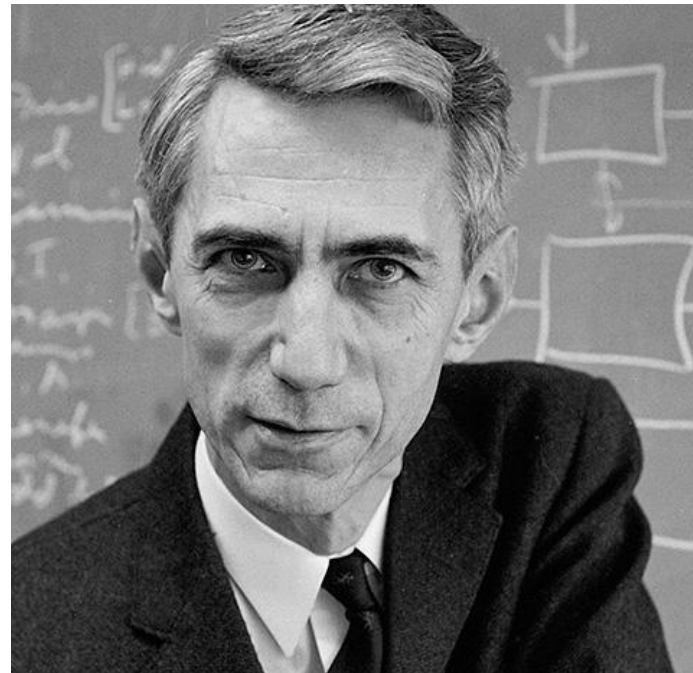


Information Theory & The future of Identities

1. Information Theory
2. Capitalism
3. Information Models
4. Information Enablers & Industrial Revolutions
5. ID Spoofing
6. Liveness
7. Bio-ID Enablers
8. DID Enablers
9. What it means to crypto?
10. What it means to Legacy Banking?

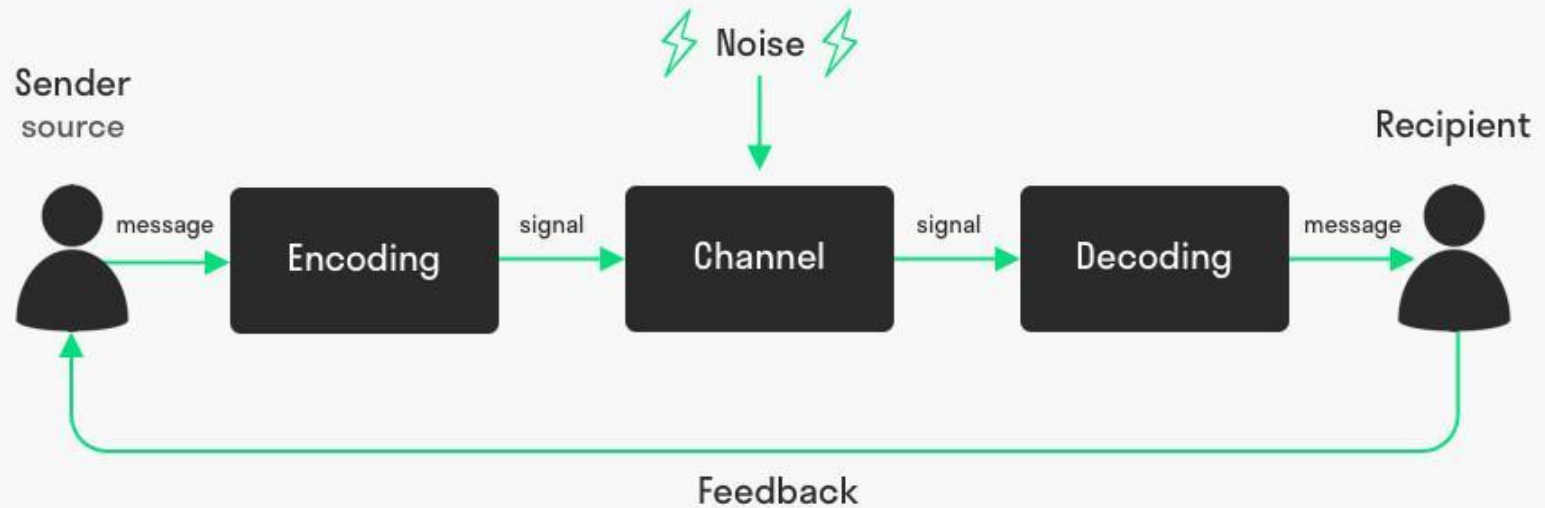
Information Theory



Claude Shannon

Communication Cycle model (Shannon and Weaver)

toolshero



In an information system, individuals master the science of information in order to overcome the laws/challenges of the world. The individual can succeed because of the surprising power of the laws of information, which are conducive to human creativity.

