BERNSTEIN

Blockchain certificates
for securing
intellectual property assets

Munich, 26.04.2018

Public blockchains are the universal **public registries** that humanity has been waiting for
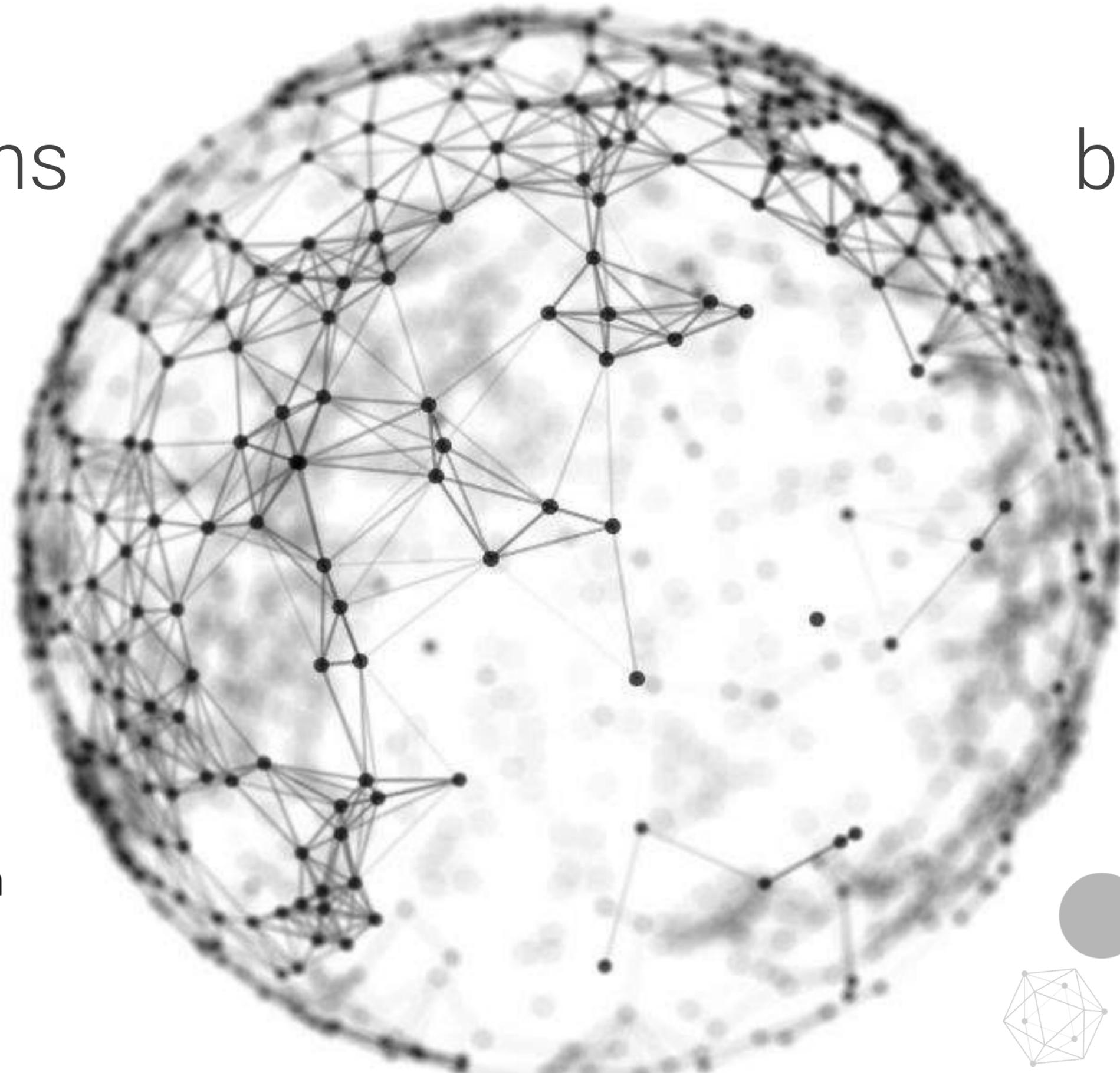
Public blockchains

