Assignment 8: "Multimedia"

due by section during the week of 13 April 1999

Please note that this assignment requires use of Adobe Photoshop and zero or more floppy disks.

Please write or type your answers on one or more separate pieces of paper.

Short answers. (10 points each.)

Please answer each of the following three questions in one or more words or sentences.

1. Tan and well rested from his Spring Break, Joe User has decided that it's time to get back to academics. Eager to get to the fun part of Assignment 8: "Multimedia," Joe hunkers down to tackle the assignment's first question. Having paid good attention during the most recent meeting of his favorite Extension School course, Joe chuckles as he reads the first question.

    Image files used in Web pages are often compressed so that they can be downloaded by browsers more quickly. But how can the size of an image file possibly be decreased without sacrificing *the quality of the image?*

    "Ha!" Joe exclaims. "That's so easy!"

    Unfortunately, Joe's pen suddenly runs out of ink. Help Joe out by answering this question for him.

2. Tragically, Joe cannot find a working pen anywhere. And so he must entrust you with the assignment's second question as well.

    CNN offers newscasts on demand via its Web site. That is, at any point during the day, you can visit `http://www.cnn.com/videoselect` and download a 13-minute video that highlights the day's top stories. The size of this newscast is on the order of several megabytes —certainly a large download. And, yet, the video starts playing only seconds after clicking on its link.

    How is it possible for the video to start playing before it's been downloaded fully? In what file formats might CNN's newscasts be?

3. On 3 March 1999, CNN published an article entitled, "Downloading music from the Internet: theft or democracy?" The article was in response to the sort of black market that has developed on the Internet for MP3s. But what exactly are MP3s? Why are they so popular (more so than WAV files)? In what way does distribution of MP3s over the Internet constitute theft? In what way does their distribution constitute democracy? Be sure to address each of these questions in your answer.

A work of art. (60 points.)

The following question requires use of Adobe Photoshop and zero or more floppy disks. Adobe Photoshop is available on most of the Macs and PCs in the Science Center, which is open twenty-four hours a day, seven days a week. If you wish to submit your work on floppy disk(s) but do not already own any, you can purchase one or more of them inexpensively at the Harvard Coop or at any computer store.

4. In section during the week of 6 April 1999, you were introduced to Adobe Photoshop, the de facto standard graphics-design tool for the Macintosh and Windows platforms. Your job for this question is to put your new skills to work and to design a personalized graphic.

   The guidelines for your design are as follows.

   - You must design a graphic that somehow embodies your initials or name.
   - You must use three or more colors in your graphic.
   - Your graphic must be no wider than 570 pixels and no taller than 410 pixels.
   - You must use at least two filters in designing your graphic.
   - You must submit your graphic in the GIF or GIF89a format. The file should be called `username.gif`, where `username` is your FAS username.
   - You must *also* submit at least five (5) incremental versions of your graphic in the Photoshop file format. That is, when designing your graphic, you must save your work every ten (10) minutes or so, using a *new* file name each time. When saving your work for the first time, you must name the file `username1.psd`, where `username` is your FAS username. Roughly ten minutes later, you should select **Save As...** from Photoshop's **File** menu and save your work as `username2.psd`. And so on. (Recall that `.psd` stands for "Photoshop document.") We want to see how you progressed in your design process. (Your GIF version of your graphic, however, should be your *final* product.)
   - You must submit your files either as e-mail attachments or on floppy disk(s). If you choose to submit one or more floppy disks, you must label each with both your name and your teaching fellow's name. You must also number each disk. (For instance, if you submit three disks, number them "1 of 3," "2 of 3," and "3 of 3.")

   In short, you must submit at least the following files, where `username` is your FAS username.

   1. `username.gif`
   2. `username1.psd`
   3. `username2.psd`
   4. `username3.psd`
   5. `username4.psd`
   6. `username5.psd`

   You will not be graded on the artistic merits of your graphic. However, you will be graded on the basis of your fulfillment of the above guidelines as well as on the extent to which you took advantage of the design techniques taught in section. (Your incremental versions will reveal to us the efforts that went into your design.)

Revealing your secrets. (2 points.)

5.   What filters did you use in designing your graphic?

Your own critic. (8 points.)

6.   In one or more paragraphs, each of five sentences or more, describe the work that went into
        your design. You may want to use one or more of the following questions as points for
        departure. What decisions did you make during the design process? What techniques did you
        use? What effects did you deploy? What filters did you try out but decide not to use? What
        features of Photoshop did you stumble upon during your work?

Extra Credit. (5 points.)

7.   Not only does Adobe Photoshop empower you to design graphics, it also enables you to edit
        graphics. For instance, consider the JPEG of Mr. Bill Gates below.

        Now consider the edited JPEG of Mr. Gates below.

Obviously, some prankster has merged the image of Mr. Gates with the image of some balding man. Notice, though, that the prankster has not just copied the balding head and pasted it atop Mr. Gates; rather, the prankster has blended carefully the two images together using Photoshop's brush, eraser, and smudge tools, among others.

Armed with your new Photoshop skills, you too can play such games! For extra credit, find two images on the Web that you'd like to merge, download them, and then work your magic on them with Photoshop.