[[1]](#footnote-2)

*Abstract*—This paper outlines a project to vectorize raster images. Vector graphics uses geometrical primitives based on mathematical equations to represent images. Since vector graphics constructs the displayed image from a mathematical model it is possible to rended the model at any zoom level without creating a (pixelized – change this) image.

S, Stevenson, Member, IEEE, and D, Benoit (Check this Formatting)

*Index Terms*—Imaging, Image converters, , [**http://www.ieee.org/organizations/pubs/ani\_prod/keywrd98.txt**](http://www.ieee.org/organizations/pubs/ani_prod/keywrd98.txt)

# INTRODUCTION

THIS document is a overview of the Vectorization project. This project was implemented using matlab and its Image Processing Toolbox. The implementation consists of a GUI to load images, and user controlled vectorization methods.

The main GUI presents the user with (three) options: Polygons, Lines and Curves (Maby should do a combined one)

# Polygon Detection

# Line Detection

## Hough

One method of line detection considered is the Hough Transform Method. This method is utilized after the original image has been converted to grayscale and canny edged detection has been applied (converts image to binary). There are three parts to the Hough Transform Method: Standard Hough Transform (SHT), Hough Peaks and Hough Lines.

SHT computes?. Hough Peaks locates peaks in the Hough Transform Matrix [#<http://www.mathworks.com/help/toolbox/images/ref/houghpeaks.html>] [#<http://mathworld.wolfram.com/HoughTransform.html>].

# SVG Output

This allows exporting of the vectorized images. Using SVG 1.1 standard which is based on the XML ?. To narrow the scope only polygons and cubic bezier curves are output. Parameters such as color is also set. The user is prompted upon execution for the filename and path. [#<http://www.w3.org/Graphics/SVG/>]

# Conclusion

A conclusion section is not required. Although a conclusion may review the main points of the paper, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extensions.

Appendix

Appendixes, if needed, appear before the acknowledgment.

Acknowledgment

The preferred spelling of the word “acknowledgment” in American English is without an “e” after the “g.” Use the singular heading even if you have many acknowledgments. Avoid expressions such as “One of us (S.B.A.) would like to thank ... .” Instead, write “F. A. Author thanks ... .” **Sponsor and financial support acknowledgments are placed in the unnumbered footnote on the first page, not here.**

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