

SummaTRON-API

Api for identification 2FA,
Registration and Signature of Documents.



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1. Introduction

SummaTRON is a project for the development of an API of identification type 2FA, registration and signature of documents, based on an App (IdTron.DApp) and 2 tokens: SummaTRON and IdTronix, and of course the TRON blockchain.

SummaTRON want to be a universal identification system, and resolve problems like:

- 1) Different ID in every website
- 2) Different Password in every website
- 3) Virus or Trojans getting information from your computer
- 4) Fishing, email with redirection to fake websites
- 5) 2FA systems like SMS, that the user must copy data and and you can be wrong.
- 6) 2FA systems hardware based that the user must buy
- 7) Forms Register with data store in Google, Microsoft or Facebook
- 8) Complexity of PDFs document signing
- 9) Complexity of PDF signature verification

How SummaTRON want to improve these problems?

- 1) Using Tron.Networks
- 2) Making a DApp

So simple, SummaTRON want to be a universal system for identification,

As an example of use we have several projects:

- 1) SummaTRON-AVA (Account Viewer Aggregator).

It is a system of visualization of multiple linked TRON accounts.

- 2) SummaTRON-Shop.

Online shop of digital objects based on TRON.

- 3) SummaTRON-PRE

Presence control at work

The continuous growth of users and accounts in the TRON project, allows to approach projects with a wide future projection and based on the existence of the TRON account and its characteristics of private key and public key.

As of December 31, 2018, there were more than 1.000,000 TRON accounts created and the projections for the implementation of the TRON project will lead to tens of millions of accounts.

The SummaTRON project is based on having a wallet or an App on a mobile phone, where the user has his private key and can therefore carry out operations with his TRON account that only he can carry out, converts the mobile phone into a device that complements all the processes related to user identification.

We would be talking about making it possible:

- 1) User identification
- 2) User registration.
- 3) Signature of PDF documents.

1.1 User identification.

The identification of users in websites is one of the main concerns for a company, to have perfectly identified its users and to have additional elements to a simple user code and an access key, is critical for the proper functioning of companies.

As a complement to the traditional user/key, companies use an element that acts as a double factor (2FA), such as sending of an SMS, an email or the use of programs such as Google Authenticator. Likewise, the website implement a captcha systems to avoid the attack of external systems.

With this second factor the company aims to ensure that the user, apart from communicating something that both parties know (the key), is verified something that the user has (the mobile).

Thanks to TRON, now the user has an element in the mobile that must be non-transferable (such as a credit card or bank account). **the private key of the TRON account** that is the access to account information and allows you to operate with it.

Later the process will be explained in more detail, as an advance it should be noted that the user only has to scan a QR offered by the website, from the App an IdTronix (ITX) token will be sent to the company's TRON account, and the company will read from its server the information sent through the TRON network. Therefore, at no time does the user have to type anything, which avoids problems with viruses, Trojans and even fishing.

1.2 Registration

The registration process is highly tedious for a user, but much more delicate is for companies that must take great care of the relationship between information they require and the patience of the user when filling in all the information.

In addition to the data capture process, many companies also send confirmations to the private mail to check if it is correct.

SummaTRON-API proposes an alternative way, much simpler and safer than all the existing processes. In the IdTron App, the user will fill in all the data typically requested by a company. This process will be carried out only once and the user will be in charge of keeping the data updated.

The company will display the list (not the fields to be filled in) of the information it is going to require and the QR code on its page. Within IdTron, the user will mark the fields to be sent through a check, when the user scans the QR will send a SummaTRON token to the company's TRON account and as associated data the list of all required fields.

The data travels safely and traceably from the IdTron App of the user's mobile to the company's TRON account and then to the company's website. This whole process will be encrypted with the public key of the company's TRON account and therefore can only be read using the private key of the company's TRON account.

The user will send each company only the data it needs and will be encrypted for each recipient. The TRON blockchain acts as a historical service of each record and therefore as an external support to the company for the management of personal data.

1.3 Signature of documents

Document signing will probably be one of the most complex processes for a user, especially if it is based on an RSA type certificate and the company implements the signature system in Java or ActiveX.

The configuration of the equipment, the download of additional software and the process itself is slow and usually complex.

SummaTRON-API proposes a totally innovative system in this field and again based on the potential of the TRON account and its blockchain.

