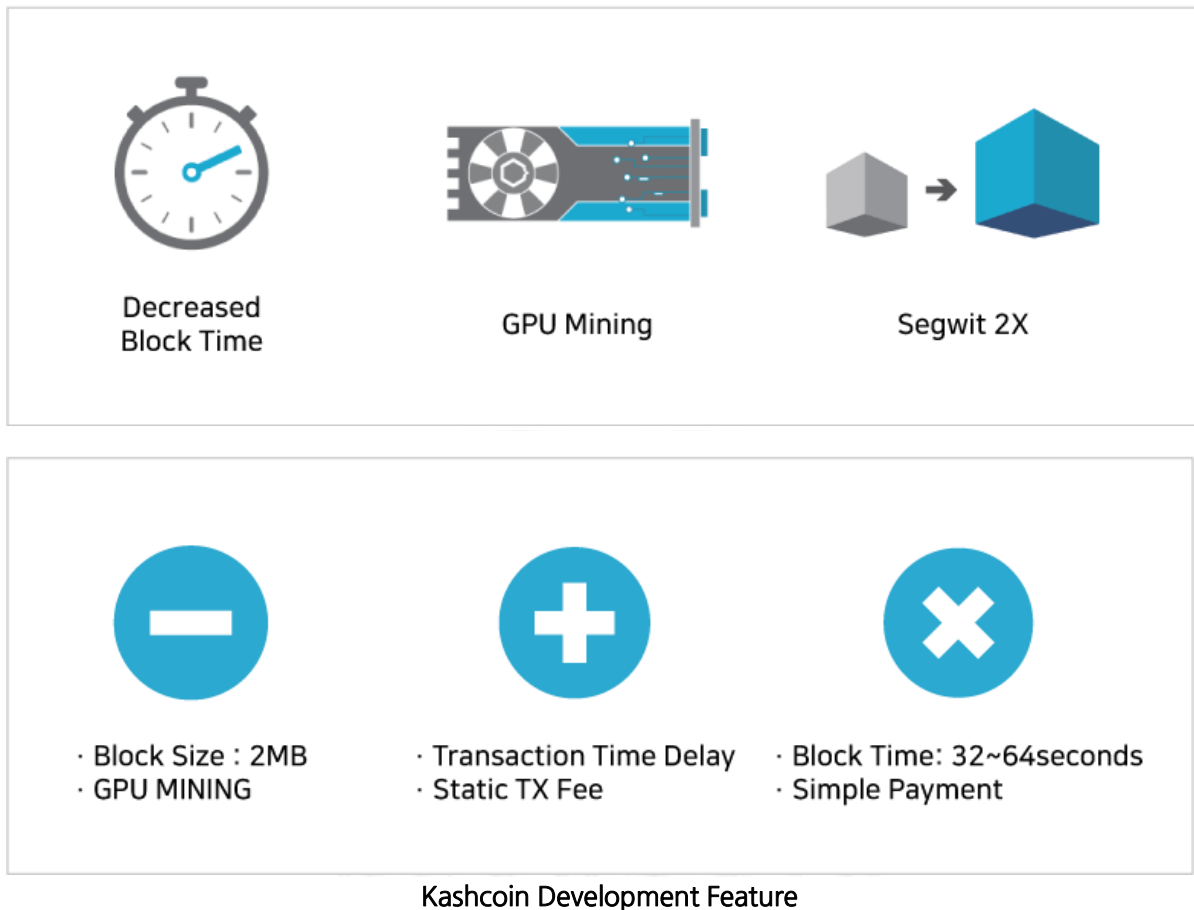


Vision

◆ Background

Cryptocurrency, which was created to overcome the national currency, quickly gained popularity after its introduction. However, due to an absence of regulations and legal instruments and a low understanding in cryptocurrency, cryptocurrency has become a means of speculation, that repeats a sharp rise and a sudden fall, and made market disruption. Many cryptocurrencies, including Bitcoin, have turned into tools for speculation. It has become a tool of speculation in which only the function of storing value, not the function of exchange and payment, is preferred. Therefore, Blockwave has started

the Kashcoin project in order to complete the mission of the times, which pursues the natural value of currency. Specifically, Kashcoin introduced various devices and systems to realise its slogan, “cryptocurrency that can be used anytime, anywhere”, and established Kashcoin ecosystem to connect with the real economic system in harmony.



