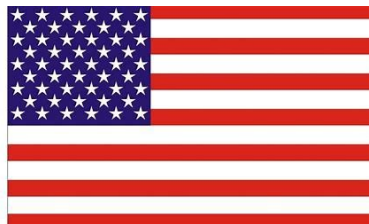


Alex Garcias, Dr.
Yellow Paper: Corporate Blockchain Structure
Doc.: 000150819En



Alex Garcias | Law Firm | International



Brazil | Spain | Italy | France | USA

The legal office in Brazil with the largest
number of international connections

Presentation

The office Alex Garcias | Evolution is intended to help individuals and businesses utilize the decentralized system for global and local market share through P2P Economics.

Founded in 2001 with expertise in domestic and foreign law and high technology consulting, the firm provides clients with support for Open Corporate Capital by Crypto-assets, local and global investments by Crypto-assets, sending and receiving payments by Crypto-assets, Smart Contract, Auto Executable Contract, Blockchain Data Recording, Internet of Things, Creation of Crypto-assets for Companies and Projects, Plan and Strategy, Corporate Research, Scientific Research, Legal consulting in International trade. We solve problems. With service capacity in 5 languages.

Alex Garcias, Dr. Attorney. Research. Developer C#, Python, Solidity, PHP, HTML, Css.

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Alex Garcias, Dr.

Yellow Paper: Blockchain Structure . Linked Smart
Contract .

Solidity: Ethereum platform , HTML, CSS, web3.js

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Observation

This Yellow Paper resume the technical information about link between Smart Contracts.

Each human activities has your own Smart Contract. Some human activities has more importance that others. So, is important too register some human activities in Smart Contract so solve conflicts without intermediaries.

We suppose that the individual “Alpha” has one house, one car, one soon, one cat, one job, education, take care to health, travel and waste.

We build the Smart Contract to linked the important human activities. The first Smart Contract register the data about the person. Other Smart Contracts as buy, sell, rent properties are linked with the Smart Contract Person that Hash is the primary key of the Ecosystem. The same to Car.

If a person buys a car, the legal relationship between buyer and seller is recorded in the Smart Contract. The Smart Contract can transfer money, assets, property, anything, automatically, without intermediaries like lawyers, judiciary and banks.

So when accessing the Smart Contract person's Hash primary key the information is public, private, and sensitive data, with access level determined as public or private in the Solidity program, about the person connected to Smart Contract properties, cars. Thus, personal information and car information are recorded in Smart Contract and stored in Blockchain. The same to soon and parents.

The hash, children and parents, specific smart contract, are recorded in the smart contract and stored in the Blockchain. There is cross data information. The Id of offspring is registered in father, mother, grandfather, grandmother, brother, health, education and other human activities.

In resume, read Blockchain Structure, is possible link Smart Contract to register all important human activities in the Blockchain, as follow:

Argument

How to link Smart Contract to solve conflict about the human activities with interest to Right?

Progress of opinion

This Yellow Paper we describe the method to build Blockchain Ecosystem World wide:

Smart Contract

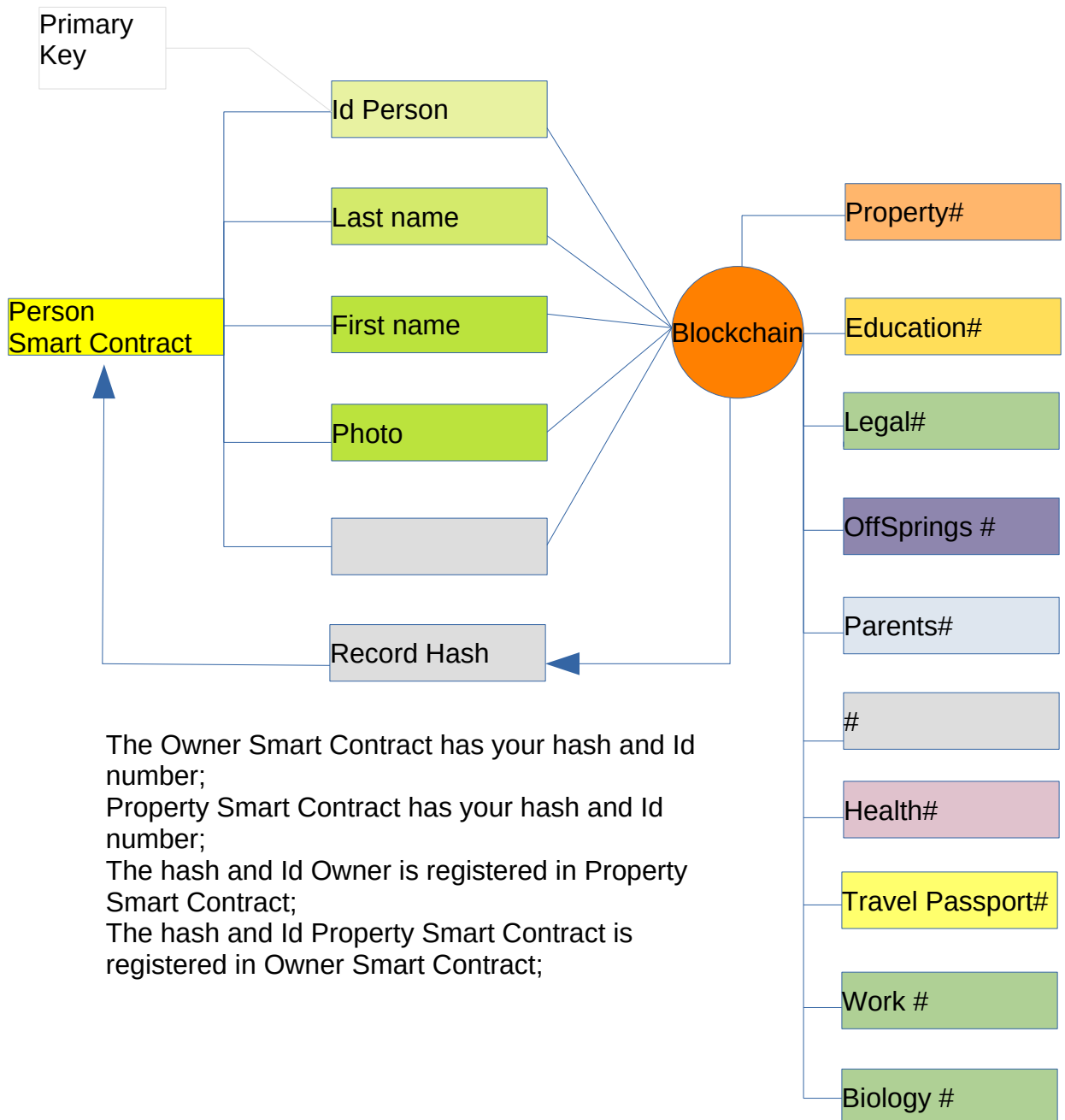
The Ecosystem has the first Smart Contract. In the first Smart Contract we reserve to stock public, private and sensible data about the person.

The 1 Smart Contract has all information about the person. The 1 Smart Contract is the primary key of the ecosystem.

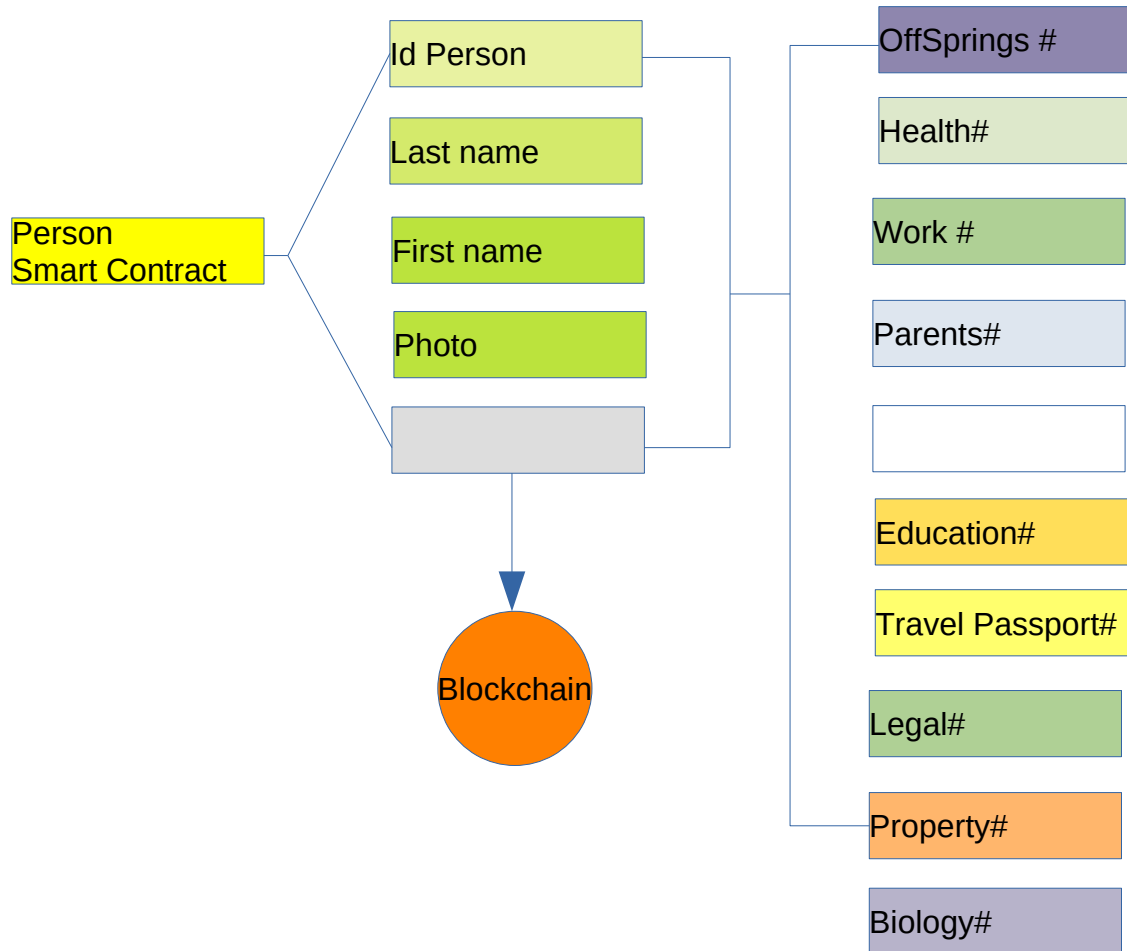
The primary key contract – Smart Contract Owner – we stock the simple data about the person.