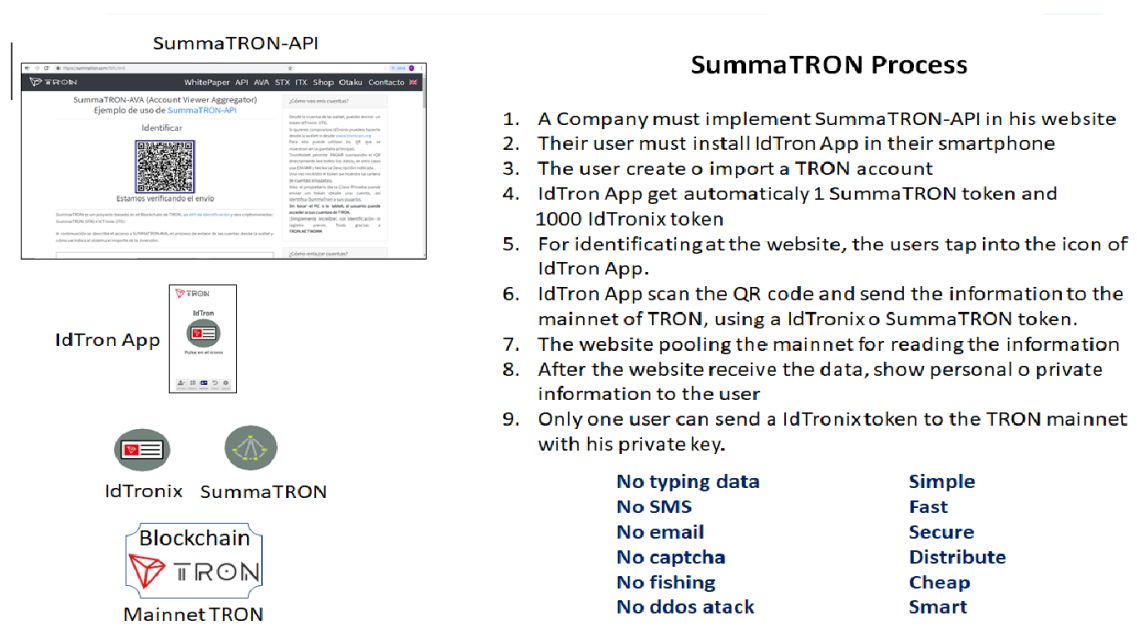
The company must complement its document generation process with a SummaTRON-API piece, which allows to generate an MD5 of the file that shows it to the user jointly, in this way the user will be able to see a PDF generated with the information that the company asks him to sign and a QR code that contains the TRON account of the company and the MD5 of the associated file and that shows jointly.

The user, through the IdTron App, will be able to scan the QR code and send a SummaTRON token, including in the message the MD5 code as part of it. This sending generates a message signed with the private key of the user's TRON account, which reaches the company's server through the TRON blockchain.

The API processes the information received and allows the company to include in the footer of the PDF document the information of the signatory and the hash of the operation. This avoids repudiation by the user and this hash can also be verified at <https://www.tronscan.org>, which allows anyone else to verify the information.

Compared to the processes of identification, registration and signature of current documents, SummaTRON-API provides a simplification capability that will make life easier for users.

The SummaTRON project has a very long term vision, in line with the roadmap of the TRON project, of at least 10 years. Its basic concept is to take advantage of the existence of the TRON account which basically behaves as a certificate with public and private key.



Very important

Why SummaTRON is different to actual process of identification?

Someone may think that this process is identical to the current process or that a company can use a similar system with its users. Users can have an application that sends information directly to the server. Each company can do that now without Tron.Network.

Yes, but the difference is that the user must have an App for each company, with IdTron + SummaTRON-API the system becomes universal, with a single

DApp the user can register and identify them in thousands of web pages. And most importantly the TRON network is used but unlike Google or Microsoft, TRON does not know, manage or can sell your data because they are encrypted with the public key of each server.

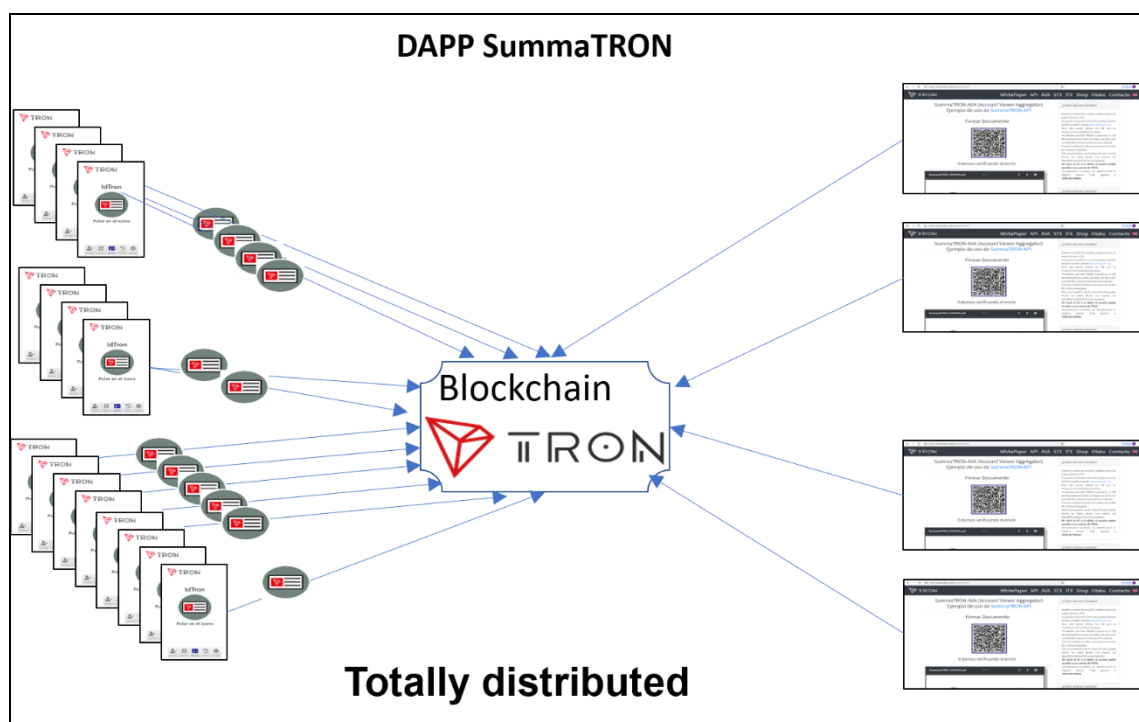
1.4 Why TRON?

