UNIVERSITY of NICOSIA

Session 9

Property Rights

BLOC 513: Law and Regulation in Blockchain

Session objectives

- To navigate students through the concepts of real property & personal property rights.
- To examine the “disruptive” nature of blockchain and tokenization for property law.
    - In particular, to understand:
        - The concepts of real property and personal property rights;
        - The available means of legal protection and enforcement of property rights;
        - The value of Blockchain for safeguarding and tracing property rights;
        - The significance of Property tokenization.

Session outline

1. Real and Personal Property Rights
2. Property Rights & Blockchain
3. Benefits & Challenges from “asset tokenization”
4. Required reading
5. Further reading

Real & Personal Property Rights

Real & Personal Property Rights

Anything that can be legally owned may be called property and “property” can be grouped into two main categories:

1. Real Property, that is land or things attached to land as “immovable property” (real estate or realty)

Real Estate Laws & Regulations:

Ownership, Real Estate Rights, System of Registration (Registry/Registries), Real Estate Transactions, Liabilities, Finance & Banking, Leases, Public Law Permits & Obligations, Tax (income tax, capital gain tax, vat etc)

2. Personal Property, that is anything that can be legally owned, other than real estate (immovable property), and includes both tangible and intangible assets [e.g. money, vehicles, stocks, bonds, patents, copyrights etc.]

Property Rights & Blockchain

Useful Links: #1 #2 #3 #4 #5 #6 #7

Property Rights & Blockchain

Lex Cryptographia (Wright and De Filippi, 2015): Blockchain technology enables the creation of decentralized currencies, self-executing digital contracts (smart contracts) and intelligent assets that can be controlled over the Internet (smart property).

"Given the patchwork nature of property registries for real and intellectual property both in the United States and in foreign countries, digital property registries will likely be difficult to create. Indeed, discussion of digitizing title registries has been raised since the late 1990s (see Dale A. Whitman, Digital Recording of Real Estate Conveyances, outlining the benefits to a digital title registries). However, because blockchain technologies do not just enable the creation of local-US based digital property registries, but the development of a global digital property registry, this technology may finally enable the creation of these registries. Governments do not need to trust another government—or a third-party—to manage its property registries. Rather, trust can be placed in the mathematical certain provided by blockchain technology."

Eric D. Chason (How Bitcoin Functions As Property Law): "Bitcoin goes beyond creating simple digital deeds and replicates important institutional aspects of real estate transactions […] Bitcoin is a system of property that replicates the functions of legal instruments (deeds) and institutions (public records offices) without relying on legal institutions or even the law itself to coordinate the transfer or enforcement of property interests."

Property Rights & Blockchain

Attaching Rights & Obligations to Any Personal Property (?)

(e.g. company shares, investment units, intellectual property, stocks, futures, options etc)

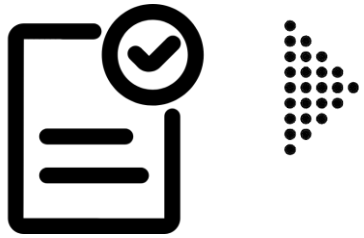
Registration / Management /Enforcement of rights through Blockchain

The example of a "Blockchain Share Certificate":

STEP 1
The corporate administrator uses a pre-made digital template of a share certificate to fill in all required data.

STEP 2
The completed digital copy of the share certificate is given to the signatories of the company to place their digital signature and to return it back to the corporate administrator duly signed.

