

# Steganography Secure Communication

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**Steganography** : Data hidden within data.

It is the technique of hiding a secret message within an ordinary message.

**Steganography Techniques:**

- Spatial steganography & Transform steganography

**Measures for Comparison**

- Mean-Squared Error
- Peak Signal-to-Noise Ratio
- Capacity: Size of the data in a cover image that can be modified without deteriorating the integrity of the cover image.
- Invisibility: Strength of Steganography lies in its ability to be unnoticed by human eye

**Algorithms:**

- Lee, Y., & Tsai, W. (2014). A New Secure Image Transmission Technique via Secret-Fragment-Visible Mosaic Images by Nearly Reversible Color Transformations.
- Shaukat, A., Chaurasia, M., & Sanyal, G. (2016). A novel image steganographic technique using fast fourier transform.

IN MANY COUNTRIES, JOURNALISTS RISK TORTURE AND OPPRESSION FOR THE SAKE OF THE TRUTH

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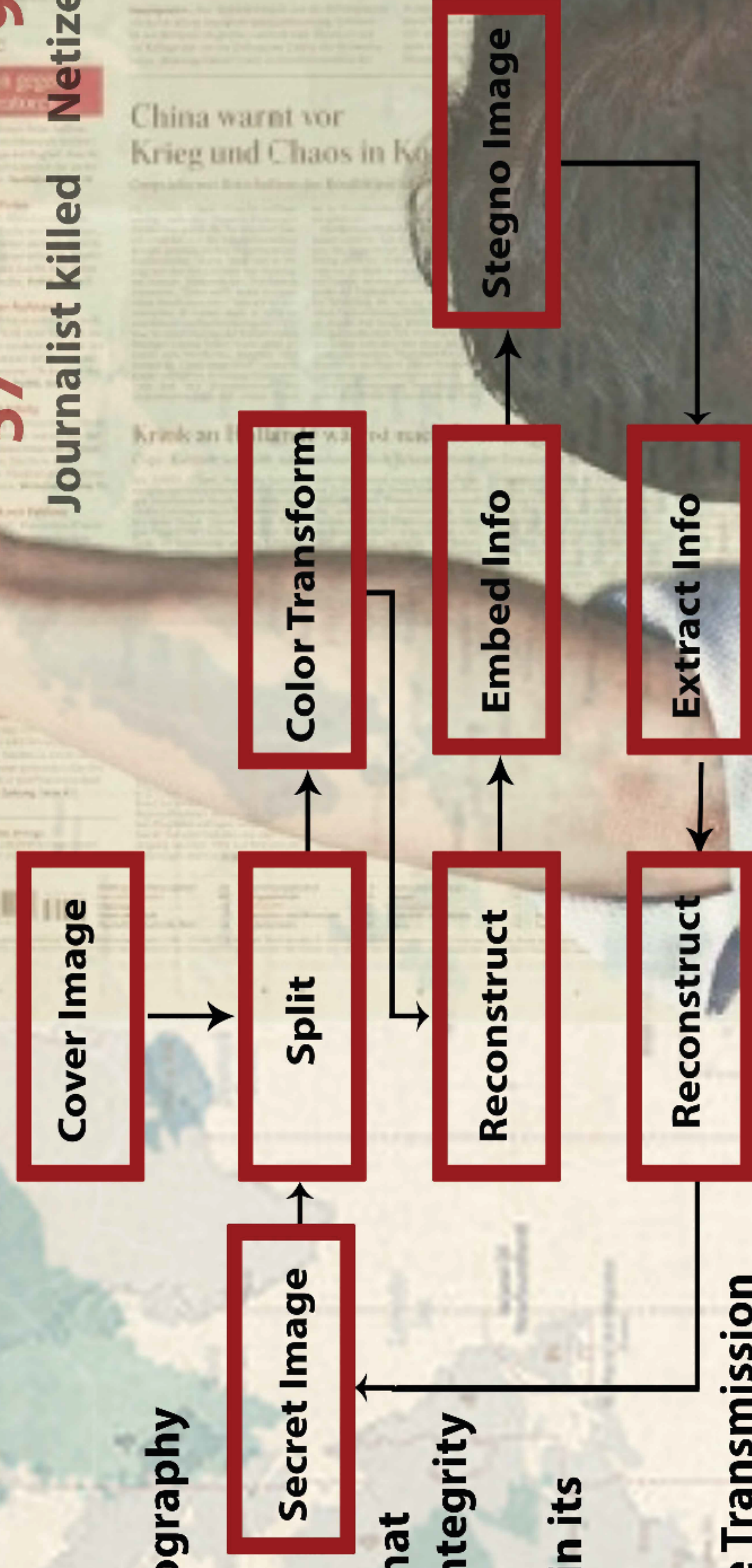
57

