USING BLOCKCHAIN FOR CERTIFICATION OF MEDIA CREATIONS: THE CASE OF "TRUTHSTER" (ORAL COMMUNICATION)

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Abstract: *Tackling disinformation is crucial for the development of the Information Society. To do so it is necessary to empower journalists in the production of trustworthy information, and to nurture an economic ecosystem centred on a secure circulation of contents. In this contribution we present an interdisciplinary approach that aims at (1) finding a balance between freedom of expression and other fundamental rights (i.e., privacy and data protection), (2) developing business models driven by the production of genuine content, (3) exploiting the potentials of distributed ledger systems to provide media certification.*

1. Outline of the contribution: presenting project "TRUTHSTER" [1]

In this oral communication we present the background research of project "TRUTHSTER" which, in our view, can be considered not only as an example of the actions put in place by the EU aimed at tackling disinformation, but also paradigmatic of the approach adopted by the EU institutions.[2] Indeed, as we will explain below, we envision an ecosystem composed by three pillars: (1) a set of legal rules – including both legal provisions and private agreements – (2) a sustainable business model – based on "open innovation" paradigm – and (3) a digital platform – based on distributed ledger technologies – which is meant to avoid *by design* both centralized monopoly over media production and lack of control on its circulation. Furthermore, our leading concept is that trustworthiness in the information can be better pursued empowering individual media creators in their effort to build trust towards their own professionality. Hence, the practical outcome of TRUTHSTER is a tool – a mobile application – which is meant to integrate a "proof of validity" on digital media generated with journalist's device, focusing on those whose creation process requires an interaction with another human actor (mainly, video interviews, audio recordings, and photos) before being shared. In the process, a customized disclosure notice is automatically sent to the interviewee, containing the terms and conditions regulating the media release, thus acknowledging her/his fundamental rights (primarily, privacy).

[1] This contribution is the result of joint research of the co-authors. Individual contributions can be attributed as follows: Federico Costantini, par. 1 and 5, Silvia Venier, par. 2, Francesco Crisci, par. 3, Stefano Bistarelli and Ivan Mercanti, par. 4.

[2] FLORIDI (Ed.), The Onlife Manifesto. Being Human in a Hyperconnected Era, Open Access Springer International Publishing, Cham, 2015.

Our solution is based on three main components: (1) a mobile and web interface for the interviewer, (2) a cloud-ready backend server, and (3) a web app for the interviewed. The user experience will be the following: the interviewer logs through her/his mobile device into the TRUTHSTER application, which identifies her/him and the device itself, after a preliminary KYC procedure. The user is allowed to insert the personal data (e.g. name, surname, address, contact details) of the interviewee, and to configure the legal framework regulating the digital content before its generation (including privacy and media release options chosen by the interviewee). Once the media is recorded, the interviewee is requested to interact with the interviewer (e.g. sending an SMS to her/him or generating a QR code to scan).

Such interaction triggers four processes: (1) the calculation of the hash of the file (together with metadata included by the user, such as the identity of the interviewee, and recorded automatically, such as GPS position of the device), (2) the transmission of such data (in a human comprehensible format) to the interviewee for future reference (e.g. GDPR notice), (3) the upload of the file into a cloud server,[3] (4) the storage of hash and metadata in decentralized platform, which is provided by Alastria,[4] an open-source and permissioned blockchain platform.[5] The interface is enriched by other functionalities, such as a navigable history of the interviews stored in the DB, and other practical tools.

2. Conclusion

While the impact of blockchain has been not only a technological innovation, but undoubtedly also a social phenomenon, their practical benefits and disadvantages are still under discussion, with "pros" and "cons" which depend on the context of their application (which are very wide, from cryptocurrencies to supply-chain certification). In our project the use of such a platform offers the supreme advantage that it allows to align theoretical background (the need of a decentralized governance for supporting trustworthiness of media) with legal requirements (the challenge of protecting fundamental rights in the digital realm) and with sustainability concerns (the interest of the single media creator as a design requirement). In the next months we are planning to release a White Paper both to showcase the outcome of our research and to demonstrate the validity of our tenets.

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[3] MongoDB, https://www.mongodb.com.
[4] https://alastria.io/.
[5] The interviewer is notified of the completion of the process by a Node.js server.