Notes toward input to a decision tree for LM loss and change in context:

**Contexts:**

1) Position

-position in word

-monosyllables: initial, in initial CC but not initial, in nucleus, in coda but not final, final

-polysyllables: similar, but add word-medial for C and Gl; also add lexical stress value of following V (start with full vs reduced vowel, perhaps eventually distinguish main-stress from secondary-stress full vowel)

-position in phrase: initial; in initial onset cluster but not initial; in final syllable, in final cluster but not final, final

2) Frequency

-of word: in the language, in the dialogue

-of phrase

3) Adjacent segments

-preceding C, V, syllable stress

-following C, V, syllable stress

4) Morphosyntactic category

-Content word vs Function word (vs. Interjection?)

-If Content word: Noun, Verb, Adjective, Adverb

5) Where in syntactic constituent (as opposed to prosodic constituent)

6) How many syllables in the word?

7) Phonotactic constraints?

**Outcomes:**

1) Is LM lost?

2) Is LM changed? These are marked in the Lost&Changed tier with double slashes (see example in red below); current candidates for these phenomena are listed in the Word file called Landmark changes v 2.doc

**Labels in LM tiers:**

-For consonants (stops, fricatives, nasals): <phoneme label>-cl [for clos], <phoneme label> [for release]; for affricates, additional <phoneme label>-2 for second release

-For glides: single LM with <phoneme label>

-For vowels: single LM with V label

[Any of these labels can be followed by -?; in the LM tier this means there is weak evidence for the LM; in the Lost&Changed tier, this means can hear the segment but no evidence for LM (segment and its features presumably cued by other non-LM cues]

-three types of abrupt acoustic events that don't signal manner features:

-ipp (irregular pitch periods)

-+g/-g (onset of voicing after non-voicing; offset of voicing when not accounted for by presence of [-voi] consonant, e.g. at end of utterance or before a pause)

-vpp (closure/opening of velopharyngeal port)

LM added: <phoneme label>-+

LM omitted: <phoneme label>-x

LM changed: e.g. t-cl-x/t-glide/t-x

2012. 4. 5. Steps in automatic generation of predicted landmarks and notations for landmark markings

Automatic generation of predicted landmarks

Given: sentences (word sequences)

+ dictionary

-> phone sequences

+ phone2phoneme rules

-> phoneme sequences

+ phoneme2landmark rules

-> landmark sequences

<NB> phoneme2landmark rules: assumption: V- ( ) – V form (?)

Mapping rules probably manner-class specific

{V/G/L/N/S/F} x {V/G/L/N/S/F} = at most 36 cases

In results, differences between predicted and labeled landmarks will be

1. Adjustments for mapping
2. Real modifications

Notations for annotated landmark labeling

1. <phoneme/phone>

segment identity : b, d, g, …

1. <word>

Position : (o1, o2, …) (n11, n12) ( ( a n1, a n2, …) ( n n1, n n2) … ) (c1, c2 … )

Prominence/stress : +1 (full), +0 (reduced)

Category : noun, verb, adj., …

# syllables in word : S1, S2, …

1. <phrase>

Position: IP0, (IP1, IP2, … IP n), IPF,

ip0, (ip1, ip2, … ip n), ipF

<NB> if only one syllable in phrase, note as IP0/F and/or ip0/F

Prominence/pitch accent : +2 (pitch accented), +1 (maybe), +0 (no)

Category : NP, VP, AdjP, …

# words in phrase : W1, W2, …

1. Frequencies

Word/phrase frequencies within dialogue and in the language will be in separate lookup table