The central tenet of information theory is a measure of individual ***freedom.***

Claude Shannon's theory could be applied on almost anything transmitted over time and space in the presence of noise or interference—including **business ideas, economic profits, monetary policies, private property protections, innovative processes and human creativity.**

What is capitalism?

*"Capitalism is not chiefly an incentive system but an
information system."*

- George Gilder

Information Models

Information Density



Human Mind/Spirit

Chemistry & Biology

Physics

Language/Arithmetics/Music

- Nuclear energy was harvest before the cure for polio.
- Killing a virus without killing the man who carries it turns out to be a vastly more complex and information-intensive exercise than orbiting the planet.
- A few lines of genetic code (fraction of an organism's genome) convey more information that anything in the realm of physics.

Information Models & Industry

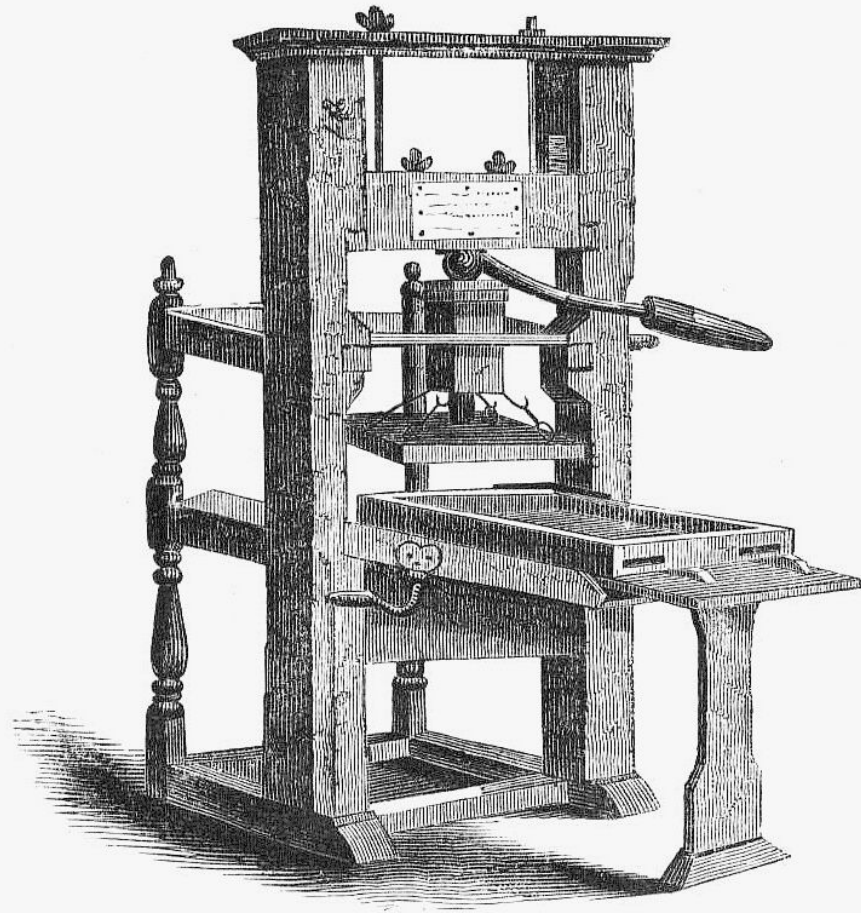
3rd IR	Physics & Chemistry
2nd IR	Physics
1st IR	Physics
Renaissance	Language/Music/Arithmetics

