

SurruS White Paper

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1. Introduction

The present document researches problems and objectives of the international anti-theft devices market and possibilities for changing the available technological paradigm, commercial and technical aspects of solutions, developed by Surrus company for monetization of this change's potential. The key provisions of the documents are presented below.

1.1. Market

Vehicle insurance market in the USA, Europe, and Russia has reached 400 billion USD per year, while anti-theft alarm system market - over 350 billion USD per year. There are 703 million cars in these regions, with more than 30 million new cars being sold annually. Thus, about 5.8 million cars are stolen annually; the damage numbers 73.5 billion USD.

The current situation in the market and key players are as follows:

- *Car owners* - aim to protect their vehicles or, at least, get a worthy insurance payment;
- *Insurance companies* - want to maximize the profit from insurance awards and reduce insurance case risks;
- *Car manufacturers* - want to increase sales by supplying the cars with anti-theft systems, but do not manage to trace all new theft techniques;
- *Manufacturers of anti-theft systems* - complicate their devices, but are helpless with advanced techniques of car thieves. Better protective systems just force the thieves to spend a bit more time for a theft.

It is obvious that the market needs an infrastructure solution which could satisfy requirements of all these groups and solve car theft problem for ever. Surrus company is ready to offer such a solution. Today you can become a part of probably the most global scientific and technical business projects in the field of anti-theft protection since the time when the first car was invented.

1.1.1 Problem of car thefts in the world

Car theft problem emerged almost in the same time with sales of the very first cars and it has not been solved yet. Created insurance companies minimize

losses of the car owner in the event of theft, while anti-theft systems reduce the chances of car thieves. However, the problem has not been solved completely yet, as none of the available tools can ensure the car owner their car won't be stolen or will be returned to them.

Insurance companies

It's not a secret that the insurance companies aim to minimize their expenses in the case of an insurance event. How it works:

- ***Insurance companies distribute responsibility and risks between all participants of the insurance***

Rates are calculated in a way that the total amount of insurance award exceeds as the amount of payment for insurance events. Thus, the car owners who have not experienced the insurance case cover company's expenses on insurance cases. That is why the rates are so high and make up to 10% of the car cost per year.

- ***Insurance programs against theft are expensive and non-transparent***

Insurance programs intended for protection only against thefts do exist, but their cost is almost the same as the cost of theft+damage insurance package. Besides, this type of insurance is valid only if the car is equipped with anti-theft alarm system, which results in increased of insurer's expenses. Moreover, usually the contract contains a set of additional conditions which may become a pretext for refusing to pay in the insurance event.

Anti-theft alarm systems

The purpose of installing anti-theft alarm systems is reduction of car theft probability and support of the car owner's psychological comfort. What happens in practice?

- ***Anti-theft systems provide only nominal protection, but do not guarantee the car will not be stolen***

Car owners implement various devices, both mechanical and electronic ones to protect their vehicles from stealing. But anti-theft systems protect only from amateur thieves. Professionals ones has special means for breaking of any system, since as soon as a new anti-theft system is introduced to the market the violators find a way to break it within the shortest terms. Therefore, more

advanced and complicated anti-theft systems just prolong the time the car thieves spend for penetration into the car, but do not prevent the theft itself.

- **Satellite and GSM-channels of electronic systems are pricey and can be easily jammed**

Electronic car protection systems work with satellite and GSM-channels of signal transmission. But there are many devices for suppressing the signals on these frequencies in the black market; therefore, car thieves simply block protection systems of this type. Besides, electronic systems are expensive. Together with the insurance, additional expenses can make up to 15% of the car cost per year.

1.1.2 Companies and individuals bearing losses due to car thefts

Owners of personal vehicles

Neither cheap, nor premium-class cars are totally secured against theft. Garages and guarded parking lots cannot provide a proper solution, as security guards of garage communities and parking can enter into collusion with thieves or suffer from their actions.

Usually car theft means the vehicle is lost forever. The percentage of theft cases solved is very low and even if the car is found it is often in unserviceable and non-repairable condition or the cost of repair is comparable to a new car price.

Car manufacturers

Frequent thefts of a certain car brand or car model have a negative impact on sales. Therefore, manufacturers strive to minimize the theft case frequency. They integrate standard anti-theft systems, though they are ineffective and fail to solve the theft problem. Car companies introduce more and more perfect protection systems regularly, but these are systems of the basic level and professional car thieves apply special devices to break them quickly.

Taxi pools, car rent services, and public transport

Taxi pools, car rent companies, municipal public transport, leasing enterprises, car sharing services - they all suffer from theft problem very much. Elimination of theft risk will help the companies increase their profit considerably. It is a big market which needs a technological breakthrough.

1.2 Surrus solution

Surrus is a complex innovative solutions including:

- decentralized system of search and return of the stolen car;
- blockchain-insurance against thefts, with a guarantee of instant refund of up to 100% of car market cost under the smart-contract.

Surrus team has developed a new way to find stolen cars which works even with radio signals suppressed. Surrus search modules located across the city enable to find the stolen car and transfer it back to owner.