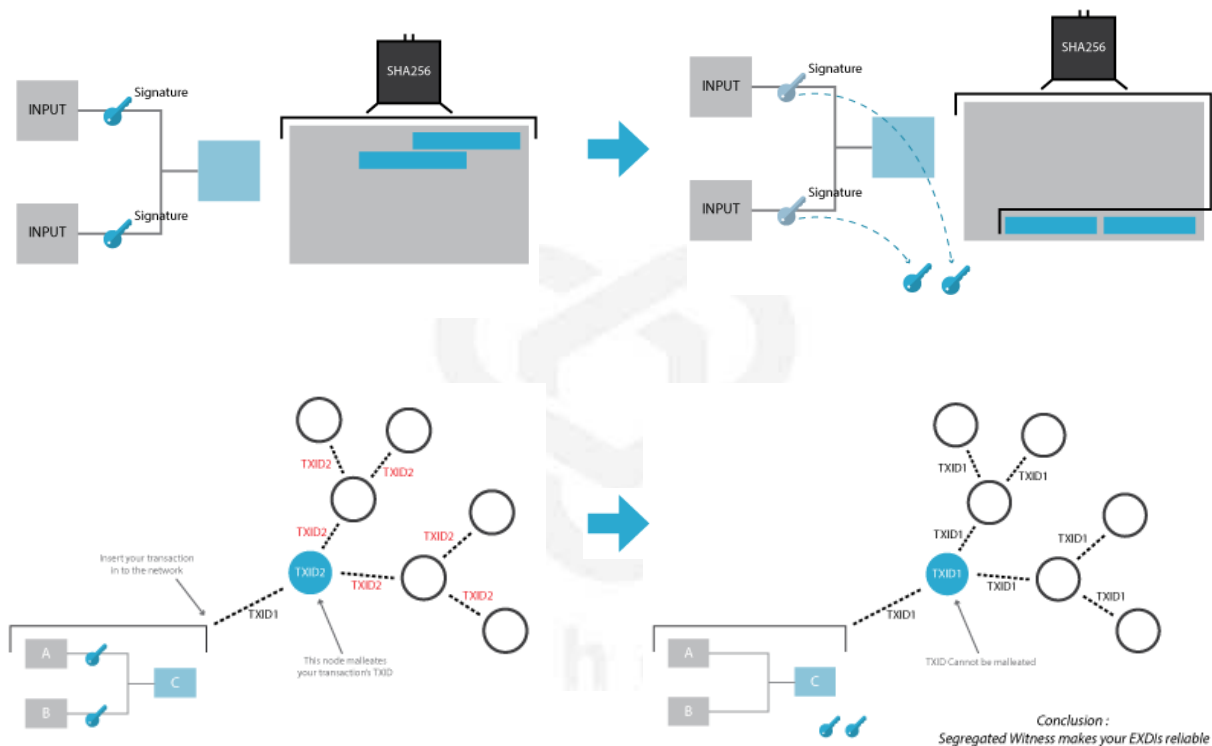
◆ Features

- ✓ Segwit2X, Advanced coin

Kashcoin is an advanced cryptocurrency that fully supports Segwit2X. This refers to separating the signature from the transaction record and making it possible to include as much of the separated Signature as it is. In addition, a 2x update doubles the size of each block, thereby doubling the transaction capacity. Kashcoin actively reviewed the introduction of Segwit2X to solve various problems that Bitcoin had and is a representative

cryptocurrency that introduced Segwit2X without any dispute or contrast.

