Every service, app and social network we use today comes with some conditions attached. They appear in the form of software licenses, privacy policies, and terms of service documents. Normative texts like these are essentially contracts, defining what you and the service provider can and cannot do. They are often long and hard to understand, and most people agree to these legal documents without ever reading them.

In order to know what we are agreeing to, we need tools that can cut through the jargon and quickly answer our queries about a given contract. Using formal methods opens up a wide range of powerful analysis techniques, which guarantee correct responses while avoiding the need for a document to be read through manually. The trick, however, is making these techniques available to users who have no understanding of them.

This thesis studies various aspects of computational contract analysis, from formal modelling to simulation and verification, together with how these technologies can be packaged for end users, using natural language processing, controlled natural languages and visual representations. In bringing these components together, our goal is to make analysing contracts accessible for all.

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Contracts and Computation
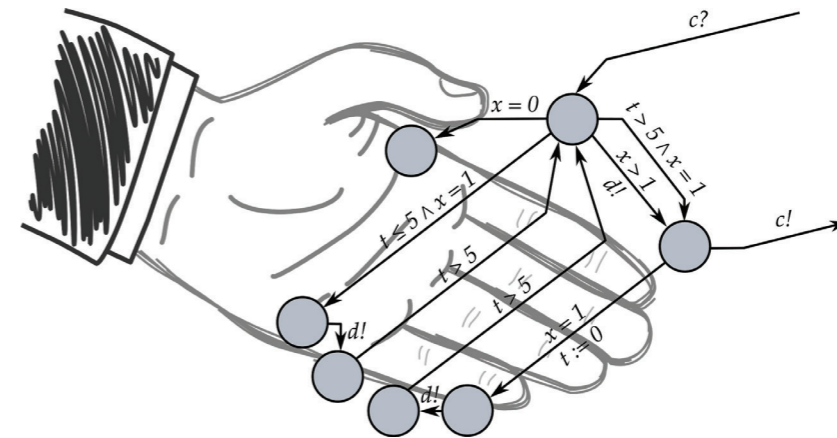Formal modelling and analysis for normative natural language

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