

Blockchain, Smart Contracts and the Design of Everyday Transactions

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1. Catalyst Information

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2. Conversation Description

While it is clear that digital technologies enable us to carry out transactions quickly, anywhere, and through various media, the decisions behind these transactions and possible outcomes of practices that they mediate are less clear. Issues of data acquisition and access have been largely discussed, and it is known that algorithms can tailor searches and purchase recommendations, but designers have given little attention to the potential of digital protocols to enable new social and economical models.

As digital technology becomes more integrated in everyday life, data algorithms start to play a larger role in everyday practices. In the Internet of Things, objects can send and receive information and respond according to in-built protocols. Blockchain technologies and cryptocurrencies potentially add a new level of complexity to these systems, allowing smart contracts to be attached to objects and possibly trigger monetary transactions. Not only can artefacts and systems gain more autonomy, playing different roles in decision-making, but also smart contracts and in-built protocols can start to be defined collectively, creating new models of ownership and value.

In this conversation we will discuss the role of design in defining and communicating these protocols. What is the potential and challenges for designers of interactive systems in this context? Could we think about currencies that override national and transnational ones? Can these systems be designed so that people can define their own personal smart



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contacts? Can different values be designed into these systems? Will these protocols continue to be profit-driven or could they propose new social, cultural, environmental, and economical models?

The catalysts have been involved in a number of research projects that explore the relationships between Design, cryptocurrencies and Blockchain technologies. They have previously run a number of creative workshops around this subject.

3. Planned Activities and Expected Outcomes

The session will start with an introduction to the Bitcoin Blockchain and examples of algorithms that may be considered as favouring particular social and economical organisations. We will then distribute a number of artefacts to participants in the discussion, who will be invited to consider how they would design protocols for these artefacts, also discussing the potential and consequences of such designs with the group. The group will then speculate on how these protocols could coexist, e.g. if they would conflict or lean towards one specific direction. We will close the session with a general discussion on the implications of considering smart contracts in the design of interactive systems, also discussing the potential offered by Blockchain technologies. The discussion will point at different design opportunities, possibly resulting in future collaborations among participants.

4. Intended Audience

Although the conversation will focus on design of interactive systems, we will welcome participants of different backgrounds.

5. Length of Workshop

The proposed session will last 90 minutes.

6. Space and Equipment Required

Ideally participants will be arranged in a circle, and the artefacts used to catalyse discussion will be placed in the middle of this circle. We will also use pens and threads to register impressions and establish visual connections among the artefacts.

7. Potential Outputs

The conversation will point at different design opportunities, possibly resulting in future collaborations among participants.

About the Catalysts:

Larissa Pschetz is an interaction designer and Lecturer at the University of Edinburgh. She is interested in socio-technological narratives and how they help to influence and can be shaped by design practice.

Chris Speed is Professor of Design Informatics within Edinburgh College of Art, University of Edinburgh. Chris is Co-Director of the Design Informatics Research Centre that is home to researchers working across interaction design, temporal design, anthropology, software engineering and cryptocurrencies.

Debbie Maxwell is Lecturer in Interactive Media and Design at University of York. She works in the spaces between technology, storytelling and design, adopting creative, codesign, people-centred approaches to explore knowledge practices through storytelling across domains.