SLAAASh ID Glossing Principles and Annotation Conventions

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Contents

Also see these documents -

https://www.dropbox.com/s/t7bp9t1arbtnp4d/160629_SLAAASh_ASLLEX_decisions.rtf?dl=0

https://www.dropbox.com/s/5ka7yggxrzxhi0b/160725_Comparing glosses from ASL-LEX to ASL SignBank.rtf?dl=0

What's new in Version 2.0

References to appendix tiers in all sections of annotation guidelines

Updated instructions for suggesting ID glosses (reflecting the use of ASL SignBank)

Removal of sections regarding gestures, Emblems

The table of all conventions has been updated to reflect the above.

Introduction

SIGN LANGUAGE ACQUISITION, ANNOTATION, ARCHIVING, AND SHARING (SLAAASh)

SLAAASh is the construction of necessary infrastructure to support the archiving and distribution of sign language corpora. Previously collected longitudinal samples of the development of ASL by Deaf children, already partially annotated, will be converted into the appropriate format for distribution using the SLAAASh infrastructure.

In other words, we are figuring out how to get video and annotated data ready to be shared. This means a lot of cleaning up, standardizing and preparing for sharing. There is also a process for reconsenting so that all participants can give informed consent about the use of data they provided.

While this particular project is currently referred to as SLAAASh, we could also use SLAASh because while our data is currently from a specialized acquisition corpus, we will also implement the protocols established here for other documentation projects thus using SLAASh (Sign Language Annotation, Archiving and Sharing) is appropriate too.

This document introduces and describes the ID glossing principles and annotation conventions used for this project. Other data archiving practices (file naming for transcripts and videos, tier names and structure in transcript template, etc.) are also outlined in this document. At the end of this document, a complete table of annotation conventions is provided.

Annotation

Language documentation in general

Language documentation is about collecting primary data (video recordings of different language texts) and adding annotations as well as metadata in order to make the primary data accessible. What "accessible" means here is that the data is made machine-readable so that it can be searchable, sorted, and counted. This accessibility requires the consistent use of ID glosses and annotation conventions.

Transcription

Transcription is the act of representing signed or spoken language behavior in written language, using glosses and special conventions or a certain transcription system (e.g., Berkeley Transcription System (Hoiting and Slobin, 2002)), on paper or, more commonly nowadays, on the computer screen. For signed language data, the most typical data medium currently is a video recording of some language act - narrative, conversation, poem, presentation, and so on. And the most commonly used transcribing method is glossing, which is using capitalized written words to represent signs. An example is provided below, in Figure 1, to illustrate English glosses representing Haitian Sign Language (LSH) signs.

LSH signs

English glosses	NOW	IX_1	FINALLY

Figure 1. English glosses represent LSH signs

As seen in Figure 1, the English word 'now' represents the LSH sign NOW. The English word 'IX_1' represents the LSH sign that signifies the first person singular pronoun. And the English word 'finally' represents the LSH sign that means something like "finally, at last". The written words are capitalized when using them as glosses to represent signs. Glosses are also accompanied by a special set of conventions because there are certain linguistic units and patterns that require more than just written glosses for their representation in the transcript and subsequent analysis. For example, signs that fall under a certain category, e.g., fingerspelling, may be associated with a specific label used to identify their category (i.e., if something is fingerspelled in the data, then the code for that category is provided e.g. FS, and the written translation is provided in a separate area, as

(fingerspelled-word)).

Annotation

Annotation is different from transcription in that written information (sometimes known as "tags") are appended to the original data. While transcripts can exist separately from the original data, annotations are intended to be used in conjunction with the original data. Examples of annotations include marking for word classes, discourse type, and so on. For signed languages, another type of annotation marking can be the glossing itself. These glosses are known as ID glosses which are unique labels used consistently to identify the same signs (Johnston, 2008).

Deciding what to represent in the data

Documentation projects should give priority to creating a minimal annotation scheme (Himmelmann 2006), which is a transcription and translation of the primary data (video recordings). Here, transcription in a minimal annotation scheme means representing data as produced by the right hand and the left hand. Free translation should accompany the transcription in order to make the data accessible to a wider audience. Other research projects (those we will share this archived data with) can add additional tags as needed in order to examine their role in the lexicon, phonology, morphology, syntax and discourse (e.g., Johnston 2011).

In short, at minimum, the following should be annotated:

* ID glosses (along with special conventions) for right and left hands
* Free translation

Tiers that will be used for this project will be discussed later in this document.

ELAN

For creating SLAASh language archives, we will use ELAN, a software program that allows for the mark up of time-aligned videos, in order to create annotations of the video data. To help ensure that the data are annotated consistently, the ELAN annotation files (.eafs for short) should be created from a template with the same tiers (data categories). The template should be available on the project's Google Drive (under "annotating

SLAASh"). The tier structure used in this project will be described later. The purpose of these tiers is to render the video data machine-readable. That is, we can search for specific data in the videos. This will enable future tagging and analyses.

ID glosses

In this section, ID glosses are further described. An ID gloss is "the common identifier for each lexical sign" (2009, Johnston & Beuezeille, p.9), a way of "identifying a sign as a token of a lexical type, so that it can be further annotated or tagged during later annotation parses (e.g., for grammatical class, semantic roles, presence or absence of modifications or 'inflections'…" (2010, Johnston, p.120). Finally, "signs are identified uniquely and consistently" making it possible to search effectively for all instances "in order to determine the ways and environments in which it is used" (2010, Johnston, p. 119). In short, ID glosses are not intended to be translations but ways of finding signs. Translations occur elsewhere in the transcripts.

ID glosses are used to identify lexical signs (relatively conventional forms, those that a user may expect to find in the dictionary). Partially-lexical signs and non-lexical signs (e.g., Johnston 2011) are less conventionalized forms and are identified using a unique code labeling their type (codes for these types of signs are further detailed in the section "Annotation conventions"). Some examples of partially-lexical signs include pointing, fingerspelling, sign names, depicting signs, and buoys. Non-lexical forms include actions. We will define what ID glosses mean after discussing readability principles that influence how we select ID glosses.

ID glosses - readability principles to consider

Machine-readability

The same data should be represented in the same way to allow for data searching and counting. In other words, the computer can be asked to find all instances of the same sign using the 'find' feature. This is known as 'machine readability' and this is enabled by using ID glosses, which are unique labels that consistently represent signs.

Machine readability helps lead to successful data analysis. For example, the sign produced by the signer in Figure 2 below can be represented in different ways: NOW, CURRENT, PRESENTLY, and so on.

NOW

CURRENT

PRESENTLY

...

Figure 2. Different English words can represent the same sign

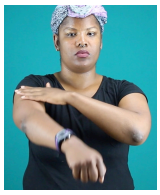
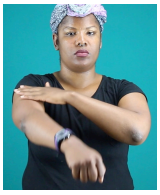
As demonstrated by the glosses following Figure 2, there are multiple possibilities for glosses. This can lead to inconsistency in glosses for the same sign, which is problematic and should be avoided since this will negatively impact machine readability (i.e., the computer will not be able to find all instances of the same sign when they are glossed differently). When glossing, the same written word needs to be used for the same sign throughout the transcripts.

In addition to using consistent glosses to make the data machine-readable, the annotator can only use symbols that are machine-readable (which is basically any symbol that can be found on the keyboard) and are not formatted using bolding, italicization, underlining and so on.

Human-readability

In addition to machine readability (the same information is encoded in the same way), the researcher needs to also be concerned with 'human readability', which has to do with making the data more easy to handle from a human perspective. For example, the data (here, the ID glosses) should be relatively easy for the annotator to retrieve (or remember) while annotating. When done, the final annotated transcript should be scannable (easily read).

When deciding upon ID glosses, human readability is enhanced by choosing everyday English words that are commonly used for the same concept expressed in signs.

For example, the ASL sign for “arm”  could be coded as B-5 because of the handshapes in the sign or it could be coded as @#%$ as a randomly selected series of symbols used to represent the sign; or it could be coded as “a long body part that protrudes from the torso” which we could argue is an acceptable translation. But those codes are hard to remember and, for the second code “@#%$”, arbitrary (there is no obvious link between the sign and the label), or for the third code “a long body part…”, lengthy. Instead, it is arguably more effective to use the English translation commonly used. Specifically here that is the word ‘arm to gloss  as ARM.

