

## PROPOSAL FOR ELIMINATION OF INCORPORATED STEMS & ESTABLISHING $V_R+C_A$ SHORTCUTS

At the request of uakci and presumably supported by others in the community, I have come up with the following proposed scheme for eliminating incorporated stem and replacing them with what I am calling “concatenated” formatives. Doing so will allow these replacements for incorporated stems to take all the morphology usually associated with other formatives (with the exception of Bias). Additionally, this scheme allows us to simplify/streamline the morpho-phonological structure of formatives in general and allows for the introduction of eight  $V_R+C_A$  shortcut forms that will shorten many formatives by one syllable.

### Proposed Slot Structure of a Formative

I	II	III	IV	V	VI	VII	VIII	IX	X*	XI
( $C_C$ )	' $V_V$	$C_R$	( $V_R$ )	( $V_X C_S \dots$ )	( $C_A$ )	( $V_X C_S \dots$ )	( $V_N C_N$ )	$V_C^* / V_K$	(') $C_B$ or (') $C_Y$	[stress]
Concatenation status indicator + $V_R+C_A$ shortcut indicator	Version + Stem + $C_A$ shortcut	Main Root	Function + Specification	$V_X C_S$ affix(es) apply to stem but not to $C_A$ If Slots IV & VI values are present then form is reversed to $-C_S V_X-$	Configuration + Extension + Affiliation + Perspective + Essence	$V_X C_S$ affixes apply to stem + $C_A$	Valence + Mood/Case-Scope or Aspect + Mood/Case-Scope or Phase + Mood/Case-Scope or Level + Mood/Case-Scope or Effect + Mood/Case-Scope	Case or Illocution + Expectation + Validation as determined by syllabic stress	Bias or Case-Scope or Mood  must be preceded by a glottal-stop unless Slot VIII $C_N$ or Slot IX $V_C/V_K$ contains a glottal-stop	penultimate stress = UNFRAMED Relation + $V_C$  ultimate stress = UNFRAMED Relation + $V_K$  antepenultimate stress = FRAMED Relation + $V_C$
consonantal prefix	vocalic affix	cons. form	vocalic affix; presence determined by $C_C$ in Slot I	last $V_X$ in the series requires a glottal stop to indicate end of Slot	consonant form; presence determined by $C_C$ in Slot I		Modular Slot containing a vowel-form + consonant-form	vocalic affix		

\* Concatenated formatives (see discussion for Slots I and II below) label the  $V_C$  Case marker as  $V_F$  Format; additionally, Slot X must be empty in a concatenated formative.

**NOTE:** A monosyllabic formative is considered to have the equivalent of ultimate stress (i.e., it is an UNFRAMED verbal formative).

### SLOT I: $C_C$ — Concatenation-Type plus Alternate $V_F$ of Preceding Concatenated Formative, plus $V_R+C_A$ Short-Cut Type

Slot I carries a new prefix,  $C_C$ , that serves two functions: (1) to indicate that the formative is immediately preceded by a concatenated formative (the new replacement for stem incorporation from previous versions of this document), and (2) to indicate whether certain  $V_R+C_A$  forms from Slots IV and VI have been elided (thus being instead indicated by the Slot I  $C_C$  value).

**Concatenation:** The incorporated stems of previous versions of the language have now been eliminated. Instead, any formative may be immediately preceded by another formative which serves the same purpose as the previous incorporated stem. The first formative of this pair of formatives shall be known as a *concatenated* formative. The second formative of the pair shall be known as a *parent* formative. The pair of formatives together shall be termed a *concatenated pair*. (NOTE: A formative that is not part of a concatenated pair is now termed a *standalone formative*.)

The first formative of the pair, the concatenated formative, is structured as a regular formative, able to take any and all morphology as appropriate and semantically permissible for the concatenated pair as a whole (except for Slot X). The second formative of the pair, the parent formative, however, will show one of the following eight  $C_C$  values in Slot I to indicate that it and the preceding formative constitute a concatenated pair. The meaning of the different  $C_C$  values is explained below the table.

