



Silent Notary

SilentNotary is a multiplatform decentralized service for confirmation of event existence, recorded in digital format. Communications in messenger, an image, a video file, and an e-mail can be an event. SilentNotary converts an event into a legally significant evidence, excluding the possibility of falsification.



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Introduction

Just a few years ago, a solution was found to build a Trust Machine – distributed ledger was a fact. The first thing that people started to write down in the ledger were records about a financial transaction that everyone could trust, and so Bitcoin was born.

We live in a world full of distrust. And in case of misfortune, we must prove that certain facts were intact.

We use distributed ledger technology for its intended purpose, trust.

Data about the events that occurred are recorded. There is no need anymore to prove anything, distributed ledger solves the problem of distrust.

Suddenly we have a way to make the world better and our lives safer, with a global system of confirmation of event existence!

Distributed ledger is a sophisticated technology. Bridges are needed between the user and the technology. These bridges are user interfaces, allowing users to transfer data to the system about events recorded in any form - photos, videos, chats, audio recordings or documents.

Now, we have developed all the main interfaces possible for you.

Our Product

SilentNotary is an ecosystem which develops around Smart Contracts, ensuring the evidence of existence and permanence of certain events.

To achieve the goal of a global solution, various user interfaces have been developed, which are as follows:

1. Chatbots for Facebook messenger and Telegram bots are developed to record information, available in production and beta-versions. Chatbots are installed on almost all smartphones. They are convenient and common for users. They allow us to record video, send files, and communicate with many users in real time.
2. Web interface (developed and available in beta-version).
3. Mobile applications for Android and iOS Apps have been developed and available now in AppStore and Playmarket.
4. Mail-bot has been developed and is available in production version. It is used to certify e-mails and records written communication with any number of counter agents.
5. API for IoT solutions, integration with applications and corporate systems.

To promote the product in the global market, it was necessary to adapt it for different categories of customers:

1. B2C (Business to Consumer): The simplest interface, understandable to the common user and can be integrated with social networks.
2. B2B (Business to business): License scheme, corporate accounts (available in beta version), access delimitation, and API for integration with corporate document management systems available.

SilentNotary worldwide market capacity:

B2C: 2,3 billion users.

B2B Sectors:

Insurance companies

11,388

Online media

1,371

Banking insurance

7,987

Construction

43,347

Use Cases

In which cases do we need SilentNotary and what can it do to help? Let's study several examples of legal relations, which may require delivery of evidence:

1. Performed work, rendered services

It will be easy to record the results at each stage of the process. Just launch the messenger and send images or video files of the results to the SilentNotary chatbot. You can share the received link with the employer. By doing so, you will be able to prove the fact that, at that moment, the work was completed. If the work was not finished within the agreed timescale or there were deficiencies detected, the employer can do the same and record the problem in the format of certified images or video. Certified records can be used for preparation of acceptance, certificates for work performed, or objections as to quality and timescale claims.

2. Communication via e-mail

Letters of critical importance can be saved and certified by just adding the SilentNotary address into the list of recipients. The system certifies the letter content and data from the mailing servers (RFC-title of the letter). It means that the list of recipients, the fact of dispatch, delivery, and email routing will be recorded.

3. Offers are made in a digital format

Any company, selling anything via the Internet, makes a public offer to its clients. In this case, the text of the offer is just published on the website. This text may be changed at any time. There are many cases that require confirmation of the offer content and the fact of publishing it on the website. Both the seller and the buyer may need it. You can use the SilentNotary website to certify the documents and the pages, where it was published. Just send a link to the page, and order a certification of the page content.

4. Website content copyrights

Almost every website shows the users a © symbol. As a matter of fact, placement of the copyright protection symbol is a meaningless ritual. It is very hard to prove that some content was present on the website at some time in the past. Just certify the website content using SilentNotary if you need to protect your rights and fight against plagiarism. Just send a link to SilentNotary, and order a certification of the website pages and content. That will be enough. Afterwards, you can publish a link of the certified content, next to the notice of copyright protection.

5. Priority of authorship

Code text, picture, story, music... Any intellectual property item, which can be represented in digital format, is subject to legal protection. SilentNotary cannot replace a patent solicitor, but it helps to prove precedence in the case of dispute. To certify the item, just send a file via email to the SilentNotary address, certify it by yourself on the website, or share it in a message to the chatbot.

6. Agreements

You can record any negotiation and decision taken. Just conduct negotiations through the multi-chat feature in our chatbot. The chatbot will prepare and certify the conversation protocol on your command.

7. License agreement

How many times has each of us agreed to the terms of use of some software program? That said, the text of the agreement is only a text on the website page, which can be replaced at any moment. If a user violates the terms of the agreement, it is hardly possible to prove which text was published at the moment the user agreed to it. Send a link of the page with the agreement to SilentNotary. We will record the fact of publication at a specified address, date of publication, and content of all the published documents.

8. Whitepaper and other types of public statements

Oftentimes, to refer to someone's statement, we should prove that this exact text that existed in the past, during a certain action was performed. For example, to participate in an ICO, you should record the whitepaper content and the fact of publishing it at the moment of the transaction. Just send a link of the published document to the SilentNotary website, and certify the fact of publication, date of publication, and document content.

9. User guides

Financial success of a product manufacturer depends on the accuracy of the user guide and the fact of publishing it on the website. You can certify the page with the publication via the SilentNotary website by just sending a hyperlink to the page.

10. Evidence gathering from an accident site

In case of an incident (for example, a car crash), an acute need for records of the circumstances of the incident often arises. Just launch the SilentNotary chatbot and send images and video files of the relevant circumstances.

11. Verbal agreements

It is very hard to prove a verbal agreement in court. Do not risk it. During conclusion of the agreement, launch the SilentNotary chatbot and record your conversation. The audio file will be recorded and certified for you.