Decentralized
Permissionless
Uncensorable
Resilient

ethereum
bitcoin

Private blockchains

Distributed
Permissioned
Trust based

MultiChain
HYPERLEDGER

Public blockchains are a new common

{Common: a resource accessible to all members of a society, including natural materials such as air, water and a habitable earth. These resources are held in common, not owned privately.}
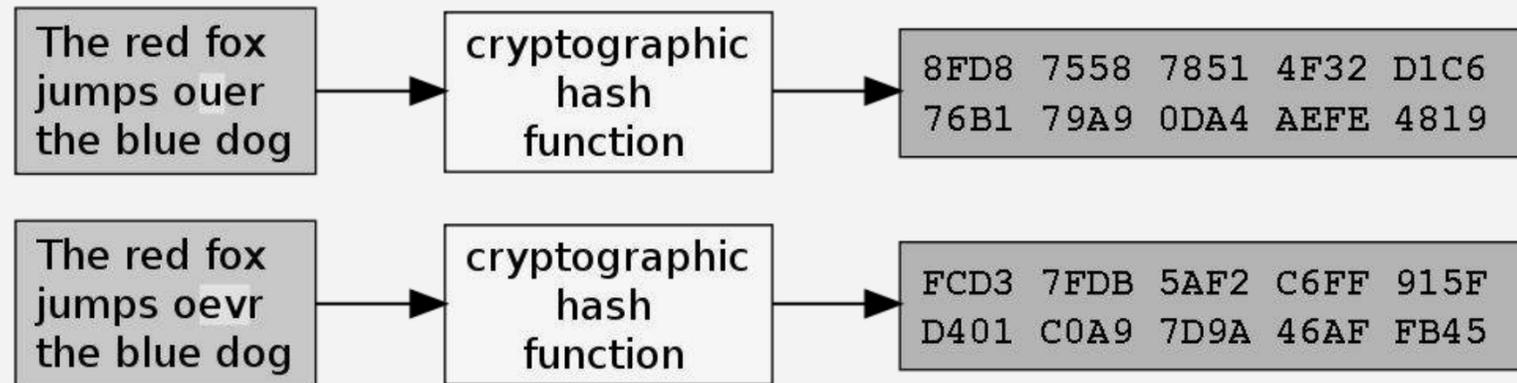
A public blockchain is a public registry

with very unique features

Transactions and timestamps

- The blockchain contains **transactions only** (no files, no documents, ...)

- Each transaction includes a **timestamp** (~10 min for Bitcoin)

How can we use the blockchain as public record if we are not able to store data on it?
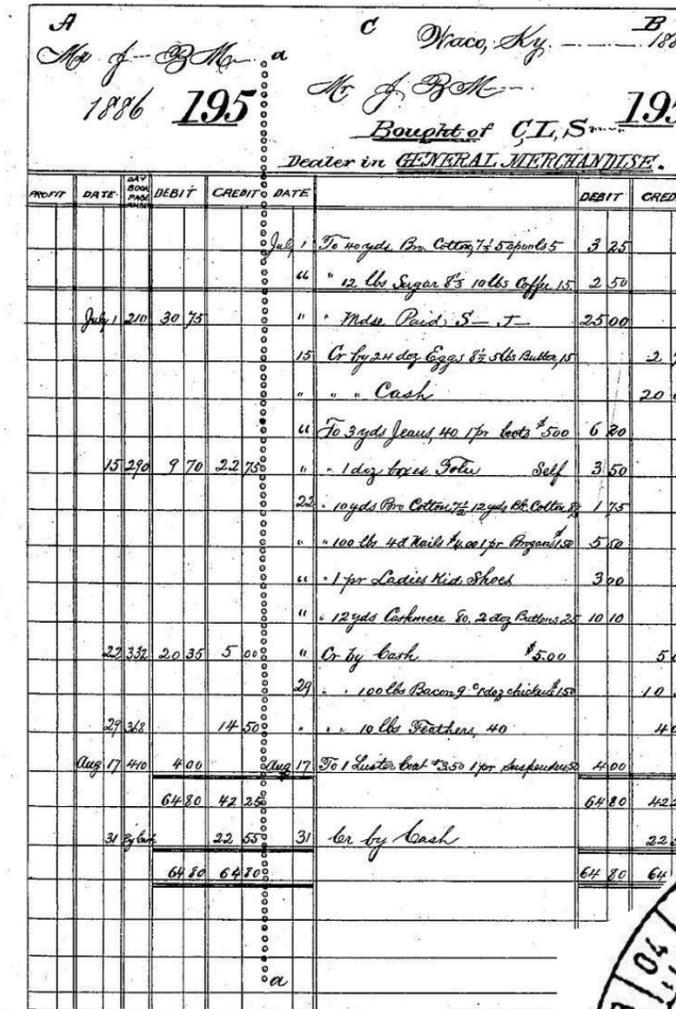
| The red fox jumps ouer the blue dog | → | cryptographic hash function | → | 8FD8 7558 7851 4F32 D1C6 76B1 79A9 0DA4 AEFE 4819 |

