—HEAD
Genève

Cryptokit

A SEMANTIC MAP OF BLOCKCHAIN TECHNOLOGY 

Hes·so GENÈVE
Haute Ecole Spécialisée
de Suisse occidentale

Anthony Masure, Océane Juvin, Guillaume Helleu | ATypI Paris, 13 May 2023

01

CONTEXT

TEAM

Anthony Masure

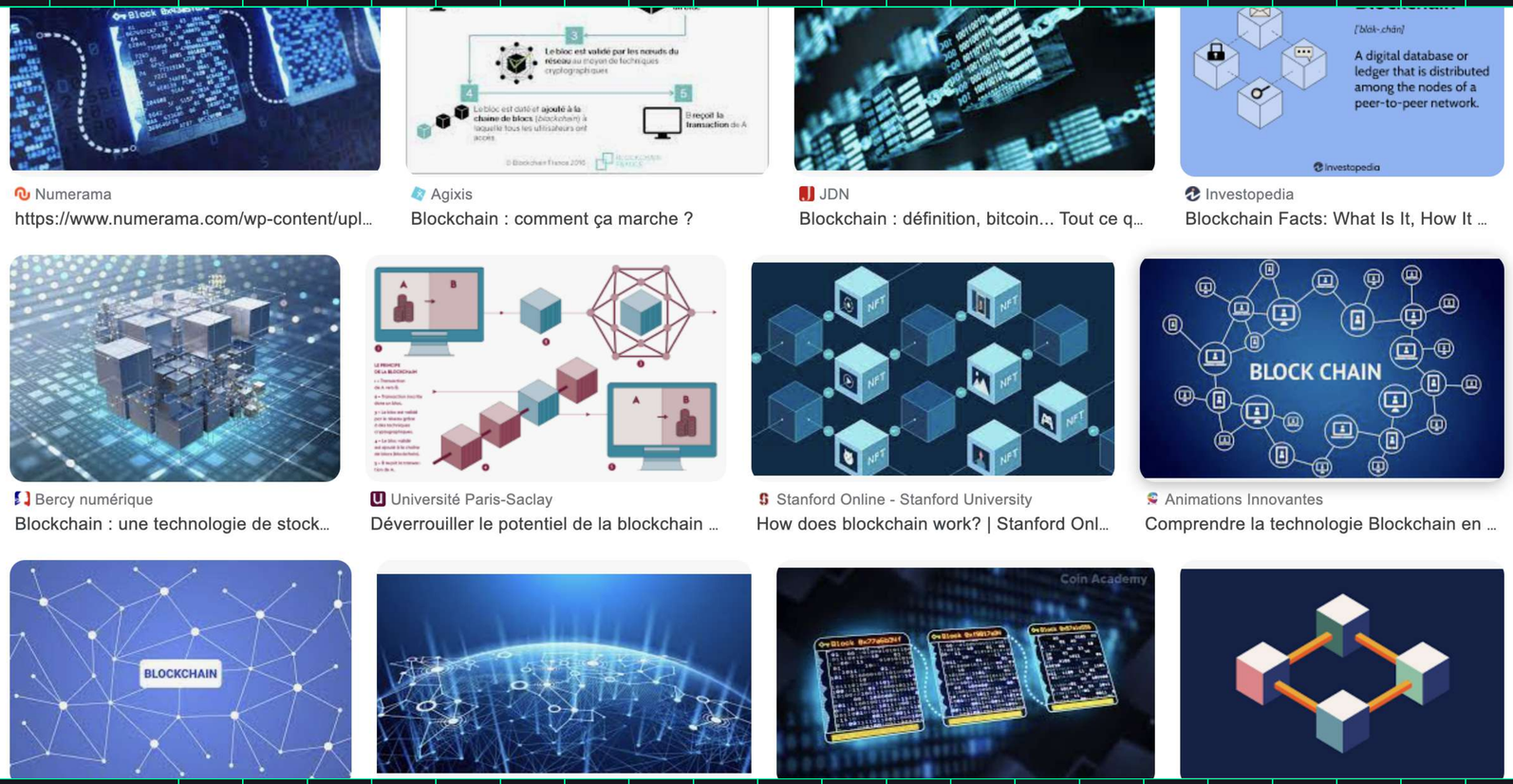
Océane Juvin

Guillaume Helleu

GENEVA UNIVERSITY
OF ART AND DESIGN
(HEAD – GENÈVE)

Research project
funded by the
Bureau de la
Stratégie
Numérique of
HES-SO Genève

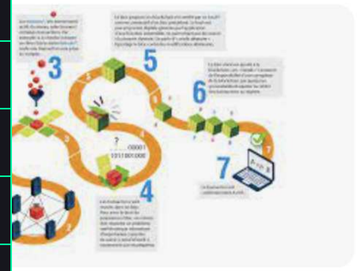
A VISUAL MESS



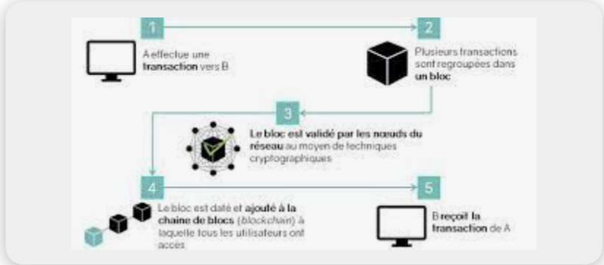
Google Images, 2023

HOW TO REPRESENT BLOCKCHAIN TECHNOLOGY?

Google Images, 2023

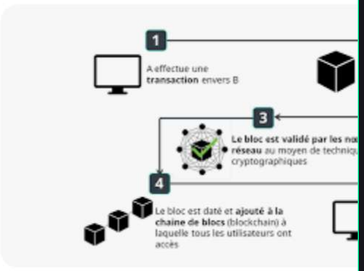


nement de la blockchain



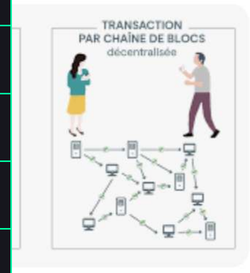
La Tribune

https://static.latribune.fr/1020548/blockchain-mode-d-emploi....

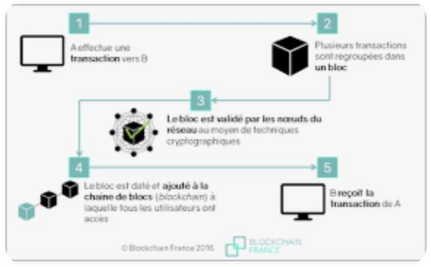


Eanet

Qu'est-ce que la blockchain ? - Agenc

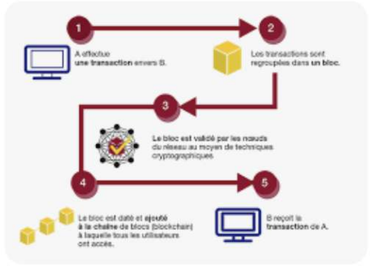


aîne de blocs (blockch...



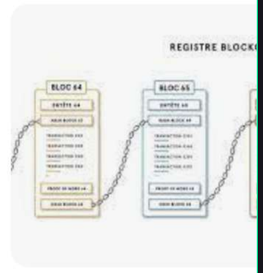
Codeur.com

Comprendre la technologie blockchain : le...



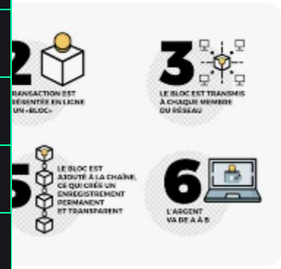
CoinJournal

https://coinjournal.net/wp-content/u...

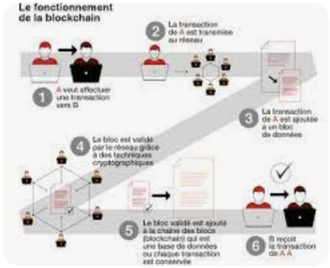


CoinJournal

https://coinjournal.net/wp-

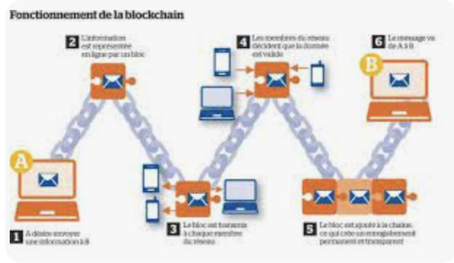


oints pour faire le point – Di...



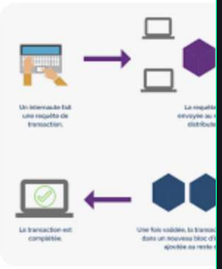
www.kmu.admin.ch

Partage en blockchain



Change The Work

Blockchain et ressources humaines : quelles ...



linksconsulting.fr

La Blockchain : ce qu'i

ISSUES

No consistent dataset
> Many key terms have no visual form

Lot of physical metaphors (ie. “cloud”)
> Lack of technical and digital culture

Already composed diagrams
> Need for a modular and vectorial system

BACKGROUND

New Kids On The Blockchain (2018)

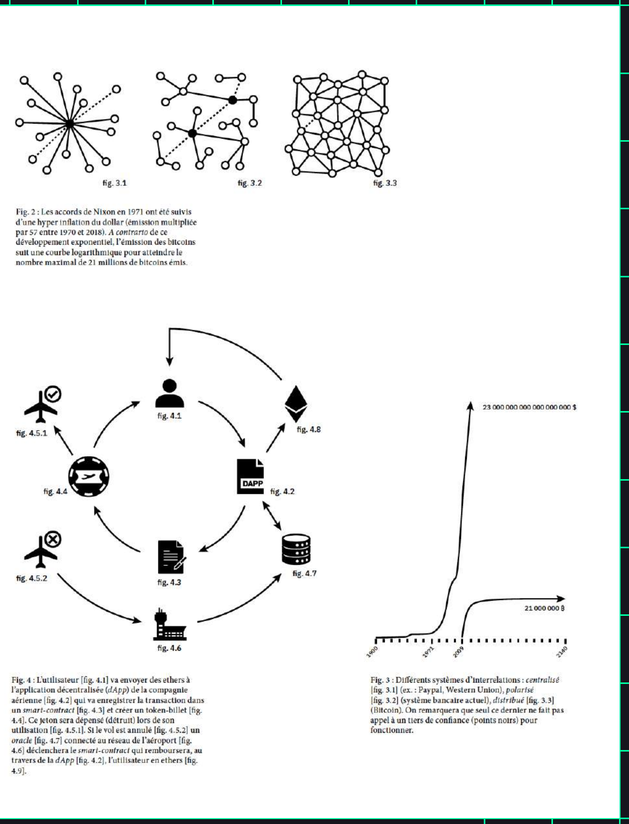


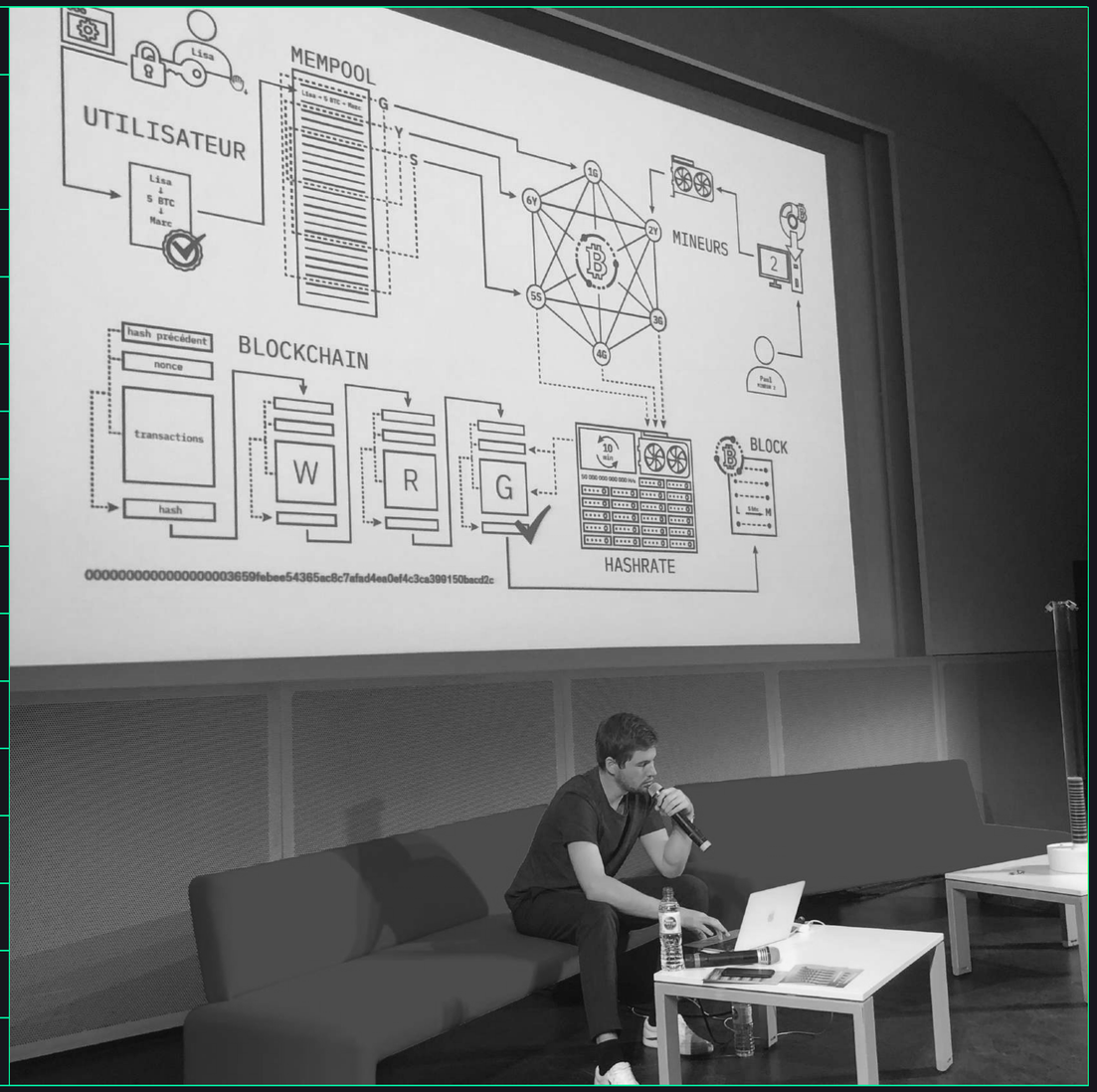
fig. 3.1 fig. 3.2 fig. 3.3

Fig. 2 : Les accords de Nixon en 1971 ont été suivis d'une hyper inflation du dollar (émission multipliée par 57 entre 1970 et 2018). *A contrario* de ce développement exponentiel, l'émission des bitcoins suit une courbe logarithmique pour atteindre le nombre maximal de 21 millions de bitcoins émis.

Fig. 4 : L'utilisateur [fig. 4.1] va envoyer des ethers à l'application décentralisée (*dApp*) de la compagnie aérienne [fig. 4.2] qui va enregistrer la transaction dans un *smart-contract* [fig. 4.3] et créer un token-billet [fig. 4.4]. Ce jeton sera dépensé (détruit) lors de son utilisation [fig. 4.5.1]. Si le vol est annulé [fig. 4.5.2] un *oracle* [fig. 4.7] connecté au réseau de l'aéroport [fig. 4.6] déclenchera le *smart-contract* qui remboursera, au travers de la *dApp* [fig. 4.2], l'utilisateur en ethers [fig. 4.9].

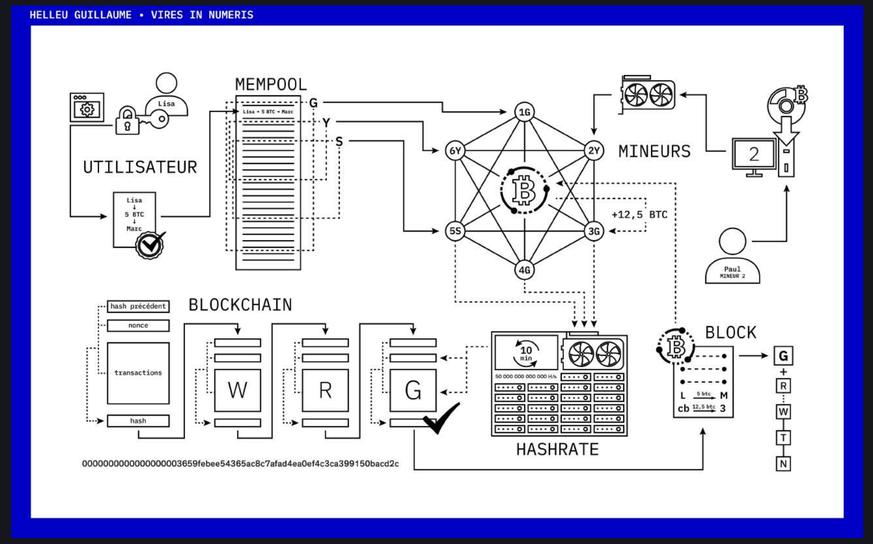
Fig. 3 : Différents systèmes d'interrelations : *centralisé* [fig. 3.1] (ex. : Paypal, Western Union), *polarisé* [fig. 3.2] (système bancaire actuel), *distribué* [fig. 3.3] (Bitcoin). On remarquera que seul ce dernier ne fait pas appel à un tiers de confiance (points noirs) pour fonctionner.