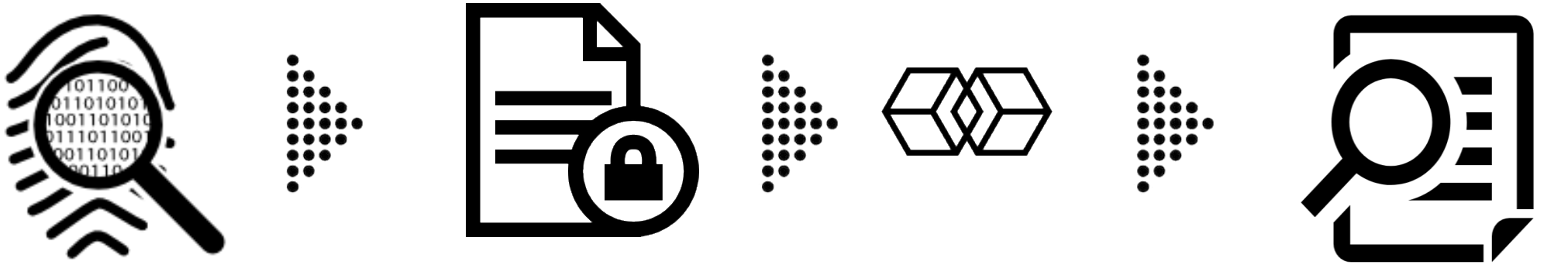
The corporate administrator generates Digital Share Certificate (as a PDF)



Electronic signature (eIDAS) and validation by the legal signatories

STEP 3

The Company generates a unique fingerprint (hash) for the share certificate and links it to an append-only public Blockchain.



Unique fingerprint (hash) is Generated for the Certificate

Final Approved Signed Document

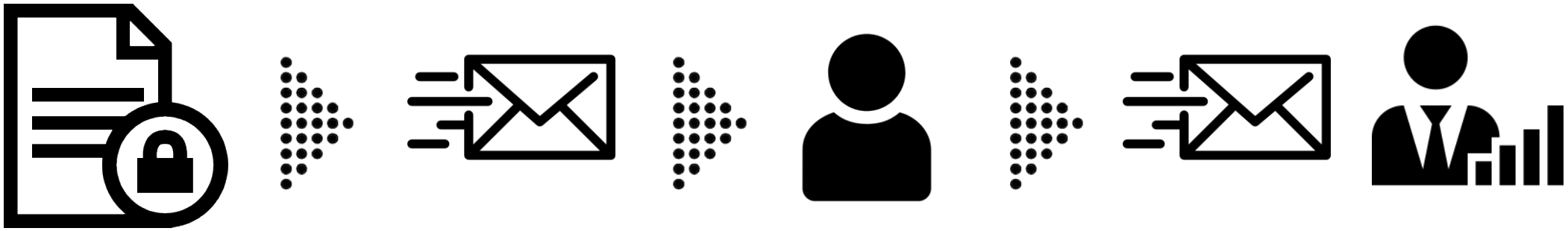
Published on the Blockchain

Authenticity of the Digital Certificate is audited by the Blockchain ledger

The whole process enables the issuance of Digital Share Certificates anchored to a Blockchain enhancing immutability, and security.

STEP 4

The “Blockchain Digital Share Certificate” is then delivered to the shareholder. From now on, the shareholder can electronically share it with any person or legal entity in case he/she wishes, for instance, to negotiate the sale of his/her shares with any prospective buyer or for the purpose of pledge of shares or for any other use.



“Blockchain Digital Share Certificate”

