Zero Knowledge Compilers

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Overview

- Zero knowledge protocols have practical applications in cryptography.
- They are difficult to design and to implement.
- Zero knowledge compilers help to ease this burden.

Outline

Outline

Interactive Proof

Must satisfy:

- *Completeness*: For every $x \in S$, the verifier always accepts after interacting with the prover on common input x.
- *Soundness*: For every $x \notin S$, the verifier rejects with probability at least $\frac{1}{p(|x|)}$.

Zero Knowledge Proof

Magic Cave

Graph Theory Intro

Hamiltonian Cycle

Outline

Compilers

Outline

Relevant Background

Mostly Number Theory and Crypto stuff here.

Sigma-Protocols

ZKCrypt

ZKPDL

Outline

Electronic Cash

Outline

Final Thoughts

Acknowledgments

Questions