

About bernstein.io: how a Blockchain-Startup is digitizing the patent market

The Munich-based Startup Bernstein.io has developed a Service that makes the secure and encrypted storage of sensitive documents even easier. The four member team around Marco Barulli sees Blockchain Technology as the opportunity to avoid obligatory presence at the notary: Patents, NDA's or technical drawings can simply be uploaded, encrypted and then stored invariably thanks to a connected transaction on the Bitcoin Blockchain.

This way of digital sealing or freezing of a certain stage of development is an attractive, time-saving tool for innovators from all over the world. The founders do not shy away from a competition with classical notaries: they are welcome to pass the white label service directly to their customers under their own name.

xyarena spoke to Jean-Maxime Riviere, Bernstein.io's business developer. We're providing insights into the founding history, the service, and the future of this ambitious company:

When did you found Bernstein.io?

29.09.2016

How did you find together as a Team?

Bernstein started as a spin-off of Clipperz online password manager during the acceleration period at Wayra. Wayra's as well as Marco's networks were leveraged to attract the other team members.

Is your company self financed or do you have investors or loan providers?

For now, the company is mainly self-financed, but we are preparing a seed financing round towards the end of the year.

How big do you consider today's market for „time stamp based certificates“ (speaking generally of nda's, patents and others you are targeting)

Bernstein is targeting millions of innovators producing new ideas in business, technology, and science worldwide. We estimate the market to be 3,5 B\$.

From which industries and countries are your customers so far?

So far, our customers are mainly located in Germany and Switzerland and come from the legal industry (law firms, legal consultants), the biotech industry and innovation hubs.

In which industries and countries do you see the biggest potential for growth during the next five to ten years?

China, as one of the most innovative countries of the world, is definitely on top of our list. The first step in that direction has been taken with the Chinese translation of our website published last week. Japan and South Korea will soon follow.

Law firms will remain one of our main focus, as they're best suited to both understand and value Bernstein's service and to benefit from it by offering it to their clients.

How would you describe your USP? What makes your service unique and keeps you staying ahead from competitors? (not just competitors from „the old economy“)

Our USP is convenience. Everything we offer could be done independently. Anyone can go to the notary to notarize and timestamps documents (the "old economy" way) or access a public blockchain. But by offering unlimited versioned storage, a strong encryption, a drag-

and-drop web-app and one-click certification, we want to make it an easy and straightforward for customers and let them focus on innovation.

Your service offers a simple upload, automated encryption and fingerprint for files. How do you assure that the formal requirements are fulfilled – even if you don't check the clients data due to concealment – so your client would win a patent dispute in court in any country?

As you point out correctly, we do not check our clients' data and hence do not assure any formal requirements. In the case of a dispute, the assumed infringer can defend himself if he has convincing proof of prior knowledge and use. We provide the platform for easy certification of ownership, existence, and use, but it's up to him to choose his proofs wisely. Because the entire process is encrypted and the storage is unlimited, we want to encourage our users to certify as much data as possible for the strongest case possible in court.

In context of above question: Where exactly do you draw the line between „legal advisory“ and „notarial certification services“?

We're neither! Both terms have strict legal meanings.

Is there any case yet, where Bernstein certificates were used to prove Intellectual Property Rights?

Not yet!

Has Bernstein been involved in the IPFS open source project?

No. We are currently solely exploring the possibility of using IPFS or any other content addressable and decentralised files storage technology in the future.

Where are Bernsteins Cloud Storage Servers for your clients data located (eg. in which country)?

As of today, we use the Amazon Web Services servers located in Frankfurt, Germany by default.

Would you speak of "centralized" Cloud Storage Servers in this case?

The servers are indeed centralized. This is why we are exploring the IPFS alternative for a more decentralized option for customers.

Which cloud storage solution do you recommend to your clients? Or do they prefer storage on their own servers?

The choice is completely theirs. Thanks to the platform-independent nature of the Bernstein protocol, the service can be adapted to individual needs and preferences. Some prefer storing their confidential data on their own servers, others favor decentralization, others still go for the most convenient option, since their data is encrypted anyway.

You are executing a real Bitcoin Transaction, to create an immutable fingerprint connected to the data, is that right? How exactly do you assure the fingerprint (is it the Transactions Hash?) is connected to the immutable file?

That is right. The fingerprint of a project or a file is its hash (which is by definition unique to the document(s)). On the Bitcoin blockchain, a multi-signature transaction is then created.

Each Bernstein transaction presents a 3-of-3 multi-signature output using the following addresses:

1. Owner address

The address associated with the organization that owns the Bernstein account.

2. Project data address

The address derived from the hash of the files included in the project

3. Bernstein notary address

The organization-specific address shared between Bernstein and the organization administrator

The project data address guarantees the documents in question existed in their exact form at the time of the transaction (proof of existence, integrity) and the owner address, whose associated private key is known only to the user/innovator, proves that he was in control of these documents at that time (proof of ownership).

Lets look at an exemplary case of a software patent: Why wouldn't a well maintained version management in a Git be safe enough to prove the origin of a certain, valuable code element?

While a well maintained GitHub repository might prove valuable in court, the validity of its timestamping and its immutability is only as strong as the trust in the centralized server, and the people behind it.

Thank you, Jean-Maxime, for sharing these insights and all the best for bernstein's future!