Berlin wall  
Destruction

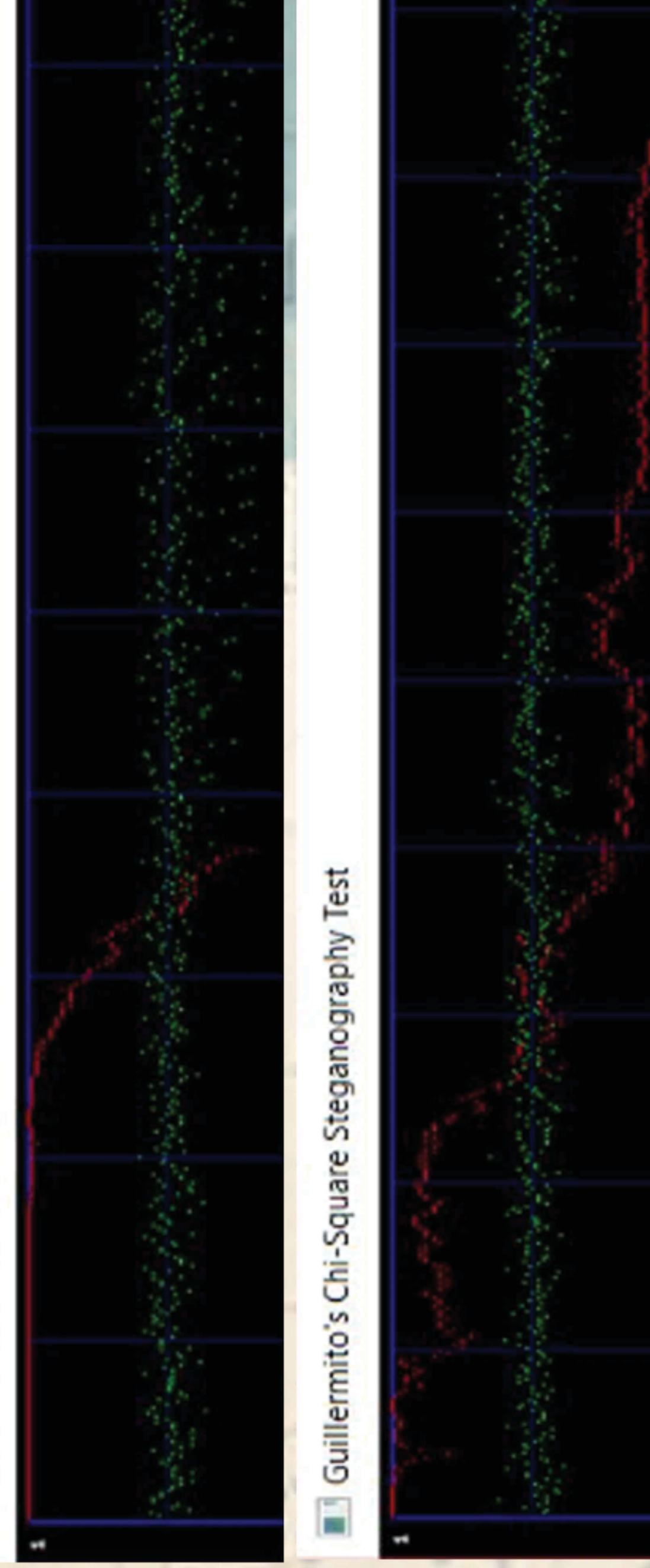
Heute  
Deutsche  
Demokratie

Krankheit  
China warnt vor  