We're build one (1) Smart Contract for each human activities, as follow:

Person



Smart Contract world wide

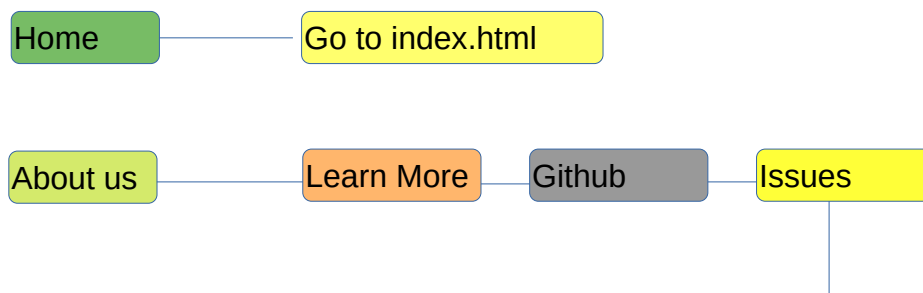


HTML

Smart contracting needs an HTML page to interact with. The HTML page to interact with Smart Contract has the same field name and constant as we have in developing solidity.

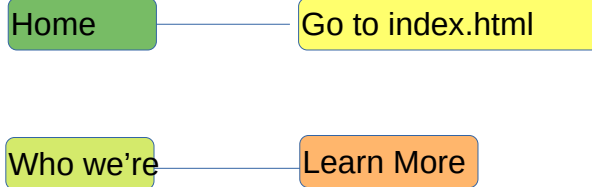
The first page is: <http://alexgarcias.com.br/smartcontract/index.html>

Index info



1. What is Legal Smart Contract?
2. How to build Legal Smart Contract?
3. How to store Legal Smart Contract?
4. How to interact with Legal Smart Contract?
5. How is the security about Legal Smart Contract?

Who We are



We are a law firm specializing in solving legal issues with smart contracts.

Since 2001 Alex Garcias does scientific research on Smart Contract, Blockchain, Internet of Things, Crypto-assets, Artificial Intelligence (AI), Machine Learning, with the aim of solving legal problems in the local and international markets.

Solidity

The primary key is to person access the Ecosystem. The basic public data about the person is registered in Smart Contract and Ethereum Blockchain.

The system modification as add new member can be public or private. Depends of the use.

Repository:

<https://github.com/AlexGarcias/SmartContract/blob/master/AddPerson/Member.sol>

Field

Attention: each (Id_) is specific Smart Contract.