Information Models & Industry

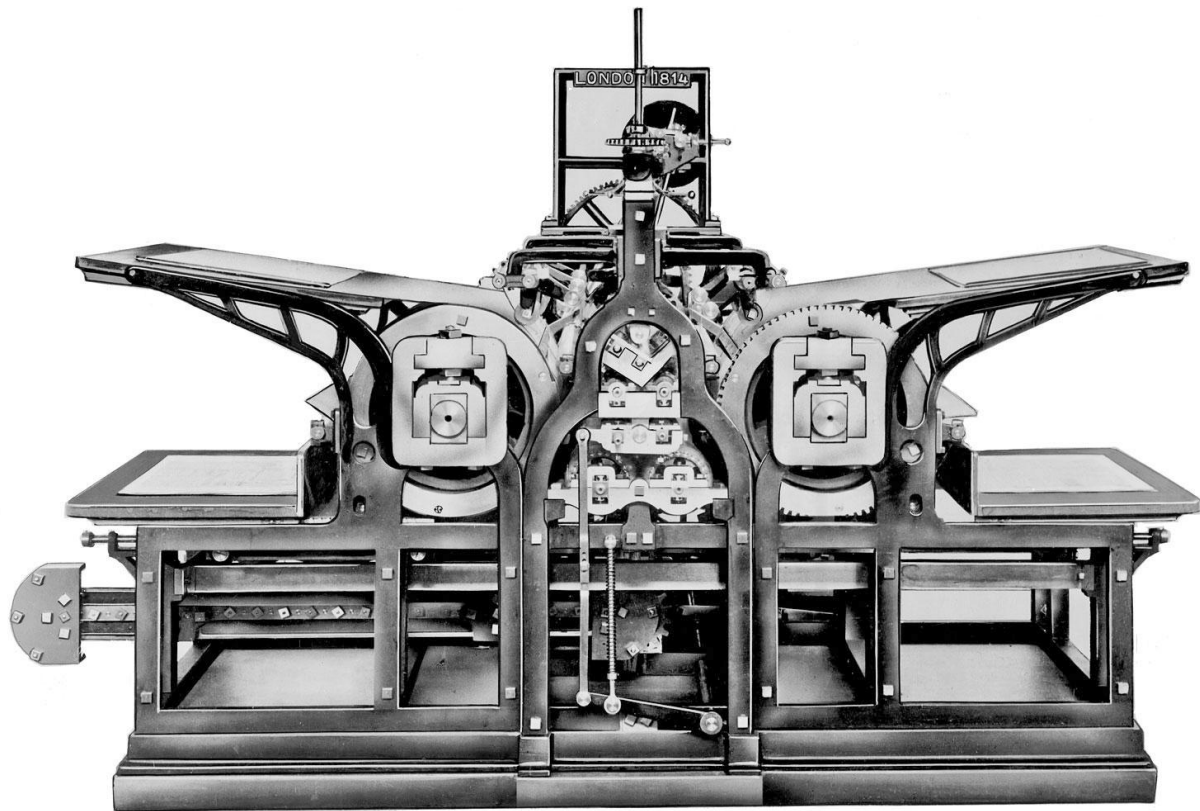
1969-2020s	3rd IR	Physics & Chemistry	Silicone/Internet
1870 - 1914	2nd IR	Physics	Steel/Construction, Telecoms, Automobile
1750-1830s	1st IR	Physics	Clothing/ Locomotive