ID glosses

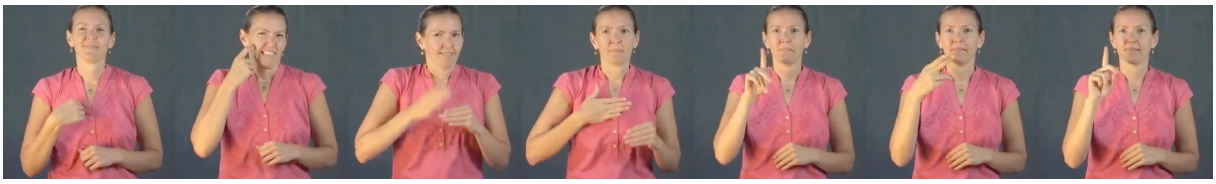
A headword (or lemma) is a basic and unmarked form. For example, the root form of the English verb ‘read’ has the following inflected forms: ‘reads’, ‘read’ (past), and ‘reading’. ‘Read’ is considered the headword in this set of related terms.

The headwords (basic, unmarked forms) in English will be used as sources for ID glosses. That is, the sign  that can be translated to “read” will be glossed as READ.

Also, the ID glosses will be treated as lemmata (a set of words related to the same basic form). So, while the ID glosses will draw upon basic forms in English, the ID gloss itself is also a headword (or lemma). Signs that are derived from a basic form and morphologically modified will still be glossed with the same ID gloss. For example, if the sign READ is modified for temporal aspect (which may look like the sign is repeated with additional nonmanual signals), it still receives the same ID gloss - READ. Such

modification can be captured by a separate pass of annotations (i.e., on further analysis of the data, the annotator can add tags specifically for any morphological modification).

In practice, the annotator will gloss what is produced and not what is understood (or inferred from the overall meaning). In other words, the glosses are meant to enable search for similar forms and not to serve as translations (which is done in a separate annotation pass and on our "free translation" tier). For example, the speaker in the utterance below says, "I just completed my PhD." Please note that this is an English translation. The glosses are provided below the signs here.



IX_1 RECENT END-OF POSS_1 FS
(phd)

Figure 3. Utterance in ASL with English glosses

Note that the third sign END-OF conveys the concept for 'finish/complete' but is understood to have happened in the past. In standard English, the verb would require the past tense -ed (i.e., 'completed'). However, since the speaker in the utterance featured in figure 3 above does not physically produce any additional sign that marks the past tense in END-OF, the gloss should not be marked with the past tense marker. Choosing the root English form should be consistently done for any ASL verb that may normally be marked by morphological inflections like -s, -ed, -ing in English.

Also, the second sign in Figure 3, RECENT, is produced with a non-manual marker that serves as a modifier. It means "really very recently". Again, the ID glosses themselves should not represent the sign as being modified but should (as faithfully as possible) represent how it is produced. Again, grammatical inflection can be indicated in the data but should be done during other annotation passes separate from the ID gloss tier that serves to render the data machine-readable.

ID glosses - deciding on labels

In practice for signed language documentation projects, it is becoming increasingly common to use ID glosses. The basics of the practice are the same - use the same gloss for the same form regardless of any inflection or phonological alternation. How to select the ID glosses themselves varies from research team to research team. What follows are the principles for SLAAASh.

Basically, for each sign, the most neutral and common English translation is selected. Also, we are treating ASL signs as lemmas and generally follow the principles as outlined in Fenlon et al (2015). We accordingly will assign two glosses – a lemma ID and an annotation ID gloss. Often, the lemma ID and annotation ID gloss will be the same. If there are phonological variants (in which just one or two features change while the basic meaning remains the same), the annotation ID gloss will change (while the lemma ID remains the same). If there are lexical variants or different words, they will receive different lemma IDs. We discuss more issues and preferred approaches below.

When phonological variants share the same English gloss (same lemma, different annotation ID gloss)

The following signs are phonological variants (different ways of saying something) for the same concept, "apple". Semantically related but slightly phonologically different variants receive the same gloss (lemma ID) but are appended with additional tags in their annotation ID gloss to identify the phonological (physical) form of the signs themselves.

For example,  will receive the same lemma ID gloss – APPLE but are further glossed with separate annotation ID glosses: glossed as APPLEx, APPLEa, and APPLEck respectively. Each form receives the

gloss APPLE but gets different tags appended to the glosses themselves ("x" for the handshape, "a" for the handshape again; "ck" indicates the location of where the hand is located – here, the cheek). This will also serve as a quick way of observing how many variants exist in the language.

Arbitrarily chosen numbers or alphabetic symbols as used by other teams are avoided as tags in our project because these are more difficult for the transcriber (or analyst) to remember. Tags that refer to phonological form are preferred because they are easier to retrieve (or recall) when transcribing.

When related signs share the same English representation (different lemmas)

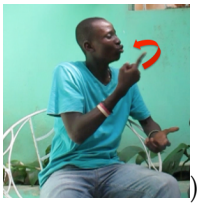
If there are signs with different forms that represent the same concept (or different aspects of the same concept), and have the same English translation and thus potentially the same gloss, then care needs to be taken by the annotator in ensuring that different lemma ID glosses are assigned. For example, both of these ASL signs  and  could share a common English translation - 'plant'. The first sign is the verb form, which could mean 'to plant' or 'to put in' and the second is the noun 'plant' (probably derived from the ASL verb 'grow'). To gloss them both with the same English word would be inconsistent (not machine-readable). A separate lemma ID gloss is then needed for both forms. For example, this ASL sign  would be marked as PUT-IN and this  would be marked as PLANT.

If the annotator wishes to observe that certain signs are closely related in meaning but have slightly different forms (especially in citation forms) and receive different ID glosses (e.g., COUNT and ACCOUNTANT), then this information will be recorded as metadata in our ASL SignBank database under the section called "related signs". This additional information will assist with searchability for these forms.

When signs have the same form but different meanings (different English glosses)

In "Building the BSL Signbank", Fenlon et al (2015) describe their lemmatization principles, which we have generally adopted. For when signs have the same form but different meanings they say: "In addition to the form of the sign, as noted previously, it is also necessary to refer to the sign's meaning when determining whether two variants constitute the same lexeme or not. This is clearly required for homonyms: pairs of sign that have the same phonological form but differ in meaning. For example, both BSL BROTHER and MARCH-MONTH are produced with two fist hands in neutral space brushing against each other with alternating up-and-down movement (Figure 24). As the meanings in each case are distinct, BROTHER and MARCH- MONTH are treated as homonyms and therefore separate lexemes" (193).

Determining whether signs are actually homonyms is sometimes difficult. While we will generally follow the principle that the same form with conventionalized different meanings (e.g., SOMETHING and ALWAYS, which both have this general form:

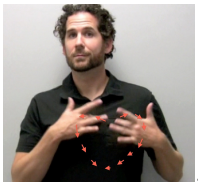
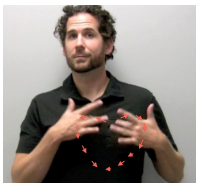


) should get different signs, we will consider potential homonyms on a case by case basis. This is a change from our previous conventions, in which signs with the same form were assigned the same ID Gloss regardless of meaning.

When unrelated signs share the same English gloss

If there are signs that represent different concepts but could have the same written word (i.e., they are homonyms in the written language) and thus potentially the same

gloss, again the annotator needs to be sure that different ID glosses are assigned. For instance, in English "light" is used for an object that illuminates a room and to refer to an object that is not heavy. In ASL, the signs to express those concepts are different, therefore they will receive different glosses even if they share the same written translation.

Sometimes it is difficult to find a different English translation to use as a separate gloss. Consider the two signs  and  . They both share the same English translation although they mean something different (although somewhat related) and have different ASL signs. Since it is difficult to label them uniquely, we will use meaning in the multiple words separated by hyphens in the glosses themselves. That is, we could label  as HEART-BODY and  as HEART-SHAPE.

Using ID glosses

To ensure consistency in ID glosses (which, again, means unique labels for different signs), it is helpful to maintain a list of all of the ID glosses. For SLAASh, the list of ID glosses is maintained in the ASL SignBank, located online at http://applejack.science.ru.nl/asl-signbank. With ELAN files linked to the correct external controlled vocabularies set up for certain annotation tiers (*right hand, left hand* and *NMS*), we ensure that only approved annotation ID glosses are used. If you do not find a sign you need in the list, you will gloss your suggestion (for the annotation ID gloss) with a ~ in front (e.g. ~ALLIGATOR) and suggest the gloss to be added to the ASL SignBank and therefore to the external controlled vocabulary (instructions follow on the next page, see General how-to for proposing annotation ID glosses). ~ serves as our code for letting us know that a sign needs an ID gloss (both the lemma ID and the annotation ID gloss) and it needs to be checked and later changed (even if that means just removing the ~). After the annotation ID gloss is checked by Julie Hochgesang, it will be added to ASL SignBank and to the new version of the external controlled vocabulary for annotation, and annotators

will review instances of suggested glosses as needed (further protocol for this ID gloss updating protocol to come). Step-by-step instructions for gloss suggestion follow.