Person Data	Property Data	Parents	Offspring	Education
Id_Person	Id_Home	Id_Mother	Id_Offspring	Id_Education
First_Name	Id_Apartment	Id_Father		
Last_Name	Id_Animals			
Photo	Id_Cars			
	Id_Motorcycle			
	Id_Company			
	Id_Farm			
	Id_Waste			
Health	Legal	Travel	Biology	Licenses
Id_Doctor	Id_Justice	Id_Passport	Id_DNA	Id_Drive_License
Id_Food	Id_Police	Id_Ticket	Id_Face	Id_Boat_License
Id_Veterinary	Id_Testament	Id_hotel	Id_finger_print	Id_Others_Licenses
Id_Gym		Id_Taxi	Id_eyes	
Id_Clinic				

Gas

1. <https://ethereum.org> price to run the Smart Contract;
2. Gas Used = 21000 to register;

Nitro

The cost to add new member is:

1. 0.01608563 – Ethereum;
2. Address payable in the moment of the transaction;

Permission

Public

Any person can registered in the First Smart Contract and Ethereum Blockchain.

The first Smart Contract is necessary. It is the primary key to the Ecosystem.

Private

The Smart Contract Owner can use the Ecosystem.

Logic

Website to run the Ecosystem: <https://alexgarcias.com.br/smartcontract>

PHP Reference: <https://www.php.net/docs.php>

1. The user access the website;
2. The website has 2 fields and 1 button;
3. The fields is Login and Password. Button is Send;
4. The login is E-mail;
5. The Password has 7 characters with letters and numbers;

Button action

1. When the user click in the Send button the system consulting in Data Base about the E-mail;

Data base

Reference: <https://www.mysql.com/>

MySQL Documents: <https://dev.mysql.com/doc/>

1. The first register of the new user is stored in MySQL system;
2. Fields. Id_member, login, password, access level;
3. The owner has Admin access in the system;
4. Field Id_member is primary key;
5. Field login is UNIQUE;

Return button action

- a) If there is no register with the E-mail, then the system send e-mail to new user to confirm the register in the Ecosystem;
- b) If there is register with the E-mail, return message, 'Try other login" go to register page again;

Decision

The person receives the e-mail and confirm:

- 1. Yes;
- 2. No;

Condition

- a) If the person confirm E-mail, then go to login e pass page;
- b) If the person do not confirm E-mail, then no action;

Decision II

The person type login and pass in PHP page?

- a) Yes;
- b) No;

Condition II

- 1. If the person type login and pass, then go to Dash Board (ag-openlaw/dash/);

2. If login error, then go to register page and:

- a) Send new E-mail to confirm register;
- b) Type login and pass again;
- c) Log.txt to register the login and password page;

Dash board

In the dash board we've the fields to record each Smart Contract Number (Hash) in the Person Smart Contract;

In the dash board we've the buttons to:

- a) update pass,
- b) send pass again,
- c) delete member account;

