



Security Label NFC-CHIP Blockchain Technologie EU-Patent Nr. EP 3 671 674

DE-Patent Nr. 10 2020 129 468

# TEAM





TEAM

# MATTHIAS RUMMEL

- Graduate in business administration, specializing in international tax law
- Shareholder/Managing Director AnchorTEC GmbH
- Invention & realization of patent developments in the area of blockchain technology
- Development and further development of patent solutions, technical implementation
- Internal administration





Matthias Rummel Mobil: +49 151 15 790 660 matthias.rummel@anchortec.de TEAM

# **BORIS HOFMANN**

- Specialist lawyer for banking and capital market law
- Shareholder/Managing Director AnchorTEC GmbH
- External representation, customer acquisition
- Licensing and punishment of patent infringements





Boris Hofmann Mobil: +49 172 722 9997 boris.hofmann@anchortec.de



# PRODUCTS, PEOPLE AND BRANDS IN DIALOGUE

Our security solutions serve:

- the authentication of products
- their traceability
- proof of originality and provenance
- interaction with your customers (customer
  - retention/customer acquisition)

✓ this is absolutely forgery-proof thanks to the use of. the latest Blockcha technology and our software.

5

# OUR MISSION

- unfalsifiable traceability
- Product Fraud Prevention
- Minimization of cancellation cases
- Customer loyalty through innovation

These problems can



Increase in insurance premiums

Damage in the billions



Loss of reputation for your company

lead.

# WHAT WE OFFER

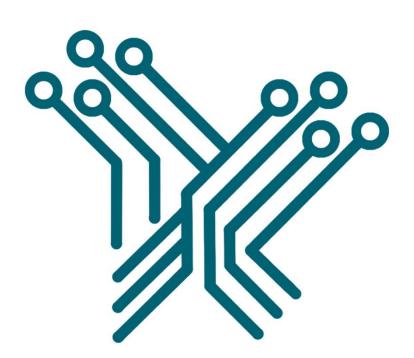
- Intelligent software solutions / interface management
- Software "Backend"
- Mobile application
- Patented security technology through a combination of a readable chip with antenna circuit(s) and blockchain
- Individual support for connection, maintenance and further development





# WHAT IS NFC?

NFC (Nearfield Communication) is a method with which data can be read out and subsequently saved without contact.







# QR-Code

VS.

- QR codes data encrypted in an image
- Decrypted using optical image recognition
- Not 100% counterfeit-proof
- Visual contact required
- No bulk detection possible
- Fraud Danger through scanning (reading the cell phone)
- No evidence of manipulation possible

# NFC or. RFID

- NFC / RFID tags contain a microchip
- Data transfer between tag and reader
- 100% counterfeit-proof
- no visual contact required label can be incorporated into the product
- Possible with RFID bulk recording
- Possibility of personalized content
- Provision of forms possible
- Feedback options

# WHERE is the read data stored?

On the Blockchain.

The blockchain technology used offers absolute data security, intangibility and therefore complete transparency. It is considered the greatest technological achievement after the invention of the Internet.





## **BLOCKCHAIN**

VS.

- Database structured as a chain of blocks
- no ability to change or edit once added to the chain
- new information is added in the form of a new block => formation of a chronological history of data records
- highest level of security and trust
- Improving efficiency in speed and testing

The most important goals of blockchain technology at a glance: Immutable, tamper-proof data.

# TRADITIONAL DATABASE

- Abuse by authorized users or hackers
- Entries from the past can be changed at any time.
- Possibility of making changes to the database programs, structures or security settings
- Hardware limitations

# BENEFITS OF OUR SECURITY SOLUTION





**BENEFITS** 

- Remarkable cost reduction and process acceleration
- Additional reputation through more security
- Strengthening your brand identity
- Better customer retention
- Perfect connection with the IoT (Internet-of-things)
- Absolute transparency in logistical processes

= Best possible product-specific protection when marketing your valuable physical goods and goods.





# OUR SOFTWARE

was tested by the IBM research laboratory Zurich (Rüschlikon, Switzerland).



# Many industries face the same challenge

Our solution is a "MUST HAVE" for all industries facing counterfeit issues. Build or expand the trust of your customers with us now!





