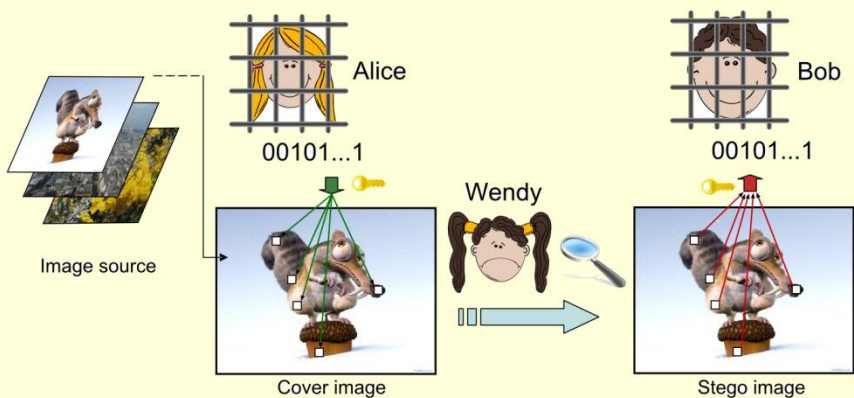


The Square Root Law of Steganographic Capacity

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Steganography is a mode of covert communication.

Problem Statement and Motivation

- Secure payload grows linearly with cover size for undetectable stegosystems.
- All practical embedding methods for real digital media are **detectable** to some extent.
- How does secure payload grow for detectable stegosystems?

Main Result

- Proposed model captures many practical embedding algorithms.
- Secure payload scales as **square root** of the cover size.
- Experimental verification is provided.

Conclusions and Future Work

- **Alice can send only 2x larger message when 4x larger images are available.**
- Secure payload is inversely proportional to Fisher information between cover and stego.
- Compare practical stegosystems by their FI.