General how-to for using ID glosses

In each of our ELAN annotation files (.eafs), the "right hand", "left hand", and "NMS" tiers for each participant are linked to an ECV – an external controlled vocabulary of annotation ID Glosses that comes from our ASL SignBank.

Creation and Approval of ID glosses

For SLAAASh, one person should always be responsible for approving the final versions of the annotation ID glosses (and determining their lemma IDs) in order to avoid overlap in creating glosses and to ensure that they follow existing practices as outlined in this guide so far. The following is the general how-to for whoever is responsible for creating the ID glosses. (Currently, Julie Hochgesang of Gallaudet University is responsible for final approval of annotation ID glosses.)

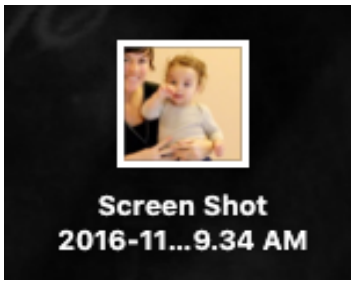
General how-to for proposing annotation ID glosses

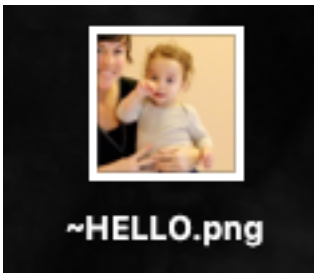
1. I'm transcribing in my ELAN file and this is the first time I've seen the sign which I gloss as ~HELLO. Before glossing, I make sure to check whether the new form is under an existing lemma. (See above sections on page ### beginning with "ID Glosses – deciding on label"). If that's true and the new form is a phonological variant, I am sure to use the tag protocol to determine the new annotation ID gloss (outlined in above sections, see pages ###).

2. I use the shortcut keys ⌘+SHIFT+4 (on a Mac, or the Print Screen key on Windows)to take a screenshot of the sign itself.
   Preferably, especially if the sign production is not clear in the video, I can instead take a video of myself producing the sign and then take a

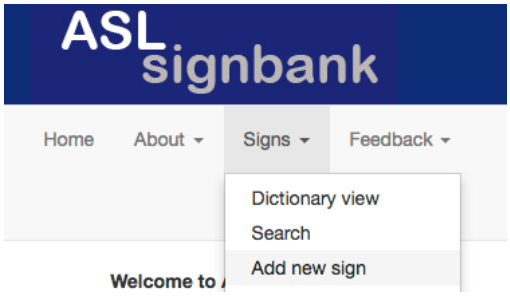
screenshot from my video of myself producing the sign in the same way. It will eventually be re-filmed by a hired actor for the ASL SignBank.

3. The file of the screenshot is automatically saved to the desktop and gets a filename of something like this: Screen Shot 2016-11-04 at 11:29:48 AM. (On Windows, I can directly save the screenshot as my desired filename.)

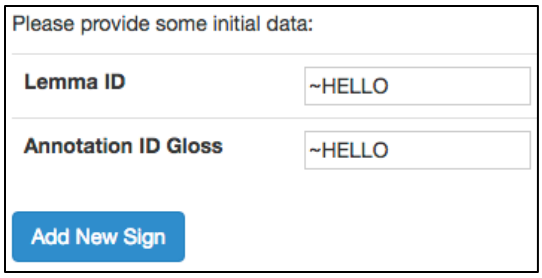




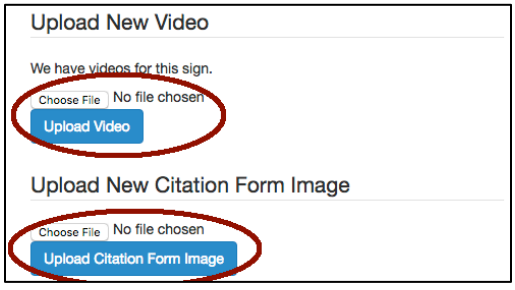
4. I click on the filename and change it the proposed annotation ID gloss that I want to use, which is ~HELLO for this case.
5. I open up my web browser and go to ASL SignBank, found at http://applejack.science.ru.nl/asl-signbank
6. I then browse to “Signs” -> “Add New Sign”.



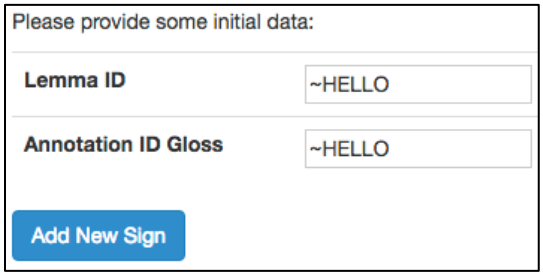
7. I create a new sign record using the image that I just made (and video, if applicable), being sure to mark the gloss as only a suggestion by starting it off with a ~ in both Lemma ID and Annotation ID Gloss.



8. I scroll down slightly on the page and use the buttons on the left side of the page to upload my image (“Citation Form Image”). Then, if I made a video, I let the page refresh to show my image before submitting my video in the same way, using the buttons.



9. Then, I go to the right side of the page closer to the top and fill out translation equivalents for the new sign by clicking on the red dashes and typing in my words instead. For example, for "~HELLO" I might type "hi" as a translation equivalent. I can also fill in a little bit of other information be clicking and expanding the other sections, but complete information can wait until the sign is approved in case it's a duplicate or ends up not being needed.



10. Last, I scroll down to the bottom of the page and look on the left side where it says "Tags". I select the tag "sign:proposedIDgloss_needsapproval" and click "Add Tag". This marks the gloss as still needing approval, so that the person or people who are regularly looking through to add and update ID Glosses can easily use that tag as a filter in order to easily see all of the new suggestions.

After completing those steps, the new ID Gloss has been proposed and will be able to be considered for full addition to ASL SignBank.

ID glosses summarized

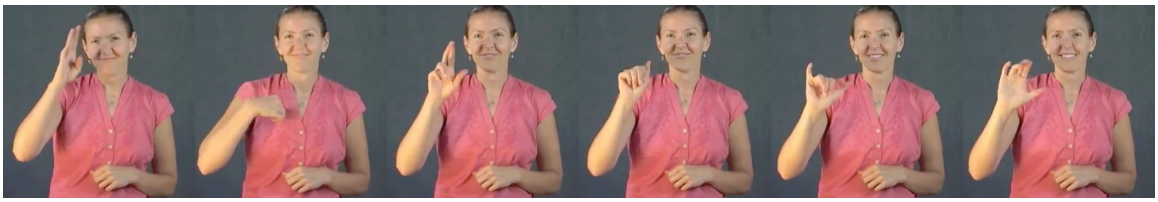
To represent an ASL sign, the annotator picks the closest English equivalent to represent that sign. The physical (phonological) manual forms of signs will be used to guide the annotator's decisions in choosing what English words will serve as ID glosses. This means the annotator sometimes ignores what spoken-language-influenced word (in this case, English) is produced on the mouth along with the manual articulation of the sign. Basically, the same form gets the same English word, regardless (to a degree) of the contextual meaning. This means that the English word should usually be the base form found in the dictionary without any inflection (for plural, gender, aspect, etc.). The ID gloss does not show modification to the sign (e.g., aspectual modification, spatial modification, etc.).

Annotation conventions

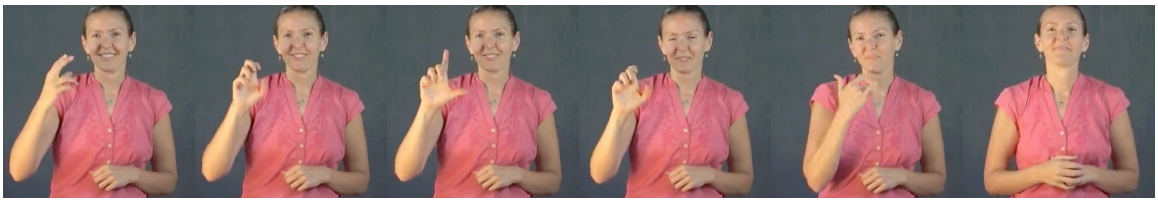
Introduction

When glossing signs, sometimes it is not enough to just pick written equivalents to represent signs. Sometimes additional codes are needed to represent certain language patterns. For example, many signed languages have different sign types like plain verbs, indicating verbs, depicting verbs, adjectives, adverbs, pronouns, name signs, fingerspelling, compounds, etc. Researchers can explicitly label these categories with codes in the ID glosses themselves so they can search for these types in the data.

