IMAGE STEGANOGRAPHY

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Introduction

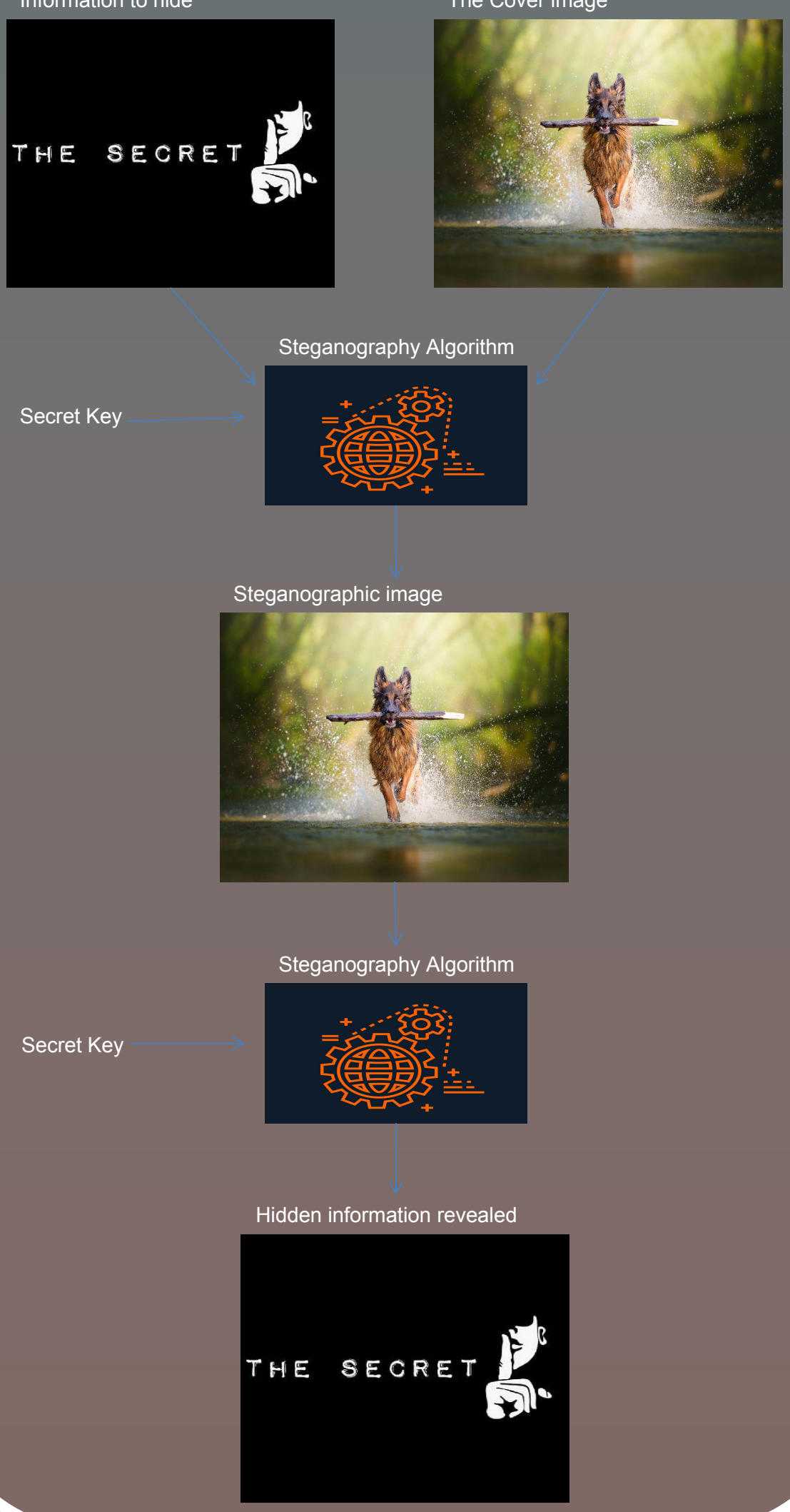
In the current era, the internet provides good convenience in transmitting large amounts of data from anywhere in the world. But, security and safety of the communications are still an issue. In order to solve this problem steganography schemes has been developed. Steganography is the practice of concealing messages or information within other non-secret text or data [1]. Unlike encryption, where it's obvious that information is being hidden, steganography hides information in plain sight, inside a file such as an image, which makes it difficult for observer to figure out where exactly the data is.

Methods & Materia

Image Steganography techniques can be divided into two groups: Image domain and Transform domain. Image domain known as spatial domain techniques embed messages in the intensity of the pixels directly, while transform domain known as frequency domain techniques image are first transformed and then the message is embedded in the image. Common image domain technique is Least Significant Bit (LSB) and common transform domain techniques are JPEG compression and JPEG steganography.

Results

The Information that need to be hidden will be provided along with the Cover image that is intended to conceal the secret information.



Conclusions

Steganography is useful for securely storing sensitive data, this data might be passwords or keys within other files. Information security means protecting your information from unauthorized access, modification, disruption, use, recording and destruction. This way the third party cannot notice the difference between normal message and a steganographic message [2].

References

[1] Moerland, T., "Steganography and Steganalysis", Leiden Institute of Advanced Computer Science, https://www.liacs.nl/home/tmoerl/privtech.pdf
[2] Wang, H & Wang, S, "Cyber warfare: Steganography vs Steganalysis", Communications of the ACM, 47:10, October 2004

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