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USING BLOCKCHAIN FOR CERTIFICATION OF MEDIA CREATIONS: THE CASE OF "TRUTHSTER"

5th Distributed Ledger Technology Workshop (DLT 2023)

May 25-26, 2023 - DAY 2: Friday 26° - session 5

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Summary

- **Truth, Freedom of expression, disinformation ... in theory**
- **Truth, Freedom of expression, disinformation ... in practice**
- **Main Legal issues**
- **The background perspective**
- **TRUTHSTER project**
- **Conclusions**
- **Aknowledgement / Q&A**

Truth, Freedom of expression, disinformation ...



... in theory

Truth, Freedom of expression, disinformation ... in theory

Truth is a human basic need

- (1) individually**, as a matter of personal spiritual quest,
- (2) socially**, as a base for personal and economic trusted relations, and
- (3) politically**, as an inevitable requirement for consent in a fair exercise of public power.

Truth, Freedom of expression, disinformation ... in theory

Conversely, disinformation is as old as human consortia:

- **Ancient greeks:**

- Popular rumour (Pheme)
- Slander (Syphophantia)
- Malice (Diabolé).

- **China**

- (The art of War) «*all warfare is based on deception*»

Truth, Freedom of expression, disinformation ... in theory

«Information society» and the «flood» of information

- Mass media

- Newspapers**
- Radio**
- Television**

- Internet and social media

- 1997 SCOTUS «ACLU / RENO» -> internet as a «wholly new medium»**
- 2004 (FB) Social networks**

Gleick, J. *The Information: A History, A Theory, A Flood*. Knopf Doubleday Publishing Group, 2012 (2011).

Truth, Freedom of expression, disinformation ...



... In practice

The threats

The use of semi-automatic generators or legal claims is a great idea ...

... but it is terrifying for web creators

PhotoClaim

Perché noi ▾ Come funziona ▾ Mappa del successo Blog Contatto

Avvia reclamo

Monitor Your Images. Find out who is using your photos on the web.

Go through our simplified registration process to get back your money and protect your rights!

Get Report → It's Free!

<https://photoclaim.com/it/>

A local (partial) example

The use of this image by a broadcasting company on its web page was challenged by the threat of a lawsuit due to an (alleged) copyright violation.

But ... this image could be taken by anybody (some claims are ungrounded but they represent a threat anyway)



Public library, Udine (IT)

The interviews

Media professionals lack specific and effective tools to

- **Certify** the authenticity and integrity of the content produced,
- **Collect consent** for using personal data or copyright license from interviewees.
- **Provide information** concerning the terms and conditions under which media are released.



Queue of «Alpini fans» participants in a TV program waiting for signing the media release license