To provide a few examples of some of those sign types, Figure 4 is an utterance in ASL which can be translated as "Hello, I'm Raychelle."



HELLO IX_1 FS
(Raychelle)



FS (cont) NS
(Raychelle)

Figure 4. ASL utterance, "Hello, I'm Raychelle"

Figure 4 features different signs that can be members of certain categories in ASL. For example, the speaker in the pictures above points to herself before she says her name. This pointing is known as a pronoun in ASL. Different sign language research groups code pronouns in different ways. Some examples are: IX_1, IX(self), PRO1, PRO(self), PT1 (please note that IX is short for 'index', PRO for 'pronoun' and PT for 'point'). Then the speaker introduces herself as 'Raychelle' in two ways - first, she provides her English name in fingerspelling and then she provides her ASL name using a namesign. Across different groups, fingerspelled words can be coded as: R-A-Y-C-H-E-L-L-E or #RAYCHELLE or FS(Raychelle). Name signs can be coded as: NS(Raychelle), NAMESIGN-Raychelle,

NS_Raychelle. Our annotation convention in our eaf is to place the code for the type of production (FS, NS, etc.) on the main annotation tier and to place further description ("Raychelle") on an appendix tier enclosed in parentheses. (Eventually these – the code and the information enclosed in parentheses- may be combined during analyses in which the researcher wants to see them combined. But this will not happen in the archival eafs which will be shared with others and basically retains the original tier structure and annotation conventions intended to provide access to the primary data). In our conventions, it is also important to note capitalization conventions. For proper nouns, the initial letter is capitalized as in standard English. Common nouns remain entirely lower-case, again as in standard English. Abbreviations and pseudonyms are entirely capitalized.

Since conventions vary depending on decisions of each research group (which may differ based on research goals and theoretical biases), it is crucial to explicitly record how one transcribes certain patterns in language by developing lists of conventions. These lists also help ensure consistency in how the same data is represented. There are some established transcription conventions, which can be found in publications discussing signed language research.

Common practices

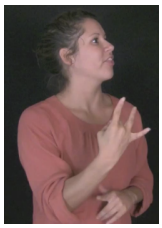
Although conventions vary, there are a few common practices. The first is that most signs are capitalized in glosses, such as NAME instead of 'name'. Another common practice is to hyphenate more than one written word for one single sign, e.g., NOT-YET is a gloss that uses two English words to represent one ASL sign  . Finally, transcribing using glosses is not like writing using standard English. Punctuation symbols that usually accompany the text, such as periods, commas and apostrophes, do not have a place in transcription unless they have specific coding functions. The ends of the sentences (or utterances) in transcripts are usually left blank; there are no periods at the end of those units. Commas are not used to separate items in lists or connect two sentences. If there are any punctuation symbols, they have a certain function, much like

the hyphen mentioned earlier which serves to connect more than one English word that represents one ASL sign.

SLAAASh-specific conventions

What follows are the conventions we use for our project.

Bound morphemes

One example of where bound morphemes can be found is in numeral incorporation, in which the quantifiable unit is usually represented by phonological aspects like placement, movement and orientation and the numeral is represented by the handshape. For example, in ASL, "eighth place" can be represented by moving the hand as if producing the sign for IN-PLACE  but with the handshape from the sign EIGHT.

For SLAAASh, we will not distinguish bound morphemes. That is, signs will be assigned single ID glosses despite the complexity of their meaning. To represent the form of the example just provided in the transcript, we would use EIGHTH to represent the numerally incorporated sign.

Buoys

"Signers frequently produce signs with the weak hand that are held in a stationary configuration as the strong hand continues producing signs. Semantically they help guide the discourse by serving as conceptual landmarks as the discourse continues. Since they maintain a physical presence that helps guide the discourse as it proceeds I am calling them buoys" (Liddell, 2003, 223). In other words, buoys are forms that are intentionally left on the weak hand for meaning or reference while the other hand (the strong hand[1])

[1] In signing, the strong hand is the hand that is active (also known as dominant) while the weak hand is passive (also known as non-dominant).

produces other signs. There are five different kinds of buoys. Each are described briefly along with how they should be annotated.

A “list buoy” is used to represent a list of items. Each extended finger on the weak hand is used to represent one item on a list. For example, this signer

has extended the thumb and index finger on her weak hand to form a list that she is referring back to in her narrative. The list buoy has an annotation ID gloss, BUOY-LIST, that is tagged with codes for each finger \timrp\ (t= thumb, i=index, m=middle, r=ring, and p=pinky). For this particular form, the gloss would be BUOY-LIST\ti\ for the left hand while the right hand is annotated as a pronoun that refers to the second item on the list buoy (described in a later subsection). In the annotation file, BUOY-LIST goes on the *left hand* tier while \ti\ goes on the left hand’s *append* tier. (Note, if we refer to this situation in prose, we will type it as BUOY-LIST\ti\)

A “fragment” buoy is part of a lexical sign that has been left on the weak hand after production to maintain its presence in discourse while the strong hand continues to produce other signs. A “depicting” buoy is similar to a fragment buoy except depicting buoys are remnants of depicting signs. Both fragment and depicting buoys are marked by the length of the annotations themselves. Since the sign is held longer than usual, the annotation [_] is appended to the sign (see more on this below). Otherwise, there is no special annotation for these buoys; rather, annotation fields in ELAN will indicate that these signs have been held longer while other signs are produced on the strong hand. An example is shown in figure 5.

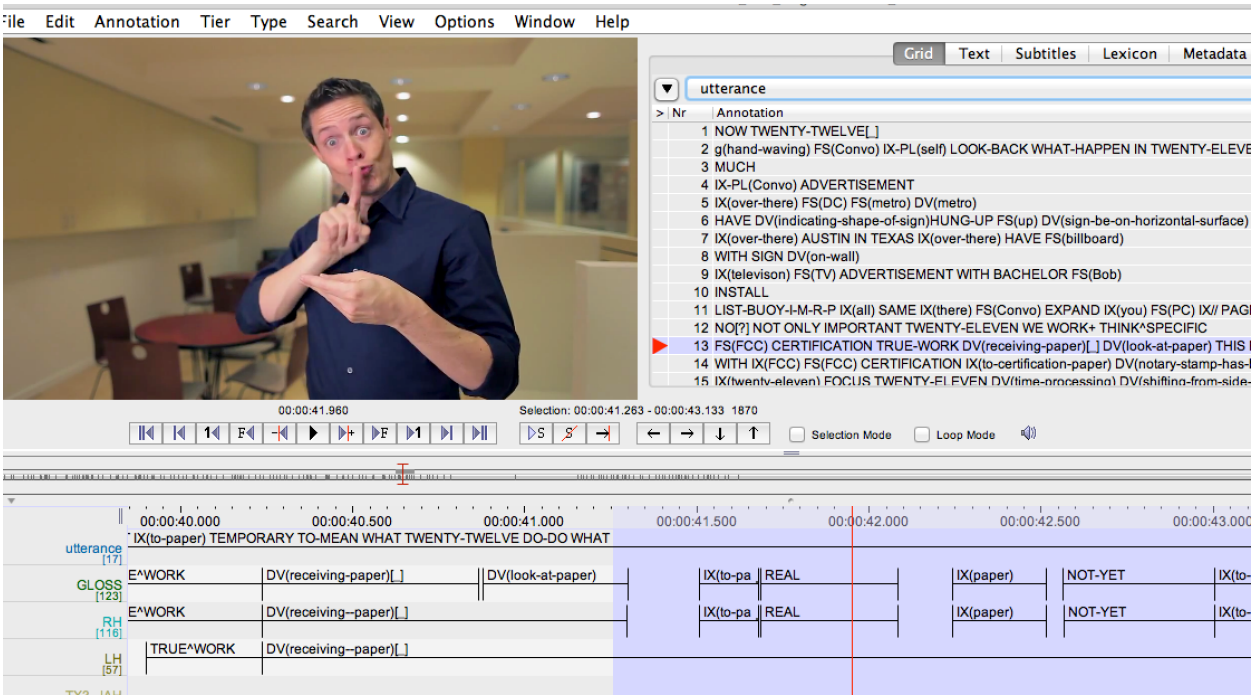


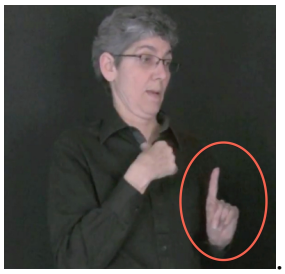
Figure 5. Screenshot of ELAN transcript with depicting buoy example

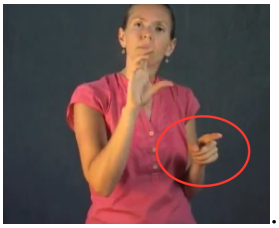
NOTE: tier structure and conventions are slightly different from ours

In figure 5 above, there is an annotation on the *left hand* tier with the gloss DS(receiving-paper)[_]. See later subsection for our tier structure and how depicting verbs are coded. What is important here is the length of the annotation on the *left hand* tier. The annotation lasts for a bit more than 3 seconds, which is a long time for a sign (which is usually produced in less than half a second). The left hand is serving as a depicting buoy here in order to keep the idea of the paper in place while the right hand (the strong hand) is producing different signs.