Krieg und Chaos in Ko

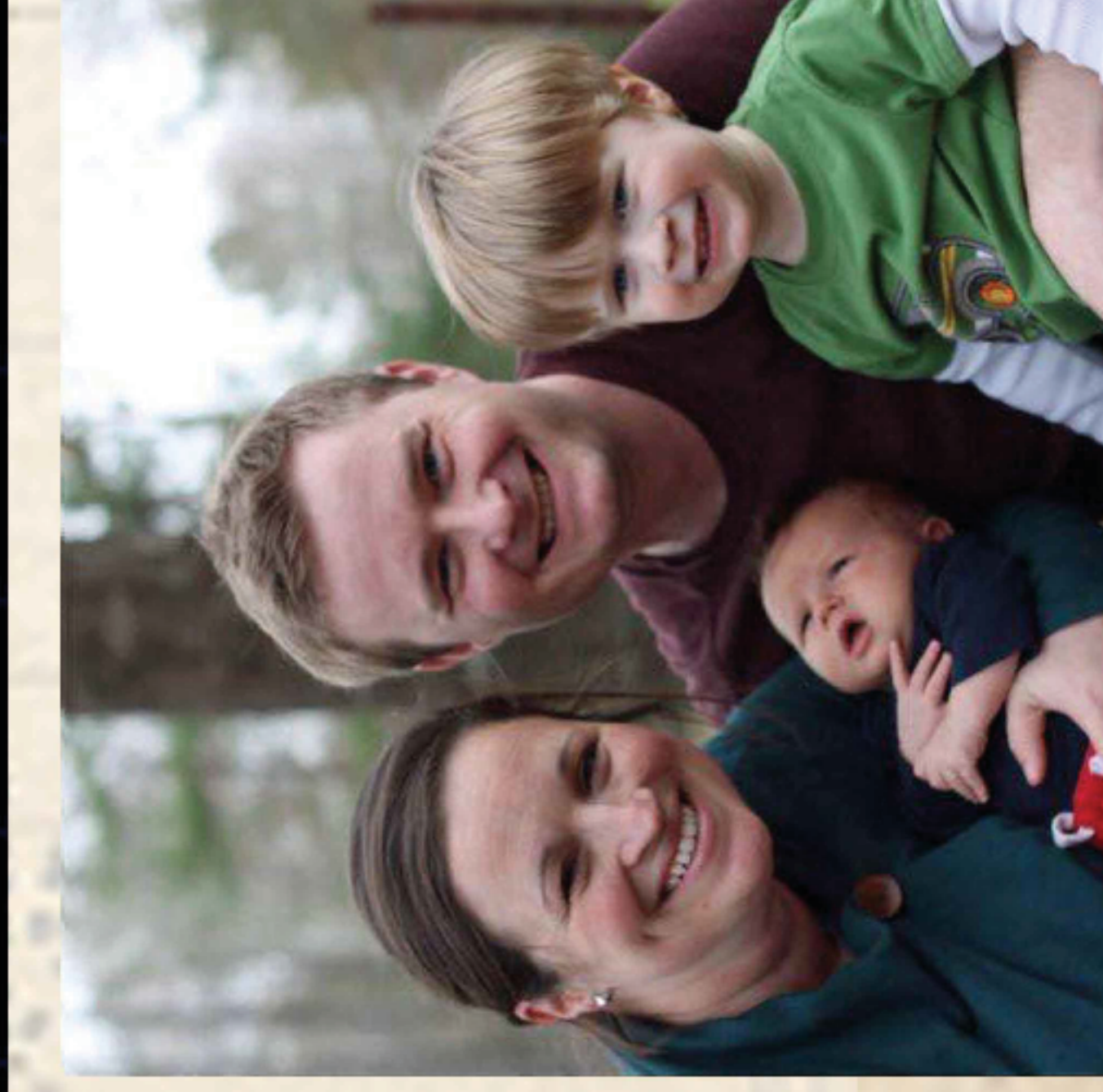
Journalist killed Netizen killed Media Assistants killed