| The red fox jumps oevr the blue dog | → | cryptographic hash function | → | FCD3 7FDB 5AF2 C6FF 915F D401 C0A9 7D9A 46AF FB45 |

Any arbitrary set of data can be reduced to short string of bits, called a **hash**.

+
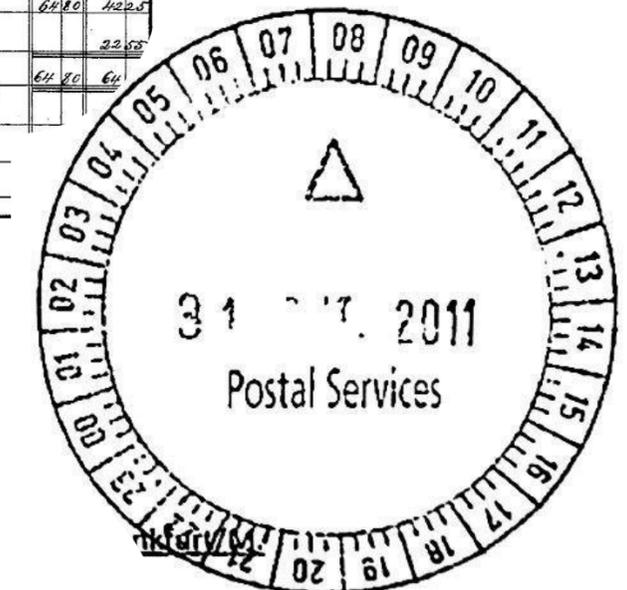
Bitcoin protocol allows a few options for adding short **textual data** to a transaction.

⇒ **We have a public registry!**

Bernstein is a gateway to blockchain-based **registries for innovators**

Why the blockchain will revolutionize IP

How to make your company future-proof?

Together with partners, create a **blockchain-based alternative** for conventional IPR that is quicker, more transparent, impossible to manipulate, and works **without middlemen**.

Dennemeyer
The IP Group

We need to be aware that with blockchain technology the private sector will become an **ancillary record keeper**.

- Francis Gurry -
WIPO Director General

WIPO
WORLD
INTELLECTUAL PROPERTY
ORGANIZATION

Bernstein approach to IP management

Multifaceted and complex:

- Securing trade secrets
- Claiming copyrights
- Proving prior use
- Make defensive disclosures
- Confidentiality agreements
- Technology licenses
- ...

