Peer-to-peer image sharing app using compression

CS4089 Project

Midterm Report

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1 Introduction

We aim to initially conduct a study of the existing image compression algorithms and compare the compression ratios of them using a standard image. We would then implement the algorithm and use the same to convert images on a devices storage to a smaller size without any perceptible loss in image quality. This image of a smaller size would then be sent over to another device over a Wi-Fi network, thus enabling faster transfer times.

2 Problem Statement

The problem is to find the ideal compression algorithm which results in the best compression ratio without a noticeable loss in clarity. In order to ease the transfer of the compressed file, we would also be required to optimize our WiFi transfer methods.

3 Literature Survey

The fundamentals of Android development are available at the Android Developers website [1]. JPEG standards and their progressive benefits were analyzed from Singh [2]. Wallace [3] in 1992 presented the JPEG still picture compression standard.

4 Work Done

The literature survey to analyze the requirements necessary for the project have been completed. The findings of the same are being documented and these would provide the future direction of our work.

5 Future Work

On the basis of our findings, a suitable compression algorithm will be chosen. The requirements specification and the design of the application, including UML diagrams and application mockups are designated to be completed in this semester.

References

[1] Android Developers. *developer.android.com*, Google Inc., 2015.

[2] Singh, R.; Srivastava, V.K., JPEG2000: A review and its performance comparison with JPEG, in *Power, Control and Embedded Systems (ICPCES)*

[3] Wallace, G.K., The JPEG still picture compression standard, in *Consumer Electronics, IEEE Transactions on* , vol.38, no.1, pp.xviii-xxxiv, Feb 1992