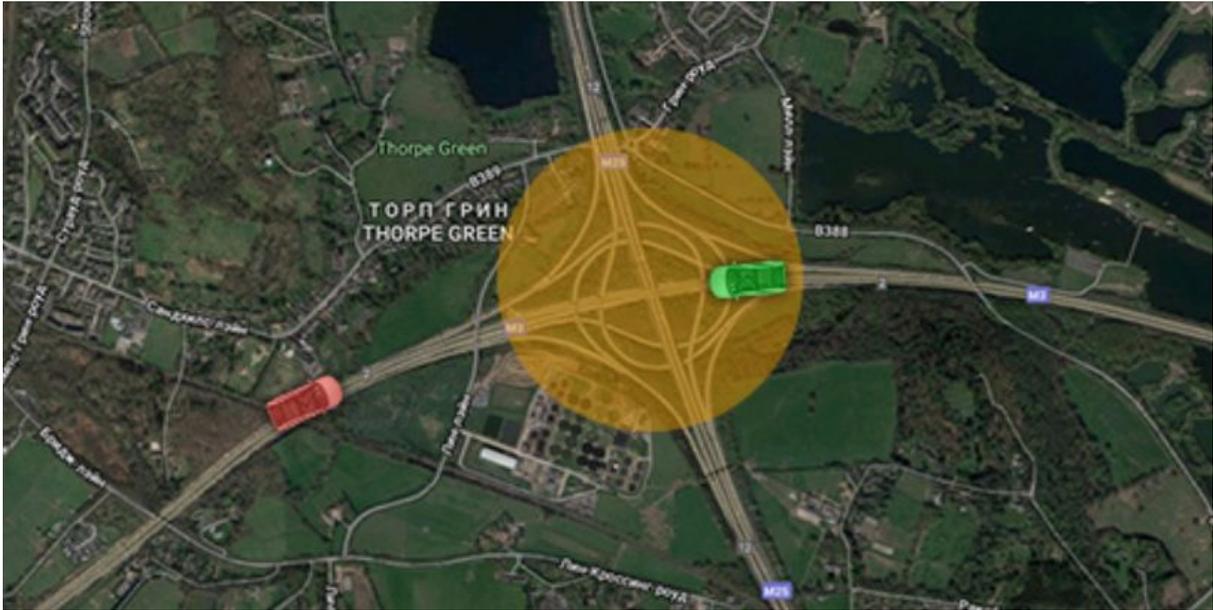
1.2.1 Surrus technology

Surrus company has developed search modules and car equipment, launched production of them, created and patented software, and set the search network. Thanks to own network and unique search algorithm, Surrus can find the stolen cars quickly and ensure peace of mind for the car owners.

Devices installed in the car do not deliver any signals, unless they are in the operation radius of the search module. This means car thieves won't be able to find and remove it. Whenever the search module detects the device in its operation radius it transfers the information on location of the car.

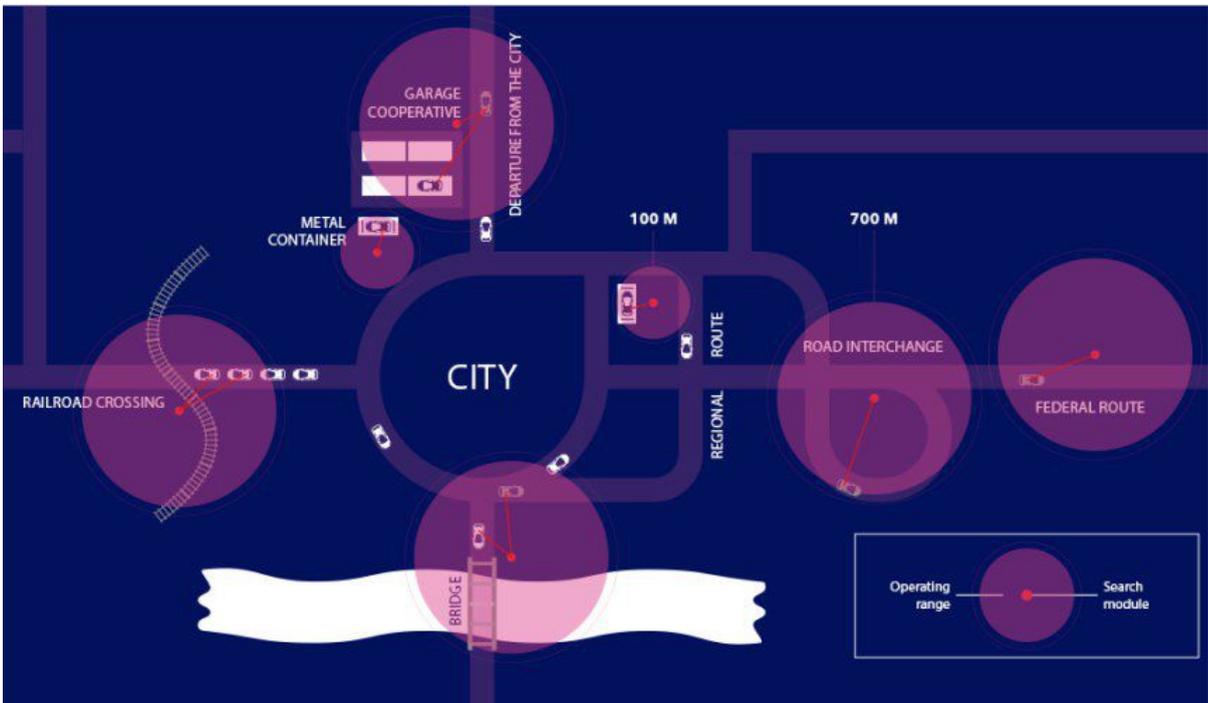
Creation of a "smart-suppressor" for this technology is impossible: this type of a channel can be blocked only broadband killer which, due to enormous radiation, can be dangerous for human health. Besides, the operation of this killer will be registered by the search module too.

The search module operation radius depends on the local conditions and makes from 100 m in a metal container and up to 700 m outdoors. Installation of numerous modules in a risk zones ensures that the stolen car will be get into operation radius of at least a couple of them, so that the first signal will be enough to draw up a precise search zone.



Search network

Small range of the search module operation will be compensated by creation of own network. SurruS network covers only key traffic points: federal and regional highways, all exits from a city, railway crossings, bridges, junctions, large garage cooperative societies, and other critical zones. The network enables to detect a possible location of the stolen car for further combing the district with special equipment and finding the car.