# NFC CHIP & BLOCKCHAIN TECHNOLOGY THE IDEAL TEAM

For secure authentication and tracking of a wide range of products, in order to counteract, among other things, the illegal trade in counterfeits.



16





# Our team is based on 2 patents:

## "Value storage object" ensures the

closure of the packaging during transport

and until receipt

EU-Patent Nr. EP 3 671 674



## "Security label" (attached directly to the

## valuable item) proves originality and

origin

DE-Patent Nr. 10 2020 129 468



# VALUE STORAGE OBJECT





# VALUE STORAGE OBJECT

The object is the outer packaging. Outer packaging does not only mean a box or a cardboard box, but also an envelope or even a loop label.

### Application example:

The label acts as a seal and completely or partially covers the area where the stored value object is opened.

- A chip is integrated into the safekeeping object. However, this does not mean that the chip has to be integrated INto the storage object. Rather, it is sufficient if the chip is connected to the safekeeping object via a seal in such a way that it cannot be removed without being destroyed.
- The chip contains a storage element that contains all information about the valuable item about its origin, value and originality, which was previously stored in the blockchain.
- The chip is read using a transponder (or mobile phone app). This happens via one or more antenna circuits connected to the chip.



## SECURITY LABEL





# SECURITY LABEL

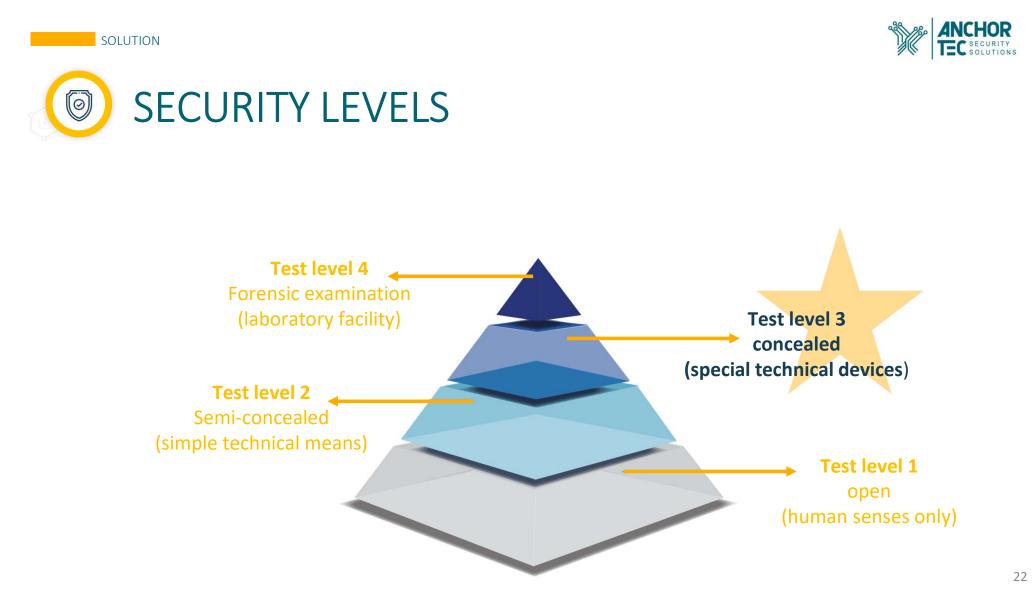
In contrast to the valuable storage object (difference), the security label can be applied directly to the valuable object in such a way that the label cannot be removed without being destroyed.

## Application example:

The trust factor of the seal is no longer present. Originality and provenance can be questioned.



- This patent also differs from the "Value Storage Object" patent in that the seal (sticker) must contain at least 2 antenna circles.
- If the outer antenna circuit is damaged, the scan of the label will be followed by the information "Label manipulated". However, by scanning the inner label, the information about the valuable item can still be read.
- If the inner antenna circuit is damaged, the chip can no longer be read. This is proof that the label has been destroyed. The "trust factor" is eliminated.



