CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY

Name(s)
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Project Number
J1608

Project Title
Image Compression: Does It Really Matter?

Abstract

Objectives/Goals
The objective of my science project is to determine which image compression method compresses the image to a smaller file size but still produces good image quality when printed.

Methods/Materials
I used a digital camera to take a picture, a compression program (irfanview) to compress the images into five different formats (JPEG, TIFF - lossy & lossless, PNG, and GIF. I used a Laser Printer and photo paper to print the images. I had 5 judges rate the quality of the images on a scale of one to five. I repeated this process five times and documented the results.

Results
The results of this experiment showed that pictures compressed using JPEG were chosen by the judges more often as having better image quality than pictures that were compressed using TIFF, PNG and GIF.

Conclusions/Discussion
In conclusion, through this experiment, I learned that the JPEG compression method results in the best image quality and should be used for the compression of an image when quality is important.

Summary Statement
I am investigating which compression method, (JPEG, PNG, TIFF, GIF) , compresses files and also produces the best image quality when printed.

Help Received
My Mother helped get judges for project and helped me figure out how to compile data for graphs.