Risks: product delays, wasting R&D money, legal costs, going out of business, litigations, ...
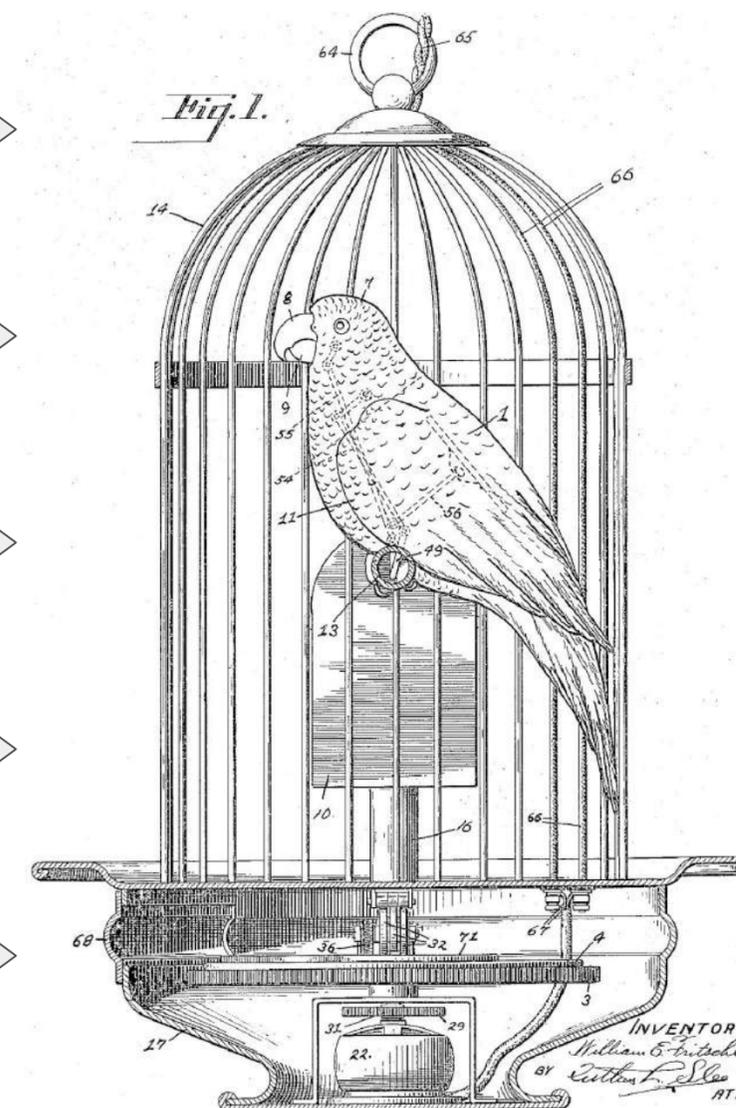
Patent trolls

Competitors

Employees

Hackers

Partners

The blockchain allows companies to create solid foundations to neutralize these risks.

At **low effort** and **low cost**.

Bernstein solutions for a future-proof IP portfolio

BERNSTEIN

Bernstein is a web service that allows innovators to **register IP assets on the blockchain**.