Search process

The search algorithm detects the territory of possible car's location on the basis of data from the theft place and actuation of the search module control points. A search squad arrives to the detected area and scans it from the ground and from the air, with the help of manual and search modules and quadcopters. Once exact coordinates of the car are defined, the final search group together with the policemen arrives to the site for withdrawal and return of the car to legal owner.

Search algorithm

The search algorithm is based on a self-trained neural network which is constantly improved depending on car thieves' behaviour in a specific region; thus, the probability of failure to return the car significantly reduces over the time. The algorithm includes "fuzzy logic" principle, so thieves won't manage to copy the technology and crack it.

1.2.2 Blockchain insurance against car theft

SurruS technology reduces the non-return risk to almost zero level. However, as an additional guarantee, the company undertakes to return 100% of the market cost of the car to car owner if the vehicle won't be found and returned.

Unlike the insurance companies whose payments usually do not cover even a half of the stolen car price and whose customers have to spend many months, while collecting the papers at all instances, SurruS payments are instant and full according to smart-contract.

Blockchain technology, being technology of decentralized digital ledger, enables to change the process of information processing, and namely:

- **to simplify submission of insurance application;**
- **to raise insurance payments by elimination of intermediaries;**
- **to reduce the period of waiting for insurance payments essentially;**
- **to make transactions in the insurance market more transparent;**
- **to relieve the market from numerous frauds.**

Besides, the application of blockchain technologies enables new promising players to win the trust of customers.

1.3 Surrus company – from dream to developed solution

1.3.1 History of Surrus

The idea to develop a solution against car thefts came to the mind of one of the project founders, Vladimir Kosenko, in 2007, after his car has been stolen. Vladimir got personal evidence that the existing measures directed on car theft prevention and damage indemnification are inefficient: anti-theft alarm systems did not save the car from thieves, while the insurance company took advantage of a loophole in a treaty and refused to pay.

Vladimir searched for the suiting solution and studied all offers in the market. However, none of them guaranteed full protection of the car against theft or reparation of damages at the rate of 100% of the market cost of the car. Then Vladimir addressed to researches of Novosibirsk science campus with a precise task - to develop an efficient anti-theft system. As soon as this system was created, Vladimir became business angel of the project - started financing the further works and undertook the overall project management.

After 11 years of researches, tests, and hypotheses checks, a system for detection and return of the stolen cars was created. Investments into development and start of the system exceeded 10 million dollars. A couple of years ago, the concept could be barely implemented due to flaws of technologies, high cost of equipment, and lack for the universal, decentralized data exchange system with high encryption degree.

Today, thanks to blockchain technology, a revolutionary breakthrough in the field of artificial intelligence, and reduction of accessories cost, the international launch of the project has become possible.

1.3.2 Surrus team



Andrei Zhukov - Founder, engineer

- 20-year long experience in electronic and mechanical systems development;
- designing of search modules and stable communication channels for more than 15 years;
- participation in international conferences on traffic, information technologies, and traffic safety since 2009;
- cooperation with the government of Novosibirsk oblast and the Korean company KT Corporation in the field of traffic safety system development.



Vladimir Kosenko

Founder, owner-entrepreneur, business angel

- 24 years of entrepreneurial activity and foundation of enterprises;
- recover of 2 unprofitable plants to profit level within 19 months;
- experience of managing a staff consisting of 270 employees;
- profit of the group of companies headed by Vladimir made 95 million USD per year.



Sergei Glushkov

Scientist, author of original developments

- professor of transport engineering and machinery operation department at Siberian state transport university;
- successful developments, adaptation, and tests of machines, devices, and equipment;
- more than 120 scientific articles and studies published;
- 10 patents for inventions;
- being scientific adviser, Sergei trained 2 Dr.Sci.Tech. and 15 Cand.Tech.Sci. and is now scientific adviser for 5 doctoral candidates and 7 post-graduate students.

Marketing team



Иван Филатов
Project manager



Александр Терехов
Traffic manager



Шуваев Дмитрий
Product manager

- Soft Cap was collected for 5 ICO projects, Hard Cap - for 2 ICOs;
- We generate more than 3000 applications for mortgage financing monthly;
- Implementation of the marketing strategy for the largest network of car pawnshops in the Russian Federation with the annual budget of more than one million USD.

Technical team



Maksim Skorikov

Front-end developers team lead at Innodata.

- 6 years of web-development experience;
- took part in developing yorso.com and investore.club;
- took part in the hack4climate.org hackathon;
- winner of the AngelHack hackathon.



Maksim Shalavin – co-founder of Blockchain Expert.

- Over 2 years of experience in developing blockchain-based solutions;
- over 10 successful blockchain projects;
- worked with Sberbank, QIWI, Yorso, MTS, investore.club

SurruS has created a revolutionary product interfacing two big markets: vehicle insurance and anti-theft alarm systems. We offer you to join our implementation of the project which will solve the car theft problem for ever. High demand for the product will multiply repay the investors' expenses at ICO stage, while subsequent reduction of car theft quantity will become an important step on the way to safer future for our offsprings.

2. Concept and technical description of the project

2.1 Concept

SurruS company has developed the innovative solution for efficient search for the stolen cars and entered unique product to the market, with the help of technical facilities and software.

SurruS concept is a brand new technology allowing to return any stolen car and, eventually, essentially reduce the number of thefts thanks to application of hidden devices mounted into the car and the search network.

2.1.1 Vocabulary

Technical solution developed by SurruS consists of the following components:

Device mounted into the car - small, hidden attachment which is installed into the car for tracing its location by transmission of signal, once the car gets into the search module operation zone.

Search module - small device which is masked as infrastructure objects and other items installed at key points of a district with the main roads and traffic flows. Once the car gets into the module operation range, the latter requests and receives signal from the device installed in the car.

Communication channel between the device and the module - communication channel for close (100-700m) distances, secured against interferences and killers, through which the signal from the search module to the device is transmitted.

Search network - network of search modules covering all key zones of suggested car location area and sufficient for effective search of the stolen car.