Usage of SilentNotary service is not limited to the mentioned examples. There may be a need for evidence in all situations, resulting in rights and duties. We believe that the users will find a lot of new ways to use our service.

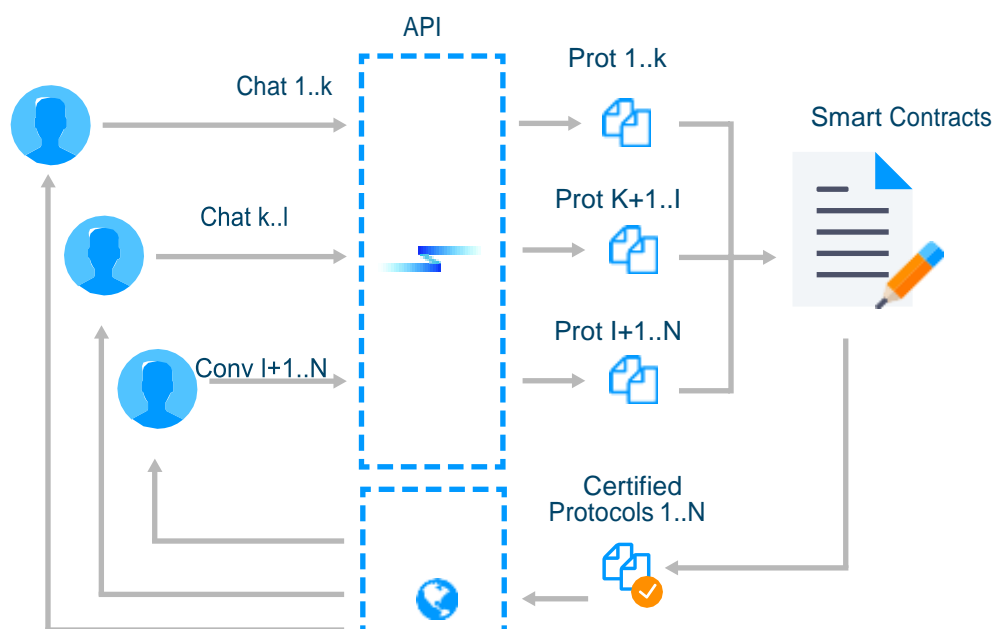
Important! Warning! Usage of SilentNotary service should not contradict local norms, rules and laws. In case of wrongful use of the service, responsibility for its usage lies with the user.

User Interfaces

As stated in the previous section, the user interacts with the service using the following interfaces: messengers, web, mobile apps, and email. The working schemes of these interfaces are

Messengers

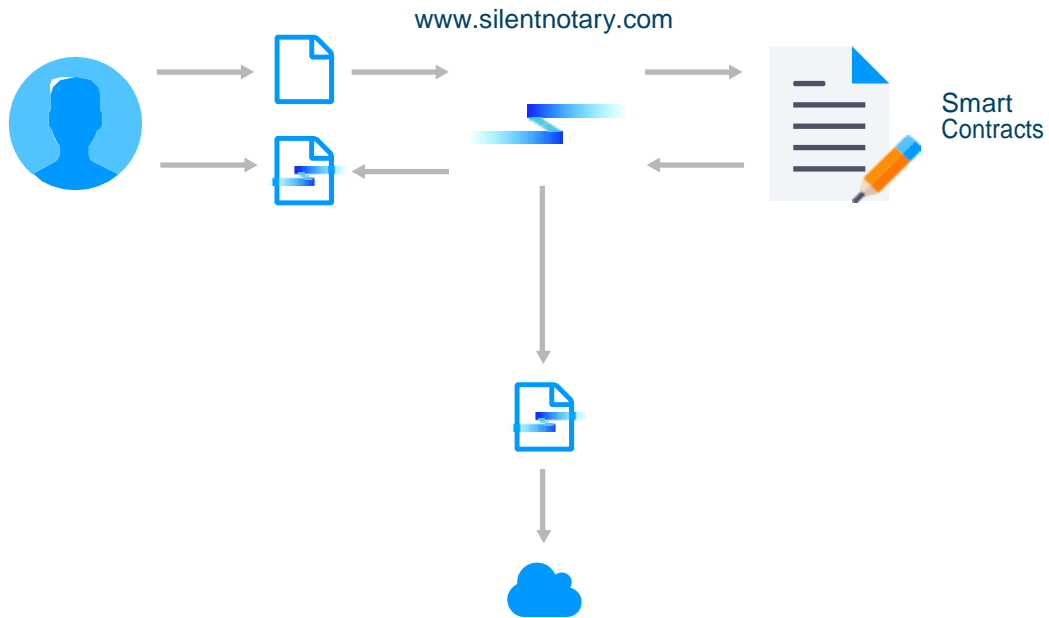
The capabilities of the chatbot are determined by the functionality that the messenger provides. In addition, during the development of the messenger, these opportunities may change. Our development plan involves working with all popular instant messengers. For implementation in the demo version, the Telegram and Facebook messenger have been selected. At the launch time of the chatbot, the Facebook messenger did not support group chat. To solve this problem, we implemented a synthetic multi-chat, allowing the participation of an unlimited number of users and an unlimited number of simultaneously running multi-chats. Each of the users communicates only with the chatbot, the chatbot collects two-way communication in the common multi-chat. The user can now switch between simultaneous conversations.



The service allows the conversation's participants to assure the protocol in the blockchain and store it in the SilentNotary Vault. Archives will be available to users in their own personal account.

Web

The scheme of working with SilentNotary through the web is the following: The registered user drags (drag & drop feature) the file to the appropriate area on the SilentNotary website or places the link of the file to the webpage that he wants to certify.