Bernstein's unique protocol will create blockchain certificates that can prove:
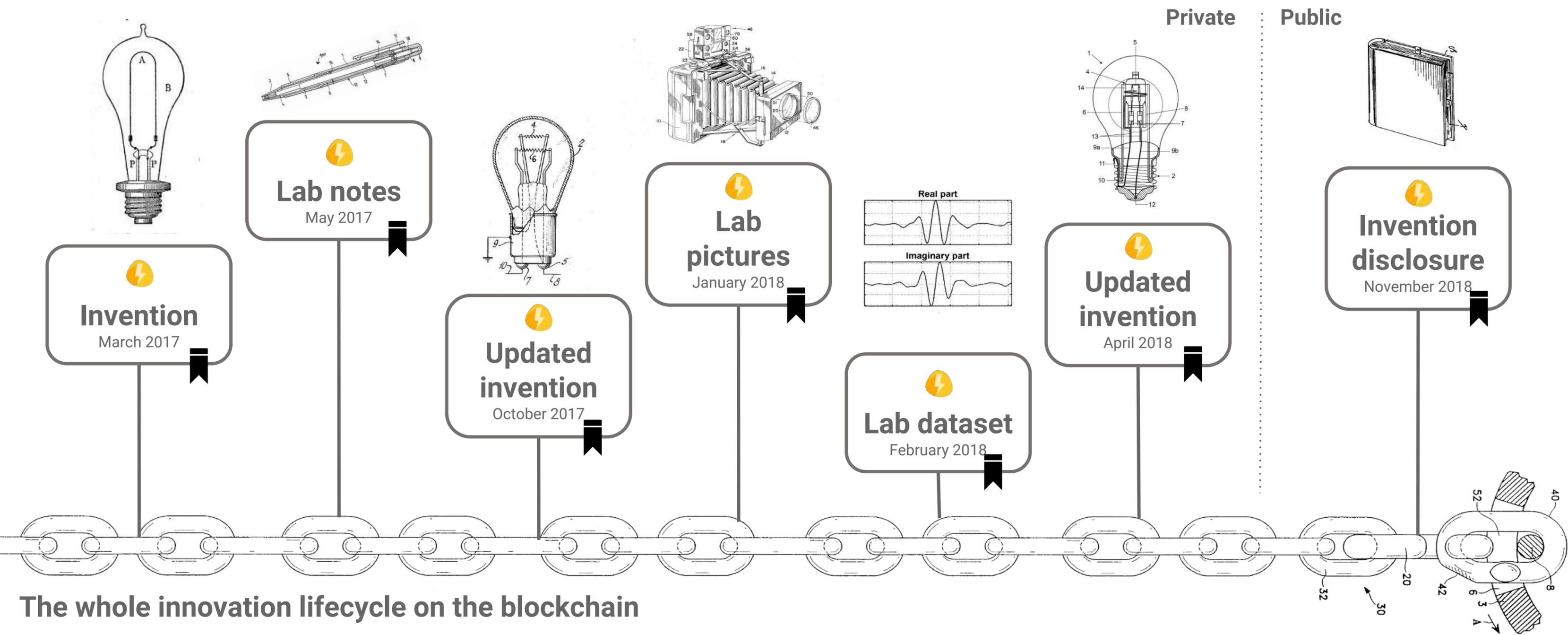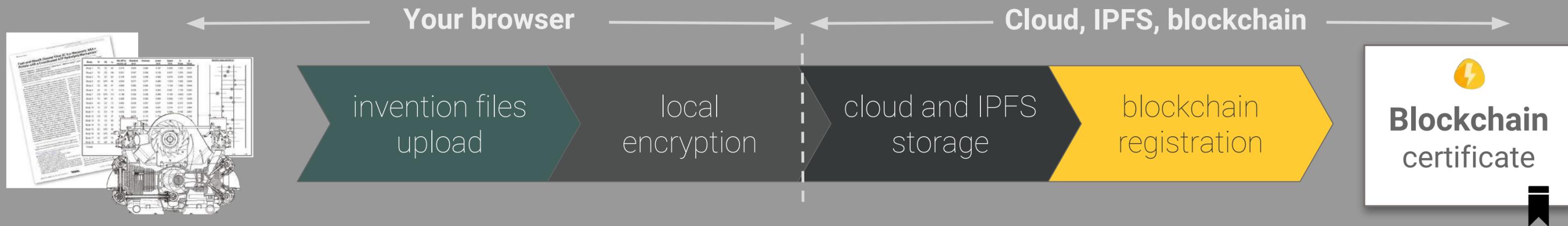**existence**, **integrity** and **ownership**.

Specific **targets**
- Industrial and scientific IP
- Small and mid-size companies

Unique **advantages**
- Perfect confidentiality
- Unlimited encrypted data storage

Bernstein is a **gateway** to multiple certification infrastructures

Your browser

Cloud, IPFS, blockchain

invention files upload → local encryption → cloud and IPFS storage → blockchain registration → **Blockchain** certificate

Private | **Public**

Invention
March 2017

Lab notes
May 2017

Updated invention
October 2017

Lab pictures
January 2018

Lab dataset
February 2018

Updated invention
April 2018

Invention disclosure
November 2018

The whole innovation lifecycle on the blockchain

Three **use cases**
for blockchain certificates

Bernstein blockchain certificates

Secure Vault / Marco Barulli / Four blade bi-directional razor structure with flexible guard system

Summary History Settings

Cover

FOUR BLADE BI-DIRECTIONAL RAZOR STRUCTURE WITH FLEXIBLE GUARD SYSTEM

Description

Single-head bi-directional razor devices having an elongated bi-directional razor head with flexible g
edges are disclosed. The razor head may be constructed as a removable cartridge if desired, and h
strips are positioned within the head in a substantially common working plane, with their sharpene
working plane is defined in part by the flexible guards, which preferably are formed as elongate plia
edges of the razor head. The first and second sets of razor blade strips may consist of one, two or
preferably mounted for individual spring-loaded movement. The user gently presses the razor head
then moves the head in one direction for contacting blades from the first set against the user's skin
lifting the razor head from the skin, moves the head in the opposite direction so that blades from th
reverse movement. The flexible guard system helps manipulate the skin to be shaved so that it is t
edges of the blade strips to engage the skin with the appropriate amount of pressure for a closer s

Files

Name	Size	Last modified	Type
public-vs-private-pt1-1.pdf	158.65625 KB	2 months ago	applicati
The IP Sales Process.pdf	254.1953125 KB	2 months ago	applicati
170417 - Stellbrink opinion.pdf	89.6728515625 KB	2 months ago	applicati
Screenshot 2017-05-17 at 12.24.59.png	39.1015625 KB	2 months ago	image/p

BLOCKCHAIN CERTIFICATE

The file or collection of files referred hereunder existed and was presented in the date and time printed down below by the entity identified as Project Owner.