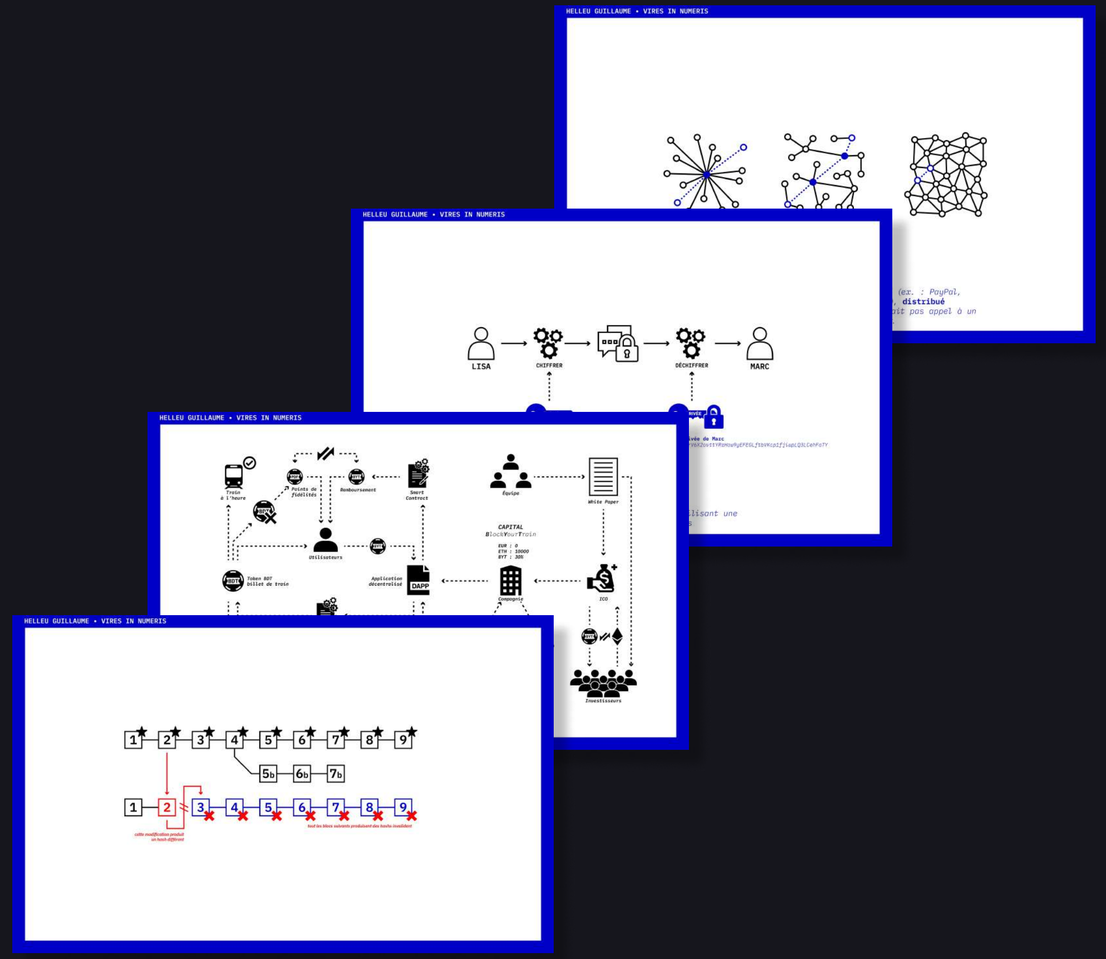
Multitudes journal (2018)



BACKGROUND

New Kids On The Blockchain (2018)





CRYPTOKIT PROJECT (2022-2023): GOALS

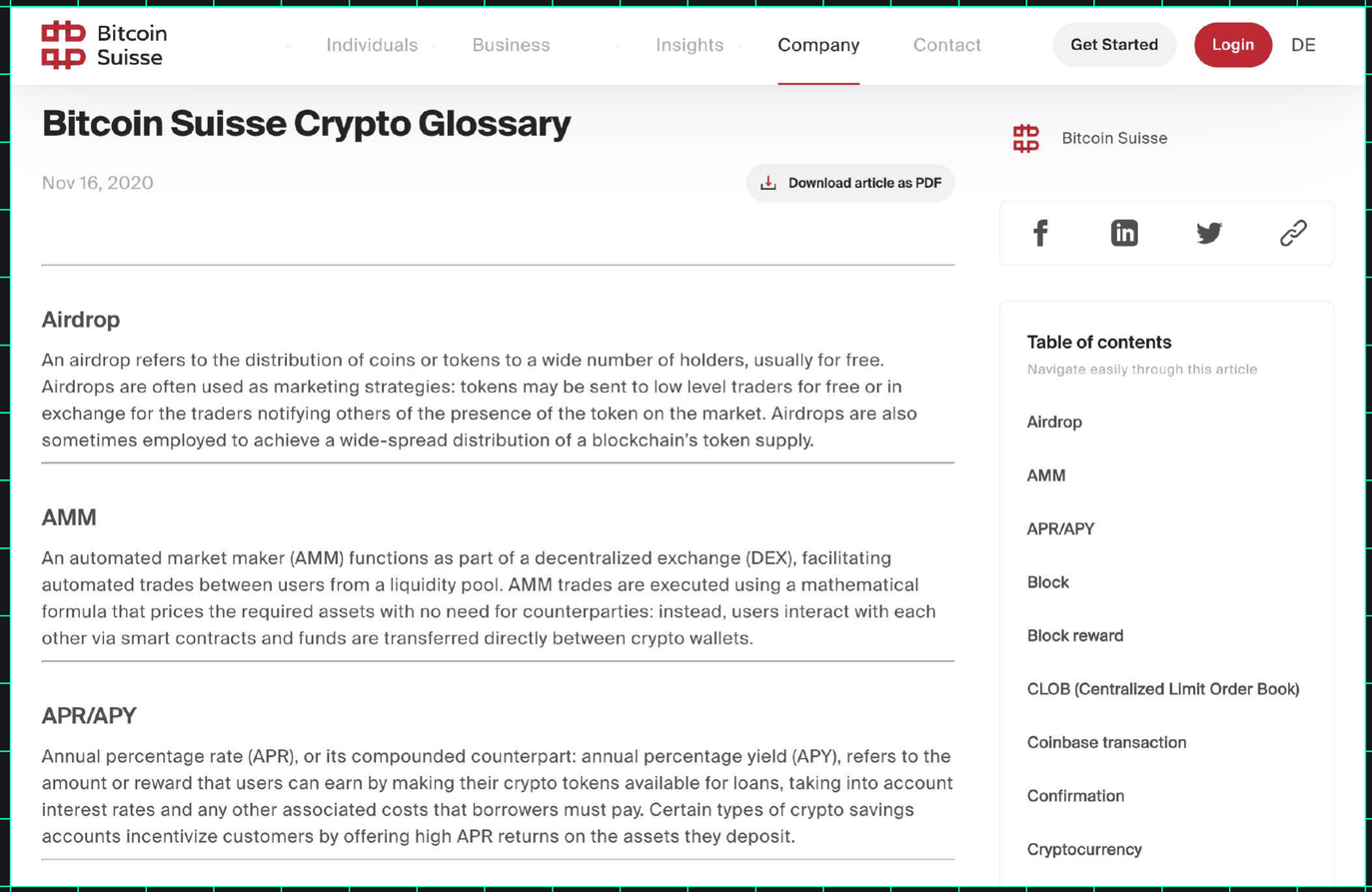
> Explain in a didactic way how blockchain technologies work

> Produce free educational material for schools and companies

> Establish a visual method of analysis and visual that can be applied to other fields

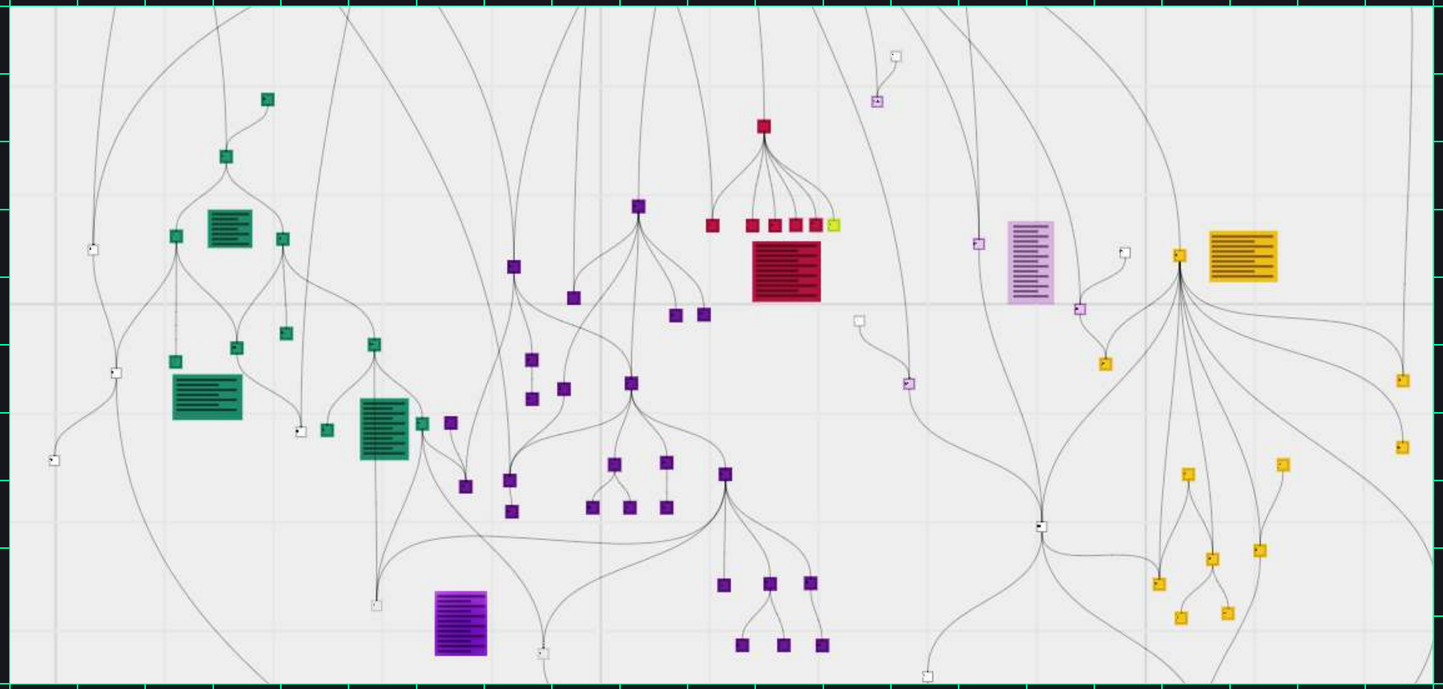
METHOD: FROM A GLOSSARY TO A SEMANTIC MAP

There are already a lot of blockchain glossaries



METHOD: FROM A GLOSSARY TO A SEMANTIC MAP

Displaying keywords on semantic layers



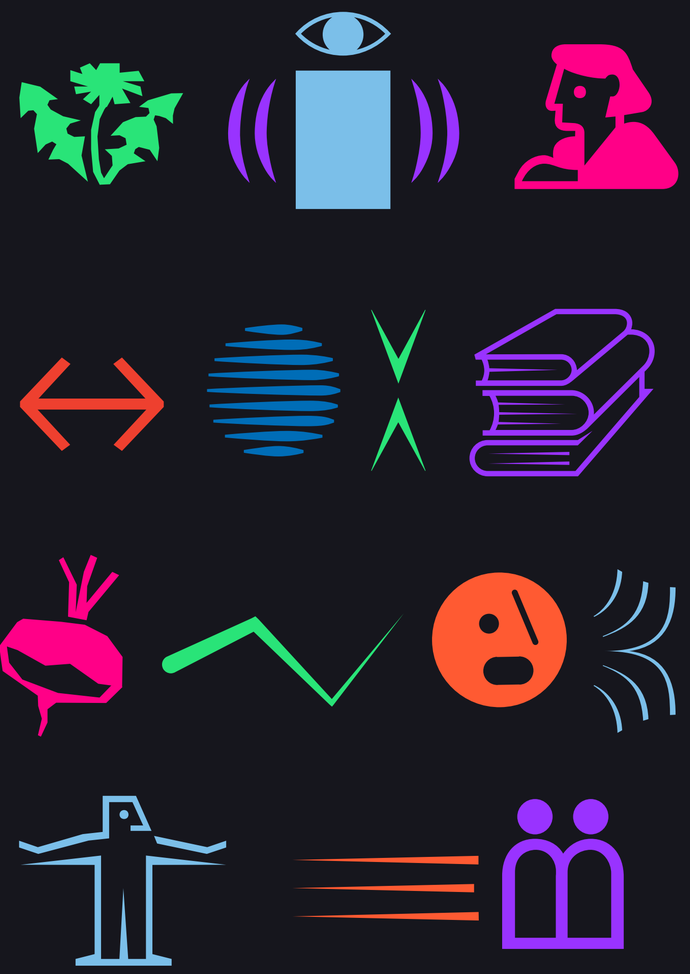
02

TYPEFACE

CREATION OF PICTOGRAPHIC TOOLS FOR THE TRANSMISSION OF COMPLEX IDEAS

Various pictographic systems created for various subjects and uses

http://oceanejuvin.fr

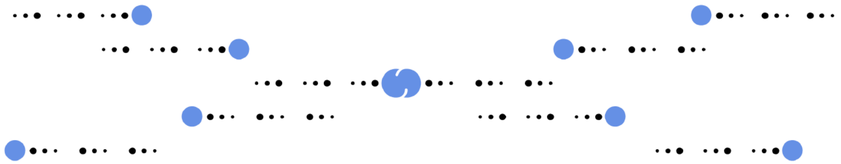


http://oceanejuvin.fr/quantype

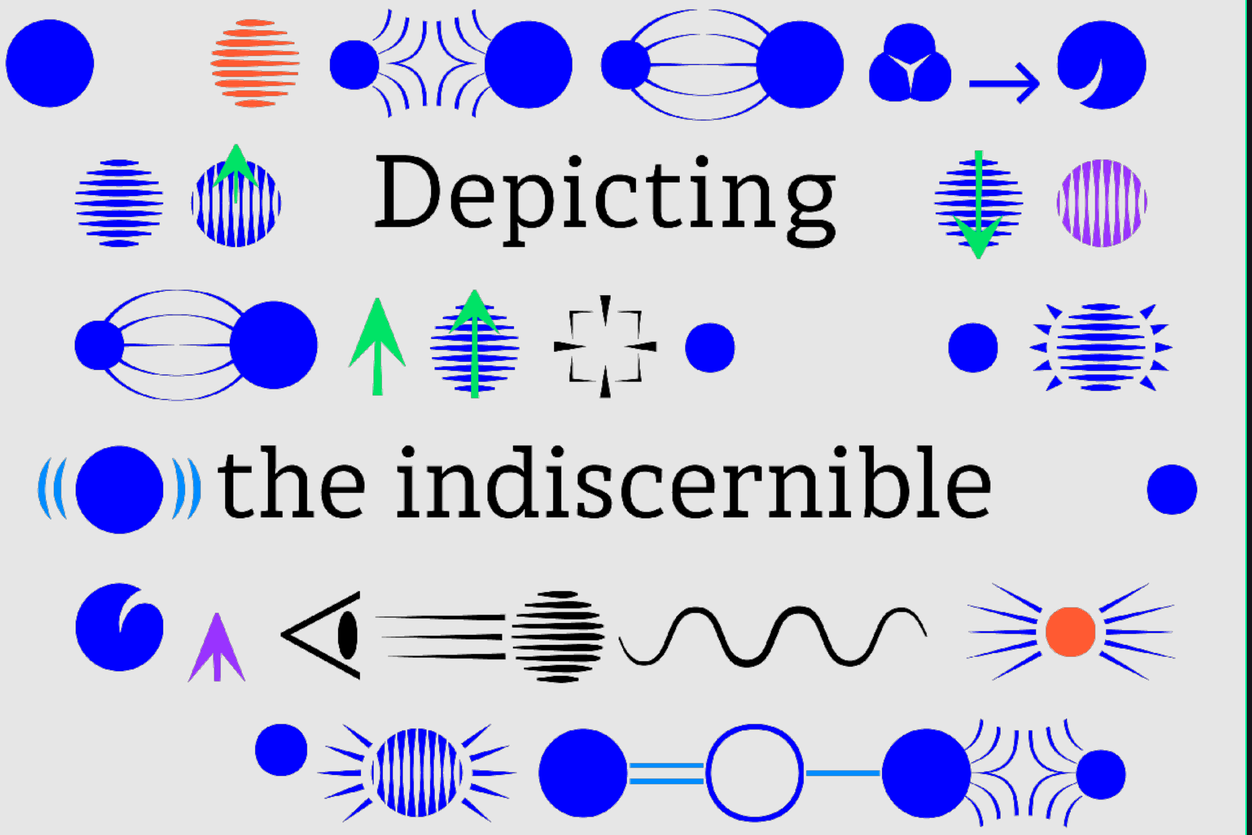
La quantique autrement, Julien Bobroff, Flammarion,2020

parfaite entre particules. Prenons deux de ces particules. Plaçons les de part et d'autre de la page de ce livre :

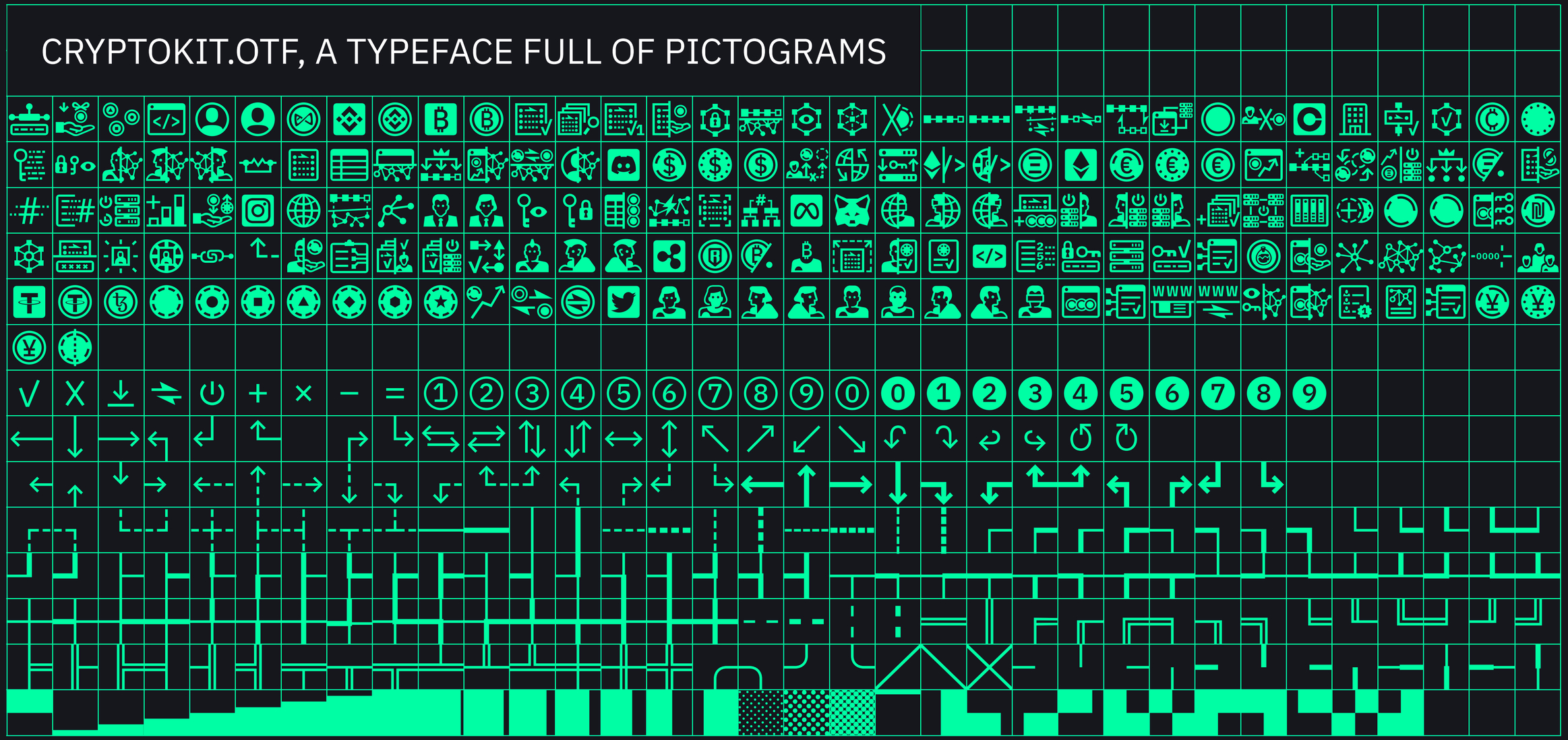
Envoyons-les l'une vers l'autre comme dans un billard :