Main legal issues

TRUTHSTER



Main legal issues

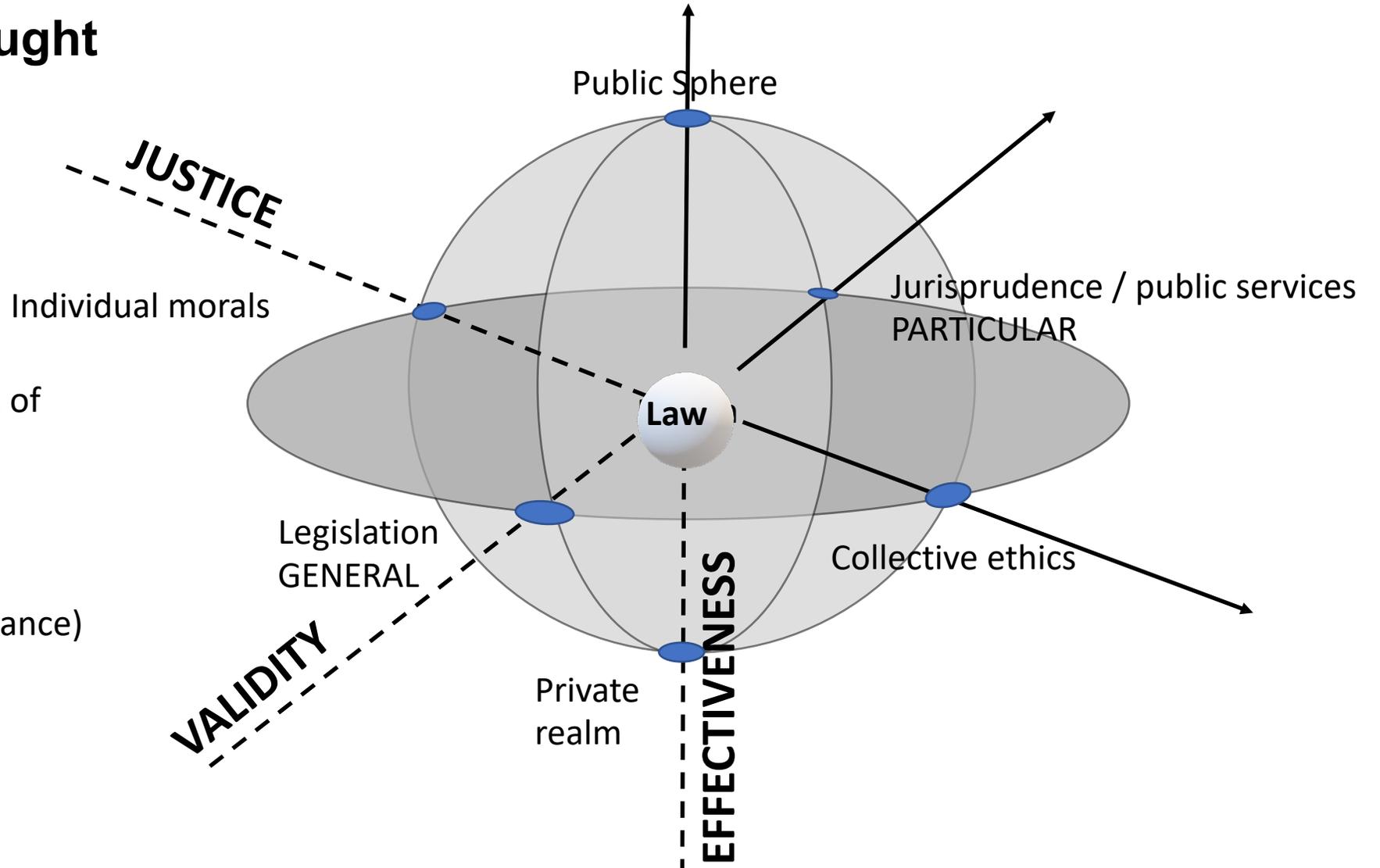
- 1. Personal identification and professional qualification** by the reporters:
 - 1. Authorship** of the media created (copyright)
 - Applicable **legal** framework (journalists' privileges, e.g. confidentiality of sources)
- 2. Legal compliance**, especially related to:
 - 1. Copyright licensing by journalists**, in terms of both
 - verification of legal ownership for the materials used and
 - enforcement against infringements for the materials produced.
 - 2. Rights of portrayal** and other personal image-related rights (interviewees).
 - Personal **Data protection** (GDPR, of course)
- 3. Accountability**, i.e., providing an easy proof of genuinity for:
 - "persons of interest" (interviewees, witnesses) -> against forgery, deep fakes
 - third parties (publishers, courts) and
 - the general public.

The background idea



From a law-centered vision to a design-centered perspective

Traditional legal thought



Three are the basic dimensions of the legal realm, according to traditional legal thought

