**Problem Set 3**

12.1 Draw tree structures for the following ATIS phrases:

4. arriving in Washington

9. any delays in Denver

12.2 Draw tree structures for the following ATIS sentences:

1. Does American airlines have a flight between five a.m. and six a.m.?

2. I would like to fly on American airlines.

13.12 Discuss the relative advantages and disadvantages of partial versus full parsing.

***Answer either disjunct but not both:***

[13.9-revised - Define with CF rules and an FST a more extensive finite-state grammar for noun groups that will cover the examples from 13.5, as in “*The most recently cancelled flight*,” or the “*The second cancelled flight*.” Other examples include: *one Cray Computer share, an Italian state-owned holding company*

Test it <by hand> on some similar NPs and show what happens.

What would your rules do with “\**The recently second flight*”?

OR

13.6 Alter the Earley algorithm so that it makes better use of bottom-up information

to reduce the number of useless predictions. Write the pseudo-code.]

13.13 Draw the CKY parse table for *Drive to the end of the road*. Can you think of any lexically based “filters” or “constraints” that might rule out one or more spurious constituents?

Drive to the end of the road

**Problem Set 4**

14. 9 Give two examples each of attachment ambiguity, coordination ambiguity and local ambiguity.

14.5 Fill out the rest of the probabilistic chart in Figure 14.4.