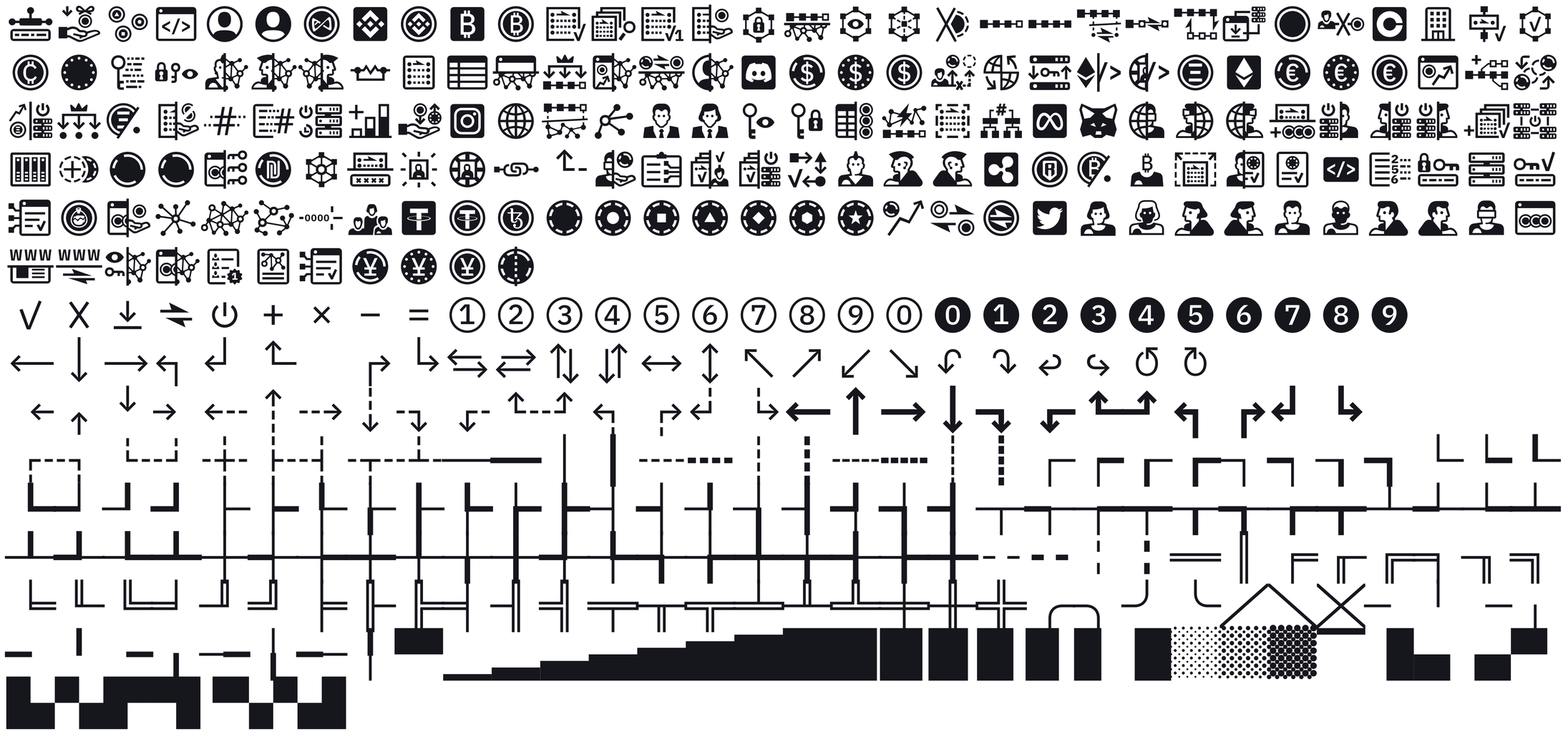


Après le choc, il est impossible de dire laquelle des particules ● ou ● est à gauche ou à droite. Moins célèbre que l'intrication, la dualité ou le principe d'incertitude, l'indiscernabilité est pourtant l'une des notions les plus importantes. A elle seule, elle va s'avérer responsable de la diversité des atomes dans notre Univers, de la force des liaisons chimiques, et même de l'existence des métaux.



CRYPTOKIT.OTF, A TYPEFACE FULL OF PICTOGRAMS



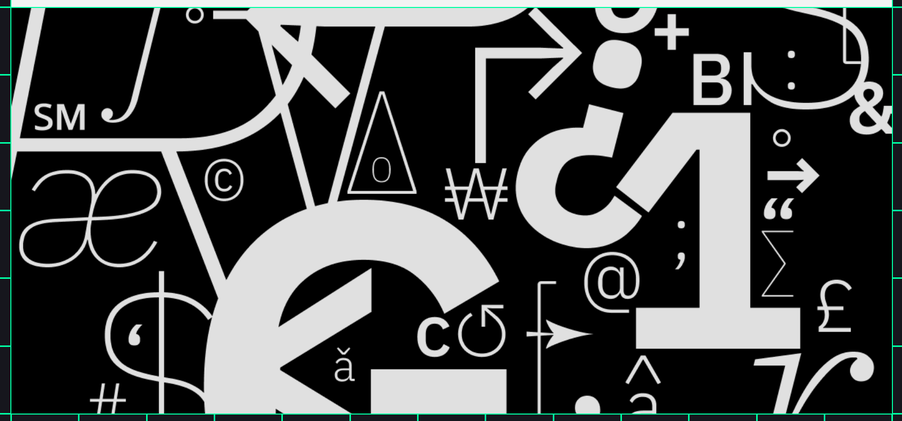


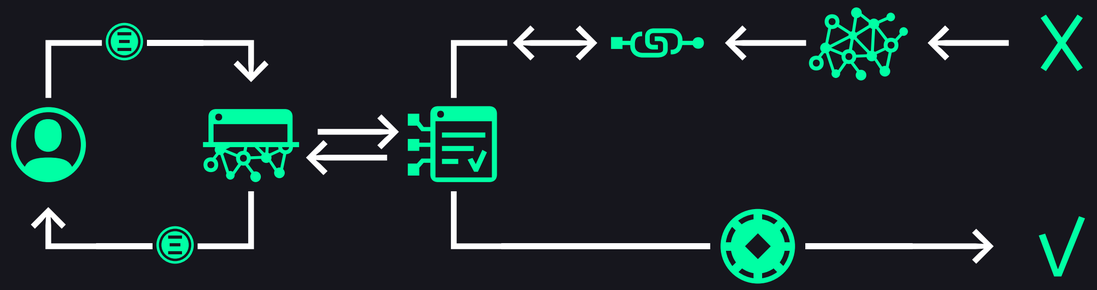
CryptoKit.ch

Anthony Masure, Océane Juvin, Guillaume Helleu | ATypI Paris, 13 May 2023

IBM PLEX FORK AND COMPANION

IBM Plex Sans:
Natural and engineered letterforms in balance.





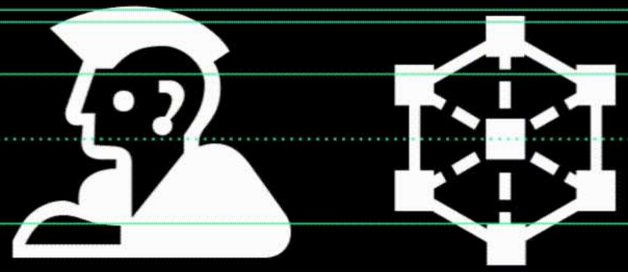
1 Pour envoyer 5 bitcoins à Marc, Lisa va utiliser sa clé privée pour signer sa transaction qui sera mise en attente dans la mempool . 2 Les mineurs ayant préalablement téléchargé le logiciel-client Bitcoin et alloué leur puissance de calcul au protocole vont sélectionner parmi la mempool les transactions à insérer dans leur version du bloc à miner .

IBM Plex Mono Regular

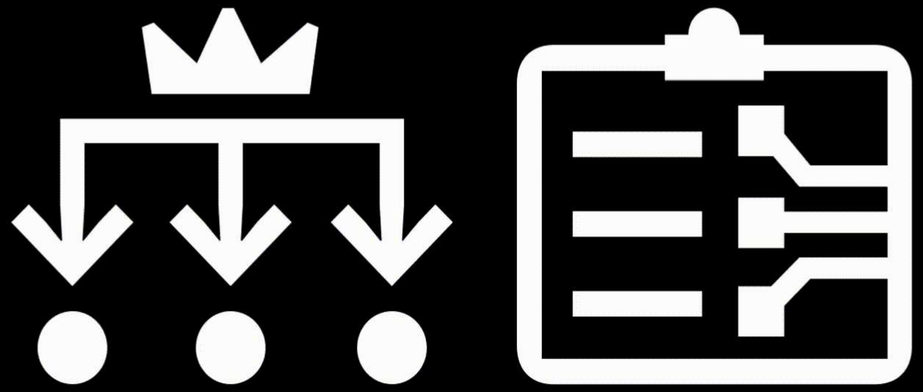
Cryptokit

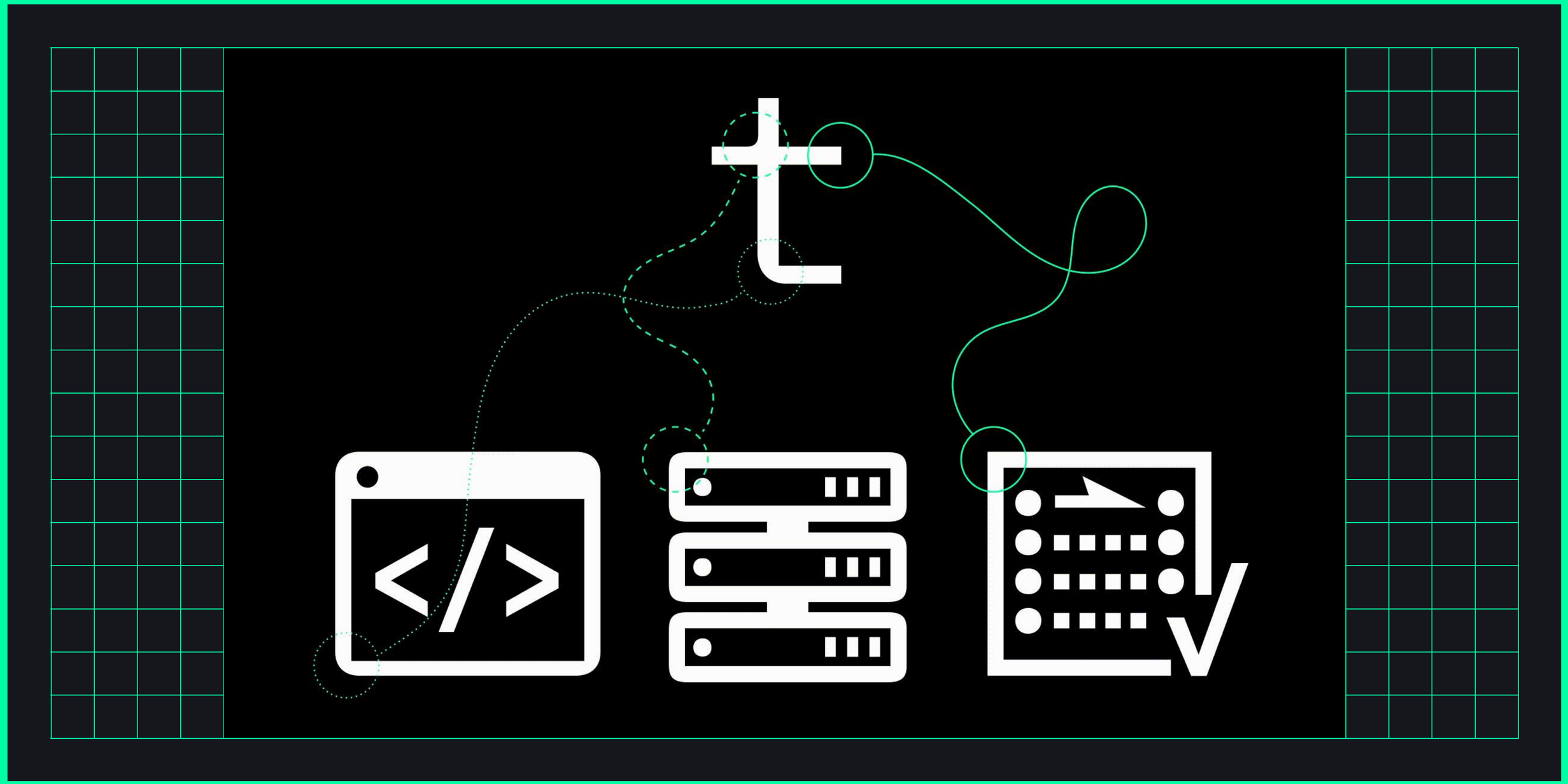
a
c
x
d

Crypto

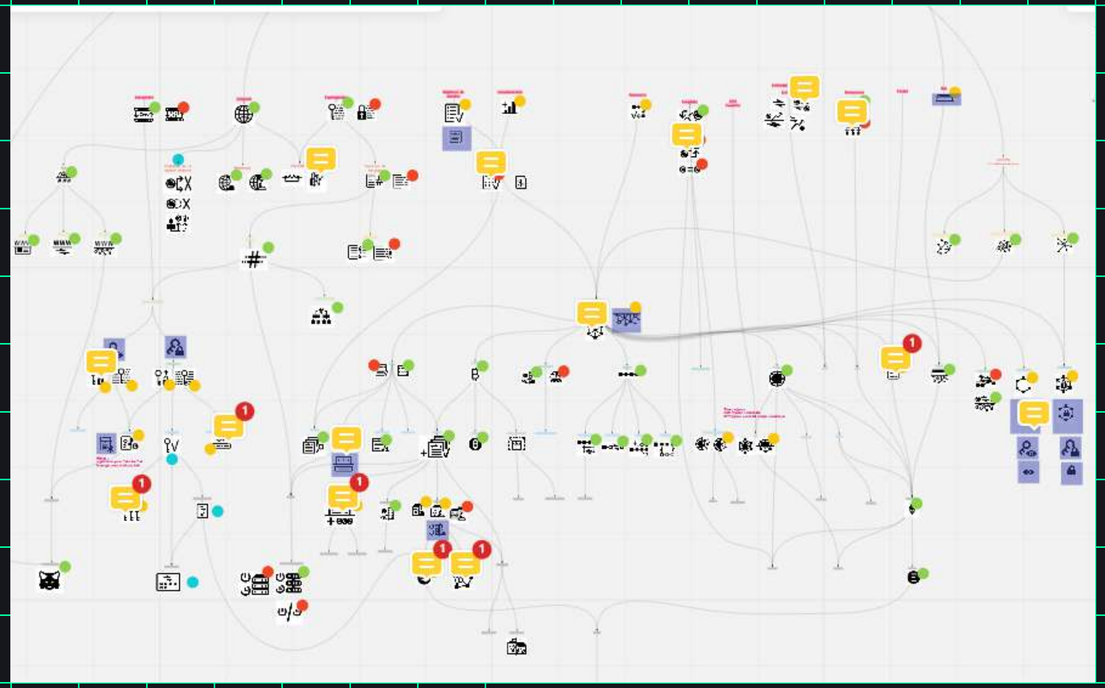


coin

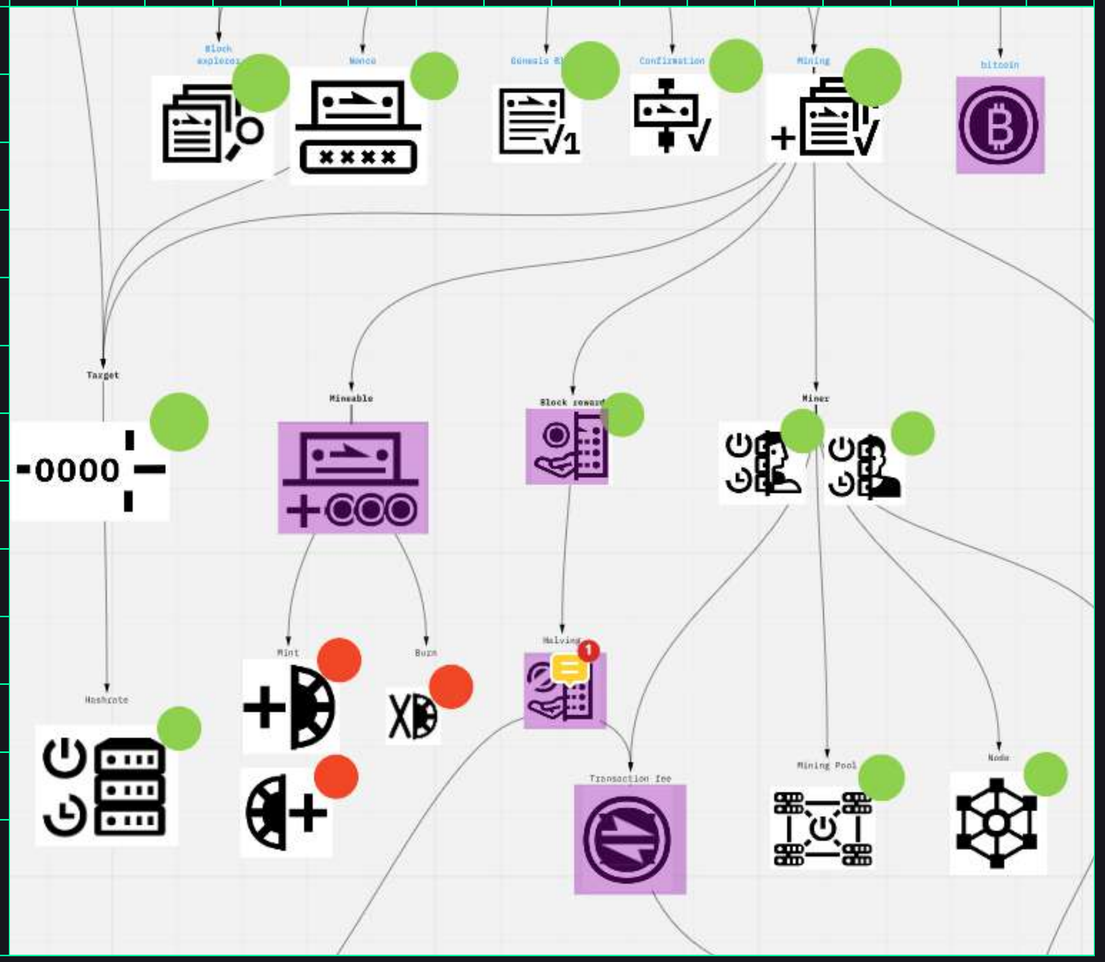


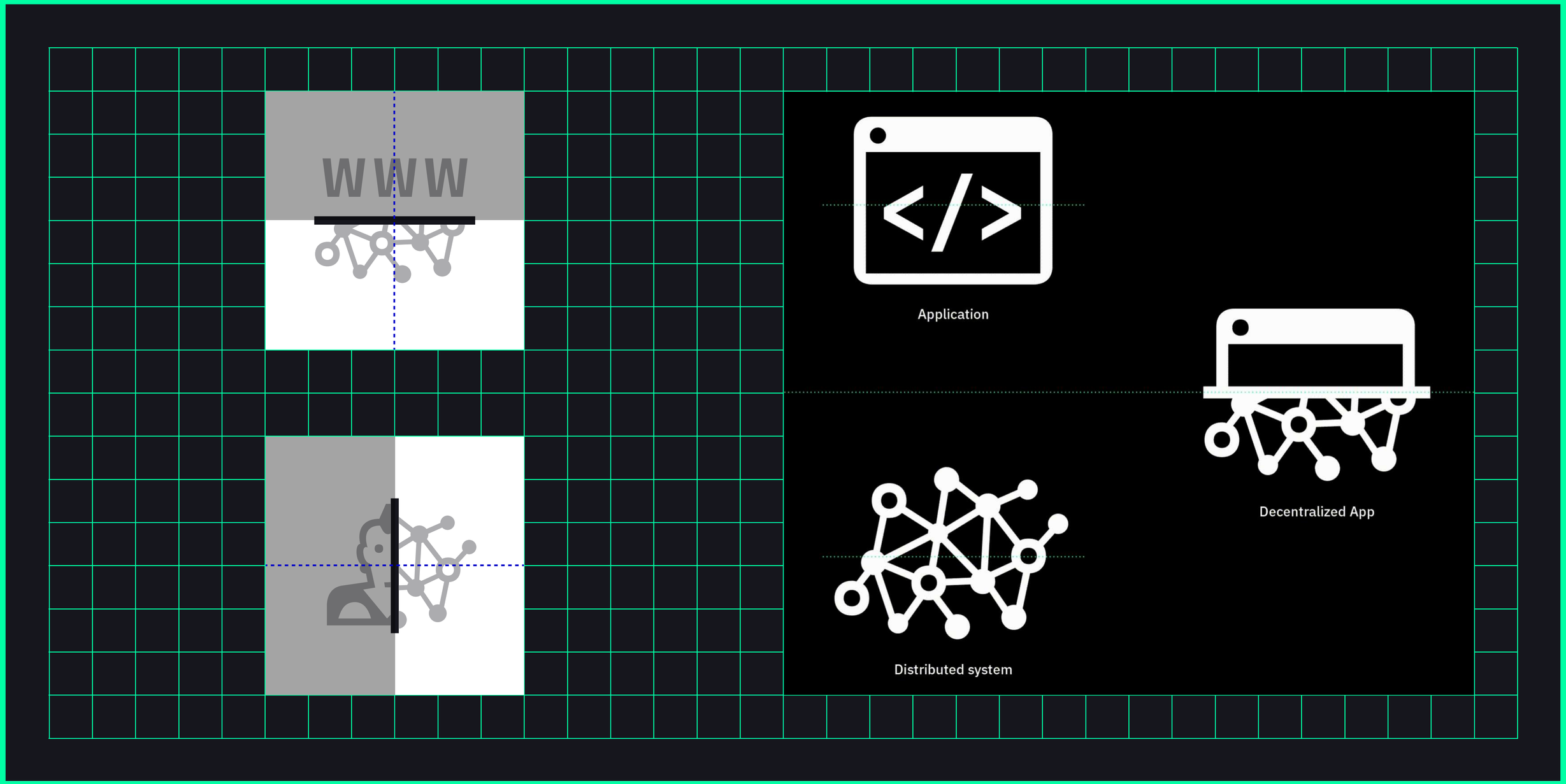


WHAT GRAPHIC SYSTEM TO REPRESENT BLOCKCHAIN TECHNOLOGIES?