Other projects are centralized or have a very low transaction execution speed, only TRON offers 2,000 TPS and more in the future.

The system must be fully distributed, each company must implement the SummaTRON API so that each server manages the identification process of its own clients.

If a single company pretended to carry out this process in a centralized manner, it would be very complex and its management capacity could fail and block users.

TRON is distributed and scalable so that just now it would be the only platform that could support the SummaTRON project.



A user needs only one DApp, IdTron, and a blockchain, TRON. Companies will benefit from having other users have IdTron installed on their mobile. The API forces the server company to "return" the tokens to the user so that it can be reused again.

The companies will have to buy as many SummaTRON as users expect to have registered and as many IdTronix as identifications provided by users.

The business is in keeping the system balanced and acquiring both TRX as they believe necessary to freeze them and have bandwidth or consume them in the movements of tokens.

The users have 25 free daily operations, and IdTron makes transparent the entire purchase process of tokens or TRX. Also IdTron allows you to import an existing TRON account.

The SummaTRON project will create a control panel to manage the system.

The beta version is at <https://www.summatron.com/console.html>.

1.5 Teminology

IdTron

DApp for Identificacion, registration, signature of documents and link accounts.

IdTronix

Token used for Identification process, 1TRX = 1.000 IdTronix.

SummaTRON

Token used for registration, signature of documents and link accounts. 1 TRX = 1 SummaTRON

SummaTRON-API

API for control transfer between IdTron and the server TRON account. A company must implement this API into its webside

SummaTRON-AVA

Account V iewer Aggregator (AVA), is a tool for controlling the portfolio of account. Implement SummaTRON-API.

SummaTRON-SHOP

Marketplace where a user can upload a digital product and the buyers can use TRX. Implement SummaTRON-API

2. Identification with SUMMATRON-API

SummaTRON-API is an identification system created by SummaTRON, type 2FA and based on the Blockchain of TRON to improve the identification of users on websites.

There are more than 1.060 million web pages and more than 28 million registered web domains. SummaTRON's API wants to help simplify and increase the security of user-identified pages.

The identification API acts as a 2FA system, dual-factor identification, based on a user who has a TRON account on a wallet or IdTron App, and sends an IdTronix (ITX) token to another account, can only be him. If you have lost control of your account, you have lost your identity and content (equivalent to losing a digital certificate along with the key).

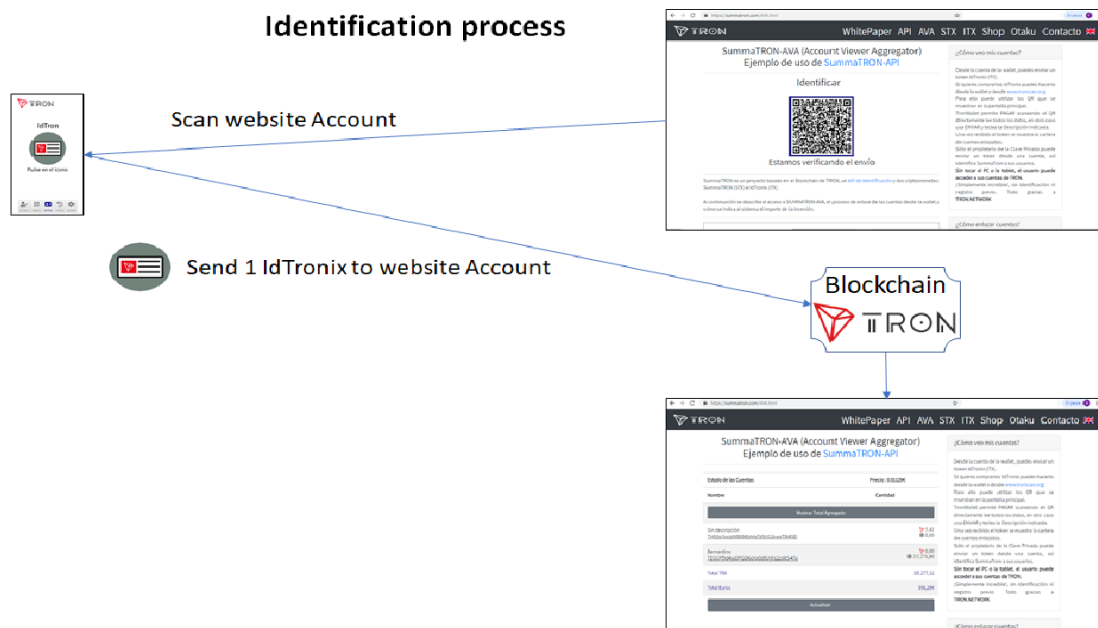
On this page: www.summatron.com/ECOID.html you can test how it works. By sending 1 IdTronix you will be able to see your account information without having to use the private key. This way if you are using Windows you will not need to type anything. It works like navigating with Tronscan, but without typing the private key. It does not replace the functionality of wallet: sending or payment.

