

ABSTRACT

In steganography, the distortion purpose is used to explain the modification cost on cover elements, which are definitely crucial to the security of current adaptive steganography. There are several successful rules for reassigning the cost defined by a given distortion function, which can promote the security stage of the corresponding steganographic algorithm. In this project, a novel cost reassignment rule that is implemented to not one but a batch of present distortion functions. The costs assigned on a few pixels by several steganographic strategies may be very dissimilar even though those strategies exhibit close security levels. Such pixels are named as “controversial pixel”. Results display that steganalysis features are unresponsive to those pixels, therefore these pixels are appropriate to hold extra payloads. This rule named as the Controversial Pixels Prior (CPP) rule. The thumb rule, recommends a cost reassignment scheme. Through extensive experiments on several types of stego algorithms, steganalysis features and cover databases, which exhibits that the CPP rule can enhance the security of state-of-the-art steganographic algorithms for spatial snapshots.

Keywords:

Steganography, Distortion, Security, Cost reassignment, Controversial pixel, Payloads,

Stego algorithms, Steganalysis, databases.