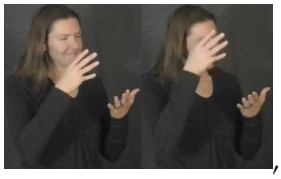
In short, we do not directly code for fragment or depicting buoys but will let the lengths of annotation fields indicate their presence in the discourse. If annotators wish to note the presence of these buoys then they can make a note on the relevant participant's *comments* tier or they should be coded on a different tier dedicated to marking buoys.

A "theme buoy" takes the form of an extended index finger that is pointing up, like

this  . Theme buoys signify that "something important" is being discussed. The theme buoys themselves become the important ideas. Since this form is consistent, it will receive an ID gloss, specifically BUOY-THEME.

A "pointer buoy" also takes the form of an extended index finger but instead of pointing up, it points to the discourse itself  . Pointer buoys indicate that something important is going to be discussed or has been discussed in the discourse itself. Since this form is consistent, it will receive an ID gloss, specifically BUOY-POINTER.

Compounds

A compound is a word formation process in which two existing words are combined together to create a new sign, often with a meaning that is unpredictable from analyzing the meaning of the first two signs. While the compound retains the forms of the original two signs, the phonological forms of both are significantly different from the originals. For example,  shows two signs that have been combined to create a new meaning. That is, the two signs GOOD and ENOUGH have been combined into a single sign that has a new meaning, specifically "not good enough". Another example is the ASL sign for "parents"  , which was derived from compounding the two ASL signs MOTHER and FATHER. Our ID gloss for this form, however, is PARENTS.

In short, these compounded forms will be not receive special annotation symbols but will be labeled with unique ID glosses, e.g., GOOD-ENOUGH and PARENTS.

Contracted signs

Similar to compounded signs, sometimes two existing words are produced as if they were one sign. The difference between a compounded sign and a contracted sign seems to lie in the meaning. The meaning appears to not be analyzable in compounds. That is, the meaning is not predictable. While in contracted signs, the meaning results from the combination of the two. This is a very simplified way of talking about the two types of word formation and may not entirely be accurate. For our purposes, it does not really matter. When we come across signs like WILL GO or WHY NOT or NOT NEED in which the first sign (WILL; WHY; NOT respectively) is reduced to a single segment (often a contacting hold) and the second sign (GO; NOT; NEED respectively) is articulated in full (that is - all segments are retained in the production, although still subject to alternation like any production), we will represent them in a single annotation field with unique ID glosses, e.g., WILL-GO, WHY-NOT, NOT-NEED.

Depicting signs

Depicting signs (also known as classifier predicates or polycomponential signs) are signs of depiction, those that make "ideas present in discourse" (Dudis, 2014, personal communication). Or, as Liddell (2003) says, "Depicting verbs, like verbs in general, encode meanings related to actions and states. What distinguishes depicting verbs from other verbs is that, in addition to their encoded meanings, these verbs also depict certain aspects of their meanings" (261).

Depicting signs will be annotated with the specific code DS, along with a form label motivated by handshape, and then further specified by a descriptive tag. The DS code and form label are consistent (a full list is in ASL SignBank). The descriptive tag is placed on an appendix tier, and simply describes what is being depicted.

To create descriptive tags on an appendix tier, first identify the object represented by the hand configuration, then the action or state, surface (if any) and manner (if any). For example, suppose a signer produces the following: the right hand has a handshape in

which all fingers are extended and unspread and facing down, and the hand moves in a straight path parallel with the left hand which is facing down. We can say that the right hand is representing some kind of vehicle (object) and is moving down a path (action) on top of a surface (left hand). It would be annotated as such:

ASL right hand: DS_3

ASL RH append: (vehicle-move-down-path)

Sometimes, there are gestures or body actions that cannot be represented by specific annotation ID glosses, or even specific depicting signs. They seem like instances of depiction but do not have handshapes that are typically associated with ASL depicting signs (the "classifier predicates"). These are instances of constructed action - in which the signer re-enacts reactions or actions in discourse. For those, we will recognize that they are a part of depiction but will not further code them. These will receive one singular label - DS(ca) which can be put on the *right hand*, *left hand,* and/or *nms* tiers (following the production of the signer). While these instances of constructed action will not get specific descriptions on these tiers, they can be described in the *free translation* tier. For instance, if we have a signer pretending to eat (and she uses her right hand), we put DS(ca) in a single annotation on the *right hand* tier. In the *free translation* tier, we can put something like "And I was pretending to eat like this…".

(Note, if we refer to this situation in prose, we will type it as DS_label(meaning).)

False starts

In normal discourse, people often start talking/signing but stop themselves for different reasons. These "false starts" can be further categorized into 5 sub-types as listed in Chen Pichler et al (2010)...

> We use modified CHAT symbols to indicate when sign ... is interrupted (either by the signers/speakers themselves or by other participants) or when it "trails off." Note that because tokenization of the [annotations] creates individual annotations each time a space is detected, notational symbols must be typed directly adjacent to the preceding word/sign, with no intervening space. Interruptions by others are notated by a single forward slash (/) (e.g., *MOTHER WANT/*), while self-

> interruptions are notated by two forward slashes (//). Slash notations enclosed within square brackets are also used for *re- tracing*, or in cases when participants restart an utterance: [/] retracing without correction [//] retracing with correction [///] retracing with reformulation (p. 21-22).

Instead of placing the notational symbols directly adjacent to the preceding word/sign, we place the notational symbols on an appendix tier in order to preserve the annotation ID Gloss and therefore the ECV link to ASL SignBank. Example:

ASL right hand: MOTHER WANT
ASL RH append: //

(Note, if we refer to this situation in prose, we will type it as SIGN/, etc.)

Fingerspelling

Many signed languages have a set of manual signs used to represent individual letters in the majority spoken/written language. ASL has a set of 26 signs that represent the corresponding 26 letters in the Roman alphabet, used by many European languages like English, French, Kreole and Spanish. Produced in isolation (i.e., in demonstration form), these manual signs have their own ID glosses, e.g., LETTER-A, LETTER-B, LETTER-C and so on. When these signs are combined together to fingerspell a word, then they are labeled with this code: FS(fingerspelled-term). The generic label "FS" is placed on the normal transcription tier, and the fingerspelled word is placed on an appendix tier. For example, if a person fingerspells his name "Diego", the label in the transcript would look like this:
ASL right hand: FS
ASL RH append: (Diego)
The label represents the concept that is expressed regardless of what is actually produced. When fingerspelling (particularly in rapid fingerspelling), forms can be altered for ease of perception or articulation. These alterations in form can be captured in a separate tagging phase, not in the ID glosses on the right and left hand tiers. (Note, if we refer to this situation in prose, we will type it as FS(intended-fingerspelled-word).

Fingerspelling plus sign

Sometimes signers will fingerspell and sign together to represent a single concept. For example “give up” can be produced as SACRIFICE FS(up) and “Dropbox” as DROP FS(box) and “nickname” as FS(nick) NAME. In these cases, we will represent the signs as ID glosses with the ASL sign glossed like its counterpart (if already existing in the ASL SignBank) and with the FS bit altered for this special case. To avoid confusion with our current convention FS(meaning), FS will be a part of the gloss without any parentheses enclosing the meaning. And, these glosses will be entered into a single annotation field and hyphenated (like the multi-word English glosses), e.g., SACRIFICE-FSup; DROP-FSbox, and FSnick-NAME.