Based on this premise, any company that owns or wants to implement a user identification system, can use in addition to user and password: SMS, Google Authenticator, Microsoft Authenticator, etc., SummaTRON will be a similar method and even easier not to have to wait for the SMS arrives, if not that he sends the Token.

For example, a company that wants to use it only has to integrate the API and register, which means:

- 1) Create or have a TRON account, you must buy 1 SummaTRON and as many IdTronix as you think necessary according to your number of users, its price is 0.001 TRX.
- 2) The registration process consists of sending the SummaTRON to the project account: TFQwLDzUvEc99ktd3TvUc9g3uATGmX2fS7, and very important, in the description indicate the name of the web, for example: www.xxxxxxx.com. It will be used to generate the code for identification.
- 3) Tell your users to install IdTron App or a wallet (TronWalletMe has a PAY option that speeds up the process by scanning all the data at once).

- 4) In the IdTron App installation the user will be able to import or create a new TRON account.
- 5) On the web users must register this TRON account with an additional data, it will be used to identify themselves. (The registration process is explained in detail in section 2).
- 6) The company will send a number of IdTronix (ITX) tokens to this account so that the user initially doesn't need to do anything, and can use them to identify himself.
- 7) When the user wants to enter the website (which has already implemented the SummaTRON API) a QR code will appear, he scans it and sends an ITX that will go to the company's own account, so the company will only need to buy more ITX if its customers increase.



3. Registration with SUMMATRON-API

The registration process based on SummaTRON-API aims to simplify the entire process of data writing and subsequent validation, basically relies on an App that we have called IdTron (in this case there is no wallet to do this process, although they could incorporate the functionality since the SummaTRON project code is available in GitHub).

One might think that the process of writing the data each time a record is made is already provided by browsers, but that is because both browsers and web pages are retaining information of users that many times they do not know or do not remember.

Again comment that viruses, Trojans, fishing, etc. seek to get information from the keyboard, cookies, or information displayed on the web pages, therefore SummaTRON-API aims to avoid the user to have to type anything in the company website, but to get it directly and safely.

The IdTron App will introduce the fields that are usually necessary to complete a record, each field can be selected or not, to be sent to a company since in each case must send the information strictly requested.

The SummaTRON-API registration component will be implemented from the server, which will allow the user to communicate the TRON account to which the data must be sent, encrypted and signed.