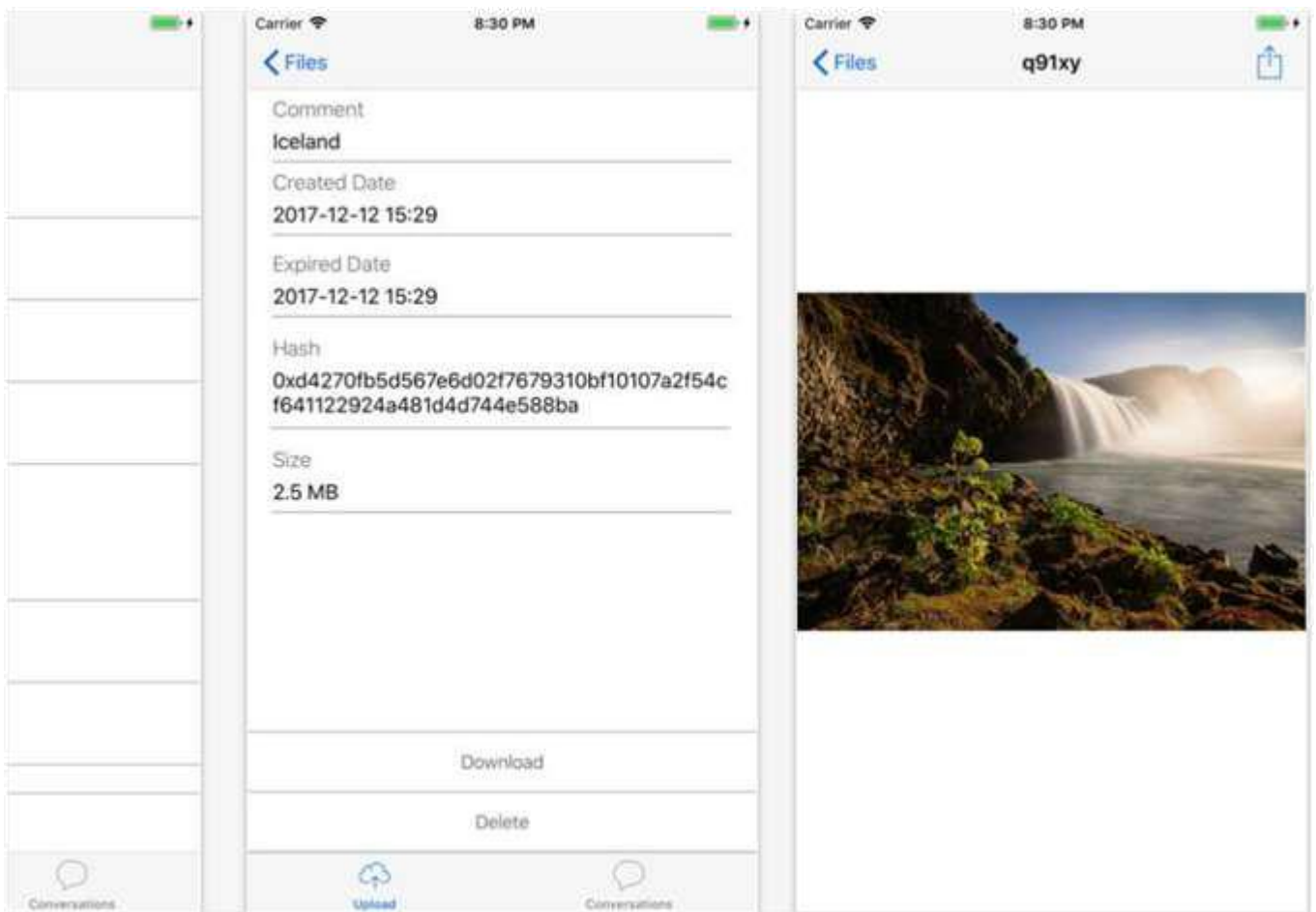
When you save a file or page of a site, an archive is created with the content of the file or page, the hash value is calculated, user confirmation is requested, the service is paid, the hash of this archive is deployed into the decentralized ledger (f.e. Ethereum blockchain or ByteBall DAG-based graphchain), and the archive is saved in the vault. The archive with the hash and the transaction data is available for downloading in the user's own personal account.

Mobile applications

The mobile apps for iOS & Android have been developed and are available now at [AppStore](#) and [PlayMarket](#).

Functions planned and implemented:

- Personal and corporate account;
- Real-time video and audio recording capabilities;
- Access to the Notary Vault for all the uploaded and certified content;
- Real-time video recording using our innovative LightStamp Technology (in development);
- Secure mode (in development).



Lightstamp technology

During the development of the SilentNotary, it became necessary to determine the time range of a certified event. Using the hardware capabilities of smartphones, a solution was found and the Lightstamp (tm) technology was developed to determine the time interval of the event recorded with the smartphone video camera.

The Lightstamp technology allows the following:

1. Counteracts forgery and any modification of the recorded video facts;
2. Records the time interval of the event (the time of beginning and end of the video); and
3. Provides evidence of a real video-shooting event.

National patent app. #2017144897 “METHOD OF PROVIDING THE RELIABILITY OF EVIDENCE AND THE DEVICE FOR ITS IMPLEMENTATION AND THE METHOD OF USING THIS DEVICE”, Intellectual Property priority date is 21.12.2017, registered by RosPatent.

Next step is international patent application according to the PCT (Patent Cooperation Treaty), procedure of WIPO (World Intellectual Property Organization) for simultaneous protection of intellectual property in 152 countries.

More information about LightStamp Technology will be provided soon as we are registering a patent now.