What is SegWit? SegWit stands for 'Segregated Witness'. This originally meant the effect of strengthening security, which would prevent the flexibility of transactions at source. In other words, although solving the variability of transactions through the introduction of SegWit is the main purpose, it can be expected to increase block size additionally.



- ✓ Fast speed in transfer

Currently, Bitcoin can process about 7 transactions per second. This is because it produces one block with 1MB capacity every 10 minutes. It is not enough speed for real economic life. If a lot of transactions are coming in at once, it can cause an inconvenience that requires more than a few hours for deposit, withdrawal, and payment. In winter of 2017, waiting time for approval of Bitcoin transaction took up to 2 days. Kashcoin has developed and applied various devices to solve the problem of traffic overload. On average, over 400 transactions can be processed per second through processing speed that is

almost 50 times faster than Bitcoin. This is the processing speed that is much higher than existing major cryptocurrencies such as Bitcoin, Ethereum Bitcoin Cash, and Litecoin. This is extremely fast speed that surpasses the transaction processing speed of PayPal, a representative simple payment system, which is 200 transactions processing speed per second and is well equipped with the technical capacity to be used as a direct payment method.

✓ Low fee

The problem of speed in cryptocurrency is not just a matter of speed. This is a deeply related matter to the fees. Bitcoin has a system that handles transactions first, which are heavily paid for the fees. The current Bitcoin network structure is subject to transaction overload due to slow processing speed, and traders who want to speed up transaction processing must pay higher fees. Considering that transaction fees went up to around \$ 55 in the winter of 2017, when large transactions took place, it is suspicious whether Bitcoin could function properly as a means of exchange and payment. To address this problem, Kashcoin increased the block size to 2MB and applied Segwit2X. Therefore, even if traffic is heavily concentrated, processing speeds will not be drastically reduced. Thus, this will prevent abnormal increases in fees. In addition, the lowest fee policy among all coins was applied so that many people can use the coins at various locations without burdens of the fees.

✓ Currency that is issued by a plan

With the collapse of the IT bubble and the subprime mortgage crisis in the U.S. in the 2000s, the U.S. government implemented quantitative easing, a strong economic stimulus package. This was the U.S. government's reckless and unilateral policy, which led to problems such as depreciation of currency and inflation. Those who watched these situations dreamed of a currency that could not be determined by central power, resulting existing major cryptocurrencies such as Bitcoin, Ethereum Bitcoin Cash, and Litecoin. This

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Kashcoin issued under a set plan will become a representative cryptocurrency with a stable value to prevent the risk of inflation, the risk of war, and economic chaos in advance.

◆ Specification of development

Category	Development spec	Note
Core Version	1.15.09	
Transaction confirmation	1 Min	
SegWit	SegWit2x	With a method of releasing a lock in a transaction, secure P2SH (Pay to script hash) block space
Block Head Hash Algorithm	Script	SHA256D
Transaction hash	Script	BTC = Based on Forth, Non Turing complete
Halving	840,000 blocks	total blocks = 26,880,000 total half-life = 32 Period per half-life = 583.33 days (1year and 218.333 days)
Amount	84,000,000 KAC	◆ BTC = 21,000,000 ◆ LTC = 84,000,000
Platform	Windows / Linux / Mac	Kashcoin Platform
Public address	Start "K"	Changing account system → Kashcoin "K"
Wallet	Windows / Linux / Mac /iOS/Android	Kashcoin wallet Platform
Payment	Mobile (iOS / Android)	Kashcoin payment Platform
Transfer Fee	Base Fee = 0.001 MinRelayTx Fee = 0.00001	Same with Litecoin Base fee per block = 6KAC
Mining	CPU/GPU	Insert Mining function to Blockchain core Total Mining period = 51years 51.66days
1Kashcoin separating	Separating 8 decimals	Separating 8 decimals which is same as BTC

◆ Ecosystem of Kashcoin

Kashcoin connects cryptocurrency with the real world and expands. Kashcoin wants to complete a system that enables them to be used in real-world life, not just trade in the exchange. It aims to create a living system that can grow and interact with each other through a network that connects users, locations, and developers. Through a circular system pursued by Kashcoin's ecosystem, Kashcoin either replaces the existing currency or functions in the auxiliary position of the currency.