Aperture Science Handheld Portal Device

Project Owner
Aperture Laboratories

Registration Date
23.06-.2016 18:05:38 UTC

Project Hash: 28299503e35d9d500acf21e3eb6e99952b2b6e7336c908712fcd6577dcd3fa0bc

TX: 02b082113e35d5386285094c2829e7e2963fa0b5369fb7f4b79c4c90877dcd3d

Block: 2664844

TX

Multisig 3/3 → [A, B, C]

OP_RETURN → BERNSTEIN 01.01 REG 80c33821...

Project Owner public key (A)
db9bdd543e72fe3039a1f1c047
0e28da1848f640de68c2ee9132

Project data public key (B)
046ce31db9bdd543e72fe3039a1f1c047
a669ff90e28da1848f640de68c2ee9132

Bernstein public key (C)
046ce31db9bdd543e72fe3039a1f1c0
a669ff90e28da1848f640de68c2ee91

Enhanced confidentiality agreements

The NDA dilemma:

- broad ⇒ unenforceable
- specific ⇒ complex, discloses trade secrets

Blockchain enhanced NDA:

- simple, strong, private

Better defensive publishing

BERNSTEIN

Defensive publishing is getting more popular, but it is not trivial neither cheap to execute in a robust and indisputable way.
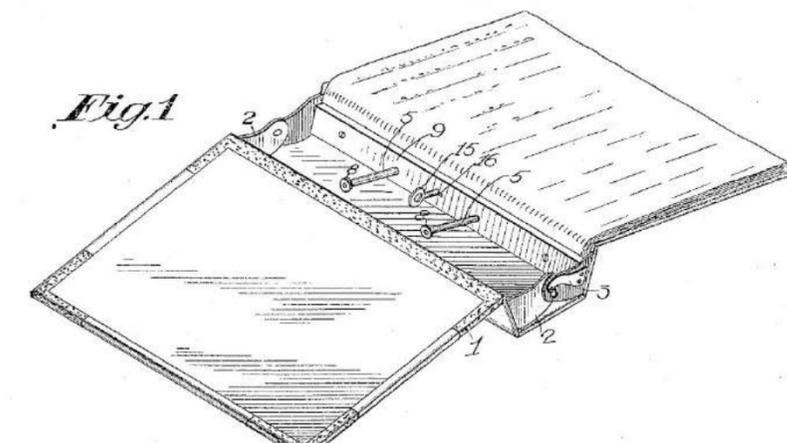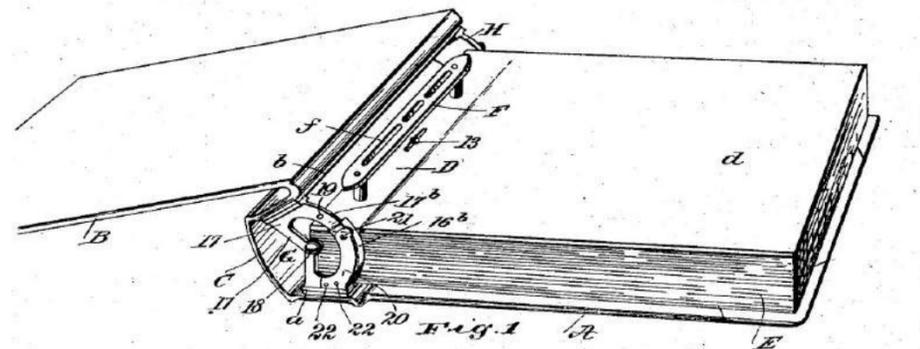
In-house
- publication date can be challenged
- public availability is hard to prove