Secure mode

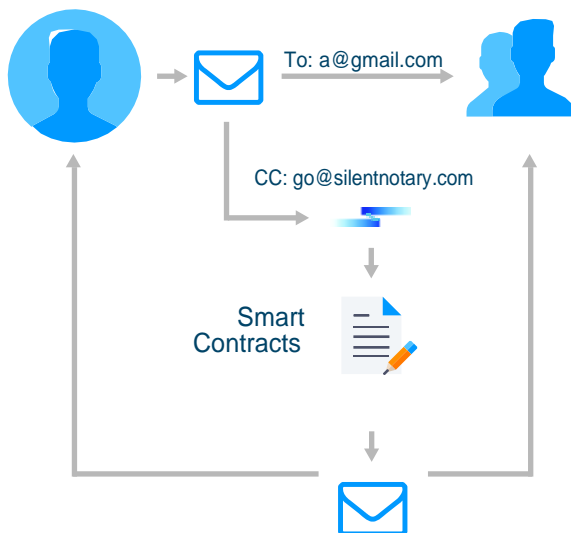
While selling a product, we received requests from customers to develop a technology to certify extremely confidential information. Instead of using particularly robust cryptographic technologies, a simple solution was found.

For particularly sensitive data, the enhanced security mode will be used: hash will be calculated on the Client side and transferred to the system without transferring and storing data to NotaryVault. For certification, the system does not need to have the original data, only a digital fingerprint (hash) is enough. If necessary, the User will provide source files for the technical expertise.

This mode will be available only to users of mobile applications and when integrating corporate systems through API.

Email

The scheme of working with SilentNotary via e-mail is the following: The user sends an email directly to our mailbot address (go@silentnotary.com) or adds the mailbot address in cc. SilentNotary creates an archive with the email's details, RFC-title, content, and attached documents. The hash of the archive is calculated, and then the user is required to confirm the saving by replying to a message.

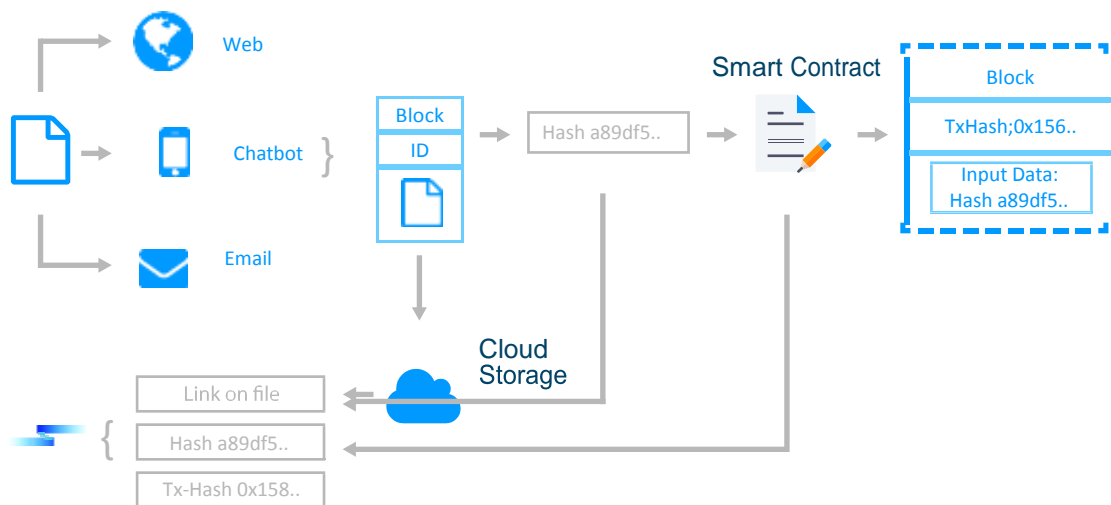


After the document is saved and payment for the service is confirmed by the user, DApp SilentNotary records data hash in the distributed ledger (blockchain/graphchain).

The user then receives a link for the hash transaction. The archive is stored in the repository. (In the demo version, Google cloud storage is used, and in the main version, the possibility of using decentralized systems will be considered.) After the operation is completed, the user will be able to access the saved history in his/her personal account.

Technical description of the product

The scheme of operation of the service is quite simple. In accordance with various interactions with the user, an archive is formed, including the date of the event, details of the document, and the document itself (it can be a file and a protocol of correspondence, among others).



Next, the hash of this archive is calculated by the algorithm SHA-256, with the help of a Smart Contract written into the distributed ledger (blockchain or graphchain). The archive itself is saved in the cloud storage. The user receives a hash, which is the result of computing the hash function on the user's archive. The TxHash of the transaction in the distributed ledger platform and a link to the document in his/her personal account are then made available.

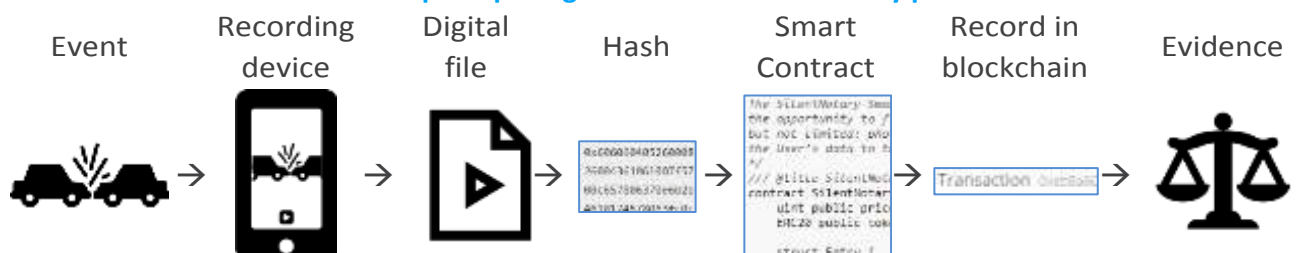
Legal issues

SilentNotary uses blockchain (graphchain) as a service. Dealing with any complex technical system, we need to use a special technical expertise to prove the authenticity of the created evidence. Thus we need to:

- develop a methodology for experts in different countries,
- explain how to use created evidences in a court,
- collect and generalize judicial practices,
- certify lawyers and experts to use SilentNotary technology and
- create a marketplace for decentralized legal services.