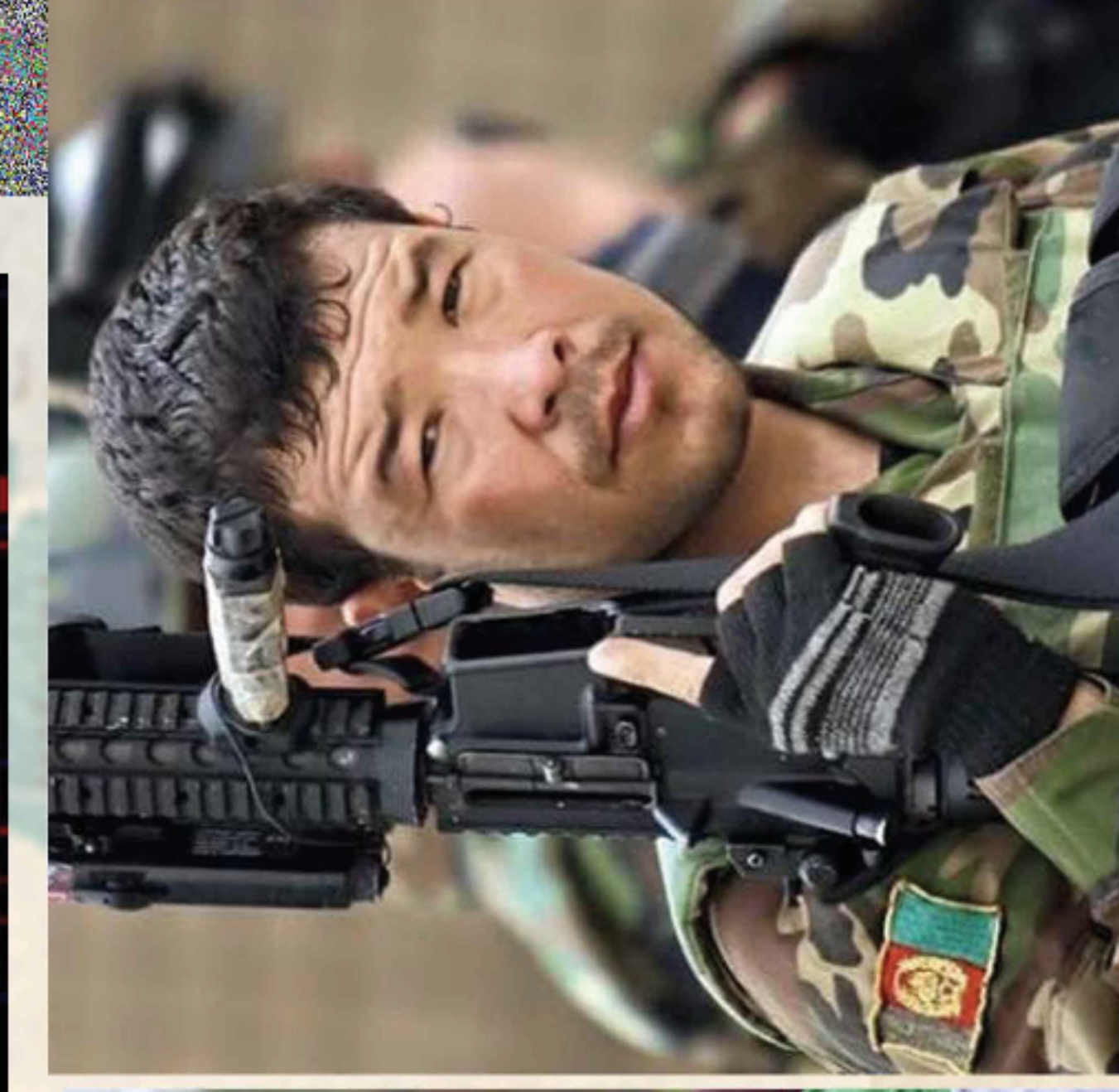
Guillermo's Chi-Square Steganography Test