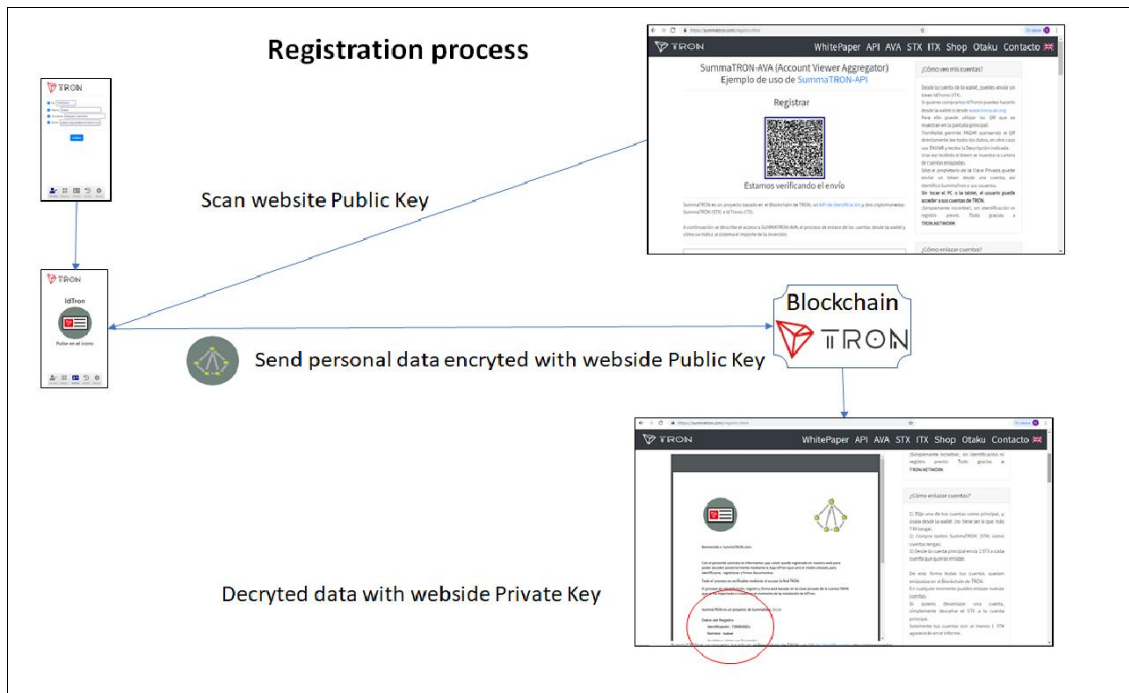
This point is very important because one would think that if you have an App and a web server, it is not necessary to use the TRON network to send the data. In this case it would be enough to make a symmetrical encryption and in this way the communication is secure and impossible to be captured by any virus or Trojan, but there would remain the possibility of repudiation and fishing.

The existence of a symmetric key published in the protocol would allow some companies to use the method to supplant others without many complications.

Another alternative that each company creates its own App, as is currently the case with banks, insurance companies, supermarkets, etc.

SummaTRON-API's proposal is to have a single App to be able to register in all those companies that implement the server side, the public key ensures that the information travels encrypted and that only the company that owns the private key can read it.

TRON is a decentralized network and SummaTRON-API is a decentralized registration project, everything is reusable and each company is responsible for managing its users, but common users will use IdTron App as a unique tool.



Here you can see an example of a registration form, normally a user should fill in each field of the form and potentially a virus or a Trojan could read keyboard or form information.

IdTron works by scanning the QR and sending the requested personal data by encrypting them with the public key of the server account.

On the server, the data is read from the tron.network, it is decrypted with its private key and the data is sent to the form or to any process that uses it later.

TRON

☒ Id: 72695492J

☒ Name: Isabel

☒ Surname: Vázquez Caamaño

☒ Email: isabel.vazquez@summatron.com

Save

My Data Registers Identify History Options

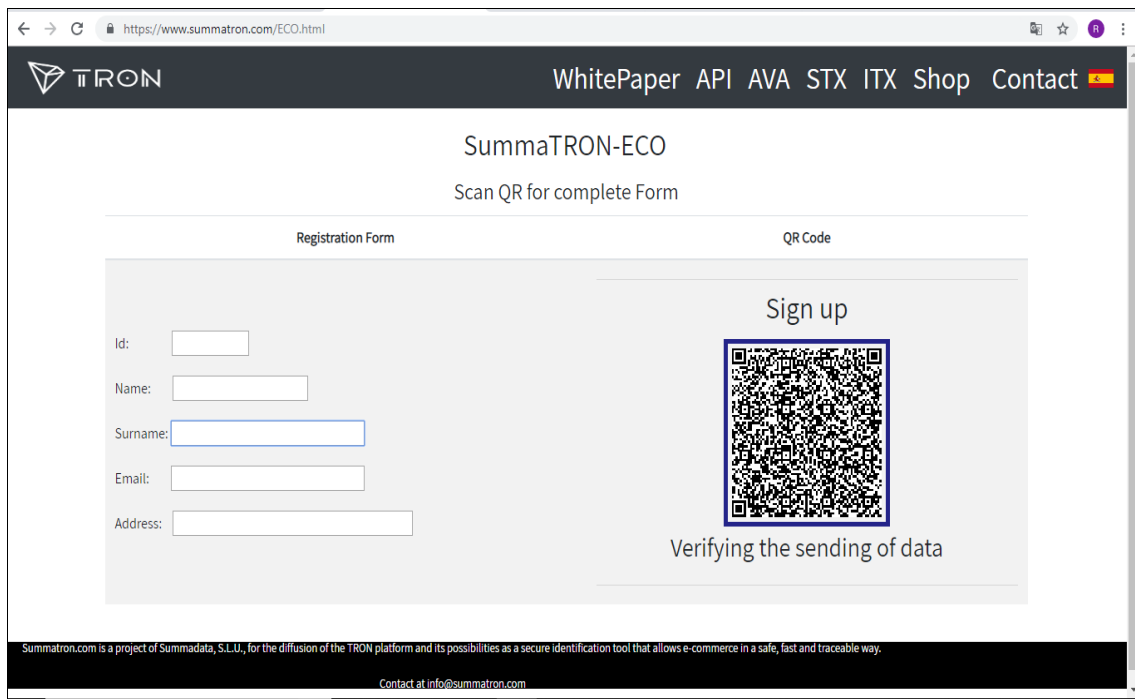
In Idtron the user must fill all the field with his personal data.

