## October 2023 - Addendum to ASLLRP Report No. 20 :

"Documentation for Download of ASLLRP Sign Bank Citation-Form Sign Datasets" <a href="https://www.bu.edu/asllrp/rpt20/asllrp20.pdf">https://www.bu.edu/asllrp/rpt20/asllrp20.pdf</a>>

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As of **October 2023,** updated versions of our isolated sign datasets are available. These contain two important new features:

- In addition to everything that had been provided with previous versions, in some cases we are providing individual sign videos for the isolated sign examples. Those individual sign videos can be downloaded separately from the set of larger videos containing these signs. The filenames for these are provided in a new, labelled, column in the spreadsheets.
- 2) We are also adding a final column in the spreadsheet with "class labels."

## About class labels

The "class label" is what we have used for purposes of sign recognition. In almost all cases, it is taken from the "main entry" label in the following column. However, in a few cases, we have collapsed forms that are very similar, assigning a single class label to multiple main entry labels. In many cases, this occurs when there are very similar compound and non-compound forms, which are distinguished linguistically, and rightfully in their glossing, but which need not be distinguished for purposes of sign recognition. Examples include, for example, the sign for "brother," which can be produced either as a compound consisting of the sign BOY\_2 followed by the sign CORRECT, or else as a non-compound lexical sign, derived from that compound, with the initial handshape of CORRECT at the place of articulation for BROTHER, and remaining throughout the articulation. Thus, there is handshape assimilation, turning the compound into a single lexical sign. This is illustrated in Figure 1. Examples of this kind are grouped under a single class label.





There are other cases where two signs that are different in meaning (and where the meaning is ordinarily clear from context) may not be distinguishable in terms of articulation. In such cases, as well, we have assigned the same class label. An example of this: SURPRISE vs. WAKE-UP. We have assigned both the class label SURPRISE/WAKE-UP.



## Figure 2. Signs that mean 'surprise,' and 'wake up' that are assigned the same class label: SURPRISE/WAKE-UP

The one case that is a bit more complicated is that of index signs. For those signs, the ASLLRP glossing conventions used for continuous signing make more distinctions than can often be readily discerned in citation-form signs. For example, it is often not possible to readily distinguish 2<sup>nd</sup> from 3<sup>rd</sup> person agreement on index signs in isolated sign examples, nor to distinguish adverbial uses of index signs from the use of index signs as pronouns or determiners. So that the continuous signing and isolated datasets might be combined for sign recognition, we have provided broad class labels, as shown by examples presented in Table 1, where the variant label (rather than the main entry label) is, in this case, the predictor of the class label.

If the variant label is	then the class label is
IX-2p	IX
IX-3p:i	IX
IX-loc:i	IX
IX:i	IX
IX-1p	IX-1p
IX-1p-pl	IX-1p-pl
IX-1p-pl-arc	IX-1p-pl
IX-1p-pl-circle	IX-1p-pl
IX-2p-pl-arc	IX-pl
IX-3p-pl-arc	IX-pl
IX-3p-pl-circle	IX-pl
IX-loc-pl-arc	IX-pl
IX-pl-arc	IX-pl
POSS-1p	POSS-1p
POSS-2p	POSS
POSS-3p:i	POSS
POSS:i	POSS
SELF-2p	SELF
SELF-3p:i	SELF
SELF:i	SELF
SELF-1p	SELF-1p
SELF-1p-pl	SELF-1p-pl
SELF-3p-pl-arc	SELF-pl

Table 1. Examples of class labels used with index signs, based on their variant labels

Further information about the ASLLRP gloss labeling is also available from: [1-4].

**Disclaimer:** These annotations are offered without guarantees of accuracy. Although we have made our very best attempt to categorize these thousands of signs, it is inevitable that an occasional error will have crept in. We anticipate that corrected versions of this document may be made available in the future. If so, then the new versions will be identified by successive version numbers, and corrections will be documented and explained.

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## References

- [1] Neidle, C. (2002) SignStream<sup>™</sup> Annotation: Conventions used for the American Sign Language Linguistic Research Project, In American Sign Language Linguistic Research Project Report No. 11, Boston University, Boston, MA. <u>http://www.bu.edu/asllrp/asllrpr11.pdf</u>
- [2] Neidle, C. (2007) SignStream<sup>™</sup> Annotation: Addendum to Conventions used for the American Sign Language Linguistic Research Project, In American Sign Language Linguistic Research Project Report No. 13, Boston University, Boston, MA. <u>http://www.bu.edu/asllrp/asllrpr13.pdf</u>
- [3] Neidle, C., and A. Opoku. (2022) Documentation for Download of ASLLRP Sign Bank Citation-Form Sign Datasets, Boston University, ASLLRP Project Report No. 20, Boston, MA. <u>http://www.bu.edu/asllrp/rpt20/asllrp20.pdf</u>
- [4] Neidle, C., A. Thangali, and S. Sclaroff. (2012) Challenges in Development of the American Sign Language Lexicon Video Dataset (ASLLVD) Corpus. 5th Workshop on the Representation and Processing of Sign Languages: Interactions between Corpus and Lexicon. LREC, Istanbul, Turkey. May 2012. <u>https://open.bu.edu/handle/2144/31899</u>