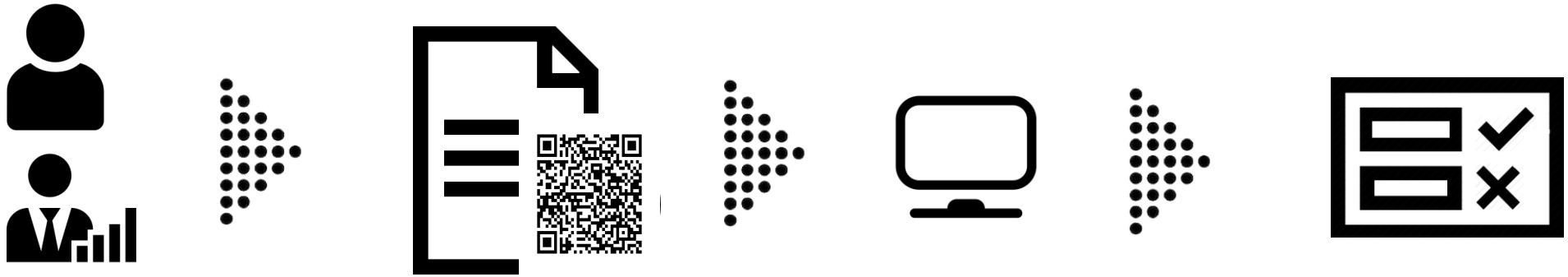
E-mailed to the Shareholder

Shared with Potential Investors, banks or any interested party

The Digital Share Certificate can be easily distributed by the Shareholder to anyone wishes to confirm its authenticity.

STEP 5

The shareholder or any person who possesses the digital share certificate can validate the authenticity of the share certificate by either visiting the company's official website or by scanning the QR code on the bottom right edge of the digital share certificate.



Scan the QR code or visit the company's official website

Access validator's online portal

Validation rules on the Ledger confirm / disconfirm the validity of a Certificate

Anyone can independently confirm / disconfirm the validity of a Digital Share Certificate.

Benefits & Challenges from Asset Tokenization

Asset Tokenization

Non-Fungible Tokens (NFTs)

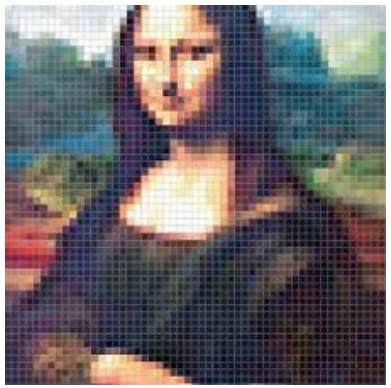
Non-Fungible Tokens (NFTs) refer to digital assets that cannot be interchanged for another asset of the same type because they are unique and cannot be replaced. This is in contrast to “fungible assets”, such as bitcoin, which can be substituted or exchanged for another asset of the same type, i.e. for another bitcoin.

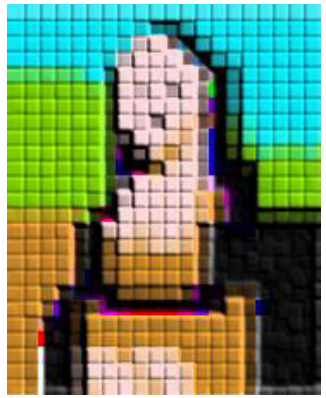
Gaming, Sports, Art, Music and other sectors are among those with the highest NFT product sales.

A digitized piece of art.

But what art? A mere digital representation of an existing real painting or sculpture? Or is it something new and original in digital form? Do I simply buy the right to make legitimate copies of a digital piece of art? But what would be the value then of the original digital art? Is the ownership history of the digital art piece (which is provable and immutable) valuable in the long run?

Regulatory uncertainties



Required Reading

Required Reading

Rosa M. Garcia-Teruel and Hector Simon-Moreno, **"The digital tokenization of property rights. A comparative perspective."** (2021)

Alexandra Giannopoulou et. al., "**The Rise of Non-Fungible Tokens (NFTs) and the Role of Copyright Law**" (2021) – PART I / PART II

Oleksii Konashevych, "**General Concept of Real Estate Tokenization on Blockchain**" (2020)

Gönenç Gürkaynak et. al., "**Intellectual property law and practice in the blockchain realm**" (2018)

Non-Fungible Tokens (NFTs): Redefining Digital Scarcity, a report published by Kraken (Sep. 2021)

Further reading

Further reading

Eric D. Chason, **How Bitcoin Functions as Property Law** (2019)

Rosa M. Garcia-Teruel, "**Legal Challenges and opportunities of blockchain technology in the real estate sector**" (2019)

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Questions?

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