Search algorithm - plan of search actions, from the moment of submitting a statement to the police by the car owner and receiving the first signal from the stolen car to determination of the car location by combing the district and arrival of the police squad.

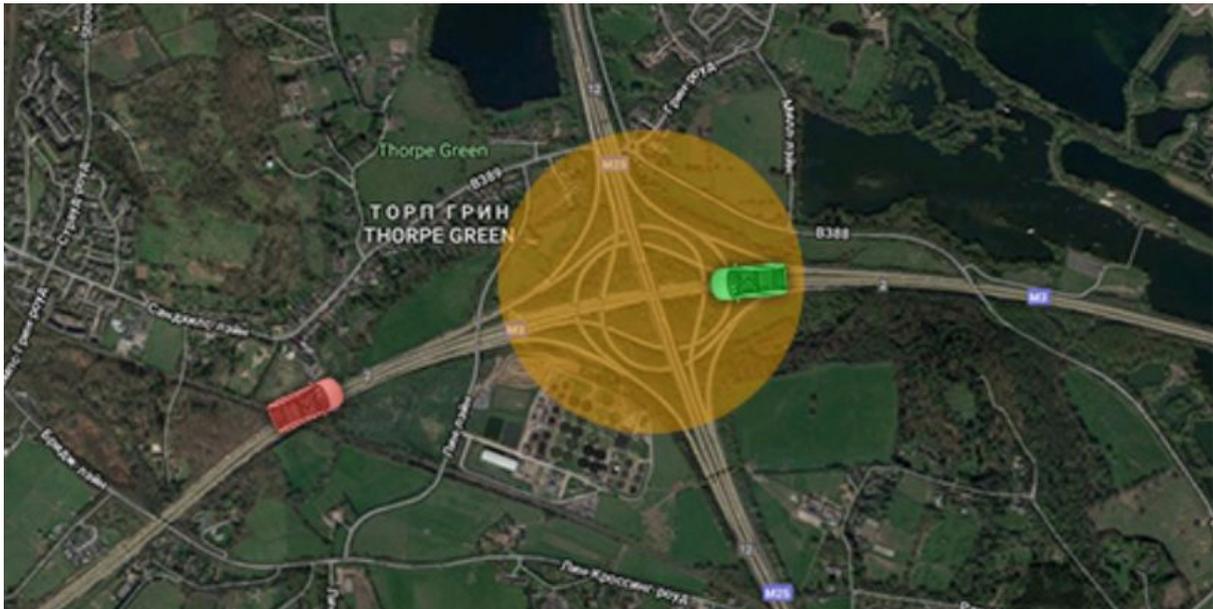
2.1.2 Technical part

SurruS invention consists in development of a special communication channel between the device installed in the car and the search module. Unlike currently available anti-theft systems, SurruS equipment is based on absolutely different way of data exchange between the device and the search module. It is protected against interferences and killers cannot be blocked by existing equipment; it is efficient, simple, and reliable.

The problem of finding the stolen car is solved by installation of hidden electronic devices of small size which transfer replies at different frequencies only when they get into the search module operation range. Low capacity enables to work at "hopping" frequencies that are unknown to thieves. Besides, low power consumption makes devices self-contained and small, so that they can be mounted in various parts of the car and remain unnoticed.

The device installed in the car does not transfer data by itself; therefore, it cannot be detected by signal. It does not work on satellite and mobile communication channels, so its signal cannot be killed, intercepted, or changed.

SurruS search module is a small device hidden in the city's infrastructure: traffic lights, hollow posts, couplings of electric cables, advertising structures, under roofs of houses, pavilions, garages, etc. The search module network covers the key traffic points - federal and regional highways, all exits from the city, railway crossings, bridges, junctions, garage cooperative societies, etc. Selective placement facilitates network creation. In particular, 300 modules would be enough for Novosibirsk, about 700 - for St.-Petersburg.



Communication range between the search module and the device depends on local conditions and makes up to 100 m if stolen car is in the metal container or concrete sediment basin, up to 250 m - in city conditions, and up to 700 m – in the open territory. Small operation range of the search module is compensated by creation of own stationary network which does not depend on satellite communication and mobile provider networks.

It is impossible to create a "smart" killer of signal within the scope of this technology, using resources that are available to the public. The signal on this channel can be jammed only by broadband killers adopted and used by military men, special services, and law enforcement bodies. However, the operation of this killer is detected by the search module and if the module fails to connect with device inside the car, then the system will detect the stolen car by operation of the killer itself.

Technology protocols are secret and there is an additional anti-crack protection level in the solution - so-called technology drift, which makes any attempts to crack the code just senseless. Even if thieves manage to get one device, they won't be able to create a crack technology, as there are several kinds of devices differing by type, form, and arrangement. One car may have several installed devices, including fake models, and it's impossible to distinguish operating device from the fake one, as none of them transfers signal by itself, but only responds to requests from the search module. As soon as the device responded, or killer's operation is detected, the search group gets the first coordinates and the stolen car can be found easily.

As soon as the search module receives signal from the stolen car, Surrus search group checks the exact location by inspecting the area with special equipment including quadcopters. The policemen arrive to the place at the final stage of the search operation.

2.2 Scientific substantiation

Interference immunity

Enhanced interference immunity of Surrus communication channel is attained by implementation of two scientific principles for noise immunity support: Shannon-Hartley theorem and "hopping frequencies" ("noise-like signals") of Hedy Lamarr.

Shannon-Hartley theorem

According to Shannon-Hartley theorem, under continuous interferences, the maximal number of correctly transferred information through a certain communication channel depends on the message transfer rate. If message transfer rate is less than communication channel throughput, then the error probability is zero, and on the contrary - if the message transfer rate exceeds the channel throughput, the error probability increases in proportion to increase of this rate.