These are prime functions of our SilentNotary foundation.

The principal legal scheme of SilentNotary product



- 1The event is fixed with the user's device and recorded as a digital file.
2. The digital fingerprint (hash of the file) is calculated.
3. Hash is sent to a smart contract, which records it in the distributed ledger.

4. The record in the ledger, the hash of the file, and the file itself is used as evidence in the court.

5. An application is made for technical expertise to determine that the file hasn't been changed (corresponds bit by bit to the one presented as evidence) at the specified time (at the time of recording in the distributed ledger). For this, the expert should determine that:

- It is not possible to create a file that is different from the one presented but with the same hash.

- It is not possible to change the presented record in the distributed ledger.

- The timestamp of presented record corresponds to the actual recording time with the required accuracy.

Multiplatform Concept



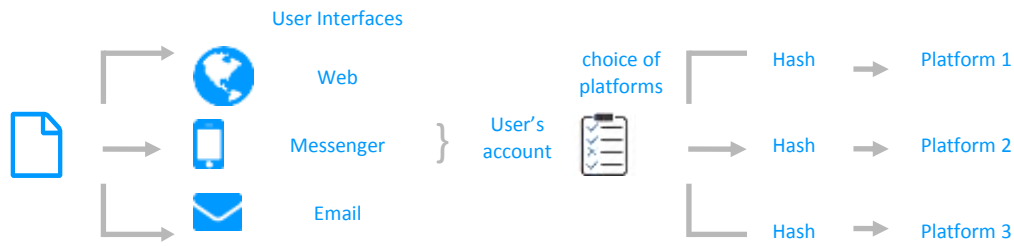
We use a distributed ledger as a service to store our evidences immutable and timestamped. But distributed ledger technology is developing rapidly and we have a choice of platforms now with different features. Some of them more stable but more expensive, others are young but very fast and cheap. Some of them will lose their positions but new stars will arise. We are open for different platforms and provide our customers with a choice. Our customers can choose more suitable platform for their specific case.

For example, it is very expensive and almost impossible to use Ethereum to certify data flows from IoT devices now, but we can use such solution as a DAG-based platform ByteBall in this case.



The principal scheme of Multiplatform Concept.

SilentNotary users can choose the platform used to store evidence. SilentNotary is an open system for the use of various platforms. The basic requirements for a decentralized distributed ledger are the unchanged records and the time synchronized between all nodes.



At present, Ethereum is used as the main platform. To ensure low-cost and fast transactions, for example to certify data flows from IoT devices, test integration with the DAG-based non-blockchain platform ByteBall was made.

Development of the System

The main directions of development

The main problems for the development of the system are the indefinite legal status of the record in the public stable blockchain and low awareness of potential customers about the new product. Accordingly, the following strands of work are planned for the successful development of the system:

1. To develop legal opinions, perform technical and legal expertise, create instructions and ways of using the system, and legal support in case-based litigations with leading legal companies;
2. To promote use of the blockchain notary in everyday life, develop recommendations, and collect and generalize judicial practices;
3. To finish development of user interfaces (integration with WeChat, KakaoTalk, LINE and Skype, launch Product and SilentNotary Foundation sites) and move servers on own hardware.
4. To create an ecosystem around the main application. This ecosystem would consist of service provider organizations, end users, and decentralized applications;
5. We have planned to include public notaries in the ecosystem to organize a remote notarization of the existence of online and electronic documents to cover the maximum range of needs for notary services. For this purpose, it is planned to create a distributed ledger of notaries and organize interaction within the ecosystem. World distributed ledger of public notaries will allow the users to remotely verify the existence of electronic documents in a classical way, but with a more convenient user interface; And
6. To advertise and promote services those use the SilentNotary Smart Contract.

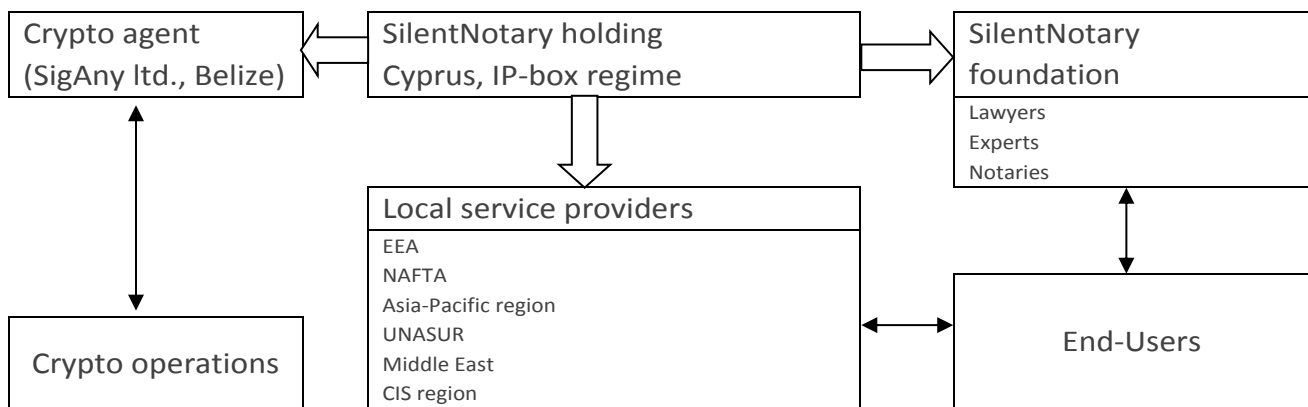
These activities are financed by the sale of the system tokens.

Legal structure of the project.