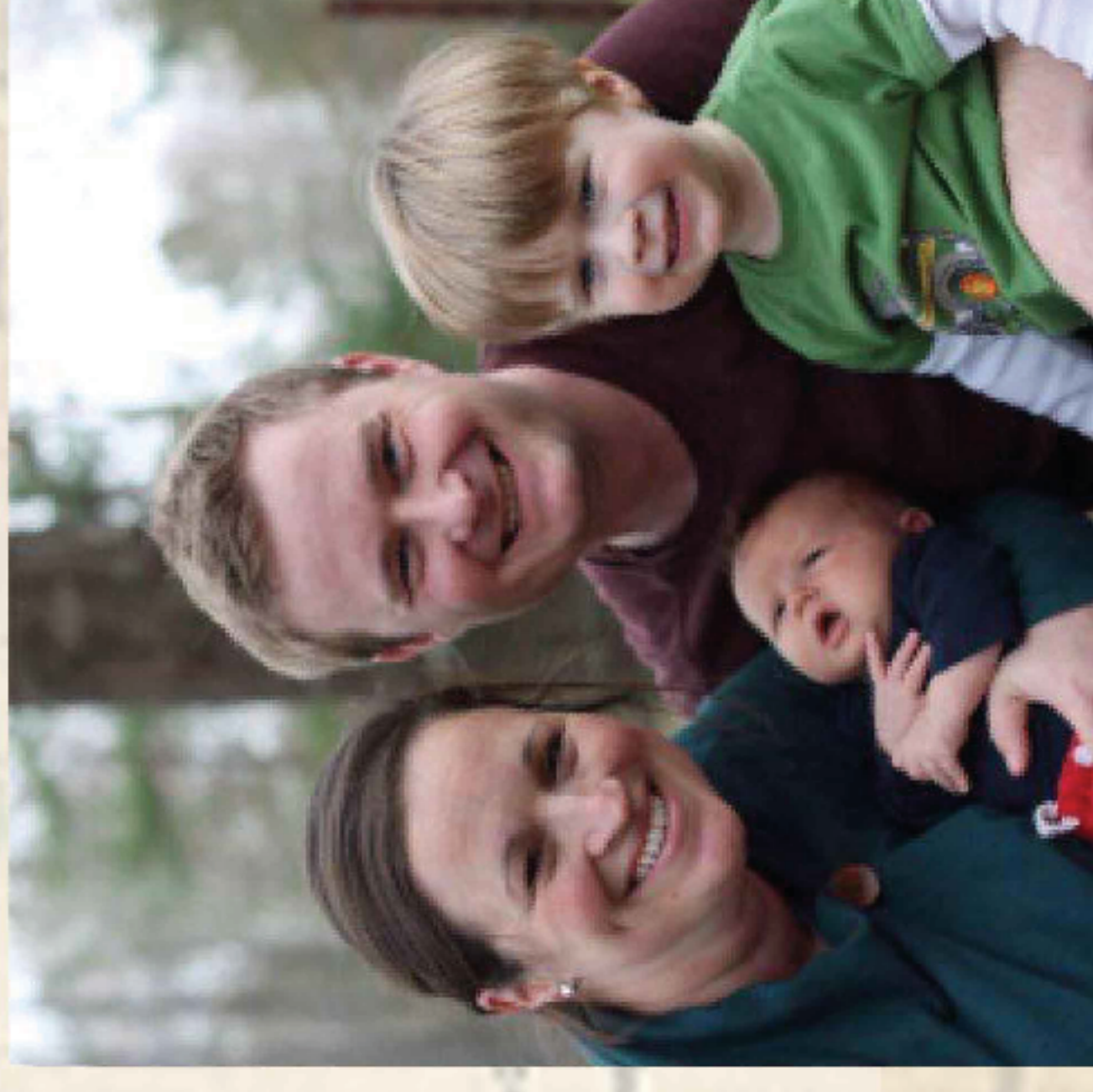
Encrypted Secret Image



Cover Image