Property

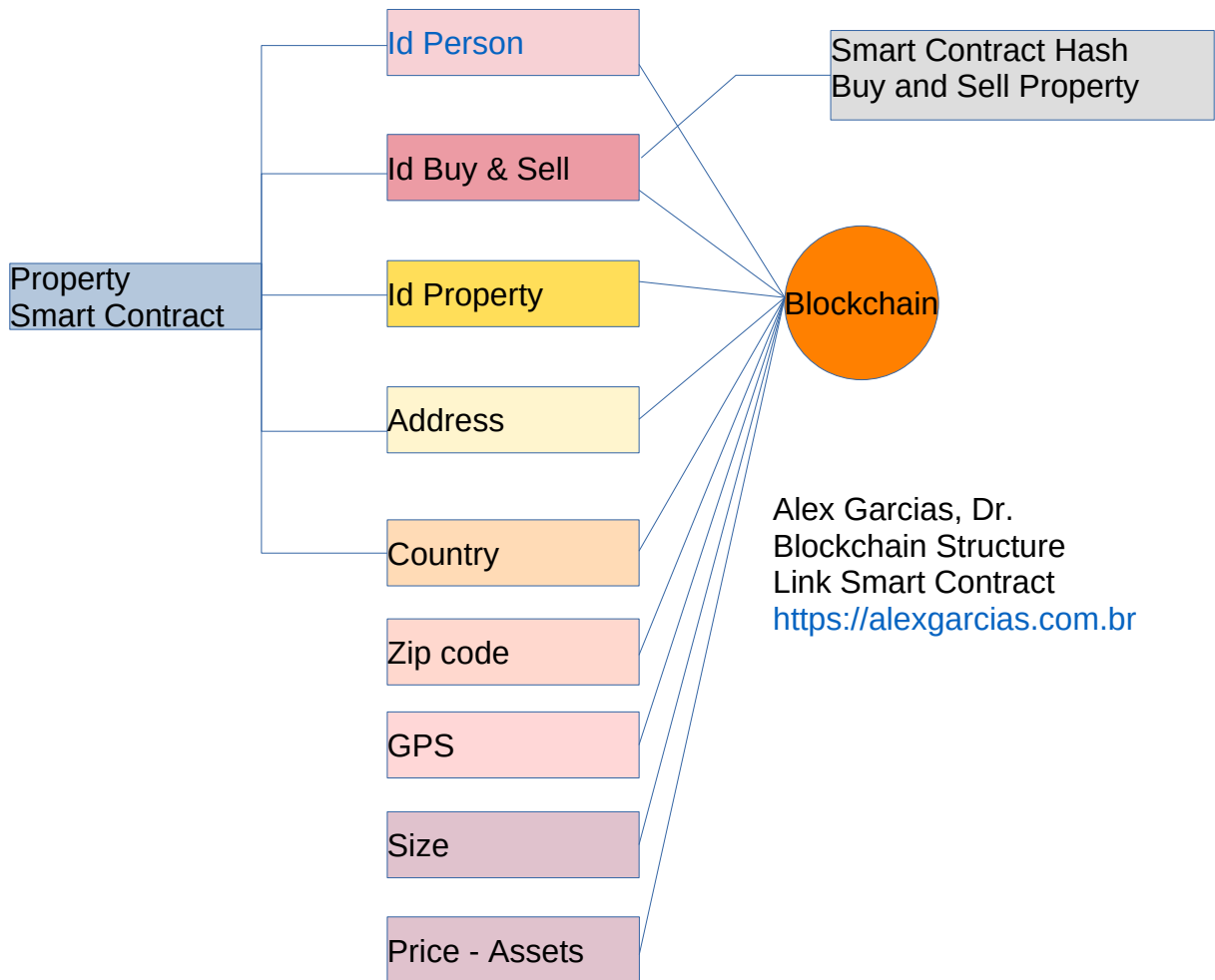
The person have properties as:

1. House;
2. Apartment;
3. Farm;
4. Car;
5. Motorcycle;
6. Boat;
7. Animals;

Each property has its own smart contract. Every Smart contract is tied to the person ID in Contract number 1. The method is to identify the property and its owner.

We must create a Property Smart Contract:

Home and apartment



HTML

Smart contracting needs an HTML page to interact with. The HTML page to interact with Smart Contract has the same field name and constant as we have in developing solidity.

Solidity

Repository:

https://github.com/AlexGarcias/SmartContract/tree/master/Property/Home_Apart

Smart Contract to purchase and sell home and apartment:

Field

1. Id Person. Smart Contract. Primary key. Only Owner can change;
2. Id Property Smart Contract purchase and selling;
3. Id Property;
4. Property address;
5. Property Country;
6. Property Place;
7. Zip Code;
8. GPS;
9. Property size;
10. Property price in Crypto-assets;

Permission

1. Only Owner. Only owner properties can new register in Smart Contract;

Gas

1. <https://ethereum.org> price to run the Smart Contract;
2. Gas: 2100000000;

Nitro

The cost to add new member is:

1. 0.01608563 – Ethereum;
2. Address payable in the moment of the transaction;

Animals

We suppose that person has animal:

1. Dogs;
2. Cats;
3. Bovine;
4. Equine;
5. Pork;
6. Birds;
7. Goats;

HTML

Smart contracting needs an HTML page to interact with. The HTML page to interact with Smart Contract has the same field name and constant as we have in developing solidity.

Solidity

Smart Contract to purchase and sell home and apartment:

Field

Dogs

1. Id_person. Owner;
2. Id_person. Veterinary;
3. Id_Property. Place where animal is;
4. Id_Buy_Sell. Smart Contract purchase and sell dog or adoption terms;
5. Id_Health. Smart Contract Dog Health. Include Dog food;
6. Id_Dog;
7. Dog Name;
8. Id_Mother;
9. Id_Father;

Cats

1. Id_person. Owner;
2. Id_person. Veterinary;
3. Id_Property. Place where animal is;
4. Id_Buy_Sell. Smart Contract purchase and sell cat or adoption terms;
5. Id_Health. Smart Contract Cat Health;
6. Id_Cat;
7. Cat_Name;
8. Id_Mother;
9. Id_Father;

