Project proposal (Revised)

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EE368 Class Project Team

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Implement a Visual Masking Model to in run real-time on Android Platform

This is a proposal to implement a visual masking model on the android platform that could run in real-time. The visual masking is calculated loosely on how much the value of each individual pixel could be changed before this change become visible to human eye.

The visibility threshold is a function of the local image pattern, a phenomenon known as masking. For video, there are also temporal masking effects associated with brightness changes.
The computational models for visual masking we are considering are from the below mentioned papers

1) Modeling the Masking Effect of the Human Visual System with Visual Attention Model
   Anmin Liu, Maansi Verma and Weisi Lin
   School of Computer Engineering
   Nanyang Technological University
   Singapore

2) A Model of Visual Masking for Computer Graphics
   James A. Ferwerda, Cornell University Sumanta N. Pattanaik, Cornell University
   Peter Shirley, University of Utah Donald P. Greenberg, Cornell University

We hope to select a low computationally intensive visual masking model which can be implemented in real-time by displaying overlay colors to represent small changes in the local image pattern that would be visible to the human eye. In this way we also hope to highlight how one image pattern might be masking other pattern in the image to the human eye.

Driod Phone: We plan to implement this on a droid phone.