Commercial services
- expensive
- limited visibility, for paid access

Blockchain registration + IPFS publishing
- robust and indisputable timestamp
- proven public availability
- optionally anonymous
- convenient and inexpensive
- always secures the largest perimeter
- not just for documents (datasets, visuals, ...)
- freely available to anyone

Disclosure certificate
October 2017

Securing 3D models

BERNSTEIN

Copyright claims: the traditional way

3D model → redacted 3D model → Copyright office

- Slow and inconvenient
- Reveal trade secrets
- Expensive
- Limited geographies

Copyright claims: the blockchain way

3D model → BERNSTEIN → **Blockchain** Certificate May 2017

- No need to redact files
- Perfect confidentiality
- Strong ownership claim
- Convenient, quick, global.

Consistent enforcement and **statutory damages** may dissuade infringers (anyone with a 3D printer). But strong copyright claims are required.
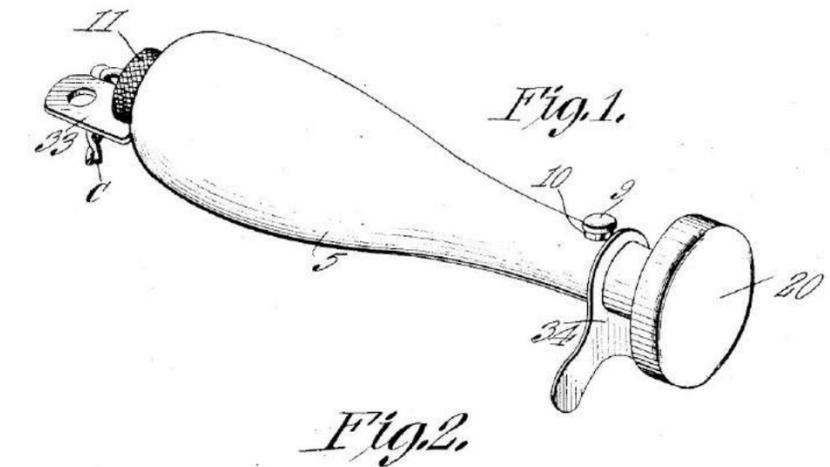
IndustryWeek

3D Printing May Lead to Increased Copyright Litigation

Mar 13, 2017

Legal acceptance
and
Identity

Legislators are paving the road
for blockchain records

QUARTZ

Sweden's blockchain-powered land registry is inching towards reality

By Joon Ian Wong | April 03, 2017

Delaware is Drafting Law That W
Recognize Blockchain Records

Garrett Keirns (@garrettkeirns) | Published on March 15, 2017 at

Delaware is inching closer to using blockchain as a means to create and manage corporate records.

Though the process is in the early stages, a group within the Delaware State Bar Association's Corporation Law Section has released a proposed piece of legislation that would establish a legal basis for using the technology for this purpose. Specificall

SMART DUBAI
دبــي الذكية
HAPPY LIVING لحيـاه أسعـد

DUBAI BLOCKCHAIN STRATEGY

The Dubai Blockchain Strategy, launched by His Highness Sheikh Hamdan, i result of a collaboration between the Smart Dubai Office and the Dubai Fut Foundation to continually explore and evaluate the latest technology innov efficient, a

ping the fu Blockchai Mohamm ai the happ

BBC | Sign in | News | Sport | Weather | Shop | Earth | Travel | More

NEWS

Technology

Government urged to use Bitcoin-style digital ledgers

19 January 2016 | Technology

Share

Blockchain certificates "only" creates a link between some data and the owner of a specific secret.

The blockchain lacks any identity feature.

Therefore a **traditional legal framework** that makes the best use of the certificates is **still needed**.

The futures of identity
1. self-sovereign
2. authorities embrace blockchain

![BERNSTEIN]

Team & Contacts

Marco Barulli
Managing Director

Paul Reboh
Chief Technology Officer

Jean-Maxime Rivière
Business Development

MCI WORLDCOM

Loughborough University

ALMA MATER STUDIORUM A.D. 1088

fidor BANK

TLM

foodora

ADVISORS

Andy Goldstein
Deloitte Digital - LMU

Tankred Hase
Lightning Labs

Sevim Süzeroglu
Dennemeyer

Simmons & Simmons

simmons-simmons.com
elexica.com