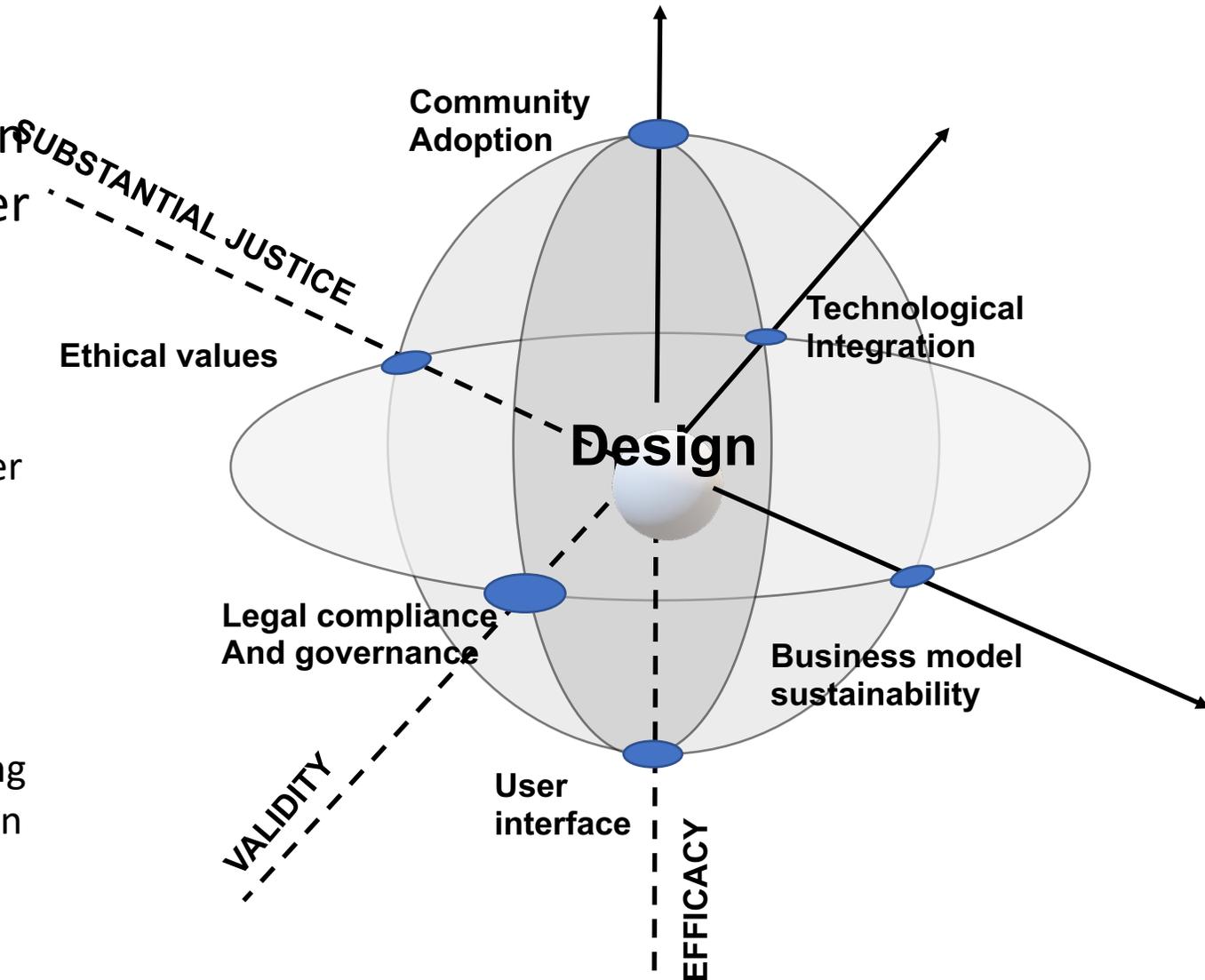
1. **Justice** (fair / unfair law)
2. **Validity** (legal sources)
3. **Effectiveness** (social acceptance)

New perspective

In a technological society, design is the **surrogate** of law and other elements change accordingly.

Three key components are required:

- (1) **traditional legal provisions**, which offer a uniform framework of general and abstract rules;
- (2) **business models allowing economic sustainability** (costs of maintenance and transactions);
- (3) **technological infrastructure**, combining the general rules of law with the design of an ecosystem meant to virtualize resources and automate processes.



Cfr. Floridi, Luciano. 2019. *The Logic of Information: A Theory of Philosophy as Conceptual Design*.

TRUTHSTER project



«A public opinion facilitator system
for (online) content creators»

The team

1. **Federico Costantini**, University of Udine, *PI, Legal compliance*
2. **Francesco Crisci**, University of Udine, *Management*
3. **Marino Miculan**, University of Udine, *DLT Cybersecurity*
4. **Stefano Bistarelli**, University of Perugia, *DLT Architecture*
5. **Rosario Lombardo**, Innov@ctors, *Front-end development (Web)*
6. **Federico Rosso**, HTS Hi Tech Services, *Back-end development (DLT)*
7. **Silvia Venier**, Human rights Researcher, *Ethics and governance*
8. **Giancarlo Virgilio**, freelance publicist, *testing, PR and communication*

Key ideas

- 1.- see the world from a **micro-scale** perspective(e.g. the rights of the interviewed) rather than on a **macro-scale** dimension (e.g. disinformation of social media)
- 2.- solve a **specific problem** for stakeholders (e.g. GDPR information notice) rather than **any kind** of problem
- 3.- provide a tool for a **specific target** (e.g. journalists), rather than a **definitive solution** for any user
- 4.- offer an **easy-to-use way** to express consent, rather than a many-step (annoying) verification scheme
- 5.- Do not provide just a product or a service, but create a **legacy**, so define a way to handle the consequences of an innovation