Bovine

1. Id_person. Owner;
2. Id_person. Veterinary;
3. Id_Property. Place where animal is;
4. Id_Buy_Sell. Smart Contract purchase and sell or adoption terms;
5. Id_Health. Smart Contract Health;
6. Id_Food. Smart Contract Bovine food;
7. Id_Bovine;
8. Bovine_Name;
9. Bovine_sex;
10. Bovine_age;
11. Id_Mother;
12. Id_Father;
13. Id_Offspring;
14. Id_Bovine_Biology. Smart Contract to control and stock data about bovine biology as DNA, semen;

Equine

1. Id_person. Owner;
2. Id_person. Veterinary;
3. Id_Property. Place where animal is;
4. Id_Buy_Sell. Smart Contract purchase and sell or adoption terms;
5. Id_Health. Smart Contract Health;
6. Id_Food. Smart Contract food;
7. Id_Equine;
8. Equine_Name;
9. Equine_sex;

- 10. Equine_age;
- 11. Id_Mother;
- 12. Id_Father;
- 13. Id_Offspring;
- 14. Id_Equine_Biology. Smart Contract to control and stock data about equine biology as DNA, semen;

Pork

- 1. Id_person. Owner;
- 2. Id_person. Veterinary;
- 3. Id_Property. Place where animal is;
- 4. Id_Buy_Sell. Smart Contract purchase and sell or adoption terms;
- 5. Id_Health. Smart Contract Health;
- 6. Id_Food. Smart Contract Pork food;
- 7. Id_Pork;
- 8. Pork_Name;
- 9. Pork_sex;
- 10. Pork_age;
- 11. Id_Mother;
- 12. Id_Father;
- 13. Id_Offspring;
- 14. Id_Pork_Biology. Smart Contract to control and stock data about pork biology as DNA, semen;

Birds

- 1. Id_person. Owner;
- 2. Id_person. Veterinary;

3. Id_Property. Place where animal is;
4. Id_Buy_Sell. Smart Contract purchase and sell or adoption terms;
5. Id_Health. Smart Contract Health;
6. Id_Food. Smart Contract Birds food;
7. Id_Birds;
8. Birds_Name;
9. Birds_sex;
10. Birds_age;
11. Id_Mother;
12. Id_Father;
13. Id_Offspring;
14. Id_Birds_Biology. Smart Contract to control and stock data about pork biology as DNA, semen;

Goats

1. Id_person. Owner;
2. Id_person. Veterinary;
3. Id_Property. Place where animal is;
4. Id_Buy_Sell. Smart Contract purchase and sell or adoption terms;
5. Id_Health. Smart Contract Health;
6. Id_Food. Smart Contract Goats food;
7. Id_Goats;
8. Goats_Name;
9. Goats_sex;
10. Goats_age;
11. Id_Mother;
12. Id_Father;
13. Id_Offspring;

14. Id_Goats_Biology. Smart Contract to control and stock data about pork biology as DNA, semen;

Permission

1. Only Owner. Only owner properties can new register in Smart Contract;

Gas

1. <https://ethereum.org> price to run the Smart Contract;
2. Gas Used = 21000;

Nitro

The cost to add new member is:

1. 0.01608563 – Ethereum;
2. Address payable in the moment of the transaction;

Car and motorcycle

We consider Cars as property register and Smart Contract as follow:

HTML

Smart contracting needs an HTML page to interact with. The HTML page to interact with Smart Contract has the same field name and constant as we have in developing solidity.

Solidity

Field

1. Id_Person;
2. Id_Smart_Contract. Buy, sell, rent, swap car;
3. Id_Car;
4. Model_Car;
5. Color_Car;
6. Car_license;
7. Car_Fabric_year;
8. Fabric_Car-Number;
9. Fabric_Car;
10. Observation;

Note: Observation refers a particular condition of the car:

1. As police notice about crime;

Permission

1. Only Owner can make a new car register in Blockchain;

Gas

3. <https://ethereum.org> price to run the Smart Contract;
4. Gas: 2100000000;

Nitro

The cost to add new member is:

1. 0.01608563 – Ethereum;
2. Address payable in the moment of the transaction;

Sailboat and motorboat

We consider sailboat and motorboat as property register and Smart Contract as follow:

HTML

Smart contracting needs an HTML page to interact with. The HTML page to interact with Smart Contract has the same field name and constant as we have in developing solidity.

Solidity

Field

- 11.Id_Person;
- 12.Id_Smart_Contract. Buy, sell, rent, swap;
- 13.Id_Boat;
- 14.Model_Boat;
- 15.Boat_Number;
- 16.Boat_Fabric_year;
- 17.Fabric_Boat_Number;
- 18.Fabric_Boat;
- 19.Observation;

Note: Observation refers a particular condition of the boat:

- 1. As police notice about crime;
- 2. Price and others;

Note: describe boat material, equipment and condition can have your own Smart Contract to control it.