Held signs

Sometimes productions of signs are perceived as being held longer than expected. If an annotator feels that a sign has been held long (note, this is a subjective evaluation) then [_] is input on the associated tier, e.g.:

ASL right hand: SIGN

ASL RH append: [_]

For example, this often happens at the end of utterances when a signer holds the last postural segment of a sign while the other person responds. (Note, if we refer to this situation in prose, we will type it as SIGN[_].)

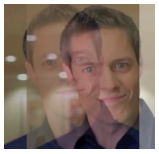
Homonyms

A homonym is a form that has multiple meanings (which can be unrelated). For example, in English, the word “light” can refer to a source of illumination or to the fact that something is not heavy. Determining whether signs are actually homonyms can be difficult. We will generally follow the principle that the same form with multiple unrelated meanings should get different ID Glosses. We will consider potential homonyms on a case by case basis. (Also see the section on p.11 regarding signs with the same form but different meanings.)

Indicating/directional/agreeing verbs

Like pronouns, indicating verbs are signs that point to (indicate) their referents (Liddell, 2003). Unlike pronouns, these verbs have more meaningful content than just reference. These verbs indicate some certain activity along with their referents. For example, in ASL, I can point the sign for "give" from myself to another person to mean, "I gave (this) to that person." The directionality of the verb can be used to indicate the doer and the receiver of actions. These verbs will receive their own ID glosses without annotation to mark their directionality as outlined by principles in these guidelines. Their referents can be specified in the free translation tier or in other tiers added by other research projects/researchers.

Interjections

Interjections are somewhat conventionalized manual and non-manual actions that express emotions or discourse markers in "short bursts". Interjections typically occur not within sentences but at their boundaries or in isolation between sentences. This type of meaningful unit will be labeled with the code i(interjection). For example,  (in which the signer is moving his head up and down) will be glossed as i(yes). Note that this example is of a non-manual action so it should be put on the NMS tier for SLAAASh eafs. A full list will be maintained in the ID gloss list. There is a closed set of possible interjections. Interjection codes are treated the same as regular SIGN glosses – they simply are of the slightly different form starting with "i" and containing parentheses.

Lexical signs

Lexical signs are conventionalized units in a language. "fully-lexical signs are highly conventionalised signs in both form and meaning in the sense that both are relatively stable or consistent across contexts" (11, Johnston 2011). Lexical signs are what one might expect to see in a dictionary for that language. These forms are represented by ID glosses and maintained in ASL SignBank. Principles of ID glossing and lemmatization are listed above.

Mouthing

In signed discourse, a speaker may choose to mouth a spoken word (without any voicing) during a signed utterance without any accompanying sign. These instances are labeled with the code m(mouthed-word) on the "NMS" tier, with the mouthed word listed in the parentheses. For example, if someone mouths "on" during the signed utterance that means "leave the light on", the glossed units will look like this: LEAVE LIGHT on the right and left hand tiers with m(on) on the NMS append tier. A full translation of this can be provided in "free translation". Note that mouthing accompanying manual signs is not annotated.

Name signs

Name signs are individual signs given to people. These signs can be related to their spoken names or created based on a different set of attributes (physical, cultural, etc). Name signs are not consistent for people with the same spoken names. That is, all men named James will not have the same name sign because of their spoken name but will have individual name signs. In the transcripts, this type of sign will be labeled with the code: NS and the referent will be indicated on the appropriate append tier, similar to FS, DS, and m. For example, if a man named James Hochgesang has a unique name sign, the form will be glossed as:

ASL right hand: NS

ASL RH append: (JamesHochgesang)

More commonly, the individual referenced would have a pseudonym used to refer to them throughout the corpus, and that pseudonym would instead be placed inside the parentheses e.g. (JH) on the *ASL RH append* tier for the above example.

For signs that identify places, institutions or organizations (e.g., CHICAGO, GALLAUDET), they will be represented by ID glosses rather than the NS code. (Note, if we refer to this situation in prose, we will type it as NS(name-sign).)

New ID gloss needed

ID gloss lists or databases are always growing. There will be the need to constantly check the list and add entries. If a sign production in any transcript has not yet received an ID gloss, the annotator can suggest one and put ~ before the gloss, e.g., ~SUGGESTED-GLOSS (or ~NEED-GLOSS in case the annotator does not know what to put). They should follow procedures for how to share the needed ID glosses as listed above (see "using ID glosses" on pages 9-12).

Pointing signs

There are sets of signs that refer to other things, known as pronouns. In many signed languages, these pronouns take the following form: the index finger is extended while all other fingers are flexed and the tip of the index finger is pointed towards its referent (this affects movement and palm orientation). IX (short for "index") will be used to represent this form followed by what is referred to in parentheses, like so:

ASL right hand: IX

AS: RH append: (referent)

For instance, if a signer points to a tree, we annotate this as "IX" on the tier for whichever hand the signer is pointing with (right or left), and as "(tree). If the signer points to themself, we annotate this as IX_1 (which is an ID gloss in itself). If the referent cannot be identified, we can just annotate using IX. For signs that refer to locations, we can identify the location itself, e.g., (Starbucks), or use a more general description on the append tier, like these: (there), (off-camera), (loc). (Note, if we refer to this situation in prose, we will type it as IX(referent).)

Sometimes this pointing sign can be produced with an arc, that will be represented as IXarc on the hand tier, with the referents listed in parentheses on the append tier e.g. (scattered-blocks).

Sometimes people will point to different parts of the same item like a mother pointing at the different pictures on the same page in a book. "dpo" can be used as a

shorthand for “different part of” while specifying the referent of an IX using the relevant append tier, e.g., (book) (dpo-book) (dpo-book2) etc.

Sometimes a pointing sign can also trace. A common scenario is a parent tracing a shape in a book. Those will be represented as IXtracing, with the referent in parentheses on the append tier as in previous examples.

When a pointing sign becomes a tapping action, first represent the sign as IX in the first annotation field, specifying the referent as usual and then annotate the tapping on the participant’s *comments* tier as an action, following our action conventions e.g. “&=taps”.

Possessive pronouns

Possessive pronouns are a subset of pronouns. Like the pronouns introduced above, possessive pronouns also point to their referents. The difference between the pronouns above and here are both in form and meaning. In form, all fingers are extended and unspread, the movement is usually a straight path, and placement/orientation are determined by directionality (that is, the sign will point to its referent and that determines the actual beginning and end locations and orientation of the form). In meaning, the possessive pronoun indicates that something belongs to someone, e.g., in English, her/his/their act as possessive pronouns: “her baby”, “his video”, “their home”.

We will start with the code of POSS (short for “possessive”) with the referent on the relevant append tier, as in previous sections, like so:

ASL right hand: POSS

ASL RH append: (referent)

For instance, if a signer points a possessive pronoun away from themself like

and then signs TREE, we annotate this as:

ASL right hand: POSS TREE

ASL RH append: (off-camera)

(Note “off-camera” is used because we do not know what the referent is since it is not visible in the picture. This happens sometimes on camera when the referent is off-camera. “Off-camera” (or “oc” can be used for this situation. Otherwise, names or brief descriptors should be used.) (Note, if we refer to this situation in prose, we will type it as POSS(Julie), POSS(off-camera), etc.)

The conventions for POSS are similarly followed for SELF and HONORIFIC

Repeated signs

If a sign is repeatedly produced in entirety (repeated once or more than once, as is common when producing each repetition in different locations), it is fully annotated as many times as the sign is repeated.

Repetition in sign

Some signs are produced with more than one “cycle” of segments. For example, BALL is produced with the hands coming together to make contact at the fingertips - this is one cycle. This cycle can be repeated by moving the hands back to the beginning position and moving again so that the fingers are in contact once again. Many ASL signs show repetition like this. If there are signs that appear to have unusually short or long repetition, the code [+] on the append tier will mark this, e.g.:

ASL right hand: SIGN

ASL RH append: [+]

(Note, if we refer to this situation in prose, we will type it as SIGN[+].)

Unclear signs

For signs that the annotator cannot confidently identify, they will type the ID gloss for the sign they are fairly sure is the target and annotate [?] on the relevant append tier like so:

ASL right hand: SIGN

ASL RH append: [?]

If there is an alternative possibility, it will be added after the code =? in brackets, all on the append tier like so:

ASL right hand: SIGN

ASL RH append: [=?ALTERNATIVE]

(Note, if we refer to this situation in prose, we will type it as SIGN[?] or SIGN[=?ALTERNATIVE).)

