



SDI Review Form 1.6

Journal Name:	British Journal of Mathematics & Computer Science
Manuscript Number:	2013_BJMCS_7958
Title of the Manuscript:	Reading Skewed Images without Image Rotation
Type of the Article	

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	Figure 1 2 3 4 are used by author to explain the challenges faced during skewing. However, this challenges are not the inherent challenges that everyone dealing with skewing image are facing. These problem are due to author previous imperfection or lack of technical skill in processing the image. In other words, the author creates the challenge himself and tries to solve it instead of solving a challenge that everyone in the field is facing. When the challenge validity is doubted, the motivation of the paper is challenged, the rest of the paper is just a bunch of sentences that have gone into wrong direction meaninglessly. More precisely speaking, figure 2, deterioration plus haloes after rotation can be avoided using binary image instead of gray level image. The figure 4 lost character, is actually the approach of skewing is technically weak. Normally, software engineer would not be so be so incompetent such that the rotation will cut off part of the number. So: find a more convincing motivation for your method Processing time which used as one of the performance comparison is quite subjective because each author has different computer with different specification. Normally, we use the algorithm Big O complexity which is more general and objective to compare.	Regarding the figures 1,2,3 and 4: On the one hand, image rotation (not image filtering) can never add details to an image; on the other hand, knowing that the rotation of an image is <i>a priori</i> incompatible with the discrete Fourier model (except if the image rotation is a multiple of $\Pi/2$), other interpolation methods are used where most of them can be viewed as local approximations of the Fourier model (e.g. direct interpolation, spline interpolation, ...). When applying any rotation algorithm, the target pixel coordinates may: 1. Contain a decimal part and thus we have to take the value of the nearest neighbor, weighted average, bilinear interpolation, ... => Not 100% accurate which means creation of haloes. 2. Be outside the image=>loss of some pixels/characters <u>in case we have to keep the same image and character sizes.</u> To solve the <u>second issue</u>, the software engineers: a. Use a destination image bigger than the original one (but in this case, they have to fill a major part of the added border with an arbitrary value –usually with black or white-) => bigger image and thus more execution time , or, b. And if they have to respect the same original



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	So: if not possible to know the Big O complexity of other author's algorithm, at least you have to know yours.	image size, they have to shrink the image (and here we have an inevitable loss of information, in addition to the problem of having to fill arbitrarily a major part of the added border area). N.B.: It is worthy to note that there are many other problems related to image rotation (e.g. unreachable pixels –pixels coordinates not belonging to any result of the used rotation algorithm) => destination image not 100% accurate which means creation of haloes. Integrated.
<u>Minor</u> REVISION comments	Having skew character to be recognized by OCR will need to OCR to be more robust to recognize. So easing the skewing process might deteriorate the OCR process. Please explain on this issue.	My approach doesn't have any negative effect neither on the OCR process nor on the OCR accuracy because, all neural networks can easily be trained to read skewed characters and thus this issue doesn't exist at all.
<u>Optional/General</u> comments	Quality of flowchart is terrible, it is blurred.	Adjusted