

Extra Credit:
Chapter 8, #9

The police have a photograph taken during the commission of a crime. Unfortunately the robbery took place behind the tourist with the camera. You notice in the photo a large chrome plated sphere that appears to be acting like a mirror. You use a film digitizer with $25\mu\text{m}$ pixel spacing and find that the image of the ball measures 360 pixels in diameter. The actual ball is 3 feet in diameter, and it was 27 feet from the camera position. Develop an equation for the geometric transformation that will rectify the image of the robbers. You may assume that the radius of the ball is negligible compared to its distance from the camera and the crime.

Extra Credit:

View a movie containing morph operations (e.g., Terminator 2) on a video player with stop-motion capability. Examine morph sequences in slow motion, and estimate how many control points were required, and where they were located. Write a brief paper outlining your estimates, along with the digitizing, processing and display requirements for this project (either 1991 or 2004 technology), as well as on the financial impact of these scenes on the producers.

<http://www.movieprop.com/tvandmovie/terminator/t2cgi.htm>

<http://www.mediaknowall.com/Scifi/Terminators.html>

http://www.creativecow.net/articles/zwar_chris/morph/