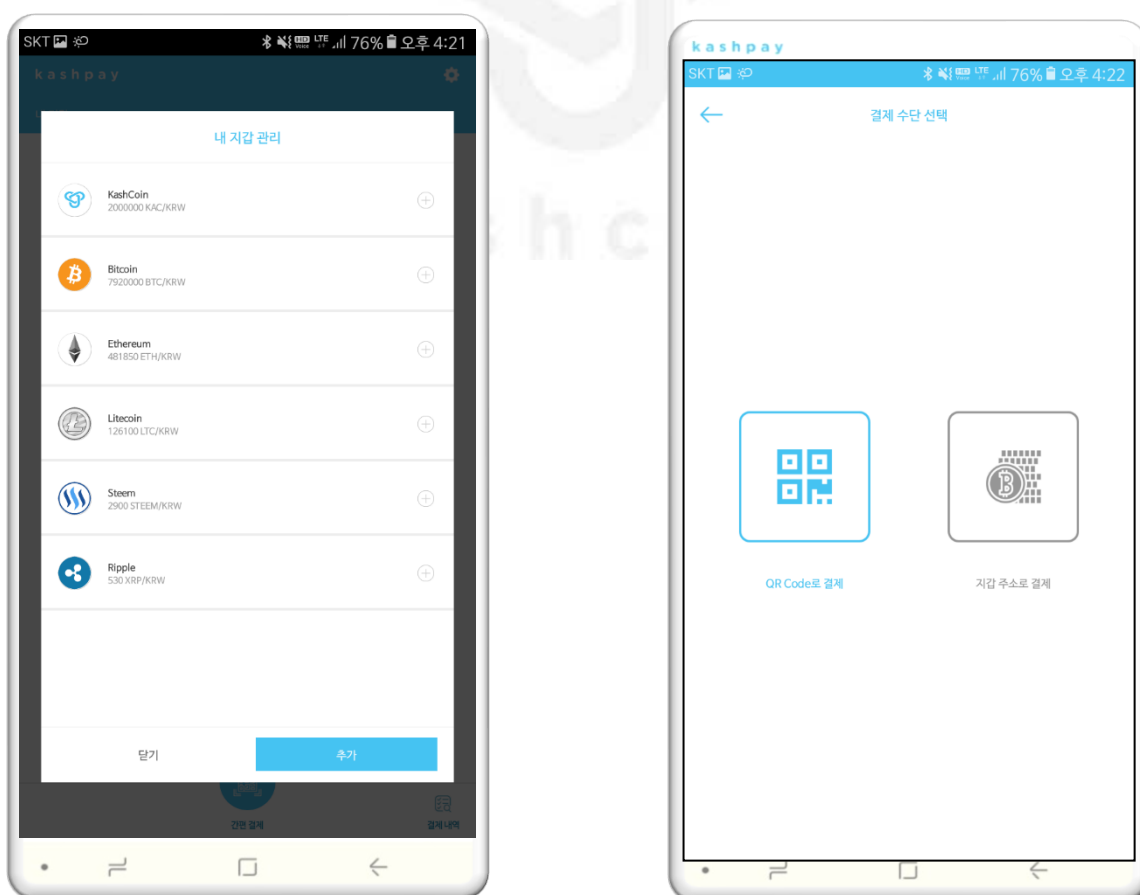


Figure1. Kashcoin Circulation

● Kashpay

◆ Background

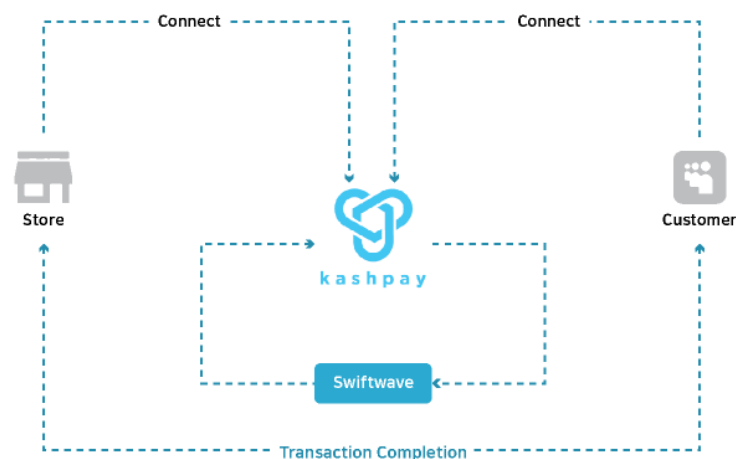
In order for cryptocurrency to have actual meaning for users, a payment market is needed, where users can actually experience cryptocurrency. Therefore, Blockwave plans to launch Kashpay, which can combine cryptocurrency with real life, and become the standard for the cryptocurrency payments market. Kashpay is a system built by combining the advantages of a simple payment system and cryptocurrency. It provides a service and establishes an environment to use cryptocurrency easier and more convenient in various places. It hopes that users of cryptocurrency will be able to see new possibilities for cryptocurrency and the blockchain in their economic lives.



◆ A safe payment solution based on a blockchain

In order for use a cryptocurrency as a real currency, a payment system and service are needed that are suitable for the cryptocurrency. Only when an ecosystem is established that can be used by anyone easily and quickly, like cash or credit cards, an amalgamation of the real economic system and cryptocurrency can be actualised. Kashpay is a payment system for these cryptocurrencies that makes it easy to make payments anytime, anywhere using QR codes. Fees are cheaper than credit cards, and payment is smooth and instant. The transaction history through Kashpay is quickly processed using the advantages of the Kashcoin network. This makes it easier and more efficient for stores to attract consumers than other cryptocurrency payment solutions, and buyers can make payments without any inconvenience using the cryptocurrency as a means of payment. Kashpay allows both users and stores to experience a high-level technology.

KashPay Payment Scenario



◆ Features