Current projects and blockchain-based applications

Media corporations and news agencies

1. **WordProof** provides a tool to address copyright infringements generating timestamps of on-line content and automating the generation of claims <https://wordproof.com> .
2. **LegalEye** aims at certifying online content for forensic purposes (e.g. “chain of custody”) <https://www.legaleye.it>.
3. **ANSA check** aims at **certifying** genuinity and integrity of the press release. https://www.ansa.it/sito/static/ansa_check.html.
4. **Verizon Full Transparency** is described as follows <https://www.verizon.com/about/news/transparency-technology> .
5. **New York Times and IBM “News Provenance Project”** focuses on visual content, aiming at displaying provenance information on news photos using metadata published to the Hyperledger Fabric blockchain. <https://www.newsprovenanceproject.com/>.

Other projects and applications

Features in digital platforms

1. **Popula** aims at creating trust among authors and their community of interest, allowing a direct contribution from the readers of contributions. <https://popula.com/>.
2. **Mindzilla** creates a peer-to-peer financing system integrated with AI powered tools for detecting disinformation. <https://www.crunchbase.com/organization/mindzilla>.
3. **Safe.Press** is a “decentralised and consortium-based certification platform that uses IBM Blockchain technology to track and authenticate the source of a published news story with one click. Each news item is recorded on the platform’s blockchain ledger and all members of the consortium have a copy. The details that the ledger provides — where, when and by whom a story is published — are safely hosted by all consortium members”.
4. **Truepic** provides a decentralised platform for notarization of pictures, certifying media (e.g. photo inspections) against counterfeiting or manipulation. It aims at assisting insurance companies in the process of evidence digitalization. <https://truepic.com/>.

Applications

1. **Adobe** offers a tool implementing Adobe sign, combined with a repository where users can upload their model and share with other contributors. This solution identifies the author, as a copyright owner, but does not provide a certification. <https://contributor.stock.adobe.com/static/releases/model/Releases-en.293128c8f1ff86abb874b5f73b8c5094.pdf>
2. **Getty images** provides a model for commercial use of images created by contributors. Even in this case, neither certification nor automation is present. <https://contributors.gettyimages.com/>
3. **Model release applications** mobile applications marketplaces offer several tools for photographers and media creators, sometimes combined with the most popular cloud services or with commercial repository providers. These solutions do not certify content and do not offer proof of consent of the interviewee. <https://expertphotography.com/best-model-release-apps/>

Main limitations of current solutions

1. they are **not decentralized** (owning the platform can lead to censorship / mistrust)
2. They do not **empower** content creators (they aim at imposing a de facto standard)
3. They do not focus on **accountability** (they aim at monetization)
4. They do not embrace the whole phenomenon integrating **technology, law and organization**

Model Release

For valuable consideration received, I grant to Federico Costantini (Photographer) the absolute and irrevocable right and unrestricted permission concerning any photographs that he/she has taken or may take of me or in which I may be included with others, to use, reuse, publish, and republish the photographs in whole or in part, individually or in connection with other material, in any and all media now or hereafter known, including the internet, and for any purpose whatsoever, specifically including illustration, promotion, art, editorial, advertising, and trade, without restriction as to alteration; and to use my name in connection with any use if he/she so chooses. I release and discharge Photographer from any and all claims and demands that may arise out of or in connection with the use of the photographs, including without limitation any and all claims for libel or violation of any right of publicity or privacy. This authorization and release shall also inure to the benefit of the heirs, legal representatives, licensees, and assigns of Photographer, as well as the person(s) for whom he/she took the photographs. I am a legally competent adult and have the right to contract in my own name. I have read this document and fully understand its contents. This release shall be binding upon me and my heirs, legal representatives, and assigns.

