## LING5702: Problem Set 4

## Due via Carmen dropbox at 11:59 PM 3/6.

1. Consult the lecture notes (\#10) on hierarchical sequential prediction. According to the model in those notes, assume the following complex event (a sentence) is being recognized:

and the following event fragments have already been constructed:

(a) [6 pts.] Draw the events and event fragments that would exist after one terminal decision. (HINT: As in lecture notes 10.4, draw just one rectangle with a word inside, no tree lines.)
(b) [2 pts.] Which result (match or no-match) is used in this decision?
(c) [2 pts.] How many distinct (disjoint) events or event fragments exist in memory now?
2. Now assume the following complex event (a sentence) is being recognized:
verb-phrase
and the following event fragments have already been constructed:

(a) [6 pts.] Draw the events and event fragments that would exist after one terminal decision. (HINT: As in lecture notes 10.4, draw just one rectangle with a word inside, no tree lines.)
(b) [2 pts.] Which result (match or no-match) is used in this decision?
(c) [2 pts.] How many distinct (disjoint) events or event fragments exist in memory now?
3. Now assume the following complex event (a noun phrase) is being recognized:

and the following events and event fragments have already been constructed:

(a) [6 pts.] Draw the events and event fragments that would exist after one nonterminal decision. (HINT: As in lecture notes 10.4, draw just one rectangle with a pair of tree lines inside it.)
(b) [2 pts.] Which result (match or no-match) is used in this decision?
(c) [2 pts.] How many distinct (disjoint) events or event fragments exist in memory now?
4. Now assume the following complex event (a noun phrase) is being recognized:

and the following events and event fragments have already been constructed:

(a) [6 pts.] Draw the events and event fragments that would exist after one nonterminal decision. (HINT: As in lecture notes 10.4, draw just one rectangle with a pair of tree lines inside it.)
(b) [2 pts.] Which result (match or no-match) is used in this decision?
(c) [2 pts.] How many distinct (disjoint) events or event fragments exist in memory now?