Can select or unselect fields, if a field is unselect that data isn't sent to the server.

The number of fields could be more, like address, city o country.

Here you can test the functionality, scanning the QR, the fields are filled.

www.summatron.com/ECO.html



The screenshot shows a web browser window with the URL <https://www.summatron.com/ECO.html>. The page features a dark header with the TRON logo and navigation links: WhitePaper, API, AVA, STX, ITX, Shop, and Contact. The main content area is titled "SummaTRON-ECO" and "Scan QR for complete Form". It is divided into two sections: "Registration Form" on the left and "QR Code" on the right. The registration form includes input fields for Id, Name, Surname, Email, and Address. The QR code section is titled "Sign up" and contains a QR code with the text "Verifying the sending of data" below it. At the bottom, a footer states: "Summatron.com is a project of Summadata, S.L.U., for the diffusion of the TRON platform and its possibilities as a secure identification tool that allows e-commerce in a safe, fast and traceable way." and provides a contact email: info@summatron.com.

Normally a user should fill in the fields or allow Google Chrome or Microsoft Internet Explorer to store your personal data for later use in other forms.

Another alternative is to authorize the page to access your data on Facebook, in any case your data is shared between you and the server company, but large corporations are aware of all of them (and negotiate with them).

On the other hand each website forces you to create a user and have a password, which in each case can be different and therefore remembering them is another problem.

With IdTron and SummaTRON-API, the user is always the address of the TRON account and the password is the private key of that account that is always stored in the App.

That is why it is important to back up your private key in case your mobile phone is lost or updated.

4. Signature of documents with SUMMATRON-API

Taking advantage of the possibilities offered by the existence of a public key and a private key for each TRON account, SummaTRON-API and Tron.Network aims to simplify the entire process of signing documents.

Currently the process of signing documents is quite cumbersome because the whole process is based on the utilities provided by Adobe or developments based on applet or applications developed with the aim of signing documents.

These applications must be downloaded by users and each user must also manage their certificate.

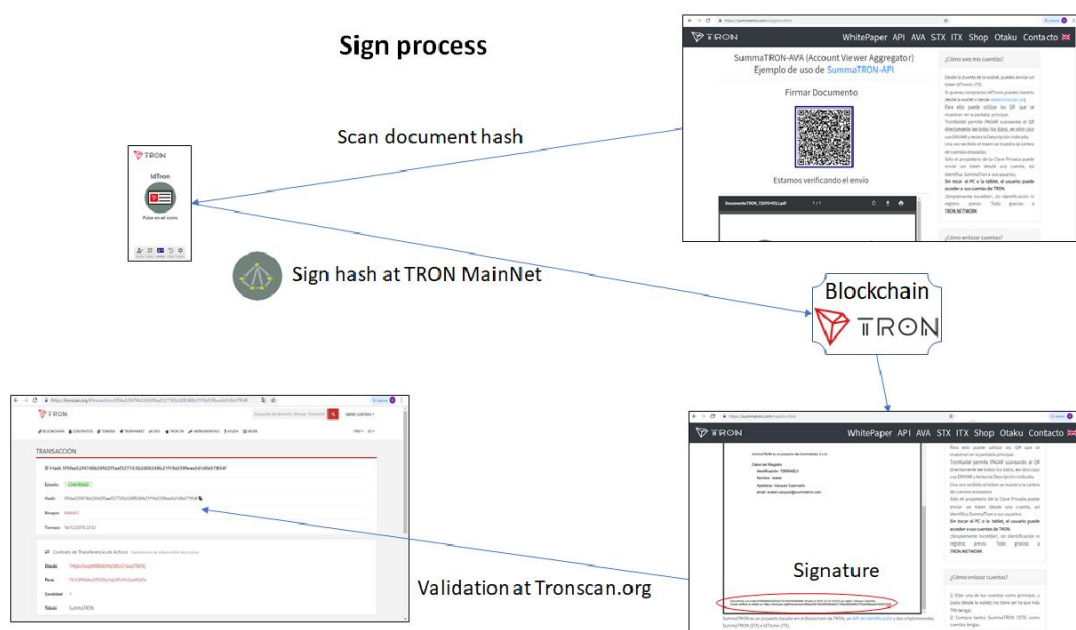
In the case of companies such as banks, it has developed its own ecosystems to carry out the entire registration and signature process.

The signature process needs a permanent system to allow verification of the document and above all to avoid non-repudiation by the user.