The current trend is so that the new communication channels transfer huge arrays of information, which reduces their noise immunity. Surrus solution consists in the opposite idea: the car device sends the minimal possible amount of information to the search module, which ensures ultimate interference immunity. Surrus technology is the first one over the last 100 years to apply the telegraph principle, as it is utmost resistant to interferences at signal transmission.

“Hopping frequencies” (“Noise-like signals”) of Hedy Lamarr

Initially the invention of Hedy Lamarr was intended for creation of technology for radio control of torpedoes which would be resistant to intercept and jamming. Traditionally, signals were encrypted with a code decoding rules of which were known both to transmitting and receiving parties. However, the signal can be jammed if someone knows the broadcast channel. Lamarr's invention in 1942 made revolution in the world of information enciphering: it was suggested to transfer not ciphered signal on one channel, but send a usual signal through channels that are continuously changed in the order

which is known only to two parties. Though Lamarr's solution was way too innovative for that time, today similar technologies are applied everywhere: for example, in mobile communication and Wi-Fi.

Pure noise-like signals are used by the army, while civilians are not allowed to broadcast at all frequencies at the same time. Surrus company has solved this problem by reducing the transfer capacity. One search module broadcasts signals in the limited territory - not more than 1 km, and this type of transfer does not require any special permission.

Thus, the signal from device in the car to the search module is transferred at hopping frequencies and cannot be intercepted or changed. The only way to stop the transfer is to use the signal killer of high capacity, which jams broadcasting at all frequencies. However, its operation entails enormous radiation and can result in serious health problems. Besides, the operation of this device will be registered by the search module, so Surrus system will find the stolen car anyway - by signal from the device or by killer's operation.

Fuzzy logic

Algorithms of Surrus system are based on fuzzy logic. Instead of traditional "true" and "false" terms, fuzzy logic includes a wider range of terms, like "probably", "sometimes", "rather yes", etc. The system deliberately includes elements of uncertainty. Equipment installers, after coordination with Surrus company, can choose installation points, number, and type of devices to be mounted in the car independently. If a thief mounts complex of this type into his car for further dismantling and examination, he won't get the exhaustive information, as the neighbouring station will have a bit different equipment, installed in different places. Use of own network and very low capacity of the channel enables creation of economically reasonable variety of devices for fuzzy logic variability support.

Thus, without knowing installation point and device type and unable to take the bearing of its signal due to absence of it, the thief can find the device only after complete dismantle of the car into spare parts, which should be done within several minutes, as the device responds to search modules on the way and imparts them the car's location, or the search modules detect the killer's signal, if the thief uses it.

Fuzzy logic is also applied in arrangement of the search network modules. Some modules are stationary and masked in infrastructure objects, some of

them are mobile. During the training search, SurruS search service moves mobile modules, leaving no chance for the thieves to detect module locations. The only way to neutralize all modules in a specific district is to destroy all buildings up to foundation, to cut down trees, and remove all supply lines.

Thus, SurruS system is based on a principle of regular changes of device type, location, and modules' arrangement. These conditions rule out the crack possibility. Gradually, the number of theft attempts which failed will constrain thieves from new actions and the car theft rate will reduce to minimal value.

2.3 Search algorithm

Search for the stolen car is carried out in several stages. SurruS search team gets down to work once a statement from the car owner is submitted to the police. At the first stage, based on information on the last car's location provided by the car owner and data received from the search modules, the search center operator determines the car moving direction and zones which can be excluded from the search area. The search software operates by self-trained neural network principle, which enhances the system efficiency after every search.

As soon as the territory of probable location of the car is determined, a search groups arrives there and combs the district automatically, by programmed route, using GPS/GNSS/GLONASS signals and quadcopters. The final search group together with the policemen arrives to the site where the stolen car was contacted. SurruS search team determines exact location of the car and the policemen perform the required operational procedures.

Simultaneously with the SurruS search teams, any user of the system can participate in the search for the stolen vehicle. The smartphone app sends a notification announcing the search operation launch, allowing the users to set out to the area by themselves and scout last known location of the signal. If the volunteer manages to find the vehicle first, he will receive a reward for it.

In free time, members of SurruS search groups carry out daily training searches: one group "steals" a car and hides it, while the other group has to find it. During the search in a specific district, the search group members analyze the territory and enter data about suggested car location into the system, and draw up a map of probable storage places. The optimal search route is developed for every square, signal radio transmissivity in a specific area is assessed on the basis of telemetering data. These data help improve

the information database daily, which facilitates the search in the event of real car theft in the future.

Training search actions are required also for protection of the search network against revealing. Surrus team moves search modules regularly, which serves as a kind of psychological pressure on criminal gangs. Besides, moving of modules has another one useful effect: even members of Surrus search group do not know the exact arrangement of all search towers. Therefore, information leakage won't enable car thieves to form the best routes.

Neural network develops together with training search actions. The network remembers the search group action algorithm and, in the event of real car theft, compares this algorithm with the real situation. Based this comparison, the network defines the most efficient actions of the search group and verifies them in the algorithm. If car thieves acted in non-standard manner, the network remembers this information too. Thus, daily training searches improve the neural network and real car thefts verify the available plans.

2.3.1 Participation of law enforcement bodies at the search operation final stage

To date, search and withdrawal of stolen cars are carried out by law enforcement bodies. A person whose car has been stolen writes a statement and expects the police to get down to this case immediately. Unfortunately, only policemen from movies and series can devote the whole work day to one case. In real life, one policeman may have dozen various cases that are investigated simultaneously. Unfortunately, the assessment conditions of police efficiency force the policemen to focus on cases with higher clearance probability, which is not the case of car thefts.

Car theft is a real catastrophe for the owner, who treats it as extremely important and urgent. However, for the police, it is just another one routine case. Investigation entails extensive paperwork and is sometimes dragged out due to complicated communication between officers of different levels. Besides, non-standard solutions of the policemen are encouraged only in movies. In reality, the officers have to follow established procedures, instead of taking the initiative.