Permission

1. Only Owner can make a new boat register in Blockchain;

Gas

1. <https://ethereum.org> price to run the Smart Contract;
2. Gas: 2100000000;

Nitro

The cost to add new member is:

1. 0.01608563 – Ethereum;
2. Address payable in the moment of the transaction;

Companies

We have companies in 1,2,3 sectors of the local and global economy. The companies to individual or group of person need a contract to start a new company.

This agreement is replaced by the Smart Contracts. Smart contract for businesses has a structure similar to the centralized system of business and people data for state control rights and obligations.

The Smart Contract must predict all variables that can cause conflict between the parties and solve the problem without intermediaries, without a few seconds.

Then, is necessary follow the Legal Plan to each companies. In this phase we analysis the follow elements:

HTML

Smart contracting needs an HTML page to interact with. The HTML page to interact with Smart Contract has the same field name and constant as we have in developing solidity.

Solidity

Field

1. Id_Person;
2. Id_Research_Smart_Contract;
3. Id_Report_Research_Smart_Contract;
4. Id_Smart_Contract_Open_New_Company;
5. Id_Smart_Contract_Open_New_Projects;
6. Id_Office_Smart_Contract. Rent, buy of the office;
7. Id_Property;
8. Id_Person_worker;
9. Id_Smart_Contract_Shares_Company. For Open Capital by Crypto-assets,
Local and Global Investments by Crypto-assets;
10. Id_Smart_Contract_to_Create_Token;
11. Id_Collaborators_Smart_Contracts;
12. Id_Employment_Smart_Contract;

Permission

1. Only Owner can make a new boat register in Blockchain;

Gas

1. <https://ethereum.org> price to run the Smart Contract;
2. Gas: 2100000000;

Nitro

The cost to add new member is:

1. 0.01608563 – Ethereum;
2. Address payable in the moment of the transaction;

Farm

HTML

Smart contracting needs an HTML page to interact with. The HTML page to interact with Smart Contract has the same field name and constant as we have in developing solidity.

Solidity

Field

Permission

1. Only Owner can make a new boat register in Blockchain;

Gas

1. <https://ethereum.org> price to run the Smart Contract;
2. Gas: 2100000000;

Nitro

The cost to add new member is:

1. 0.01608563 – Ethereum;
2. Address payable in the moment of the transaction;

Education

The life school of the person can be registered in Blockchain. The school has your own Blockchain. Cross data between Education center and Smart Contract Hash path.

The education center records data on its students' Blockchain. There is one Smart Contract for Education Center and other Smart Contract for the students.

The Smart Contract hash of the Education Center is recorded in student Blockchain.

if is necessary know Education information about the person, then follow the Smart Contract hash.

Each education center has its own smart contract. The entire Education Center exchanges information with all students. The Education Center then records data on its own Blockchain about students and shares information on each student's Blockchain. The goal is to crosscheck information in smart contracts.

HTML

Smart contracting needs an HTML page to interact with. The HTML page to interact with Smart Contract has the same field name and constant as we have in developing solidity.

Solidity

Field

1. Id_Person;
2. Id_School_Smart_Contract.
3. Id_School;

Permission

1. Only Owner can make a new boat register in Blockchain;

Gas

1. <https://ethereum.org> price to run the Smart Contract;
2. Gas: 2100000000;

Nitro

The cost to add new member is:

1. 0.01608563 – Ethereum;
2. Address payable in the moment of the transaction;

Criminal data

The criminal data can be stored in Blockchain. The data about criminal status of the person is public. So, the all function must be public too.

The criminal data is linked with official government information about person. The register in Blockchain is important to public security.

HTML

Smart contracting needs an HTML page to interact with. The HTML page to interact with Smart Contract has the same field name and constant as we have in developing solidity.

Solidity

Field

Id_Person;

Id_Criminal_Register;

Permission

1. Only Owner can make a new register in Blockchain;

Gas

1. <https://ethereum.org> price to run the Smart Contract;
2. Gas: 2100000000;

Nitro

The cost to add new member is:

1. 0.01608563 – Ethereum;
2. Address payable in the moment of the transaction;

Licenses

Smart Contract to control licenses. Linked with others Smart Contract.

Drive

HTML

Smart contracting needs an HTML page to interact with. The HTML page to interact with Smart Contract has the same field name and constant as we have in developing solidity.