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Witness Information

Name: publi
Country: United States

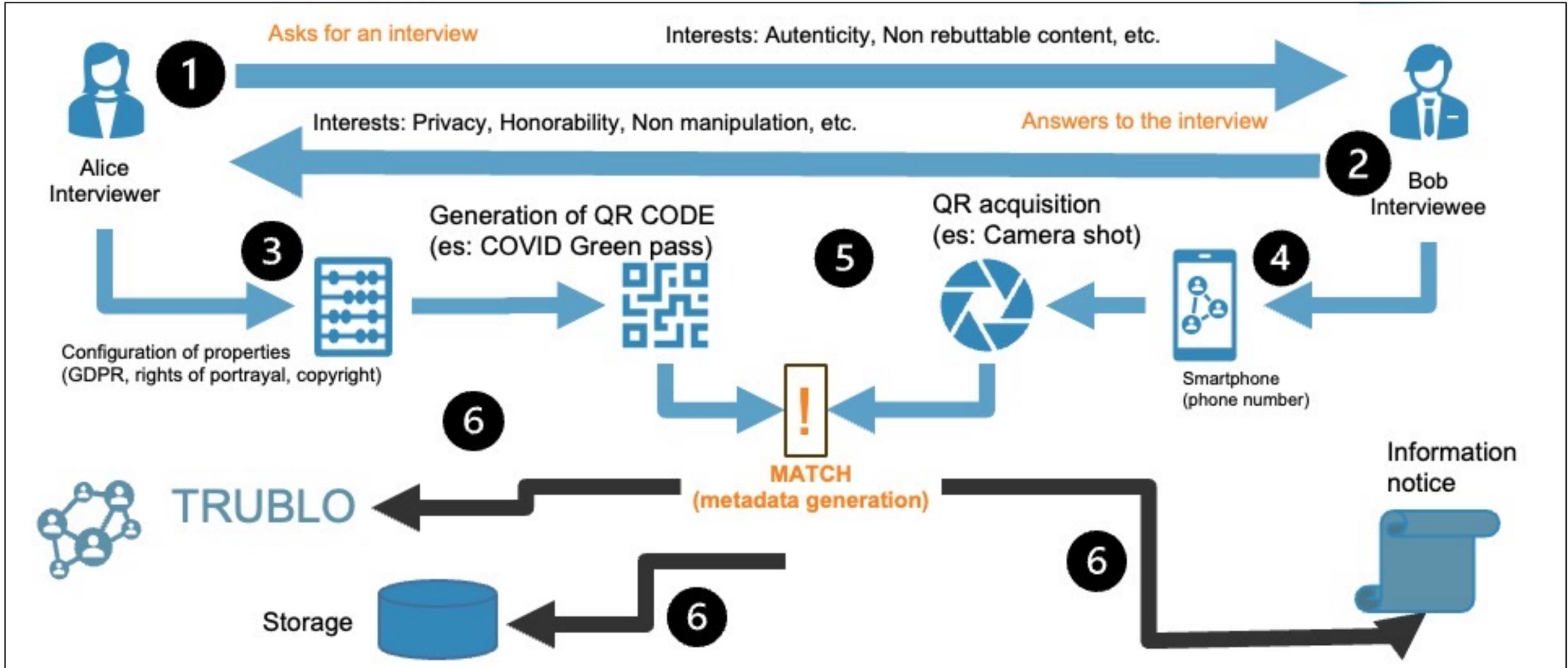
Compensation

Amount: 10
Tax ID: 2005200200

Key features of TRUTHSTER

- 1.- **Certification** through «proof of validity» as an empowerment of professional media content creators and, so, of freedom of expression
- 2.- **Smart contracts** as a way to raise transparency and to protect persons of interests (interviewed's data protection)
- 3.- **Decentralized** infrastructure (Alastria) as a trusted platform for balancing fundamental rights
- 4.- **Participative governance** to ensure the uptake of the technology and the management of the system
- 4.- **Open innovation** (possible integration e.g. with cloud storage services, NFT marketplace, online ADR services) to ensure the growth of the ecosystem

How it works



Conclusions



Conclusions

«*per plures melius ad veritatem*» (Sinibaldo de' Fieschi, XIV century)

.. Today, this means that:

- Truth can be shared, not owned (that's «democracy»);
- Trust can be achieved via trust-less platforms (that's blockchain).

Aknowledgement / Q&A

TRUTHSTER



This project received funding from the European Union's Horizon 2020 research and innovation programme under the Grant Agreement No 957228 (see <https://www.trublo.eu/> for details).

Many thanks!



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TRUTHSTER



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- Federico Costantini / Francesco Crisci / Silvia Venier / Stefano Bistarelli / Ivan Mercanti, *Tackling disinformation in the EU: the case of “Truthster”*, in: Jusletter IT 30. März 2023 [LINK](#)
- Presentation IRIS23: Internationales Rechtsinformatik Symposium 23/2/2023 Salzburg (AT) [LINK](#)
- Presentation International conference «Cybersecurity threats - Russian aggression against Ukraine and disinformation» 16/3/2023, Warsaw (PL), Remote [LINK](#)