**Abstract:**

A novel approach for steganography using a reversible texture synthesis ia a main goal of our proposed system. A texture synthesis process resample’s a smaller texture image, which synthesizes a new texture image with a similar local appearance and an arbitrary size. We weave the texture synthesis process into steganography to conceal secret messages. In contrast to using an existing cover image to hide messages, our algorithm conceals the source texture image and embeds secret messages through the process of texture synthesis. This allows us to extract the secret messages and source texture from a stego synthetic texture. Our approach offers three distinct advantages. First, our scheme offers the embedding capacity that is proportional to the size of the stego texture image. Second, a steganalytic algorithm is not likely to defeat our steganographic approach.

**Introduction:**

In The last decade many advances have been made in the area of digital media, and much concern has arisen regarding steganography for digital media. Steganography is a singular method of information hiding techniques. It embeds messages into a host medium in order to conceal secret messages so as not to arouse suspicion by an eavesdropper.

A typical steganographic application includes covert communications between two parties whose existence is unknown to a possible attacker and whose success depends on detecting the existence of this communication. In general, the host medium used in steganography includes meaningful digital media such as digital image, text, audio, video, 3D model, etc.

A large number of image steganographic algorithms have been investigated with the increasing popularity and use of digital images. Propose a novel approach for steganography using reversible texture synthesis.

A texture synthesis process re-samples a small texture image drawn by an artist or captured in a photograph in order to synthesize a new texture image with a similar local appearance and arbitrary size. We weave the texture synthesis process into steganography concealing secret messages as well as the source texture. In particular, in contrast to using an existing cover image to hide messages, our algorithm conceals the source texture image and embeds secret messages through the process of texture synthesis. This allows us to extract the secret messages and the source texture from a stego synthetic texture. To the best of our knowledge, steganography taking advantage of the reversibility has ever been presented within the literature of texture synthesis.

**Existing System:**

Most image steganographic algorithms adopt an existing image as a cover medium. The expense of embedding secret messages into this cover image is the image distortion encountered in the stego image. This leads to two drawbacks. First, since the size of the cover image is fixed, the more secret messages which are embedded allow for more image distortion.

Consequently, a compromise must be reached between the embedding capacity and the image quality which results in the limited capacity provided in any specific cover image. Recall that image steganalysis is an approach used to detect secret messages hidden in the stego image.

A stego image contains some distortion, and regardless of how minute it is, this will interfere with the natural features of the cover image. This leads to the second drawback because it is still possible that an image steganalytic algorithm can defeat the image steganography and thus reveal that a hidden message is being conveyed in a stego image.

**Disadvantages:**

* A stego image contains some distortion, and regardless of how minute it is, this will interfere with the natural features of the cover image.

**Proposed System:**

Ourproposed system implement with a novel approach for steganography using reversible texture synthesis. A texture synthesis process re-samples a small texture image drawn by an artist or captured in a photograph in order to synthesize a new texture image with a similar local appearance and arbitrary size. We weave the texture synthesis process into steganography concealing secret messages as well as the source texture.

In particular, in contrast to using an existing cover image to hide messages, our algorithm conceals the source texture image and embeds secret messages through the process of texture synthesis. This allows us to extract the secret messages and the source texture from a stego synthetic texture.

To the best of our knowledge, steganography taking advantage of the reversibility has ever been presented within the literature of texture synthesis.