✓ Swiftwave

The Swiftwave system is a self-developed cryptocurrency payment system developed by Blockwave and is designed to enable fast payment processing by using cryptocurrency.

Blockwave is currently preparing to apply for a patent for its own Swiftwave.

- ✓ Possible to make a payment with a various cryptocurrency

Currently, it is possible to pay 7 kinds of cryptocurrency including Bitcoin and Kashcoin. In the future, more cryptocurrency will be linked together, making it possible to use in Kashpay. As a result, cryptocurrency, which was only available for simple transactions, can be used as a real currency, and ultimately it can be used to pay through Kashpay anywhere in the world.

- ✓ An Inexpensive fee of 1%

In order to provide Kashpay to many people, which is an advanced cryptocurrency payment system, the environment has been built to avoid unnecessary costs, such as introducing new devices for the payment system, and no subscription or management costs for the partnership are incurred. Fees also take minimal charges to maintain the network, rather than 2-5-percent fee required by existing credit card companies.

- ✓ Various partnerships

Through partnerships with various stores, an environment that can be used anytime in real life will be established and partnership will be provided further with both online and offline affiliated companies. It currently has partnerships with more than 20 industries, including fashion, accommodation, real estate, gas stations, cafes, restaurants, and etc.

- ✓ Convenient usability

For the growth of the cryptocurrency payment market and the dissemination of the advanced technology, non-members are also allowed to use it. It provides user-centred UV/UX, and the QR code payment method is designed to ensure that even beginners can easily make payments.