If the annotator cannot venture a guess as to what the sign means, YYY will be used if the form can be observed, XXX if it cannot, with no accompaniment on the append tiers in either case. If an annotator glosses YYY, phonetic information should be entered on the relevant pho tier (e.g. "ASL right hand pho" for the right hand). For instances of XXX, signing is often mostly off-camera or a signers back is to the camera such that the annotator could tell that the person was signing, but had no idea what they might be signing.

Tier Structure

While glossing itself is a form of annotation, there are other types of annotation possible. For example, ID glosses can be further coded for word class (noun, verb, adjective, etc) or grammatical role (subject, object). Other types of information can be identified in separate annotation passes such as nonmanual signal behavior.

For our project SLAAASh, the following tiers are annotated: ASL produced on right and left hands, corresponding "pho" (for phonological) tiers, nonmanual signals (strictly for mouthing and nonmanual gestures produced without any accompanying signs), corresponding "append" (for appendix) tiers for each hand, free translation, comments, ASL feedback, ASL syntactic unit, English. These tiers are re-produced for *each* participant on the video. Each tier is described below.

	Purpose of each tier

Comments	Annotations on this tier are for any aspects of the data that the annotator wishes to observe for future reference. Possible observations include: phonological alternations, morphological processes, questions about the ID glosses, and so on.
ParticipantComments	This tier is intended to capture specific comments for each participant. There will be a comment tier for “child1”, “adult1” and so on.
Left Hand	Annotations on this tier are to be time-aligned with linguistic behavior of the left hand. Annotations are limited to individual sign units.
Left Hand Pho	The annotator can add notes about any interesting phonological behavior exhibited on the left hand.
LH append	Annotations on this tier correspond to annotations on the Left Hand tier. The annotator can add specifications about particular types of or alternations to linguistic form (e.g. FS, NS, IX, POSS, [+], //).
Right Hand	Annotations on this tier are to be time-aligned with linguistic behavior of the right hand. Annotations are limited to individual sign units.
Right Hand Pho	The annotator can add notes about any interesting phonological behavior exhibited on the right hand.
RH append	Annotations on this tier correspond to annotations on the Right Hand tier. The annotator can add specifications about particular types of or alternations to linguistic form (e.g. FS, NS, IX, POSS, [+], //).
NMS	This tier will be used for the annotation of non-manual gestures or interjections as well as nonverbal mouthings when there is no accompanying manual sign.
ASL Feedback	After the annotator has completed ASL for all participants on the video, someone else in the team will proof the annotations and provide feedback on this tier.
ASL Syntactic Unit	Annotations on this tier is for the use of people doing later analysis such as MLU or IPSyn, if they want to offer a different interpretation of the signs or the utterance breaks in order to use that interpretation for their analyses.
Free translation	Annotations on this tier indicate the annotator’s determination of the duration of the utterance. English translations of the signed utterances are provided here.
English	If there is any English, it will be represented on this tier.

a

Table 1. Purpose of each tier in ELAN template

All .eafs will use this tier schema. Annotators should create new .eafs using the SLAAASh template.

Comments

Annotations on this tier are for any aspects of the data that the annotator wishes to observe for future reference. Possible observations include: phonological alternations, morphological processes, questions about the ID glosses, and so on.

Right and left hand

Signs (including gestures) that are produced on either right or left hand will be annotated in the transcript. Each hand receives its own tier since timing of sign duration can differ. The annotation field for an individual sign begins when most or all of the following criteria are met: hand has formed its configuration for the sign, hand is not blurry, and hand has just changed direction. The annotation field for an individual sign ends when most or all of the following are met: hand has started to change its configuration for the next sign or relaxes, hand is blurry and in transition to the next sign, and hand is about to change direction.

Right and left hand pho

"Pho" is short for "phonological". This tier is used to capture any observations about the phonological form of the sign. If you are prone to making these kinds of observations (e.g., second hand has been added, handshape has been changed, etc.) then it's worth leaving this tier visible. If you do not, then you can hide the tier by right-clicking on the tier name.

Right and left hand append

"Append" is short for "appendix". This tier captures specific information relating to the general forms (as described above in this document) of FS, NS, DS, IX, POSS, SELF [+], [_], [?], and so on.

NMS

"NMS" is short for "non-manual signal". This tier captures communication that occurs usually on the face, such as head nods and head shakes as well as mouthings that don't accompany a sign.

ASL Feedback

After the annotator has completed ASL for all participants on the video, someone else in the team will proof the annotations and provide feedback on this tier. This tier can

also be used by annotators to request feedback by asking for someone to "check" a particular sign or utterance. Annotators should include their initials when requesting feedback so that we know where the comment came from.

Free translation

Annotations on this tier match the duration of complete thoughts on the video. The annotation length will usually be longer than the annotations on the right and left hand tiers. Approximate English translations of the signed text are provided here.

English

If there is any English, it will be represented on this tier. Conventions for representing English will be available in another manual.

Data Archiving Practices

Apparatus

Apparatus is basically "a guide to the data". This information provides context for the primary data (video recordings) that has been collected for the documentation. The descriptive information available in additional documents makes the digital compilation of primary data more cohesive and navigable. This information (filming logs, etc) is mostly on our shared Google Drive (*ASLslaash@gmail.com*).

Documents that are often included in the apparatus are: metadata ("data about the data") for each session and the overall documentation; annotations (described in depth above); general access resources (introduction/background to relevant information; conventions (like this document); links to additional resources; other documents that describe how data is collected, organized, or analyzed; any other contextualizing information about the documentation (such as information about the research team, pictures and twitter posts).

General workflow

There should only be one person working on one session (one movie, one .eaf). In general, the annotator should ensure that the .eaf is using the updated template (see Google Drive); she uses current ID glosses and annotation conventions to annotate primary data or to update existing transcripts. See workflow in our shared Google Drive. Also remember to refer to the filming logs and to use transcribing logs (which are a separate tab in the filming logs).

Code names

Each filmed child has received a code name (also known as a pseudonym). These will be used in our annotation and logs - JIL, SAL, ABY, NED. Other people like family members receive a general description (MOT/FAT for "mother" or "father"). Initials are used for research assistants. Visitors (family friends, relatives, etc.) often receive their own code name and are kept on file. Annotators will help keep track of who appears on the videos by filling out participant information using a form on Google Drive.

File naming

The following filenaming conventions will be used when saving transcripts.

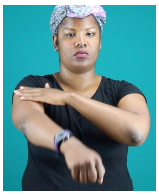
KID_FILNUM_(AE)_YYMMDD

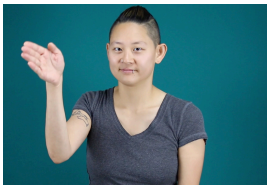
- 00 nothing transcribed
- a0 ASL being transcribed, not checked; no English
- A0 ASL checked, no English
- A0 ASL checked, no English
- Ae ASL checked; English being transcribed, not checked
- AE both languages transcribed and checked

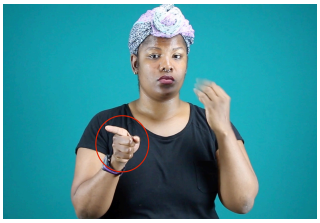
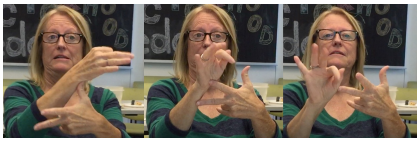
e.g., NED_001_a0_161011 for "the first session of NED; ASL transcription in process; no English; last annotated on October 11, 2016"

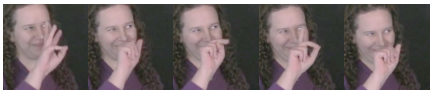
Note that some files may also include a 3rd character after AE. This "s" or "S" stands for standardization and was sometimes used to indicate whether a file's annotations had been updated to be standardized to SLAASh conventions from a previous set of conventions, or not yet.