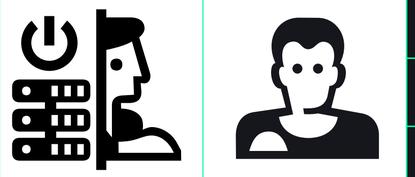


Screenshots of our work
in progress on a Miro mind map

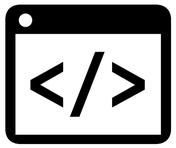



WWW
Application
Decentralized App
Distributed system

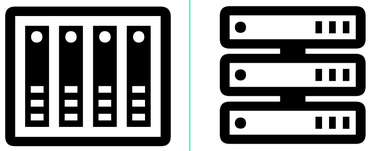
actors / roles



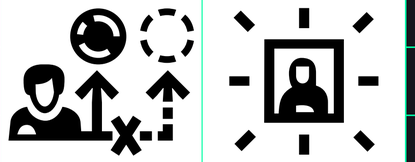
softwares



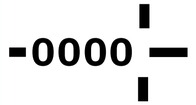
hardwares



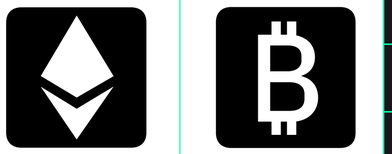
concepts



numbers

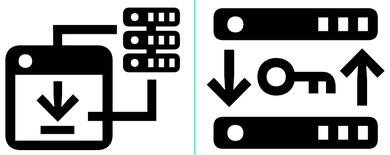


companies

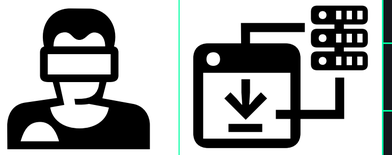


documents

mechanisms

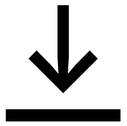


technologies

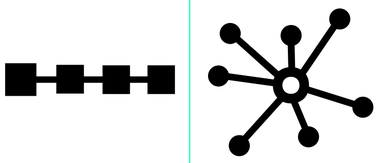


digital assets

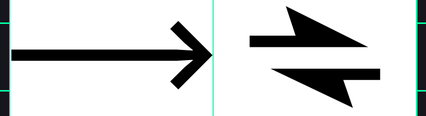
operations

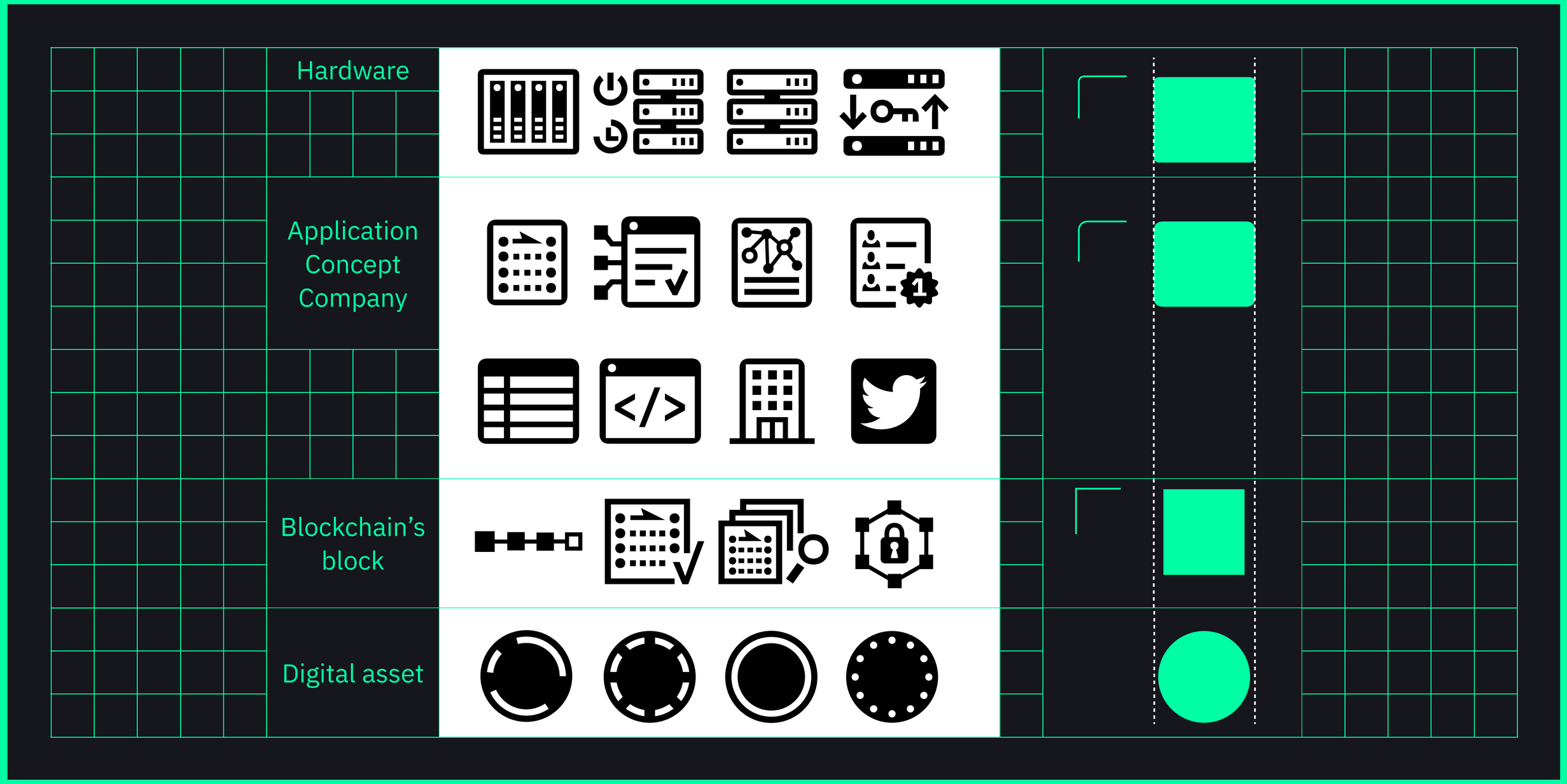


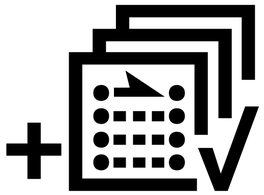
organisation systems

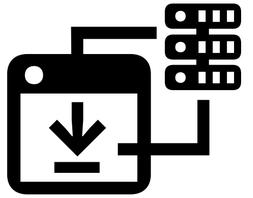


relations




Hardware
Application
Concept
Company
Blockchain’s
block
Digital asset





Burn

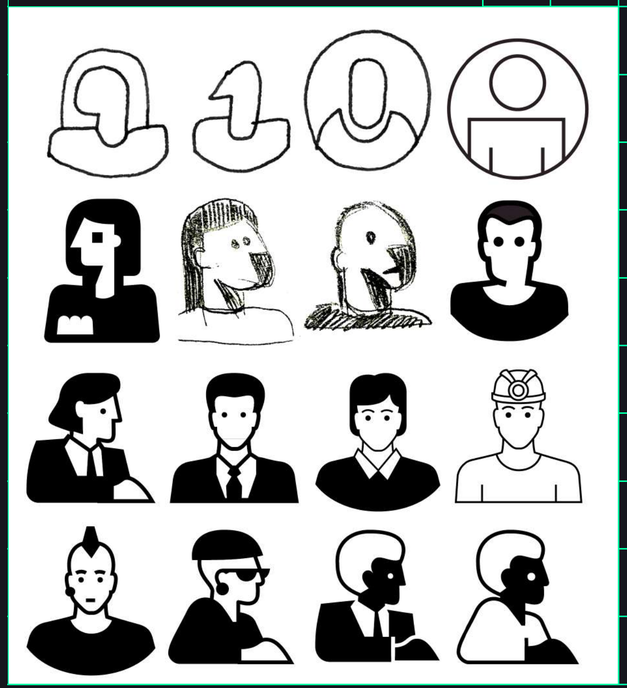
Mint

Mining

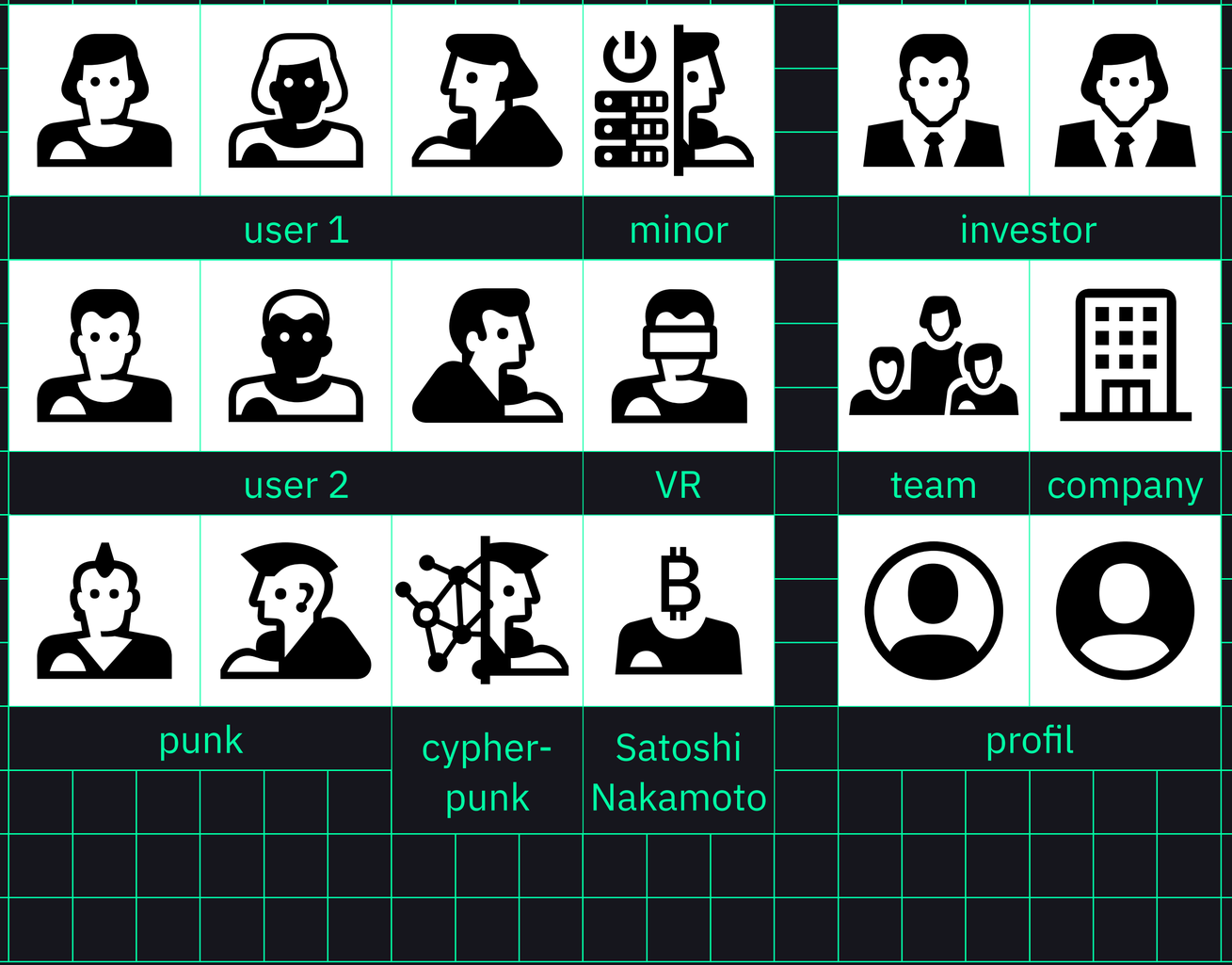
Oracle

Cloud

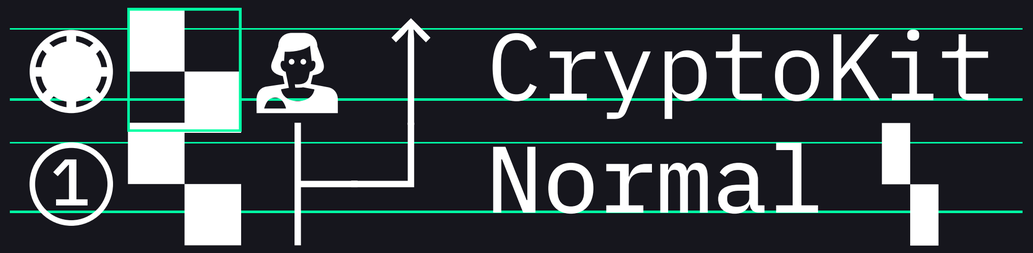
Sketches for drawing of avatars

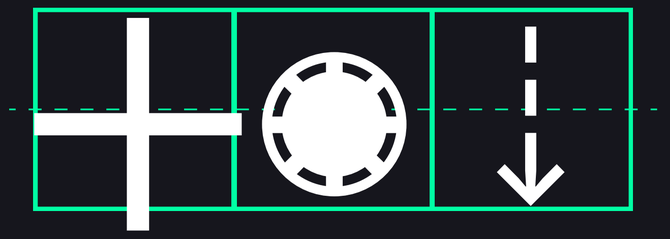


→



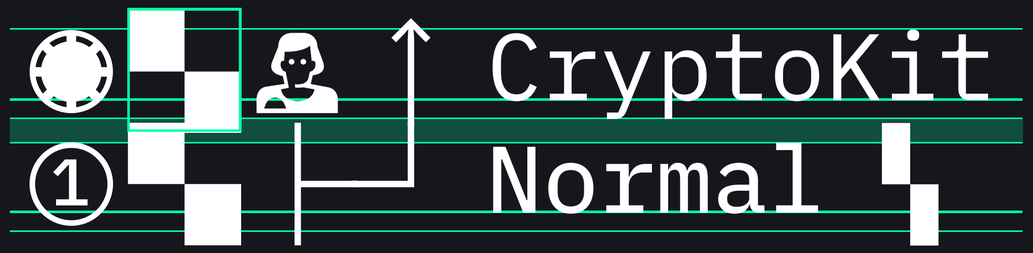
