Blockchain certificates for intellectual property management
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**.

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

- Francis Gurry -
  WIPO Director General
Public blockchains
Decentralized
Permissionless
Uncensorable
Resilient

Private blockchains
Distributed
Permissioned
Trust based

ethereum
bitcoin
HYPERLEDGER
ripple
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.
The challenges of 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, ...

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

At **low effort** and **low cost**.
The whole innovation lifecycle on the blockchain

Private
Disclose inventions on a decentralized file system (IPFS).

Public

Lab notes
Proof of use
May 2016

Invention
March 2016

Updated invention
October 2016

Lab picture
Proof of use
January 2017

Lab dataset
Proof of use
February 2017

Updated invention
April 2017

Invention disclosure
November 2017

Blockchain
Bernstein solutions for a future-proof IP portfolio

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.

Blockchain certificates are linked together to create a trail of records of the whole innovation lifecycle.

To improve security and reliability, Bernstein protocol is deployable on multiple blockchains, both public and private.

Bernstein also provides digital certificates issued by timestamping authorities.

- EU - Bundesdruckerei
- China, Japan, USA, Korea - coming soon
How does Bernstein work?

**IP owners just need to select their files**, and Bernstein will take care of:

1. inserting a cryptographic fingerprint of the files in a specially crafted bitcoin transaction
2. encrypting all files and associated metadata in the user’s browser
3. upload an encrypted copy of the files on an immutable repository

This **bitcoin transaction is the root of the blockchain certificate issued by Bernstein.**

- IP assets are **not disclosed to anyone**, not even to Bernstein itself.
- Bernstein certificates are **independently verifiable** by any third party exclusively against the blockchain.
- The encrypted content of your innovations can be **stored at multiple locations**: cloud, local, IPFS.
Bernstein blockchain certificates

BLOCKCHAIN CERTIFICATE

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

Aperture Science Handheld Portal Device

Project Owner: Aperture Laboratories
Registration Date: 23.06.2016 18:05:38 UTC

Project Hash: 28299503e35d9d500acf21e3eb6e99552b2b6e7336c908712fc6577dc3f0bb

TX: 02b082113e35d53b625b93bc2829e7e2963fa05e369fb7f4b79c4c908777dcd3d Block:2664844

Multisig 3/3

OP_RETURN

BERNSTEIN 01.01 REG 80C33821...

Project Owner public key (A)
Project data public key (B)
Bernstein public key (C)

db3bd543e72fe3039a1f1c047
0e28da1846f640de68c2ee9132

046ce31db9dd543e72fe3039a1f1c047
a669ff90e28da1846f640de68c2ee9132

046ce31db9dd543e72fe3039a1f1c047
a669ff90e28da1846f640de68c2ee9132
Benefits of blockchain certificates

- Secure trade secrets
- Prove prior knowledge
- Prove prior use
- Fight patent trolls
- Deter unloyal employees and partners
- Define and protect the largest IP perimeter

- Secure copyright
- Keep your privacy
- Notarize every file format
- Save time, save money
- Easy deployment even to large, dispersed organizations.

In a first-to-file world, defensive IP strategies are becoming increasingly important.
Use case

Enhanced confidentiality agreements

The NDA dilemma:
● broad ⇒ unenforceable
● specific ⇒ complex, discloses trade secrets

Blockchain enhanced NDA:
● simple, strong, private

Blockchain-enhanced NDA

Between “Legal person or entity A” hereinafter referred to as “Inventor” and “Legal person or entity B” hereinafter referred to as “Recipient”

Whereas:

Inventor and Recipient intend to collaborate on a joint project and, in order to define the nature and content of the collaboration, the Inventor wishes to share technical and/or commercial information of a confidential nature with the Recipient that will ensure that the same remain confidential. Now, therefore, it is hereby agreed as follows:

1. For the purposes of this Agreement “Confidential Information” shall mean such technical and/or commercial information as univocally identified by Annex A, a blockchain certificate issued via Bernstein Technologies GmbH, the specific certificate number being xxxx-yyyy-www-zzz.

2. Additional information disclosed by the Inventor to the Recipient during the collaboration should be considered part of the Confidential Information only if:
   a. the new information is identified by a new blockchain certificate logically linked to the one mentioned in 1. (see Annex 2 for technical details)
   b. the new blockchain certificate is transmitted to the Recipient along with the new information.
Legislators are paving the road for blockchain records
Our vision

**Decentralized technologies for IP**
Bernstein will keep selecting and building on top of the most secure, uncensorable, and reliable decentralized technologies: Bitcoin, IPFS, sidechains, ...

**Today**
Making the most of the current opportunities in the IP market.

**Tomorrow**
Turn Bernstein into the portal that enables the whole IP industry to access decentralized infrastructures. Eventually launching its own token to enable a complete new way to secure, manage and trade intellectual property. On a global scale.
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