Even if there is a device with satellite communication installed in the car, many car owners are surprised to see that the policemen do not rush to the signal zone. This is caused by their experience - many car thieves quickly find this

device and discard it or, which is even the worse case, throw it to demountable body of a lorry passing by. Therefore, officers often refrain from responsibility to send the police squad there.

All these features were taken into account at development of SurruS search algorithm. Prior to involving the police officers, SurruS search group arrives to the site for determination of exact car location. Law enforcement bodies arrive to the specified address to detain the thieves and withdraw the car. As a result, car theft case is not troublesome and of little promise, but easy and successful. And any policeman would be glad to clear this case.

To speed up the process even more, SurruS company negotiates with division heads in advance to agree on sequence of activities and responsible officers. Therefore, SurruS search group not simply calls 911, but contacts people who know what to do directly. Smooth-running cooperation of the search group and police will allow returning the stolen cars to their owners within the shortest terms.

Cooperation between the law enforcement bodies and SurruS company is favourable for both parties: the company provides quick return of car to the customer, while the police improves case clearance statistics without any additional efforts.

3. ICO campaign of SurruS and SURR token issue

The main objective of SurruS project is to create decentralized independent ecosystem for insurance of vehicles against theft with 100% guarantee of car owner interest protection.

All calculations in the ecosystem will be carried out with SURR tokens. Mining of token is not provided.

ICO terms, distribution of the raised funds, and rights of token owners are described in the following subsections.

3.1 SURR token

At ICO stage of SurruS company, investors will be able to buy SURR tokens.

Token cost

1 SURR = 0.0002 ETH

1 ETH = 5000 SURR

Owner of SURR token can:

- pay with tokens for company's services and protection of own car against theft;
- sell tokens at exchange;
- pay with tokens for goods and services of partner companies with discounts and bonuses.

In order to preclude any misunderstanding we'd like to stress that SURR tokens do not provide their owners with any property rights or other privileges in SurruS company. Token owners do not have any rights to get dividends, participate in distribution of profit, or voting.

Paying for company's services with SURR tokens

Tokens can be used when paying for equipping the vehicle with SurruS devices and as single and monthly payment for anti-theft protection program.

Sale of tokens at exchange

The tokens owner has the right to sell them on exchanges. Listing at stock exchanges is planned to be started 1 month after ICO completion.

Services and discounts from partner companies

SURR token owners can use them to pay for goods and services of partner companies and join loyalty programs at special conditions offering special discounts and bonuses. An extensive partner network including stores of car spare parts, car services, filling stations, insurance companies, taxi services, and many other companies will be created.

Quantity of issued tokens

There will be 10 000 000 SURR tokens issued in total. 60% of tokens - 6 000 000 will be offered for sale. Upon ICO termination unsold tokens will be burnt; additional issue and mining are not planned.

ICO stages

Stages	Terms	Soft cap	Hard cap
Pre-sale	Private 15.02.2018 - 31.03.2018	200 ETH	
	Public 01.04.2018 - 31.05.2018		
ICO	01.06.2018 - 01.08.2018		80 000 ETH

Depending on amount of the raised funds, the program will be realized in one, two, three, or four countries, but not more than that.

Investment amount	Country
2 000 – 15 000 ETH	Russian Federation
15 000 – 35 000 ETH	Great Britain
35 000 – 55 000 ETH	France
55 000 – 80 000 ETH	Italy

3.2 SRS token

A security token, SRS is equivalent in price to one search module in the SurruS infrastructure. SRS token issue will take place in December 2018. The priority right to buy SRS tokens will be granted to SURR token holders.

The rate of exchange between SRS token and SURR token is:

1 SRS = 650 SURR

SRS token holder will be receiving monthly payouts, pegged to the company's revenue.

In December 2018 SRS tokens will be issued according to the number of search modules in the system (1 SRS = 1 module). Token holders will be able to exchange their SURR for SRS at the rate of 1 SRS = 650 SURR. SRS

holders will start receiving monthly payouts, pegged to the company's revenue.

3.3 Token sale at ICO

3.3.1 General information

Objectives will be attained at two stages: pre-ICO, ICO.

	SURR
Start date:	11:00 (GMT) FEBRUARY, 15, 2018
Payment ways:	BTC, ETH
Objective:	80 000 ETH
SOFT CAP:	200 ETH at pre-sale stage
HARD CAP:	80 000 ETH
Token exchange rate:	1 ETH = 50 SURR
Total number of tokens for sale	6 000 000
Minimal purchase amount	unlimited

Bonuses

Bonuses will be offered for SURR purchases of over 10 ETH and will depend on purchase term and amount.

	>100 ETH	10-100 ETH	<10 ETH
pre-ICO	individually	30%	25%
Day 1	20%	18,5%	15%
Day 2-7	15%	13,5%	10%

Week 2-3	10%	7,5%	5%
Week 4	5%	2,5%	0%
Later terms	0%	0%	0%

- If Softcap is not reached, all funds will be returned to ICO participants in full;
- ICO will be stopped, once Hard cap is reached;
- Issue and mining of tokens after ICO end are not provided;
- After the end of ICO, all unsold tokens will be burnt;
- SURR tokens are planned to be added to stock exchange six months after the end of ICO.

3.3.2 Distribution of SURR tokens

ICO participants	60%
Team	15%
Advisers, first supporters	3%
Bounty	3%
Reserve fund	19%

SURR tokens of the team will be blocked for 2 years with four six-month periods of use restriction.

Tokens of advisers and the first supporters will be blocked for 6 months.

Distribution of reserve fund tokens will start in 2019 and last for 2 years for attraction of new customers to ecosystem and promotion of SurruS ecosystem adaption among wide audience.