TYPESET IN A GRID

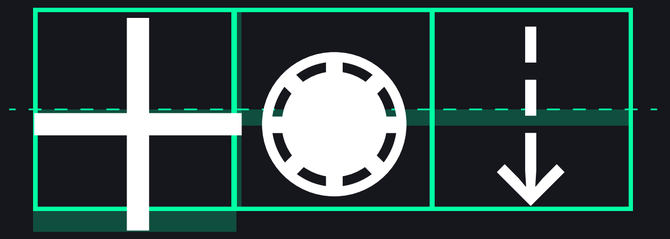




CryptoKit

TYPESET IN A GRID



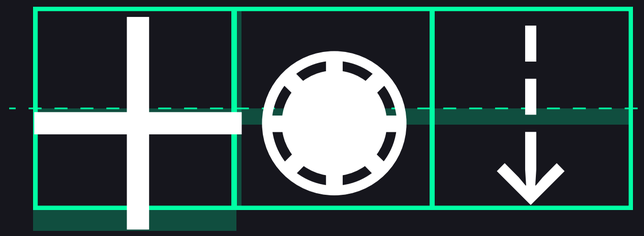


CryptoKit

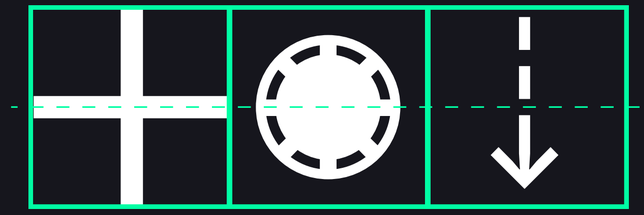
TYPESET IN A GRID

CryptoKit
Normal

CryptoKit
_GRILLE



CryptoKit



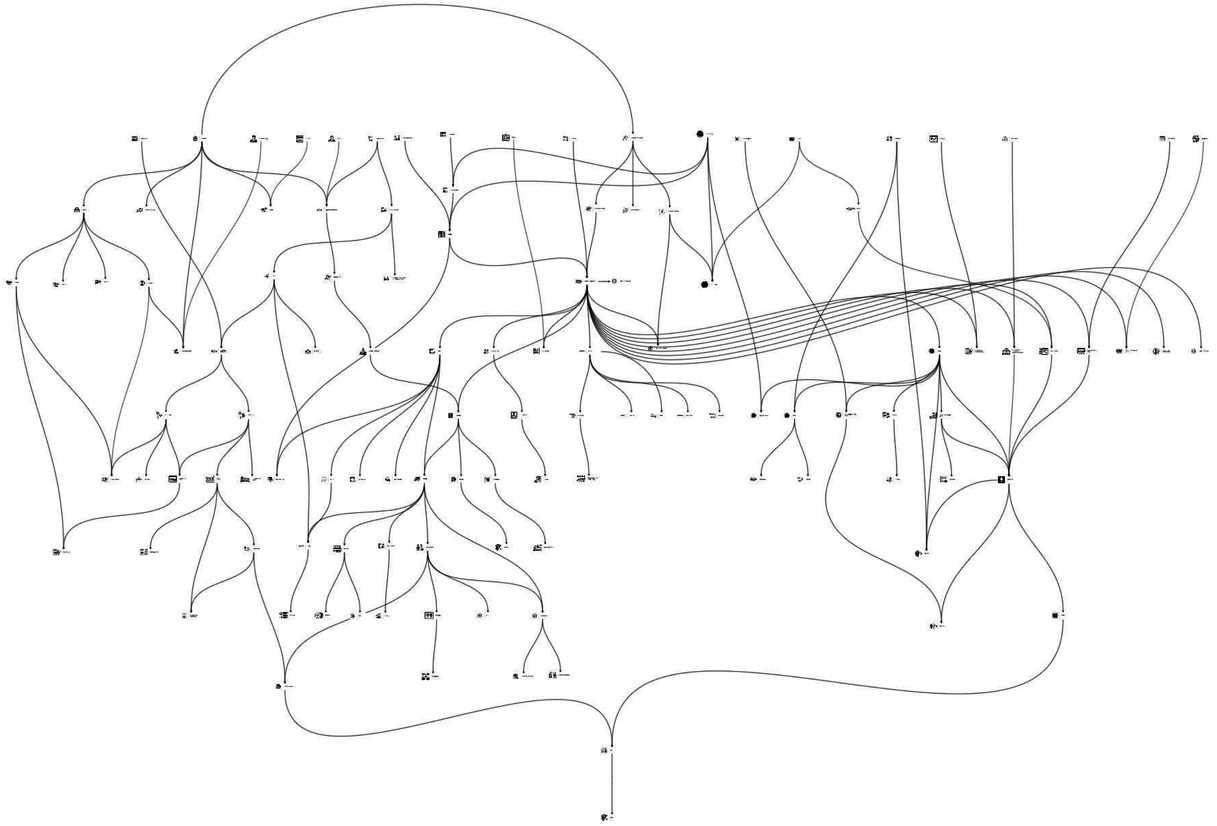
CryptoKit_GRILLE

03

USE CASES

THE MINDMAP

From functional to lexical



LEXICAL STRUCTURE

Blockchain

LEXICAL STRUCTURE

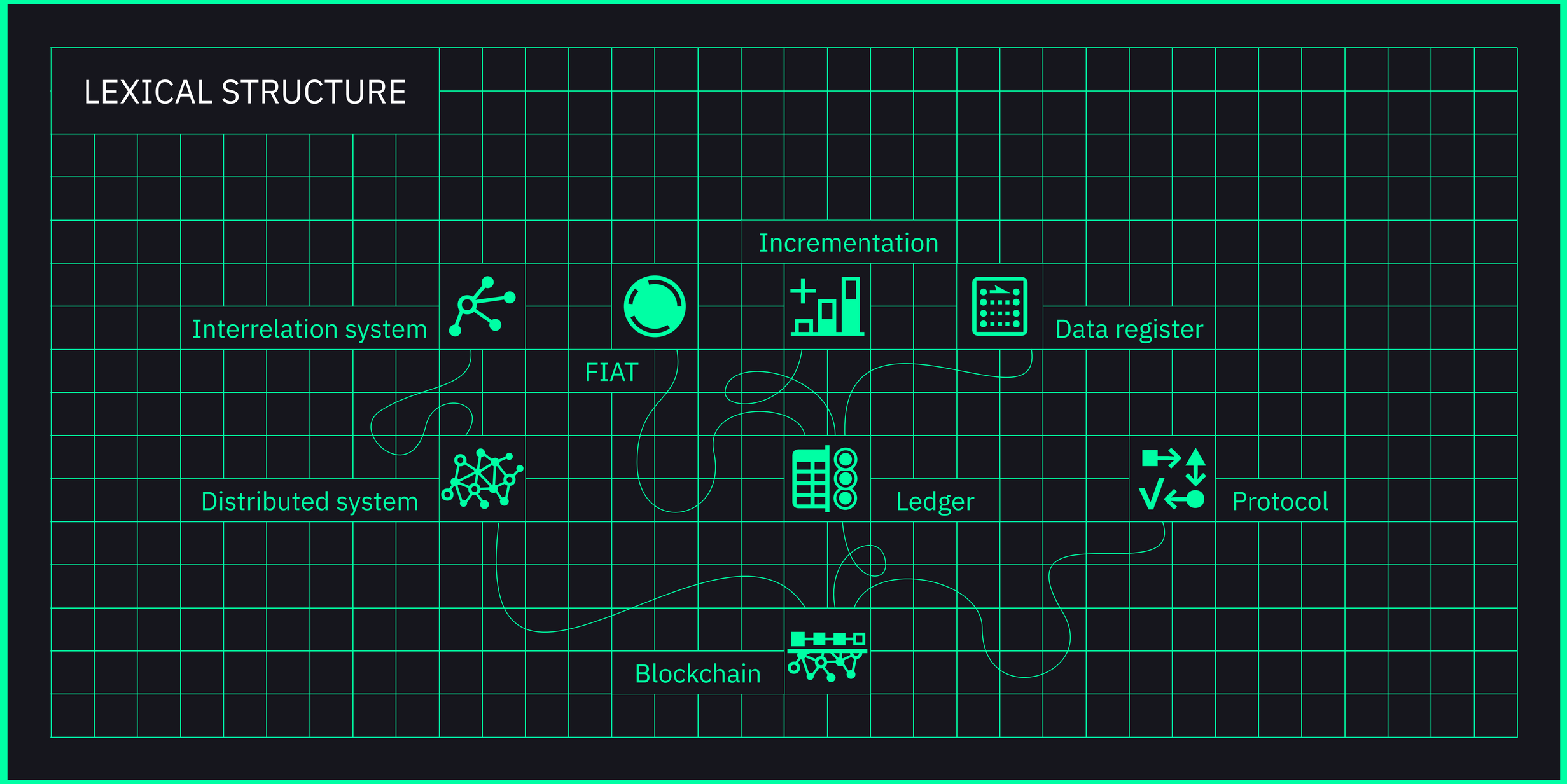
Distributed system

Ledger

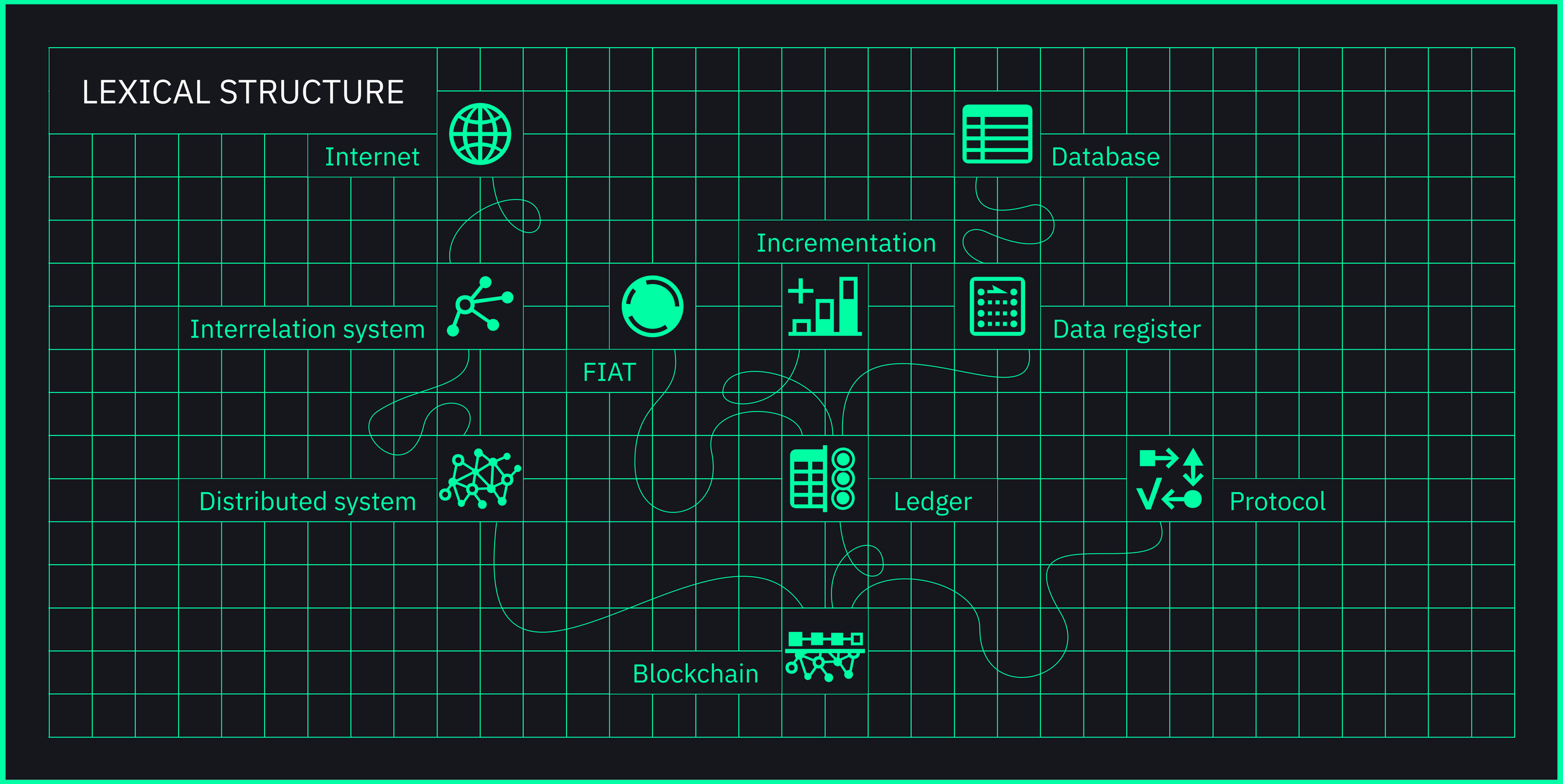
Protocol

Blockchain

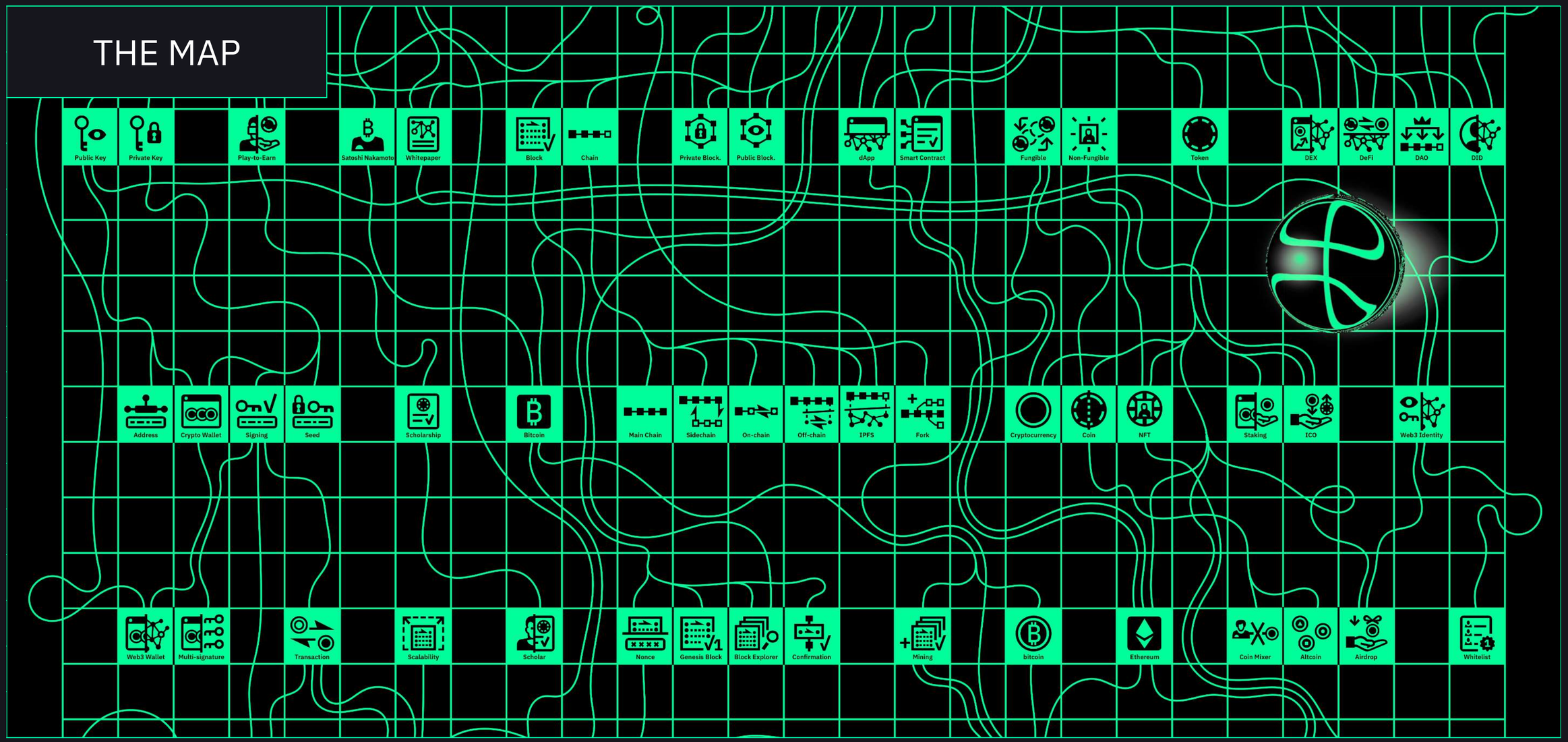
LEXICAL STRUCTURE



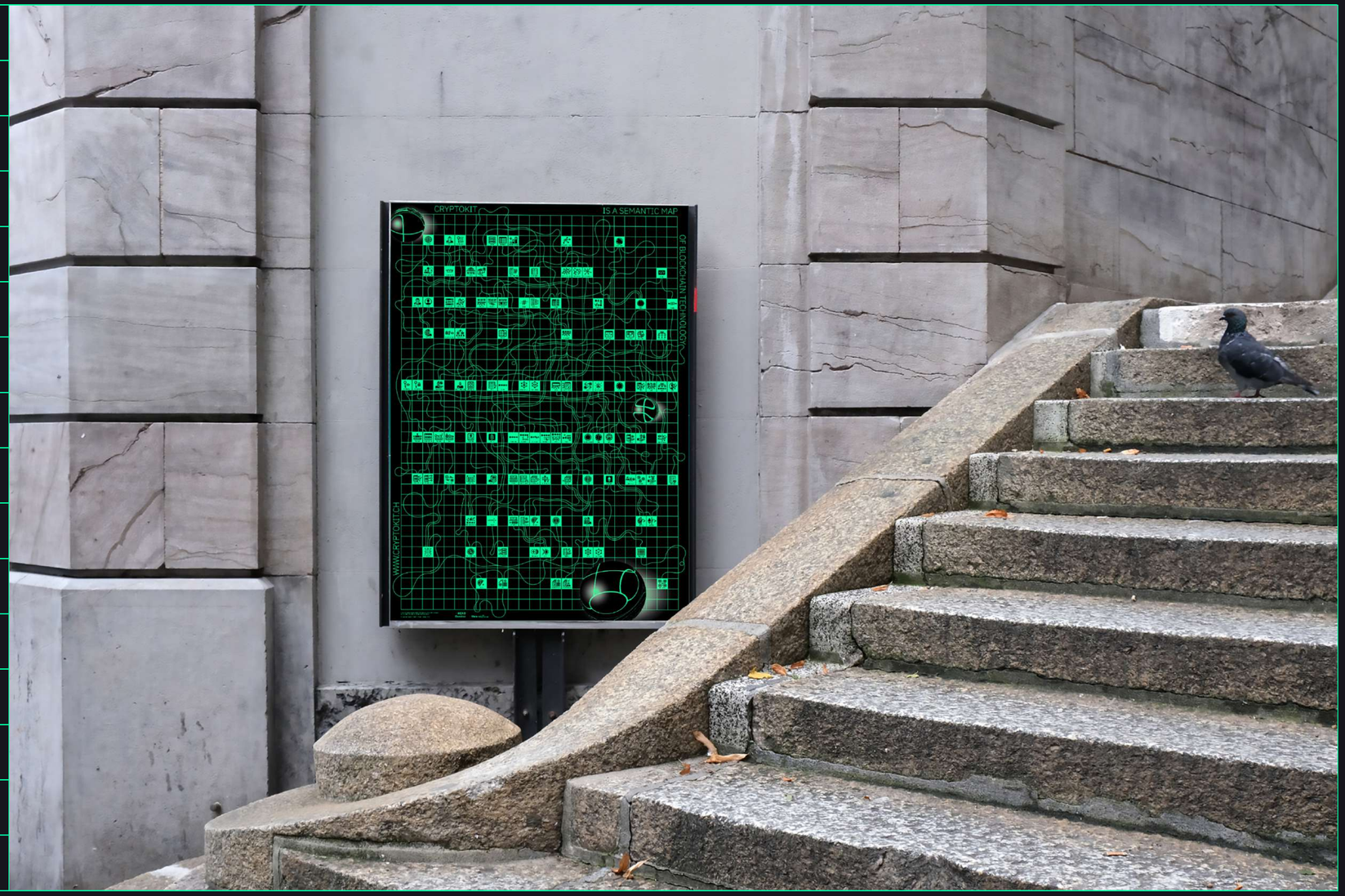
LEXICAL STRUCTURE



THE MAP

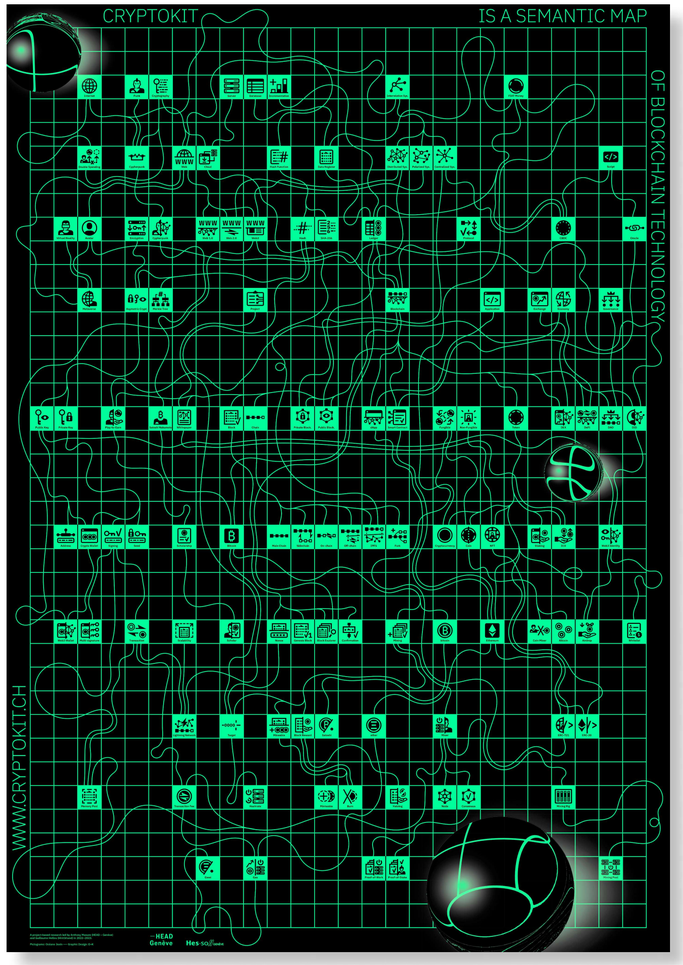

Public Key
Private Key
Play-to-Earn
Satoshi Nakamoto
Whitepaper
Block
Chain
Private Block.
Public Block.
dApp
Smart Contract
Fungible
Non-Fungible
Token
DEX
DeFi
DAO
DID
Address
Crypto Wallet
Signing
Seed
Scholarship
Bitcoin
Main Chain
Sidechain
On-chain
Off-chain
IPFS
Fork
Cryptocurrency
Coin
NFT
Staking
ICO
Web3 Identity
Web3 Wallet
Multi-signature
Transaction
Scalability
Scholar
Nonce
Genesis Block
Block Explorer
Confirmation
Mining
bitcoin
Ethereum
Coin Mixer
Altcoin
Airdrop
Whitelist