The project consists of 3 different parts by function and purpose:

1. **Classic IT-holding** providing services to end-users. It owns intellectual property and develops software, provides certification services and receives revenue in fiat currencies and acquires SilentNotary tokens to use a smart contract through Crypto agent. Jurisdiction of the holding company is Cyprus using the local IP-box regime. If necessary, subsidiaries are established to work in specific markets:

- a. EEA (European Economic Area) – we plan to use our holding Cyprus company as a service provider on EEA market.
 - b. NAFTA (North American Free Trade Agreement) region – USA based service provider;
 - c. Asia-Pacific region – Singapore or Hong Kong based service provider;
 - d. UNASUR – local service provider;
 - e. Middle East – UAE based local service provider;
 - f. CIS region – Russia based local service provider (already created for test sales) – SilentNotary Ltd., REG #1165030052307, www.silentnotary.ru
2. **Crypto-agent** – SPV, a specialized company for operations with crypto assets to organize token sale and token circulation. Due to the uncertain legal status of crypto assets, these transactions are separated from the core business and placed in neutral jurisdiction. Company already created: SigAny limited #1 Mapp street, Belize, REG #164,617.
 3. Non-commercial organization SilentNotary Foundation based in EU.



SNTR tokens

The system tokens (hereinafter referred as SNTR or tokens) are issued in a limited number of $1 \cdot 10^{12}$ tokens and are used to organize the interaction among the ecosystem participants. The main contract for its operation is required by SNTR. Only the SNTR token holder can use the services of the contract.

The main SilentNotary contract was developed and deployed to Ethereum blockchain before token sale and available for users at address `0x2ed9b0A70702F52808A27B60cF451652DBD75f8f`. In a future a new contracts can be developed, but any new contract will be able to accept SNTR tokens.

Token contract address is `0x2859021eE7F2Cb10162E67F33Af2D22764B31aFf`

The amount of SNTR tokens needed to execute the contract is as follows:

$$\text{Main contract requirement in SNTR} = \text{Rate USD/ETH} \times \text{Price of certification, \$ USD} \times 20\% / 0.2 \text{ ETH}$$

Since the service is aimed at rendering its facilities in the real economy, the cost of services shall be denominated in fiat currencies. However, calculations within crypto-economics are made in crypto currencies. Compared to crypto currencies, the cost of fiat currencies is marked by high volatility. The following solution is proposed to resolve the issue of regulating the cost of services and linking it to the fiat currency: Control the SilentNotary contract execution costs by changing the basic cost for document certification (serves for recording the market conditions and competitive environment). Coefficients USD/ETH rate and certification costs are published on the webpage SilentNotary.com.

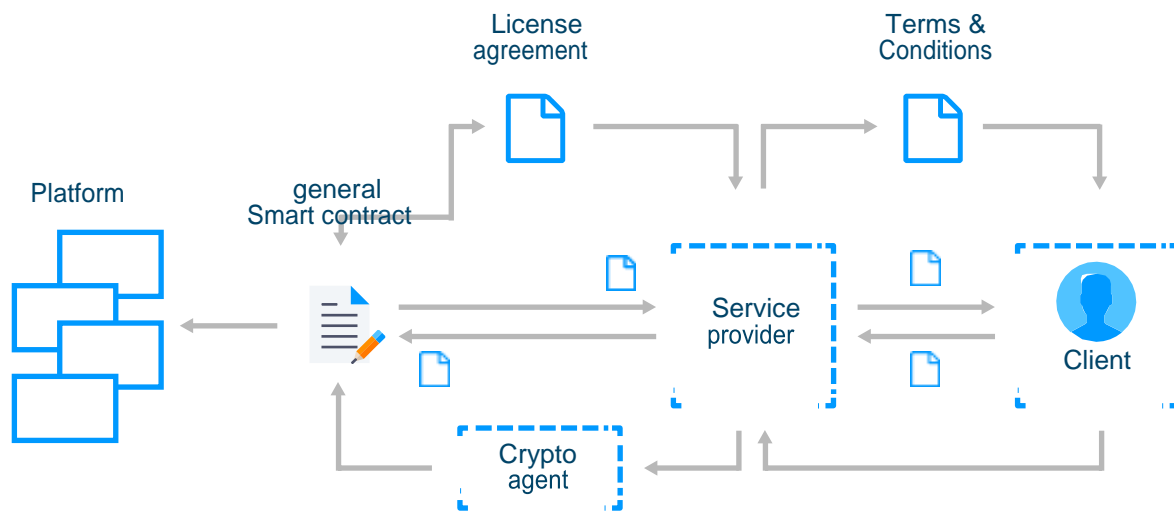
For example, as per the calculation formula, if a basic cost of certification equals to 0.5 USD and USD/ETH exchange rate is 1000, the requirement of the contract will be 500 SNTR.

For the service of the ordinary user, it is planned to create own or support the creation of independent service providers and commercial organizations that are acting as intermediaries between the end customer and the SilentNotary service. To render services, the providers must buy the SNTR tokens.

These tokens can be obtained in the following two ways:

1. During the token sale, by exchanging ETH/GBYTES/BTC for tokens in accordance with the rules of the sale.
2. Exchange from the existing owners in a transaction.

Let's consider a case where the Smart Contract of SilentNotary is used by a service provider.



The Service provider, a company rendering commercial services to end users, submits an offer (Terms & Conditions) to the user, according to which the user sends certified content to the provider and pays for the service in-line with the rate (USD).

To provide services to its customers, the service provider uses the main Smart Contract of SilentNotary under the terms of the license agreement.

To execute the main contract, the Service provider needs to transfer a certain number of SNTR tokens to SilentNotary smart contract. He can use Crypto agent for processing crypto operations. As a result the Service Provider will receive a link to TxHash and sends it to the user, while the information itself is stored in the Vault and made available to the user in his/her personal account.