Information Enablers & Industrial Revolutions

1450s. The Gutenberg
printing press



1843
Steam Engine
Rotary Press



1840-1850s
Telegraph and
Morse Code



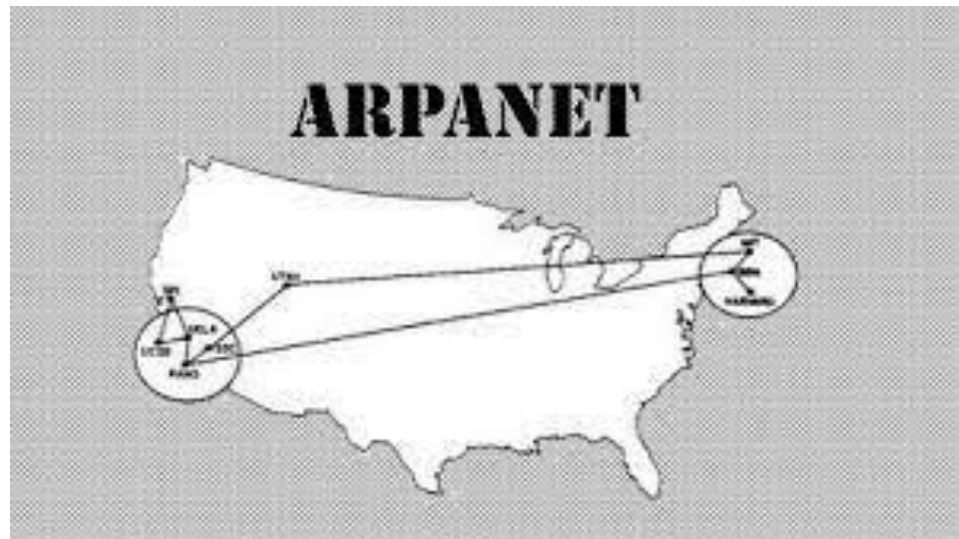
1870s
Bell's Phone



1981
IBM 5150,
Personal Computer



1969
ARPANET Launched

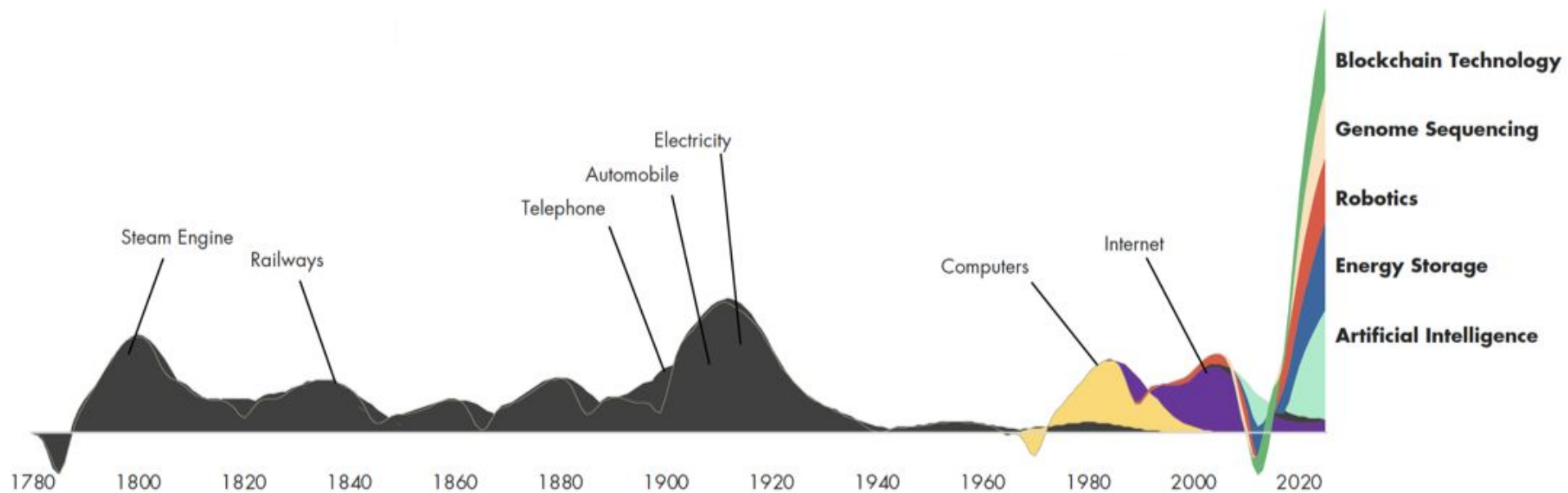


Information Enablers & Industry

3rd IR	1969-2020s	<i>Personal Computer & Internet</i>	1969 & 1861
2nd IR	1870 - 1914	<i>Telegraph & Bell's Phone</i>	1850s & 1870s
1st IR	1750-1830s	<i>Steam Engine Printing Press</i>	1843
Renaissance	15-16th Century	<i>Gutenberg Printing Press</i>	1450s

Industry & Information Models

4th IR	Biology & Chemistry
3rd IR	Physics & Chemistry
2nd IR	Physics
1st IR	Physics
Renaissance	Language/Music/Arithmetics