THE MAP


CRYPTOKIT
IS A SEMANTIC MAP
OF BLOCKCHAIN TECHNOLOGY
WWW.CRYPTOKIT.CH

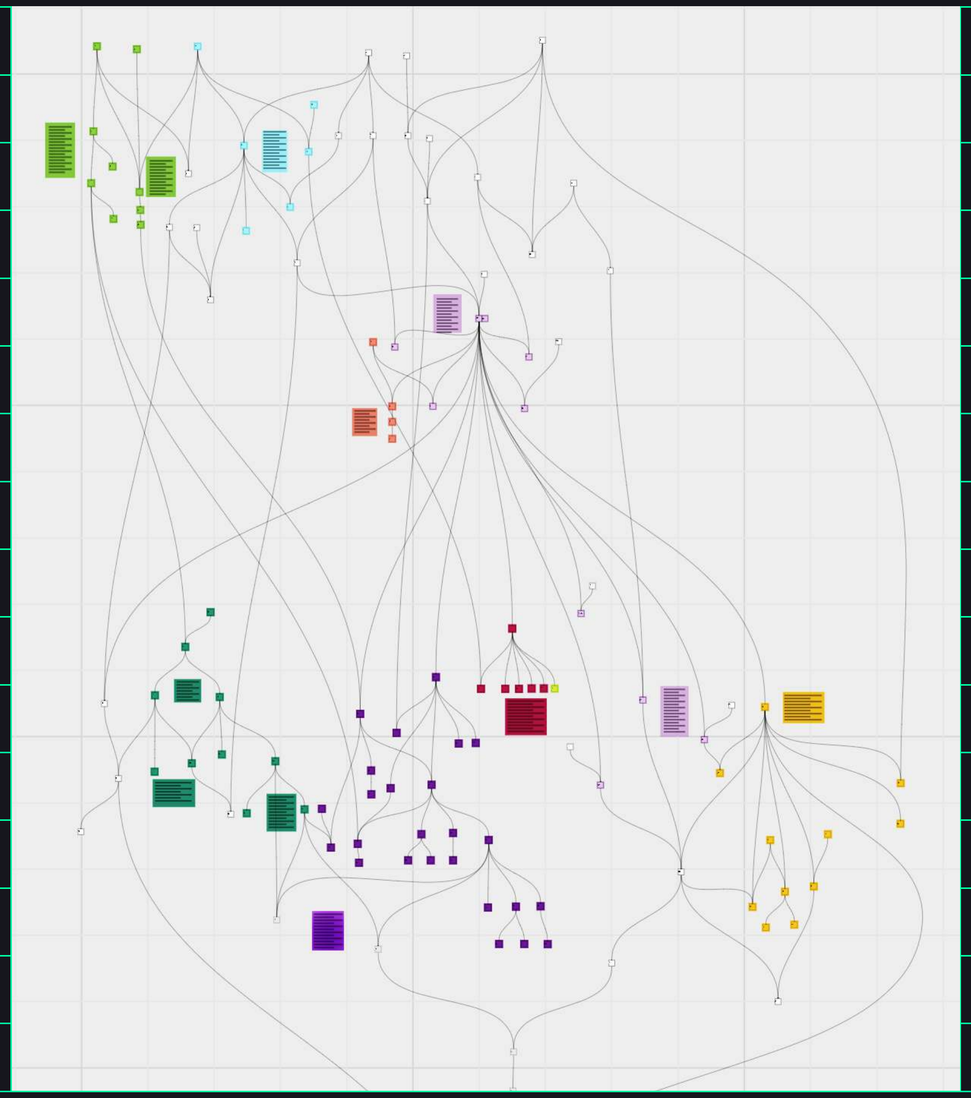
THE MAP

Graphic design: E+K
Black and green silk-screen printing
F4 format (89.5 × 128 cm)
CHF 30

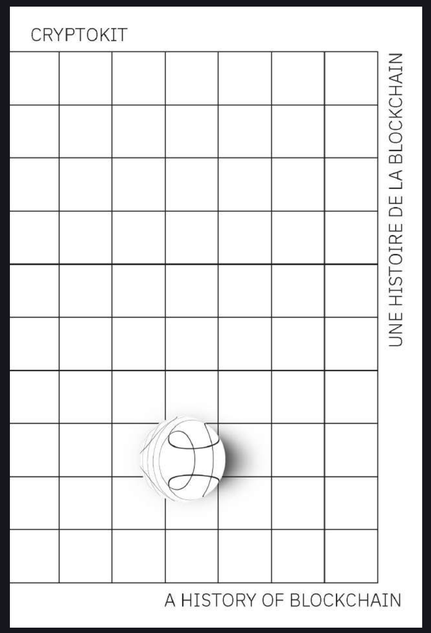


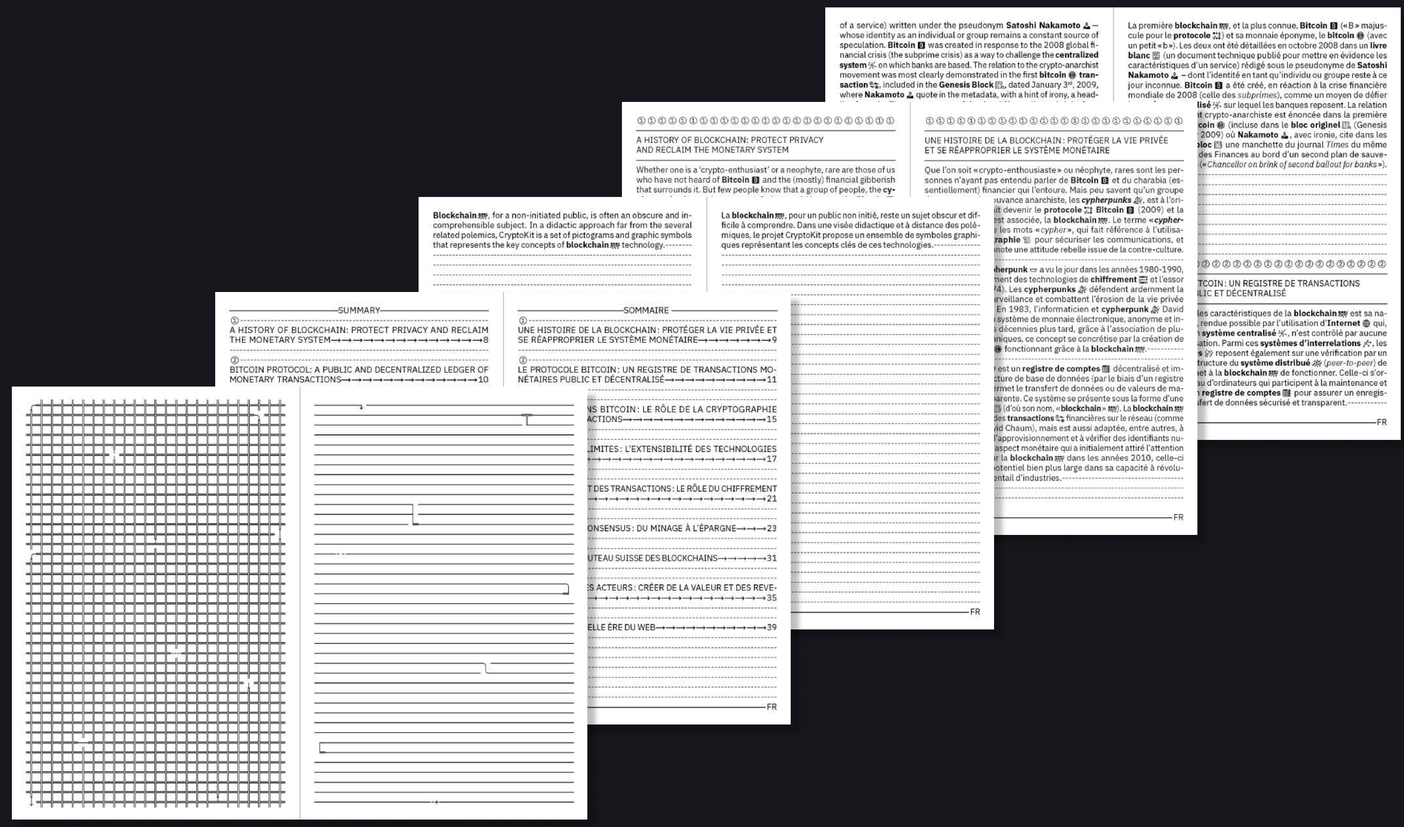
THE BOOKLET

From lexical to narrative



THE BOOKLET





Graphic design: E+K, 52 pages — print-on-demand — 15,6 × 23,4 cm — 5 USD

CryptoKit.ch

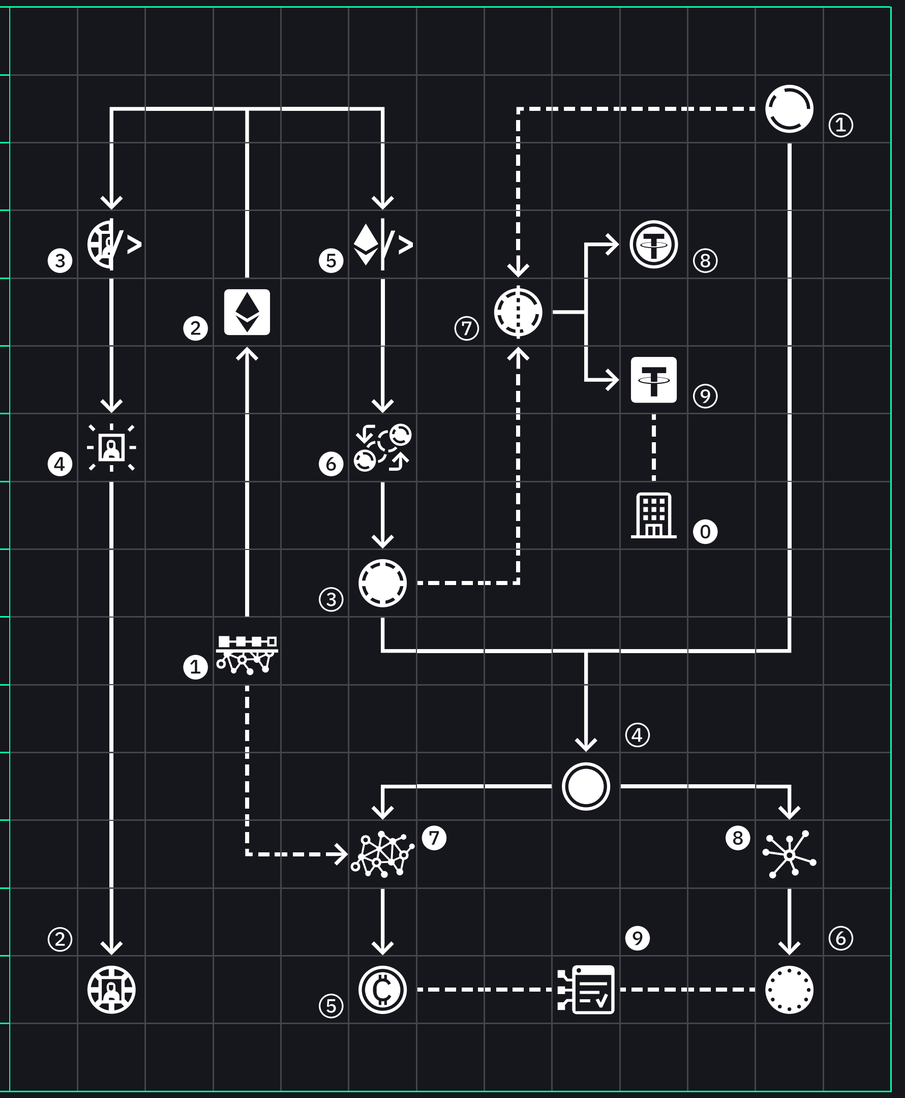
Anthony Masure, Océane Juvin, Guillaume Helleu | ATypI Paris, 13 May 2023