3.3.3 Bounty

Bounty program will include 3% of the total quantity of SURR tokens. Bounty tokens will be distributed as follows:

Signature-ad campaign in BitcoinTalk	30%
Campaign with posts in personal blogs and videos	20%
Social network (Facebook and Twitter)	20%
Translations	15%
Telegram	2%
Other	13%

Referral program

Referral award makes 5% of the number of tokens purchased after following referral link. Referral award will be paid in ETH.

The user buying tokens by referral link will get a 3% bonus of the number of tokens purchased. Referral award will be paid by the company from own funds of the marketing budget

3.4 Target distribution of funds

Funds attracted during ICO will be used according to the roadmap, for the following expenses:

Infrastructure creation	60%
Marketing and sales	15%
Research and development	13%
Administration and maintenance	7%

Legal support	3%
Unexpected expenses	2%

Продублировать таблицу графиком

Infrastructure creation

The funds will be used for production and mounting of search modules.

Marketing and sales

The funds will be used for attraction of users of the system.

Research and development

The funds will be used for designing and development of smart-contracts, cryptographic procedures, SurruS platform, apps, and interfaces, as well as for creation of R&D center for search module and search algorithm modernization.

Administration and maintenance

The funds will be used for labour remuneration of SurruS company employees, except for R&D team.

Legal support

The funds will be used for covering all legal expenses relating to introduction of SurruS ecosystem in Russia and abroad.

3.5 KYC procedure (Know Your Customer)

SURR token is not offered, not sold, and cannot be resold or otherwise alienated by SurruS company or token owners, to citizens (natural persons or legal entities), residing or being registered in the country or in the territory where transactions with digital tokens are forbidden or otherwise restricted by current laws or regulations.

We do not allow citizens of these countries and territories to participate in ICO and declare our right to refuse or cancel request for SURR token purchase anytime, at our own discretion, if information presented by the buyer within the scope of KYC procedure is incomplete, inaccurate, misleading or if the buyer belongs to the group of people for whom these restrictions exist

4. SurruS ecosystem

4.1. General information

Our purpose is to create the leading decentralized platform for car owners willing to insure their cars against theft with 100% guarantee and for investors interested in development of blockchain technology in the field of car insurance.

The role of SurruS company is:

- to develop technology with open source code;
- to create a platform required for the project start;
- to build a search network;
- to launch search algorithm in the territory covered by the project;
- to attract users and investors to the platform.

Funds required for production and installation of the necessary quantity of search modules will be raised by crowdfunding at ICO. SurruS company issues SURR tokens which can be purchased by residents of the countries where legislation does not forbid transactions of this type.

SURR tokens do not provide their owners with any property rights or other privileges in SurruS company. Token owners have no right for dividends of any form, participation in profit distribution and in voting.

Once SURR token will be added to the listing of cryptocurrency exchanges (6 months after the end of ICO) SurruS company will support its exchange rate by buying out a share of tokens at own expenses in the case of exchange rate decrease and, in the case of prompt growth - by offering reserve fund tokens for sale. This will ensure stability of exchange rate and protect the interests of token owners.

4.2. Participant of ecosystem

SurruS ecosystem will be built according to scalability and decentralization principles, which will make it stable and self-sufficient in a long term.

Ecosystem requires performance of certain roles by participants:

- Investor (token owner);
- SurruS company (owner of equipment and search algorithm);

- Buyer of company's services who insures own car.

Additional stability of the ecosystem is provided by the fact the investor can serve as a buyer by purchasing SurruS insurance product with their share of tokens.

Powers of SurruS company:

- To issue SURR tokens and distribute them for attraction of money resources into the system;
- To produce the necessary quantity of search modules using the funds raised at ICO;
- To introduce search network in the region by installation of search modules in the key points of traffic flows;
- To employ and train a team of searchers who will search for and find the stolen cars using terrestrial and air search equipment;
- To establish the plan for interaction with the law enforcement bodies and to attract them for withdrawal of stolen cars and their return to legal owners;
- To carry out marketing actions, promote the brand, and attract new users to the system;
- To establish partner relations with other companies and services for expansion of the ecosystem and providing token owners with possibility to buy goods and services of the partner-companies with special discounts.

Powers of the investor:

- To buy SURR tokens during ICO or at the stock exchange;
- To pay for the company's services with tokens and to protect own vehicle against theft;
- To sell tokens at the stock exchange;
- To pay for goods and services of the partner-companies with special discounts and bonuses.

Powers of the buyer:

- To insure the car by mounting SurruS device and paying for the company's services with SURR tokens;
- To sign a smart contract ensuring payment of 100% of the car market price if the search groups fails to find it;

- To pay for goods and services of the partner-companies with special discounts and bonuses.

When desired, all users of SurruS ecosystem can buy SURR tokens at the stock exchange and get an access to additional tools.

4.3. Blockchain and smart-contracts in SurruS ecosystem

For mutual settlements with customers, SurruS company uses blockchain technology and smart-contracts, which ensures ultimate transparency, instant transfer of money to the account, and absence of any expenses on services of banks and other financial intermediaries.

Blockchain is a technology of distributed database which is applied for cryptocurrency transactions registration. Blockchain is a register of all transactions performed in the system which is constantly updated. Decentralization means that transaction register is stored not in one database, but on computers of all network participants, which ensures protection against cracking and fraud. Even if one node gets cracked the information will remain on hundreds other nodes.

Smart-contracts are self-executing contracts in which agreement conditions between participants of the system processes are registered directly in the program code lines. The code and agreements contained exist in a distributed, decentralized blockchain network. Smart-contracts enable to carry out secure transactions between untied anonymous parties, without the need to create a central regulation body, legal system, or external mechanism of compulsory execution. Smart-contracts make transactions traceable, transparent, and irreversible.

