



SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	Asian Journal of Research in Computer Science
Manuscript Number:	2019/AJRCOS/50591
Title of the Manuscript:	Enhancing PIGPEN Image Steganography Method by using Zigzag scanning

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
<p>1. In contrast to Abdelmegid [9], in fact, this report only adds zigzag permutation; the algorithm security is only achieved by PIGPEN. Detecting whether the image has hidden information is one of the attackers' common operations. On the other hand, extracting the lowest digital and zigzag order is an operation that is easily thought of by the attackers, and the extraction algorithm is also simple, so the algorithm has a very weak security.</p> <p>2. PIGPEN does not help to increase capacity. For example, the ASCII of "z" is 122. It can also be hidden by using two pixels. The first pixel hides "12" (1100), the second pixel hides "2" (0010). The PIGPEN of "z" is 88. It must use 2 pixels to hide two "8" (1000). The computer uses "0" and "1" to store the characters, and the last 4 bits of pixels need to be changed when the characters are represented by ASCII and PIGPEN. In fact, after changing the last 4 bits of two pixels to 1100 and 0100, respectively, or changing to 1000 and 1000 respectively, the PSNR of which scheme is large cannot be determined. But PIGPEN can improve security because PIGPEN's encoding rules are equivalent to secret keys.</p> <p>3. Although the method of this report is flawed, it provides some data hiding methods . It is recommended to publish the article.</p> <p>4. Need to add the experiment of compared with [9].</p>	

Reviewer Details:

Name:	<i>Gang-Qiang Xiong</i>
Department, University & Country	<i>Guangdong Medical University, China</i>