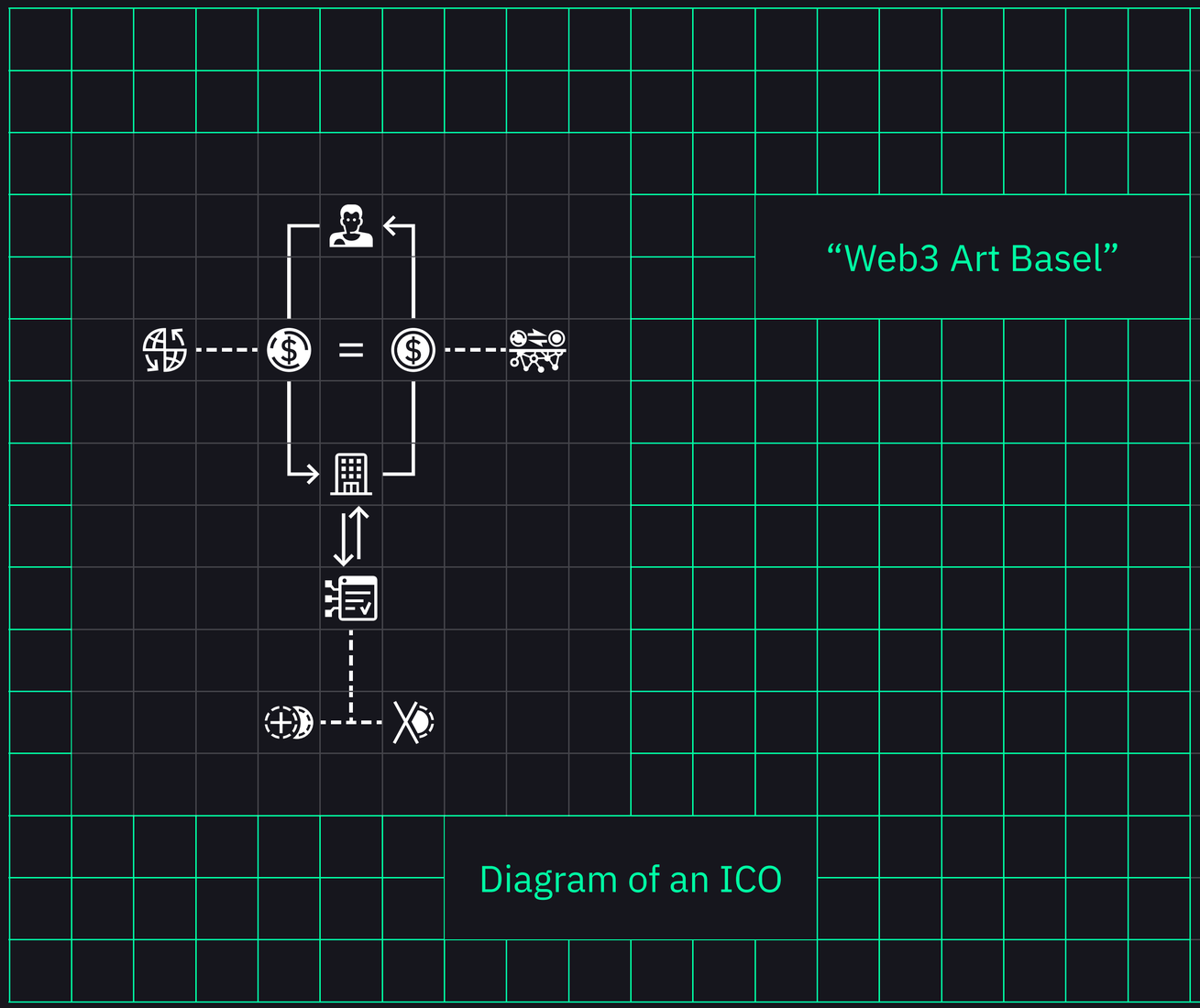
CryptoKit.ch

Anthony Masure, Océane Juvin, Guillaume Helleu | ATypI Paris, 13 May 2023

DIAGRAMS

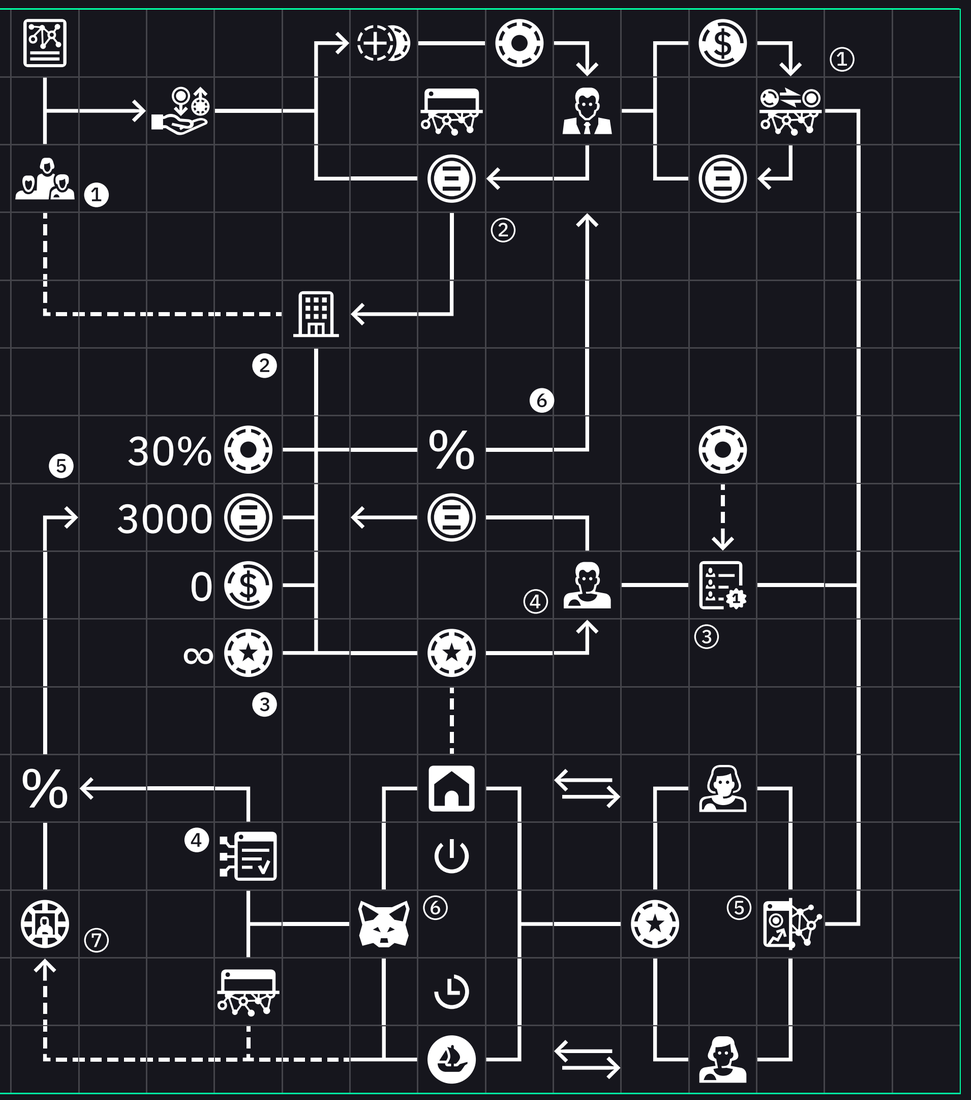
From narrative to functional





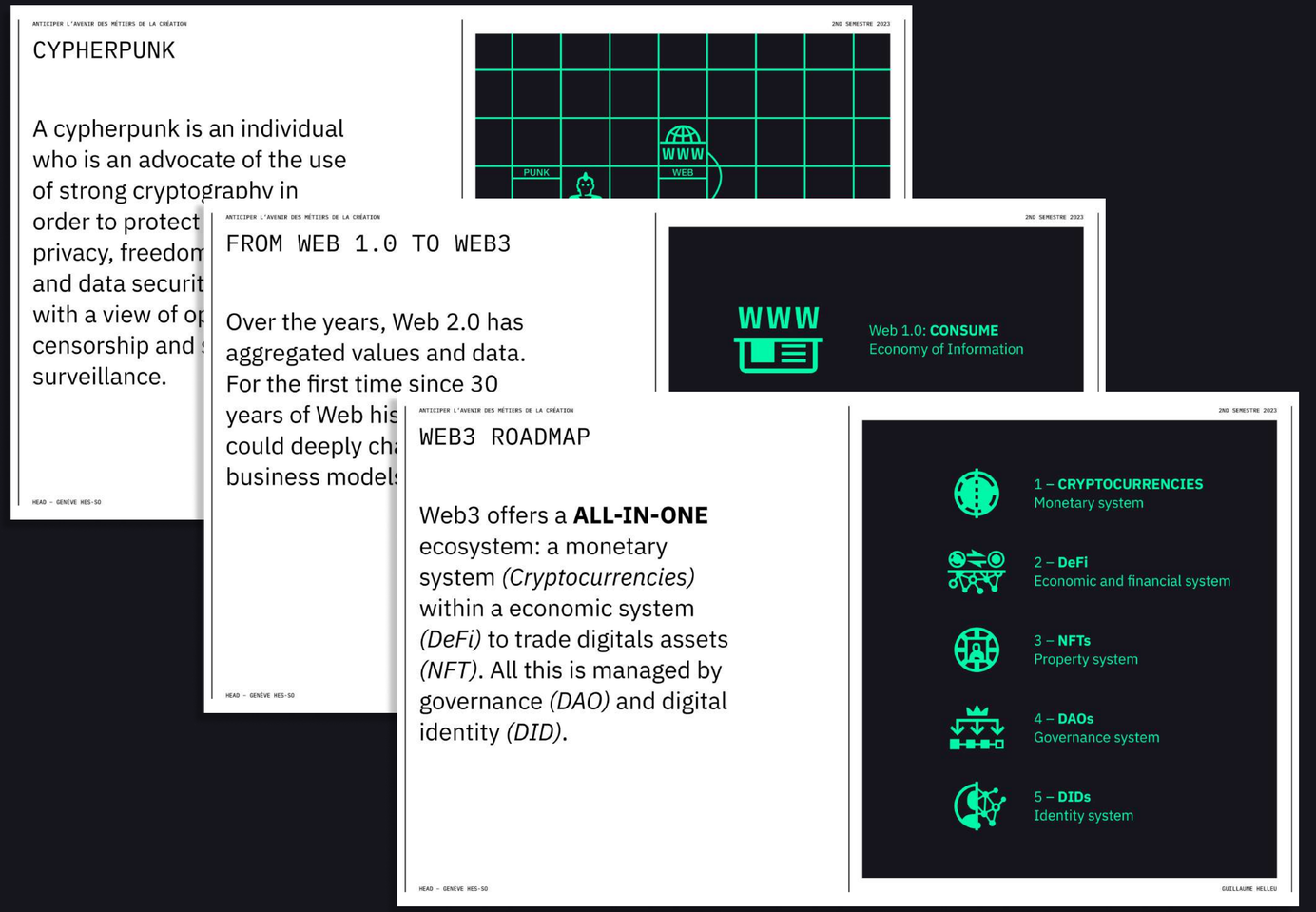
“Web3 Art Basel”

Diagram of an ICO



SLIDES & LECTURES

HES-SO Geneva Bachelor transversal course

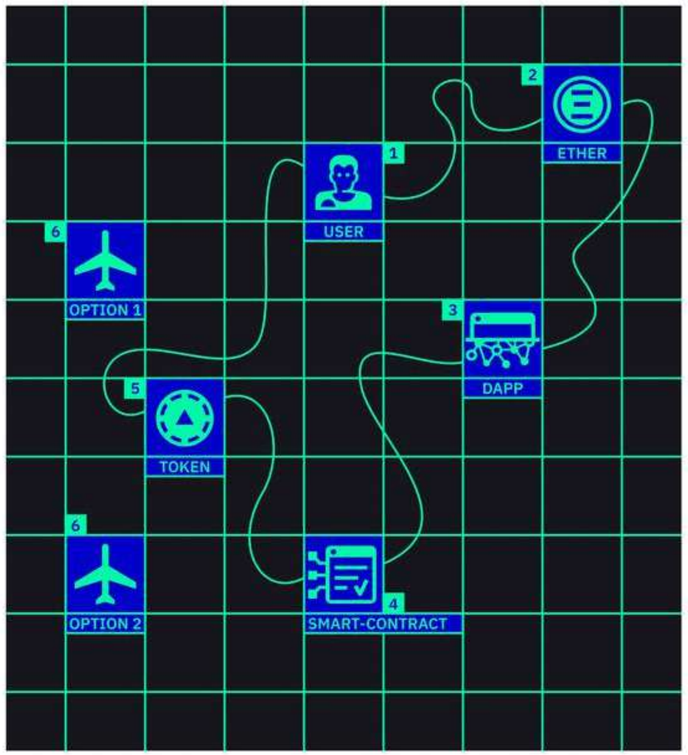


ANTICIPER L'AVENIR DES MÉTIERS DE LA CRÉATION

2ND SEMESTRE 2023

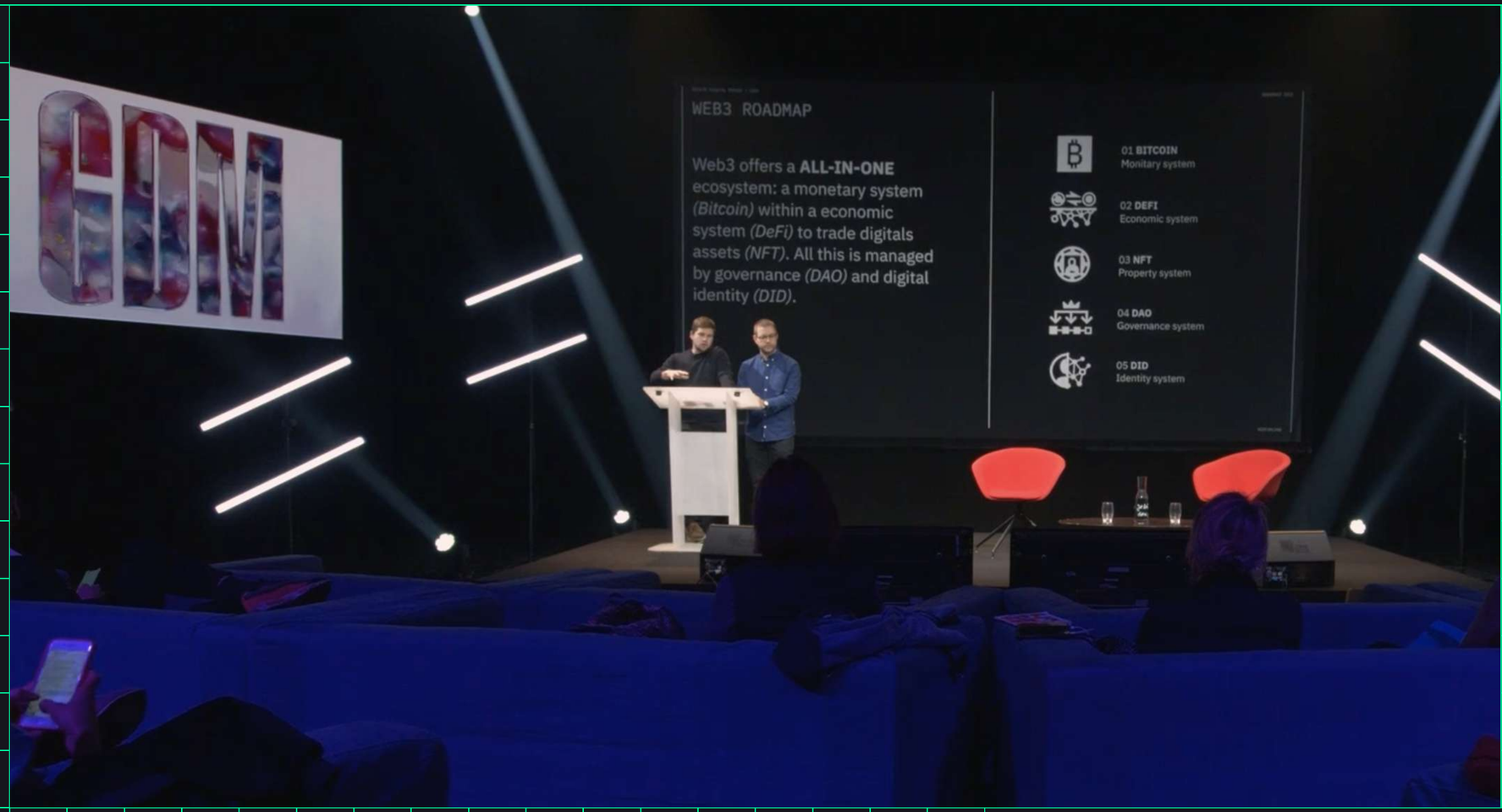
WEB3 PROTOCOL

The user [1] will send ethers [2] to the decentralized application (dApp) of the airline [3] which will record the transaction in a smart contract [4] and create a token-ticket [5]. Two scenarios are possible [6].



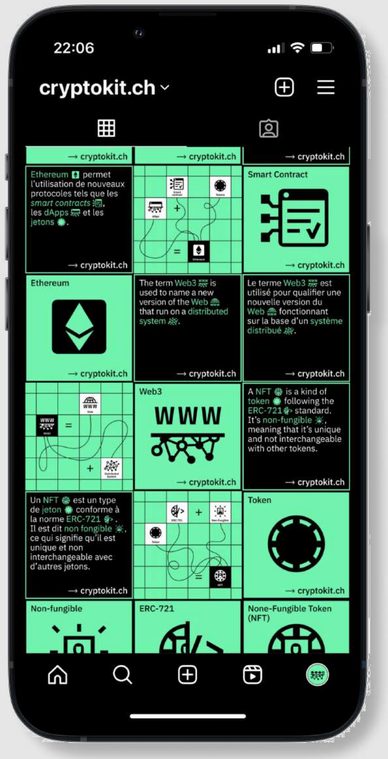
HEAD – GENÈVE HES-SO

GUILLAUME HELLEU



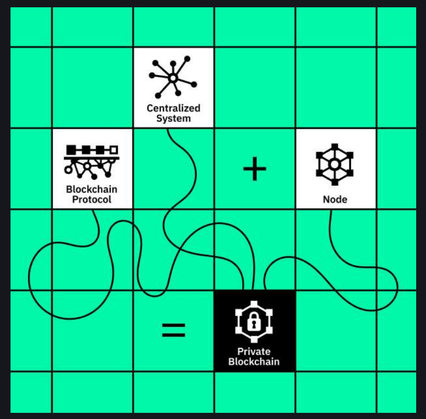
Geneva International Film Festival (GIFF):
Geneva Digital Market, 2022


22:05
cryptokit.ch
78 Publications
19 Followers
0 Suivi(e)s
Cryptokit
CryptoKit is a semantic map designed to explain blockchain technology and Web3 protocols. It includes a open source typeface of 200 pictograms.
Voir la traduction
www.cryptokit.ch
Modifier
Partager profil
The cypherpunks (portmanteau word between cypher and punk) are an informal group defending the freedom of the Web through the use of cryptography.
Les cypherpunks (mot valise entre chiffrement et punk) sont un groupe informel défendant la liberté du Web grâce à la cryptographie.
Punk
Cypherpunk
Ethereum allows the use of new protocols such as smart contracts, dApps and tokens.
Ethereum permet
Smart Contract


22:06
cryptokit.ch
Ethereum permet l'utilisation de nouveaux protocoles tels que les smart contracts, les dApps et les jetons.
Smart Contract
Ethereum
The term Web3 is used to name a new version of the Web that run on a distributed system.
Le terme Web3 est utilisé pour qualifier une nouvelle version du Web fonctionnant sur la base d'un système distribué.
Web3
WWW
A NFT is a kind of token following the ERC-721 standard. It's non-fungible, meaning that it's unique and not interchangeable with other tokens.
Un NFT est un type de jeton conforme à la norme ERC-721. Il est dit non fongible, ce qui signifie qu'il est unique et non interchangeable avec d'autres jetons.
Token
Non-fungible
ERC-721
None-Fungible Token (NFT)


22:07
Instagram
Votre story
cryptokit.ch
A blockchain that run on a distributed system is called a public blockchain.
cryptokit.ch
cryptokit.ch #CryptoKit
Il y a 2 jours


22:06
cryptokit.ch
Web3
WWW
cryptokit.ch
Épingler au profil
Archiver
Partager

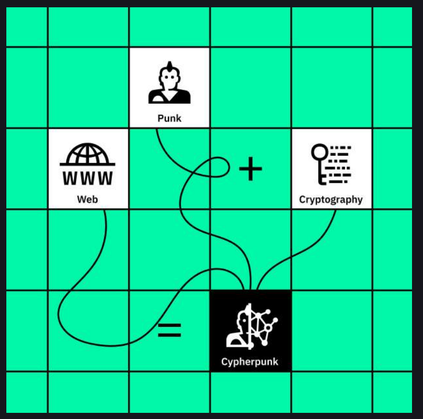


Lightning network is a technical update of the Bitcoin protocol made to solve the scalability problem of transactions.

→ cryptokit.ch

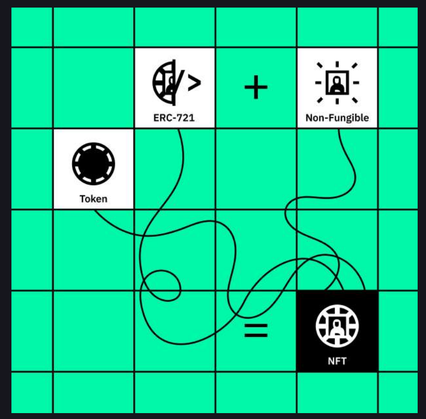
Metaverse

→ cryptokit.ch



Satoshi Nakamoto

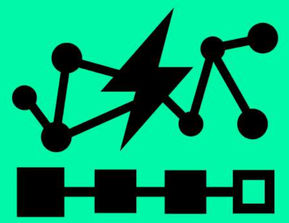
→ cryptokit.ch



Satoshi Nakamoto is a cypherpunk who is anonymous and is the author of the whitepaper of Bitcoin on October 31st, 2008.

→ cryptokit.ch

Lightning Network

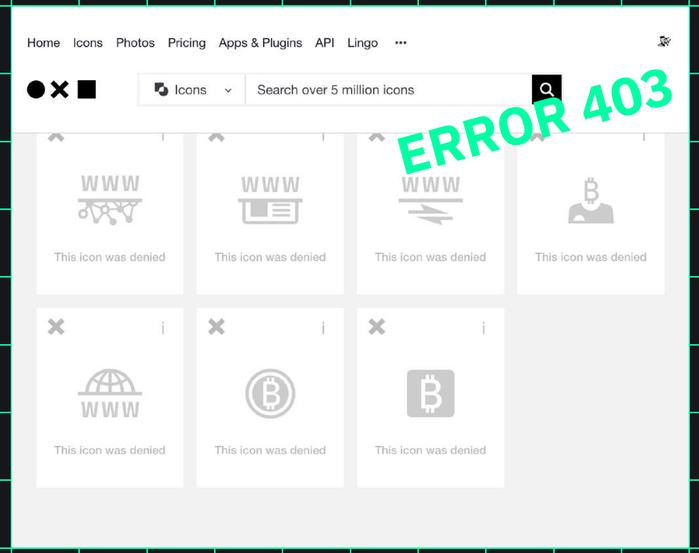


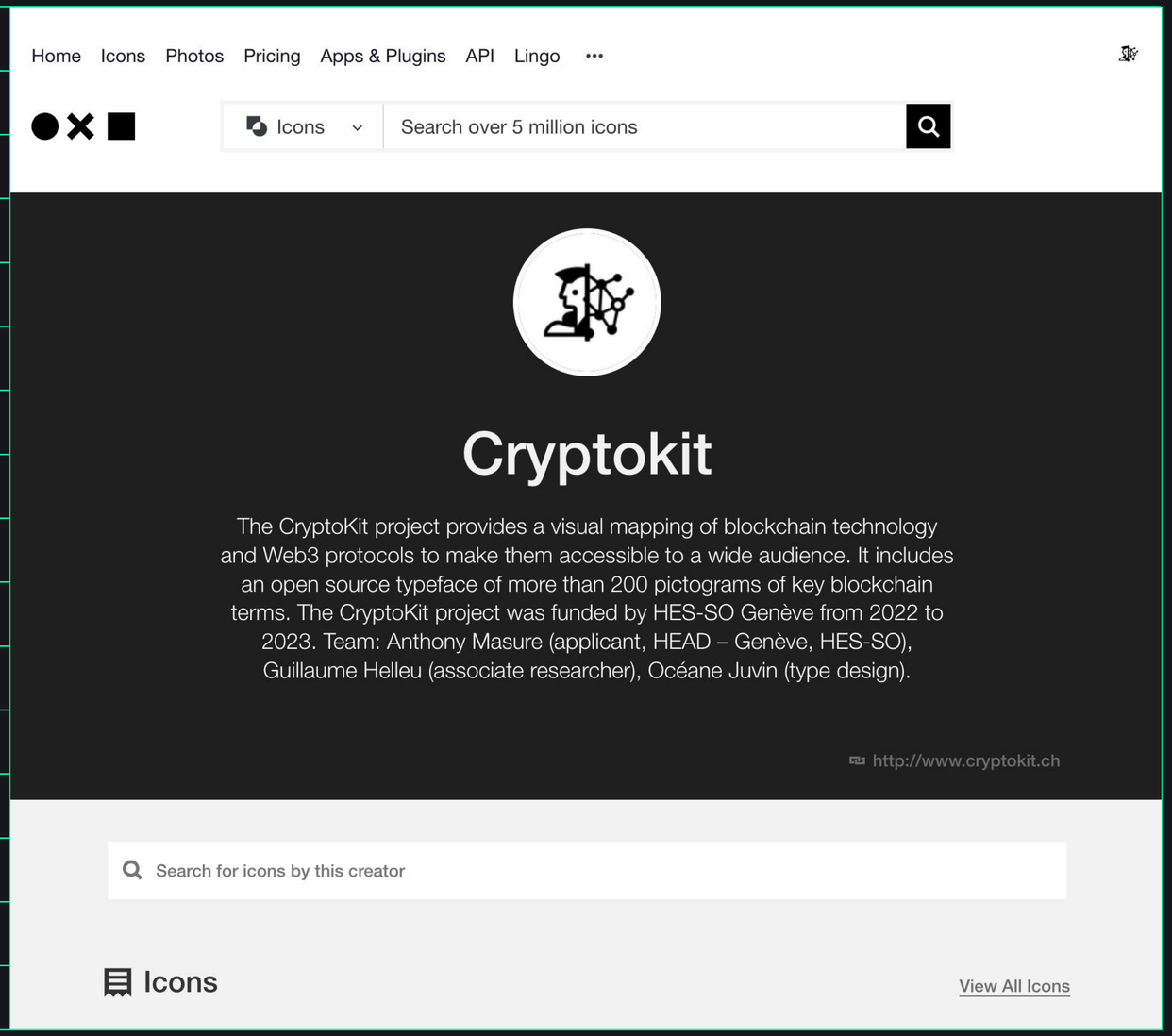
→ cryptokit.ch

FROM OPEN SOURCE TO CC 0
“NO RIGHTS RESERVED”