Important!

The aforementioned calculation, its results, and assumptions do not constitute an obligation for a team to provide potential holders of tokens with some profit. The calculation just demonstrates the circulation of tokens inside SilentNotary system. Therefore, we do not recommend you to treat the token as an investment.

The token Smart Contract is used to control the circulation of the tokens. A SNTR is issued in line with ERC20 standards, which makes it possible to use all the existing infrastructure and maintain the circulation of the tokens. Some amount of issued tokens can be converted to the token receipts issued on other platforms, for example, on ByteBall DAG-based platform. Issued token receipts will be changeable to ERC-20 SNTR tokens at the ratio 1:1.

After the number of tokens that is necessary for the application are transferred, the tokens received by the Smart Contract are deposited and, thus, withdrawn from circulation. In the future, the developers consider a possibility of putting the deposited tokens in circulation, purely for the purposes of the application's development or its market promotion.

The Roadmap

This section describes the sequence of steps which we intend to execute to create an ecosystem based on the main Smart Contract SilentNotary.



Token Sale



Current state

MVP:

Web-interface with personal and corporate accounts, Messengers' integration (Facebook Messenger, Telegram and Slack), Android&iOS Mobile Apps

Patent pending for LightStamp technology

Registered companies - token sale agent and 1-st sales provider.



Stage One (Q1 2018) 3 Months

B2B&B2G Product Sales, Foundation for legal services creation, first legal solutions, International patent pending for LightStamp technology, Multiplatform solution, integration with 1-st platform for IoT solutions, Skype, WeChat, KakaoTalk and LINE messengers' integration.



Stage Two (Q2 2018) 6 Months

IT holding creation, Reseller contracts, White label sales, Start B2C sales, IoT solutions.

Creation of the SilentNotary foundation

An important stage in the SilentNotary service implementation is the creation of a non-profit organization, SilentNotary Foundation, which will aim at the development of the SilentNotary ecosystem (legal status of certification in the blockchain, expertise and introduction in legal practice). List of tasks of the first stage are as follows:

- Registration acts connected with the SilentNotary Foundation – including the choice of jurisdiction, the choice of the legal entity form, and the choice of the taxation scheme;
- Development of a standard offer for the service users;
- Development of the license agreements; and
- Legal elaboration of the service model to ensure its correct operation in various jurisdictions.

This stage will take 2–3 months.

Service development

The second work stage is more focused on the technical challenges, including the expansion of the available service interfaces:

- Development of the code for the main Smart Contract of the system and activation of the evolution mechanism;
- Development of chatbots for the main messengers, which ensure the functionality required for the service work;
- Further development of the website functionality – dealing not only with separate files, but also with hyperlinks, saving the structure of the website and its contents;
- Development of schemes for accepting payments from service users and the introduction of a flexible pricing system for services;
- Further development of the mail service, for example, file hashing by links;
- Development of the API interface;
- Improvement of the interface usability;
- Development of the code for the main Smart Contract of the system on ByteBall platform; and
- Development of Lightstamp technology.

This stage will take 4–6 months.

Launching

The third work stage includes creation (attraction) of the service providers, final testing of the service, development of the marketing program, recruitment of the companies working on the service promotion, and conclusion of the contracts with the key performers of the program.

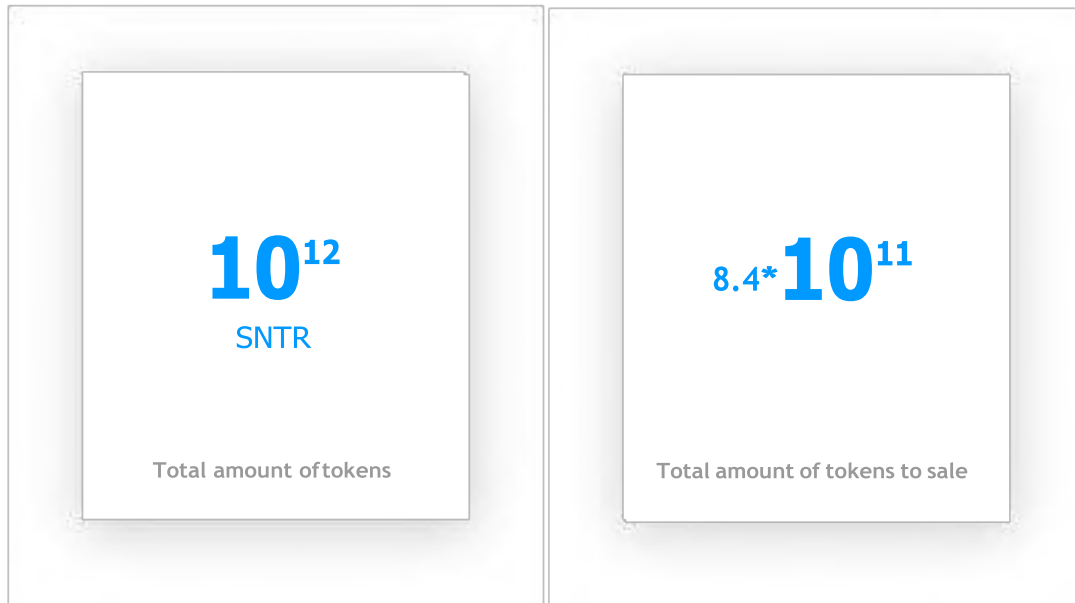
This stage will take 2–3 months. It ends with the commercial launch of the service.

Token Sale

Important!