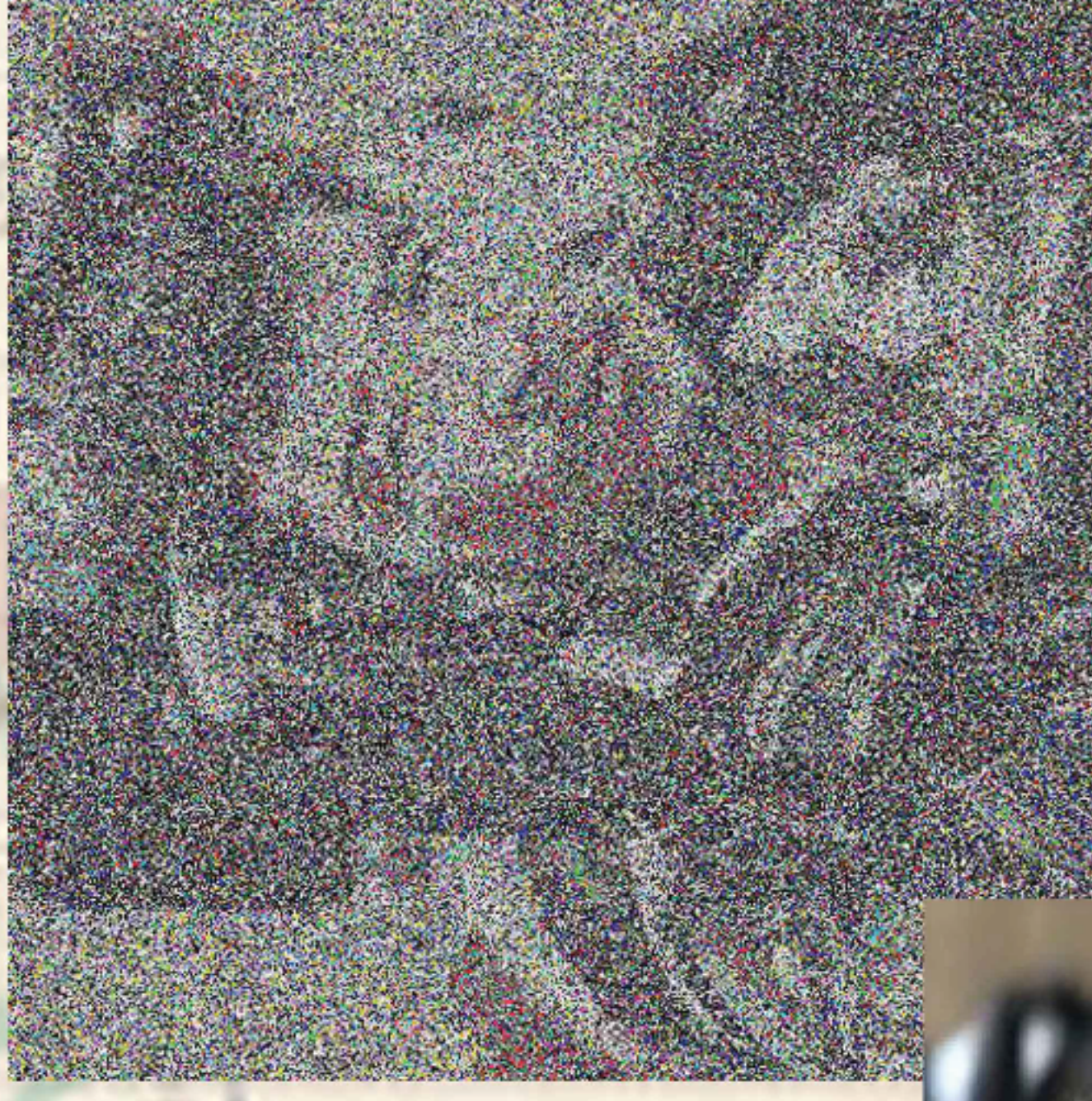
Secret Image



Steg Image



Recovered Image



Recovered decrypted Image