ETH
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Distributed Computing

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BA/SA/Group:

What's in a transaction?

Payments are an everyday thing in our society and most of us don't think twice about it. But a payment or transaction can be so much more. Each transaction is a contract between the sender and the receiver, be it settling a debt or the exchange of goods and services for money.

Analyzing the payment traffic should therefore allow us to get a glimpse at the social interactions that is causing it. While it is hard to infer much from an individual transaction, combining millions of transactions into a big picture allows to recognize common patterns and behaviors. Sadly the transaction history is usually tied up and fragmented in proprietary databases. The advent of Bitcoin promises to change that: it keeps track of all transactions in a replicated ledger in the network, that can be easily accessed by anyone. This allows us to analyze the transaction history at unprecedented scale.

The goal of this thesis is to construct the big picture and analyze it. This could mean combining the raw transaction data with information that can be found on the Internet, building profiles about sender and receiver of transactions, reconstructing the underlying social network or coming up with metrics about the inferred data.

Requirements: Programming knowledge to extract the needed information and implement the analysis of the resulting graphs.

Interested? Please contact us for more details!

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