Typeface file: SIL OFL

THENOUNPROJECT.COM



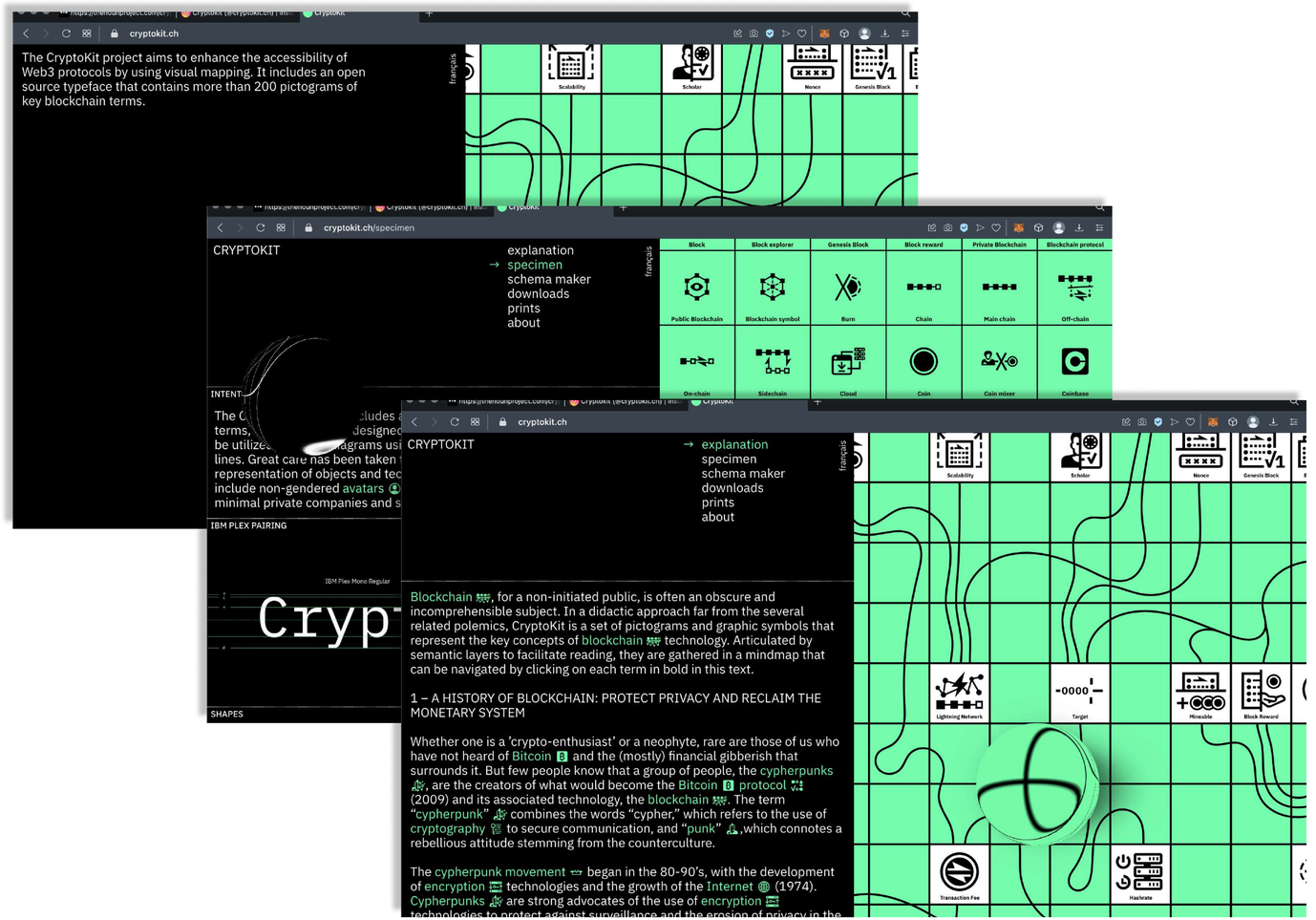


THE WEBSITE

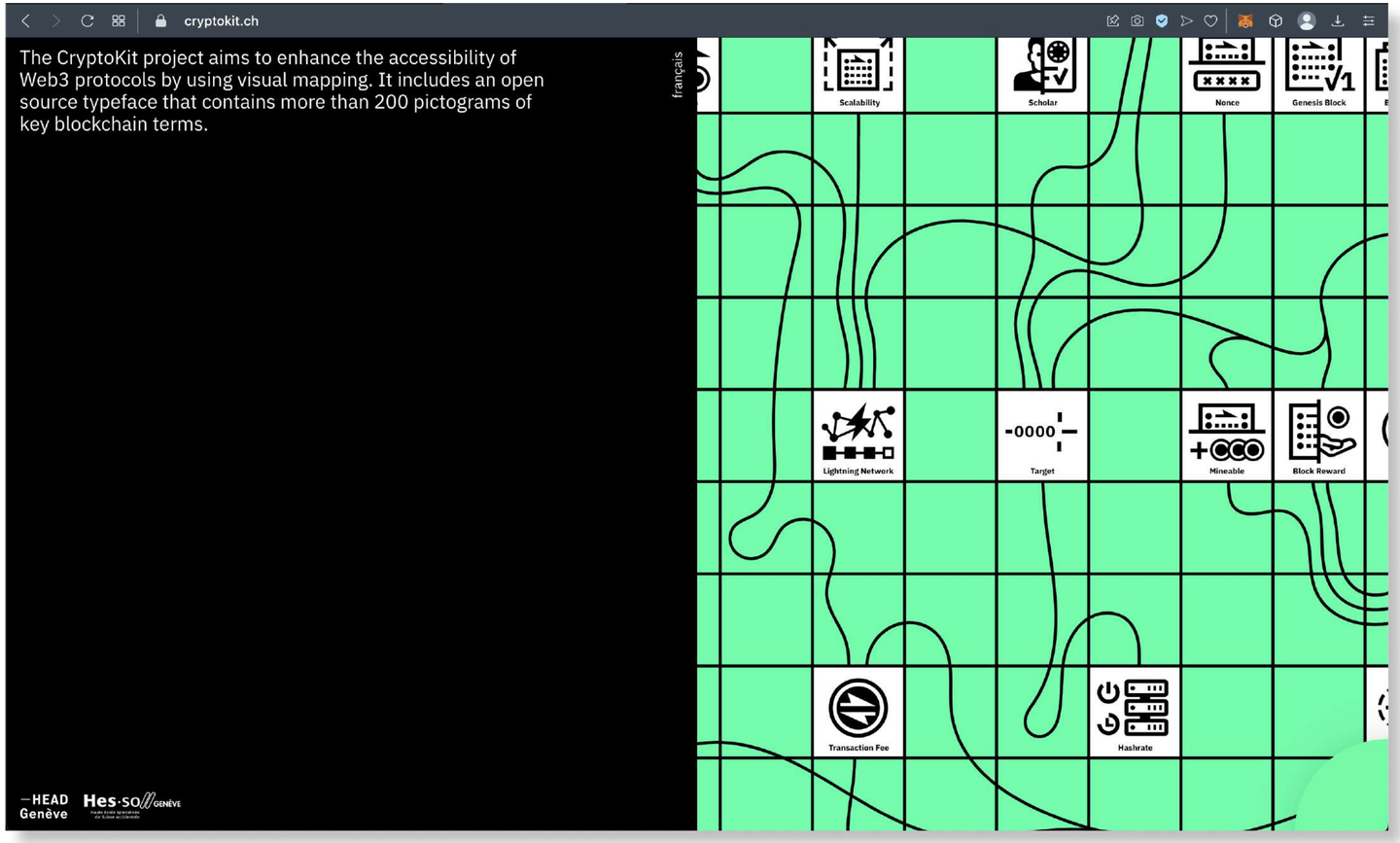
www.cryptokit.ch

CRYPTOKIT.CH

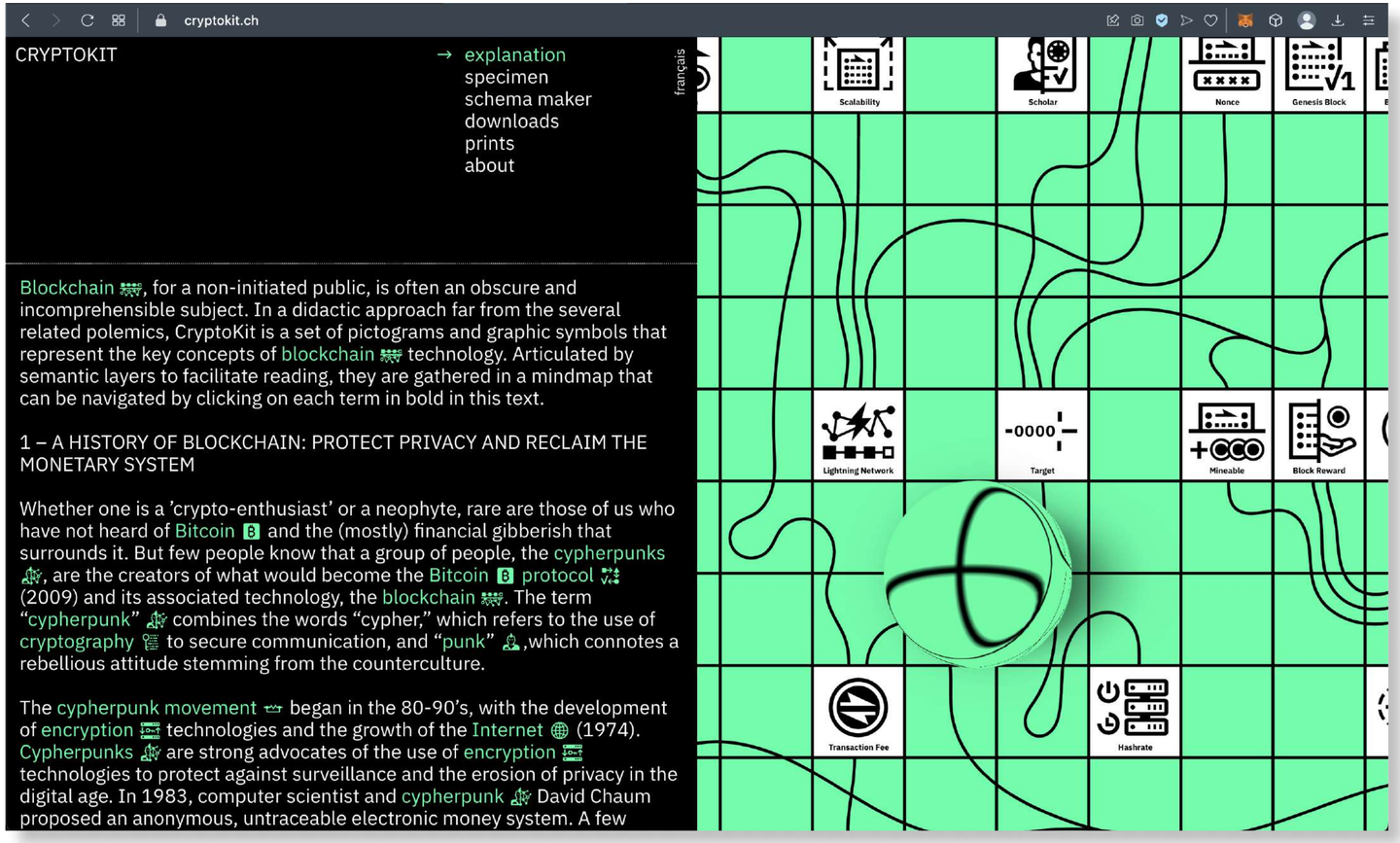
Webdesign: E+K &
Alexandre Texier



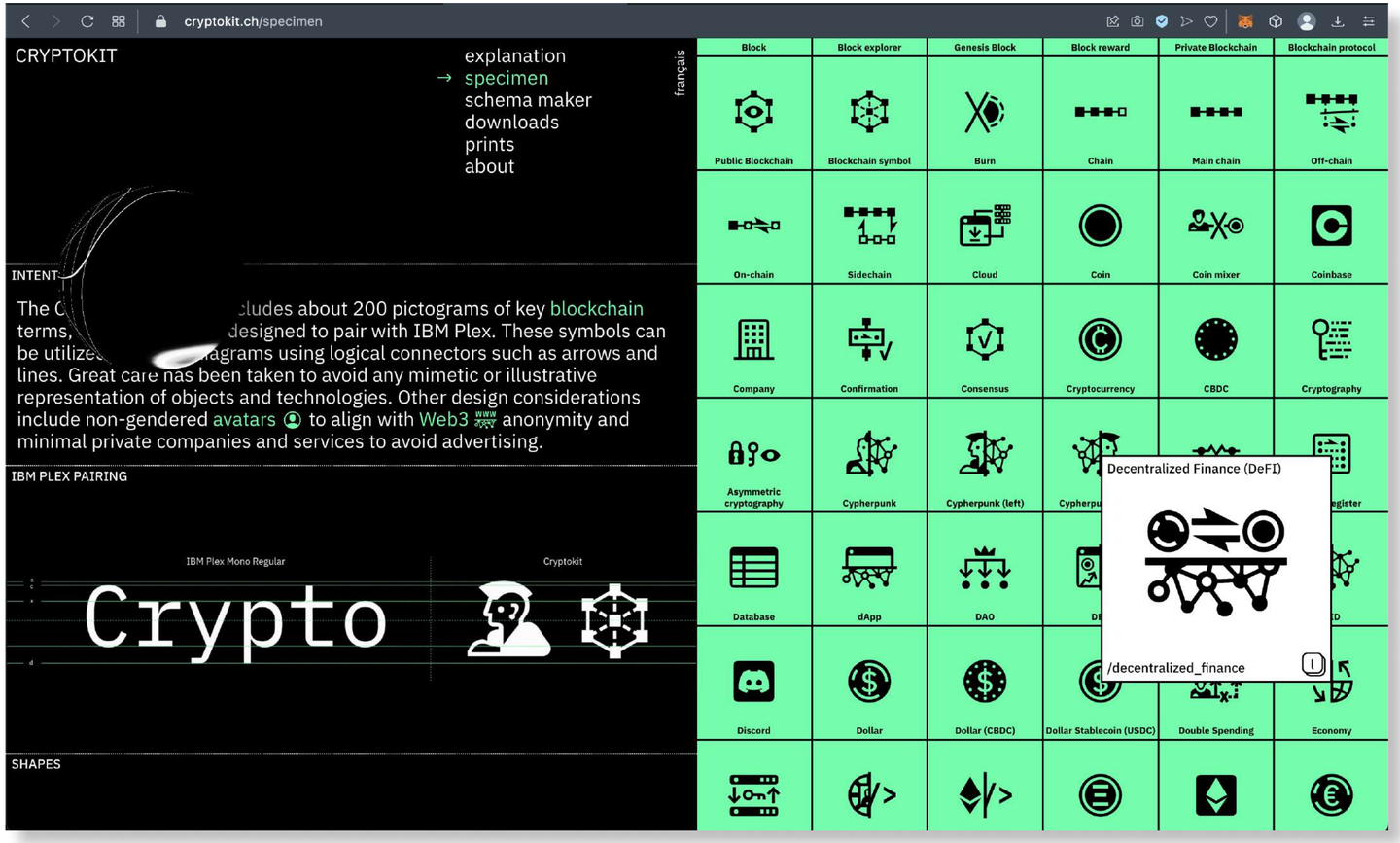
CRYPTOKIT.CH



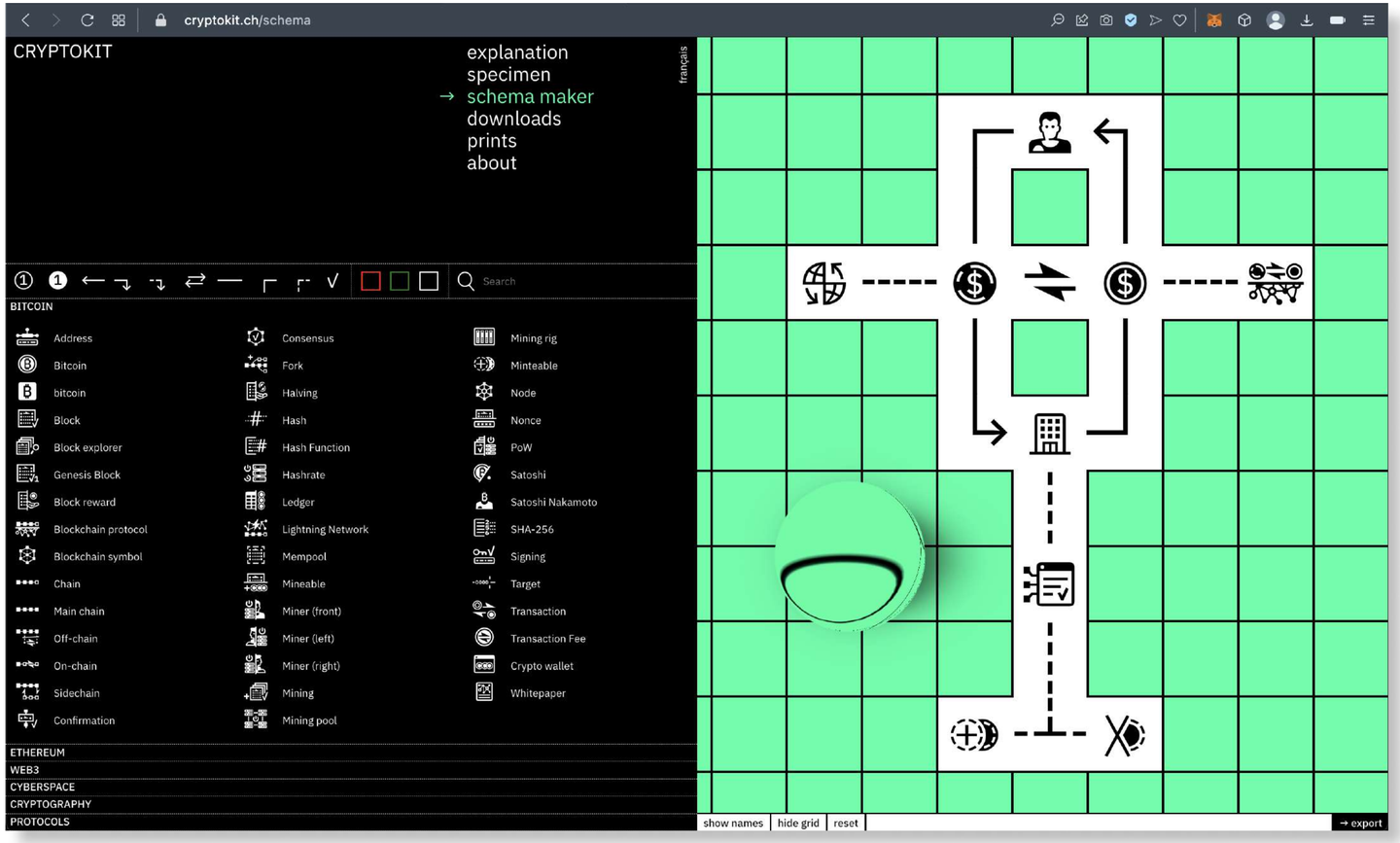
CRYPTOKIT.CH



CRYPTOKIT.CH



CRYPTOKIT.CH



04

Q&A

www.cryptokit.ch

@cryptokit.ch

@anthonymasure

@ohp.ju

@helleuguillaume

Hes·so // GENÈVE
Haute Ecole Spécialisée de Suisse occidentale

—HEAD Genève