

# REFERENCE GUIDE: THE RAP (RHYTHM AND PITCH) ANNOTATION SYSTEM

## RaP Symbol Set

### Rhythm tier

<b>X</b>	very strong metrical prominence
<b>x</b>	moderately strong to weak metrical prominence
<b>X?</b>	uncertain whether a beat is very strong or only moderately strong
<b>x?</b>	uncertain whether a syllable is metrically prominent or not
<b>x?&gt; &lt;x</b>	prominence ambiguity on adjacent syllables: nonbeat + weak beat sequence
<b>x?&gt; &lt;X</b>	prominence ambiguity on adjacent syllables: nonbeat + strong beat sequence
<b>[x]</b>	metrical prominence on lexically reduced or unstressed unreduced syllable <sup>1</sup>
<b>)</b>	major phrase boundary
<b>)?)</b>	a boundary is present, but it may be either major or minor
<b>)</b>	minor phrase boundary
<b>)?</b>	not sure if a minor phrase boundary is present

### Tones tier

<b>H*</b>	“high” pitch accent
<b>L*</b>	“low” pitch accent
<b>E*</b>	“equal” pitch accent
<b>H+, +H</b>	rightward- and leftward-aligning “high” unstarred tones
<b>L+, +L</b>	rightward- and leftward-aligning “low” unstarred tones
<b>E+, +E</b>	rightward- and leftward-aligning “equal” unstarred tones
<b>H[*]</b>	“high” false pitch accent
<b>L[*]</b>	“low” false pitch accent
<b>E[*]</b>	“equal” false pitch accent
<b>H?*</b>	uncertain whether “high” or “equal” starred tone
<b>H?, H?+, +H?</b>	uncertain whether “high” or “equal” unstarred tone
<b>L?*</b>	uncertain whether “low” or “equal” starred tone
<b>L?, L?+, +L?</b>	uncertain whether “low” or “equal” unstarred tone
<b>X*</b>	starred tone of indeterminate type
<b>X+</b>	unstarred tone of indeterminate type
<b>*?</b>	uncertain whether starred tone is present
<b>+?</b>	uncertain whether unstarred tone is present
<b>!</b>	small pitch interval (< 3 semitones)
<b>!?</b>	uncertain whether small pitch interval
<b>:</b>	utterance-initial tone

### Misc tier

<b>dis</b>	disfluency
<b>hes</b>	hesitation
<b>cut</b>	cutoff
<b>res</b>	restart
<b>[pi</b>	beginning of perceptually isochronous syllable sequence
<b>pi]</b>	end of perceptually isochronous syllable sequence
<b>(//</b>	beginning of (consecutive) tonal parallelism
<b>//)</b>	end of (consecutive) tonal parallelism

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<sup>1</sup> A lexically unstressed syllable as defined here is a syllable in a polysyllabic word which lacks lexical stress and has reduced vowel quality, e.g. *a-* in *about*. An unstressed unreduced syllable defined here is a syllable in a polysyllabic word which lacks lexical stress but has full vowel quality, e.g. *-o* in *piano*.

1(//	beginning of first part of non-consecutive tonal parallelism
//)1	beginning of first part of non-consecutive tonal parallelism
2(//	beginning of second part of non-consecutive tonal parallelism
//)2	beginning of second part of non-consecutive tonal parallelism, etc.
>p	late F0 peak
>v	late F0 valley

## Rhythm tier labeling conventions

- I. **Clash/lapse convention.** Prefer a transcription in which metrically prominent syllables are separated by one or two non-prominent syllables.
- II. **Lexical stress convention.** For *polysyllabic* words, prefer a transcription in which (a) syllables with primary, secondary, or ternary stress are assigned metrical prominences (“x” or “X”) while (b) unstressed syllables (including unstressed unreduced syllables) are not assigned metrical prominences.
- III. **Content/function word convention.** For *monosyllabic* words, prefer a transcription in which (a) content words are assigned metrical prominences and (b) function words are not assigned metrical prominences.
- IV. **Multiple-word phrase convention.** For multiple-word *phrases*, prefer a transcription in which the most prominent syllable(s) in the phrase are treated as beats and the least prominent elements of the phrase are treated as nonbeats.