The Problem: ID Spoofing

REPÚBLICA DE COLOMBIA
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CÉDULA DE CIUDADANÍA

NÚMERO 1.075.657.291
MOLANO PEÑA

APELLIDOS
FABIAN LEONARDO

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Fabian Leonardo Molano Peña



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VANEGAS GARZON

APELLIDOS
PAULA ANDREA

NOMBRES

Paula Andrea Vanegas Garzon



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BRAVO MUTIS

APELLIDOS
SEGUNDO DIDIER

NOMBRES

Segundo Bravo



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YELA BARAHONA

APELLIDOS
JHON AYKER

NOMBRES

Jhon Ayker

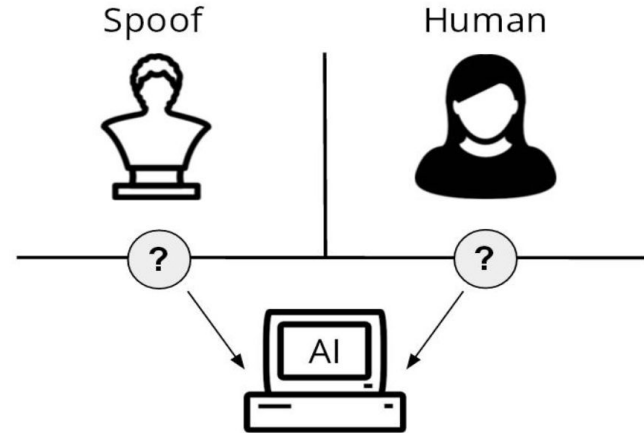


count(status)	status	
566	ASSESSING	⌵
47028	ACTIVE	⌵
3584	FAILED	⌵
47	NEEDS_MANUAL_VERIFICATION	⌵
120449	NOT_FOUND	⌵

**Solution:
Liveness**

Liveness

Liveness Detection is a computer's ability to determine that it is interfacing with a physically present human being and not an inanimate spoof artifact or injected video/data.



3D Liveness Tech



IRS To Require Facial Recognition To View Tax Returns



BY TYLER DURDEN

THURSDAY, JAN 20, 2022 - 11:55 AM

The US Internal Revenue Service (IRS) has partnered with a Virginia-based private identification firm which requires **a facial recognition selfie** among other things, in order to create or access online accounts with the agency.



According to [KrebsonSecurity](#), the IRS announced that by the summer of 2022, **the only way to log into irs.gov will be through ID.me**. Founded by former Army Rangers in 2010, the McLean-based company has evolved to providing online ID verification services which several states are using to help reduce unemployment and pandemic-assistance fraud. The company claims to have 64 million users.

Some 27 states already use ID.me to screen for identity thieves applying for benefits in someone else's name, and now the IRS is joining them. The service requires applicants to supply a great deal more information than typically requested for online verification schemes, such as scans of their driver's license or other government-issued ID, copies of utility or insurance bills, and details about their mobile phone service.

When an applicant doesn't have one or more of the above — or if something about their application triggers potential fraud flags — ID.me may require a recorded, live video chat with the person applying for benefits.

-KrebsonSecurity

Bio-ID Enablers

A **Digital ID** tailored for
the online & offline world.



A New World

A **digital identity** designed to interact with businesses, governments, and other roles such as: *consumer, worker, taxpayer and asset owner*.

Users will be able to...

- Onboard with companies faster than ever before
- Build a history and reputation
- Control who can see their private data
- Monetize data

DID Enablers

What if there was a way to give users **full sovereign control over their data** while getting access to not just the data from your application but many other compatible ones? What if you could **promise users that their information would live in a decentralized network** where no individual application developer or company could choose to take it down or tamper with, that they own their data in the truest sense?

DIDs are [Decentralized Identifiers](#), a technical standard that enables verifiable, decentralized, interoperable digital identities. A DID can refer to any subject (e.g., a person, organization, thing, data model, abstract entity, etc.).

Scheme

did:**example:**123456789abcdefghi

DID Method

DID Method-Specific Identifier

Each user has full sovereign control over their data and ultimately can bring that data with them to each app they visit.

According to research from McKinsey Digital, digital IDs could unlock economic value equivalent to 3 to 13 percent of GDP in 2030.

**What does it mean for
Crypto?**

The world's most popular crypto wallet

Over 81 million wallets created to buy, sell, and earn crypto.

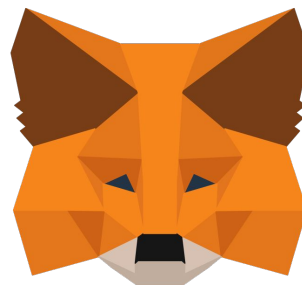
[Get started](#)[Log In](#)

Biometric IDs



V

Decentralized IDs (DIDs)

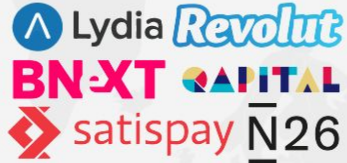


**What does it mean for Legacy
Banking?**

North America



Europe



Asia



South America



Africa





"Commoditization is equivalent to a 51%
attack to modern banking"

- Johan Castellanos