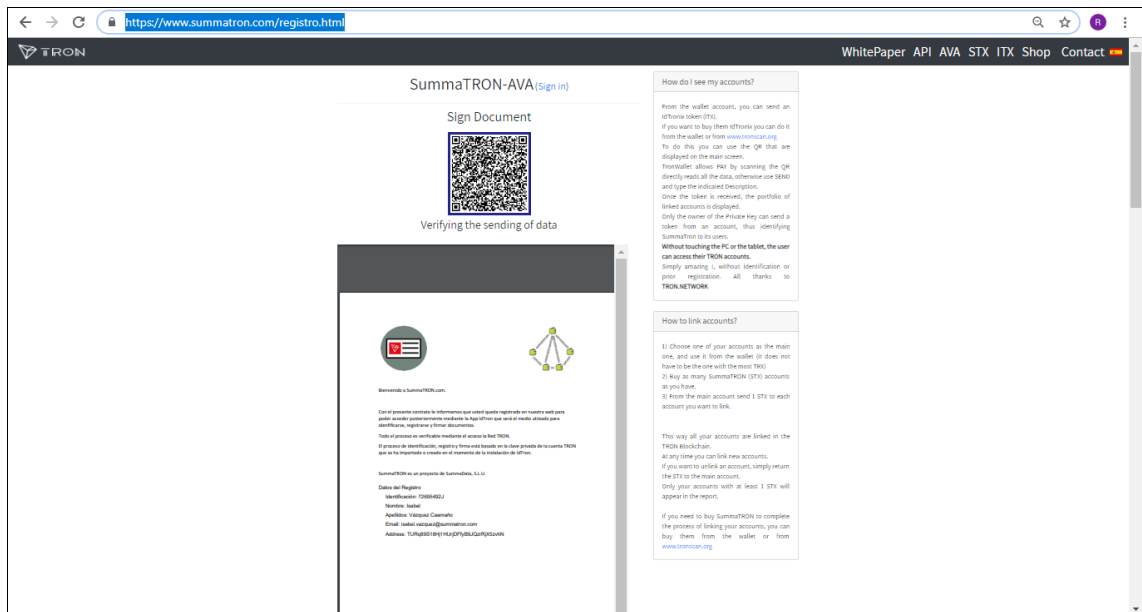
A PDF document can be signed using SummaTRON generated its corresponding hash (MD5), the server shows the PDF document, a QR code with the information of the server's TRON account and the MD5 to sign.

Using IdTron, the user scans the QR and sends a SummaTRON token with the MD5 to the server's TRON account, signing the sending on the Tron.Network.

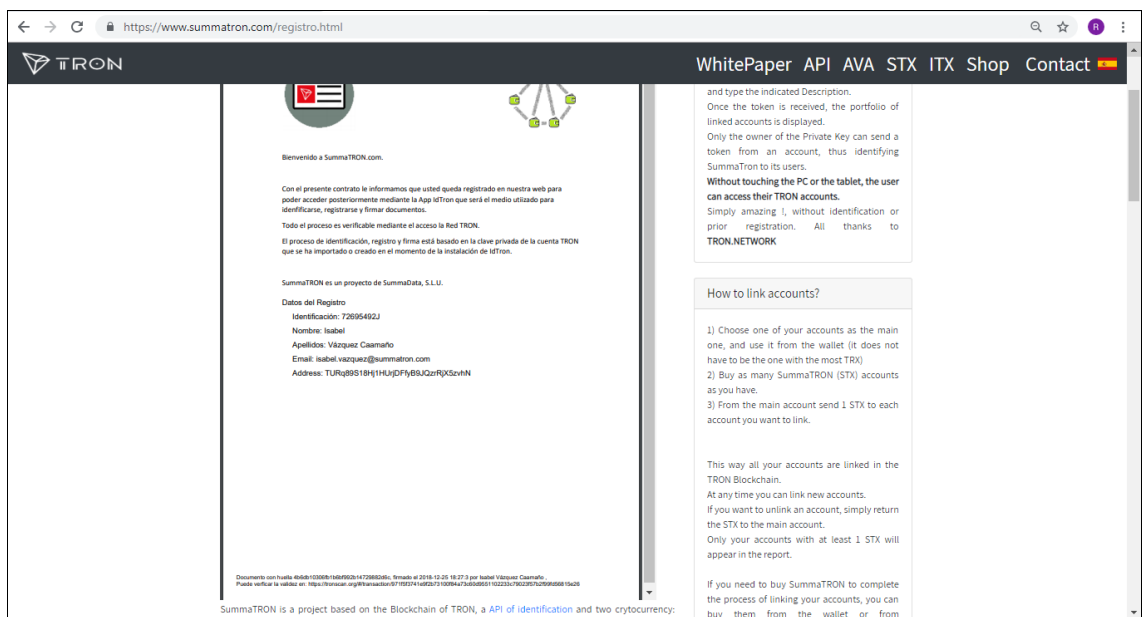
The result of the operation generates a signature that is incorporated into the footer of the PDF document, and can be verified at www.tronscan.org.