SurruS smart-contract system

Within the scope of the project, it's planned to use the system consisting of the following smart-contracts:

- Smart-contract of SURR cryptocurrency issue
- Smart-contract for Pre-ICO and ICO of SurruS systems
- Smart-contract for insurance payments

SurruS enters the market with million customers, each of which will make numerous payments annually. Blockchain technology and smart-contracts will

ensure secure data storage and quick transfer of money to accounts of company and customers (in the event of insurance payments). SurruS platform is designed to withstand high load; the main attention is paid to high rate and stability of operation, as well as to user-friendly interface. Application of reliable and scalable technologies with open source code creates a smooth-running solution that can be continuously improved.

5. Economic concept

SurruS solution lies on the intersection of two large markets - vehicle insurance and anti-theft systems - and integrates advantages of these markets, while eliminating their major lacks. SurruS system protects interests of the car owner with full return guarantee of either the car or its market cost - neither insurance companies, nor anti-theft system manufacturers can offer such conditions. Thus, SurruS protection costs less than the average price of anti-theft insurance package, while the levels of protection against theft or jamming of the radio signal are much higher than those of standard anti-theft devices.

This all allows us to present SurruS system as a product of new generation which, once introduced into the market, will be in high demand and find its niche of affordable and highly effective tools for protection of car owner interests.

Closed SurruS ecosystem relieves from the necessity to pay for service of banks, equipment manufacturers, and other intermediaries. Everything which is required for system operation, starting from search modules and up to software, will be developed and produced by SurruS company. Reduction of costs at all stages makes the price of the end product affordable for car owner, which ensures high demand that is essential for financial success of the company and SURR token owners.

5.1 For whom SurruS system may be interesting and profitable

Car owners

Car owners get affordable solution for protection of their interests in the event of car theft. Protection of the car with SurruS system costs 3-5 times less than the current insurance awards under anti-theft insurance programs. While the

usual insurance can cost up to 10% of the car price, SurruS protection makes not more than 3% of this amount.

Application of blockchain technology and decentralized digital ledger changes the way the information is processed, which facilitates actions of the car owner.

After addressing to SurruS company the car owner:

- submits a request quickly - no procrastination and numerous visits to he insurance company offices;
- gets high raised insurance payments thanks to absence of intermediaries with their fees;
- gets insurance payments much quicker;
- can monitor all processes thanks to ultimate transparency of the system.

SurruS solution relieves car owners from fears and concerns about the car, as it guarantees either return of the vehicle or refund of its full market cost. Thus, the customer won't have to wait for the payment weeks and even months long, which is a usual case for many other insurance companies. Money is transferred to the account instantly according to smart-contract.

Insurance companies

Insurance companies will willingly fill their product range with a new solution that will arouse customer's interest with affordable price and advantageous conditions. Since insurance company serves as a kind of "show-window" in this case, while installation of devices, car search, and insurance payments are carried out by SurruS company, addition of SurruS product will not entail any additional expenses of insurance company and will not require any special efforts.

Car manufacturers

Theft rate statistics for certain brands and models is accessible to everybody; therefore, car manufacturers aim to provide their vehicles with the best possible protection against thieves and create the image of "theft-resistant" brand. SurruS company offers a ready-made solution for the manufacturers - they should simply equip their cars with SurruS device and mention this

information in advertising materials. It will enhance the brand prestige and promote sales.

Car sharing, car rent services, taxi

Thefts remain one of the biggest risks for all kinds of car-related enterprises. SurruS solution will allow these companies to insure their financial interests and run business at ease, without worrying about theft of one or several cars.

Thus, SurruS product faces a huge market which is interested in reliable and inexpensive product for protection of car owner interests in the event of car theft. Millions people worldwide pay much more for way less effective tools trying to protect their cars - the majority of customers will be happy to get a better product at lower price. According to the market laws, high sales can be expected from the very first month of work, whenever a cheaper and better solution is entered into the market with a formed demand for it.

6. SurruS interfaces

SurruS functions can be accessed through website and mobile apps after login procedure.

6.1 For investor

The project investor who has purchased SurruS token at ICO will be able to do the following in the personal profile:

- bind the bank card and work with exchange by buying and selling tokens;
- follow the company's progress and cash flows;
- stay informed about the latest articles in mass media;
- set questions and get quick answers from the support service;
- get discounts and special offers from partner-companies.

6.2 For car owner

Car owner willing to insure their vehicle with SurruS system will be able to do the following in the personal profile:

- pay for company's services;
- inform the company on insurance case;

- follow car location online;
- order additional services;
- set questions and get quick answers from the support service;
- get discounts and special offers from partner-companies.

Advantage of SurruS system consists in the fact the user may not be limited only to the role of investor or car owner willing to protect their car. The same user can be both insurer and investor at the same time, while using SURR tokens at own discretion: in payments for company's services or for buying goods or services of the partners.

One of the key goals of SurruS is creation of a handy service for a wide range of users, irrespective of their experience and knowledge in the field of cryptocurrency and blockchain. SurruS ecosystem will expand beyond the crypto-community and focus on mass audience. Purchase and sale of SURR tokens will be quick and easy for the interface users, both on the site and in mobile app.

7. Roadmap

Roadmap includes project implementation stages including technology development, infrastructure expansion, signing of partner agreements, and implementation of marketing initiatives. Please pay your attention that due to large scale of the project terms and details of certain stages may be changed.

- 2007 – Researches
- 2008-2010 – Creation of working model
- 2010-2012 – Search for solution to introduce the system
- 2013-2015 – Conclusion of cooperation agreement with the government of Novosibirsk oblast and the Korean company KT Corporation for start of the system
- 2016 – Trial start and demonstration
- 2017 – Emergence of a concept with blockchain technology application
- February, 2018 – Start of pre-ICO
- May, 2018 - Start of ICO

- July, 2018 – February, 2019 – Mounting of search network in Russia, Great Britain, France, and Italy
- November, 2018 – Sales start in Russia
- February, 2019 - Sales start in Great Britain and France
- May, 2019 - Sales start in Italy