- ✓ A secured system Convenient usability

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UV/UX, and the QR code payment method is designed to ensure that even beginners can easily make payments.

- ✓ A secured system

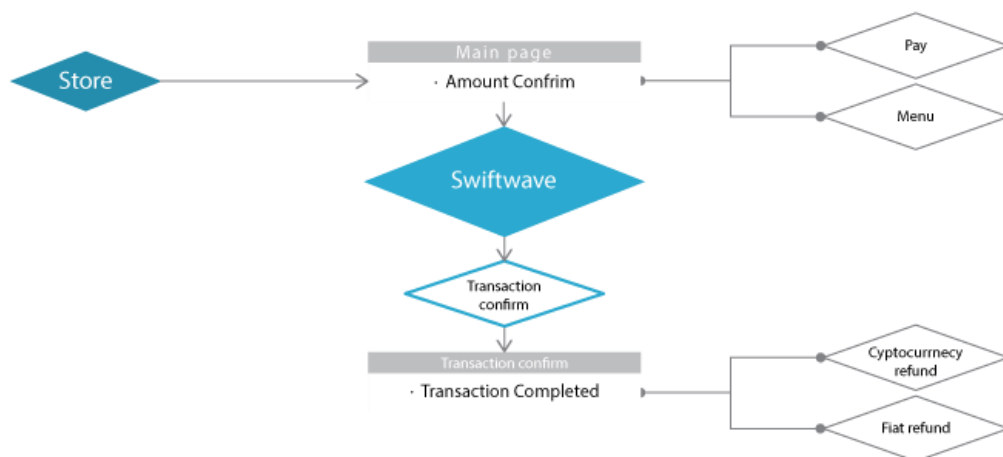
All transactions are recorded on the blockchain and therefore forgery of the transaction is impossible. In addition, since all records are encrypted and stored, personal and business information and transaction history are kept safe.

◆ Inside Kashpay

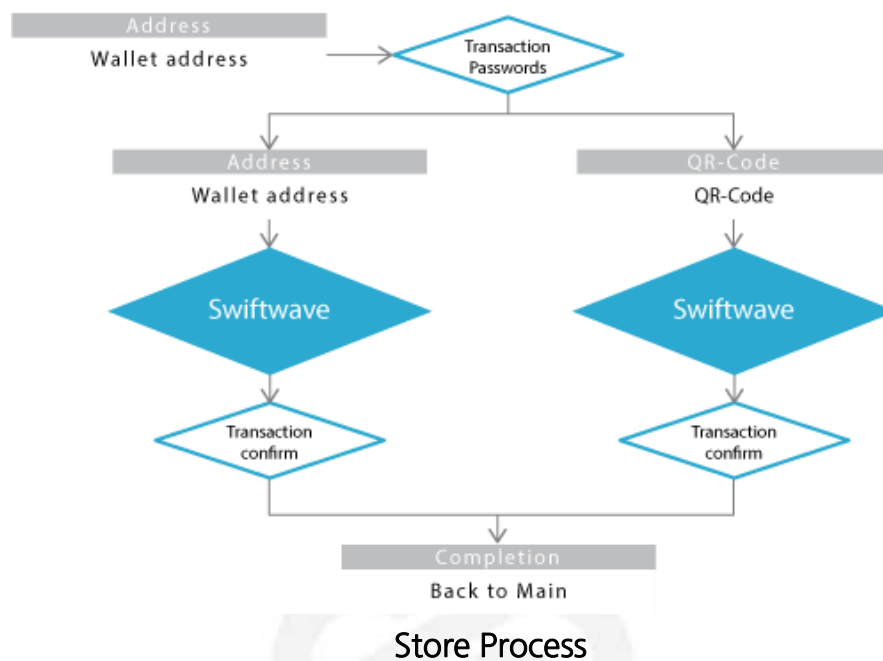
• Cryptocurrency Market

Cryptocurrency has shown rapid growth over the past few years. According to Canaccord Genuity, a Canada Investment Bank, the scale of the cryptocurrency market increased to around \$ 18,000,000,000 in 2017, which had grown by nearly 1,600 % compared to last year. And it is expected to grow about \$1,100,000,000,000 in 2025.