Here you can see an example of document signature.



In the footer the signature is included and can be verified at www.tronscan.org automatically clicking in the url.



TRON

Búsqueda de dirección, Bloque, Transacción

SIGN IN

BLOCKCHAIN

CONTRATOS

TOKENS

TRONDEX

TRON SR

MORE

TRX

ES

TRANSACCIÓN

Hash 971f5f3741e9f2b73100f84a73c60d9551102233c79023f57b2f99fd56815e26

Estado: CONFIRMED

Hash: 971f5f3741e9f2b73100f84a73c60d9551102233c79023f57b2f99fd56815e26

Bloque: 5236800

Tiempo: 25/12/2018 19:27

Contrato de Transferencia de Activos

Transferencia de tokens entre direcciones

Desde

TURq89S18Hj1HUjgDFy89IQzrRjXSzvhN

Para

TEUjCPf9d4sxDPGD6oYqGtRUhFs2zsWS4To

Cantidad

1

Token

SummaTRON

5. How to use the API

To incorporate the API into a web page, you must include the following code
(You can also see all the information at <https://github.com/SummaTron/SummaTRON-API>)

In the HEAD

```
<script src="jquery-qrcode-0.14.0.min.js" ></script>  
<script src="/api/js/apisummatron.js" ></script><br>
```

In the BODY, in the place where you want the QR to appear to make the input control.

```
<div id="PanelIRS" style="display:block;"></div>
```

At the end of the HTML code is incorporated

```
<script>  
  
    $("#PanelIRS").load("/api/PanelIRS.html", function() {  
        $("#Propietario").text(sCuenta);  
  
        Verificar(sCuenta,"ES","FUNCTION to EXECUTE");  
  
    });  
</script>
```

With this script the QR is shown and the TRON account of the company is indicated.

In FUNCTION TO EXECUTE you must indicate the name of the function that will be executed when the identification ends, the TRON count is returned as parameter, or an empty string, if after 60 seconds the identification has not taken place.

VERY IMPORTANT

In order to use SummaTRON-API you must register the name of the company that will be used as part of the key that is sent in the identification process.

This process is done by sending 1 SummaTRON token from the company account, which must then be included in the call to the Verify() function, to the project SummaTRON account:

TFQwLDzUvEc99ktd3TvUc9g3uATGmX2fS7, and it is very important, to indicate in the Description the domain of the company, this is used to generate a code for the transfers operations, and to avoid the fishing problems.

6. Summary

SummaTRON Project is base on Tron.Network, and just now **TRON is the only platform** where SummaTRON could work.

SummaTRON-API wants to be a global system for identification, and uses one DApp (IdTron) that is a light wallet to manage a TRON account with its public key and private key, and 2 tokens: IdTronix and SummaTRON.

There are 2 types of users: Companies and user of those companies.

The Companies would make transparent to there users the manage of the tokens, so they must buy SummaTRON and IdTronix, so they must buy TRX before.

There is 10 millions of SummaTRON tokens for registration and signature of documents processes, and 10.000 millions of IdTronix for identification process.

SummaTRON-API solves several security problems but the most important thing is that it defines a unique identity for all the web pages that require identification. It is a **single sign-on** with the possibility of sending personal data that are under the control of the user.

Currently this process of user / password custody users have it delegated to Google, Microsoft or Facebook, and we all know what they do business later with that information.

There are many countries where citizens do not have an identification document, **IdTron + Tron account** solve this problem for companies. In many cases, the mobile phone is already being used as an identification element, but it lacked a cryptographic process that would make the system much safer.

SummaTRON-API is a medium and long-term project, given that its implementation depends on a change in the way companies are identified by users. In addition, companies must explore the world of blockchain and cryptocurrency.

We believe that the SummaTRON global project has a wide range but at the same time needs a lot of support. On the part of the user the interface of IdTron and its use is very simple; but with respect to the companies, the resistance to change is always a barrier that has to be overcome, the technological investment to be made and economic (which is not very high but which exists, SummaTRON pretends to be a profitable business).

7. Roadmap

In October 2018, the SummaTRON (STX) token was created to provide 10 million tokens for registering companies, signing documents or linking accounts.

In October 2018, the IdTronix (ITX) token was created to provide 10 billion tokens for identification.

In November 2018, the access service will be available on the website www.summatron.com, implementing an example of API use, AVA, where the contents of the linked accounts can be easily viewed and account summaries, frozen TRX, other tokens, etc. can be obtained.

In December 2018, the IdTron Android version of the App will be available for identification processes.

In January 2019, the IdTron IOs version of the App will be available to carry out the identification processes.

In March 2019, Console control platform for companies that have implemented SummaTRON-API.

In June 2019, Console global control platform for SummaTRON project.

In June 2019, new implantation of API: presence control at work.

In December 2019, new version of the API to update the personal data in IdTron and to replicate the changes in all the companies where the user has registered.