Slot I $C_C$ Values	$V_F$ of Preceding Formative = Formats 1 thru 36	$V_F$ of Preceding Formative = Formats 37-68	$V_F$ of Preceding Formative = Formats 1 thru 36 + [w-] $C_A$ shortcut*	$V_F$ of Preceding Formative = Formats 37-68 + [y-] $C_A$ shortcut*
Type-1 Concatenation	h	ç	hl	hm
Type-2 Concatenation	hw	çw	hr	hn

\* See Slot II below for an explanation of the w- and y-  $C_A$  shortcuts

**Concatenation Type:** Type-1 concatenation implies a circumstantial relationship between the concatenated formative and the parent formative (equivalent to placing the concatenated formative into a case-frame). Type-2 concatenation is derivational (i.e., lexicalizing), creating a new lexico-semantic gestalt usually requiring a different English translation. This is analogous to English forms like *polar bear* naming a new animal rather than stating a location. Likewise, English *elephant seal* establishes a new lexico-semantic gestalt rather than describing some sort of metaphorical relationship between elephants and seals.

**Alternate  $V_F$  Indicator:** Concatenated formatives do not use a glottal-stop in the Slot IX  $V_F$  form. Instead, Columns 2 and 4 of the above table are used to indicate that the Slot IX  $V_F$  Format vowel of the preceding concatenated formative is actually a Format 37-through-68 form but without the glottal stop.

**$C_A$  Short-Cut Indicator for Parent Formatives:** Columns 3 and 4 of the above table are used if the Slot IV  $V_R$  value is default -a- (STA/BSC/EXS) and the Slot VI  $C_A$  affix is one of eight specific  $C_A$  values shown on the next page.

**$C_A$  Short-Cut Indicator for Concatenated or Standalone Formatives:** If a formative is not a parent formative (i.e., it is concatenated or standalone), then the same Slots IV/VI a+ $C_A$  short-cuts are shown by a  $C_C$  value of either w- or y-, depending on the particular  $C_A$  value being elided, as shown on the next page.

**Morpho-phonological Restrictions on a Concatenated Formative:** Concatenated formatives do not utilize a glottal-stop in the Slot IX  $V_F$  value; instead they utilize the  $V_F$  values 1 through 36 (identical to values 37 through 68 except for the glottal-stop) and the immediately following formative takes a Slot I  $C_C$  value from Column 3 or 4 of the  $C_C$  table above. Additionally, Slot X must be empty in a concatenated formative.

**“Phrasal” Concatenation:** More than two formatives may be concatenated. Three or more formatives may be concatenated to form the equivalent of “phrasal” incorporation. The second and all subsequent formatives of such a “concatenated string” must take one of the eight  $C_C$  values above to indicate that each is a parent formative for the immediately preceding formative.

**Orthography:** In addition to the presence of a  $C_C$  affix in Slot I of any parent formative, the two (or more) formatives will be joined by a hyphen in the language’s romanization scheme as a simple mnemonic indicator that they are a concatenated pair or concatenated string.

**SLOT II: V<sub>V</sub> — Stem and Version (plus optional Slot IV+VI a+C<sub>A</sub> Short-Cut)**

Slot II contains a vocalic affix, V<sub>V</sub>, showing the formative’s Stem and Version. Additionally, if Slot I contains a **w-** or **y-**, or one of the four Column 3 or 4 values from the C<sub>C</sub> table on the previous page, then the V<sub>V</sub> value also indicates a Slot IV V<sub>R</sub> value of default **-a-** plus one of eight Slot VI C<sub>A</sub> values. Additionally, the actual Slot IV/VI a+C<sub>A</sub> forms will be elided (i.e., missing), thus shortening the formative by one syllable.

The eight specific Slot IV/VI a+C<sub>A</sub> forms for which there are V<sub>V</sub> shortcuts are as follows: **-al-** (UPX/DEL/CSL/M/NRM), **-as-** (UPX/PRX/CSL/M/NRM), **-ar-** (UPX/DEL/CSL/P/NRM), **-av-** (UPX/DEL/CSL/N/NRM), **-ař-** (UPX/DEL/CSL/M/RPV), **-asř-** (UPX/PRX/CSL/M/RPV), **-asl-** (UPX/PRX/CSL/P/RPV), **-az-** (UPX/PRX/CSL/A/NRM).

