CS 4204 – Spring 2008
Dr. Bowman
Take-home exam question (due by final exam period, Friday May 2, 10:05 AM)

Instructions:
Read and answer the following question thoroughly in 1-2 pages (single-spaced, 12-point font). You will be graded on the quality of both the content and the writing of your answer. This question is worth 10 percent of your final exam grade. Please type your answer, with your name and student ID at the top of the first page. When you are finished, email your answer as a PDF file to Dr. Bowman: bowman@vt.edu.

Question:
One goal of computer animation is to generate realistic characters. Realistic *human* characters are the most challenging type of animated character to produce, because our brains are highly specialized to recognize human forms, facial features, and movements. In fact, as animated human characters become more realistic without perfect realism, they often tend to look "creepy" or even revolting (the so-called "uncanny valley" effect). Thus, a major challenge in computer graphics is to be able to generate realistic animated human characters that are indistinguishable from video of real humans. You could think of this as the graphics version of the Turing test.

Suppose that your first job after you graduate is to solve this problem (I don't expect that you already know how to solve it). What strategies could you use to find out more about the problem and how to make progress on it? What strategies would you use to evaluate your progress towards solution?