

Symbols	Description	Label Convention & Examples	Notes
Minimum of two text levels (<i>interval tiers</i>): word & syllable			
Three levels of prosodic annotation (Levels 1-3 = <i>point tiers</i>):			
1. Phrase (Level 1)			
% -	beginning and end of a prosodic phrase with a strong or weak boundary	<ul style="list-style-type: none"> - pause between phrases: label at the end of the 1st phrase and label at the beginning of the 2nd phrase - no pause between phrases: a single label that marks the end of the 1st and beginning of the 2nd phrase 	<ul style="list-style-type: none"> - a prosodic phrase with a weak boundary always occurs within a prosodic phrase with a strong boundary - phrase labels receive a tone on the tone level
❖ Diacritics			
! ^	phrasal Downstep or Upstep: <ul style="list-style-type: none"> - shift in the entire pitch range between two or more phrases - perceptually salient reduction or expansion in pitch span 	<ul style="list-style-type: none"> - at the start of the register shift, diacritic is placed <i>left</i> of the phrase label: !% !- ^% ^- - no diacritic at phrase end 	<ul style="list-style-type: none"> - if pitch register remains shifted: no further marking - return to original pitch level: mark pitch register shift if perceptually significant
&	disfluencies that interrupt a phrase, e.g., pauses like “uh”, marked by noticeable traits of disruption	diacritic placed to the left of phrase label: &% &-	disfluencies can appear at the beginning and/or end of a phrase or as a standalone phrase
2. Prominence (Level 3)			
1	weak prominence (rhythmically or tonally conditioned), does not require (clear) F0 movement	label placed in the vowel of the prominent syllable	<ul style="list-style-type: none"> - each prominence level may correspond with an accentual tone, non-accentual tone, or no tone on the tone level - prominence labels may have to be aligned with tone labels in a further step - prominence levels 2 and 3 usually correlate with an accentual tone on the tone level - a prosodic phrase with a strong boundary generally contains at least one prominence of level 2 - extra-strong prominence exceeds strong prominence noticeably
2	strong prominence, typically primarily tonal (and aligning with a pitch accent)	label placed in the vowel of the prominent syllable	
3	extra-strong prominence, often emphatic realizations of full pitch accents with strong prominence (indicated by F0 movement and/or segmental hyperarticulation)	label placed in the vowel of the prominent syllable	

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3. Tone (Level 2)			
H L	1. boundary tones = tonal marking of phrase boundaries	phrase labels (Level 1) always include a tone annotation, even if they are caused by disfluencies: - mark tone label below the phrase label - if a phrase label marks both the beginning and end of a phrase, two tone labels (without space) can be used if they differ in tone value (e.g., HL LH); otherwise, use one tone value	- a prosodic phrase with a strong boundary generally starts with a low boundary tone “L” (default for phrase beginnings is low to mid in pitch register) - if a phrase clearly starts with high F0, a high initial boundary tone “H” is set - initial boundary tones cannot be downstepped or upstepped
H* L*	2. accentual tones = tonal elements that contribute significantly to the perception of prominence (equivalent to full pitch accents)	the label is generally placed in the prominent (stressed) syllable of a word: - F0 min/max <i>within</i> the prominent syllable = label at F0 min/max - F0 min/max <i>outside</i> the prominent syllable = label in the middle of the vowel - if no clear F0 target is visible = label in the middle of the vowel (e.g., !H*, plateau contours)	- the asterisk marks the phonological association of a tone with a prominent syllable, not their phonetic alignment (in contrast to non-accentual tones!) - an accentual tone at least corresponds to prominence level 1 - prominence labels should be aligned with their corresponding accentual tones
H L	3. non-accentual tones = target points in the F0 curve before and after an accentual tone, not necessarily linked to the perception of a prominence	label is generally placed at F0 min/max: - microprosodic perturbations are not labeled = put tonal labels immediately before or after such perturbations - perceptible low target <i>before</i> high accentual tone = put L tone at the lowest F0 in or before the accent-bearing syllable (in case of non-sonorant segments the low target may occur considerably earlier than the accent-bearing syllable)	- <i>after</i> a high accentual tone (often before a right phrase boundary), a L tone is annotated if the F0 forms a clearly visible and perceivable minimum (falling movement with a distinct elbow at the phrase end = no interpolation between high accentual tone and boundary) - a prominence label only aligns with a non-accentual tone if both occur in the same syllable

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! ^	tonal Downstep or Upstep	diacritic <i>left</i> of the symbol for (non-)accentual tone or phrase-final boundary tone: !L !L* ^L ^L* !H !H* ^H ^H*	these operations are to be interpreted in relation to the preceding tone of the same quality within the same phrase (= no initial boundary tone marking!)
< >	tonal target in the <i>following</i> or <i>preceding</i> syllable of the accentual tone	diacritic on F0 min/max outside the prominent (stressed) syllable: - in the <i>following</i> syllable of the accentual tone: H* < - in the <i>preceding</i> syllable of the accent tone: > H*	the label points to the tone: < signals association with the preceding accentual tone > signals association with the following accentual tone
Comment Tier (Level 4 = point tier)			
?Alternative label plus text (optional)	cases of uncertainty (alternative annotation) if needed: comments of any type (e.g., laughter, types of disfluency or other notable elements not covered by the prosodic inventory)	- for uncertainty on a <i>single</i> level = “?” + alternative phrase, tone, or prominence label - for uncertainty across <i>multiple</i> levels = list alternative annotations sequentially in the annotation level order: e.g., ?L, ?1 - for alternative annotation of two related tone labels = use parentheses: e.g. (?L* ?H)	- uncertainties are generally indicated by “?” to the left of the respective label - a “?” without additional label can be used to express doubt about the presence/absence of an event; note the alternative to the non-existence of the event on the comment tier

Reference

Kügler, Frank, Baumann, Stefan & Röhr, Christine T. (2022) Deutsche Intonation, Modellierung und Annotation (DIMA) – Richtlinien zur prosodischen Annotation des Deutschen. In Schwarze, Cordula & Grawunder, Sven (eds.) *Transkription und Annotation gesprochener Sprache und multimodaler Interaktion: Konzepte, Probleme, Lösungen*. Tübingen: Narr, 23-54.