**Slot II V<sub>V</sub> Values**

Slot I (C <sub>C</sub> )	Stem	Version	C <sub>C</sub> = w	C <sub>C</sub> = y	C <sub>C</sub> = w	C <sub>C</sub> = y	C <sub>C</sub> = w	C <sub>C</sub> = y	C <sub>C</sub> = w	C <sub>C</sub> = y	same as the first four columns at left + short-cut for NEG <sub>1/4</sub> affix			
			[default]	PRX	P	N	RPV	PRX/RPV	PRX/P/RPV	A				
(w) or (y)	Stem 1	PRC	(a)		ai		ia / oä		ao		awa	awi	iwa	awo
		CPT	ä		au		iä / uä		ae		äwä	awu	iwä	awe
	Stem 2	PRC	e		ei		ie / oë		ea		ewe	ewi	iwe	ewa
		CPT	i **		eu		ië / uë		eo		iwi	ewu	iwë	ewo
	Stem 3	PRC	u		ui		ua / aö		oa		uyu	uwi	uya	owa
		CPT	ü		iu		ue / eö		öa		üwü	iwu	uye	öwa
	Stem 0*	PRC	o		oi		uo / io		oe		owo	owi	uyo	owe
		CPT	ö		ou		uö / iö		öe		öwö	owu	uyö	öwe

\* “Stem Zero”: Refers to the “stemless” overall conceptual meaning of the raw root, irrespective of a particular stem.

\*\* The vowel -i- is substituted for -ë- to preserve the latter for use with adjuncts.

**SLOT IV:  $V_R$  — Function, Specification, and Context**

**Slot IV  $V_R$  values**

Function of Main Root	Specification of Main Root	Context			
		EXS	FNC	RPS	AMG
STA	BSC	a	ai	ia	ao
	CTE	ä	au	iä	ae
	CSV	e	ei	ie	ea
	OBJ	i *	eu	ië	eo
DYN	BSC	u	ui	ua	oa
	CTE	ü	iu	ue	öa
	CSV	o	oi	uo	oe
	OBJ	ö	ou	uö	öe

Due to the elimination of incorporated stems, there is no longer any need for the  $V_R$  Slot to carry a glottal stop to show Version or Function, etc.

**NOTE:** If the  $C_C$  value in Slot I indicates a  $V_R+C_A$  shortcut is operating, then Slot IV and Slot VI (containing  $C_A$ ) will be empty.

## SLOT V: $C_S V_X / V_X C_S$ Affixes Applied to Stem without Scope Over the Slot VI $C_A$ complex

This optional slot holds one or more standard  $-V_X C_S$  affixes which apply to the stem only and do not have scope over the following Slot VI  $C_A$  complex or any other slots. Note that the fourth and fifth column of  $V_X$  values from previous versions has been removed, since incorporated stems have been eliminated (the fourth and fifth column of  $V_X$  values will likewise be removed from Slot VII  $V_X C_S$  affixes).

**NOTE:** If a Slot VI  $C_A$  complex is present, any Slot V affixes are shown in reversed form:  $-C_S V_X$ -; however, if the Slots IV  $V_R$  and Slot VI  $C_A$  complex have been elided as indicated in Slot I (see Secs. 3.1 and 3.2 above), then any Slot V affixes are shown in standard form  $-V_X C_S$ -.

degree	Type-1	Type-2	Type-3	
1	a	ai	ia / oä	<p><b>Type 1:</b> circumstantial                      <b>Type 2:</b> derivational</p> <p><b>Type 3:</b> applies to previous <math>C_S V_X / V_X C_S</math> affix only (or the following affix if it is the first in the slot).</p> <p><b>Degree 0:</b> unspecified degree; refers to the affix's general semantic concept as a whole.</p> <p><b><math>C_A</math> stacking:</b> The specialized <math>-V_X</math> value, <math>-üä</math>, is used to indicate that the preceding <math>C_S</math>- consonant-form is to be interpreted as a <math>C_A</math> complex having scope over (i.e., “stacked” upon) the Slot IX <math>C_A</math> complex stem of the main stem. This specialized <math>C_A</math> stacking affix may also be placed in either Slot V or Slot VII.</p>
2	ä	au	iä / uä	
3	e	ei	ie / oë	
4	ë	eu	ië / uë	
5	i	ëi	ëu	
6	ö	ou	uö / iö	
7	o	oi	uo / io	
8	ü	iu	ue / eö	
9	u	ui	ua / aö	
0	üa	üe	üo	

**Glottal Stop To Indicate the End of Slot V:** The last  $-C_S V_X$ - or  $-V_X C_S$ - affix in Slot V must carry a glottal stop to show where Slot V ends and Slot VI begins. See Sec. 1.7 (page 4) on how to add this glottal stop to the affix. For reversed  $-C_S V_X$ - forms, this glottal stop will often merge with the following Slot VI  $C_A$  complex as per the rules in Sec. 3.9.1 of version 0.16 of the Design Document.

**NOTE:** The Concatenative Adjunct from Sec. 4.6 of version 0.16 of the Design Document will be renamed the “Phrasal Adjunct” in order to avoid confusion with the new Concatenation process described in this proposal.