

Assigned: Tuesday 2001-01-16

Due: Tuesday 2001-01-23
Dan Ellis <dpwe@ee.columbia.edu>

Background reading: Read chapters 2-5 (Historical Background) in Gold & Morgan. This is light reading, to give you some perspective on the course. Often, knowing the history is the only way to make sense of certain technological developments.

Web page: Create a web page for your contributions to this course. It doesn't have to be anything fancy, just somewhere to bring together your results. Columbia AcIS accounts support basic web pages, and provide information on setting them up. If you've never made a web page before, it's easy – look for one of the many basic HTML tutorials on the web.

Send me email containing the address of your web page.

Reading assignment: J. L. Flanagan, R. M. Golden, "Phase Vocoder", Bell System Technical Journal, November 1966, 1493-1509. (You can download the scanned version from the website). Don't labour this paper too much: we will go over the principles in class next week.

Write one paragraph summarizing the paper, and another paragraph giving possible reasons why their proposed technique did not become widely used in telephone communication. Put this text on your web page.

Practical assignment: Download the soundfile `mdwh0_sx305.wav` from the course website (<http://www.ee.columbia.edu/~dpwe/courses/e6820-2001-01/>). Use Matlab (or some other program) to produce a plot of this signal as a function of time (in Matlab, use "wavread" to read a wav file – see "help wavread"). At what time does the word "delicious" begin?

Make a plot of the waveform and put it on your website. In Matlab, "print -djpeg file.jpg" should create a JPEG image file which you can include in your web page.

Project: Jot down a few ideas of what you think you might do for your project. It's OK to limit it to a general area, or to have several alternatives that you haven't decided between, but it's important to start thinking about this now. (There are a few suggestions on the projects page of the course website.) Put your ideas on your web page.