A Novel Method of Hiding Audio Signal into Color Image using LSB Substitution

Shital Nivas Shinde[1], Komal Laxman Nikam[2], Bhagyashri Sampat Shinde[3],
Dr Arjun Ramchandra Nichal[4]
Students, Department of E&TC[1,2,3]
Associate Professor, Department of E&TC[4]
Adarsh Institute of Technology and Research Centre, Vita, India

Abstract: *Data security means protective digital privacy measure that are applied to prevent unauthorized access to computers, huge database and online data it is also protect data from security. Steganography is focuses on hiding information in such a way that the message is undetectable for outsiders and only appears to the sender and intended recipient. It is is used to hide the message and prevent the detection of hidden message. Various modern technique of steganography are: a) Video steganography b) Audio steganography. information. The propose method is to hide secret information and image behind the audio and video file respectively. Steganography, a method of concealing secret data within various media carriers, has gained prominence due to advancements in computational power and increased security awareness. This paper introduces novel techniques based on LSB manipulation and redundant noise inclusion for data hiding in images and audio. Experimental results demonstrate the effectiveness and imperceptibility of these methods. Evaluation parameters such as transparency, robustness, and capacity are crucial for assessing steganography techniques. Image steganography methods are categorized into spatial and transform domain techniques, with the latter offering higher robustness. LSB-based steganography methods, including LSBR and LSBM, manipulate pixel bits to hide data, while variants like LSB MR enhance capacity. Ongoing research aims to strike a balance between capacity, robustness, and transparency in steganography techniques*

Keywords: Steganography, LSB substitution, Image processing, Secret Key, etc