Solidity

Field

1. Id_Person;
2. Id_Smart_Contract;
3. Id_License_Number;
4. Emission_date;
5. Expiration_data;
6. Observation;

Permission

1. Only Owner can make a new register in Blockchain;

Gas

1. <https://ethereum.org> price to run the Smart Contract;
2. Gas: 2100000000;

Nitro

The cost to add new member is:

1. 0.01608563 – Ethereum;
2. Address payable in the moment of the transaction;

Boat

HTML

Solidity

Field

Permission

Gas

Nitro

Biology

HTML

Solidity

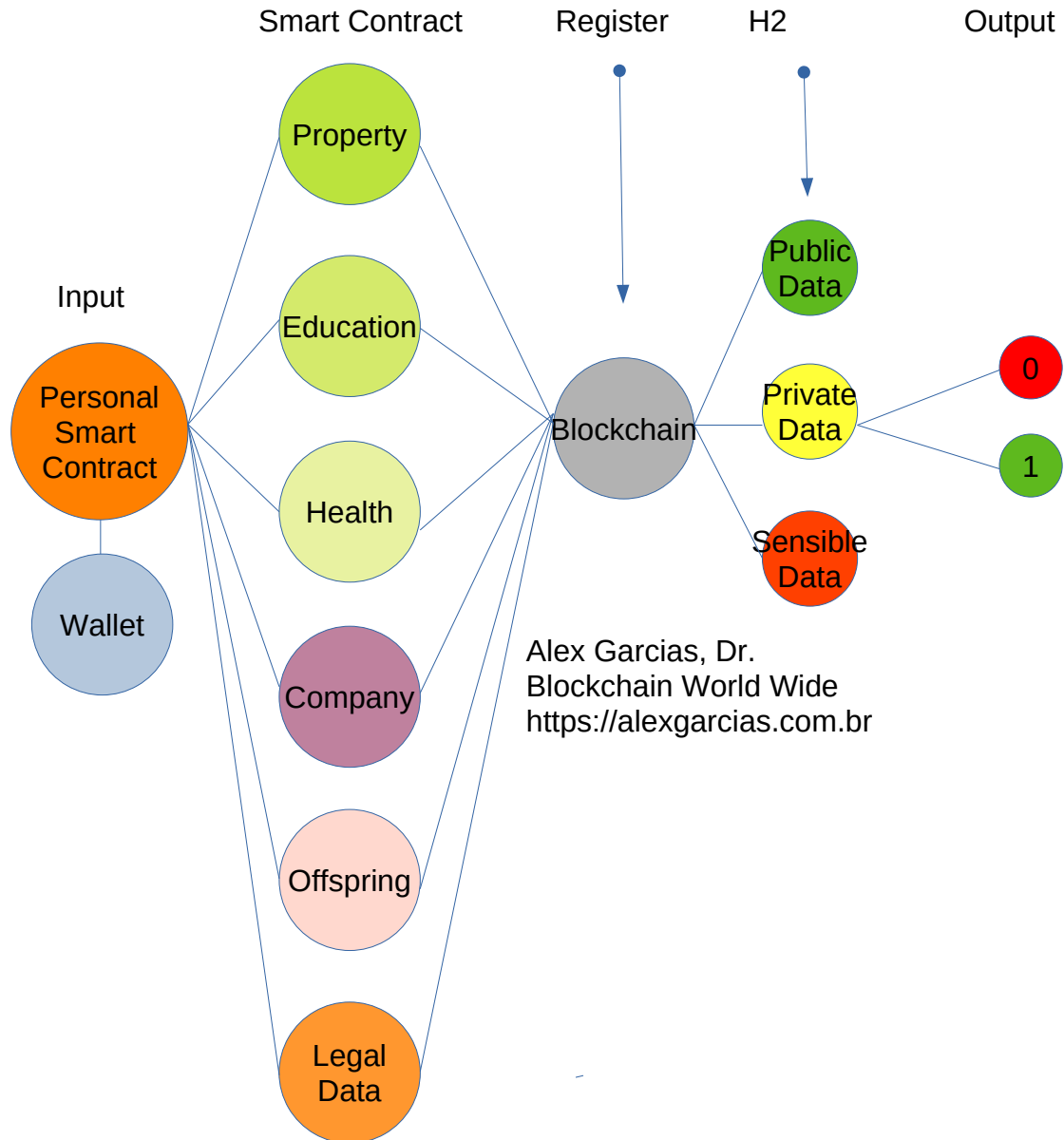
Field

Permission

Gas

Nitro

Flow chart. Blockchain world wide



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Nexus of cause

Conclusion

Reference

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