This section is devoted to the issuing and exchange of the SNTR tokens. If the laws of the country you reside in involve certain requirements that for you, as a potential token holder, or for the process of tokens acquisition and exchange, we recommend you consult the lawyers with the relevant practice in your jurisdiction and make a decision about the tokens exchange based on their recommendation. Besides, we would like to bring to your notice that due to technical organization of token issuing and exchange, we do not collect, store, or make use of the potential token holders' personal data, and, thus, we cannot control what jurisdiction they belong to and whether the laws of this jurisdiction are violated. As a result of such circumstances, the responsibility for exchanging tokens in your jurisdiction rests with you, as the token holder.

Main characteristics of the Token Sale



- Total amount of tokens is $1e12$ (One trillion)
- Total amount of tokens for sale is $8.4e11$ (Eight hundred forty thousand billions)
- Up to 50% of tokens for sale can be reserved and sold on different from Ethereum platforms.
- Tokens released and sold on other platforms have the same value as original tokens. SilentNotary provides the exchange of tokens released on third-party platforms to original SNTR tokens at the ratio of 1:1.
- No Soft Cap – main part of the system is already developed and ready to use.
- Hard Cap – \$15M. The threshold of ETH raised will be calculated 24 hours before the final token sale based on average USD/ETH rate on the exchange with highest rank of ETH 24h trade volume. The token sale will be completed when all collected funds nominated in ETH will exceed the threshold.
- All unsold tokens will be burned.
- SNTR tokens reserved for sales can be used as payments during promotion or development (f.e. bounty or referral program).
- The sales period will be divided in several phases;
- Each phase can last up to 14 days;
- The start date of each phase will be announced in-time by the developers and will be published on the website and broadcasted in our social media channels; and
- Each phase can be extended by the team, but it will not surpass 14 days.

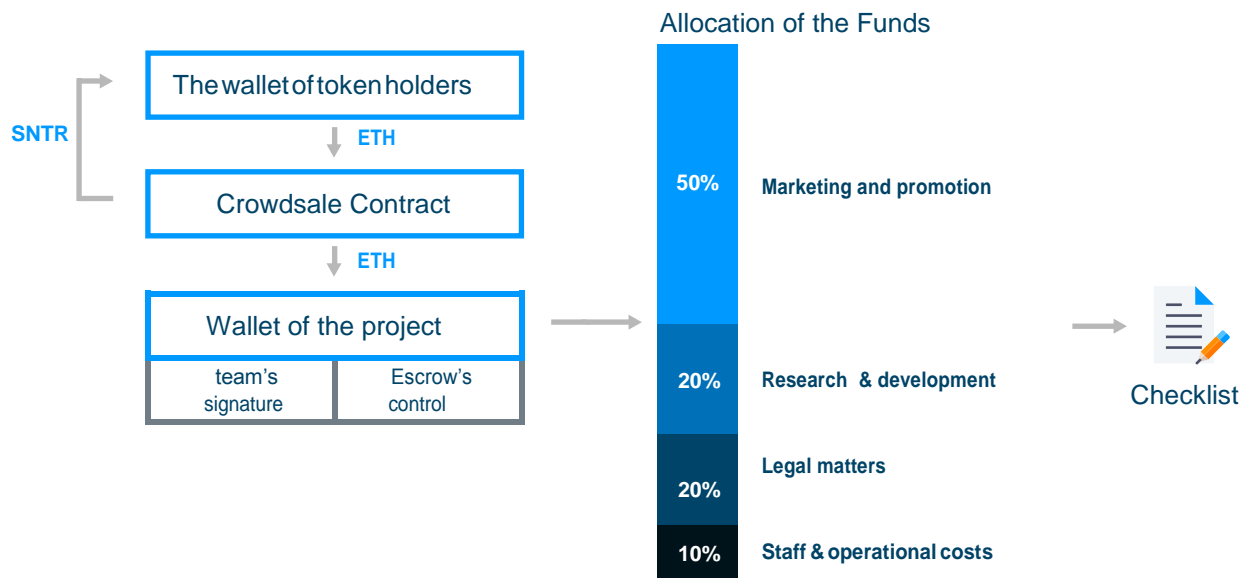
Sale procedures

In order to purchase tokens during the token sale, you will need to send the required amount of accepted cryptocurrency to the address which will be published on the official website www.silentnotary.com. The address will be published not earlier than 24 hours before the start of the sale. In response to the payment, tokens will be deposited to the wallet of purchaser.

The use of funds raised

Use of funds is done approximately as follows:

- 50% will be used for marketing and promotion of innovative products
- 20% for the legal status, experts in different legislations, and introduction in legal practice.
- 20% for Research & Development.
- 10% will be used for staff and operational costs.



The Future of SilentNotary

We believe that a whole system of services will emerge that will use SilentNotary, in particular, P2B, B2B, P2P credit systems, real estate management, insurance, evaluation of physical assets, and more.

We are willing to collaborate with other teams and projects. If your project needs solid proofs that certain events or documents took place, we will develop a convenient interaction interface.

Become part of the revolution and join us in our journey.

Conclusion

The legal system is the basis of our society. We have come a long way and evolved from primitive tribes, where the rule of force prevailed, to the modern complex system of norms, which guarantees the rights to all individuals. The legal systems continue to evolve, but it cannot keep up with the technological progress. It is quite inert, which is natural, since any change in the legal system will cause significant consequences on the entire society.

Obviously, the recently developed technology of data storage in a public blockchain is ideal to record facts. And the fact that almost every person today has a smartphone and uses messengers will make this technology accessible to everyone. The legal system is already beginning to accept blockchain as a method of trusted data storage, and once its reluctance is finally over, we will witness a revolution in numerous areas of our life. This will expand our possibilities significantly.

Business practices will change. Contracts will be signed in messenger apps. Business procedures will become faster. By recording all the facts, corruption and fraud will be prevented. We would create a more stable and safe world. We have developed and keep on developing SilentNotary with zealous enthusiasm.

*Yours sincerely,
The SilentNotary team*

Reach out to us at hello@silentnotary.com for any inquiries and ideas you may have.