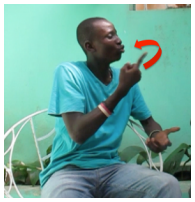
Table of all conventions

Category	*Rule*	Example
Annotation file-naming convention	*Pseudonym uses 3 upper case letters, file # uses 3 digits, lowercase a, e, indicate annotated (ASL, English) but not yet checked. Uppercase indicates annotated and checked.* *YYMMDD is the date when annotations were last revised*	Pseudonym_File#_(AE)_YYMMDD.eaf ABY_023_ae_161023.eaf
ASL sign	*Lexical signs are written using ID glosses (no spaces); one sign per annotation* ** refer to ID glosses index*	 ARM
ASL sign but more than one English word for ID glosses	*All of the words are hyphenated to signify that one ASL sign is represented* ** refer to ID glosses index*	 VIDEO-CAMERA
ASL tiers (right and left hands)	*Whatever the right hand is doing is annotated on the right hand tier; same for left hand. If they are producing the same sign, they get the same ID gloss (length varies). If they are producing separate signs or different aspects of a depicting sign, the ID glosses will be different*	SIGN SIGN or SIGN DIFFERENT-SIGN

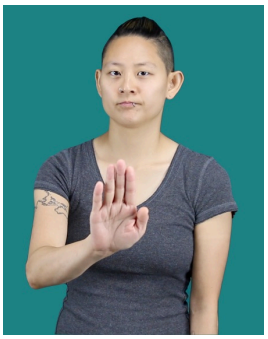
Category	*Rule*	Example
ASL two-handed signs	*Right and left hand tiers reflect timing for the start and end of movement/handshapes for each hand*	SIGN (DIFFERENT-)SIGN
ASL variants	*Information about form in tags appended to end of ID glosses used to distinguish between variants* ** refer to ID glosses index*	 FUTUREstr  FUTUREwig
bound (including numeral incorporation)	*Bound signs do not receive special notation. They will be represented by ID glosses like other lexical signs.* ** refer to ID glosses index*	 EIGHTH
buoys	*List buoys (in which fingers are variably extended depending on how many items there are in a list) are glossed with an ID gloss and an append tag that indicates which fingers are extended (t=thumb, i=index, m=middle, r=ring, p=pinky)*	 LH: BUOY-LIST LH append: \timrp\ RH: IX RH append: (buoy-list)
	Fragment buoys (in which lexical signs are perseverated on the weak hand while the strong hand produces other signs) are indicated by length of annotation field in transcript.	(see figure 5 above)

Category	*Rule*	Example
	Depicting buoys (in which depicting signs are perseverated on the weak hand while the strong hand produces other signs) are indicated by length of annotation field in transcript.	(see figure 5 above)
	Theme buoys (extended index finger pointing up) are glossed with an ID gloss.	 BUOY-THEME
	Pointer buoys (extended index finger points at discourse) are glossed with an ID gloss.	 BUOY-POINTER
	For signs produced on the list buoy itself, append \timrp\ on the relevant append tier.	 RH: NINETEEN RH append: \t\ RH: NINETEENtwist RH append: \i\ RH: NINETEENrub RH append: \m\
compounds	*Signs that were derived though compounding will be identified by an ID gloss with no special convention*	 GOOD-ENOUGH

Category	*Rule*	Example
depicting signs	*For signs that depict, identify them with the code DS, hs label (see ID glosses), then indicate their meaning on the append tier in the following order: object, action/state, surface (if any), manner of action (if any)*	Right hand: DS_3 RH append: (vehicle-move-down-path) Right hand: DS_2 RH append: (biped-stand)
depicting signs - constructed action	*For constructed action, identify the action with DS(ca). Describe it further in the free translation tier.*	Free translation: And when I fell, I fell backwards landing awkwardly on both of my hands and my butt. Right hand: DS(ca) Left hand: DS(ca)
false start	*For signs that are not complete due to false start, use special symbols. There are 5 types, all of which are placed on the append tier on the same time period as the base sign.* *interruption /* *self-interruption //* *retracing without correction [/]* *retracing with correction [//]* *retracing with reformulation [///]*	Right hand: WANT RH append: / Right hand: WANT RH append: // Right hand: WANT WANT RH append: [/] Right hand: WANT DON'T-WANT RH append: [//] Right hand: WANT IX(self) LIKE THAT RH append: [///]
fingerspelling	*write FS then put the intended fingerspelled word in parentheses on the append tier; note the English words are in lower case.*	 Right hand: FS RH append: (Wanda)
fingerspelling plus sign	*write FS then put the intended fingerspelled word in parentheses and add ID gloss to represent the sign; hyphenate the two. The order of the sign and fingerspelled item will depend on the production itself.*	FS(item)-IDGLOSS IDGLOSS-FS(item)

Category	*Rule*	Example
interjections	*write i then put English words to represent the interjection in parentheses; note the English words are in lower case. Refer to ID glosses for the complete list of interjections – these are not free-form entries*	 i(oops)
held signs	*For signs that are perceived to be held longer than expected, append [_]*	Right hand: SIGN RH append: [_]
homonym	*For homonyms (signs with the same forms but different meanings) each distinct meaning will get its own ID Gloss generally, but this will be determined case-by-case*	 ALWAYS and SOMETHING each assigned a separate ID Gloss regardless of the similarity in their forms
indicating verb	*For verbs that indicate their referents (or point at who they're talking about), ID gloss only with no referent*	GIVE ASKix THROW
manual constructed action	*Annotated as action with code &= on "comments" tier*	Child comments: &=pose Adult1 comments: &=show
mouthing	*For words that are entirely mouthed (and not voiced or signed), identify them with the code m, and indicate their meaning in parentheses. Use the NMS tier for this.*	NMS: m(okay) NMS: m(yes)
name signs	*For signs that serve as names for people, identify them with the code NS then spell out their names in parentheses on the relevant append tier (or, use the person's pseudonym, where appropriate.)*	Right hand: NS RH append: (Julie) Right hand: NS RH append: (KID)

Category	*Rule*	Example
new id gloss needed	*For signs that do not have ID glosses in the database, add ~ before a proposed gloss. In the case that the annotator doesn't know what to put, use "~NEED-GLOSS".*	~SUGGESTION ~NEED-GLOSS
numbers	*Signs that represent numbers are glossed with words (not digits)* **check ID gloss index*	ONE TWO THREE
number sequences	*Each term has its own ID gloss* **check ID gloss index*	TWENTY-ONE FIFTY-FIVE
ordinal numbers	*Each term has its own ID gloss* **check ID gloss index*	FIRST SECOND
parsing	*String is divided by individual signs on right and left hand tiers*	Annotations are true to frames on video
pointing signs	*write IX then put the referent in parentheses on the append tier; note the English words are in lower case.* *(If the signers are pointing to themselves, use IX_1)*	 Right hand: IX RH append: (camera)
plural forms	*We do not code for plurality except for IXarc. If a sign is fully repeated, each repetition receives an individual annotation.*	Right hand: IXarc RH append: (audience)
pointing signs that tap	*add IX according to current convention then add the tapping as an action, i.e., &=tap, in comments or the phonology tier*	Right hand: IX RH append: (camera) Comments: &=tap
pointing signs that trace	*write IX then tag it with tracing and identify the referent on the append tier*	Right hand: IXtracing RH append: (referent)

Category	*Rule*	Example
possessive pronouns	*write POSS then put the referent in parentheses on the append tier; note the English words are in lower case.* *(If the signers are indicating themselves, use POSS_1)*	 Right hand: POSS RH append: (camera)
reflexive pronouns	*Write SELF then put the referent in parentheses on the append tier; note the English words are in lower case.* *(If the signers are indicating themselves, use SELF_1)*	Right hand: SELF RH append: (camera)
	Write HONORIFIC then put the referent in parentheses on the append tier; note the English words are in lower case. *(If the signers are indicating themselves, use HONORIFIC_1)*	Right hand: HONORIFIC RH append: (camera)
repeated	*Fully repeated signs get more than one annotation.*	Right hand: SIGN SIGN SIGN
repetitive	*Signs with atypical number of repetitive cycles get a code* [+] *on the append tier*	Right hand: SIGN RH append: [+]
trailing off	*Signs that are incomplete are coded with … on the append tier*	Right hand: SIGN RH append: …

Category	*Rule*	Example
unclear signs	*For signs that you cannot confidently identify, try your best and add [?] on the append tier to indicate you are not sure. If you have an alternative possibility, add it after =? in brackets on the append tier. If you cannot identify it at all, use XXX.*	Right hand: GLOSS RH append: [?] or Right hand: GLOSS RH append: [=?ALTERNATIVE] or Right hand: XXX
Video filenaming convention	*Pseudonym uses 3 upper case letters, file # uses 3 digits. See p. 36 for specific codes to use in the filename to mark its ongoing annotation progress.*	NED_001
Video file viewing convention	*One annotation file per session with tier sets for each participant on camera*	(n/a)

(based on traditional glossing conventions in the field, Chen Pichler et al 2010, and Liddell 2003)

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