When Internet appeared 30 years ago, mobile payments appeared 20 years ago, and Cloud appeared 10 years ago, those have become vital ingredients for our life. Just like that, the more people who understand the basic technology and features of the blockchain and the cryptocurrency are, the further cryptocurrency payment market will grow.



Payment Process



- Simple payment Market

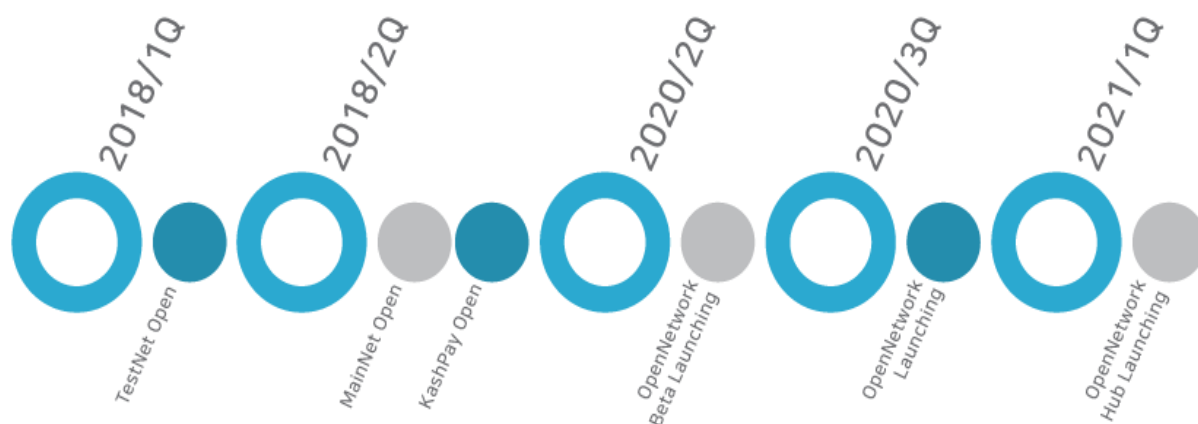
This is not a complicated payment process on a PC, but a system that supports payment in a simple way and is a representative payment system with Fintech technology. The usage rate has increased significantly since the massive penetration rate of smartphones and the universalization of mobile life. Online payments, which had to pass through many security programs, including certificate, have become easy to pay through prior verification without any unnecessary process. And offline, users can make payments anytime, anywhere after completing a simple pre-verification. This is mainly done by receiving and processing authentication codes or by using NFC functions

- Cryptocurrency + simple payment market

Both cryptocurrency market and simple payments market have enormous potential due to the demand for convenience in consumption. Because of this demand, the form of finance is also evolving to a very different one from the past. Kashpay will become the leader of the new 'easy payment service' by becoming the centre of convenient consumption and the advanced financial type.



● Roadmap



● Conclusion

The national currency is facing its limit to capture social trend which is rapidly changing. The wider range of economic activity, the wrong structure of high-cost-low-efficiency, high returns that are given only a few, and the digitalisation of finance, which is much more delayed than the digitalisation of information, are the major problems of the second-generation currency. To overcome these limitations, an advanced new currency is needed.

The introduction of the new currency is an inevitable task in our modern society. New generation is demanding new currencies that is suitable for the new era and Kashcoin has created to carry out this era's mission. Kashcoin is not limited by time and space as they are used worldwide. In addition, it features a decentralised structure with a fairer distribution of profits. As the new currency which meets the demand of new era, Kashcoin will be the standard of cryptocurrency and a frontier of the upcoming blockchain era.

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