# ADDED VALUE OF THIS TECHNOLOGY







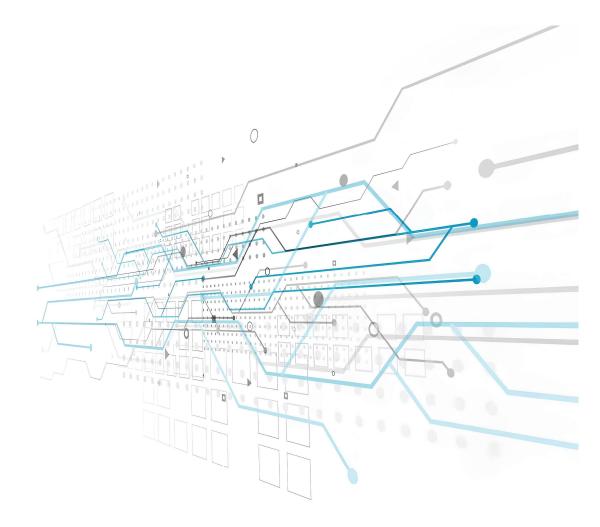
# Individual areas of application of our technology outside of the topic of "originality and origin"

- Warranty (start of warranty periods)
- Digital nameplate (readability of current operating instructions and product information)
- Marketing (customer loyalty)
- Updating machine books (in the field of mechanical engineering and robotics)
- Locating valuables after maintenance
- stock management/inventory

# IMPLEMENTATION

Mobile Application

Backend Administration







### IMPLEMENTATION

# MOBILE APPLICATION

- YOU design the interface and content of the mobile app we developed specifically for this purpose using your individual logo
- YOU "label" our app
- The "Hybrid Mobile App" is based on Google's "Flutters Framework"

Advantage: a common code base that greatly reduces development time and costs as well as maintenance effort.



IMPLEMENTAION

# MOBILE APPLICATION

- Login: 2-factor authentication (2FA) ٠
- The app user is connected to the web backend and thus to the • blockchain via the "login". The mobile application uses shared user management including the respective rights assigned to the user.

OTP Verification

antenen product

Scan & verifi authenticit

LOGIN

LOGHA

The integrated NFC reader allows you to read our special labels. The blockchain asks whether the label (which is attached to the object of storage or the product) exists in your company's blockchain.



IMPLEMENTATION

# MOBILE APPLICATION

- The label is scanned with our app, either stored on the smartphone or an industrial NFC / RFID reader. The following statuses may appear:
  - Label COMPLETELY intact = unopened & undamaged
  - Label violated = manipulated
  - Label invalid = label destroyed
- The scanning processes are logged (and stored in the blockchain) via the geolocation of the mobile device.
- Other: The information (images, videos, etc.) about the product that was stored in the blockchain is displayed.

Customizing & Development





# BACKEND ADMINISTRATION

Modern, flexible browser-based web interface that stores data directly in the blockchain.

Product Details		
Product UID	Product Id	
Product Name	Category	
Description		
	Max file size, Sec), accepted lipgip/lpng Add Image	



# BACKEND ADMINISTRATION

- Creation and management of users of the backend and the mobile application including a rights structure.
- Either manual creation of new products including the linked blockchain label and other profile information.
- Or automated reading of product data (from a PIM, ERP, etc.), which is also possible in principle.
- Creation of images for the product data Backend administration functions Display of the main image and/or other images of the product from the blockchain.
- Output of geolocation data stored via the mobile application (Google Maps).



# THE ADVANTAGES OF THE SOLUTION CONCEPT FROM





## **Complete security**

First-class technology to make the labels counterfeit-proof.



## **Quality production**

The security labels are manufactured in factories with the highest quality standards.



## **Greatest flexibility**

Standard doesn't suit you? The labels can be made according to your needs.

# THE ADVANTAGES OF THE SOLUTION CONCEPT FROM





"Innovation" progress through technology

# Stronger customer loyalty

Go new ways without high additional costs. Show your customers that innovation sets you apart from other market participants.

We provide you with trusted authentication, relevant information, compelling services & entertaining experiences in the moments that matter most.



## **QUESTIONS ?**

Matthias Rummel Mobil: +49 151 15 790 660 matthias.rummel@anchortec.de Boris Hofmann Mobil: +49 172 722 9997 boris.hofmann@anchortec.de AnchorTEC GmbH Beiertheimer Allee 40 a 76137 Karlsruhe

www.anchortec.de